UNITED STATES COURT OF APPEALS
FOR THE EIGHTH CIRCUIT

AMERICAN SOYBEAN ASSOCIATION,

Petitioner,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY; and LEE ZELDIN, in his official capacity as Administrator of the United States Environmental Protection Agency,

Respondents.

Case No. _____

PETITION FOR REVIEW

Pursuant to Rule 15(a) of the Federal Rules of Appellate Procedure and Section 16(b) of the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"), 7 U.S.C. § 136n(b), the American Soybean Association hereby petitions this Court to review and set aside in part a final order of the United States Environmental Protection Agency.

In the order, EPA registered three end use Dicamba products for weed control in Dicamba-tolerant cotton and Dicamba-tolerant soybeans under 7 U.S.C. § 136a(c)(5).[1] The order should be set aside in part because certain conditions EPA

[1] EPA Registration Number 264-1241 concerns Bayer CropScience LP's Stryax

placed on the use of these Dicamba products are arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law. 5 U.S.C. § 706(2); *see Defs. of Wildlife v. EPA*, 882 F.2d 1294, 1302 (8th Cir. 1989) ("The APA standard of review … operate[s] as a part of FIFRA.").

This Court has jurisdiction and venue. The order was signed on February 6, 2026, following a public hearing, and entered on EPA docket EPA-HQ-OPP-2024-0154. *See* 7 U.S.C. § 136n(b). Pursuant to 40 C.F.R. § 23.6, the order became final for purposes of the Court's jurisdiction at 1:00 p.m. eastern time on February 20, 2026. Petitioner the American Soybean Association participated as a party in the proceedings before the EPA, is adversely affected by certain conditions imposed on the registrations, and has a place of business in St. Louis, Missouri.

The order is implemented through three product labels and an accompanying EPA memorandum, which in turn relies on or refers to additional documents located in EPA docket EPA-HQ-OPP-2024-0154 on Regulations.gov. The product labels are attached as Exhibit 1 and the memorandum is attached as Exhibit 2.

Herbicide. EPA Registration Number 7969-507 concerns BASF Corporation's Engenia Herbicide. EPA Registration Number 100-1753 concerns Syngenta Crop Protection, LLC's Tavium Plus VaporGrip Technology.

Dated: February 24, 2026

Respectfully submitted,

/s/ Jeremy J. Broggi

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Counsel for Petitioner the American Soybean Association

CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1 and Eighth Circuit Rule 26.1A, the American Soybean Association states as follows:

The American Soybean Association has no parent company and no publicly held company has a 10% percent or greater ownership interest in the American Soybean Association.

Dated: February 24, 2026

Respectfully submitted,

/s/ Jeremy J. Broggi

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Counsel for Petitioner the American Soybean Association

CERTIFICATE OF SERVICE

I hereby certify that I caused the foregoing Petition for Review, the exhibits thereto, and the accompanying Corporate Disclosure Statement to be served by certified mail, return receipt requested, on Respondents at the following addresses:

United States Environmental Protection Agency
Correspondence Control Unit
Office of General Counsel, Mail Code 2311
1200 Pennsylvania Avenue NW
Washington, DC 20460

Lee Zeldin, Administrator
United States Environmental Protection Agency
Office of the Administrator, Mail Code 1101A
1200 Pennsylvania Avenue NW
Washington, DC 20460

I also hereby certify that I caused the foregoing Petition for Review, the exhibits thereto, and the accompanying Corporate Disclosure Statement to be served by certified mail, return receipt requested, on counsel for Respondents at the address below:

Pamela J. Bondi, United States Attorney General
Office of the United States Attorney General
United States Department of Justice
950 Pennsylvania Avenue NW
Washington, DC 20530

February 24, 2026

/s/ *Jeremy J. Broggi*
Jeremy J. Broggi

EXHIBIT 1

A

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505T)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
264-1241	2/6/26

Term of Issuance:
Unconditional

Name of Pesticide Product:
Stryax Herbicide

Name and Address of Registrant (include ZIP Code):

Bayer CropScience LP
800 N. Lindbergh Blvd.
St. Louis, MO 63167

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

The record for this product currently contains the following CSFs:

- Basic CSF dated 1/30/2026
- Alternate CSF 1 dated 1/30/2026
- Alternate CSF 2 dated 1/30/2026

Continues page 2

Signature of Approving Official:

Lindsay Roe, Chief
Herbicide Branch, Registration Division (7505T)

Date: 2/6/26

EPA Form 8570-6

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you comply with the terms listed below. This registration will automatically expire on February 6, 2028.

General Terms

1. Submit and/or cite all data required for registration review of your product when the Agency requires all registrants of similar products to submit such data.
2. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. You have 18 months from the date of registration to provide these data.
3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Endangered Species Protection and Formal Consultation

4. In its endangered species assessment as part of its review of this action, EPA made may affect determinations for certain listed species and their designated critical habitats. EPA initiated formal consultation with the United States Fish and Wildlife Service (FWS), which will be ongoing during the registration period.

   If, after formal consultation with FWS, additional modifications are identified in the Service's Biological Opinion, EPA will notify Bayer CropScience LP (Bayer) in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA's notice, Bayer must submit an amendment application incorporating any required changes, including amended labels. Alternatively, Bayer may respond by submitting a request for voluntary cancellation of this product. If Bayer fails to comply with this term, Bayer has agreed in prior written acceptance of these terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

Herbicide Resistance Management Plan

5. Bayer must develop, implement, maintain, and annually update an Herbicide Resistance Management Plan as described in Appendix A regarding field detection and remediation; education, training, and outreach; annual evaluation; annual reporting; and best management practices (BMPs).

Volatility Reduction Agents

6. The Stryax Herbicide registration requires the use of a qualified Volatility Reducing Agent (VRA) that must be reviewed and confirmed as qualified by the Agency. In order to have a new

VRA product confirmed as a qualified VRA, an application for the new VRA product must be submitted to the Agency as an R350 PRIA action (or, if PRIA is amended during the term of this registration, an equivalent code) and is subject to the associated PRIA fee.

A new VRA product may be qualified and added to the list of qualified VRA products on www.stryaxapplicationrequirements.com if, based upon the VRA product testing according to Appendix B of this document:

a. the VRA product is identical in formulation to VaporGrip Xtra (MON 51817); or
b. the test mixture of the VRA product + Dicamba OTT product + Roundup PowerMAX® 3 results in humidome airborne dicamba concentrations that are confirmed by EPA to achieve the same or better level of volatility reduction compared to a 40 fl oz per acre rate of VaporGrip Xtra (MON 51817).

Prior to or within one day of updating Bayer's list of qualified VRA products on their website, Bayer must inform all other registrants of OTT dicamba products which qualified VRA products meet the standard for inclusion on the list of qualified VRA products pursuant to 5.a or b and are being added to the list.

7. The educational and information materials developed by or for Bayer, including materials identified in Appendix A, Section B, shall include the requirement that a qualified VRA must always be tank-mixed with Stryax Herbicide. A list of qualified VRAs and the associated application rates must be maintained by Bayer at www.stryaxapplicationrequirements.com.

8. Because the Stryax Herbicide registration requires the use of a qualified VRA with every application, Bayer will:
   a. Take appropriate action(s) to ensure that a sufficient supply of qualified VRA is in the channels of trade to support legal use of all registered OTT dicamba products. To ensure the supply of qualified VRA is sufficient throughout each season, Bayer will:
      i. Project and monitor distribution of Stryax Herbicide and qualified VRAs;
      ii. Monitor available qualified VRAs in relevant channels of trade;
      iii. Make available additional supplies if needed to ensure sufficient quantities of qualified VRAs are available to allow lawful application of the full quantity of Stryax Herbicide that is available in the channels of trade;
      iv. Maintain capacity to produce additional qualified VRAs (or to cause more qualified VRAs to be produced) whenever any further need is anticipated; and
      v. Produce or ensure production of qualified VRA as needed to maintain a stock in the market that would support legal use of all registered OTT dicamba products.
   b. Make arrangements through appropriate distribution networks to ensure that qualified VRAs are timely available to applicators in all locations where Stryax Herbicide will be applied, before any applicator would apply Stryax Herbicide. Access to qualified VRAs will either be through the same retail outlets as Stryax Herbicide, or if necessary, in particular locations, available from other readily accessible sources. Bayer will timely make available to every applicator information on where qualified VRAs can be ordered or purchased.
   c. Ensure that all training materials clearly indicate the mandatory use of qualified VRAs with every Stryax Herbicide application. Work with State and Tribal authorities to ensure that appropriate training occurs before any application of Stryax Herbicide is made.

d. Registrant Recordkeeping: Bayer will keep records appropriate to document its compliance with its qualified VRAs quantity commitments. Bayer will make records available to EPA upon request.

Education, Training, and Outreach

9. Bayer must maintain a website at www.stryaxapplicationrequirements.com, available to the public before any product may be released for shipment, which must be consistent with the product labeling and contain the following tabs or sections:
   a. State Specific Labeling (which could also apply to Tribes if requested)
   b. Link to Bulletins Live! 2 (BLT)
   c. Instructions for how to check Weather Forecast (NWS)
   d. Link to Runoff Mitigation Menu: https://www.epa.gov/pesticides/mitigation-menu
   e. Instructions on how to report incidents to Bayer and EPA
   f. Training materials (as described in Appendix A, section B)
   g. Bayer's Resistance Management Plan
   h. List of qualified VRAs and corresponding required use rates
   i. Instructions on how to report a VRA shortage to Bayer

10. Bayer must develop, annually update, provide to EPA, and implement prior to release of any product, an education program on labeling requirements for applicators that includes the following elements:
   a. The education program must include information about required buffers so that growers/applicators have a better understanding of what constitutes a buffer on his/her field(s), and recommendations for weed control practices in buffer zones. The education program must also include information on what may and may not be counted within a buffer. The training must also include an element assisting the grower in understanding eligibility for and calculating the buffer distance reductions.
   b. Information on sensitive plants and how they impact applications.
   c. Training for sprayer cleanouts (before and after spraying as indicated on labeling).
   d. Training for Bulletins Live! 2 (BLT), including clarification of how a grower/applicator can document that they have checked BLT within 6 months and what the documentation will look like if no bulletin is applicable or if there is an applicable bulletin.
   e. Training on how to earn and calculate the runoff/erosion points required.
   f. Training on how to identify a temperature inversion.
   g. Provide an optional template for record keeping that includes all elements and links to associated websites.
   h. Clearly describe the maximum use rate and how the restriction to 1 lb. per acre per calendar year for all combined dicamba-containing products impacts use of dicamba throughout the year on the field.
   i. Training on the use of the temperature-dependent volatility mitigations with real-world application examples.
      i. Training on how to use predicted and actual temperatures to determine whether an application may take place and mitigations needed.
      ii. How a grower/applicator could calculate and document the 50% restriction of the grower's managed dicamba-tolerant crops within the county.
      iii. How to implement the retreatment interval for different fields when restricted to 50% of the grower's managed dicamba-tolerant crops within the county.

iv. Recommendations for how to limit applications at certain temperatures to 50% of the grower's managed dicamba-tolerant crops within the county and on associated retreatment intervals.
    1. Provide training on the use of in-row drop nozzles and in-row hooded sprayers (e.g., what qualifies as hooded sprayer, appropriate uses).
    2. When and how precision agriculture technology could be used to meet this reduction.

j. Training on how growers/applicators can report incidents and control failures to EPA, states, and tribal governments.
k. Tutorial on how to check the weather forecast and how to track that it was done for records as applicable.
l. Tutorial on the website containing state-specific labeling and the other items as required in Section 7.
    i. Where to find information about qualified VRAs and how to use a qualified VRA at the appropriate rate.
m. Training consistent with Appendix A: Herbicide Resistance Management Plan, section B Education, Training, and Outreach.
    i. The critical importance of following resistance management practices and appropriate BMPs as described in Section B.5. to prevent, contain, delay, and/or control weed resistance.
    ii. Stressing the requirement for field scouting before and after application.
    iii. Bayer's commitments to growers/applicators on addressing suspected resistant weed reports including field detection, testing, and remediation assistance as described in Section A.
    iv. Reporting lack of herbicide efficacy promptly to Bayer or its representative.
n. Bayer must transmit the BMPs to all applicators of Stryax Herbicide. In addition to the other requirements of these Terms and Conditions, this BMPs transmittal must describe to growers/applicators the commitments as described in section A.5 about investigations of suspected dicamba-resistant weeds.

11. Bayer must provide at least one written communication regarding herbicide resistance management each year, directed to applicators of Stryax Herbicide for use over-the-top on dicamba tolerant soybean or dicamba-tolerant cotton.
12. All Bayer herbicide sales representatives must have immediate access to the education program for distribution to growers/applicators, extension agents, neighboring landowners, and any other interested stakeholder upon request.
13. Bayer must provide a copy of all Stryax Herbicide educational and training materials, and examples of written communication materials to EPA by 2/28/2026, and at any time upon EPA's request. At the initiative of either EPA or Bayer, EPA and Bayer will meet to discuss possible modifications to the educational program as needed.
14. Bayer must provide access to educational materials for distribution by sales representatives or others to growers/applicators, extension agents, neighboring landowners, and any other interested stakeholders by February 1st of each year following this registration. In 2026, the access to educational materials must be provided before any product is released for shipment.
15. Bayer must ensure that retailers and sales representatives are aware of the VRA and DRA application requirements and instruct retailers and sales representatives that they must not sell Stryax Herbicide without sharing that information with buyers.
16. Bayer must provide to EPA the registrant education program for OTT dicamba applicators by 2/28/2026 and individual state education program materials as they are available, but no later than

releasing product for shipment within the state. All educational and training materials listed above must be provided to EPA and made available to State and Tribal pesticide authorities and agricultural extension services upon request.

Annual Reporting

17. Bayer must submit the information in their possession or control as identified below to EPA's Office of Pesticide Programs, unless you have previously submitted that information to EPA's Office of Pesticide Programs.
    a. Information received by telephone or in writing regarding potential damage to non-target vegetation from alleged use of dicamba during the 2026-2027 growing seasons regardless of any determination that the alleged incident resulted from misuse (intentional or accidental). Information must be forwarded to EPA regardless of which dicamba product may have been used and/or whether or not the alleged damage resulted from a product being used according to labeling directions. Data must be organized by product and state to the extent practicable, and must include all available information regarding acreage involved, plant species involved, severity of damage, date and location (coordinates) of incident, known dicamba applications in vicinity of incident, location of application (coordinates), distance from application to incident, temperature and humidity data at time of application, qualified VRA product applied, and similar information received, including (if available) whether an investigation was conducted, all available information related to the specifics of each incident, whether residue testing was completed, and test results. Incident data must be submitted in narrative form and in a spreadsheet format. This information must be submitted with cumulative totals and be submitted annually by January 15 (beginning by January 15, 2027) and final report with all the available information due September 30th of each year.
    b. Information received by telephone or in writing regarding reports of dicamba-resistant weeds, and cases of weed control failure and/or suspected resistance. All information must be forwarded to EPA regardless of which dicamba product may have been used and/or whether or not the alleged resistance occurred after an application made according to label directions. This information must be submitted annually by January 15 (beginning January 15, 2027) and final report with all then available information due September 30th of each year.
    c. Any information received by Bayer or finding in an analysis conducted by Bayer of foods/commodities containing dicamba residues that are not covered by a tolerance or exceed established tolerance levels. This information must be submitted annually by January 15 (beginning January 15, 2027) and final report with all then available information due September 30th of each year.
    d. Information (studies, incident reports, etc.) regarding adverse effects, including allegations of non-target plant damage resulting from the use of, or contact with dicamba, including non-lethal effects, which occurred in any country at any time during registration. Adverse effects include but are not limited to 10% visual injury (i.e., cupping) and/or 5% reduction in height, biomass, yield, or other visual signs of dicamba exposure.[1] Reportable information includes all information described in 40 CFR 159.158, and includes complaints, memos, investigations, reports, or other documents arising

[1] Leaf cupping is considered an adverse effect of dicamba exposure and must be reported irrespective of plant genetics, although genetic information considered relevant may be included in the report. EPA requires all information on incidents related to "cupping," regardless of plant genetics, be included in the incident reports (i.e., do not exclude reports of "cupping" on varieties that have "poor plant genetics").

from incidents or studies. Adverse effects information should be provided in a searchable spreadsheet format.[2]

e. Provide all information regarding the impact of dicamba off-target movement on seed research and breeding programs to the Agency. In addition to research and breeding plots, provide all reports of adverse effects to seed plots for commercial seed production; however, you may omit reports of adverse effects to crops modified to increase dicamba tolerance. Submit all available information on the nature of any damage to these plots as well as on the distance between the possible sources of the damage and the damaged crop.

f. Information regarding tank mixes containing the over-the-top dicamba products labeled for use on Dicamba-tolerant (DT) soybean or DT cotton found to be or suspected of being incompatible or reactive with any other pesticide and/or causing increased drift, volatility, and/or plant injury relative to OTT products containing dicamba only.

g. Any information not legally privileged or subject to a protective order, including, but not limited to deposition transcripts, responses to interrogatories, expert reports, other discovery documents (including internal company correspondence), and trial exhibits or transcripts, that was generated as a result of or in anticipation of lawsuits filed in any country, indicating that use of or contact with dicamba, directly or indirectly, resulted or may have resulted in adverse effects to non-target plants.

h. All studies and associated data (raw and summary) not already provided to EPA by your company, completed, incomplete, or in progress, conducted or sponsored by or for your company regarding dicamba pertaining to:

   i. Off-target movement of dicamba, through direct application (with or without drift reduction technologies such as hooded or layby sprayers or volatility reduction agents), volatilization, off-site spray drift, potential for long-range transport, runoff, leaching to groundwater, or rainfall. Include any study summary or test that pertains to off-site transport that was discontinued because of damage either confirmed or suspected to be from dicamba exposure to controls or test plots, damage beyond the treated area, or dicamba contamination of workspaces (indoor or outdoor) during or after the dicamba application.

   ii. Potential toxicity of dicamba or any qualified VRA required in [Primary Brand Name] labeling to target or nontarget plants via any presence of dicamba/residues detected in rainwater, concentrations of dicamba in the air (including but not limited to that moved via long-range transport), runoff, or leaching to groundwater that were commenced by you or by others on your behalf, including those where no written reports or summaries were submitted to you. Include both indoor (greenhouse studies) and outdoor (field or plot studies), as well as reports from efficacy studies and/or incidents.

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[2] The following information must be provided to EPA to the extent Bayer possesses or receives such information: Inquiry/Incident ID, Call Date, Affected Acres, Impacted Location: State, Impacted Location: County, Planting Date (in the case of damage reported on agricultural crops), Date on Which a Phone Interview was Attempted, Date on Which a Phone Interview Occurred, Impacted Site Visit Date, Date on Which Symptomology was First Observed, Account of Cause of Damage, Affected Field/Site Latitude, Affected Field/Site Longitude, Total Acres Impacted, Crop/Vegetation Type Impacted, Variety of Plant/Crop on Affected Field/Site, Brand of the Affected Crop, Description of how the injury is spatially distributed, Action(s) taken upon observing symptomology, Pictures Taken (Yes/No), description of symptomology, whether or not state officials were contacted about the incident, whether the sprayer was cleaned out prior to application, whether the application was made by a certified applicator, and whether dicamba was applied on the affected farm/site or on neighboring farms. If soybean was the impacted vegetation, additional information should be provided, including soy growth stage showing maximum symptomology, soy growth stage showing least symptomology, crop height (inches) showing maximum symptomology, and crop height (inches) showing least symptomology. Registrants are encouraged to provide information on additional parameters as they deem appropriate.

iii. Adverse effects of any qualified VRA required in [Primary Brand name] labeling, including but not limited to tank mix incompatibility, changes in pesticide efficacy when combined with tank mix partners, injury to target crop.
iv. Development of weeds' resistance to dicamba, or diminished control of weeds by dicamba.
v. Bayer must provide a master list of studies involving dicamba in possession or control of the registrant including a description of each trial, why it was terminated (where applicable), and contact information for the researchers who conducted, initiated, and/or planned all studies, including but not limited to terminated studies. Bayer must provide at least two contacts per study, including the principal investigator(s) for those studies, and contact information should be submitted to EPA in the form of a searchable spreadsheet that includes fields including but not limited to name, professional affiliation, title, study name/number and description, reason for termination of the study (where applicable), email, and phone number. Persons listed on the provided list of contacts should be authorized to freely discuss with EPA all aspects of their dicamba research.

18. Subsequent annual reports after the first year shall include updates of any aspect of the education and training program and associated materials that have materially changed since submission of the previous annual report.
19. Following submission of the annual report, Bayer shall meet with the EPA at EPA's request to evaluate and consider the information contained in the report.

Renewal

20. If Bayer decides to renew this registration, Bayer must submit a package 18 months before the expiration date (on or before 8/6/2026). This package will be coded as an R350 PRIA action (or, if PRIA is amended during the term of this registration, an equivalent code) and must be submitted as such, including all documents that would be expected for that type of application.

Including references to the company's website on the label makes that website labeling under FIFRA and therefore the website is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA Section 12(a)(1)(E). 40 CFR §156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on the product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to EPA's attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.
In addition to Bayer's prior written acceptance of these terms, release of this product for shipment further confirms Bayer's acceptance of all terms and conditions listed above. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA Section 6, including cancellation under FIFRA 6(e) as described under paragraph 3 above.

APPENDIX A

Herbicide Resistance Management Plan

Bayer must develop and implement an herbicide resistance management plan that includes the following components:

A. **Field Detection, and Remediation**

1. If any grower, crop consultant, extension agent, or State or Tribal specialist informs Bayer or its representative of a lack of herbicide efficacy, then Bayer or its representative must work with growers/applicators to support them in identifying and responding to suspected resistance to dicamba by applying the criteria for determining suspected herbicide resistance listed below, set forth in EPA Pesticide Registration Notice 2017-2: Guidance for Herbicide Resistance Management, Labeling, Education, Training, and Stewardship[3]. In addition, such testing of suspected resistance must also include testing with 2,4-D to evaluate the extent to which cross-resistance and/or multiple resistance is occurring.

Factors for Determining Suspected Herbicide Resistance:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.
- A spreading patch of non-controlled plants of a particular weed species.
- Surviving plants mixed with controlled individuals of the same species.

2. If one or more of the above factors are met, then Bayer or its representative must:
   a. Provide the grower with specific information and recommendations to control and contain suspected resistant weeds, including rotation to pesticides with different modes of action and/or other non-pesticide controls, as appropriate. If requested by the grower, Bayer will become actively involved in implementation of weed control measures.
   b. Request, at the time of the initial determination that one or more of the factors are met and prior to any application of alternative control practices, that the grower provide Bayer with access to the relevant field(s) to collect specimens of the suspected resistant weeds (potted specimens or seeds) for further evaluation in the greenhouse or laboratory, and to collect such specimens if possible (or, alternatively, request that the grower provide such specimens to Bayer, at Bayer's expense).
   c. Conduct greenhouse or laboratory studies to confirm resistance as soon as practicable following sample collection. If resistance is confirmed, report this information to the International Survey of Herbicide Resistant Weeds by requesting to add a case at https://weedscience.org/Home.aspx.
   d. To the extent possible, contact or visit the grower in an appropriate timeframe after implementation of the additional weed control measures in order to evaluate success of such measures.
   e. If the additional weed control measures were not successful in controlling the suspected resistant weeds, then:

[3] https://www.epa.gov/pesticide-registration/prn-2017-2-guidance-herbicide-resistance-management-labeling-education

i. Work with the grower to determine the reason(s) why the additional control measures were not successful.
ii. Offer to further assist the grower in controlling and containing the suspected resistant weeds, including rotation to pesticides with different modes of action and/or other non-chemical controls, as appropriate.
iii. Report annually the inability to control the suspected resistant weeds to relevant stakeholders such as extension experts, State or Tribal agencies, and grower organizations.

3. Keep records of all field evaluations for suspected resistance for a period of 3 years and provide a copy of the records to EPA upon request.

B. **Education, Training, and Outreach**

1. Develop, implement, and annually update an education and training program, with at least one written communication each year to growers/applicators of this product regarding herbicide resistance management. All education and training materials must include information on:
   a. The critical importance of following resistance management practices and appropriate BMPs as described in Section B.5. to prevent, contain, delay, and/or control weed resistance.
   b. Stressing the requirement for field scouting before and after application.
   c. Bayer's commitments to growers/applicators on addressing suspected resistant weed investigations including field detection, testing, and remediation assistance as described in Section A.
   d. Reporting lack of herbicide efficacy promptly to Bayer or its representative.

2. Bayer must provide access to educational materials for distribution by sales representatives or others to growers/applicators, extension agents, neighboring landowners, and any other interested stakeholders by February 1st of each year.

3. Bayer must provide a copy of the registrant education program to EPA by 02/28/2026 and individual state education program materials as they are available, but no later than releasing product for shipment within the state. Bayer must also provide copies of education programs at any time upon EPA's request.

4. The education and training materials must be made available to State and Tribal pesticide authorities and agricultural extension services.

5. Appropriate best management practices (BMPs) must be included in the education program to avoid and control weed resistance and convey the importance of following BMPs. Bayer must advise growers/applicators to follow BMPs in all education and training materials, annual written communication, and product literature. This list may be updated or revised as new information becomes available.

   The following BMPs must be included:
   <u>Crop selection and cultural practices:</u>
   • Understand the biology of the weeds present.
   • Use a diversified approach towards weed management focused on preventing weed-seed production and reducing the number of weed seeds in the soil seedbank.
   • Emphasize cultural practices that suppress weeds by using crop competitiveness.

• Plant into weed-free fields, keep fields as weed-free as possible, and note areas where weeds were a problem in prior seasons.
• Incorporate additional weed-control practices whenever possible, such as mechanical cultivation, biological management practices, crop rotation, and weed-free crop seeds, as part of an integrated weed-control program.
• Do not allow weed escapes to produce seeds, roots, or tubers.
• Manage weed seed at harvest and post-harvest to prevent a buildup of the weed seed-bank.
• Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
• Thoroughly clean plant residues from equipment before leaving fields.
• Prevent an influx of weeds into the field by managing field borders.
• Scout fields before application to ensure herbicide and application rates will be appropriate for the weed species and weed sizes present.
• Scout fields after application to confirm herbicide effectiveness and to detect weed escapes.
• If resistance is suspected, treat weed escapes with a different mechanism-of action herbicide or use non-chemical methods to remove weed escapes.

Herbicide selection:

• Use a broad-spectrum, soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed control program.
• A broad-spectrum weed-control program should consider all weeds present in the field. Weeds should be identified through scouting and field history.
• Difficult-to-control weeds may require sequential applications of herbicides with alternative mechanisms of action.
• Fields with difficult-to-control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action.
• Apply full rates of this herbicide for the most difficult to control weeds in the field. Applications should be made when weeds are at the correct size to minimize weed escapes.
• Report any incidence of non-performance of this product against a particular weed species to Bayer or its representatives.

C. **Annual Reporting**

1. Bayer must submit annual reports, clearly marking any claims of confidentiality, to EPA by January 15th of each year containing the following:

a. Annual sales of this product nationally and by state. The data should be provided in a searchable spreadsheet format.
b. Annual estimated total acres of DT cotton and DT soybeans planted in the United States and per state based on seed sold by Bayer. The data should be provided in a searchable spreadsheet format.
c. The current education program and associated materials, and subsequent annual reports shall include updates of any aspect of the education program and associated materials that have materially changed since submission of the previous annual report.
d. Investigation and remediation of cases regarding suspected resistant weeds. Summary of Bayer's determinations as to whether any reported lack of herbicide efficacy was suspected resistance, Bayer's follow-up actions taken, and, if available, the ultimate outcome (e.g.,

evaluation of success of additional weed control measures) regarding each case of suspected resistance. In the annual report, Bayer will list the cases of suspected resistance by county and state.

e. Summary of the status of any laboratory and greenhouse testing performed by, or at the direction of Bayer following up on incidents of suspected resistance, performed in the previous year. Data pertaining to such testing do not need to be included in the annual reports, but such data must be made available to EPA upon request.
f. Bayer is also obligated under 40 CFR Part 159 to report product failure to EPA and must follow those procedures and reporting schedule.

2. Following submission of the annual report, Bayer shall meet with the EPA at EPA's request to evaluate and consider the information contained in the report.

APPENDIX B
Testing of Tank Mix Volatility-Reduction Adjuvants/Buffering Adjuvants

VRA Product Testing Design

This study is designed as a humidome test using conditions based on ASTM STP1587 outlined below. Testing is not required to be performed to good laboratory practice (GLP) standards, but test methods, materials, and results should be well documented. Two baseline tests are used:

Baseline Testing: [Dicamba Product] + Roundup PowerMAX® 3 + VaporGrip Xtra (VGX)

Test 1: (0.5 lb a.e./A + 1.125 lb a.e. glyphosate/A + 20oz VGX/A use rates)

Test 2: (0.5 lb a.e./A + 1.125 lb a.e. glyphosate/A + 40oz VGX/A use rates)

Proposed VRA Product Test: [Dicamba Product] + Roundup PowerMAX® 3+ Proposed VRA
(0.5 lb a.e. dicamba/A + 1.125 lb a.e. glyphosate/A + proposed VRA use rate lbs/A)

Other study design and reporting information:

Proposed VRA Product Description: buffering agent(s) [e.g., potassium carbonate], percent of product [e.g., 50% buffering agent], total mass of buffering agent in test [e.g., 350 mg potassium carbonate] mixed with specific volume of water and final aqueous concentration in test.

Water carrier rate: 15 GPA

Test Container: Normal plastic humidome as specified in ASTM STP1587

Treated substrate: Soil/Soil blend as specified in ASTM STP1587 with 12-22% moisture

Required Independent Test Temperatures: 23.9°, 29.4°, and 35° C

Relative humidity: 40 ± 5% RH

Sample collection duration: 24 hours

Air sampling rate: 1.5-3.0 L/min

Air sampling filter: any substrate validated to capture >95% of dicamba (e.g., fiberglass mesh + cotton pad, cellulose + PUF, MCE)

Replications: 3 minimum (6 replicates recommended)

Analysis: A one-tail (upper-bound) t-test ($\alpha = 0.10$) performed for all test mixtures relative to baseline tests at all tested temperatures.

Review Considerations

EPA will review the study to determine if the new VRA product meets the baseline buffering agent performance that was established in the Dicamba DGA and BAPMA salts – Final Ecological Risk Assessment and Biological Evaluation. Typically, EPA's review will include:

- evaluating the study design and performance,
- will focus on the average concentration from the trials (< 2 ng/m3 threshold based on observation results from past volatility reducing agent tests, see Ecological Risk Assessment for more details).
- will consider variability between all trials at testing concentrations (clustered around a tight range of air concentrations (±0.25 ng/m3) is ideal), and
- will consider the performance of the air concentration and variability as temperature increases.

References

Gavlick, W.K., D.R. Wright, A. MacInnes, J.W. Hemminghaus, J.K. Webb, V.I. Yermolenka, W. Su. 2016. A Method to Determine the Relative Volatility of Auxin Herbicide Formulations, Pesticide Formulation and Delivery Systems: 35th Volume, ASTM STP1587. pp. 24-32G. R. Goss, Ed. ASTM International, West Conshohocken, PA.

USEPA. 2026. Dicamba DGA and BAPMA salts – Final Ecological Risk Assessment and Biological Evaluation Including Effects Determinations for Federally Listed Endangered and Threatened Species and Designated Critical Habitat for the Proposed Section 3 New Use Registration of Dicamba on Dicamba-Tolerant Cotton and Soybean. Office of Pesticide Programs. Office of Chemical Safety and Pollution Prevention. U.S. Environmental Protection Agency. February 2026. Task Group 619468, 621218, 624274.

RESTRICTED USE PESTICIDE
To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

This labeling expires on February 6, 2028.
DO NOT use or distribute this product after February 6, 2028.

DICAMBA	GROUP	4	HERBICIDE

STRYAX™ HERBICIDE
[ABN: KHNP0090 Herbicide]

With VaporGrip® Technology. For weed control in cotton with XtendFlex® Technology (dicamba-tolerant cotton) and soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ Soybean] (dicamba-tolerant soybean). This product may only be used on dicamba-tolerant cotton and dicamba-tolerant soybean fields.

Stryax™ Herbicide is approved by U.S. EPA for use in dicamba-tolerant cotton and dicamba-tolerant soybeans only in the following states: Alabama, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

Check the registration status of this product in each state before using. The user must check http://www.stryaxapplicationrequirements.com no more than 7 days before application of this product for additional labeling and any additional state-specific labeling. Where applicable, users must comply with additional labeling found on this website.

ACTIVE INGREDIENT: Dicamba	
Diglycolamine salt of dicamba (3,6-dichloro-*o*-anisic acid)*	**42.80%**
OTHER INGREDIENTS	**57.20%**
TOTAL	**100.00%**

*Contains 29.0% 3,6-dichloro-o-anisic acid, CAS No. 104040-79-1 (Stryax™ Herbicide is a soluble concentrate containing 2.9 pounds acid equivalent per U.S. gallon or 350 grams per liter)

EPA Reg. No. 264-1241 **EPA Est. No. _____**

CAUTION / PRECAUCIÓN

KEEP OUT OF REACH OF CHILDREN

ACCEPTED
02/06/2026
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 264-1241

MANTÉNGASE FUERA DEL ALCANCE DE LOS NIÑOS

Manufactured for:
Bayer CropScience LLC
800 N. Lindbergh Blvd.
St. Louis, MO 63167
1-866-99BAYER (1-866-992-2937)

FIRST AID

IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for treatment advice.
Note to Physician	• Not applicable.
In case of emergency, call the toll-free Bayer Emergency Response telephone number: 1-800-334-7577. Have the product container or label with you when calling a poison control center or doctor or when going for treatment.	

Please refer to [back panel] [booklet] for additional precautionary statements and directions for use. [Note to reviewer: Location of additional precautionary statements and directions for use will vary between those listed, depending on container type/size.]

Label Highlights

Labeled crops: Cotton with XtendFlex® Technology, Soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology, [Vyconic™ Soybean]
Formulation type: Soluble Concentrate
Restricted Use Pesticide: Yes

Rain-Free Period: DO NOT apply during rain. **DO NOT** apply when soil in the area to be treated is saturated (if there is standing water on the field or if water can be squeezed from soil). Detailed National Weather Service forecasts for local weather conditions may be obtained on-line at: https://www.noaa.gov/, on NOAA weather radio, or by contacting your local National Weather Service Forecasting Office.

Sale, Use, and Distribution of this Product: Alabama, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

Endangered Species Act: See Section 6.0
EPA Registration No.: 264-1241

Net Contents: _____

Table of Contents

PRECAUTIONARY STATEMENTS – Sections 1-4

1.0 Hazards to Humans and Domestic Animals

CAUTION

- Causes moderate eye irritation.
- Avoid contact with eyes or clothing.

2.0 User Safety Requirements

2.1 Handler Personal Protective Equipment

2.1 Personal Protective Equipment (PPE)

All mixers, loaders, certified applicators, and other handlers must wear:

- Long-sleeve shirt and long pants
- Waterproof gloves
- Shoes plus socks

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

2.2 Statement for Contaminated PPE

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

2.3 Engineering Controls Statement

2.3 Engineering Control Statement

When handlers use closed systems, or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.607 (d-f)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "all mixers, loaders, applicators, and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

2.4 User Safety Recommendations

2.4 User Safety Recommendations

Users should:

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

3.0 Environmental Hazards

Apply this product only as directed on the label.

Reporting Ecological Incidents
For guidance on reporting ecological incidents, including death, injury, or harm to plants and animals, including bees and other non-target insects, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents or call 1-866-99BAYER (1-866-992-2937).

3.1 Water Hazards	**DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high-water mark. **DO NOT** contaminate water by cleaning of equipment or disposal of wastes.
3.2 Groundwater Advisory	This chemical is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.
3.3 Movement by Surface Runoff or Through Soil	**DO NOT** apply under conditions which favor runoff. **DO NOT** apply if soil is saturated with water or when rainfall that may exceed soil field capacity is forecast to occur within 48 hours. Under some conditions, dicamba has the potential for runoff several days after application. Poorly draining, wet, or erodible soils with readily visible slopes toward adjacent sensitive areas are more prone to produce runoff. When used on erodible soils, best management practices for minimizing runoff should be employed. Consult your local Soil Conservation Service for recommendations in your use area. **DO NOT** apply to impervious substrates such as paved or highly compacted surfaces in areas with high potential for groundwater contamination. Groundwater contamination may occur in areas where soils are permeable or coarse and groundwater is near the surface. **DO NOT** apply to soils classified as sand with less than 3% organic matter and where groundwater depth is shallow. To minimize the possibility of groundwater contamination, carefully follow the specified rates as affected by soil type in the Crop-specific Information section of this label.
3.4 Movement by Water Erosion of Treated Soil	Ensure treated areas have received at least 1/2-inch rainfall (or irrigation) before using tailwater for subsequent irrigation of other fields. **DO NOT** apply this product through any type of irrigation system including sprinkler, drip, flood, or furrow irrigation.
3.5 Point Source Management	To prevent point source contamination, **DO NOT** mix or load this pesticide product within 50 feet of wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. **DO NOT** apply pesticide product within 50 feet of wells. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas as described below. Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self-contained to prevent surface water flow over or from the pad. The pad capacity must be maintained at 110% that of the largest pesticide container or application equipment used on the pad and have sufficient capacity to contain all product spills, equipment or container leaks, equipment washwaters, and

	rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment. Care must be taken when using this product to prevent: a) back siphoning into wells, b) spills, or c) improper disposal of excess pesticide, spray mixtures, or rinsates. Check valves or anti-siphoning devices must be used on all mixing equipment.
3.6 Run-off Management	A variety of factors including soil type, slope, and weather conditions (e.g., rainfall) can influence volume and intensity of water running off the treated field. The applicator should evaluate factors and make appropriate adjustments when applying this product. Land management, agronomic practices, field conditions, and application measures that reduce, to the maximum extent practicable, runoff from treated fields, should be implemented by land managers/users of this product. Runoff/erosion mitigation is required. Refer to Section 10.0 Runoff and Erosion Mitigations.

4.0 Physical Hazards

DO NOT store or heat near oxidizing agents as a hazardous chemical reaction may occur.

DIRECTIONS FOR USE – Sections 5-16

5.0 Use Restrictions

RESTRICTED USE PESTICIDE

Only for retail sale to and use by Certified Applicators. NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This labeling must be in the user's possession during application. Read the entire label before using this product.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

For important crop safety information, refer to Section 12 Crop/Site Use Directions for each crop.

5.1 Agricultural Use Requirements

5.1 Agriculture Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses as well as individuals who handle agricultural pesticides. It contains requirements for training, decontamination, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE), notification to workers, and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval **(REI) of 24 hours**.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Shoes plus socks
- Chemical resistant gloves made of any waterproof material

5.2 Non-Agricultural Use Requirements

Not applicable.

6.0 Endangered Species

6.1 Endangered and Threatened Species Protection Requirements

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

7.0 Directions for Use

7.1 Product Description

7.1 Product Description

Stryax™ Herbicide is:

- A water-soluble formulation intended for control and suppression of many annual, biennial, and perennial emerged broadleaf weeds listed in Section 16.0 of this label. This product may be used for control of these weeds in cotton with XtendFlex® Technology and soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ soybean].
- Readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth. Stryax™ Herbicide interferes with plant growth hormones (auxins) resulting in death of many broadleaf weeds.
- A systemic herbicide, with limited soil activity on small seeded broadleaf weeds, including waterhemp, lambsquarters, and Palmer pigweed.

Check the registration status of this product in each state before using. The user must check http://www.stryaxapplicationrequirements.com no more than 7 days before application of this product for additional labeling and any additional state-specific labeling. Where applicable, users must comply with additional labeling found on this website.

7.2 Active Ingredient Conversion

7.2 Active Ingredient Conversion	
Stryax™ Herbicide (fl oz/A)	**Active Ingredient Equivalent (lb ae/A)**
22	0.5

7.3 Crops/Use Sites Listed

7.3 Crops/Use Sites	
Soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ soybean]	Cotton with XtendFlex® Technology

7.4 Requirements for All Uses

Refer to the specific use directions and restrictions in each crop table. The user must check http://www.stryaxapplicationrequirements.com no more than 7 days before application of this product for additional labeling and any additional state-specific labeling. Where applicable, users must comply with additional requirements found on this website.

APPLICATION REQUIREMENTS OVERVIEW

Read and follow all applicable restrictions, precautions, and directions on the container label and booklet and at www.stryaxapplicationrequirements.com. For product questions or inquiries and/or to report any nonperformance of this product against any labeled weed species, call 1-866-99BAYER (1-866-992-2937). See Section 8.0 for full application requirements.

7.4 REQUIREMENTS FOR ALL USES
Mandatory Training: Prior to applying in any calendar year, the certified applicator must complete dicamba-specific annual training for that year. Only certified applicators may apply this product. This product must not be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers. If state-approved OTT dicamba training is required and provided by the state where the certified applicator intends to apply this product, the certified applicator must complete that training before applying this product. Otherwise, the certified applicator must complete the dicamba-specific training provided by one of the following sources: a) a registrant of a dicamba product approved for over the top (OTT) use with dicamba-tolerant crops, or b) a state-authorized provider.
Record Keeping: Records must be created, maintained, and made available to federal and state officials in accordance with any applicable federal and state record keeping requirements. To the extent consistent with such requirements, records for this product include: 1. Full name of the certified applicator. 2. Certification number of the certified applicator. 3. Product name. 4. EPA registration number. 5. Total amount of this product applied. 6. Application month, day, and year. 7. *Start and Finish Times:* the time the applicator begins and the time the certified applicator completes applications of this product. 8. Location of the application. If maximum temperatures are forecasted to be 85 - <95˚F on the day of treatment or the day after treatment, the location and the percentage of treated dicamba-tolerant (DT) cotton and dicamba-tolerant soybean fields managed by grower in the county and the total number of acres of dicamba-tolerant cotton and dicamba-tolerant soybean managed by the grower in the county. 9. Crop or site receiving the application. 10. Size of area treated. 11. *Training Requirement:* proof that the certified applicator completed dicamba-specific training described in this section.

12. *Application Timing:* whether the certified applicator applied this product preemergence or postemergence in relation to the crop.
13. *Receipts of purchase:* receipts for the purchase of this product, and for the purchase of the required VRA and required DRA.
14. *Product Label:* A copy of the product labeling including state-specific labeling and any information that supplements the product label, such as relevant bulletins.
15. *Sensitive Areas, Sensitive Plants, and Residential Awareness*: Documentation that the applicator checked an applicable sensitive crop/specialty crop registry; and that the certified applicator surveyed all adjacent fields for any sensitive areas, sensitive plants, or residential areas surrounding the field prior to application. Date the applicator consulted the sensitive crop registry/specialty crop registry and the date the applicator surveyed for sensitive plants on adjacent areas and within the required spray buffer distance for downwind spray buffer distance calculations, and the name of the sensitive crop registry/specialty crop registry the certified applicator consulted.
16. *Spray Buffer Requirement:* Required downwind buffer distance (240 ft) determination and any areas included within the buffer distance determination. If the buffer distance was reduced, what qualifying mitigation practices support that reduction.
17. *Spray System Cleanout:* Documentation that the applicator complied with Section 15.0 Equipment Cleanout, including the date the applicator performed the required cleanout, and cleanout method that the applicator followed.
18. *Tank Mix Products:* a list of all products (pesticides, adjuvants, and other products) that the applicator tank mixed with this product for each application, including EPA registration numbers in the case of any pesticides.
19. *Required Tank Mix pH Buffering Volatility Reducing Agent:* the VRA and use rate that was tank mixed with this herbicide.
20. *Required Tank Mix Drift Reducing Agent:* the DRA and use rate that was tank mixed with this product.
21. *Nozzle Selection:* which spray nozzle the applicator used to apply this product, and the nozzle pressure the applicator set the sprayer to.
22. *Air Temperature:* the air temperature at boom height at the time the applicator starts applications of this product, and every time the spray tank is refilled, and documentation of a weather forecast by NOAA/National Weather Service on the day of application showing the forecasted maximum temperature prediction for the day of and day after application.
23. *Wind Speed and Direction:* the wind speed and direction at or above boom height at the time the applicator starts applications of this product, and the wind speed and direction at or above boom height every time the tank is refilled during application.
24. Runoff/Erosion Mitigation Points: List of how the required total of runoff/erosion mitigation points were achieved. The creation and keeping of these records count as ONE point toward the total points required for use of this product, in accordance with Runoff/Erosion Mitigation Relief Options as listed on EPA's Mitigation Menu website.

Required Adjuvants:

Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA).

The user must check http://www.stryaxapplicationrequirements.com for a list of qualified VRAs and VRA application rates.

Rate and Timing:

Cotton with XtendFlex® Technology (Dicamba-tolerant cotton):

This product may be applied Preplant, At-Planting, Preemergence, and Postemergence: A maximum of two applications of 0.5 lb acid equivalent (a.e.) dicamba (22 fluid ounces) per acre may be made up to 7 days prior to harvest. **DO NOT** apply more than 0.5 lb a.e. dicamba per acre per application. **DO NOT** exceed 1 lb a.e. dicamba per acre per calendar year from all combined dicamba-containing products.

Soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ Soybean] (Dicamba-tolerant soybean):
This product may be applied Preplant, At-Planting, Preemergence, and Postemergence: A maximum of two applications of 0.5 lb acid equivalent (a.e.) dicamba (22 fluid ounces) per acre may be made through R1. **DO NOT** apply after R1 or crop response may occur. **DO NOT** apply more than 0.5 lb a.e. dicamba per acre per application.

Pre-harvest interval (PHI) for Soybean Forage: **DO NOT** harvest or feed soybean forage until 7 days after application.

Pre-harvest interval (PHI) for Soybean Hay: **DO NOT** harvest or feed soybean hay until 7 days after application.

DO NOT exceed 1 pound acid equivalent (a.e.) dicamba per acre per calendar year from all combined dicamba-containing products.

For details, see Section 12.0 Crop/Site Use Directions.

Spray volume: Apply a minimum of 15 gallons of spray solution per acre.

Tank mixing: See Section 14.0 Tank Mixing Directions. Refer to all product labels to determine mix order or perform a mix compatibility test.

Application Equipment:

Application by air is prohibited.

Apply only using ground equipment.

Spray system equipment cleanout: Ensure entire sprayer system is properly cleaned in accordance with Section 15.0 before and after application.

Droplet requirement: Apply this product with nozzles calibrated to apply coarse or coarser droplets only in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).

Spray boom height: Maximum boom height is 24 inches above target pest or crop canopy.

Ground speed: Do not allow application equipment to exceed 15 mph while applying this product.

Environmental Conditions:

Wind speed: Apply when wind speed, measured at boom height, is between 3-10 mph. **DO NOT** apply if wind speed is below 3 mph or above 10 mph.

Inversions: **DO NOT** make applications at night. Applications may only be made starting one hour after sunrise and ending two hours before sunset. **DO NOT** apply this product outside of this time frame.

DO NOT spray during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke

from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
Downwind Requirements: *Sensitive plants downwind*: **DO NOT** apply if sensitive plants, as defined in Section 9.0 Spray Drift, are planted on an adjacent downwind field or area. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas. *Downwind buffer*: After determining no adjacent sensitive plants are downwind, the applicator must maintain a 240-foot downwind buffer between the last treated row and the nearest downwind field edge. The practices in the buffer reduction Table 9.2 may be used to reduce the size of the buffer. See Section 9.1 Spray Drift Buffer Distance for more information.
Management of Runoff/Erosion: **DO NOT** apply during rain. **DO NOT** apply when soil in the area to be treated is saturated (if there is standing water on the field or if water can be squeezed from soil). Avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours). You must achieve a minimum of **THREE** runoff/erosion mitigation points for the crop uses listed on this label unless otherwise stipulated in Section 10.0 Runoff and Erosion Mitigations.

7.5 Restrictions for All Uses

7.5 Restrictions for all uses

DO NOT tank mix ammonium sulfate (AMS) or any products that contain AMS with Stryax™ Herbicide.

DO NOT apply more than 22 fl oz/A (0.5 lb dicamba ae/A) per application.

DO NOT exceed 44 fluid ounces (1 pound acid equivalent (a.e.) dicamba) of Stryax™ Herbicide per acre per year.

DO NOT exceed 1 pound a.e. dicamba per acre per year from all dicamba applications if more than one dicamba-containing product is applied to the same site within the same year.

If temperatures are forecasted to be 95˚F or above either on the day of treatment or the day after treatment, **DO NOT** apply this product.

DO NOT apply without DRA and VRA.

DO NOT apply if wind speed is less than 3 mph or more than 10 mph.

DO NOT apply through any type of irrigation equipment. **DO NOT** treat irrigation ditches or water used for crop irrigation or domestic purposes.

DO NOT apply to crops under stress due to lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, insects, or widely fluctuating temperatures as injury may result.

DO NOT apply this product if sensitive plants are planted on an adjacent downwind field or area.

Ensure treated areas have received at least one-half inch rainfall (or irrigation) before using tailwater from flood or furrow irrigation for subsequent irrigation of other fields.

Application by air is prohibited. Apply only using ground equipment.

Restricted entry interval (REI): 24 hours.

7.6 Crop Rotations

When counting days from the application of this product, **DO NOT** count days when the ground is frozen. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

The interval between application and planting rotational crop is given below. Planting at intervals less than specified below may result in crop injury.

7.6 Crop Rotations		
Stryax™ Herbicide RATE per acre per year	**CROPS**	**ROTATION INTERVALS**
One application of 22 fl oz/A	Soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ Soybean]	None
	Cotton seed with XtendFlex® Technology (including Bollgard® 3 XtendFlex® Cotton, Bollgard II® XtendFlex® Cotton, or XtendFlex® Cotton)	None
	All other crops not listed	No planting restrictions apply beyond 120 days after application East of the Mississippi River wait a minimum of 30 days before planting West of the Mississippi River wait a minimum of 45 days before planting. In areas with less than 30 inches of annual rainfall wait a minimum of 100 days before planting (furrow and/or overhead irrigation can be included in rainfall determination).
Two applications of 22 fl oz/A	Soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ Soybean]	None
	Cotton seed with XtendFlex® Technology (including Bollgard® 3 XtendFlex® Cotton, Bollgard II® XtendFlex® Cotton, or XtendFlex® Cotton)	None
	All other crops not listed	In areas with less than 30 inches of annual rainfall wait a minimum of 180 days before planting crops (furrow and/or overhead irrigation can be included in rainfall determination). In areas with 30 inches or more annual rainfall: wait a minimum of 120 days after application before planting.

7.7 Weed Resistance and Integrated Programs

7.7 Weeds Resistance and Integrated Programs

The dicamba active ingredient in Stryax™ Herbicide is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to Stryax™ Herbicide and other Group 4 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance, take one or more of the following steps:

Limit cultivation and/or mechanical tillage within 7 days after application, as this may result in reduced efficacy and promote regrowth of treated weeds.

Rotate the use of Stryax™ Herbicide within a growing season and among growing seasons with different herbicide groups (other than Group 4) that control the same weeds.

Use tank mixtures with herbicides from a different herbicide group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.

Implement an integrated weed management program that guides herbicide use through regular scouting and historical data on herbicide applications and performance. The program should also incorporate tillage or other mechanical controls, cultural practices (such as increased crop seeding rates and precision fertilizer timing to benefit crops over weeds), biological methods (like weed-suppressive crops), or other complementary strategies such as crop rotation.

Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and by planting clean seed.

If a weed pest population continues to progress after treatment with this product, switch to another management strategy or herbicide with an effective mode of action, if available, and contact Bayer at 1-866-99BAYER (1-866-992-2937).

Contact your local extension specialist or certified crop advisor for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.

For further information or to report suspected resistance contact Bayer at 1-866-99BAYER (1-866-992-2937).

Management of Dicamba-Resistant Biotypes

Appropriate testing is critical to determine if a weed is resistant to dicamba. Contact your Bayer representative (1-866-99BAYER) to determine if resistance in any particular weed biotype has been confirmed in your area or visit www.iwilltakeaction.com or www.weedscience.org.

The following agronomic practices can reduce the spread of confirmed dicamba-resistant biotypes, particularly if pursued as soon as signs of resistance are observed:

If a naturally occurring resistant biotype is present in your field, this product may be tank mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control (See Section 14.0 Tank Mixing Directions for more information).

Cultural and mechanical control practices (e.g., crop rotation or tillage) can also be used as appropriate.

Scout treated fields after herbicide applications and control weed escapes, including resistant biotypes, before they set seed.

7.8 Best Management Practices for Pollinator Programs

Visit https://www.epa.gov/pollinator-protection/tools-and-strategies-pollinator-protection for tools and strategies for pollinator protections.

8.0 Application Method Instructions and Information

8.G.0 Ground (G) Application Directions

APPLY THIS PRODUCT USING PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING THE REQUIRED VOLUMES.

Stryax™ Herbicide may be applied to actively growing weeds as broadcast, in-row hooded, banded, lay-by or directed applications using water as a carrier. For best results, treat weeds early when they are relatively small (less than 4 inches). Timely application to small weeds early in the season will improve control and reduce weed competition.

Include a VRA and DRA with every application.

8.G.0 Ground (G) Application Directions	
8.G.1 Method of Application	Ground Application (Including Broadcast and In-Row).
8.G.2 Boom height above target	**DO NOT** exceed 24 inches above target pest or crop canopy.
8.G.3 Droplet size	Use spray nozzles that provide a coarse or coarser droplets only.
8.G.4 Water volume	**Broadcast Applications:** Use a minimum of 15 gallons of spray solution per broadcast acre for optimal performance. Use 20 gallons per acre or greater when treating dense weed canopy/vegetation. **Banding Applications:** When applying **Stryax Herbicide** by banding, use the formulas to calculate the amount of herbicide and water volume needed. $\frac{\text{Bandwidth (inches)}}{\text{Row width (inches)}} \times \text{Broadcast rate per acre} = \text{Banding herbicide rate per acre}$ $\frac{\text{Bandwidth (inches)}}{\text{Row width (inches)}} \times \text{Broadcast volume per acre} = \text{Banding water volume per acre}$
8.G.5 Wind speed	Apply when wind speed, measured at boom height, is between 3-10 mph. **DO NOT** apply if wind speed is below 3 mph or above 10 mph.
8.G.6 Sprayer speed	**DO NOT** allow application equipment to exceed 15 mph while applying this product.

8.G.7 Temperature and Humidity	**DO NOT** apply at temperatures ≥ 95° F. If temperatures are forecasted to be 85 - <95° F on the day of treatment or the day after treatment, **DO NOT** treat more than 50% of the total number of dicamba-tolerant soybean AND dicamba-tolerant cotton acres managed by the grower within the county within one day. See Section 11.0 Mandatory Volatility Mitigations for more information.
8.G.8 Temperature inversions	**DO NOT** make applications at night. Applications may only be made starting one hour after sunrise and ending two hours before sunset. **DO NOT** apply this product outside of this time frame. **DO NOT** spray during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
8.G.9 Spray drift buffer	**DO NOT** apply if sensitive plants are planted on an adjacent downwind field or area. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas. See section 9.0 for a list of sensitive plants. After determining no adjacent sensitive plants are downwind, the applicator must maintain a 240-foot downwind buffer between the last treated row and the nearest downwind field edge unless applying a qualifying practice listed in the table in Section 9.2 Spray Drift Buffer Reductions below. More information and definitions of the qualifying practices can be found at https://www.epa.gov/pesticides/mitigation-menu-measure-descriptions. After determining your total % reduction in the buffer distance, determine the distance that may be reduced in feet, subtract that distance from the 240-foot buffer distance, then round to the nearest 5-foot increment for your final buffer distance. No downwind buffer is required if: Use of the buffer reduction options results in a buffer reduction ≥100%. Use of the buffer reduction options results in a buffer <10 feet, after rounding to the nearest 5 ft increment.
8.G.10 Buffer distance to well	**DO NOT** apply this pesticide product within 50 feet of wells. This setback does not apply to properly capped or plugged abandoned wells.

9.0 Spray Drift

Avoiding spray drift at the application site is the responsibility of the applicator. The spray system and weather-related factors determine the potential for spray drift. The applicator is responsible for considering these factors when making application decisions to avoid spray drift onto nontarget areas. Applicators must follow application requirements to avoid spray drift hazards, including those found in this labeling and applicable state and local regulations and ordinances. Where states have more stringent regulations, they must be observed.

All application equipment must be properly maintained and calibrated using appropriate carriers.

DO NOT allow herbicide solution to drip, physically drift, or splash onto desirable vegetation because injury to desirable broadleaf plants could result. The following physical spray drift management requirements must be followed.

DO NOT apply if sensitive plants are planted on an adjacent downwind field or area. **DO NOT** spray this product when wind is blowing toward adjacent sensitive plants, as defined below.

It is important for the applicator to be aware that wind direction may vary during the application. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas.

Sensitive plants in agricultural and/or residential settings include, but are not limited to:

- Non-Dicamba Tolerant (DT) soybeans
- Non-DT cotton
- Cucumber and melons, including all members of EPA Crop Group 9: Cucurbit Vegetables
- Flowers
- Fruit trees
- Grapes
- Ornamentals including greenhouse-grown and shadehouse-grown broadleaf plants and ornamental plants in a residential area
- Peanuts
- Peas and beans, including all members of EPA Crop Group 6: Legume Vegetables (Succulent or Dried) and EPA Crop Group 6-22: Legume Vegetable Group with the exception of DT soybeans
- Peppers, tomatoes, and other fruiting vegetables, including all members of EPA Crop Group 8-10: Fruiting Vegetable Group
- Potato
- Sugar beets
- Sweet potato
- Tobacco

Sensitive crop registries can provide additional information about sensitive crops and sensitive areas. The applicator must check an applicable sensitive crop/specialty crop registry; and document that the applicator surveyed all adjacent fields for any sensitive areas, sensitive crops, or residential areas surrounding the field prior to application. See Section 7.4 Record Keeping for details. If you have questions regarding sensitive crop registries, check https://fieldwatch.com/ prior to application.

9.1 Spray Drift Buffer Distance

9.1 Spray Drift Buffer Distance
After determining no adjacent sensitive plants are downwind, the applicator must maintain a 240-foot downwind buffer between the last treated row and the nearest downwind field edge. The practices in the buffer reduction table, Table 9.2 below, may be used to reduce the size of the buffer. More information and definitions of the qualifying practices can be found at https://www.epa.gov/pesticides/mitigation-menu-measure-descriptions. After determining your total % reduction in the buffer distance, determine the distance that may be reduced in feet, subtract that distance from the 240-foot buffer distance, then round to the nearest 5-foot increment for your final buffer distance. No downwind buffer is required if:

Use of the buffer reduction options results in a buffer reduction ≥100%.
Use of the buffer reduction options results in a buffer <10 feet, after rounding to the nearest 5 ft increment.

9.2 Spray Drift Buffer Reductions

9.2 Spray Drift Buffer Reduction Options*	Qualifying Practice	Reduction in Buffer Distance**
Small field size (≤10 acre) /Reduce treatment area	Treatment area of 1/10 acre to 1 acre	75%
	Treatment area of >1 acre to 4 acres	35%
	Treatment area of >4 acres to 10 acres)	15%
Downwind Drift Barrier	Basic windbreak/hedgerow/artificial screen	50%
	Advanced windbreak/hedgerow/artificial screen	75%
Use of directed sprayer equipment	Over-the-top Hooded Sprayer	50%
	Row-middle Hooded Sprayer	75%
	Sprays below crop canopy using drop nozzles or layby applications (difference between the crop height and release height is ≥ 1 ft, and that there are more than 4 consecutive rows of crop on the field that meet this parameter)	50%

* Descriptions of spray drift buffer reduction measures are available on EPA's website at: https://www.epa.gov/pesticides/mitigation-menu-measure-descriptions

**Buffer reduction measures are additive in nature. For example, a 50% reduction in buffer distance for one measure plus a 15% reduction in buffer for another measure, when used in combination, results in an overall 65% reduction in an identified buffer.

The following managed areas may be included in the buffer if they are immediately adjacent/contiguous to the treated field in the downwind direction and people are not present in those areas (including inside closed buildings/structures). Buffer reduction options do not apply to these managed areas, as they are included in the buffer distance.

- Untreated portions of the treated field.
- Roads, paved or gravel surfaces, mowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area.
- Areas present and/or maintained as a drift buffer reduction measure as listed on the buffer reduction table above. Examples include vegetative windbreaks and hedgerows.
- On-farm contained irrigation water resources that are not connected to adjacent water bodies, including on-farm irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, farm ponds, and tailwater collection ponds.
- Areas present and/or maintained as a runoff/erosion measure as listed on EPA's Mitigation Menu website. Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement.

9.3 Spray Drift Management

9.3.1 MANDATORY SPRAY DRIFT MANAGMENT

DO NOT apply if sensitive plants are planted on an adjacent downwind field or area. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas. Refer to section 9.0 for list of sensitive plants in agricultural and/or residential settings.

During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes), must register between 3 and 10 miles per hour. **DO NOT** apply if wind speed is below 3 mph or above 10 mph.

Wind speed and direction must be measured on location using a windsock or anemometer (including systems to measure wind speed or velocity using application equipment). This information must be measured before the application begins and every time the spray tank is refilled. Wind direction may vary during the application. Downwind buffers must be adjusted according to changing wind direction.

Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.

DO NOT release spray at a height greater than 2 feet above the ground or crop canopy.

Certified applicators must select nozzle and pressure that deliver coarse or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).

Inversions:

- **DO NOT** make applications at night. Applications may only be made starting one hour after sunrise and ending two hours before sunset. **DO NOT** apply this product outside of this time frame.
- **DO NOT** spray during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

9.3.2 SPRAY DRIFT ADVISORIES

THE CERTIFIED APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

IMPORTANCE OF DROPLET SIZE
An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size:

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

- Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

BOOM HEIGHT
For ground equipment, the boom should remain level with the crop and have minimal bounce.

HOODED (OR SHIELDED) SPRAYERS
Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY
When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

WIND
Drift potential generally increases with wind speed. Certified applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

MEASURING WIND SPEED AND WIND DIRECTION
Best Management Practices for measuring wind speed and direction of wind direction:

- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the permissible range.
- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:
    - Relying on equipment on the application equipment that measures wind speed.
    - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground certified applicators should stop at least every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, certified applicators would not have to stop to take measurements.
    - Using a windsock. Wind can be estimated with a windsock using the stripes on a windsock. The certified applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Certified applicators should look at the sock at least every hour to estimate wind speed and direction.
    - Using an aircraft smoke system. Laying down several puffs of smoke along different lines using an aircraft smoke system can provide an accurate view of what the wind speed and direction for the application.
- Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

10.0 Runoff and Erosion Mitigations

10.0 Runoff and Erosion Mitigations
DO NOT apply during rain. **DO NOT** apply when soil in the area to be treated is saturated (if there is standing water on the field or if water can be squeezed from soil). Avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours). **MANDATORY RUNOFF MITIGATION** Certified applicators must access and search Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If

you are located inside a PULA, follow the instructions in the "Inside a PULA" section below and in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below.

Outside a PULA:
THREE mitigation points are required for all crops listed on this label. Follow the steps below to determine which applications need to achieve points, determine your eligibility for runoff/erosion mitigation relief, and determine options to achieve mitigation points.

Inside PULAs:
SIX runoff/erosion mitigation points are required inside specific PULAs for all crop uses. Follow the steps below to determine which applications need to achieve the points, determine eligibility for runoff/erosion mitigation relief, and determine options to achieve runoff/erosion mitigation points.

Steps to Achieve Points:
Step A. To achieve the runoff/erosion mitigation points specified above, visit EPA's mitigation menu website (http://www.epa.gov/pesticides/mitigation-menu) to determine which applications need to achieve points and for a full list of mitigation and mitigation relief options.

Step B. Determine if you are eligible for runoff/erosion mitigation relief. Runoff/erosion mitigation is NOT needed if certain field/application parameters are present at the time of application (*e.g.*, subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, etc). Refer to the mitigation menu for a complete list of field/application parameters.

Step C. If the application site does not meet the field/application parameters specified on EPA's mitigation menu website, choose among the runoff/erosion mitigation and/or runoff/erosion mitigation relief options on EPA's mitigation menu website to meet or exceed the required points noted on this label before applying this product.

Step D. To achieve runoff/erosion mitigation points for the application, the mitigation and mitigation relief measures must be:

- Employed in accordance with the instructions and descriptions on EPA's Mitigation Menu Website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's Mitigation Menu Website.

Step E. Additional restrictions may be present on the labeling or in bulletins—always follow the most restrictive instructions across the labeling and any bulletins. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between all the tank-mixed products' labeling and bulletins.

EPA may periodically update the Mitigation Menu Website, for example, by adding new mitigation measures or updating a mitigation measure description.

CROP	Runoff and Erosion Mitigation Points Needed	
	Nationally	Pesticide Use Limitation Area (PULA)
Soybean	3	6
Cotton	3	6

11.0 Mandatory Volatility Mitigations

DO NOT tank mix ammonium sulfate (AMS) or any products that contain AMS with Stryax™ Herbicide. Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) and a qualified pH buffering Volatility Reduction Agent (VRA).

The user must check http://www.stryaxapplicationrequirements.com for a list of qualified VRAs and of VRA application rates.

Temperature Restrictions:

- On the date of application, certified applicator must obtain a daily high temperature forecast as predicted by the NOAA/National Weather Service for the day of and the day after application. Detailed National Weather Service forecasts for local weather conditions may be obtained on-line at www.weather.gov. In addition, the certified applicator must check the temperature at boom height in the field when an application begins and every time the spray tank is refilled. If the measured temperature is higher than forecasted for the day, the certified applicator must follow the label directions corresponding to that measured temperature. If the measured temperature is below the forecasted temperature, application must follow label directions corresponding to the temperatures forecasted. The highest temperature on the day of application or forecasted for the day after application is the value that must be used to determine the label restrictions for that application.
- If temperatures are forecasted to be 95˚F or above either on the day of treatment or the day after treatment, **DO NOT** apply this product. If the measured temperature at the application site is above 95˚F at any point during the planned day of application, **DO NOT** begin application or STOP application if it has already begun.
- If temperatures are forecasted to be 85-<95˚F at the application site either on the day of treatment or the day after treatment, application of this product is limited to 50% or less of the total number of acres of dicamba-tolerant soybean AND dicamba-tolerant cotton under production by the grower within the county. For purposes of this label, “grower” is defined as the individual or business entity managing the crop on the land on which the product is being applied. **DO NOT** treat additional/remaining dicamba-tolerant soybean AND dicamba-tolerant cotton acres managed by the grower within the county the day of application or the day after application. Remaining untreated 50% of DT crop acreage managed by the grower may be treated on the third day after initial treatment. All label restrictions including temperature-based restrictions apply to subsequent treatments.
- If temperatures are forecasted to be <85˚F, the application has begun, the measured temperature at the application site is 85-<95˚F at any point, and more than 50% of the total number of dicamba-tolerant soybean AND dicamba-tolerant cotton acres managed by the grower within the county have been treated: STOP application immediately. If less than 50% has been treated at the time that the measured temperature exceeds the forecasted <85˚F temperature, the application plan for the day must be modified to comply with the 50% limitation on the treatment of the grower’s managed dicamba-tolerant soybean and dicamba-tolerant cotton acres within the county.

11. Volatility Mitigations	
Maximum Forecasted Air Temperature*	**Rates of Stryax™ Herbicide + Required Adjuvants** + Additional Mitigation**
< 85° F	0.5 lb a.e. dicamba (22 fl oz) + VRA + DRA
≥ 85 °F - < 95° F	0.5 lb a.e. dicamba (22 fl oz) + VRA + DRA **PLUS DO NOT** treat more than 50% of DT cotton and DT soybean acres managed by grower within the county***
≥ 95 °F	No applications allowed

*Maximum temperature must be forecasted by NOAA/National Weather Service not to exceed what is noted for both the day of application and the day after application. The highest temperature (forecasted or measured) on the day of application or the day after application is the value that must be used to determine the label restrictions for that application.
** The user must check http://www.stryaxapplicationrequirements.com for a list of qualified VRAs and rates of VRA application.
*** **DO NOT** apply these products to the untreated 50% of DT crop acreage the day of or the day following initial treatment. Remaining untreated 50% of DT crop acreage may be treated the third day after initial treatment. All restrictions apply for subsequent treatments. The “grower” is the individual or business entity managing the crop on the land on which the product is being applied.

If the grower is not the applicator, it is the responsibility of the applicator to ensure that they have communicated with the grower to obtain information on the number of DT cotton and DT soybean acres managed by the grower.

12.0 Crop/Site Use Directions

CROPS WITH XTEND® TECHNOLOGY [AND VYCONIC™ SOYBEAN]

Cotton with XtendFlex® Technology (including Bollgard II® XtendFlex® COTTON, Bollgard® 3 XtendFlex® COTTON, or Bollgard® 3 ThryvOn with XtendFlex® Technology) and soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ soybean] CONTAIN A PATENTED GENE THAT PROVIDES TOLERANCE TO DICAMBA, THE ACTIVE INGREDIENT IN THIS PRODUCT. THIS PRODUCT MAY CAUSE SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS IF APPLIED TO COTTON AND SOYBEAN THAT ARE NOT DICAMBA- TOLERANT, INCLUDING COTTON AND SOYBEAN WITH A TRAIT ENGINEERED TO CONFER TOLERANCE TO AUXIN HERBICIDES OTHER THAN DICAMBA. FOLLOW THE REQUIREMENTS SET FORTH HEREIN TO PREVENT SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS. CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS THAT **DO NOT** CONTAIN A DICAMBA TOLERANCE GENE OR ARE NOT NATURALLY TOLERANT TO DICAMBA, COULD RESULT IN SEVERE PLANT INJURY OR DESTRUCTION.

Stryax™ Herbicide is approved by U.S. EPA for use in cotton with XtendFlex® Technology and in soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ soybean] only in the following states: Alabama, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

Information on cotton with XtendFlex® Technology and on soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ soybean] can be obtained from your seed supplier or Bayer representative. Cotton with XtendFlex® Technology and soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ soybean] must be purchased from an authorized licensed seed supplier.

Cotton with XtendFlex® Technology, soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ soybean], and methods of controlling weeds and applying dicamba in cotton with XtendFlex® Technology and in soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ soybean] are protected under U.S. patent law. No license to use cotton with XtendFlex® Technology or soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ soybean] is granted or implied with the purchase of this herbicide product. Cotton with XtendFlex® Technology and soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ soybean] are owned by Bayer and a license must be obtained from Bayer before using it. Contact your Authorized Bayer Retailer for information on obtaining a license to use cotton with XtendFlex® Technology and soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ soybean].

12.1: Dicamba-Tolerant Cotton

12.1: DT Cotton			
Product Rate (fl oz/A)	**Application Timing**	**Pests Controlled**	**Use Directions**
22	Preplant, at-planting, preemergence and postemergence	See Section 16.0	A maximum of **two** applications of 0.5 lb a.e. dicamba (22 fl oz) per acre may be made up through 7 days prior to harvest.
Tank Mixtures			

Required	Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check http://www.stryaxapplicationrequirements.com for a list of qualified VRAs and VRA application rates.
May be mixed with	Refer to all product labels to determine mix order or perform a mix compatibility test.
Prohibited	**DO NOT** tank mix ammonium sulfate (AMS) or any products that contain AMS with Stryax™ Herbicide.

Use Restrictions					
Application Rate Restrictions Per Acre					
Preemergence Maximum Rate	**Postemergence Maximum Rate**	**Seasonal Maximum Rate**	**Yearly Maximum Rate**	**Maximum Number of Applications**	**Minimum Application Interval**
22 fl oz	22 fl oz	44 fl oz	44 fl oz	2	7 days

Maximum Application Per Year
DO NOT exceed 44 fluid ounces (1 pound acid equivalent (a.e.) dicamba) of Stryax™ Herbicide per acre per year. **DO NOT** exceed 1 pound acid equivalent (a.e.) dicamba per acre per calendar year from all combined dicamba-containing products.
Last Application Growth Stage
Applications may be made up to 7 days prior to harvest.
Geographic Restrictions
Check the registration status of this product in each state before using.
State-Specific Restrictions
Check the registration status of this product in each state before using. The user must check http://www.stryaxapplicationrequirements.com no more than 7 days before application of this product for additional labeling and any additional state-specific labeling. Where applicable, users must comply with additional requirements found on this website.
Grazing Restrictions
Cotton gin byproducts may be fed to livestock.

12.2 Dicamba-Tolerant Soybean

12.2: DT Soybean			
Product Rate (fl oz/A)	**Application Timing**	**Pests Controlled**	**Use Directions**
22	Preplant, at-planting, preemergence and postemergence	See Section 16.0	A maximum of **two** applications of 0.5 lb a.e. dicamba (22 fl oz) per acre may be made up through R1. **DO NOT** apply after R1 or crop response may occur.

Tank Mixtures	
Required	Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check http://www.stryaxapplicationrequirements.com for a list of qualified VRAs and VRA application rates.
May be mixed with	Refer to all product labels to determine mix order or perform a mix compatibility test.
Prohibited	**DO NOT** tank mix ammonium sulfate (AMS) or any products that contain AMS with Stryax™ Herbicide.
Use Restrictions	

Application Rate Restrictions Per Acre					
Preemergence Maximum Rate	**Postemergence Maximum Rate**	**Seasonal Maximum Rate**	**Yearly Maximum Rate**	**Maximum Number of Applications**	**Minimum Application Interval**
22 fl oz	22 fl oz	44 fl oz	44 fl oz	2	7 days
Maximum Application Per Year					
DO NOT exceed 44 fluid ounces (1 pound acid equivalent (a.e.) dicamba) of Stryax™ Herbicide per acre per year. **DO NOT** exceed 1 pound acid equivalent (a.e.) dicamba per acre per calendar year from all combined dicamba-containing products.					
Last Application Growth Stage					
DO NOT apply after R1 or crop response may occur.					
Geographic Restrictions					
Check the registration status of this product in each state before using.					
State-Specific Restrictions					
Check the registration status of this product in each state before using. The user must check http://www.stryaxapplicationrequirements.com no more than 7 days before application of this product for additional labeling and any additional state-specific labeling. Where applicable, users must comply with additional requirements found on this website.					
Grazing Restrictions					
Forage	Allow at least 7 days between final application and forage harvest or feeding of soybean forage.				
Hay	Allow at least 7 days between final application and hay harvest or feeding of soybean hay.				

13.0 Adjuvants

Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check http://www.stryaxapplicationrequirements.com for a list of qualified VRAs and VRA application rates.

When a specific adjuvant product such as a Drift Reduction Adjuvant (DRA) is to be used with this product, Bayer CropScience recommends the use of those adjuvants certified by the Council of Producers & Distributors of Agrotechnology (CPDA).

14.0 Tank Mixing Directions

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Refer to all product labels to determine mix order or perform a mix compatibility test.

Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check http://www.stryaxapplicationrequirements.com for a list of qualified VRAs and VRA application rates.

DO NOT use PVA (polyvinyl acetate) packets in a tank mix with products that contain boron or release free chlorine. The resultant reaction of PVA and boron or free chlorine is a plastic that is not soluble in water or solvents.

DO NOT tank mix ammonium sulfate (AMS) or any products that contain AMS with Stryax™ Herbicide.

14.1 Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

- For 15 gallons per acre spray volume, use 2.5 cups (591.5 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
- Add components in the sequence indicated in the Mixing Order section below using 2 teaspoons for each pound or 1 teaspoon for each pint of labeled use rate per acre.
- Cap the jar and invert 10 cycles between component additions.
- When the components have all been added to the jar, let the solution stand for 15 minutes.
- Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface; fine particles that precipitate to the bottom; or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, then do not mix the ingredients in the same tank.

14.2 Mixing Order

Always read and follow label directions for all products in the tank mixture. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

1. Ensure application and mixing equipment are clean and in proper working order.
2. Water - Begin by agitating a thoroughly **clean sprayer** tank three-quarters full of clean water.
3. Agitation - Maintain constant agitation throughout mixing and application.
4. Drift Reducing Adjuvants (DRA).
5. Inductor - If an inductor is used, rinse it thoroughly after each component has been added.
6. Products in PVA bags - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
7. Water-dispersible products (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions).
8. Water-soluble products.
9. Emulsifiable concentrates (such as oil concentrate when applicable).
10. Water-soluble additives (when applicable).
11. Add remaining quantity of water.

Maintain constant agitation during application

15.0 Equipment Cleanout

The applicator must ensure that the spray system used to apply this product is clean before using this product. Failure to properly clean the entire spray system can result in inadvertent contamination of the spray system.

Inadvertent contamination can also occur in equipment used for bulk product handling and mixing prior to use in the spray system. Care should be taken to reduce contamination not only in the spray system but in any equipment used to transfer or deliver product. For example, bulk handling and mixing equipment containing this product should be segregated when possible to reduce potential for cross-contamination. Consider using block and check valves to avoid backflow during transfer. Piping should be reviewed to ensure there is not potential for product build-up. Dedicated nurse trucks and tender equipment should be used when possible.

Contamination of the spray system may cause injury to non- dicamba-tolerant soybeans and other sensitive crops. Clean equipment immediately after using this product, using a triple rinse procedure as follows:

1. After spraying, drain the sprayer (including boom and lines) immediately. **DO NOT** allow the spray solution to remain in the spray boom lines overnight prior to flushing.
2. Fill tank with clean water (at least 10% volume) and flush tank, hoses, boom, and nozzles. Ensure agitation for 15 minutes and then spray out solution through boom. If equipped, open boom ends and flush.
3. Inspect and clean all strainers, screens, and filters.
4. Fill tank with clean water (at least 10% of volume) and prepare a cleaning solution with a commercial detergent or sprayer cleaner or ammonia according to the manufacturer's directions.
5. Take care to wash all parts of the tank, including the inside top surface. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
6. Flush hoses, spray lines, and nozzles for at least 1 minute with the cleaning solution.

7. Remove nozzles, screens, and strainers and clean separately in the cleaning solution after completing the above procedures.
8. Drain pump, filter, and lines.
9. Repeat steps 2 and 3.
10. Rinse the complete spraying system with clean water.
11. Clean and wash off the outside of the entire sprayer and boom.
12. All rinse water must be disposed of in compliance with local, state, and federal guidelines.

16.0 Weeds Controlled or Suppressed

General Weed List, Including ALS-, Glyphosate-, and Triazine-Resistant Biotypes

16.1 ANNUAL WEEDS		
Alkanet	Flixweed	Pusley, Florida
Amaranth, Palmer, Powell, Spiny	Fumitory	Radish, Wild
Aster, Slender	Goosefoot, Nettleleaf	Ragweed, Common, Giant (Buffaloweed), Lance-Leaf
Bedstraw, Catchweed	Hempnettle	Rocket, London, Yellow
Beggarweed, Florida	Henbit	Rubberweed, Bitter (Bitterweed)
Broomweed, Common	Jacobs-Ladder	Salsify
Buckwheat, Tartary, Wild	Jimsonweed	Senna, Coffee
Buffalobur	Knawel (German Moss)	Sesbania, Hemp
Burclover, California	Knotweed, Prostrate	Shepherdpurse
Burcucumber	Kochia	Sicklepod
Buttercup, Corn, Creeping, Roughseed, Western Field	Ladysthumb	Sida, Prickly (Teaweed)
Carpetweed	Lambsquarters Common	Smartweed, Green, Pennsylvania
Catchfly, Nightflowering	Lettuce, Miners, Prickly	Sneezeweed, Bitter
Chamomile, Corn	Mallow, Common, Venice	Sowthistle, Annual, Spiny
Chevil, Bur	Marestail (Horseweed)	Spanish Needles
Chickweed, Common	Mayweed	Spikeweed, Common
Clovers	Morningglory, Ivyleaf, Tall	Spurge, Prostrate, Leafy
Cockle, Corn, Cow, White	Mustard, Black, Blue, Tansy, Treacle, Tumble, Wild, Yellowtops	Spurry, Corn
Cocklebur, Common	Nightshade, Black, Cutleaf	Starbur, Bristly
Copperleaf, Hophornbeam	Pennycress, Field (Fanweed, Frenchweed, Stinkweed)	Starwort, Little
Cornflower (Bachelor Button)	Pepperweed, Virginia (Peppergrass)	Sumpweed, Rough
Croton, Tropic, Woolly	Pigweed, Prostrate, Redroot (Carelessweed), Rough, Smooth, Tumble	Sunflower, Common (Wild), Volunteer
Daisy, English	Pineappleweed	Thistle, Russian
Dragonhead, American	Poorjoe	Velvetleaf
Eveningprimrose, Cutleaf	Poppy, Red-horned	Waterhemp, Common, Tall
Falseflax, Smallseed	Puncturevine	Waterprimrose, Winged
Fleabane, Annual	Purslane, Common	Wormwood

16.2 BIENNIAL WEEDS		
Burdock, Common	Gromwell	Starthistle, Yellow
Carrot, Wild (Queen Anne's Lace)	Knapweed, Diffuse, Spotted	Sweetclover
Cockle, White	Mallow, Dwarf	Teasel
Eveningprimrose, Common	Plantain, Bracted	Thistle, Bull, Milk, Musk, Plumeless
Geranium, Carolina	Ragwort, Tansy	

16.3 PERENNIAL WEEDS		
Alfalfa	Garlic, Wild	Smartweed, Swamp
Artichoke, Jerusalem	Goldenrod, Canada, Missouri	Snakeweed, Broom
Aster, Spiny, Whiteheath	Goldenweed, Common	Sorrel, Red (Sheep Sorrel)
Bedstraw, Smooth	Hawkweed	Sowthistle, Perennial
Bindweed, Field, Hedge	Henbane, Black	Spurge, Leafy
Blueweed, Texas	Horsenettle, Carolina	Sundrops
Bursage, Woollyleaf (Bur Ragweed, Povertyweed)	Ironweed	Thistle, Canada, Scotch
Buttercup, Tall	Knapweed, Black, Diffuse, Russian, Spotted	Toadflex, Dalmatian
Campion, Bladder	Milkweed, Climbing, Common, Honeyvine, Western Whorled	Tropical Soda Apple
Chickweed, Field, Mouseear	Nettle, Stinging	Trumpetcreeper (Buckvine)
Chicory	Nightshade, Silverleaf (White Horsenettle)	Vetch
Clover, Hop	Onion, Wild	Waterhemlock, Spotted

17.0 Storage and Disposal

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. **DO NOT** allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal.

17.1 Pesticide Storage

Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination.

17.2 Pesticide Disposal

To avoid wastes, use all material in this container, including rinsate, by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. All disposal must be in accordance with applicable federal, state, and local regulations and procedures.

17.3 Container Handling and Disposal

[*Insert appropriate Container Handling and Disposal Statement and Refilling Limitation from the following options*]
[*CONTAINER HANDLING AND DISPOSAL STATEMENT AND REFILLING LIMITATION FOR NONREFILLABLE RIGID CONTAINERS OF LESS THAN 1-GALLON CAPACITY*]
Nonrefillable container. **DO NOT** reuse or refill this container.

[*Alternative container statement:* Nonrefillable container. **DO NOT** reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in this container. Contact your state regulatory agency to determine allowable practices in your state.]

Triple rinse this container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or mix-tank and continue to drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix-tank, or store rinsate for later use or disposal. Continue to drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Once properly rinsed, some plastic [*Optional text:* agricultural] pesticide containers can be taken to a container collection site or picked up for recycling. [Alternative container disposal statement: Then offer the container for recycling, if available.]

[Optional container disposal statement: To find the nearest collection site, contact your chemical dealer or Bayer at 1-866-99BAYER (1-866-992-2937).]

If recycling is not available, dispose of in accordance with federal, state and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

[CONTAINER HANDLING AND DISPOSAL STATEMENT AND REFILLING LIMITATION FOR NONREFILLABLE RIGID PLASTIC 2.5- GALLON CONTAINER AND OTHER NONREFILLABLE CONTAINERS OF GREATER THAN 1-GALLON BUT EQUAL TO OR LESS THAN 5-GALLON CAPACITY]

Nonrefillable container. **DO NOT** reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in this container. Contact your state regulatory agency to determine allowable practices in your state.

[Alternative container statement: Nonrefillable container. **DO NOT** reuse or refill this container.] Triple rinse or pressure rinse (or equivalent) this container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or mix-tank and continue to drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix-tank, or store rinsate for later use or disposal. Continue to drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix-tank and continue to drain for 10 seconds after the flow begins to drip. Place container so that it can drain directly into application equipment or mix-tank while rinsing, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle into the side of the container and rinse at about 40 PSI for at least 30 seconds. Continue to drain for 10 seconds after the flow begins to drip.

Once properly rinsed, some plastic [Optional text: agricultural] pesticide containers can be taken to a container collection site or picked up for recycling. [Alternative container disposal statement: Then offer the container for recycling, if available.]

[Optional container disposal statement: To find the nearest collection site, contact your chemical dealer or Bayer at 1-866-99BAYER (1-866-992-2937).]

If recycling is not available, dispose of in accordance with federal, state and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

[CONTAINER HANDLING AND DISPOSAL STATEMENT AND REFILLING LIMITATION FOR NONREFILLABLE RIGID PLASTIC 30- GALLON CONTAINER AND OTHER NONREFILLABLE CONTAINERS OF GREATER THAN 5-GALLON CAPACITY]

Nonrefillable container. **DO NOT** reuse or refill this container.

[Alternative container statement: Nonrefillable container. **DO NOT** reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in this container. Contact your state regulatory agency to determine allowable practices in your state.]

Triple rinse or pressure rinse (or equivalent) this container promptly after emptying.

[Optional label text: For containers not equipped with pumping systems,] Triple rinse as follows: Empty the remaining contents into application equipment or mix-tank. Fill the container ¼ full with water. Replace and tighten closures. Tip the container on its side and roll it back and forth for 30 seconds, ensuring at least one complete revolution. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or mix-tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

[Alternative or additional triple rinsing instructions for large containers equipped with pumping systems: [Optional label text: For large containers equipped with pumping systems,] Triple rinse as follows: Empty the remaining contents into application equipment or mix- tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.]

Pressure rinse as follows: Empty the remaining contents into application equipment or mix-tank and continue to drain for 10 seconds after the flow begins to drip. Place container so that it can drain directly into application equipment or mix-tank while rinsing, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle into the side of the container and rinse at about 40 PSI for at least 30 seconds. Continue to drain for 10 seconds after the flow begins to drip.

Once properly rinsed, some plastic [Optional text: agricultural] pesticide containers can be taken to a container collection site or picked up for recycling. [Alternative container disposal statement: Then offer the container for recycling, if available.]

[Optional container disposal statement: Some container manufacturers offer container recycling. See additional information regarding manufacturer recycling programs attached to this container, if available. If no recycling information is available on this container, contact your chemical dealer or Bayer at 1-866-99BAYER (1-866-992-2937) to find the nearest recycling location.]

[Optional container disposal statement: To find the nearest collection site, contact your chemical dealer or Bayer at 1-866-99BAYER (1- 866-992-2937).]

If recycling is not available, dispose of in accordance with federal, state and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

[Optional container disposal statement: Return Properly Rinsed Container to Bayer for Recycling – Call 1-866-99BAYER (1-866-992- 2937).]

[Optional additional container disposal statement: IBC EMPTY? – FREE CALL – 1-888-SCHUETZ (1-888-724-8389) www.schuetz.net/ticket; Schuetz ticket service]

[Optional additional container disposal statement: FREE IBC PICKUP] [For continental USA and Canada only.]

[Optional additional container disposal statement: RETURNnet SYSTEM – To return empty IBC's Email or Call – www.returnnetsystem.com – 1-888-758-SHIP (1-888-758-7447) – United States and Canada – IBCNA – Clarkston, Michigan – USA]

[CONTAINER HANDLING AND DISPOSAL STATEMENT AND REFILLING LIMITATION FOR ALL REFILLABLE CONTAINERS, EXCEPT TRANSPORT VEHICLES]

Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose.

Cleaning this container before refilling is the responsibility of the refiller. Cleaning this container before final disposal is the responsibility of the person disposing of the container.
To clean this container before final disposal, empty the remaining contents from the container into application equipment or mix-tank.

Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

[Optional container disposal statement: Then offer the container for recycling, if available.]

[Optional container disposal statement: Some container manufacturers offer container recycling. See additional information regarding manufacturer recycling programs attached to this container, if available. If no recycling information is available on this container, contact your chemical dealer or Bayer at 1-866-99BAYER (1-866-992-2937) to find the nearest recycling location.]

[Optional additional container disposal statement: IBC EMPTY? – FREE CALL – 1-888-SCHUETZ (1-888-724-8389) www.schuetz.net/ticket; Schuetz ticket service]

[Optional additional container disposal statement: FREE IBC PICKUP] [For continental USA and Canada only.]

[Optional additional container disposal statement: RETURNnet SYSTEM – To return empty IBC's Email or Call – www.returnnetsystem.com – 1-888-758-SHIP (1-888-758-7447) – United States and Canada – IBCNA – Clarkston, Michigan – USA]

[Optional container disposal statement: To obtain information about recycling refillable containers, contact Bayer at 1-866-99BAYER (1- 866-992-2937).]

[Optional container disposal statement: Return Properly Rinsed Container to Bayer for Recycling – Call 1-866-99BAYER (1-866-992- 2937).]

[Optional additional container label statements for the CUBE refillable packaging system only:

CUBE Bayer Refillable Delivery System FEATURES INCLUDE:
- Automatic Venting
- Heavy duty one-way 2-inch camloc ball valve with protective shield door
- Complete coated steel protective enclosure
- Durable 4-way plastic pallet
- Lift door to access one-way valve]

18.0 IMPORTANT NOTICE – PLEASE READ: LIMITATIONS OF WARRANTIES, LIABILITY, AND REMEDIES

This Notice of Limitation of Warranties, Liability, and Remedies ("Notice") and instructions to the purchaser and/or user ("Purchaser") contained in this product ("Product") label, including without limitation under Directions for Use (collectively, "Directions for Use"), are included in the terms of sale of this Product. Please read the Directions for Use and this Notice entirely before using this Product. The Purchaser accepts, acknowledges, and agrees to be bound by the Directions for Use and the terms of this Notice upon use of the Product. If Purchaser does not accept such terms, Purchaser must return the unopened Product container immediately. Any use and/or transfer of this Product must be authorized by Bayer CropScience LLC and accompanied by this Notice.

INHERENT RISKS OF USE: The Directions for Use of this Product are believed to be adequate, and Purchaser must carefully follow the Directions for Use. However, it is impossible to eliminate all risks associated with the use of this Product. Crop injury, ineffectiveness, or other unintended consequences may result because of factors and conditions beyond the control of Bayer CropScience LLC and its authorized Product distributors ("Seller"), including, among other things, adverse weather conditions, presence of other materials, and the manner of use or application. To the extent consistent with applicable law, Purchaser assumes all such risks.

To the extent the Product is a seed treatment product, Purchaser acknowledges that treatment of damaged seed (including, without limitation, highly mechanically damaged seed) or seed of low vigor or poor quality may result in reduced germination or seed and seedling vigor. Prior to use of this Product, Purchaser should inspect seed for damage and treat and conduct germination tests on a small portion of seed before treating a full seed lot with any seed treatment product.

EXPRESS WARRANTY: Seller's sole and exclusive warranty ("Exclusive Warranty") on the Product is the statements made on this Product label.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, EXCEPT FOR THE EXCLUSIVE WARRANTY SET FORTH ABOVE, SELLER DISCLAIMS ANY AND ALL WARRANTIES WITH RESPECT TO THIS PRODUCT, WHETHER EXPRESS OR IMPLIED (EITHER IN FACT OR BY OPERATION OF LAW), INCLUDING BUT NOT LIMITED TO: (A) THE IMPLIED WARRANTY OF MERCHANTABILITY; (B) THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; (C) THE IMPLIED WARRANTY AGAINST NONINFRINGEMENT (FOR THIS PRODUCT ALONE OR IN COMBINATION WITH ANY OTHER PRODUCTS); AND (D) ANY WARRANTIES OF CROP PERFORMANCE OR, IF APPLICABLE, CARRYOVER SEED PERFORMANCE.

LIMITATION OF LIABILITY AND REMEDIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW:

1. SELLER'S TOTAL LIABILITY AND PURCHASER'S EXCLUSIVE REMEDY FOR ANY AND ALL LOSSES, INJURIES AND/OR DAMAGES ARISING FROM THE PURCHASE, USE, OR HANDLING OF THIS PRODUCT, OR OTHERWISE ARISING OUT OF A BREACH BY SELLER OF THE EXCLUSIVE WARRANTY, HOWEVER SUCH LIABILITY MAY ARISE, WHETHER SUCH CLAIMS ARE BASED ON CONTRACT, NEGLIGENCE, STRICT LIABILITY, TORT, OR ANY OTHER THEORY OF RECOVERY OR REMEDY, SHALL BE, AT THE ELECTION OF SELLER OR SELLER'S DELEGATE, AN AMOUNT NOT TO EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THIS PRODUCT (AS SET FORTH IN THE APPLICABLE INVOICE) OR THE REPLACEMENT OF THE PRODUCT.

2. SELLER SHALL NOT BE LIABLE TO PURCHASER AND/OR ANY THIRD PARTY FOR ANY INCIDENTAL, CONSEQUENTIAL, RELIANCE, REMOTE, EXEMPLARY, PUNITIVE, SPECIAL, OR INDIRECT DAMAGES INCURRED OR EXPENDED IN THE PURCHASE, USE OR HANDLING OF THIS PRODUCT.

3. PURCHASER AGREES THAT IF THE PURCHASE PRICE PAID BY PURCHASER FOR THIS PRODUCT OR REPLACEMENT PRODUCT IS PROVIDED, THE REMEDY SET FORTH IN THIS NOTICE WILL NOT HAVE FAILED OF ITS ESSENTIAL PURPOSE.

PROMPT NOTICE OF CLAIMS REQUIRED: To the extent consistent with applicable law, as a condition to receiving Purchaser's limited remedy set forth above, any and all claims brought against the Seller must be brought within 30 days after the condition or event giving rise to the claim is discovered or should have been discovered, or prior to the harvest of any crop to which the Product was applied, whichever comes first, so that the claim can be investigated, and the Product or crop inspected.

MISCELLANEOUS: Purchaser agrees that this Notice is the entire agreement between Seller and Purchaser regarding Seller's warranty and liability for this Product. No modification of, addition to, or waiver of any of the terms of this Notice shall be binding unless set forth in writing and signed by an authorized representative of Bayer CropScience LLC. If any portion of this Notice not material to the remaining portions shall be held illegal, void, or ineffective by a governmental authority, the remaining portions shall remain in full force and effect. If any portion of this Notice is in conflict with any applicable statute or rule of law, then such portion shall be deemed to be modified to conform to such statute or rule of law.

[*Optional limitations of liability statement:* Bollgard II®, Bollgard®, Roundup Ready 2 Xtend®, Stryax™, XtendFlex®, and VaporGrip® are trademarks of Bayer Group. All other trademarks are the property of their respective owners.]

[*Optional limitations of liability statement:* Bollgard II®, Bollgard®, Roundup Ready 2 Xtend®, Stryax™, XtendFlex®, VaporGrip®, and Vyconic™ are trademarks of Bayer Group. All other trademarks are the property of their respective owners.]

19.0 Changes From Previous Label

Not applicable

EPA Reg. No. 264-1241

State-Specific labels for Illinois, Indiana, Iowa, Minnesota and South Dakota

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

This labeling expires on 02/06/2028.
DO NOT use or distribute this product after 02/06/2028.

Bayer CropScience LLC
800 N. Lindbergh Blvd.
St. Louis, MO 63167
1-866-99BAYER (1-866-992-2937)

Stryax™ Herbicide

EPA Reg. No. 264-1241

For weed control in cotton with XtendFlex® Technology (dicamba-tolerant cotton) and soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ Soybean] (dicamba-tolerant soybean)

Additional Illinois specific restrictions as found on http://www.stryaxapplicationrequirements.com.

DIRECTIONS FOR USE

RESTRICTED USE PESTICIDE

Only for retail sale to and use by Certified Applicators. NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This labeling must be in the user's possession during application. Read the entire label before using this product.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Use of Stryax™ Herbicide according to this labeling is subject to the use precautions, restrictions, and limitations imposed by the label affixed to the container for Stryax™ Herbicide.

Refer to the Container Label for additional use precautions and directions.

ILLINOIS SPECIFIC RESTRICTIONS

1) Temperature Restriction
A pesticide containing dicamba shall not be applied on soybeans if the air temperature at the field at the time of application is over 85 degrees Fahrenheit or if the National Weather Service's forecasted high temperature for the nearest available location for the day of application exceeds 85 degrees Fahrenheit. Local National Weather Service forecasts are available at https://www.weather.gov.

2) Cut-off Date Restriction
Application on soybeans of a pesticide containing dicamba shall not be made after June 20 of each year.

3) Before applying a pesticide containing dicamba on soybeans, the applicator shall consult the FieldWatch sensitive crop registry (https://www.fieldwatch.com) and comply with all associated recordkeeping and label requirements.

4) Application on soybeans of a pesticide containing dicamba shall not be made if the wind is blowing toward:
a. Any Illinois Nature Preserves Commission site that is adjacent to the field of application; or
b. An adjacent residential area.

This labeling and the Stryax™ Herbicide container label must be in the possession of the user at the time of the pesticide application. Read the label affixed to the container for Stryax™ Herbicide before applying.

For MEDICAL and TRANSPORTATION Emergencies ONLY Call 24 Hours a Day 1-800-334-7577

For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

For Incidents of Non-performance or Off-Target Movement or for Questions Regarding Buffer Requirements or Sensitive Crop Registries Call 1-866-99BAYER (1-866-992-2937)

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

This labeling expires on 02/06/2028.
DO NOT use or distribute this product after 02/06/2028.

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For weed control in cotton with XtendFlex® Technology (dicamba-tolerant cotton) and soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ Soybean] (dicamba-tolerant soybean)

Additional Indiana specific restrictions as found on http://www.stryaxapplicationrequirements.com.

DIRECTIONS FOR USE

RESTRICTED USE PESTICIDE

Only for retail sale to and use by Certified Applicators. NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This labeling must be in the user's possession during application. Read the entire label before using this product.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Use of Stryax™ Herbicide according to this labeling is subject to the use precautions, restrictions, and limitations imposed by the label affixed to the container for Stryax Herbicide.

Refer to the Container Label for additional use precautions and directions.

INDIANA SPECIFIC RESTRICTIONS

Cotton

- **DO NOT** apply after June 12.

Soybean

- **DO NOT** apply after June 12.

This labeling and the Stryax™ Herbicide container label must be in the possession of the user at the time of the pesticide application. Read the label affixed to the container for Stryax™ Herbicide before applying.

For MEDICAL and TRANSPORTATION Emergencies ONLY Call 24 Hours a Day 1-800-334-7577

For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

For Incidents of Non-performance or Off-Target Movement or for Questions Regarding Buffer Requirements or Sensitive Crop Registries Call 1-866-99BAYER (1-866-992-2937)

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

This labeling expires on 02/06/2028.
DO NOT use or distribute this product after 02/06/2028.

Bayer CropScience LLC
800 N. Lindbergh Blvd.
St. Louis, MO 63167
1-866-99BAYER (1-866-992-2937)

Stryax™ Herbicide

EPA Reg. No. 264-1241

For weed control in cotton with XtendFlex® Technology (dicamba-tolerant cotton) and soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ Soybean] (dicamba-tolerant soybean)

Additional Iowa specific restrictions as found on
http://www.stryaxapplicationrequirements.com

DIRECTIONS FOR USE

RESTRICTED USE PESTICIDE

Only for retail sale to and use by Certified Applicators. NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This labeling must be in the user's possession during application. Read the entire label before using this product.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Use of Stryax™ Herbicide according to this labeling is subject to the use precautions, restrictions, and limitations imposed by the label affixed to the container for Stryax Herbicide.

Refer to the Container Label for additional use precautions and directions.

IOWA SPECIFIC RESTRICTIONS

Cotton

- **DO NOT** apply after June 12 or 1st square, whichever comes first.

Soybean

- **DO NOT** apply after June 12 or V4, whichever comes first.

This labeling and the Stryax™ Herbicide container label must be in the possession of the user at the time of the pesticide application. Read the label affixed to the container for Stryax™ Herbicide before applying.

For MEDICAL and TRANSPORTATION Emergencies ONLY Call 24 Hours a Day 1-800-334-7577

For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

For Incidents of Non-performance or Off-Target Movement or for Questions Regarding Buffer Requirements or Sensitive Crop Registries Call 1-866-99BAYER (1-866-992-2937)

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

This labeling expires on 02/06/2028.
DO NOT use or distribute this product after 02/06/2028.

Bayer CropScience LLC
800 N. Lindbergh Blvd.
St. Louis, MO 63167
1-866-99BAYER (1-866-992-2937)

Stryax™ Herbicide

EPA Reg. No. 264-1241

For weed control in cotton with XtendFlex® Technology (dicamba-tolerant cotton) and soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ Soybean] (dicamba-tolerant soybean)

Additional Minnesota-specific restrictions as found on http://www.stryaxapplicationrequirements.com.

DIRECTIONS FOR USE

RESTRICTED USE PESTICIDE

Only for retail sale to and use by Certified Applicators. NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This labeling must be in the user's possession during application. Read the entire label before using this product.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Use of Stryax™ Herbicide according to this labeling is subject to the use precautions, restrictions, and limitations imposed by the label affixed to the container for Stryax Herbicide.

Refer to the Container Label for additional use precautions and directions.

MINNESOTA SPECIFIC RESTRICTIONS

DO NOT apply south of Interstate 94 after June 12. **DO NOT** apply north of Interstate 94 after June 30.

Statewide restriction: **DO NOT** apply if the air temperature of the field at the time of application is over 85 degrees Fahrenheit or if the National Weather Service's forecasted high temperature for the nearest available location for the day exceeds 85 degrees Fahrenheit. Forecasted temperature must be recorded at the start of the application.

This labeling and the Stryax™ Herbicide container label must be in the possession of the user at the time of the pesticide application. Read the label affixed to the container for Stryax™ Herbicide before applying.

For MEDICAL and TRANSPORTATION Emergencies ONLY Call 24 Hours a Day 1-800-334-7577

For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

For Incidents of Non-performance or Off-Target Movement or for Questions Regarding Buffer Requirements or Sensitive Crop Registries Call 1-866-99BAYER (1-866-992-2937)

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

This labeling expires on 02/06/2028.
DO NOT use or distribute this product after 02/06/2028.

Bayer CropScience LLC
800 N. Lindbergh Blvd.
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1-866-99BAYER (1-866-992-2937)

Stryax™ Herbicide

EPA Reg. No. 264-1241

For weed control in cotton with XtendFlex® Technology (dicamba-tolerant cotton) and soybean with Roundup Ready 2 Xtend® Technology or XtendFlex® Technology [or Vyconic™ Soybean] (dicamba-tolerant soybean)

Additional South Dakota specific restrictions as found on http://www.stryaxapplicationrequirements.com.

DIRECTIONS FOR USE

RESTRICTED USE PESTICIDE

Only for retail sale to and use by Certified Applicators. NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This labeling must be in the user's possession during application. Read the entire label before using this product.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Use of Stryax™ Herbicide according to this labeling is subject to the use precautions, restrictions, and limitations imposed by the label affixed to the container for Stryax™ Herbicide.

Refer to the Container Label for additional use precautions and directions.

SOUTH DAKOTA SPECIFIC RESTRICTIONS

DO NOT apply after June 30.

This labeling and the Stryax™ Herbicide container label must be in the possession of the user at the time of the pesticide application. Read the label affixed to the container for Stryax™ Herbicide before applying.

For MEDICAL and TRANSPORTATION Emergencies ONLY Call 24 Hours a Day 1-800-334-7577

For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

For Incidence of Non-performance or Off-Target Movement or for Questions Regarding Buffer Requirements or Sensitive Crop Registries Call 1-866-99BAYER (1-866-992-2937)

B

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505T)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
7969-507	2/6/26

Term of Issuance:
Unconditional

Name of Pesticide Product:
Engenia Herbicide

Name and Address of Registrant (include ZIP Code):

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

The record for this product currently contains the following CSF(s):

- Basic CSF dated 4/1/2024
- Alternate CSF 1 dated 4/1/2024

Continues page 2

Signature of Approving Official:

Lindsay Roe, Chief
Herbicide Branch, Registration Division (7505T)

Date: 2/6/26

EPA Form 8570-6

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you comply with the terms listed below. This registration will automatically expire on February 6, 2028.

General Terms

1. Submit and/or cite all data required for registration review of your product when the Agency requires all registrants of similar products to submit such data.
2. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Endangered Species Protection and Formal Consultation

3. In its endangered species assessment as part of its review of this action, EPA made may affect determinations for certain listed species and their designated critical habitats. EPA initiated formal consultation with the United States Fish and Wildlife Service (FWS), which will be ongoing during the registration period.

   If, after formal consultation with FWS, additional modifications are identified in the Service's Biological Opinion, EPA will notify BASF Corporation (BASF) in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA's notice, BASF must submit an amendment application incorporating any required changes, including amended labels. Alternatively, BASF may respond by submitting a request for voluntary cancellation of this product. If BASF fails to comply with this term, BASF has agreed in prior written acceptance of these terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

Herbicide Resistance Management Plan

4. BASF must develop, implement, maintain, and annually update an Herbicide Resistance Management Plan as described in Appendix A regarding field detection and remediation; education, training, and outreach; annual evaluation; annual reporting; and best management practices (BMPs).

Volatility Reduction Agents

5. The Engenia Herbicide registration requires the use of a qualified Volatility Reducing Agent (VRA) that must be reviewed and confirmed as qualified by the Agency. In order to have a new VRA product confirmed as a qualified VRA, an application for the new VRA product must be submitted to

the Agency as an R350 PRIA action (or, if PRIA is amended during the term of this registration, an equivalent code) and is subject to the associated PRIA fee.

A new VRA product may be qualified and added to the list of qualified VRA products on www.EngeniaHerbicide.com if, based upon the VRA product testing according to Appendix B of this document:

a. the VRA product is identical in formulation to VaporGrip Xtra (MON 51817); or
b. the test mixture of the VRA product + Dicamba OTT product + Roundup PowerMAX® 3 results in humidome airborne dicamba concentrations that are confirmed by EPA to achieve the same or better level of volatility reduction compared to a 40 fl oz per acre rate of VaporGrip Xtra (MON 51817).

Prior to or within one day of updating BASF's list of qualified VRA products on their website, BASF must inform all other registrants of OTT dicamba products which qualified VRA products meet the standard for inclusion on the list of qualified VRA products pursuant to 5.a or b and are being added to the list.

6. The educational and information materials developed by or for BASF, including materials identified in Appendix A, Section B, shall include the requirement that a qualified VRA must always be tank-mixed with Engenia Herbicide. A list of qualified VRAs and the associated application rates must be maintained by BASF at www.EngeniaHerbicide.com.

7. Because the Engenia Herbicide registration requires the use of a qualified VRA with every application, BASF will:
   a. Take appropriate action(s) to ensure that a sufficient supply of qualified VRA is in the channels of trade to support legal use of all registered OTT dicamba products. To ensure the supply of qualified VRA is sufficient throughout each season, BASF will:
      i. Project and monitor distribution of Engenia Herbicide and qualified VRAs;
      ii. Monitor available qualified VRAs in relevant channels of trade;
      iii. Make available additional supplies if needed to ensure sufficient quantities of qualified VRAs are available to allow lawful application of the full quantity of Engenia Herbicide that is available in the channels of trade;
      iv. Maintain capacity to produce additional qualified VRAs (or to cause more qualified VRAs to be produced) whenever any further need is anticipated; and
      v. Produce or ensure production of qualified VRA as needed to maintain a stock in the market that would support legal use of all registered OTT dicamba products.
   b. Make arrangements through appropriate distribution networks to ensure that qualified VRAs are timely available to applicators in all locations where Engenia Herbicide will be applied, before any applicator would apply Engenia Herbicide. Access to qualified VRAs will either be through the same retail outlets as Engenia Herbicide, or if necessary, in particular locations, available from other readily accessible sources. BASF will timely make available to every applicator information on where qualified VRAs can be ordered or purchased.
   c. Ensure that all training materials clearly indicate the mandatory use of qualified VRAs with every Engenia Herbicide application. Work with State and Tribal authorities to ensure that appropriate training occurs before any application of Engenia Herbicide is made.
   d. Registrant Recordkeeping: BASF will keep records appropriate to document its compliance with its qualified VRAs quantity commitments. BASF will make records available to EPA upon request.

Education, Training, and Outreach

8. BASF must maintain a website at www.EngeniaHerbicide.com, available to the public before any product may be released for shipment, which must be consistent with the product labeling and contain the following tabs or sections:
   a. State Specific Labeling (which could also apply to Tribes if requested)
   b. Link to Bulletins Live! 2 (BLT)
   c. Instructions for how to check Weather Forecast (NWS)
   d. Link to Runoff Mitigation Menu: https://www.epa.gov/pesticides/mitigation-menu
   e. Instructions on how to report incidents to BASF and EPA
   f. Training materials (as described in Appendix A, section B)
   g. BASF's Resistance Management Plan
   h. List of qualified VRAs and corresponding required use rates
   i. Instructions on how to report a VRA shortage to BASF

9. BASF must develop, annually update, provide to EPA, and implement prior to release of any product, an education program on labeling requirements for applicators that includes the following elements:
   a. The education program must include information about required buffers so that growers/applicators have a better understanding of what constitutes a buffer on his/her field(s), and recommendations for weed control practices in buffer zones. The education program must also include information on what may and may not be counted within a buffer. The training must also include an element assisting the grower in understanding eligibility for and calculating the buffer distance reductions.
   b. Information on sensitive plants and how they impact applications.
   c. Training for sprayer cleanouts (before and after spraying as indicated on labeling).
   d. Training for Bulletins Live 2! (BLT), including clarification of how a grower/applicator can document that they have checked BLT within 6 months and what the documentation will look like if no bulletin is applicable or if there is an applicable bulletin.
   e. Training on how to earn and calculate the runoff/erosion points required.
   f. Training on how to identify a temperature inversion.
   g. Provide an optional template for record keeping that includes all elements and links to associated websites.
   h. Clearly describe the maximum use rate and how the restriction to 1 lb. per acre per calendar year for all combined dicamba-containing products impacts use of dicamba throughout the year on the field.
   i. Training on the use of the temperature-dependent volatility mitigations with real-world application examples.
      i. Training on how to use predicted and actual temperatures to determine whether an application may take place and mitigations needed.
      ii. How a grower/applicator could calculate and document the 50% restriction of the grower's managed dicamba-tolerant crops within the county.
      iii. How to implement the retreatment interval for different fields when restricted to 50% of the grower's managed dicamba-tolerant crops within the county.
      iv. Recommendations for how to limit applications at certain temperatures to 50% of the grower's managed dicamba-tolerant crops within the county and on associated retreatment intervals.

1. Provide training on the use of in-row drop nozzles and in-row hooded sprayers (e.g., what qualifies as hooded sprayer, appropriate uses).
2. When and how precision agriculture technology could be used to meet this reduction.

j. Training on how growers/applicators can report incidents and control failures to EPA, states, and tribal governments.
k. Tutorial on how to check the weather forecast and how to track that it was done for records as applicable.
l. Tutorial on the website containing state-specific labeling and the other items as required in Section 7.
    i. Where to find information about qualified VRAs and how to use a qualified VRA at the appropriate rate.
m. Training consistent with Appendix A: Herbicide Resistance Management Plan, section B Education, Training, and Outreach.
    i. The critical importance of following resistance management practices and appropriate BMPs as described in Section B.5. to prevent, contain, delay, and/or control weed resistance.
    ii. Stressing the requirement for field scouting before and after application.
    iii. BASF's commitments to growers/applicators on addressing suspected resistant weed reports including field detection, testing, and remediation assistance as described in Section A.
    iv. Reporting lack of herbicide efficacy promptly to BASF or its representative.
n. BASF must transmit the BMPs to all applicators of Engenia Herbicide. In addition to the other requirements of these Terms and Conditions, this BMPs transmittal must describe to growers/applicators the commitments as described in section A.5 about investigations of suspected dicamba-resistant weeds.

11. BASF must provide at least one written communication regarding herbicide resistance management each year, directed to applicators of Engenia Herbicide for use over-the-top on dicamba tolerant soybean or dicamba-tolerant cotton.
12. All BASF herbicide sales representatives must have immediate access to the education program for distribution to growers/applicators, extension agents, neighboring landowners, and any other interested stakeholder upon request.
13. BASF must provide a copy of all Engenia Herbicide educational and training materials, and examples of written communication materials to EPA by 2/28/2026, and at any time upon EPA's request. At the initiative of either EPA or BASF, EPA and BASF will meet to discuss possible modifications to the educational program as needed.
14. BASF must provide access to educational materials for distribution by sales representatives or others to growers/applicators, extension agents, neighboring landowners, and any other interested stakeholders by February 1st of each year following this registration. In 2026, the access to educational materials must be provided before any product is released for shipment.
15. BASF must ensure that retailers and sales representatives are aware of the VRA and DRA application requirements and instruct retailers and sales representatives that they must not sell Engenia Herbicide without sharing that information with buyers.
16. BASF must provide to EPA the registrant education program for OTT dicamba applicators by 2/28/2026 and individual state education program materials as they are available, but no later than releasing product for shipment within the state. All educational and training materials listed above must be provided to EPA and made available to State and Tribal pesticide authorities and agricultural extension services upon request.

Annual Reporting

17. BASF must submit the information in their possession or control as identified below to EPA's Office of Pesticide Programs, unless you have previously submitted that information to EPA's Office of Pesticide Programs.
    a. Information received by telephone or in writing regarding potential damage to non-target vegetation from alleged use of dicamba during the 2026-2027 growing seasons regardless of any determination that the alleged incident resulted from misuse (intentional or accidental). Information must be forwarded to EPA regardless of which dicamba product may have been used and/or whether or not the alleged damage resulted from a product being used according to labeling directions. Data must be organized by product and state to the extent practicable, and must include all available information regarding acreage involved, plant species involved, severity of damage, date and location (coordinates) of incident, known dicamba applications in vicinity of incident, location of application (coordinates), distance from application to incident, temperature and humidity data at time of application, qualified VRA product applied, and similar information received, including (if available) whether an investigation was conducted, all available information related to the specifics of each incident, whether residue testing was completed, and test results. Incident data must be submitted in narrative form and in a spreadsheet format. This information must be submitted with cumulative totals and be submitted annually by January 15 (beginning by January 15, 2027) and final report with all the available information due September 30th of each year.
    b. Information received by telephone or in writing regarding reports of dicamba-resistant weeds, and cases of weed control failure and/or suspected resistance. All information must be forwarded to EPA regardless of which dicamba product may have been used and/or whether or not the alleged resistance occurred after an application made according to label directions. This information must be submitted annually by January 15 (beginning January 15, 2027) and final report with all then available information due September 30th of each year.
    c. Any information received by BASF or finding in an analysis conducted by BASF of foods/commodities containing dicamba residues that are not covered by a tolerance or exceed established tolerance levels. This information must be submitted annually by January 15 (beginning January 15, 2027) and final report with all then available information due September 30th of each year.
    d. Information (studies, incident reports, etc.) regarding adverse effects, including allegations of non-target plant damage resulting from the use of, or contact with dicamba, including non-lethal effects, which occurred in any country at any time during registration. Adverse effects include but are not limited to 10% visual injury (i.e., cupping) and/or 5% reduction in height, biomass, yield, or other visual signs of dicamba exposure.[1] Reportable information includes all information described in 40 CFR 159.158, and includes complaints, memos, investigations, reports, or other documents arising from incidents or studies. Adverse effects information should be provided in a searchable spreadsheet format.[2]

[1] Leaf cupping is considered an adverse effect of dicamba exposure and must be reported irrespective of plant genetics, although genetic information considered relevant may be included in the report. EPA requires all information on incidents related to "cupping," regardless of plant genetics, be included in the incident reports (i.e., do not exclude reports of "cupping" on varieties that have "poor plant genetics").

[2] The following information must be provided to EPA to the extent BASF possesses or receives such information: Inquiry/Incident ID, Call Date, Affected Acres, Impacted Location: State, Impacted Location: County, Planting Date (in the

e. Provide all information regarding the impact of dicamba off-target movement on seed research and breeding programs to the Agency. In addition to research and breeding plots, provide all reports of adverse effects to seed plots for commercial seed production; however, you may omit reports of adverse effects to crops modified to increase dicamba tolerance. Submit all available information on the nature of any damage to these plots as well as on the distance between the possible sources of the damage and the damaged crop.
f. Information regarding tank mixes containing the over-the-top dicamba products labeled for use on Dicamba-tolerant (DT) soybean or DT cotton found to be or suspected of being incompatible or reactive with any other pesticide and/or causing increased drift, volatility, and/or plant injury relative to OTT products containing dicamba only.
g. Any information not legally privileged or subject to a protective order, including, but not limited to deposition transcripts, responses to interrogatories, expert reports, other discovery documents (including internal company correspondence), and trial exhibits or transcripts, that was generated as a result of or in anticipation of lawsuits filed in any country, indicating that use of or contact with dicamba, directly or indirectly, resulted or may have resulted in adverse effects to non-target plants.
h. All studies and associated data (raw and summary) not already provided to EPA by your company, completed, incomplete, or in progress, conducted or sponsored by or for your company regarding dicamba pertaining to:
    i. Off-target movement of dicamba, through direct application (with or without drift reduction technologies such as hooded or layby sprayers or volatility reduction agents), volatilization, off-site spray drift, potential for long-range transport, runoff, leaching to groundwater, or rainfall. Include any study summary or test that pertains to off-site transport that was discontinued because of damage either confirmed or suspected to be from dicamba exposure to controls or test plots, damage beyond the treated area, or dicamba contamination of workspaces (indoor or outdoor) during or after the dicamba application.
    ii. Potential toxicity of dicamba or any qualified VRA required in [Primary Brand Name] labeling to target or nontarget plants via any presence of dicamba/residues detected in rainwater, concentrations of dicamba in the air (including but not limited to that moved via long-range transport), runoff, or leaching to groundwater that were commenced by you or by others on your behalf, including those where no written reports or summaries were submitted to you. Include both indoor (greenhouse studies) and outdoor (field or plot studies), as well as reports from efficacy studies and/or incidents.
    iii. Adverse effects of any qualified VRA required in [Primary Brand name] labeling, including but not limited to tank mix incompatibility, changes in pesticide efficacy when combined with tank mix partners, injury to target crop.

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case of damage reported on agricultural crops), Date on Which a Phone Interview was Attempted, Date on Which a Phone Interview Occurred, Impacted Site Visit Date, Date on Which Symptomology was First Observed, Account of Cause of Damage, Affected Field/Site Latitude, Affected Field/Site Longitude, Total Acres Impacted, Crop/Vegetation Type Impacted, Variety of Plant/Crop on Affected Field/Site, Brand of the Affected Crop, Description of how the injury is spatially distributed, Action(s) taken upon observing symptomology, Pictures Taken (Yes/No), description of symptomology, whether or not state officials were contacted about the incident, whether the sprayer was cleaned out prior to application, whether the application was made by a certified applicator, and whether dicamba was applied on the affected farm/site or on neighboring farms. If soybean was the impacted vegetation, additional information should be provided, including soy growth stage showing maximum symptomology, soy growth stage showing least symptomology, crop height (inches) showing maximum symptomology, and crop height (inches) showing least symptomology. Registrants are encouraged to provide information on additional parameters as they deem appropriate.

iv. Development of weeds' resistance to dicamba, or diminished control of weeds by dicamba.
v. BASF must provide a master list of studies involving dicamba in possession or control of the registrant including a description of each trial, why it was terminated (where applicable), and contact information for the researchers who conducted, initiated, and/or planned all studies, including but not limited to terminated studies. BASF must provide at least two contacts per study, including the principal investigator(s) for those studies, and contact information should be submitted to EPA in the form of a searchable spreadsheet that includes fields including but not limited to name, professional affiliation, title, study name/number and description, reason for termination of the study (where applicable), email, and phone number. Persons listed on the provided list of contacts should be authorized to freely discuss with EPA all aspects of their dicamba research.

18. Subsequent annual reports after the first year shall include updates of any aspect of the education and training program and associated materials that have materially changed since submission of the previous annual report.
19. Following submission of the annual report, BASF shall meet with the EPA at EPA's request to evaluate and consider the information contained in the report.

Renewal

20. If BASF decides to renew this registration, BASF must submit a package 18 months before the expiration date (on or before 8/6/2026). This package will be coded as an R350 PRIA action (or, if PRIA is amended during the term of this registration, an equivalent code) and must be submitted as such, including all documents that would be expected for that type of application.

Including references to the company's website on the label makes that website labeling under FIFRA and therefore the website is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA Section 12(a)(1)(E). 40 CFR §156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on the product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to EPA's attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.
In addition to BASF's prior written acceptance of these terms, release of this product for shipment further confirms BASF's acceptance of all terms and conditions listed above. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA Section 6, including cancellation under FIFRA 6(e) as described under paragraph 3 above.

APPENDIX A

Herbicide Resistance Management Plan

BASF must develop and implement an herbicide resistance management plan that includes the following components:

A. **Field Detection, and Remediation**

1. If any grower, crop consultant, extension agent, or State or Tribal specialist informs BASF or its representative of a lack of herbicide efficacy, then BASF or its representative must work with growers/applicators to support them in identifying and responding to suspected resistance to dicamba by applying the criteria for determining suspected herbicide resistance listed below, set forth in EPA Pesticide Registration Notice 2017-2: Guidance for Herbicide Resistance Management, Labeling, Education, Training, and Stewardship[3]. In addition, such testing of suspected resistance must also include testing with 2,4-D to evaluate the extent to which cross-resistance and/or multiple resistance is occurring.

Factors for Determining Suspected Herbicide Resistance:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.
- A spreading patch of non-controlled plants of a particular weed species.
- Surviving plants mixed with controlled individuals of the same species.

2. If one or more of the above factors are met, then BASF or its representative must:
   a. Provide the grower with specific information and recommendations to control and contain suspected resistant weeds, including rotation to pesticides with different modes of action and/or other non-pesticide controls, as appropriate. If requested by the grower, BASF will become actively involved in implementation of weed control measures.
   b. Request, at the time of the initial determination that one or more of the factors are met and prior to any application of alternative control practices, that the grower provide BASF with access to the relevant field(s) to collect specimens of the suspected resistant weeds (potted specimens or seeds) for further evaluation in the greenhouse or laboratory, and to collect such specimens if possible (or, alternatively, request that the grower provide such specimens to BASF, at BASF's expense).
   c. Conduct greenhouse or laboratory studies to confirm resistance as soon as practicable following sample collection. If resistance is confirmed, report this information to the International Survey of Herbicide Resistant Weeds by requesting to add a case at https://weedscience.org/Home.aspx.
   d. To the extent possible, contact or visit the grower in an appropriate timeframe after implementation of the additional weed control measures in order to evaluate success of such measures.
   e. If the additional weed control measures were not successful in controlling the suspected resistant weeds, then:
      i. Work with the grower to determine the reason(s) why the additional control measures were not successful.

[3] https://www.epa.gov/pesticide-registration/prn-2017-2-guidance-herbicide-resistance-management-labeling-education

ii. Offer to further assist the grower in controlling and containing the suspected resistant weeds, including rotation to pesticides with different modes of action and/or other non-chemical controls, as appropriate.

iii. Report annually the inability to control the suspected resistant weeds to relevant stakeholders such as extension experts, State or Tribal agencies, and grower organizations.

3. Keep records of all field evaluations for suspected resistance for a period of 3 years and provide a copy of the records to EPA upon request.

B. **Education, Training, and Outreach**

1. Develop, implement, and annually update an education and training program, with at least one written communication each year to growers/applicators of this product regarding herbicide resistance management. All education and training materials must include information on:
   a. The critical importance of following resistance management practices and appropriate BMPs as described in Section B.5. to prevent, contain, delay, and/or control weed resistance.
   b. Stressing the requirement for field scouting before and after application.
   c. BASF's commitments to growers/applicators on addressing suspected resistant weed investigations including field detection, testing, and remediation assistance as described in Section A.
   d. Reporting lack of herbicide efficacy promptly to BASF or its representative.

2. BASF must provide access to educational materials for distribution by sales representatives or others to growers/applicators, extension agents, neighboring landowners, and any other interested stakeholders by February 1st of each year.

3. BASF must provide a copy of the registrant education program to EPA by 02/28/2026 and individual state education program materials as they are available, but no later than releasing product for shipment within the state. BASF must also provide copies of education programs at any time upon EPA's request.

4. The education and training materials must be made available to State and Tribal pesticide authorities and agricultural extension services.

5. Appropriate best management practices (BMPs) must be included in the education program to avoid and control weed resistance and convey the importance of following BMPs. BASF must advise growers/applicators to follow BMPs in all education and training materials, annual written communication, and product literature. This list may be updated or revised as new information becomes available.

   The following BMPs must be included:
   <u>Crop selection and cultural practices:</u>
   • Understand the biology of the weeds present.
   • Use a diversified approach towards weed management focused on preventing weed-seed production and reducing the number of weed seeds in the soil seedbank.
   • Emphasize cultural practices that suppress weeds by using crop competitiveness.
   • Plant into weed-free fields, keep fields as weed-free as possible, and note areas where weeds were a problem in prior seasons.

• Incorporate additional weed-control practices whenever possible, such as mechanical cultivation, biological management practices, crop rotation, and weed-free crop seeds, as part of an integrated weed-control program.
• Do not allow weed escapes to produce seeds, roots, or tubers.
• Manage weed seed at harvest and post-harvest to prevent a buildup of the weed seed-bank.
• Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
• Thoroughly clean plant residues from equipment before leaving fields.
• Prevent an influx of weeds into the field by managing field borders.
• Scout fields before application to ensure herbicide and application rates will be appropriate for the weed species and weed sizes present.
• Scout fields after application to confirm herbicide effectiveness and to detect weed escapes.
• If resistance is suspected, treat weed escapes with a different mechanism-of action herbicide or use non-chemical methods to remove weed escapes.

Herbicide selection:

• Use a broad-spectrum, soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed control program.
• A broad-spectrum weed-control program should consider all weeds present in the field. Weeds should be identified through scouting and field history.
• Difficult-to-control weeds may require sequential applications of herbicides with alternative mechanisms of action.
• Fields with difficult-to-control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action.
• Apply full rates of this herbicide for the most difficult to control weeds in the field. Applications should be made when weeds are at the correct size to minimize weed escapes.
• Report any incidence of non-performance of this product against a particular weed species to BASF or its representatives.

C. **Annual Reporting**

1. BASF must submit annual reports, clearly marking any claims of confidentiality, to EPA by January 15th of each year containing the following:

a. Annual sales of this product nationally and by state. The data should be provided in a searchable spreadsheet format.
b. Annual estimated total acres of DT cotton and DT soybeans planted in the United States and per state based on seed sold by BASF. The data should be provided in a searchable spreadsheet format.
c. The current education program and associated materials, and subsequent annual reports shall include updates of any aspect of the education program and associated materials that have materially changed since submission of the previous annual report.
d. Investigation and remediation of cases regarding suspected resistant weeds. Summary of BASF's determinations as to whether any reported lack of herbicide efficacy was suspected resistance, BASF's follow-up actions taken, and, if available, the ultimate outcome (e.g., evaluation of success of additional weed control measures) regarding each case of suspected resistance. In the annual report, BASF will list the cases of suspected resistance by county and state.

e. Summary of the status of any laboratory and greenhouse testing performed by, or at the direction of BASF following up on incidents of suspected resistance, performed in the previous year. Data pertaining to such testing do not need to be included in the annual reports, but such data must be made available to EPA upon request.
f. BASF is also obligated under 40 CFR Part 159 to report product failure to EPA and must follow those procedures and reporting schedule.

2. Following submission of the annual report, BASF shall meet with the EPA at EPA's request to evaluate and consider the information contained in the report.

APPENDIX B
Testing of Tank Mix Volatility-Reduction Adjuvants/Buffering Adjuvants

VRA Product Testing Design

This study is designed as a humidome test using conditions based on ASTM STP1587 outlined below. Testing is not required to be performed to good laboratory practice (GLP) standards, but test methods, materials, and results should be well documented. Two baseline tests are used:

Baseline Testing: [Dicamba Product] + Roundup PowerMAX® 3 + VaporGrip Xtra (VGX)

Test 1: (0.5 lb a.e./A + 1.125 lb a.e. glyphosate/A + 20oz VGX/A use rates)

Test 2: (0.5 lb a.e./A + 1.125 lb a.e. glyphosate/A + 40oz VGX/A use rates)

Proposed VRA Product Test: [Dicamba Product] + Roundup PowerMAX® 3+ Proposed VRA
(0.5 lb a.e. dicamba/A + 1.125 lb a.e. glyphosate/A + proposed VRA use rate lbs/A)

Other study design and reporting information:

Proposed VRA Product Description: buffering agent(s) [e.g., potassium carbonate], percent of product [e.g., 50% buffering agent], total mass of buffering agent in test [e.g., 350 mg potassium carbonate] mixed with specific volume of water and final aqueous concentration in test.

Water carrier rate: 15 GPA

Test Container: Normal plastic humidome as specified in ASTM STP1587

Treated substrate: Soil/Soil blend as specified in ASTM STP1587 with 12-22% moisture

Required Independent Test Temperatures: 23.9°, 29.4°, and 35° C

Relative humidity: 40 ± 5% RH

Sample collection duration: 24 hours

Air sampling rate: 1.5-3.0 L/min

Air sampling filter: any substrate validated to capture >95% of dicamba (e.g., fiberglass mesh + cotton pad, cellulose + PUF, MCE)

Replications: 3 minimum (6 replicates recommended)

Analysis: A one-tail (upper-bound) t-test ($\alpha = 0.10$) performed for all test mixtures relative to baseline tests at all tested temperatures.

Review Considerations

EPA will review the study to determine if the new VRA product meets the baseline buffering agent performance that was established in the Dicamba DGA and BAPMA salts – Final Ecological Risk Assessment and Biological Evaluation. Typically, EPA's review will include:

- evaluating the study design and performance,
- will focus on the average concentration from the trials (< 2 ng/m3 threshold based on observation results from past volatility reducing agent tests, see Ecological Risk Assessment for more details).
- will consider variability between all trials at testing concentrations (clustered around a tight range of air concentrations (±0.25 ng/m3) is ideal), and
- will consider the performance of the air concentration and variability as temperature increases.

References

Gavlick, W.K., D.R. Wright, A. MacInnes, J.W. Hemminghaus, J.K. Webb, V.I. Yermolenka, W. Su. 2016. A Method to Determine the Relative Volatility of Auxin Herbicide Formulations, Pesticide Formulation and Delivery Systems: 35th Volume, ASTM STP1587. pp. 24-32G. R. Goss, Ed. ASTM International, West Conshohocken, PA.

USEPA. 2026. Dicamba DGA and BAPMA salts – Final Ecological Risk Assessment and Biological Evaluation Including Effects Determinations for Federally Listed Endangered and Threatened Species and Designated Critical Habitat for the Proposed Section 3 New Use Registration of Dicamba on Dicamba-Tolerant Cotton and Soybean. Office of Pesticide Programs. Office of Chemical Safety and Pollution Prevention. U.S. Environmental Protection Agency. February 2026. Task Group 619468, 621218, 624274.

[Note to reviewer: optional text including state specific info in brackets]

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

This labeling expires on February 6, 2028. **DO NOT** use or distribute this product after February 6, 2028.

BASF

We create chemistry

Dicamba	Group	4	Herbicide

Engenia®

Herbicide

Scan to Access QR Code Label

Placeholder QR Code

For weed control in dicamba-tolerant (DT) cotton; dicamba-tolerant (DT) soybean

This product may only be used on dicamba-tolerant cotton and dicamba-tolerant soybean fields.

This product is only for use on dicamba-tolerant soybean and dicamba-tolerant cotton in the following states: Alabama, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

Check the registration status of this product in each state before using. The user must check **www.EngeniaHerbicide.com/labels** no more than 7 days before application of this product for additional labeling, including any additional state-specific labeling. Where applicable, users must comply with additional labeling found on this website.

Active Ingredient:

BAPMA salt of dicamba (CAS No.1286239-22-2): N,N-Bis-(3-aminopropyl)methylamine salt of 3,6-dichloro-o-anisic acid)*	60.8%
Other Ingredients:	39.2%
Total:	100.0%

*Contains 48.38% dicamba (5 pounds acid equivalent per gallon or 600 grams per liter). **Engenia** is a soluble liquid (SL).

EPA Reg. No. 7969-507 **EPA Est. No.**

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See the full label for complete **First Aid**, **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

Lot/Batch Number:

Manufactured for:
BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

ACCEPTED
02/06/2026
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7969-507

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for treatment advice.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information: 1-800-832-HELP (4357).

Label Highlights

Labeled crops: for weed control in dicamba-tolerant (DT) cotton; dicamba-tolerant (DT) soybean

Formulation type: Soluble Liquid

Restricted Use Pesticide: Yes

Rain-Free Period: DO NOT apply during rain. **DO NOT** apply when soil in the area to be treated is saturated (if there is standing water on the field or if water can be squeezed from soil).

Restricted-Entry Interval (REI): 24 hours

Sale, Use, and Distribution of this Product: Alabama, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

Endangered Species Act: See **Section 6.0**

EPA Registration No.: 7969-507

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PRECAUTIONARY STATEMENTS – Sections 1-4

1.0 Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed or inhaled. Avoid breathing vapor or spray mist. Remove and wash contaminated clothing before reuse. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

2.0 User Safety Requirements

2.1 Handler Personal Protective Equipment

2.1 Personal Protective Equipment (PPE)
All mixers, loaders, applicators, and other handlers must wear: • Long-sleeved shirt and long pants • Waterproof gloves • Shoes plus socks • A NIOSH-approved dust/mist filtering respirator with any R, P, or HE filter. Examples include a filtering facepiece respirator with approval number prefix TC-84A and an R or P designation, or a full-face or half-mask respirator with R, P, or HE cartridges. See **Section 2.3 Engineering Controls** for additional requirements.

2.2 Statement for Contaminated PPE

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

2.3 Engineering Controls Statement

2.3 Engineering Control Statement
When handlers use closed systems, or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.607 (d-e)], the handler PPE requirements may be reduced or modified as specified in the WPS.

2.4 User Safety Recommendations

2.4 User Safety Recommendations
Users should: Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

3.0 Environmental Hazards

Apply this product only as directed on the label.

REPORTING ECOLOGICAL INCIDENTS: For guidance on reporting ecological incidents, including death, injury, or harm to plants and animals, including bees and other non-target insects, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents or call BASF 1-800-832-HELP (4357).

3.1 Water Hazards	**DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high-water mark. **DO NOT** contaminate water by cleaning of equipment or disposal of wastes.
3.2 Groundwater Advisory	This chemical is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.
3.3 Movement by Surface Runoff or Through Soil	**DO NOT** apply under conditions which favor runoff. **DO NOT** apply if soil is saturated with water or when rainfall that may exceed soil field capacity is forecast to occur within 48 hours. Under some conditions, dicamba has the potential for runoff several days after application. Poorly draining, wet, or erodible soils with readily visible slopes toward adjacent sensitive areas are more prone to produce runoff. When used on erodible soils, best management practices for minimizing runoff should be employed. Consult your local Soil Conservation Service for recommendations in your use area. **DO NOT** apply to impervious substrates such as paved or highly compacted surfaces in areas with high potential for groundwater contamination. Groundwater contamination may occur in areas where soils are permeable or coarse and groundwater is near the surface. **DO NOT** apply to soils classified as sand with less than 3% organic matter and where groundwater depth is shallow. To minimize the possibility of groundwater contamination, carefully follow the specified rates as affected by soil type in the Crop-specific Information section of this label.
3.4 Movement by Water Erosion of Treated Soil	Ensure treated areas have received at least 1/2-inch rainfall (or irrigation) before using tailwater for subsequent irrigation of other fields. **DO NOT** apply this product through any type of irrigation system including sprinkler, drip, flood, or furrow irrigation.
3.5 Mixing and Loading Restrictions	Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self-contained to prevent surface water flow over or from the pad. The pad capacity must be maintained at 110% that of the largest pesticide container or application equipment used on the pad and have sufficient capacity to contain all product spills, equipment or container leaks, equipment washwaters, and rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticide shipments to the mixing/loading site. States may have additional requirements regarding wellhead setbacks and operational containment. Care must be taken when using this product to prevent: a) back siphoning into wells, b) spills, or c) improper disposal of excess pesticide, spray mixtures, or rinsates. Check valves or anti-siphoning devices must be used on all mixing equipment.

(continued)

3.6 Point Source Management	To prevent point-source contamination, **DO NOT** mix or load this pesticide product within 50 feet of wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. **DO NOT** apply pesticide product within 50 feet of wells. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas as described below. Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self-contained to prevent surface water flow over or from the pad. The pad capacity must be maintained at 110% that of the largest pesticide container or application equipment used on the pad and have sufficient capacity to contain all product spills, equipment or container leaks, equipment washwater, and rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment. Care must be taken when using this product to prevent: • Back-siphoning into wells • Spills • Improper disposal of excess pesticide, spray mixtures, or rinsate Check valves or antisiphoning devices must be used on all mixing equipment.
3.8 Run-off Management	A variety of factors including soil type, slope, and weather conditions (e.g., rainfall) can influence volume and intensity of water running off the treated field. The applicator should evaluate factors and make appropriate adjustments when applying this product. Land management, agronomic practices, field conditions, and application measures that reduce, to the maximum extent practicable, runoff from treated fields, should be implemented by land managers/users of this product. Runoff/erosion mitigation is required. Refer to **Section 10.0 Runoff and Erosion Mitigations**.

4.0 Physical Hazards – Not Applicable

DIRECTIONS FOR USE – Sections 5-16

5.0 Use Restrictions

RESTRICTED USE PESTICIDE

Only for retail sale to and use by Certified Applicators. NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This labeling must be in the user's possession during application.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Observe all precautions, restrictions, and limitations in this label and the labels of products used in combination with this product. Keep containers closed to avoid spills and contamination. All applicable directions, restrictions, precautions, and **Conditions of Sale and Warranty** are to be followed.

5.1 Agricultural Use Requirements

5.1 Agriculture Use Requirements
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses as well as individuals who handle agricultural pesticides. It contains requirements for training, decontamination, notifications, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE), notification to workers, and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. **DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval **(REI) of 24 hours**. **PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:** • Coveralls worn over short sleeved shirt and short pants • Chemical resistant footwear plus socks • Chemical resistant gloves made of any waterproof material • Chemical-resistant headgear for overhead exposure • Protective eyewear

5.2 Non-Agricultural Use Requirements – Not Applicable

6.0 Endangered Species

6.1 Endangered and Threatened Species Protection Requirements

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

7.0 Directions for Use

7.1 Product Description

7.1 Product Description
Engenia® herbicide is a water-soluble herbicide that provides postemergence and moderate rate-dependent residual control of many annual broadleaf weeds. **Engenia** is also active on many biennial and perennial broadleaf weeds as well as woody brush and vines (refer to **Section 16.0** for weeds controlled or suppressed). **Engenia** may be applied preplant, at-planting, preemergence, and postemergence (in-crop) for weed control in dicamba-tolerant cotton and dicamba-tolerant soybeans. **Engenia** does not control grass weeds and must be used sequentially or tank mixed with a grass herbicide for a complete weed control program. See **Section 14.0 Tank Mixing Directions** for important information on herbicide tank mixes or **Section 12.0 Crop/Site Use Directions** for recommendations on sequential programs. **Mode of Action** Dicamba, the active ingredient in **Engenia**, is a **Group 4** (WSSA) herbicide. Herbicides in this group mimic auxin (a plant hormone) resulting in a hormone imbalance in sensitive plants that interferes with normal plant growth (e.g. cell division, cell enlargement, and protein synthesis). **Engenia** is readily absorbed by leaves, roots, and shoots; translocates throughout the plant; and accumulates in areas of active growth to provide post emergence control of emerged weeds as well as moderate residual control of germinating weed seeds. Refer to **Section 7.7** for information on weed resistance to **Group 4** herbicides.

7.2 Active Ingredient Conversion

Engenia (fl ozs/A)	**Active Ingredient Equivalent** (lb ae/A)
12.8	0.5

7.3 Crops/Use Sites Listed

9.3 Crops/Use Sites	
Dicamba-tolerant cotton	Dicamba-tolerant soybean

7.4 Requirements for All Uses

Refer to the specific use directions and restrictions in each crop table. The user must check **www.EngeniaHerbicide.com** no more than 7 days before application of this product for additional labeling and any state-specific labeling. Where applicable, users must comply with additional requirements found on this website.

APPLICATION REQUIREMENTS OVERVIEW

Read and follow all applicable restrictions, precautions, and directions on the container label and booklet and at **www.EngeniaHerbicide.com**. For product questions or inquiries and/or to report any nonperformance of this product against any labeled weed species, call BASF 1-800-832-HELP (4357).

7.4 REQUIREMENTS FOR ALL USES
Mandatory Training: Prior to applying in any calendar year, the applicator must complete dicamba-specific annual training for that year. Only certified applicators may apply this product. This product must not be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers. If state-approved OTT dicamba training is required and provided by the state where the applicator intends to apply this product, the applicator must complete that training before applying this product. Otherwise, the applicator must complete dicamba-specific training provided by one of the following sources: a) a registrant of a dicamba product approved for OTT use with dicamba-tolerant crops, or b) a state-authorized provider.

(continued)

7.4 REQUIREMENTS FOR ALL USES *(continued)*

Record Keeping: Records must be created, maintained, and made available to federal and state officials in accordance with any applicable federal and state record keeping requirements. To the extent consistent with such requirements, records for this product include:

1. Full name of the certified applicator
2. Certification number of the applicator
3. Product name
4. EPA registration number
5. Total amount of this product applied
6. Application month, day, and year
7. *Start and Finish Times:* the time the applicator begins and the time the applicator completes applications of this product
8. *Location of the application:* if maximum temperatures are forecasted to be 85-<95 °F on the day of treatment or the day after treatment, the location and the percentage of treated dicamba-tolerant cotton and dicamba-tolerant soybean fields managed by grower in the county and the total number of acres of dicamba-tolerant cotton and dicamba-tolerant soybean managed by the grower in the county.
9. Crop or site receiving the application
10. Size of area treated
11. *Training Requirement:* proof that the applicator completed dicamba-specific training described in this section
12. *Application Timing:* whether the applicator applied this product preemergence or postemergence in relation to the crop
13. *Receipts of purchase:* receipts for the purchase of this product, and for the purchase of the required VRA and required DRA
14. *Product Label:* A copy of the product labeling including state-specific labeling and any information that supplements the product label, such as relevant bulletins
15. *Sensitive Areas, Sensitive Plants, and Residential Awareness*: Documentation that the applicator checked an applicable sensitive crop/specialty crop registry; and that the applicator surveyed all adjacent fields for any sensitive areas, sensitive plants, or residential areas surrounding the field prior to application, date the applicator consulted the sensitive crop registry/specialty crop registry and the date the applicator surveyed for sensitive plants on adjacent areas and within the required spray buffer distance for downwind spray buffer distance calculations, and the name of the sensitive crop registry/specialty crop registry the applicator consulted.
16. *Spray Buffer Requirement:* Required downwind buffer distance (240 ft) determination and any areas included within the buffer distance determination. If the buffer distance was reduced, what qualifying practices supported that reduction
17. *Spray System Cleanout*: Documentation that the applicator complied with **Section 15.0 Equipment Cleanout** including the date the applicator performed the required cleanout, and cleanout method that the applicator followed
18. *Tank Mix Products:* a list of all products (pesticides, adjuvants, and other products) that the applicator tank mixed with this product for each application including EPA registration numbers in the case of any pesticides
19. *Required Tank Mix pH Buffering Volatility Reducing Agent:* the VRA and use rate that was tank mixed with this herbicide
20. *Required Tank Mix Drift Reducing Agent:* the DRA and use rate that was tank mixed with this product
21. *Nozzle Selection:* which spray nozzle the applicator used to apply this product, and the nozzle pressure the applicator set the sprayer to
22. *Air Temperature:* the air temperature at boom height at the time the applicator starts applications of this product, and every time the spray tank is refilled, and documentation of a weather forecast by NOAA/National Weather Service on the day of application showing the forecasted maximum temperature prediction for the day of and day after application
23. *Wind Speed and Direction:* the wind speed and direction at or above boom height at the time the applicator starts applications of this product, and the wind speed and direction at or above boom height every time the tank is refilled during application.
24. *Runoff/Erosion Mitigation Points:* list of how the required total of runoff/erosion mitigation points were achieved. The creation and keeping of these records counts as one point toward the total points required for use of this product, in accordance with Runoff/Erosion Mitigation Relief Options as listed on EPA's Mitigation Menu website.

Required Adjuvants:

Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check **www.EngeniaHerbicide.com/VRA** for a list of qualified VRAs and VRA application rates.

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7.4 REQUIREMENTS FOR ALL USES *(continued)*

Rate and Timing:

DT cotton: This product may be applied Preplant, At-Planting, Preemergence, and Postemergence. A maximum of two applications of 0.5 lb acid equivalent (a.e.) dicamba per acre may be made up to 7 days prior to harvest. **DO NOT** apply more than 0.5 lb a.e. dicamba per acre per application. **DO NOT** exceed 1 lb a.e. dicamba per acre per calendar year from all combined dicamba-containing products.

DT soybean: This product may be applied Preplant, At-Planting, Preemergence, and Postemergence. A maximum of two applications of 0.5 lb acid equivalent (a.e.) dicamba per acre may be made through R1. **DO NOT** apply after R1 or crop response may occur. **DO NOT** apply more than 0.5 lb a.e. dicamba per acre per application.

Pre-harvest interval (PHI) for Soybean Forage: DO NOT harvest or feed soybean forage until 7 days after application.

Pre-harvest interval (PHI) for Soybean Hay: DO NOT harvest or feed soybean hay until 7 days after application.

DO NOT exceed 1 pound acid equivalent (a.e.) dicamba per acre per calendar year from all combined dicamba-containing products.

For details, see **Section 12.0 Crop/Site Use Directions**.

Spray volume: Apply a minimum of 15 gallons of spray solution per acre.

Tank mixing: See **Section 14.0 Tank mixing Directions**. Refer to all product labels to determine mix order or perform a mix compatibility test.

Application Equipment:

Application by air is prohibited.

Apply only using ground equipment.

Spray system equipment cleanout: Ensure entire sprayer system is properly cleaned in accordance with **Section 15.0 Equipment Cleanout** before and after application.

Droplet requirement: Apply this product with nozzles calibrated to apply coarse or coarser droplets only in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).

Spray boom height: Maximum boom height is 24 inches above target pest or crop canopy.

Ground speed: **DO NOT** allow application equipment to exceed 15 mph while applying this product.

Environmental Conditions:

Wind speed: Apply when wind speed, measured at boom height, is between 3 to 10 mph. **DO NOT** apply if wind speed is below 3 mph or above 10 mph.

Inversions: **DO NOT** make applications at night. Applications may only be made starting one hour after sunrise and ending two hours before sunset. **DO NOT** apply this product outside of this time frame. **DO NOT** spray during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Downwind Requirements:

Sensitive plants downwind: **DO NOT** apply if sensitive plants, as defined below in this label in **Section 9.0 Spray Drift**, are planted in an adjacent downwind field or area. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas.

Downwind buffer: After determining no adjacent sensitive plants are downwind, the applicator must maintain a 240-ft downwind buffer between the last treated row and the nearest downwind field edge. The practices in the buffer reduction **Section 9.2** may be used to reduce the size of the buffer. See **Section 9.1 Spray Drift Buffer Distance** for more information.

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7.4 REQUIREMENTS FOR ALL USES *(continued)*

Management of Runoff/Erosion:

DO NOT apply during rain.

DO NOT apply when soil in the area to be treated is saturated (if there is standing water on the field or if water can be squeezed from soil). Avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours).

You must achieve a minimum of **THREE** runoff/erosion mitigation points for the crop uses listed on this label unless otherwise stipulated in **Section 10.0 Runoff/Erosion Mitigations**.

7.5 Restrictions for All Uses

7.5 Restrictions for all uses

DO NOT tank mix ammonium sulfate (AMS) or any products that contain AMS with this product.

DO NOT apply more than 12.8 fl ozs/A of **Engenia® herbicide** (0.5 lb dicamba ae/A) per application.

DO NOT exceed 25.6 fluid ounces of **Engenia** (1 pound dicamba ae) per acre per year. **DO NOT** exceed 1 pound dicamba ae per acre per year from all dicamba applications if more than one dicamba-containing product is applied to the same site within the same year.

If temperatures are forecasted to be 95 °F or above either on the day of treatment or the day after treatment, **DO NOT** apply this product.

DO NOT apply without DRA and VRA.

DO NOT apply through any type of irrigation equipment (e.g., chemigation). **DO NOT** [treat/contaminate] irrigation ditches or water used for crop irrigation or domestic purposes.

DO NOT apply **Engenia** if wind speed is less than 3 mph or greater than 10 mph.

DO NOT apply to crops under stress due to lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, insects, or widely fluctuating temperatures as injury may result.

DO NOT apply this product if sensitive plants are planted on an adjacent downwind field or area.

Ensure treated areas have received at least one-half inch rainfall (or irrigation) before using tailwater from flood or furrow irrigation for subsequent irrigation of other fields.

Application by air is prohibited. Apply only using ground equipment.

Restricted-entry interval (REI): 24 hours.

7.6 Crop Rotations

Use the following information to determine the required interval between **Engenia** application and rotational crop planting as well as replanting after crop failure because of environmental factors such as drought, frost, or hail. Determine the rotational crop interval for tank mix products and use the most restrictive interval of all products applied.

7.6 Crop Rotation Restrictions

Engenia RATE per acre per year	**Crop**	**Rotation Interval[1]** (Days after last application)
One or two applications of 12.8 fl ozs/A	Corn DT soybean DT cotton	None
	Sorghum Soybean, non-DT[2] Grasses[3] (30 inches or more annual precipitation)	28
	Cotton, non-DT[2] Grasses[3] (less than 30 inches annual precipitation)	42
	All other crops not listed	120

[1] **DO NOT** include time when the soil is frozen and days before receiving any required rainfall or overhead irrigation.
[2] Following application of **Engenia** and a minimum accumulation of 1 inch of rainfall or overhead irrigation, observe the indicated waiting interval.
[3] Includes barley, oats, wheat, and other grass crops.

7.7 Weed Resistance and Integrated Programs

7.7 Weeds Resistance and Integrated Programs

Dicamba, the active ingredient in **Engenia® herbicide**, is a **Group 4** herbicide. Any weed population may contain or develop plants naturally resistant to **Engenia** and other **Group 4** herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance, take one or more of the following steps:

Apply **Engenia** to weeds 4 inches or less in size for best performance.

Apply **Engenia** at the labeled rate to minimize the likelihood of weed resistance occurring. **DO NOT** apply at less than the labeled rate. See **Section 12.0 Crop/Site Use Directions** for labeled rates by crop.

Limit cultivation and/or mechanical tillage within 7 days after application, as this may result in reduced efficacy and promote regrowth of treated weeds.

Rotate the use of **Engenia** within a growing season and among growing seasons with different herbicide groups (other than **Group 4**) that control the same weeds.

Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.

Implement an integrated weed management program that guides herbicide use through regular scouting and historical data on herbicide applications and performance. The program should also incorporate tillage or other mechanical controls, cultural practices (such as increased crop seeding rates and precision fertilizer timing to benefit crops over weeds), biological methods (like weed-suppressive crops), or other complementary strategies such as crop rotation.

Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and by planting clean seed.

If a weed pest population continues to progress after treatment with this product, switch to another management strategy or herbicide with an effective mode of action, if available, and contact BASF at 1-800-832-HELP (4357). Report any incidence of non-performance of this product against a particular weed species at **www.EngeniaHerbicide.com**. Consult your local BASF representative, state cooperative extension service, professional consultants, or other qualified authority to determine appropriate actions if you suspect resistant weeds. Additional information about weeds which are known to be resistant to dicamba can be found at www.Resistance-Information.BASF.US.

Management of Dicamba-Resistant Biotypes

Appropriate testing is critical to determine if a weed is resistant to dicamba. Contact your BASF representative or call 1-800-832-HELP (4357) to determine if resistance in any particular weed biotype has been confirmed in your area or visit www.iwilltakeaction.com or www.weedscience.org.

The following agronomic practices can reduce the spread of confirmed dicamba-resistant biotypes, particularly if pursued as soon as signs of resistance are observed:

If a naturally occurring resistant biotype is present in your field, this product may be tank mixed or applied in rotation with an appropriately labeled herbicide with a different mode of action to achieve control (See **Section 14.0 Tank Mixing Directions** for more information).

Cultural and mechanical control practices (e.g., crop rotation or tillage) can also be used as appropriate.

Scout treated fields after herbicide applications and control weed escapes, including resistant biotypes, before they set seed.

7.8 Best Management Practices for Pollinator Programs

Visit https://www.epa.gov/pollinator-protection/tools-and-strategies-pollinator-protection for tools and strategies for pollinator protections.

8.0 Application Method Instructions and Information

8.G.0 Ground (G) Application Directions

APPLY THIS PRODUCT USING PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING THE REQUIRED VOLUMES.

Apply **Engenia® herbicide** by ground to actively growing weeds as a band, broadcast, or spot spray application for postemergence control of emerged weeds as well as moderate residual control of germinating weed seeds. For best results, treat weeds early when they are relatively small (less than 4 inches). Timely application to small weeds early in the season will improve control and reduce weed competition.

Inclusion of a VRA and DRA are required with every application.

8.G.0 Ground (G) Application Directions	
8.G.1 Method of Application	Ground Application (including Broadcast and In-Row).
8.G.2 Boom height above target	**DO NOT** exceed 24 inches above target pest or crop canopy.
8.G.3 Droplet size	Use spray nozzles that provide a coarse or coarser droplets only.
8.G.4 Water volume	**Broadcast Applications:** Use a minimum of 15 gallons of spray solution per broadcast acre for optimal performance. **Banding Applications:** When applying **Engenia** by banding, use the formulas to calculate the amount of herbicide and water volume needed: $\frac{\text{Bandwidth (inches)}}{\text{Row width (inches)}} \times \text{Broadcast rate per acre} = \text{Banding herbicide rate per acre}$ $\frac{\text{Bandwidth (inches)}}{\text{Row width (inches)}} \times \text{Broadcast volume per acre} = \text{Banding water volume per acre}$
8.G.5 Wind speed	Apply when wind speed, measured at boom height, is between 3 to 10 mph. **DO NOT** apply if wind speed is below 3 mph or above 10 mph.
8.G.6 Sprayer speed	**DO NOT** exceed 15 mph.
8.G.7 Temperature and Humidity	**DO NOT** apply at temperatures ≥ 95 °F. If temperatures are forecasted to be 85 - <95 °F on the day of treatment or the day after treatment, **DO NOT** treat more than 50% of the total number of dicamba-tolerant soybean AND dicamba-tolerant cotton acres managed by the grower within the county within one day. See **Section 11.0 Mandatory Volatility Mitigations**.
8.G.8 Temperature inversions	**DO NOT** make applications at night. Applications may only be made starting one hour after sunrise and ending two hours before sunset. **DO NOT** apply this product outside of this time frame. **DO NOT** spray during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

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8.G.0 Ground (G) Application Directions *(continued)*	
8.G.9 Spray drift buffer	**DO NOT** apply if sensitive plants are planted on an adjacent downwind field or area. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas. See **Section 9.0** for a list of sensitive plants. After determining no adjacent sensitive plants are downwind, the applicator must maintain a 240-foot downwind buffer between the last treated row and the nearest downwind field edge unless applying a qualifying practice listed in the buffer reduction table in **Section 9.2 Spray Drift Buffer Reductions**. More information and definitions of the qualifying practices can be found at https://www.epa.gov/pesticides/mitigation-menu-measure-descriptions. After determining your total percent reduction in the buffer distance, determine the distance that may be reduced in feet, subtract that distance from the 240-foot buffer distance, then round to the nearest 5-foot increment for your final buffer distance. No downwind buffer is required if: • Use of the buffer reduction options results in a buffer reduction ≥ 100%. • Use of the buffer reduction options results in a buffer < 10 feet, after rounding to the nearest 5 ft increment.
8.G.10 Buffer distance to well	**DO NOT** apply pesticide product within 50 feet of wells. This setback does not apply to properly capped or plugged abandoned wells.

9.0 Spray Drift

Avoiding spray drift at the application site is the responsibility of the applicator. The spray system and weather-related factors determine the potential for spray drift. The applicator is responsible for considering these factors when making application decisions to avoid spray drift onto nontarget areas.

Applicators must follow application requirements to avoid spray drift hazards, including those found in this labeling and applicable state and local regulations and ordinances. Where states have more stringent regulations, they must be observed.

All application equipment must be properly maintained and calibrated using appropriate carriers.

DO NOT allow herbicide solution to drip, physically drift, or splash onto desirable vegetation because injury to desirable broadleaf plants could result. The following physical spray drift management requirements must be followed.

DO NOT apply if sensitive plants are planted on an adjacent downwind field or area. **DO NOT** spray this product when wind is blowing toward adjacent sensitive plants, as defined below.

It is important for the applicator to be aware that wind direction may vary during the application. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, **STOP** the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas.

Dicamba-sensitive plants include, but are not limited to,
- non-DT soybeans
- non-DT cotton
- cucumbers, melons, and all members of EPA Crop Group 9: Cucurbit Vegetables
- flowers
- fruit trees
- grapes
- ornamentals including greenhouse-grown and shadehouse-grown broadleaf plants and ornamental plants in a residential area
- peanuts
- peas and beans, including all members of EPA Crop Group 6: Legume Vegetables (Succulent or Dried) and EPA Crop Group 6-22: Legume Vegetable group with the exception of DT soybeans
- peppers, tomatoes, and other fruiting vegetables, including all members of EPA Crop Group 8-10: Fruiting Vegetable Group
- potato

- sugar beets
- sweet potato
- tobacco
- other broadleaf plants, including if these plants are in a greenhouse

Severe injury or destruction could occur if any contact between this product and these plants occurs. Sensitive crop registries can provide additional information about sensitive crops and sensitive areas. The applicator must check an applicable sensitive crop/specialty crop registry; and document that the applicator surveyed all adjacent fields for any sensitive areas, sensitive plants, or residential areas surrounding the field prior to application. See **Section 7.4 Record Keeping** for details. If you have questions regarding sensitive crop registries, check https://fieldwatch.com/ prior to application.

9.1 Spray Drift Buffer Distance

9.1 Spray Drift Buffer Distance
After determining no adjacent sensitive plants are downwind, the applicator must maintain a 240-foot downwind buffer between the last treated row and the nearest downwind field edge. The practices in the buffer reduction table, **Section 9.2**, may be used to reduce the size of the buffer. More information and definitions of the qualifying practices can be found at https://www.epa.gov/pesticides/mitigation-menu-measure-descriptions. After determining your total percent reduction in the buffer distance, determine the distance that may be reduced in feet, subtract that distance from the 240-foot buffer distance, then round to the nearest 5-foot increment for your final buffer distance. No downwind buffer is required if: • Use of the buffer reduction options results in a buffer reduction ≥ 100%. • Use of the buffer reduction options results in a buffer < 10 feet, after rounding to the nearest 5 ft increment.

9.2 Spray Drift Buffer Reductions

9.2 Spray Drift Buffer Reduction Options*	**Qualifying Practice**	**Reduction in Buffer Distance****
Small field size (≤ 10 acre)/Reduce treatment area	Treatment area of 1/10 acre to 1 acre	75%
	Treatment area of > 1 acre to 4 acres	35%
	Treatment area of > 4 acres to 10 acres	15%
Downwind Drift Barrier	Basic windbreak/hedgerow/shelterbelt/artificial screen	50%
	Advanced windbreak/hedgerow/shelterbelt/artificial screen	75%
Use of directed sprayer equipment	Over-the-top Hooded Sprayer	50%
	Row-middle Hooded Sprayer	75%
	Sprays below crop canopy using drop nozzles or layby applications (difference between the crop height and release height is ≥ 1 ft, and that there are more than 4 consecutive rows of crop on the field that meet this parameter)	50%

* Descriptions of spray drift buffer reduction measures are available on EPA's website at: https://www.epa.gov/pesticides/mitigation-menu-measure-descriptions

** Buffer reduction measures are additive in nature. For example, a 50% reduction in buffer distance for one measure plus a 15% reduction in buffer for another measure, when used in combination, results in an overall 65% reduction in an identified buffer.

The following managed areas may be included in the buffer if they are immediately adjacent/contiguous to the treated field in the downwind direction and people are not present in those areas (including inside closed buildings/structures). Buffer reduction options do not apply to these managed areas, as they are included in the buffer distance.

- Untreated portions of the treated field;
- Roads, paved or gravel surfaces, mowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area;
- Areas present and/or maintained as a drift buffer reduction measure as listed on the buffer reduction table above. Examples include vegetative windbreaks and hedgerows.
- On-farm contained irrigation water resources that are not connected to adjacent water bodies, including on-farm irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, farm ponds, and tailwater collection ponds.
- Areas present and/or maintained as a runoff/erosion measure as listed on EPA's Mitigation Menu website. Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement.

9.3 Spray Drift Management

9.3.1 MANDATORY SPRAY DRIFT MANAGMENT

DO NOT apply if sensitive plants are planted on an adjacent downwind field or area. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas. See **Section 9.0** for a list of sensitive plants.

During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes), must register between 3 and 10 miles per hour. **DO NOT** apply if wind speed is below 3 mph or above 10 mph.

Wind speed and direction must be measured on location using a windsock or anemometer (including systems to measure wind speed or velocity using application equipment). This information must be measured before the application begins and every time the spray tank is refilled. Wind direction may vary during the application. Downwind buffers must be adjusted according to changing wind direction.

Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.

DO NOT release spray at a height greater than 2 feet above the ground or crop canopy.

Applicators must select nozzle and pressure that deliver coarse or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).

Inversions:

- **DO NOT** make applications at night. Applications may only be made starting one hour after sunrise and ending two hours before sunset. **DO NOT** apply this product outside of this time frame.
- **DO NOT** spray during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

9.3.2 SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby nontarget sites and environmental conditions.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size:

- **Volume** – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- **Pressure** – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- **Spray Nozzle** – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

BOOM HEIGHT

For ground equipment, the boom should remain level with the crop and have minimal bounce.

HOODED (OR SHIELDED) SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

WIND

Drift potential generally increases with wind speed. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

MEASURING WIND SPEED AND WIND DIRECTION

Best Management Practices for measuring wind speed and wind direction:

- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the permissible range.
- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:
  - Relying on equipment on the application equipment that measures wind speed.
  - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop at least every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.
  - Using a windsock. Wind can be estimated with a windsock using the strips on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every hour to estimate wind speed and direction.
  - Using an aircraft smoke system. Laying down several puffs of smoke along different lines using an aircraft smoke system can provide an accurate view of what the wind speed and direction for the application.
  - Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

10.0 Runoff and Erosion Mitigations

10.0 Runoff/Erosion Mitigations

DO NOT apply during rain.

DO NOT apply when soil in the area to be treated is saturated (if there is standing water on the field or if water can be squeezed from soil). Avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours).

MANDATORY RUNOFF MITIGATION
Applicators must access and search Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the "Inside a PULA" section below and in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below.

Outside a PULA:
THREE mitigation points are required for all crops listed on this label. Follow the steps below to determine which applications need to achieve points, determine your eligibility for runoff/erosion mitigation relief, and determine options to achieve mitigation points.

Inside PULAs:
SIX runoff/erosion mitigation points are required inside specific PULAs for all crop uses. Follow the steps below to determine which applications need to achieve the points, determine eligibility for runoff/erosion mitigation relief, and determine options to achieve runoff/erosion mitigation points.

Steps to Achieve Points:
Step A. To achieve the runoff/erosion mitigation points specified above, visit EPA's mitigation menu website (http://www.epa.gov/pesticides/mitigation-menu) to determine which applications need to achieve points and for a full list of mitigation and mitigation relief options.

Step B. Determine if you are eligible for runoff/erosion mitigation relief. Runoff/erosion mitigation is NOT needed if certain field/application parameters are present at the time of application (*e.g.,* subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, etc). Refer to the mitigation menu for a complete list of field/application parameters.

Step C. If the application site does not meet the field/application parameters specified on EPA's mitigation menu website, choose among the runoff/erosion mitigation and/or runoff/erosion mitigation relief options on EPA's mitigation menu website to meet or exceed the required points noted on this label before applying this product.

Step D. To achieve runoff/erosion mitigation points for the application, the mitigation and mitigation relief measures must be:

- Employed in accordance with the instructions and descriptions on EPA's Mitigation Menu Website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's Mitigation Menu Website.

Step E. Additional restrictions may be present on the labeling or in bulletins—always follow the most restrictive instructions across the labeling and any bulletins. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between all the tank-mixed products' labeling and bulletins.

EPA may periodically update the Mitigation Menu Website, for example, by adding new mitigation measures or updating a mitigation measure description.

Crop	Runoff/Erosion Mitigation Points Needed	
	Nationally	Pesticide Use Limitation Area (PULA)
DT Soybean	3	6
DT Cotton	3	6

11.0 Mandatory Volatility Mitigations

DO NOT tank mix ammonium sulfate (AMS) or any products that contain AMS with **Engenia® herbicide**.

Temperature Restrictions:

- On the date of application, applicator must obtain a daily high temperature forecast as predicted by the NOAA/National Weather Service for the day of and the day after application. Detailed National Weather Service forecasts for local weather conditions may be obtained online at www.weather.gov. In addition, the applicator must check the temperature at boom height in the field when an application begins and every time the spray tank is refilled. If the measured temperature is higher than forecasted for the day, the applicator must follow the label directions corresponding to that measured temperature. If the measured temperature is below the forecasted temperature, application must follow label directions corresponding to the temperatures forecasted. The highest temperature on the day of application or forecasted for the day after application is the value that must be used to determine the label restrictions for that application.
- If temperatures are forecasted to be 95 °F or above either on the day of treatment or the day after treatment, **DO NOT** apply this product. If the measured temperature at the application site is above 95 °F at any point during the planned day of application, **DO NOT** begin application or STOP application if it has already begun.
- If temperatures are forecasted to be 85-95 °F at the application site either on the day of treatment or the day after treatment, application of this product is limited to 50% or less of the total number of acres of dicamba-tolerant soybean AND dicamba-tolerant cotton under production by the grower within the county. For purposes of this label, "grower" is defined as the individual or business entity managing the crop on the land on which the product is being applied. **DO NOT** treat additional/remaining dicamba-tolerant soybean AND dicamba-tolerant cotton acres managed by the grower within the county the day of application or the day after application. Remaining untreated 50% of DT crop acreage managed by the grower may be treated on the third day after initial treatment. All label restrictions including temperature-based restrictions apply to subsequent treatments.
- If temperatures are forecasted to be <85 °F, the application has begun, the measured temperature at the application site is 85-<95 °F at any point, and more than 50% of the total number of dicamba-tolerant soybean AND dicamba-tolerant cotton acres managed by the grower within the county have been treated: STOP application immediately. If less than 50% has been treated at the time that the measured temperature exceeds the forecasted <85 °F temperature, the application plan for the day must be modified to comply with the 50% limitation on the treatment of the grower's managed dicamba-tolerant soybean and dicamba-tolerant cotton acres within the county.

11. Volatility Mitigations	
Maximum Forecasted Air Temperature*	**Rates of Engenia + Required Adjuvants + Additional Mitigation**
< 85 °F	12.8 fl ozs (0.5 lb ae dicamba) + DRA + VRA**
≥ 85 °F to < 95 °F	12.8 fl ozs (0.5 lb ae dicamba) + DRA + VRA** PLUS **DO NOT** treat more than 50% of DT cotton and DT soybean acres managed by grower within the county***
≥ 95 °F	No applications allowed

* Maximum temperature must be forecasted by NOAA/National Weather Service not to exceed what is noted for both the day of application and the day after application. The highest temperature (forecasted or measured) on the day of application or the day after application is the value that must be used to determine the label restrictions for that application.

** The user must check **www.EngeniaHerbicide.com/VRA** for a list of qualified VRAs and rates of VRA application.

*** **DO NOT** apply these products to the untreated 50% of DT crop acreage the day of or the day following initial treatment. Remaining untreated 50% of DT crop acreage may be treated the third day after initial treatment. All restrictions apply for subsequent treatments. The "grower" is the individual or business entity managing the crop on the land on which the product is being applied. If the grower is not the applicator, it is the responsibility of the applicator to ensure that they have communicated with the grower to obtain information on the number of DT cotton and DT soybean acres managed by the grower.

12.0 Crop/Site Use Directions

Engenia® herbicide may be applied preplant surface, at-planting, preemergence, or postemergence (over the top) by ground only to control or suppress many annual, biennial, and perennial broad leaf weeds (see **Table 16.0**) in dicamba-tolerant (DT) cotton and DT soybean. If **Engenia** is applied to non-DT cotton or non-DT soybean, severe crop injury will result.

Engenia is approved by U.S. EPA for use in DT cotton and DT soybean only in the following states: Alabama, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

[Within the above listed states,] **Engenia** is subject to area-specific restrictions that must be checked prior to making an **Engenia** application in DT cotton and DT soybeans. See **Section 10.0 Runoff and Erosion Mitigations** for more information.

12.1: Dicamba-Tolerant Cotton

12.1: DT Cotton					
Product Rate (fl ozs/A)	**Application Timing**	**Pests Controlled**	**Use Directions**		
12.8	Preplant, at-planting, preemergence and postemergence	See **Section 16.0**	A maximum of **two** applications each of 12.8 fl ozs per acre (0.5 lb ae/A) may be made up through 7 days prior to harvest.		
Tank Mixtures					
Required	Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check **www.EngeniaHerbicide.com/VRA** for a list of qualified VRAs and VRA application rates.				
May be mixed with	Refer to all product labels to determine mix order or perform a mix compatibility test.				
Prohibited	**DO NOT** tank mix ammonium sulfate (AMS) or any products that contain AMS with this product.				
Use Restrictions					
Application Rate Restrictions Per Acre					
Preemergence Maximum Rate	**Postemergence Maximum Rate**	**Seasonal Maximum Rate**	**Yearly Maximum Rate**	**Maximum Number of Applications**	**Minimum Application Interval**
12.8 fl ozs	12.8 fl ozs	25.6 fl ozs	25.6 fl ozs	2	7 days
Maximum Application Per Year					
DO NOT exceed 25.6 fl ozs (1 pound acid equivalent (a.e.) dicamba) of **Engenia** per acre per year. **DO NOT** exceed 1 pound acid equivalent (a.e.) dicamba per acre per calendar year from all combined dicamba-containing products.					
Last Application Growth Stage					
Applications may be made up to 7 days prior to harvest.					
Geographic Restrictions					
Check the registration status of this product in each state before using.					
Calendar Date Restrictions					
The user must check **www.EngeniaHerbicide.com** no more than 7 days before application of this product for additional labeling and any additional state-specific labeling. Where applicable, users must comply with additional requirements found on this website.					
Grazing Restrictions					
Cotton gin byproducts may be fed to livestock.					

12.2: Dicamba-Tolerant Soybean

12.2: DT Soybean			
Product Rate (fl ozs/A)	**Application Timing**	**Pests Controlled**	**Use Directions**
12.8	Preplant, at-planting, preemergence and postemergence	See **Section 16.0**	A maximum of **two** applications each of 12.8 fl ozs per acre may be made up through R1. **DO NOT** apply after R1 or crop response may occur.

Tank Mixtures	
Required	Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check **www.EngeniaHerbicide.com/VRA** for a list of qualified VRAs and VRA application rates.
May be mixed with	Refer to all product labels to determine mix order or perform a mix compatibility test.
Prohibited	**DO NOT** tank mix ammonium sulfate (AMS) or any products that contain AMS with this product.

Use Restrictions					
Application Rate Restrictions Per Acre					
Preemergence Maximum Rate	**Postemergence Maximum Rate**	**Seasonal Maximum Rate**	**Yearly Maximum Rate**	**Maximum Number of Applications**	**Minimum Application Interval**
12.8 fl ozs	12.8 fl ozs	25.6 fl ozs	25.6 fl ozs	2	7 days
Maximum Application Per Year					
DO NOT exceed 25.6 fluid ounces (1 pound acid equivalent (a.e.) dicamba) of **Engenia® herbicide** per acre per year. **DO NOT** exceed 1 pound acid equivalent (a.e.) dicamba per acre per calendar year from all combined dicamba-containing products.					
Last Application Growth Stage					
DO NOT apply after R1 or crop response may occur.					
Geographic Restrictions					
Check the registration status of this product in each state before using.					
State-specific Restrictions					
The user must check **www.EngeniaHerbicide.com** no more than 7 days before application of this product for additional labeling and any additional state-specific labeling. Where applicable, users must comply with additional requirements found on this website.					

Grazing Restrictions	
Forage	Allow at least 7 days between final application and forage harvest or feeding of soybean forage.
Hay	Allow at least 7 days between final application and hay harvest or feeding of soybean hay.

13.0 Adjuvants

When a specific adjuvant product such as a Drift Reduction Adjuvant (DRA) is to be used with this product, BASF recommends the use of those adjuvants certified by the Council of Producers & Distributors of Agrotechnology (CPDA).

Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check **www.EngeniaHerbicide.com/VRA** for a list of qualified VRAs and VRA application rates.

14.0 Tank Mixing Directions

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check **www.EngeniaHerbicide.com/VRA** for a list of qualified VRAs and VRA application rates.

DO NOT tank mix ammonium sulfate (AMS) or any products that contain AMS with this product.

Mixing **Engenia® herbicide** with postemergence grass (graminicide) herbicides may reduce the effectiveness of those products. Follow graminicide label when mixing with **Engenia** to ensure optimum weed control. Physical incompatibility, reduced weed control, or crop injury may result from mixing **Engenia** with other pesticides, additives, nutritionals, etc.

Some COC, HSOC and MSO adjuvants may cause a temporary crop response.

Hard water does not usually affect the activity of **Engenia**. Use of a conditioning agent should be considered when hard water (i.e. total calcium, magnesium, and iron content above 500 ppm) is used as a spray carrier.

14.1 Compatibility Test

Before mixing components, always perform a compatibility jar test.

1. For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
2. Add components in the sequence indicated in the following **Section 14.2 Proper Mixing Order** instructions using 2 teaspoons for each pound or 1 teaspoon for each pint of labeled use rate per acre.
3. Cap the jar and invert 10 cycles between component additions.
4. When the components have all been added to the jar, let the solution stand for 15 minutes.
5. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface; fine particles that precipitate to the bottom; or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

14.2 Proper Mixing Order

Make sure each component is thoroughly mixed and suspended before adding tank mix partners. Except when mixing products in PVA bags, maintain constant agitation during mixing and application.

1. **Water** - Begin by agitating a thoroughly clean sprayer tank 1/2 to 3/4 full of clean water.
2. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
3. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. **Water-soluble products and additives (e.g., Engenia)**
5. **Water-dispersible products** (such as dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
6. **Emulsifiable concentrates** (including NIS and oil concentrate)
7. Remaining quantity of water

Maintain continuous and constant agitation throughout mixing and application until spraying is completed. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

15.0 Equipment Cleanout

The applicator must ensure that the spray system used to apply **Engenia® herbicide** is clean before application. Small amounts of residual ammonium sulfate (AMS) that may remain in the sprayer from uses other than dicamba applications in DT crops can increase the volatility potential of **Engenia**. Severe crop injury may occur if any **Engenia** remains in the spray equipment following application and is subsequently applied to sensitive crops. After using **Engenia**, clean all mixing and spray equipment (including tanks, pumps, lines, filters, screens, and nozzles) with a strong detergent based sprayer cleaner. Dispose of rinsate in compliance with local, state, and federal guidelines.

1. After spraying, drain the sprayer (including boom and lines). Avoid allowing the spray solution to remain in the spray boom lines overnight or for extended periods of time.
2. Flush tank, hoses, boom, and nozzles with clean water. Open boom ends and flush if so equipped.
3. Inspect and clean all strainers, screens, and filters.
4. Use commercial sprayer cleaner containing strong detergents according to the manufacturer's directions.
5. Wash all parts of the tank, including the inside top surface. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
6. Flush hoses, spray lines, and nozzles with the cleaning solution for at least 1 minute. Remove nozzles, screens, and strainers, and clean separately in the cleaning solution after completing the above procedure.
7. Drain pump, filter, and lines.
8. Triple rinse the complete spraying system with clean water.
9. Clean and rinse the exterior of the sprayer.
10. Appropriately dispose of all rinsate in compliance with local, state, and federal requirements.

16.0 Weeds Controlled or Suppressed

General Weed List, Including ALS-, Glyphosate-, and Triazine-Resistant Biotypes

Weeds Controlled or Suppressed

Common Name	Scientific Name
Annuals	
Alkanet	*Lithospermum arvense*
Amaranth, Palmer	*Amaranthus palmeri*
Amaranth, Powell	*Amaranthus powellii*
Amaranth, spiny	*Amaranthus spinosus*
Aster, slender	*Aster subulatus*
Bedstraw, catchweed	*Galium aparine*
Beggarweed, Florida	*Desmodium tortuosum*
Broomweed, common	*Gutierrezia dracunculoides*
Buckwheat, tartary	*Fagopyrum tataricum*
Buckwheat, wild	*Polygonum convolvulus*
Buffalobur	*Solanum rostratum*
Burclover, California	*Medicago polymorpha*
Burcucumber	*Sicyos angulatus*
Buttercup, corn	*Ranunculus arvensis*
Buttercup, creeping	*Ranunculus repens*
Buttercup, roughseed	*Ranunculus muricatus*
Buttercup, western field	*Ranunculus occidentalis*
Carpetweed	*Mollugo verticillata*
Catchfly, nightflowering	*Silene noctiflorum*
Chamomile, corn	*Anthemis arvensis*
Chervil, bur	*Anthriscus caucalis*

(continued)

Weeds Controlled or Suppressed *(continued)*

Common Name	Scientific Name
Annuals *(continued)*	
Chickweed, common	*Stellaria media*
Clover	*Trifolium* spp.
Cockle, corn	*Agrostemma githago*
Cockle, cow	*Vaccaria pyramidata*
Cocklebur, common	*Xanthium strumarium*
Copperleaf, hophornbeam	*Acalypha ostryifolia*
Cornflower (Bachelor button)	*Centaurea cyanus*
Croton, tropic	*Croton glandulosus*
Croton, woolly	*Croton capitatus*
Daisy, English	*Bellis perennis*
Dragonhead, American	*Dracocephalum parviflorum*
Eveningprimrose, cutleaf	*Oenothera laciniata*
Falseflax, smallseed	*Camelina microcarpa*
Fleabane (annual, hairy)	*Conyza bonariensis*
Flixweed	*Descurainia sophia*
Fumitory	*Fumaria officinalis*
Goosefoot, nettleleaf	*Chenopodium murale*
Hempnettle	*Galeopsis tetrahit*
Henbit	*Lamium amplexicaule*
Horseweed (Marestail)	*Conyza canadensis*
Jacob's-ladder	*Polemonium caeruleum*
Jimsonweed	*Datura stramonium*
Knawel (German moss)	*Scleranthus annuus*
Knotweed, prostrate	*Polygonum aviculare*
Kochia[2]	*Kochia scoparia*
Ladysthumb	*Polygonum persicaria*
Lambsquarters, common	*Chenopodium album*
Lettuce, miner's	*Claytonia perfoliata*
Lettuce, prickly	*Lactuca serriola*
Mallow, common	*Malva neglecta*
Mallow, Venice	*Hibiscus trionum*
Mayweed	*Anthemis cotula*
Morningglory, ivyleaf	*Ipomoea hederacea*
Morningglory, tall	*Ipomoea purpurea*
Mustard, black	*Brassica nigra*
Mustard, blue	*Chorispora tenella*
Mustard, tansy	*Descurainia pinnata*
Mustard, treacle	*Erysimum repandum*
Mustard, tumble	*Sisymbrium altissimum*

(continued)

Weeds Controlled or Suppressed *(continued)*

Common Name	Scientific Name
Annuals *(continued)*	
Mustard, wild	*Sinapis arvensis*
Mustard, yellowtop	*Sinapis* spp.
Nightshade, black	*Solanum nigrum*
Nightshade, cutleaf	*Solanum triflorum*
Pennycress, field (Fanweed, Frenchweed, Stinkweed)	*Thlaspi arvense*
Pepperweed, Virginia (peppergrass)	*Lepidium virginicum*
Pigweed, prostrate	*Amaranthus blitoides*
Pigweed, redroot (rough)	*Amaranthus retroflexus*
Pigweed, smooth	*Amaranthus hybridus*
Pigweed, tumble	*Amaranthus albus*
Pineappleweed	*Matricaria matricarioides*
Poorjoe	*Diodia teres*
Poppy, red horn	*Glaucium corniculatum*
Puncturevine	*Tribulus terrestris*
Purslane, common	*Portulaca oleracea*
Pusley, Florida	*Richardia scabra*
Radish, wild	*Raphanus raphanistrum*
Ragweed, common	*Ambrosia artemisiifolia*
Ragweed, giant	*Ambrosia trifida*
Ragweed, lanceleaf	*Ambrosia bidentata*
Rocket, London	*Sisymbrium irio*
Rocket, yellow	*Barbarea vulgaris*
Rubberweed, bitter	*Hymenoxys odorata*
Salsify	*Tragopogon porrifolius*
Senna, coffee	*Senna occidentalis*
Sesbania, hemp	*Sesbania exaltata*
Shepherd's purse	*Capsella bursa-pastoris*
Sicklepod	*Cassia obtusifolia*
Sida, prickly (Teaweed)	*Sida spinosa*
Smartweed, green	*Polygonum scabrum*
Smartweed, Pennsylvania	*Polygonum pensylvanicum*
Sneezeweed, bitter	*Helenium amarum*
Sowthistle, annual	*Sonchus oleraceus*
Sowthistle, spiny	*Sonchus asper*
Spanish needles	*Bidens bipinnata*
Spikeweed, common	*Hemizonia pungens*
Spurge, prostrate	*Chamaesyce humistrata*
Spurry, corn	*Spergula arvensis*
Starbur, bristly	*Acanthospermum hispidum*

(continued)

Weeds Controlled or Suppressed *(continued)*

Common Name	Scientific Name
Annuals *(continued)*	
Starwort, little	*Stellaria graminea*
Sumpweed, rough	*Iva ciliata*
Sunflower, common (wild, volunteer)	*Helianthus annuus*
Thistle, Russian	*Salsola iberica*
Velvetleaf	*Abutilon theophrasti*
Waterhemp (common, tall)	*Amaranthus tuberculatus*
Waterprimrose, winged	*Ludwigia decurrens*
Wormwood	*Artemisia annua*
Biennials	
Burdock, common	*Arctium minus*
Carrot, wild (Queen Anne's Lace)	*Daucus carota*
Cockle, white	*Melandrium album*
Eveningprimrose, common	*Oenothera biennis*
Geranium, Carolina	*Geranium carolinianum*
Gromwell	*Lithospermum* spp.
Knapweed, diffuse	*Centaurea diffusa*
Knapweed, spotted	*Centaurea maculosa*
Mallow, dwarf	*Malva borealis*
Plantain, bracted	*Plantago aristata*
Ragwort, tansy	*Senecio jacobaea*
Starthistle, yellow	*Centaurea solstitialis*
Sweetclover	*Melilotus* spp.
Teasel	*Dipsacus sativus*
Thistle, bull	*Cirsium vulgare*
Thistle, musk	*Carduus nutans*
Thistle, plumeless	*Carduus acanthoides*
Thistle, variegated (milk)	*Silybum marianum*
Perennials[1]	
Alfalfa	*Medicago sativa*
Apple, tropical soda	*Solanum viarum*
Artichoke, Jerusalem	*Helianthus tuberosus*
Aster, spiny	*Aster spinosus*
Aster, whiteheath	*Aster pilosus*
Bedstraw, smooth	*Gallium mollugo*
Bindweed, field	*Convolvulus arvensis*
Bindweed, hedge	*Calystegia sepium*
Blueweed, Texas	*Helianthus ciliaris*
Bursage, woollyleaf	*Ambrosia grayi*
Buttercup, tall	*Ranunculus acris*

(continued)

Weeds Controlled or Suppressed *(continued)*

Common Name	Scientific Name
Perennials[1] *(continued)*	
Campion, bladder	*Silene vulgaris*
Chickweed, field	*Cerastium arvense*
Chickweed, mouseear	*Cerastium vulgatum*
Chicory	*Cichorium intybus*
Clover, hop	*Trifolium aureum*
Dandelion, common	*Taraxacum officinale*
Dock, broadleaf (Bitterdock)	*Rumex obtusifolius*
Dock, curly	*Rumex crispus*
Dogbane, hemp	*Apocynum cannabinum*
Dogfennel (Cypressweed)	*Eupatorium capillifolium*
Fern, bracken	*Pteridium aquilinum*
Garlic, wild	*Allium vineale*
Goldenrod, Canada	*Solidago canadensis*
Goldenrod, Missouri	*Solidago missouriensis*
Goldenweed, common	*Isocoma coronopifolia*
Hawkweed	*Hieracium* spp.
Henbane, black	*Hyoscyamus niger*
Horsenettle, Carolina	*Solanum carolinense*
Ironweed	*Vernonia* spp.
Knapweed, black	*Centaurea nigra*
Knapweed, Russian	*Centaurea repens*
Lespedeza, sericea	*Lespedeza cuneata*
Milkweed, climbing	*Sarcostemma cyanchoides*
Milkweed, common	*Asclepias syriaca*
Milkweed, honeyvine	*Ampelamus albidus*
Milkweed, western whorled	*Asclepias subverticillata*
Nettle, stinging	*Urtica dioica*
Nightshade, silverleaf (White horsenettle)	*Solanum elaeagnifolium*
Onion, wild	*Allium canadense*
Plantain, broadleaf	*Plantago major*
Plantain, buckhorn	*Plantago lanceolata*
Pokeweed	*Phytolacca americana*
Ragweed, western	*Ambrosia psilostachya*
Redvine	*Brunnichia ovata*
Smartweed, swamp	*Polygonum coccineum*
Snakeweed, broom	*Gutierrezia sarothrae*
Sorrel, red (Sheep sorrel)	*Rumex acetosella*
Sowthistle, perennial	*Sonchus arvensis*

(continued)

Weeds Controlled or Suppressed *(continued)*

Common Name	Scientific Name
Perennials[1] *(continued)*	
Spurge, leafy	*Euphorbia esula*
Sundrop	*Oenothera perennis*
Thistle, Canada	*Cirsium arvense*
Thistle, Scotch	*Onopordum acanthium*
Toadflax, Dalmatian	*Linaria genistifolia*
Trumpetcreeper	*Campsis radicans*
Vetch	*Vicia* spp.
Waterhemlock, spotted	*Cicuta maculata*
Waterprimrose, creeping	*Ludwigia peploides*
Woodsorrel, creeping	*Oxalis corniculata*
Woodsorrel, yellow	*Oxalis stricta*
Wormwood, Louisiana	*Artemisia ludoviciana*
Yankeeweed	*Eupatorium compositifolium*
Yarrow, common	*Achillea millefolium*

[1] Suppression only.
[2] Except dicamba resistant.

18.0 Storage and Disposal

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. **DO NOT** allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal. Open dumping is prohibited.

18.1 Container Type

[Nonrefillable container or refillable container]

18.2 Pesticide Storage

Store in original container in a well-ventilated area separately from fertilizer, feed, and foodstuffs. Avoid cross-contamination with other pesticides. **Engenia® herbicide** freezes around 15 °F and is stable under conditions of freezing and thawing. Product that has been frozen should be thawed and recirculated prior to use.

18.3 Pesticide Disposal

Wastes resulting from this product must be disposed of on-site or at an approved waste disposal facility. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state or local procedures under Subtitle C of the Resource Conservation and Recovery Act. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law.

18.4 Container Handling and Disposal

Nonrefillable container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

In Case of Emergency

In case of large-scale spill of this product, call:
- CHEMTREC 1-800-424-9300
- BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:
- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF 1-800-832-HELP (4357)

Steps to take if material is released or spilled:
- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

18.0 Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF Agricultural Solutions US LLC ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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007969-00507.20251113e.**NVA 2025-04-0385-0282**
Supplementals: NVA 2026-04-0385-0013
NVA 2026-04-0385-0014
NVA 2026-04-0385-0015
NVA 2026-04-0385-0016
NVA 2026-04-0385-0017

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19.0 Changes From Previous Label – Not Applicable

20.0 Market Claims – Not Applicable

Appendix – State Specific Labels

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

Additional Illinois-specific restrictions as found on
EngeniaHerbicide.com/labels

For Distribution and Use Only in the State of Illinois

Engenia®
Herbicide

This labeling expires February 6, 2028, and must not be used or distributed after this date.

EPA Reg No. 7969-507

Directions For Use

- It is a violation of federal law to use this product in a manner inconsistent with its labeling.
- **Refer to the Engenia® herbicide container label for complete Directions For Use and all applicable restrictions and precautions. Use of Engenia according to this labeling is subject to the use precautions, restrictions, and limitations imposed by the label affixed to the container for Engenia. Read the label affixed to the Engenia container before applying. This labeling and the Engenia container label must be in the possession of the user at the time of pesticide application.**
- **In the event that there are any inconsistencies with the directions for use between this and any other labeling for this product, follow the directions for use on this labeling.**

Application Directions

In order to apply **Engenia** in Illinois, the following requirement applies:

Temperature Restriction

A pesticide containing dicamba shall not be applied on soybeans if the air temperature at the field at the time of application is over 85 degrees Fahrenheit or if the National Weather Service's forecasted high temperature for the nearest available location for the day of application exceeds 85 degrees Fahrenheit. Local National Weather Service forecasts are available at https://www.weather.gov.

Cut-off Date Restriction

Application on soybeans of a pesticide containing dicamba shall not be made after June 20 of each year.

Other Requirements

Before applying a pesticide containing dicamba on soybeans, the applicator shall consult the FieldWatch sensitive crop registry (https://www.fieldwatch.com) and comply with all associated record keeping and label requirements.

Application on soybeans of a pesticide containing dicamba shall not be made if the wind is blowing toward:

1) Any Illinois Nature Preserves Commission site that is adjacent to the field of application; or
2) An adjacent residential area.

RESTRICTED USE PESTICIDE

The user must check **EngeniaHerbicide.com/labels** no more than 7 days before application of this product for additional labeling, including state restrictions. Where applicable, users must comply with additional requirements found on this website.

Record Keeping Requirement: Maintain a copy of the product label and any labeling that supplements the product label.

007969-00507.20260123d.**NVA 2026-04-0385-0013**

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RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

Additional Indiana-specific restrictions as found on **EngeniaHerbicide.com/labels**

For Distribution and Use Only in the State of Indiana

Engenia®

Herbicide

This labeling expires February 6, 2028, and must not be used or distributed after this date.

EPA Reg No. 7969-507

Directions For Use

- It is a violation of federal law to use this product in a manner inconsistent with its labeling.
- **Refer to the Engenia® herbicide container label for complete Directions For Use and all applicable restrictions and precautions. Use of Engenia according to this labeling is subject to the use precautions, restrictions, and limitations imposed by the label affixed to the container for Engenia. Read the label affixed to the Engenia container before applying. This labeling and the Engenia container label must be in the possession of the user at the time of pesticide application.**
- **In the event that there are any inconsistencies with the directions for use between this and any other labeling for this product, follow the directions for use on this labeling.**

Application Directions

In order to apply **Engenia** in Indiana, the following requirement applies:

- In DT cotton **DO NOT** apply after June 12.
- In DT soybeans **DO NOT** apply after June 12.

RESTRICTED USE PESTICIDE

The user must check **EngeniaHerbicide.com/labels** no more than 7 days before application of this product for additional labeling, including state restrictions. Where applicable, users must comply with additional requirements found on this website.

Record Keeping Requirement: Maintain a copy of the product label and any labeling that supplements the product label.

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007969-00507.20260123c.**NVA 2026-04-0385-0014**

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RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

Additional Iowa-specific restrictions as found on
EngeniaHerbicide.com/labels

For Distribution and Use Only in the State of Iowa

Engenia®

Herbicide

This labeling expires February 6, 2028, and must not be used or distributed after this date.

EPA Reg No. 7969-507

Directions For Use

- It is a violation of federal law to use this product in a manner inconsistent with its labeling.
- **Refer to the Engenia® herbicide container label for complete Directions For Use and all applicable restrictions and precautions. Use of Engenia according to this labeling is subject to the use precautions, restrictions, and limitations imposed by the label affixed to the container for Engenia. Read the label affixed to the Engenia container before applying. This labeling and the Engenia container label must be in the possession of the user at the time of pesticide application.**
- **In the event that there are any inconsistencies with the directions for use between this and any other labeling for this product, follow the directions for use on this labeling.**

Application Directions

In order to apply **Engenia** in Iowa, the following requirement applies:

- In DT cotton **DO NOT** apply after June 12 or first square growth stage whichever comes first.
- In DT soybeans **DO NOT** apply after June 12 or V4 growth stage, whichever comes first.

RESTRICTED USE PESTICIDE

The user must check **EngeniaHerbicide.com/labels** no more than 7 days before application of this product for additional labeling, including state restrictions. Where applicable, users must comply with additional requirements found on this website.

Record Keeping Requirement: Maintain a copy of the product label and any labeling that supplements the product label.

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007969-00507.20260123c.**NVA 2026-04-0385-0015**

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RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

Additional Minnesota-specific restrictions as found on **EngeniaHerbicide.com/labels**

For Distribution and Use Only in the State of Minnesota

Engenia®

Herbicide

This labeling expires February 6, 2028, and must not be used or distributed after this date.

EPA Reg No. 7969-507

Directions For Use

- It is a violation of federal law to use this product in a manner inconsistent with its labeling.
- **Refer to the Engenia® herbicide container label for complete Directions For Use and all applicable restrictions and precautions. Use of Engenia according to this labeling is subject to the use precautions, restrictions, and limitations imposed by the label affixed to the container for Engenia. Read the label affixed to the Engenia container before applying. This labeling and the Engenia container label must be in the possession of the user at the time of pesticide application.**
- **In the event that there are any inconsistencies with the directions for use between this and any other labeling for this product, follow the directions for use on this labeling.**

Application Directions

In order to apply **Engenia** in Minnesota, the following requirements apply:

- **DO NOT** apply south of interstate 94 after June 12.
- **DO NOT** apply north of interstate 94 after June 30.
- **Statewide Restriction: DO NOT** apply if the air temperature of the field at the time of application is over 85 degrees Fahrenheit or if the National Weather Service's forecasted high temperature for the nearest available location for the day exceeds 85 degrees Fahrenheit. Forecasted temperature must be recorded at the start of the application.

RESTRICTED USE PESTICIDE

The user must check **EngeniaHerbicide.com/labels** no more than 7 days before application of this product for additional labeling, including state restrictions. Where applicable, users must comply with additional requirements found on this website.

Record Keeping Requirement: Maintain a copy of the product label and any labeling that supplements the product label.

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Research Triangle Park, NC 27713

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RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

Additional South Dakota-specific restrictions as found on **EngeniaHerbicide.com/labels**

For Distribution and Use Only in the State of South Dakota

Engenia®

Herbicide

This labeling expires February 6, 2028, and must not be used or distributed after this date.

EPA Reg No. 7969-507

Directions For Use

- It is a violation of federal law to use this product in a manner inconsistent with its labeling.
- **Refer to the Engenia® herbicide container label for complete Directions For Use and all applicable restrictions and precautions. Use of Engenia according to this labeling is subject to the use precautions, restrictions, and limitations imposed by the label affixed to the container for Engenia. Read the label affixed to the Engenia container before applying. This labeling and the Engenia container label must be in the possession of the user at the time of pesticide application.**
- **In the event that there are any inconsistencies with the directions for use between this and any other labeling for this product, follow the directions for use on this labeling.**

Application Directions

In order to apply **Engenia** in South Dakota, the following requirement applies:

- **DO NOT** apply after June 30.

RESTRICTED USE PESTICIDE

The user must check **EngeniaHerbicide.com/labels** no more than 7 days before application of this product for additional labeling, including state restrictions. Where applicable, users must comply with additional requirements found on this website.

Record Keeping Requirement: Maintain a copy of the product label and any labeling that supplements the product label.

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007969-00507.20260123c.**NVA 2026-04-0385-0017**

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505T)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
100-1753	2/6/26

Term of Issuance:
Unconditional

Name of Pesticide Product:
Tavium Plus VaporGrip Technology

Name and Address of Registrant (include ZIP Code):

Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, NC 27419

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

The record for this product currently contains the following CSF:

- Basic CSF dated 5/29/2024

Continues page 2

Signature of Approving Official:

Lindsay Roe, Chief
Herbicide Branch, Registration Division (7505T)

Date: 2/6/26

EPA Form 8570-6

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you comply with the terms listed below. This registration will automatically expire on February 6, 2028.

General Terms

1. Submit and/or cite all data required for registration review of your product when the Agency requires all registrants of similar products to submit such data.
2. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Endangered Species Protection and Formal Consultation

1. In its endangered species assessment as part of its review of this action, EPA made may affect determinations for certain listed species and their designated critical habitats. EPA initiated formal consultation with the United States Fish and Wildlife Service (FWS), which will be ongoing during the registration period.

   If, after formal consultation with FWS, additional modifications are identified in the Service's Biological Opinion, EPA will notify Syngenta Crop Protection, LLC (Syngenta) in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA's notice, Syngenta must submit an amendment application incorporating any required changes, including amended labels. Alternatively, Syngenta may respond by submitting a request for voluntary cancellation of this product. If SYNGENTA fails to comply with this term, Syngenta has agreed in prior written acceptance of these terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

Herbicide Resistance Management Plan

2. Syngenta must develop, implement, maintain, and annually update an Herbicide Resistance Management Plan as described in Appendix A regarding field detection and remediation; education, training, and outreach; annual evaluation; annual reporting; and best management practices (BMPs).

Volatility Reduction Agents

3. The Tavium Plus VaporGrip Technology (Tavium) registration requires the use of a qualified Volatility Reducing Agent (VRA) that must be reviewed and confirmed as qualified by the Agency. In order to have a new VRA product confirmed as a qualified VRA, an application for the new VRA product must be

submitted to the Agency as an R350 PRIA action (or, if PRIA is amended during the term of this registration, an equivalent code) and is subject to the associated PRIA fee.

A new VRA product may be qualified and added to the list of qualified VRA products on www.TaviumApplicationRequirements.com if, based upon the VRA product testing according to Appendix B of this document:

a. the VRA product is identical in formulation to VaporGrip Xtra (MON 51817); or
b. the test mixture of the VRA product + Dicamba OTT product + Roundup PowerMAX® 3 results in humidome airborne dicamba concentrations that are confirmed by EPA to achieve the same or better level of volatility reduction compared to a 40 fl oz per acre rate of VaporGrip Xtra (MON 51817).

Prior to or within one day of updating Syngenta's list of qualified VRA products on their website, Syngenta must inform all other registrants of OTT dicamba products which qualified VRA products meet the standard for inclusion on the list of qualified VRA products pursuant to 5.a or b and are being added to the list.

4. The educational and information materials developed by or for Syngenta, including materials identified in Appendix A, Section B, shall include the requirement that a qualified VRA must always be tank-mixed with Tavium. A list of qualified VRAs and the associated application rates must be maintained by Syngenta at www.TaviumApplicationRequirements.com.

5. Because the Tavium registration requires the use of a qualified VRA with every application, Syngenta will:
   a. Take appropriate action(s) to ensure that a sufficient supply of qualified VRA is in the channels of trade to support legal use of all registered OTT dicamba products. To ensure the supply of qualified VRA is sufficient throughout each season, Syngenta will:
      i. Project and monitor distribution of Tavium and qualified VRAs;
      ii. Monitor available qualified VRAs in relevant channels of trade;
      iii. Make available additional supplies if needed to ensure sufficient quantities of qualified VRAs are available to allow lawful application of the full quantity of Tavium that is available in the channels of trade;
      iv. Maintain capacity to produce additional qualified VRAs (or to cause more qualified VRAs to be produced) whenever any further need is anticipated; and
      v. Produce or ensure production of qualified VRA as needed to maintain a stock in the market that would support legal use of all registered OTT dicamba products.
   b. Make arrangements through appropriate distribution networks to ensure that qualified VRAs are timely available to applicators in all locations where Tavium will be applied, before any applicator would apply Tavium. Access to qualified VRAs will either be through the same retail outlets as Tavium, or if necessary, in particular locations, available from other readily accessible sources. Syngenta will timely make available to every applicator information on where qualified VRAs can be ordered or purchased.
   c. Ensure that all training materials clearly indicate the mandatory use of qualified VRAs with every Tavium application. Work with State and Tribal authorities to ensure that appropriate training occurs before any application of Tavium is made.

d. Registrant Recordkeeping: Syngenta will keep records appropriate to document its compliance with its qualified VRAs quantity commitments. Syngenta will make records available to EPA upon request.

Education, Training, and Outreach

6. Syngenta must maintain a website at www.TaviumApplicationRequirements.com, available to the public before any product may be released for shipment, which must be consistent with the product labeling and contain the following tabs or sections:
   a. State Specific Labeling (which could also apply to Tribes if requested)
   b. Link to Bulletins Live! 2 (BLT)
   c. Instructions for how to check Weather Forecast (NWS)
   d. Link to Runoff Mitigation Menu: https://www.epa.gov/pesticides/mitigation-menu
   e. Instructions on how to report incidents to Syngenta and EPA
   f. Training materials (as described in Appendix A, section B)
   g. Syngenta's Resistance Management Plan
   h. List of qualified VRAs and corresponding required use rates
   i. Instructions on how to report a VRA shortage to Syngenta

7. Syngenta must develop, annually update, provide to EPA, and implement prior to release of any product, an education program on labeling requirements for applicators that includes the following elements:
   a. The education program must include information about required buffers so that growers/applicators have a better understanding of what constitutes a buffer on his/her field(s), and recommendations for weed control practices in buffer zones. The education program must also include information on what may and may not be counted within a buffer. The training must also include an element assisting the grower in understanding eligibility for and calculating the buffer distance reductions.
   b. Information on sensitive plants and how they impact applications.
   c. Training for sprayer cleanouts (before and after spraying as indicated on labeling).
   d. Training for Bulletins Live 2! (BLT), including clarification of how a grower/applicator can document that they have checked BLT within 6 months and what the documentation will look like if no bulletin is applicable or if there is an applicable bulletin.
   e. Training on how to earn and calculate the runoff/erosion points required.
   f. Training on how to identify a temperature inversion.
   g. Provide an optional template for record keeping that includes all elements and links to associated websites.
   h. Clearly describe the maximum use rate and how the restriction to 1 lb. per acre per calendar year for all combined dicamba-containing products impacts use of dicamba throughout the year on the field.
   i. Training on the use of the temperature-dependent volatility mitigations with real-world application examples.
      i. Training on how to use predicted and actual temperatures to determine whether an application may take place and mitigations needed.
      ii. How a grower/applicator could calculate and document the 50% restriction of the grower's managed dicamba-tolerant crops within the county.

iii. How to implement the retreatment interval for different fields when restricted to 50% of the grower's managed dicamba-tolerant crops within the county.
iv. Recommendations for how to limit applications at certain temperatures to 50% of the grower's managed dicamba-tolerant crops within the county and on associated retreatment intervals.
1. Provide training on the use of in-row drop nozzles and in-row hooded sprayers (e.g., what qualifies as hooded sprayer, appropriate uses).
2. When and how precision agriculture technology could be used to meet this reduction.

j. Training on how growers/applicators can report incidents and control failures to EPA, states, and tribal governments.
k. Tutorial on how to check the weather forecast and how to track that it was done for records as applicable.
l. Tutorial on the website containing state-specific labeling and the other items as required in Section 7.
i. Where to find information about qualified VRAs and how to use a qualified VRA at the appropriate rate.
m. Training consistent with Appendix A: Herbicide Resistance Management Plan, section B Education, Training, and Outreach.
i. The critical importance of following resistance management practices and appropriate BMPs as described in Section B.5. to prevent, contain, delay, and/or control weed resistance.
ii. Stressing the requirement for field scouting before and after application.
iii. Syngenta's commitments to growers/applicators on addressing suspected resistant weed reports including field detection, testing, and remediation assistance as described in Section A.
iv. Reporting lack of herbicide efficacy promptly to Syngenta or its representative.
n. Syngenta must transmit the BMPs to all applicators of Tavium. In addition to the other requirements of these Terms and Conditions, this BMPs transmittal must describe to growers/applicators the commitments as described in section A.5 about investigations of suspected dicamba-resistant weeds.

11. Syngenta must provide at least one written communication regarding herbicide resistance management each year, directed to applicators of Tavium for use over-the-top on dicamba tolerant soybean or dicamba-tolerant cotton.
12. All Syngenta herbicide sales representatives must have immediate access to the education program for distribution to growers/applicators, extension agents, neighboring landowners, and any other interested stakeholder upon request.
13. Syngenta must provide a copy of all Tavium educational and training materials, and examples of written communication materials to EPA by 2/28/2026, and at any time upon EPA's request. At the initiative of either EPA or Syngenta, EPA and Syngenta will meet to discuss possible modifications to the educational program as needed.
14. Syngenta must provide access to educational materials for distribution by sales representatives or others to growers/applicators, extension agents, neighboring landowners, and any other interested stakeholders by February 1st of each year following this registration. In 2026, the access to educational materials must be provided before any product is released for shipment.
15. Syngenta must ensure that retailers and sales representatives are aware of the VRA and DRA application requirements and instruct retailers and sales representatives that they must not sell Tavium without sharing that information with buyers.

16. Syngenta must provide to EPA the registrant education program for OTT dicamba applicators by 2/28/2026 and individual state education program materials as they are available, but no later than releasing product for shipment within the state. All educational and training materials listed above must be provided to EPA and made available to State and Tribal pesticide authorities and agricultural extension services upon request.

Annual Reporting

17. Syngenta must submit the information in their possession or control as identified below to EPA's Office of Pesticide Programs, unless you have previously submitted that information to EPA's Office of Pesticide Programs.
    a. Information received by telephone or in writing regarding potential damage to non-target vegetation from alleged use of dicamba during the 2026-2027 growing seasons regardless of any determination that the alleged incident resulted from misuse (intentional or accidental). Information must be forwarded to EPA regardless of which dicamba product may have been used and/or whether or not the alleged damage resulted from a product being used according to labeling directions. Data must be organized by product and state to the extent practicable, and must include all available information regarding acreage involved, plant species involved, severity of damage, date and location (coordinates) of incident, known dicamba applications in vicinity of incident, location of application (coordinates), distance from application to incident, temperature and humidity data at time of application, qualified VRA product applied, and similar information received, including (if available) whether an investigation was conducted, all available information related to the specifics of each incident, whether residue testing was completed, and test results. Incident data must be submitted in narrative form and in a spreadsheet format. This information must be submitted with cumulative totals and be submitted annually by January 15 (beginning by January 15, 2027) and final report with all the available information due September 30th of each year.
    b. Information received by telephone or in writing regarding reports of dicamba-resistant weeds, and cases of weed control failure and/or suspected resistance. All information must be forwarded to EPA regardless of which dicamba product may have been used and/or whether or not the alleged resistance occurred after an application made according to label directions. This information must be submitted annually by January 15 (beginning January 15, 2027) and final report with all then available information due September 30th of each year.
    c. Any information received by Syngenta or finding in an analysis conducted by Syngenta of foods/commodities containing dicamba residues that are not covered by a tolerance or exceed established tolerance levels. This information must be submitted annually by January 15 (beginning January 15, 2027) and final report with all then available information due September 30th of each year.
    d. Information (studies, incident reports, etc.) regarding adverse effects, including allegations of non-target plant damage resulting from the use of, or contact with dicamba, including non-lethal effects, which occurred in any country at any time during registration. Adverse effects include but are not limited to 10% visual injury (i.e., cupping) and/or 5% reduction in height, biomass, yield, or other visual signs of dicamba exposure.[1] Reportable information includes all information described in 40

[1] Leaf cupping is considered an adverse effect of dicamba exposure and must be reported irrespective of plant genetics, although genetic information considered relevant may be included in the report. EPA requires all information on incidents related to "cupping," regardless of plant genetics, be included in the incident reports (i.e., do not exclude reports of "cupping" on varieties that have "poor plant genetics").

CFR 159.158, and includes complaints, memos, investigations, reports, or other documents arising from incidents or studies. Adverse effects information should be provided in a searchable spreadsheet format.[2]

e. Provide all information regarding the impact of dicamba off-target movement on seed research and breeding programs to the Agency. In addition to research and breeding plots, provide all reports of adverse effects to seed plots for commercial seed production; however, you may omit reports of adverse effects to crops modified to increase dicamba tolerance. Submit all available information on the nature of any damage to these plots as well as on the distance between the possible sources of the damage and the damaged crop.

f. Information regarding tank mixes containing the over-the-top dicamba products labeled for use on Dicamba-tolerant (DT) soybean or DT cotton found to be or suspected of being incompatible or reactive with any other pesticide and/or causing increased drift, volatility, and/or plant injury relative to OTT products containing dicamba only.

g. Any information not legally privileged or subject to a protective order, including, but not limited to deposition transcripts, responses to interrogatories, expert reports, other discovery documents (including internal company correspondence), and trial exhibits or transcripts, that was generated as a result of or in anticipation of lawsuits filed in any country, indicating that use of or contact with dicamba, directly or indirectly, resulted or may have resulted in adverse effects to non-target plants.

h. All studies and associated data (raw and summary) not already provided to EPA by your company, completed, incomplete, or in progress, conducted or sponsored by or for your company regarding dicamba pertaining to:

    i. Off-target movement of dicamba, through direct application (with or without drift reduction technologies such as hooded or layby sprayers or volatility reduction agents), volatilization, off-site spray drift, potential for long-range transport, runoff, leaching to groundwater, or rainfall. Include any study summary or test that pertains to off-site transport that was discontinued because of damage either confirmed or suspected to be from dicamba exposure to controls or test plots, damage beyond the treated area, or dicamba contamination of workspaces (indoor or outdoor) during or after the dicamba application.

    ii. Potential toxicity of dicamba or any qualified VRA required in [Primary Brand Name] labeling to target or nontarget plants via any presence of dicamba/residues detected in rainwater, concentrations of dicamba in the air (including but not limited to that moved via long-range transport), runoff, or leaching to groundwater that were commenced by you or by others on your behalf, including those where no written reports or summaries were

[2] The following information must be provided to EPA to the extent Syngenta possesses or receives such information: Inquiry/Incident ID, Call Date, Affected Acres, Impacted Location: State, Impacted Location: County, Planting Date (in the case of damage reported on agricultural crops), Date on Which a Phone Interview was Attempted, Date on Which a Phone Interview Occurred, Impacted Site Visit Date, Date on Which Symptomology was First Observed, Account of Cause of Damage, Affected Field/Site Latitude, Affected Field/Site Longitude, Total Acres Impacted, Crop/Vegetation Type Impacted, Variety of Plant/Crop on Affected Field/Site, Brand of the Affected Crop, Description of how the injury is spatially distributed, Action(s) taken upon observing symptomology, Pictures Taken (Yes/No), description of symptomology, whether or not state officials were contacted about the incident, whether the sprayer was cleaned out prior to application, whether the application was made by a certified applicator, and whether dicamba was applied on the affected farm/site or on neighboring farms. If soybean was the impacted vegetation, additional information should be provided, including soy growth stage showing maximum symptomology, soy growth stage showing least symptomology, crop height (inches) showing maximum symptomology, and crop height (inches) showing least symptomology. Registrants are encouraged to provide information on additional parameters as they deem appropriate.

submitted to you. Include both indoor (greenhouse studies) and outdoor (field or plot studies), as well as reports from efficacy studies and/or incidents.

iii. Adverse effects of any qualified VRA required in [Primary Brand name] labeling, including but not limited to tank mix incompatibility, changes in pesticide efficacy when combined with tank mix partners, injury to target crop.

iv. Development of weeds' resistance to dicamba, or diminished control of weeds by dicamba.

v. Syngenta must provide a master list of studies involving dicamba in possession or control of the registrant including a description of each trial, why it was terminated (where applicable), and contact information for the researchers who conducted, initiated, and/or planned all studies, including but not limited to terminated studies. Syngenta must provide at least two contacts per study, including the principal investigator(s) for those studies, and contact information should be submitted to EPA in the form of a searchable spreadsheet that includes fields including but not limited to name, professional affiliation, title, study name/number and description, reason for termination of the study (where applicable), email, and phone number. Persons listed on the provided list of contacts should be authorized to freely discuss with EPA all aspects of their dicamba research.

18. Subsequent annual reports after the first year shall include updates of any aspect of the education and training program and associated materials that have materially changed since submission of the previous annual report.
19. Following submission of the annual report, Syngenta shall meet with the EPA at EPA's request to evaluate and consider the information contained in the report.

Renewal

20. If Syngenta decides to renew this registration, Syngenta must submit a package 18 months before the expiration date (on or before 8/6/2026). This package will be coded as an R350 PRIA action (or, if PRIA is amended during the term of this registration, an equivalent code) and must be submitted as such, including all documents that would be expected for that type of application.

Including references to the company's website on the label makes that website labeling under FIFRA and therefore the website is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA Section 12(a)(1)(E). 40 CFR §156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on the product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to EPA's attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.
In addition to Syngenta's prior written acceptance of these terms, release of this product for shipment further confirms Syngenta's acceptance of all terms and conditions listed above. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA Section 6, including cancellation under FIFRA 6(e) as described under paragraph 3 above.

APPENDIX A

Herbicide Resistance Management Plan

Syngenta must develop and implement an herbicide resistance management plan that includes the following components:

A. **Field Detection, and Remediation**

1. If any grower, crop consultant, extension agent, or State or Tribal specialist informs Syngenta or its representative of a lack of herbicide efficacy, then Syngenta or its representative must work with growers/applicators to support them in identifying and responding to suspected resistance to dicamba by applying the criteria for determining suspected herbicide resistance listed below, set forth in EPA Pesticide Registration Notice 2017-2: Guidance for Herbicide Resistance Management, Labeling, Education, Training, and Stewardship[3]. In addition, such testing of suspected resistance must also include testing with 2,4-D to evaluate the extent to which cross-resistance and/or multiple resistance is occurring.

Factors for Determining Suspected Herbicide Resistance:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.
- A spreading patch of non-controlled plants of a particular weed species.
- Surviving plants mixed with controlled individuals of the same species.

2. If one or more of the above factors are met, then Syngenta or its representative must:
   a. Provide the grower with specific information and recommendations to control and contain suspected resistant weeds, including rotation to pesticides with different modes of action and/or other non-pesticide controls, as appropriate. If requested by the grower, Syngenta will become actively involved in implementation of weed control measures.
   b. Request, at the time of the initial determination that one or more of the factors are met and prior to any application of alternative control practices, that the grower provide Syngenta with access to the relevant field(s) to collect specimens of the suspected resistant weeds (potted specimens or seeds) for further evaluation in the greenhouse or laboratory, and to collect such specimens if possible (or, alternatively, request that the grower provide such specimens to Syngenta, at Syngenta's expense).
   c. Conduct greenhouse or laboratory studies to confirm resistance as soon as practicable following sample collection. If resistance is confirmed, report this information to the International Survey of Herbicide Resistant Weeds by requesting to add a case at https://weedscience.org/Home.aspx.
   d. To the extent possible, contact or visit the grower in an appropriate timeframe after implementation of the additional weed control measures in order to evaluate success of such measures.
   e. If the additional weed control measures were not successful in controlling the suspected resistant weeds, then:
      i. Work with the grower to determine the reason(s) why the additional control measures were not successful.

[3] https://www.epa.gov/pesticide-registration/prn-2017-2-guidance-herbicide-resistance-management-labeling-education

ii. Offer to further assist the grower in controlling and containing the suspected resistant weeds, including rotation to pesticides with different modes of action and/or other non-chemical controls, as appropriate.

iii. Report annually the inability to control the suspected resistant weeds to relevant stakeholders such as extension experts, State or Tribal agencies, and grower organizations.

3. Keep records of all field evaluations for suspected resistance for a period of 3 years and provide a copy of the records to EPA upon request.

B. **Education, Training, and Outreach**

1. Develop, implement, and annually update an education and training program, with at least one written communication each year to growers/applicators of this product regarding herbicide resistance management. All education and training materials must include information on:
   a. The critical importance of following resistance management practices and appropriate BMPs as described in Section B.5. to prevent, contain, delay, and/or control weed resistance.
   b. Stressing the requirement for field scouting before and after application.
   c. Syngenta's commitments to growers/applicators on addressing suspected resistant weed investigations including field detection, testing, and remediation assistance as described in Section A.
   d. Reporting lack of herbicide efficacy promptly to Syngenta or its representative.

2. Syngenta must provide access to educational materials for distribution by sales representatives or others to growers/applicators, extension agents, neighboring landowners, and any other interested stakeholders by February 1st of each year.

3. Syngenta must provide a copy of the registrant education program to EPA by 02/28/2026 and individual state education program materials as they are available, but no later than releasing product for shipment within the state. Syngenta must also provide copies of education programs at any time upon EPA's request.

4. The education and training materials must be made available to State and Tribal pesticide authorities and agricultural extension services.

5. Appropriate best management practices (BMPs) must be included in the education program to avoid and control weed resistance and convey the importance of following BMPs. Syngenta must advise growers/applicators to follow BMPs in all education and training materials, annual written communication, and product literature. This list may be updated or revised as new information becomes available.

   The following BMPs must be included:
   <u>Crop selection and cultural practices:</u>
   • Understand the biology of the weeds present.
   • Use a diversified approach towards weed management focused on preventing weed-seed production and reducing the number of weed seeds in the soil seedbank.
   • Emphasize cultural practices that suppress weeds by using crop competitiveness.
   • Plant into weed-free fields, keep fields as weed-free as possible, and note areas where weeds were a problem in prior seasons.

• Incorporate additional weed-control practices whenever possible, such as mechanical cultivation, biological management practices, crop rotation, and weed-free crop seeds, as part of an integrated weed-control program.
• Do not allow weed escapes to produce seeds, roots, or tubers.
• Manage weed seed at harvest and post-harvest to prevent a buildup of the weed seed-bank.
• Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
• Thoroughly clean plant residues from equipment before leaving fields.
• Prevent an influx of weeds into the field by managing field borders.
• Scout fields before application to ensure herbicide and application rates will be appropriate for the weed species and weed sizes present.
• Scout fields after application to confirm herbicide effectiveness and to detect weed escapes.
• If resistance is suspected, treat weed escapes with a different mechanism-of action herbicide or use non-chemical methods to remove weed escapes.

Herbicide selection:

• Use a broad-spectrum, soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed control program.
• A broad-spectrum weed-control program should consider all weeds present in the field. Weeds should be identified through scouting and field history.
• Difficult-to-control weeds may require sequential applications of herbicides with alternative mechanisms of action.
• Fields with difficult-to-control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action.
• Apply full rates of this herbicide for the most difficult to control weeds in the field. Applications should be made when weeds are at the correct size to minimize weed escapes.
• Report any incidence of non-performance of this product against a particular weed species to Syngenta or its representatives.

C. **Annual Reporting**

1. Syngenta must submit annual reports, clearly marking any claims of confidentiality, to EPA by January 15th of each year containing the following:

a. Annual sales of this product nationally and by state. The data should be provided in a searchable spreadsheet format.
b. Annual estimated total acres of DT cotton and DT soybeans planted in the United States and per state based on seed sold by Syngenta. The data should be provided in a searchable spreadsheet format.
c. The current education program and associated materials, and subsequent annual reports shall include updates of any aspect of the education program and associated materials that have materially changed since submission of the previous annual report.
d. Investigation and remediation of cases regarding suspected resistant weeds. Summary of Syngenta's determinations as to whether any reported lack of herbicide efficacy was suspected resistance, Syngenta's follow-up actions taken, and, if available, the ultimate outcome (e.g., evaluation of success of additional weed control measures) regarding each case of

suspected resistance. In the annual report, Syngenta will list the cases of suspected resistance by county and state.

e. Summary of the status of any laboratory and greenhouse testing performed by, or at the direction of Syngenta following up on incidents of suspected resistance, performed in the previous year. Data pertaining to such testing do not need to be included in the annual reports, but such data must be made available to EPA upon request.

f. Syngenta is also obligated under 40 CFR Part 159 to report product failure to EPA and must follow those procedures and reporting schedule.

2. Following submission of the annual report, Syngenta shall meet with the EPA at EPA's request to evaluate and consider the information contained in the report.

APPENDIX B
Testing of Tank Mix Volatility-Reduction Adjuvants/Buffering Adjuvants

VRA Product Testing Design

This study is designed as a humidome test using conditions based on ASTM STP1587 outlined below. Testing is not required to be performed to good laboratory practice (GLP) standards, but test methods, materials, and results should be well documented. Two baseline tests are used:

Baseline Testing: [Dicamba Product] + Roundup PowerMAX® 3 + VaporGrip Xtra (VGX)

Test 1: (0.5 lb a.e./A + 1.125 lb a.e. glyphosate/A + 20oz VGX/A use rates)

Test 2: (0.5 lb a.e./A + 1.125 lb a.e. glyphosate/A + 40oz VGX/A use rates)

Proposed VRA Product Test: [Dicamba Product] + Roundup PowerMAX® 3+ Proposed VRA
(0.5 lb a.e. dicamba/A + 1.125 lb a.e. glyphosate/A + proposed VRA use rate lbs/A)

Other study design and reporting information:

Proposed VRA Product Description: buffering agent(s) [e.g., potassium carbonate], percent of product [e.g., 50% buffering agent], total mass of buffering agent in test [e.g., 350 mg potassium carbonate] mixed with specific volume of water and final aqueous concentration in test.

Water carrier rate: 15 GPA

Test Container: Normal plastic humidome as specified in ASTM STP1587

Treated substrate: Soil/Soil blend as specified in ASTM STP1587 with 12-22% moisture

Required Independent Test Temperatures: 23.9°, 29.4°, and 35° C

Relative humidity: 40 ± 5% RH

Sample collection duration: 24 hours

Air sampling rate: 1.5-3.0 L/min

Air sampling filter: any substrate validated to capture >95% of dicamba (e.g., fiberglass mesh + cotton pad, cellulose + PUF, MCE)

Replications: 3 minimum (6 replicates recommended)

Analysis: A one-tail (upper-bound) t-test ($\alpha = 0.10$) performed for all test mixtures relative to baseline tests at all tested temperatures.

Review Considerations

EPA will review the study to determine if the new VRA product meets the baseline buffering agent performance that was established in the Dicamba DGA and BAPMA salts – Final Ecological Risk Assessment and Biological Evaluation. Typically, EPA's review will include:

- evaluating the study design and performance,
- will focus on the average concentration from the trials (< 2 ng/m3 threshold based on observation results from past volatility reducing agent tests, see Ecological Risk Assessment for more details).
- will consider variability between all trials at testing concentrations (clustered around a tight range of air concentrations (±0.25 ng/m3) is ideal), and
- will consider the performance of the air concentration and variability as temperature increases.

References

Gavlick, W.K., D.R. Wright, A. MacInnes, J.W. Hemminghaus, J.K. Webb, V.I. Yermolenka, W. Su. 2016. A Method to Determine the Relative Volatility of Auxin Herbicide Formulations, Pesticide Formulation and Delivery Systems: 35th Volume, ASTM STP1587. pp. 24-32G. R. Goss, Ed. ASTM International, West Conshohocken, PA.

USEPA. 2026. Dicamba DGA and BAPMA salts – Final Ecological Risk Assessment and Biological Evaluation Including Effects Determinations for Federally Listed Endangered and Threatened Species and Designated Critical Habitat for the Proposed Section 3 New Use Registration of Dicamba on Dicamba-Tolerant Cotton and Soybean. Office of Pesticide Programs. Office of Chemical Safety and Pollution Prevention. U.S. Environmental Protection Agency. February 2026. Task Group 619468, 621218, 624274.

[Master]

RESTRICTED USE PESTICIDE
To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

This EPA registration expires 02/06/2028. DO NOT use or distribute this product after 02/06/2028.

DICAMBA	**GROUP**	**4**	**HERBICIDE**
***S*-METOLACHLOR**	**GROUP**	**15**	**HERBICIDE**

Tavium Plus VaporGrip® Technology must only be used on dicamba-tolerant soybean and dicamba-tolerant cotton in the following states, subject to county restriction as noted: Alabama, Arkansas, Colorado, Delaware, Florida (excluding Palm Beach County), Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York (excluding Nassau and Suffolk Counties), North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee (excluding Wilson County), Texas (excluding use on cotton in Gaines County), Virginia, West Virginia, Wisconsin. This labeling expires on February 6, 2028. Do not use or distribute after February 6, 2028

The user must check www.TaviumApplicationRequirements.com no more than 7 days before application of this product for additional labeling including any additional state-specific labeling. Where applicable, users must comply with additional labeling found on this website.

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

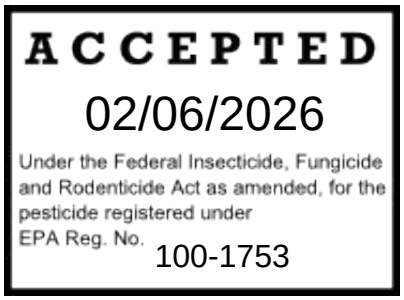
Tavium® Plus VaporGrip® Technology

Herbicide

Foliar systemic broadleaf herbicide with residual grass and certain broadleaf weed control for dicamba-tolerant cotton and dicamba-tolerant soybeans

Active Ingredients:	% W/W
Diglycolamine salt of dicamba*:	17.7%
S-metolachlor**:	24.0%
Other Ingredients:	58.3%
Total:	100.0%

*CAS No. 104040-79-1
**CAS No. 87392-12-9



Tavium® Plus VaporGrip Technology is a capsule suspension (CS) formulation containing 1.12 pounds of dicamba acid equivalent (ae) and 2.26 pounds of *S*-metolachlor per U.S. gallon.

KEEP OUT OF REACH OF CHILDREN / MANTENER FUERA DEL ALCANCE DE LOS NIÑOS.

CAUTION / PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See additional precautionary statements and directions for use [on label] [inside booklet].

EPA Reg. No. 100-1753
EPA Est.

_____
Net Contents

Manufactured for:
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, North Carolina, 27419-8300

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • **DO NOT** induce vomiting unless told to by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
SYNGENTA HOTLINE NUMBER For 24-Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call **1-800-888-8372**	

Label Highlights
Labeled Crops: Dicamba-tolerant soybean, dicamba-tolerant cotton **Formulation Type:** capsule suspension (CS) **Restricted Use Pesticide:** Yes **Rain-Free Period**: **DO NOT** apply during rain. Rainfall or irrigation occurring within 4 hours after postemergence application may reduce effectiveness. **DO NOT** apply when soil in the area to be treated is saturated (if there is standing water on the field or if water can be squeezed from soil) or if NOAA/National Weather Service predicts 50% chance or greater of 1 or more inches of rainfall to occur within 48 hours following application. **Restricted Entry Interval (REI):** 24 hours **Endangered Species Act:** See **Section 6.0** **Sale, use, and distribution of this product:** Alabama, Arkansas, Colorado, Delaware, Florida (excluding Palm Beach County), Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York (excluding Nassau and Suffolk Counties), North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee (excluding Wilson County), Texas (excluding use on cotton in Gaines County), Virginia, West Virginia, Wisconsin. **EPA Registration #:** 100-XXXX

Table of Contents

PRECAUTIONARY STATEMENTS – Sections 1-4

1.0 Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

2.0 User Safety Requirements

2.1 Handler Personal Protective Equipment (PPE)

All mixers, loaders, certified applicators, and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥14 mils, or Viton ≥14 mils
- Shoes plus socks

2.2 Statement for Contaminated PPE

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

2.3 Engineering controls

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

2.4 User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

3.0 Environmental Hazards

Apply this product only as directed on the label.

REPORTING ECOLOGICAL INCIDENTS: For guidance on reporting ecological incidents, including death, injury, or harm to plants and animals, including bees and other non-target insects, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents or call 1-800-888-8372.

3.1 Water Hazards	**DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when cleaning equipment or disposing of equipment wash water or rinsate.
3.2 Groundwater Advisory	Dicamba and S-metolachlor are known to leach through soil into groundwater under certain conditions as a result of label use. These chemicals may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow. Groundwater contamination may occur in areas where soils are permeable or coarse and groundwater is near the surface. **DO NOT** apply to impervious substrates such as paved or highly compacted surfaces in areas with high potential for groundwater contamination. **DO NOT** apply to soils classified as sand with less than 3% organic matter and where groundwater depth is shallow.
3.3 Surface Water Advisory	**DO NOT** apply if soil is saturated with water or when rainfall that may exceed soil field capacity is forecasted to occur within 48 hours. Under some conditions, dicamba has the potential for runoff several days and s-metolachlor for several months after application. Poorly draining, wet, or erodible soils with readily visible slopes toward adjacent sensitive areas are more prone to produce runoff. When used on erodible soils, best management practices for minimizing runoff should be employed. Consult your local Soil Conservation Service for recommendations in your use area. This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks or months after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of dicamba and S-metolachlor from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.
3.4 Non-Target Organism Advisory	This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.
3.5 Mixing and Loading Restrictions	Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates. Check-valves or anti-siphoning devices must be used on all mixing equipment. • This product must not be mixed or loaded within 50 ft of perennial or intermittent streams and rivers, natural or impounded lakes and

	reservoirs, wells, including abandoned wells, drainage wells, and sink holes. • Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling, or application equipment or containers within 50 ft of any well are prohibited, unless conducted on an impervious pad that meets the following specifications. Containment capacities described below must be maintained at all times. o The pad must be constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. o The pad must be designed and maintained to contain any product spills or equipment leaks, container, or equipment rinse or washwater, and rain water that may fall on the pad. o Surface water must not be allowed to either flow over or from the pad, which means the pad must be self-contained and sloped. o An unroofed pad must contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. o A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad, must have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad.
3.6 Point Source Management	To prevent point-source contamination, DO NOT mix or load this pesticide product within 50 feet of wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. DO NOT apply pesticide product within 50 feet of wells. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/ loading areas as described below. Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self-contained to prevent surface water flow over or from the pad. The pad capacity must be maintained at 110% that of the largest pesticide container or application equipment used on the pad and have sufficient capacity to contain all product spills, equipment or container leaks, equipment washwater, and rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment. Care must be taken when using this product to prevent: • Back-siphoning into wells • Spills

	• Improper disposal of excess pesticide, spray mixtures, or rinsate Check valves or antisiphoning devices must be used on all mixing equipment.
3.7 Run-off Management	A variety of factors including soil type, slope, and weather conditions (e.g., rainfall) can influence volume and intensity of water running off the treated field. The applicator should evaluate factors and make appropriate adjustments when applying this product. Land management, agronomic practices, field conditions, and application measures that reduce, to the maximum extent practicable, runoff from treated fields, should be implemented by land managers/users of this product. Runoff/erosion mitigation is required. Refer to **Section 10.0** Runoff and Erosion Mitigations.

4.0 Physical or Chemical Hazards

DO NOT mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE – Sections 5-16

5.0 Use Restrictions

RESTRICTED USE PESTICIDE

Use and purchase of this product is restricted to certified applicators only. This product is NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

Use Tavium Plus VaporGrip Technology only in accordance with specifications on this label, or in separately EPA-approved labeling instructions for this product.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR WEED CONTROL, AND/OR ILLEGAL RESIDUES.

5.1 Agricultural Use Requirements

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains

requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

5.2 Non-Agricultural Use Requirements

Not applicable

6.0 Endangered Species

6.1 Endangered and Threatened Species Protection Requirements

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

7.0 Directions for Use

7.1 Product Description

Tavium Plus VaporGrip Technology is a foliar systemic broadleaf herbicide with residual control of grass and certain broadleaf weeds in:

- dicamba-tolerant cotton (preplant, at-planting, preemergence, postemergence (In-crop) application)
- dicamba-tolerant soybeans (preplant, at-planting, preemergence, postemergence (In-crop) application)

This product needs a minimum of ½ inch of either rainfall or irrigation following application to activate residual weed control. If rainfall or irrigation is not received within 10 days after application, residual weed control may be reduced. Under these conditions, cultivate or use other weed control measures if weeds develop.

Rainfall or irrigation occurring within 4 hours after postemergence application may reduce effectiveness.

Tavium Plus VaporGrip Technology requires actively growing green plant tissue to function fully for postemergence weed control. Application of this product to drought-stressed weeds or weeds with little green foliage (i.e., mowed, cut, or hailed on weeds); weeds covered with dust; weeds damaged by insects or diseases may result in reduced weed control.

Additional state restrictions and requirements may apply. The user must comply with any additional state requirements and restrictions. The user must check www.TaviumApplicationRequirements.com no more than 7 days before application of this product for additional labeling, including state restrictions. Where applicable, users must comply with additional requirements found on this website.

7.2 Active Ingredient Conversion

Tavium Plus VaporGrip Technology	**Active Ingredient Equivalent**	
(pt/A)	**Dicamba (lb ae/A)**	***S*-Metolachlor (lb ai/A)**
3.53	0.5	1.0
7.06	1.0	2.0

7.3 Crops/Use Sites

Crops/Use Sites
Dicamba Tolerant Cotton
Dicamba Tolerant Soybean

7.4 Application Requirements Overview

- Read and follow all applicable restrictions, precautions, and directions on the container label and booklet and at www.TaviumApplicationRequirements.com. For product questions or inquiries and/or to report any nonperformance of this product against any labeled weed species, call 1-866-Syngent (1-866-796-4368)
- Refer to the specific use directions and restrictions in each crop table.
- **The user must check www.TaviumApplicationRequirements.com no more than 7 days before application of this product for additional labeling including any additional state-specific labeling. Where applicable, users must comply with additional labeling found on this website.**
- **Tavium Plus VaporGrip Technology must only be used for the uses specified on this label and only in the following states:** Alabama, Arkansas, Colorado, Delaware, Florida (excluding Palm Beach County), Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York (excluding Nassau & Suffolk Counties), North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee (excluding Wilson County), Texas (excluding use on cotton in Gaines County), Virginia, West Virginia, Wisconsin

- This product must only be used in the states listed above and is subject to area specific restrictions as required by http://www.epa.gov/espp/ that must be consulted prior to making an application in dicamba-tolerant cotton or dicamba-tolerant soybeans.

7.4.1 Required Adjuvants: Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check www.TaviumApplicationRequirements.com for a list of qualified VRAs and VRA application rates

7.4.2 **Mandatory Training:** Prior to applying in any calendar year, the certified applicator must complete dicamba-specific annual training for that year. Only certified applicators may apply this product. This product must not be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers. If state-approved OTT dicamba training is required and provided by the state where the certified applicator intends to apply this product, the certified applicator must complete that training before applying this product. Otherwise, the certified applicator must complete dicamba-specific training provided by one of the following sources: a) a registrant of a dicamba product approved for OTT use with dicamba-tolerant crops, or b) a state-authorized provider.

7.4.3 Record Keeping

Records must be created, maintained, and made available to federal and state officials in accordance with any applicable federal and state record keeping requirements. To the extent consistent with such requirements, records for this product include:

1. Full name of the certified applicator
2. Certification number of the certified applicator
3. Product name

4. EPA registration number

5. Total amount applied of this product

6. Application month, day, and year

7. *Start and Finish Times:* the time the applicator begins and the time the certified applicator completes applications of this product.

8. Location of the application If temperatures are forecasted to be 85-<95˚F on the day of treatment or the day after treatment, record the location and the percentage of treated dicamba-tolerant cotton and dicamba-tolerant soybean fields managed by grower in the county. Record the total number of acres of dicamba-tolerant cotton and dicamba-tolerant soybean managed by the grower in the county.

9. Crop or site receiving the application

10. Size of area treated

11. *Training Requirement:* proof that the certified applicator completed dicamba-specific training described in this section

12. *Application Timing:* whether the certified applicator applied this product preemergence or postemergence in relation to the crop.

13. *Receipts of purchase:* receipts for the purchase of this product, and for the purchase of the required VRA and required DRA.

14. *Product Label:* A copy of the product labeling including state-specific labeling and any information that supplements the product label, such as relevant bulletins.

15. *Sensitive Areas, Sensitive Crops, and Residential Awareness*: Document/record that the applicator checked an applicable sensitive crop/specialty crop registry; and document that the applicator surveyed all adjacent fields for any sensitive areas, sensitive crops, or residential areas surrounding the field prior to application. At a minimum, records must include the date the applicator consulted the sensitive crop registry/specialty crop registry and the date the applicator surveyed for sensitive crops on adjacent areas and within the required spray buffer distance for downwind spray buffer distance calculations, and the name of the sensitive crop registry/specialty crop registry the applicator consulted.

16. *Spray Buffer Requirement:* Record of the required downwind buffer distance (240 ft) determination and any areas included within the buffer distance determination. If the buffer distance was reduced, record what qualifying practices supported that reduction.

17. *Spray System Cleanout:* Document that the applicator complied with the section of this label titled: “Spray System Equipment Clean-out”. At a minimum, records must include the date the applicator performed the required cleanout, and cleanout method that the applicator followed.

18. *Tank Mix Products:* a list of all products (pesticides, adjuvants, and other products) that the applicator tank mixed with this product for each application. Include EPA registration numbers in the case of any pesticides.

19. *Required Tank Mix pH Buffering Volatility Reducing Agent:* list the VRA and use rate that was tank mixed with this herbicide.

20. *Required Tank Mix Drift Reducing Agent:* list the DRA and use rate that was tank mixed with this product.

21. *Nozzle Selection:* which spray nozzle the applicator used to apply this product, and the nozzle pressure the applicator set the sprayer to.

22. *Air Temperature:* the air temperature at boom height at the time the applicator starts applications of this product, and every time the spray tank is refilled, and documentation of a weather forecast by NOAA/National Weather Service on the day of application showing the forecasted maximum temperature prediction for the day of and day after application.
23. *Wind Speed and Direction*: the wind speed and direction at or above boom height at the time the applicator starts applications of this product, and the wind speed and direction at or above boom height every time the tank is refilled during application.
24. *Runoff/Erosion Mitigation Points*: List how the required total of runoff/erosion mitigation points were achieved. The creation and keeping of these records counts as one point towards the total points required for use of this product, in accordance with Runoff/Erosion Mitigation Relief Options as listed on EPA's Mitigation Menu website.

7.5 Rate and Timing

Dicamba-Tolerant Cotton:

This product may be applied Preplant, At-Planting, Preemergence, and Postemergence: A maximum of two applications of 3.53 pt/A (equivalent to 0.5 lb acid equivalent (a.e.) dicamba and 1.0 lb S-metolachlor) per acre may be made through 6-leaf. DO NOT apply more than 0.5 lb a.e. dicamba and 1.0 lb S-metolachlor per acre per application. DO NOT exceed 1 lb a.e. dicamba and 2.48 lb S-metolachlor per acre per calendar year from all combined dicamba-containing and S-metolachlor containing products.

Dicamba-Tolerant Soybean:

This product may be applied Preplant, At-Planting, Preemergence, and Postemergence: A maximum of two applications of 3.53 pt/A (equivalent to 0.5 lb acid equivalent (a.e.) dicamba dicamba and 1.0 lb S-metolachlor) per acre may be made through V4. DO NOT apply more than 0.5 lb a.e. dicamba and 1.0 lb S-metolachlor per acre per application. DO NOT harvest or feed soybean forage or hay following a postemergence application. DO NOT exceed 1 lb a.e. dicamba and 2.48 lb S-metolachlor per acre per calendar year from all combined dicamba-containing and S-metolachlor containing products.

For details, see **Section 12.0** Crop/Site Use Directions.

Spray volume: Apply a minimum of 15 gallons of spray solution per acre.

Tank mixing: See **Section 14.0** Tank Mixing Directions. Refer to all product labels to determine mix order or perform a mix compatibility test.

7.6 Application Equipment

Application by air is prohibited.

Apply only using ground equipment.

Spray system equipment cleanout: Ensure entire sprayer system is properly cleaned in accordance with Section 15.0 before and after application.

Droplet requirement: Apply this product with nozzles calibrated to apply coarse or coarser droplets only in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).

Spray boom height: Maximum boom height is 24 inches above target pest or crop canopy.

Ground speed: Do not allow application equipment to exceed 15 mph while applying this product.

7.7 Environmental Conditions

Wind speed: Apply when wind speed, measured at boom height, is between 3-10 mph. **DO NOT** apply if wind speed is below 3 mph or above 10 mph.

Inversions: **DO NOT** make applications at night. Applications may only be made starting one hour after sunrise and ending two hours before sunset. DO NOT apply this product outside of this time frame.

DO NOT spray during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

7.8 Downwind Requirements

Sensitive plants downwind: **DO NOT** apply if sensitive plants, as defined in Section 9.0 Spray Drift Buffer, are planted on an adjacent downwind field or area. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas.

Downwind buffer: After determining no adjacent sensitive plants are downwind, the certified applicator must maintain a 240-foot downwind buffer between the last treated row and the nearest downwind field edge. The practices in the buffer reduction Table 9.2 may be used to reduce the size of the buffer. See Section 9.1 Spray Drift Buffer Distance for more information.

7.9 Management of Runoff/Erosion

- **DO NOT** apply during rain.
- **DO NOT** apply when soil in the area to be treated is saturated (if there is standing water on the field or if water can be squeezed from soil).
- Avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours).
- You must achieve a minimum of THREE runoff/erosion mitigation points for the crop uses listed on this label unless otherwise stipulated in Section 10.0 Runoff and Erosion Mitigations.

7.10 Restrictions for All Uses

- **DO NOT** sell, use or distribute this product in Nassau and Suffolk Counties in the State of New York or in Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon and Washington
- **DO NOT** use in nurseries, turf, or landscape plantings.
- Application by air is prohibited. Apply only using ground equipment.
- **DO NOT** apply this product through any type of irrigation system.
- Maximum single application rate: 3.53 pt/A (equivalent to 0.5 lb dicamba ae/A and 1.0 lb *S*-metolachlor/A)
- Maximum yearly application rate: 7.06 pt/A/year (equivalent to 1 lb dicamba ae/A and 2.0 lb *S*-metolachlor/A)
- **DO NOT** exceed 1 pound dicamba ae/acre/year from all dicamba applications if more than one dicamba-containing product is applied to the same site within the same year.
- **DO NOT** tank mix ammonium sulfate (AMS) or any products that contain AMS with this product.

- **DO NOT** apply this product at ground speed greater than 15 miles per hour.
- **DO NOT** apply this product in less than 15 gallons of spray solution per acre.
- **DO NOT** exceed a boom height of 24 inches above target pest or crop canopy when applying this product.
- **DO NOT** apply this product when the wind speeds are less than 3 mph or greater than 10 mph.
- **DO NOT** apply this product until at least one hour after sunrise and no later than two hours before sunset.
- **DO NOT** apply to soils classified as sand with less than 3% organic matter and where groundwater depth is shallow.
- **DO NOT** apply under conditions which favor runoff or wind erosion of soil containing this product to nontarget areas.
- **DO NOT** graze or feed to livestock, or harvest for food, any cover crop planted following an Tavium Plus VaporGrip Technology treated crop.
- **DO NOT** apply to frozen ground.
- **DO NOT** apply to any body of water.
- **DO NOT** contaminate irrigation ditches.
- **DO NOT** apply this product if rainfall that could exceed soil field capacity and result in soil runoff is expected in the next 48 hours.
- **DO NOT** apply to powdery dry or light sand soils when conditions are favorable for wind erosion. Under these conditions, you must ensure that the soil surface is first settled by rainfall or irrigation prior to application.
- **DO NOT** apply to impervious substrates, such as paved or highly compacted surfaces.
- **DO NOT** use tailwater from the first flood or furrow irrigation of treated fields to treat nontarget crops, unless at least ½ inch of rainfall has occurred between application and the first irrigation.
- If temperatures are forecasted to be 95°F or above either on the day of treatment or the day after treatment, **DO NOT** apply this product
- **DO NOT** apply without DRA and VRA
- **DO NOT** apply this product if sensitive plants are planted on an adjacent downwind field or area.

7.11 Crop Rotations

The following crops may be planted at the specified interval following application of Tavium Plus VaporGrip Technology. Exclude counting days from application when the ground is frozen.

Crop	Plant-Back Interval
Dicamba-tolerant cotton Dicamba-tolerant soybeans Corn (field, pop, seed, sweet)*	0 days
Non-dicamba-tolerant soybeans	28 days following a minimum accumulation of 1 inch of rainfall or overhead irrigation
Non-dicamba-tolerant cotton	42 days following a minimum accumulation of 1 inch of rainfall or overhead irrigation
Barley Oats Rye Wheat	4 ½ months
Alfalfa Bean Beet	6 months

Broccoli Brussels sprouts Cabbage Carrot Cauliflower Celery Garlic Lentil Onion Pea Peanut Pepper Potato Pumpkin Radish Sorghum Sunflower Sugar beet Sweet potato Tomato	
Clover (seeded)	9 months
Buckwheat Rice Tobacco	In the next spring following treatment
All other crops not listed above	12 months

* User precaution for corn plantback: Application of this product to coarse-textured soils (sand, loamy sand, or sandy loam) or any soil with less than 2.5% organic matter under cool, wet conditions may result in transient crop injury.

7.12 Weed Resistance and Integrated Programs

DICAMBA	**GROUP**	**4**	**HERBICIDE**
***S*-METOLACHLOR**	**GROUP**	**15**	**HERBICIDE**

For resistance management, please note that Tavium Plus VaporGrip Technology contains both a Group 4/(dicamba) and a Group 15/(*S*-metolachlor) herbicide. Any weed population may contain plants naturally resistant to Group 4 and/or Group 15 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

Contact your local Syngenta representative, retailer, crop advisor or extension agent for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes. **DO NOT** assume that each listed weed is being controlled by multiple modes of action. Premixes are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredients in this product. If resistant biotypes have been reported, use the full labeled rate of this product, apply at the labeled timing, and tank-mix with an additional different mode of action product so there are multiple effective modes of application for each suspected resistant weed. To delay herbicide resistance, take one or more of the following steps:

Principles of Herbicide Resistant Weed Management

Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices**.**

Scout and know your field

- Know weed species present in the field to be treated through scouting and field history. An understanding of weed biology is useful in designing a resistance management strategy. Ensure the weed management program will control all weeds present.
- Fields should be scouted prior to application to determine species present and growth stage. Always apply this herbicide at the full labeled rate and correct timing for the weeds present in the field.

Utilize non-herbicidal practices to add diversity

- Use diversified management tactics such as cover crops, mechanical weed control, harvest weed seed control, and crop rotation as appropriate. Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.

Use good agronomic practices, start clean and stay clean

- Use good agronomic practices that enhance crop competitiveness.
- Plant into weed-free fields utilizing tillage or an effective burndown herbicide for control of emerged weeds.
- Sanitize farm equipment to avoid spreading seed or vegetative propagules prior to leaving fields.

Difficult to control weeds

- Fields with difficult to control weeds should be planted in rotation with crops that allow the use of herbicides with an alternative mode of action or different management practices.
- Difficult to control weeds may require sequential applications, such as a broad spectrum preemergence herbicide followed by one or more postemergence herbicide applications. Utilize herbicides containing different modes of action effective on the target weeds in sequential applications.

DO NOT overuse the technology

- **DO NOT** use more than two applications of this or any other herbicide with the same mode of action in a single growing season unless mixed with an herbicide with a different mode of action which provides overlapping spectrum for the difficult to control weeds.

Scout and inspect fields following application

- Prevent an influx of weeds into the field by controlling weeds in field borders.
- Scout fields after application to verify that the treatment was effective.

- Indicators of possible herbicide resistance include:
    - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
    - A spreading patch of non-controlled plants of a particular weed species; and
    - Surviving plants mixed with controlled individuals of the same species.

For further information or to report suspected resistance your Syngenta retailer, Syngenta representative, or call 1-866-Syngent(a) (866-796-4368).

- If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage.

- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- **Prevent weed escapes before, during, and after harvest**
- **DO NOT** allow weed escapes to produce seed or vegetative structures such as tubers or stolons which contribute to spread and survival.

7.13 Best Management Practices for Pollinator Programs

Visit https://www.epa.gov/pollinator-protection/tools-and-strategies-pollinator-protection for tools and strategies for pollinator protections.

8.0 Application Method Instructions and Information

8.G.0 Ground (G) Application Directions: Applications with Tavium Plus VaporGrip Technology alone or in tank mixtures are permitted with ground equipment only. This product may be applied using broadcast or hooded broadcast applications for postemergence weed control as well as residual control of susceptible weeds	
8.G.1 Method of Application	Ground Application – Broadcast, Hooded In-Row or Layby Sprayer
8.G.2 Boom height above target	Do not exceed 24 inches above target pest or crop canopy
8.G.3 Droplet size	Apply this product with nozzles calibrated to apply coarse or coarser droplets only.
8.G.4 Water volume	Broadcast: Apply in 15 gallons of water per acre For In-Row or Layby Application: determine the amount of herbicide and water volume needed using the following formula: $\frac{\text{band width (inches)}}{\text{row width (inches)}} * \text{broadcast rate per acre} = \text{rate per treated acre}$ $\frac{\text{band width (inches)}}{\text{row width (inches)}} * \text{broadcast volume per acre} = \text{spray volume per treated acre}$
8.G.5 Wind speed	Apply when wind speed, measured at boom height, is between 3-10 mph. **DO NOT** apply if wind speed is below 3 mph or above 10 mph.
8.G.6 Sprayer speed	**DO NOT** exceed a ground speed of 15 miles per hour.
8.G.7 Temperature and Humidity	**DO NOT** apply at temperatures ≥ 95° F. If temperatures are forecasted to be 85 - <95° F on the day of treatment or the day after treatment, **DO NOT** treat more than 50% of the total number of dicamba-tolerant soybean AND dicamba-tolerant cotton acres managed by the grower within the county within one day.

8.G.8 Temperature inversions	**DO NOT** make applications at night. Applications may only be made starting one hour after sunrise and ending two hours before sunset. **DO NOT** apply this product outside of this time frame. **DO NOT** apply this product during a temperature inversion. Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. The presence of an inversion can be indicated by ground fog; or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. The inversion will typically dissipate with increased winds (above 3 miles per hour) or at sunrise when the surface air begins to warm (generally 3°F from morning low).
8.G.9 Activating rainfall	This product needs a minimum of ½ inch of either rainfall or irrigation following application to activate residual weed control. If rainfall or irrigation is not received within 10 days after application, residual weed control may be reduced. Under these conditions, cultivate or use other weed control measures if weeds develop.
8.G.10 Spray drift buffer	**DO NOT** apply if sensitive plants are planted on an adjacent downwind field or area. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas. After determining no adjacent sensitive plants are downwind, the applicator must maintain a 240-foot downwind buffer between the last treated row and the nearest downwind field edge unless applying a qualifying practice listed in the table in Section 9.2 Spray Drift Buffer Reductions below. More information and definitions of the qualifying practices can be found at https://www.epa.gov/pesticides/mitigation-menu-measuredescriptions. After determining your total % reduction in the buffer distance, determine the distance that may be reduced in feet, subtract that distance from the 240-foot buffer distance, then round to the nearest 5-foot increment for your final buffer distance. No downwind buffer is required if: • Use of the buffer reduction options results in a buffer reduction ≥100%. • Use of the buffer reduction options results in a buffer <10 feet, after rounding to the nearest 5 ft increment.

8.G.11 Buffer distance to well or sink hole	**DO NOT** apply pesticide product within 50 feet of wells. This setback does not apply to properly capped or plugged abandoned wells.

9.0 Spray Drift

Avoiding spray drift at the application site is the responsibility of the applicator. The spray system and weather-related factors determine the potential for spray drift. The applicator is responsible for considering these factors when making application decisions to avoid spray drift onto nontarget areas. Applicators must follow application requirements to avoid spray drift hazards, including those found in this labeling and applicable state and local regulations and ordinances. Where states have more stringent regulations, they must be observed.

All application equipment must be properly maintained and calibrated using appropriate carriers.

DO NOT allow herbicide solution to drip, physically drift, or splash onto desirable vegetation because injury to desirable broadleaf plants could result. The following physical spray drift management requirements must be followed.

DO NOT apply if sensitive plants are planted on an adjacent downwind field or area. **DO NOT** spray this product when wind is blowing toward adjacent sensitive plants, as defined below.

It is important for the applicator to be aware that wind direction may vary during the application. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas.

Dicamba-sensitive plants include, but are not limited to:

- non-DT soybeans
- non-DT cotton
- cucumbers and melons including all members of EPA Crop Group 9: Cucurbit Vegetables
- flowers
- fruit trees
- grapes
- ornamentals including greenhouse-grown and shadehouse-grown broadleaf plants and ornamental plants in a residential area
- peanuts
- peas and beans, including all members of EPA Crop Group 6: Legume Vegetables (Succulent or Dried) and EPA Crop Group 6-22: Legume Vegetable group with the exception of DT soybeans
- peppers, tomatoes, and other fruiting vegetables, including all members of EPA Crop Group 8-10: Fruiting Vegetable Group
- potato
- sugar beets
- sweet potato
- tobacco
- other broadleaf plants, including if these plants are in a greenhouse

Severe injury or destruction could occur if any contact between this product and these plants occurs.

Sensitive crop registries can provide additional information about sensitive crops and sensitive areas. The applicator must check an applicable sensitive crop/specialty crop registry; and document that the applicator surveyed all adjacent fields for any sensitive areas, sensitive crops, or residential areas

surrounding the field prior to application. See Section 7.4 Record Keeping for details. If you have questions regarding sensitive crop registries, check https://fieldwatch.com/ prior to application.

9.1 Spray Drift Buffer Distance

After determining no adjacent sensitive plants are downwind, the applicator must maintain a 240-foot downwind buffer between the last treated row and the nearest downwind field edge. The practices in the buffer reduction table, Table 9.2 below, may be used to reduce the size of the buffer. More information and definitions of the qualifying practices can be found at https://www.epa.gov/pesticides/mitigation-menu-measure-descriptions. After determining your total % reduction in the buffer distance, determine the distance that may be reduced in feet, subtract that distance from the 240-foot buffer distance, then round to the nearest 5-foot increment for your final buffer distance.

No downwind buffer is required if:

- Use of the buffer reduction options results in a buffer reduction ≥100%.
- Use of the buffer reduction options results in a buffer <10 feet, after rounding to the nearest 5 ft increment.

9.2 Spray Drift Buffer Reductions

Options*	**Qualifying Practice**	**Reduction in Buffer Distance****
Small field size/Reduce treatment area	Treatment area of 1/10 acre to 1 acre	75%
	Treatment area of >1 acre to 4 acres	35%
	Treatment area of >5 acres to 10 acres	15%
Downwind Drift Buffer	Basic windbreak/hedgerow/artificial screen	50%
	Advanced windbreak/hedgerow/artificial screen	75%
Use of directed sprayer equipment	Over-the-top hooded sprayer	50%
	Row-middle hooded sprayer	75%
	Sprays below crop canopy using drop nozzles or layby applications (difference between the crop height and release height is ≥ 1ft, and that there are more than 4 consecutive rows of crop on the field that meet this parameter)	50%

*Descriptions of spray drift buffer reduction measures are available on EPA's website at: https://www.epa.gov/pesticides/mitigation-menu-measure-descriptions

**Buffer reduction measures are additive in nature. For example, a 50% reduction in buffer distance for one measure plus a 15% reduction in buffer for another measure, when used in combination, results in an overall 65% reduction in an identified buffer.

The following managed areas may be included in the buffer if they are immediately adjacent/contiguous to the treated field in the downwind direction and people are not present in those areas (including inside closed buildings/structures). Buffer reduction options do not apply to these managed areas, as they are included in the buffer distance.

- Untreated portions of the treated field.
- Roads, paved or gravel surfaces, mowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area.
- Areas present and/or maintained as a drift buffer reduction measure as listed on the buffer reduction table above. Examples include vegetative windbreaks and hedgerows.
- On-farm contained irrigation water resources that are not connected to adjacent water bodies, including on-farm irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, farm ponds, and tailwater collection ponds.
- Areas present and/or maintained as a runoff/erosion measure as listed on EPA's Mitigation Menu website. Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement.

9.3 Spray Drift Management

9.3.1 Mandatory Spray Drift Management

MANDATORY SPRAY DRIFT MANAGEMENT

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 24 inches above the ground or crop canopy.
- Applicators must select nozzle and pressure that deliver coarse or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).
- **DO NOT** apply during temperature inversions. **DO NOT** make applications at night. Applications may only be made starting one hour after sunrise and ending two hours before sunset. Do not apply this product outside of this timeframe. See Sections **8.G.8** for more information on temperature inversions.
- **DO NOT** apply when the wind speed is less than 3 mph or greater than 10 mph. During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes), must register between 3 and 10 miles per hour.
- **DO NOT** apply when weather conditions may cause drift to nontarget areas.
- Wind speed and direction must be measured on location using a windsock or anemometer (including systems to measure wind speed or velocity using application equipment). This information must be measured before the application begins and every time the spray tank is refilled. Downwind buffers must be adjusted according to changing wind direction.
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.

DO NOT apply if sensitive plants are planted on an adjacent downwind field or area. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas. Refer to section 9.0 for list of sensitive plants in agricultural and/or residential settings.

During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes), must register between 3 and 10 miles per hour. **DO NOT** apply if wind speed is below 3 mph or above 10 mph.

Wind speed and direction must be measured on location using a windsock or anemometer (including systems to measure wind speed or velocity using application equipment). This information must be measured before the application begins and every time the spray tank is refilled. Wind direction may vary during the application. Downwind buffers must be adjusted according to changing wind direction.

Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.

DO NOT release spray at a height greater than 2 feet above the ground or crop canopy.

Certified applicators must select nozzle and pressure that deliver coarse or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).

Inversions:
• **DO NOT** make applications at night. Applications may only be made starting one hour after sunrise and ending two hours before sunset. **DO NOT** apply this product outside of this time frame.
• **DO NOT** spray during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

9.3.2 Spray Drift Advisories

- THE CERTIFIED APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
- BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.
- The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator is responsible for considering these factors when making a decision.

Importance of Droplet Size

- An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce drift potential, drift will be greater if applications are made improperly, or under unfavorable environmental conditions.
- Controlling droplet size:
    - Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
    - Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray colume and droplet size.
    - Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce spray drift.

Boom Height

For ground equipment, the boom should remain level with crop and have minimal bounce

Hooded (or Shielded) Sprayer

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

Temperature and Humidity

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Wind

Drift potential generally increases with wind speed.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Measuring Wind Speed and Wind Direction

Best Management Practices for measuring wind speed and direction of wind direction:

- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the permissible range.

- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:
    - Relying on equipment on the application equipment that measures wind speed (e.g., aerial equipment).
    - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop at least every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.
    - Using a windsock. Wind can be estimated with a windsock using the stripes on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every hour to estimate wind speed and direction.
    - Using an aircraft smoke system. Laying down several puffs of smoke along different lines using an aircraft smoke system can provide an accurate view of what the wind speed and direction for the application.
    - Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

10.0 Runoff and Erosion Mitigation

10. Runoff/Erosion Mitigations

DO NOT apply during rain.

Avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours).

DO NOT apply when soil in the area to be treated is saturated (if there is standing water on the field or if water can be squeezed from soil).

Mandatory Runoff Mitigation
Applicators must access and search Bulletins Live! Two (BLT at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the "Inside a PULA" section below and in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below.

Outside a PULA: THREE mitigation points are required for all crops listed on this label. Follow the steps below to determine which applications need to achieve points, determine your eligibility for runoff/erosion mitigation relief, and determine options to achieve mitigation points.

Inside PULAs: SIX runoff/erosion mitigation points are required inside specific PULAs for all crop uses. Follow the steps below to determine which applications need to achieve the points, determine

eligibility for runoff/erosion mitigation relief, and determine options to achieve runoff/erosion mitigation points.

Steps to Achieve Points:
Step A. To achieve the runoff/erosion mitigation points specified above, visit EPA's mitigation menu website (www.epa.gov/pesticides/mitigation-menu) to determine which applications need to achieve points and for a full list of mitigation and mitigation relief options.

Step B. Determine if you are eligible for runoff/erosion mitigation relief. Runoff/erosion mitigation is NOT needed if certain field/application parameters are present at the time of application (e.g., subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, etc). Refer to the mitigation menu for a complete list of field/application parameters.

Step C. If the application site does not meet the field/application parameters specified on EPA's mitigation menu website, choose among the runoff/erosion mitigation and/or runoff/erosion mitigation relief options on EPA's mitigation menu website to meet or exceed the required points noted on this label before applying this product.

Step D. To achieve runoff/erosion mitigation points for the application, the mitigation and mitigation relief measures must be:

- Employed in accordance with the instructions and descriptions on EPA's Mitigation Menu Website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's Mitigation Menu Website.

Step E. Additional restrictions may be present on the labeling or in bulletins—always follow the most restrictive instructions across the labeling and any bulletins. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between all the tank-mixed products' labeling and bulletins.

EPA may periodically update the Mitigation Menu Website, for example, by adding new mitigation measures or updating a mitigation measure description.

CROP	**Max. Seasonal Allowed Rate**	**Runoff/Erosion Mitigation Points Needed**	
		Nationally	**Pesticide Use Limitation Area (PULA)**
Soybean Cotton	7.06 pt/A/year	3	6

11.0 Mandatory Volatility Mitigations

DO NOT tank mix ammonium sulfate (AMS) or any products that contain AMS with this product.

Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check www.TaviumApplicationRequirements.com for a list of qualified VRAs and of VRA application rates.

Temperature Restrictions:

- On the date of application, applicator must obtain a daily high temperature forecast as predicted by the NOAA/National Weather Service for the day of and the day after application. Detailed National Weather Service forecasts for local weather conditions may be obtained on-line at: www.weather.gov
- In addition, the certified applicator must check the temperature at boom height in the field when an application begins and every time the spray tank is refilled. If the measured temperature is higher than forecasted for the day, the certified applicator must follow the label directions corresponding to that measured temperature. If the measured temperature is below the forecasted temperature, application must follow label directions corresponding to the temperatures forecasted. The highest temperature on the day of application or forecasted for the day after application is the value that must be used to determine the label restrictions for that application..
- If temperatures are forecasted to be 95˚F or above either on the day of treatment or the day after treatment, DO NOT apply this product. If the measured temperature at the application site is above 95˚F at any point during the planned day of application, DO NOT begin application or STOP application if it has already begun.
- If temperatures are forecasted to be 85-<95˚F at the application site either on the day of treatment or the day after treatment, application of this product is limited to 50% or less of the total number of acres of dicamba-tolerant soybean AND dicamba-tolerant cotton under production by the grower within the county. For purposes of this label, “grower” is defined as the individual or business entity managing the crop on the land on which the product is being applied. Do not treat additional/remaining dicamba-tolerant soybean AND dicamba-tolerant cotton acres managed by the grower within the county the day of application or the day after application. Remaining untreated 50% of DT crop acreage managed by the grower may be treated on the third day after initial treatment. All label restrictions including temperature-based restrictions apply to subsequent treatments.
- If temperatures are forecasted to be <85˚F, the application has begun, the measured temperature at the application site is 85-<95˚F at any point, and more than 50% of the total number of dicamba-tolerant soybean AND dicamba-tolerant cotton acres managed by the grower within the county have been treated: STOP application immediately. If less than 50% has been treated at the time that the measured temperature exceeds the forecasted <85F temperature, the application plan for the day must be modified to comply with the 50% limitation on the treatment of the grower's managed dicamba-tolerant soybean and dicamba-tolerant cotton acres within the county.

Maximum Forcasted Air Temperature*	Rates of Tavium Plus VaporGrip Technology + Required Adjuvants** + Additional Mitigation
<85°F	0.5 lb dicamba + VRA + DRA
≥85°F to < 95°F	0.5 lb dicamba + VRA + DRA **PLUS: DO NOT** treat more than 50% of DT cotton and DT soybean acres managed by grower within the county***
≥95°F	No application allowed

* Maximum temperature must be forecasted by NOAA/National Weather Service not to exceed what is noted for both the day of application and the day after application. The highest temperature (forecasted or measured) on the day of application or the day after application is the value that must be used to determine the label restrictions for that application.

** The user must check www.TaviumApplicationRequirements.com for a list of qualified VRAs and rates of VRA application.

*** Do not apply these products to the untreated 50% of DT crop acreage the day of or the day following initial treatment. Remaining untreated 50% of DT crop acreage may be treated the third day after initial treatment. All restrictions apply for subsequent treatments. The "grower" is the individual or business entity managing the crop on the land on which the product is being applied. If the grower is not the applicator, it is the responsibility of the applicator to ensure that they have communicated with the grower to obtain information on the number of DT cotton and DT soybean acres managed by the grower.

12.0 Crop/Site Use Directions

12.1 Dicamba-tolerant Cotton

12.1 Dicamba-Tolerant Cotton			
Rate (pt/A)	**Application Timing**	**Target Weeds**	**Use Directions**
3.53	**Burndown/Preplant Application:** Apply prior to planting crop. **At-Planting and Preemergence Application** Apply during planting or after planting but **before** crop emergence.	**Weeds listed in Section 15.1**	Use only in: AR, KS, LA, MS, NM, OK, TN (excluding Wilson County), TX (excluding Gaines County) and the Boot Heel of MO. For emerged broadleaf weeds apply as a broadcast spray to small weeds that are less than 4 inches in height.
	Postemergence (In-crop) Application Postemergence in-crop applications can be made over-the-top of dicamba-tolerant cotton through 6-leaf cotton, **unless additional state specific use restrictions are specified**.	**Weeds listed in Section 15.2**	For use only in States specified in **Section 7.4**. This product must not be used in a county that has been explicitly prohibited on this label. Apply as a postemergence broadcast spray to small broadleaf weeds that are less than 4 inches in height. If at least ½ inch of rainfall does not occur within 10 days after application, cultivate shallowly. Crop canopy interference can reduce spray coverage on target weeds and soil, and hinder weed control. Use higher spray volumes (greater than 15 gallons per acre) under these conditions. For grass weed control, apply before grass weeds emerge or after clean cultivation.

Tank Mixtures	
Required	**Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check www.TaviumApplicationRequirements.com for a list of qualified VRAs and of VRA application rates.**
May be mixed with	Refer to all product labels to determine mix order or perform a mix compatibility test.
Prohibited	**DO NOT** apply Tavium Plus VaporGrip Technology with ammonium sulfate (AMS) or any products that contain AMS.

Precautions

- For preplant application, to the extent possible, avoid moving treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.
- If heavy rainfall occurs soon after application, crop injury may occur. Injury will be more severe in poorly drained areas where water stands for several hours or days, or where the seeding slit has not been properly closed.

USE RESTRICTIONS

Application Rate Restrictions Per Acre

Preemergence Maximum Rate	Postemergence Maximum Rate	Seasonal Maximum Rate	Yearly Maximum Rate	Maximum Number of Applications	Minimum Application Interval	Fall Application Allowed
3.53 pt/A	3.53 pt/A	7.06 pt/A/year	7.06 pt/A/year	2	7 days	No

Maximum Application Per Year

1) **Maximum Annual Rate:** 7.06 pt/A/year (equivalent to 1 lb dicamba ae/A and 2.0 lb S-metolachlor/A)
   a. **DO NOT** exceed 1.9 lb ai/A/year of *S*-metolachlor-containing products on coarse-textured soils.
   b. **DO NOT** exceed 2.48 lb ai/A/year of *S*-metolachlor-containing products on medium- or fine-textured soils.
   c. **DO NOT** exceed 1.0 lb ae/A/year from all combined dicamba-containing products.

Last Application Growth Stage

Postemergence in-crop applications can be made over-the-top of dicamba-tolerant cotton through 6-leaf cotton, **unless additional state specific use restrictions are specified**.

Geographic Restrictions

DO NOT use in Gaines County, TX; Wilson County, TN; or Palm Beach County, FL, or Nassau and Suffolk Counties, NY. Check the registration status of this product in each state before using.

Soil Restrictions

- **DO NOT** make more than one application on coarse-textured soils.
- **DO NOT** use on sand or loamy sand soils.
- **DO NOT** use on Taloka silt loam.

State-Specific Restrictions

The user must check www.TaviumApplicationRequirements.com no more than 7 days before application of this product for additional labeling, including state-specific labeling. Where applicable, users must comply with additional requirements found on this website.

Additional Restrictions

- **DO NOT** apply less than 3.53 pt of this product/A (equivalent to 0.5 lb dicamba ae/A and 1.0 lb *S*-metolachlor/A).
- **DO NOT** make more than one preplant or at-planting or preemergence application, and/or one postemergence (In-crop) application on medium-or fine-textured soils.
- **DO NOT** use where water is likely to "pond" over the bed.
- **DO NOT** apply to non-dicamba-tolerant cotton.
- **DO NOT** incorporate Tavium Plus VaporGrip Technology if applied prior to planting, or crop injury may result.

• **Pre-harvest Interval (PHI):** 100 days
Grazing Restrictions
DO NOT graze or feed treated forage or fodder to livestock.

12.2 Dicamba-tolerant Soybean

12.2 Dicamba-Tolerant Soybean			
Rate (pt/A)	**Application Timing**	**Target Weeds**	**Use Directions**
3.53	**Preplant Application:** Apply prior to planting crop. **At-Planting and Preemergence Application:** Apply during planting or after planting but **before** crop emergence.	**Weeds listed in Section 15.1**	For use only in States specified in **Section 7.4**. This product must not be used in a county that has been explicitly prohibited on this label. For emerged broadleaf weeds, apply as a broadcast spray to small weeds that are less than 4 inches in height.
	Postemergence (In-crop) Application Postemergence in-crop applications can be made over-the-top of dicamba-tolerant soybeans through V4 soybeans **unless additional state specific soybean use restrictions are specified**.	**Weeds listed in Section 15.2**	**For Postemergence Applications:** For emerged broadleaf weeds, apply as a broadcast spray to small weeds that are less than 4 inches in height. For grass weed control, apply before grass weeds emerge. Dicamba-tolerant soybeans may exhibit leaf drooping following postemergence application. This response is transient and the soybeans will fully recover.

Tank Mixtures	
Required	**Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check www.TaviumApplicationRequirements.com for a list of qualified VRAs and of VRA application rates.**
May be mixed with	Refer to all product labels to determine mix order or perform a mix compatibility test.
Prohibited	**DO NOT** apply Tavium Plus VaporGrip Technology with ammonium sulfate (AMS) or any products that contain AMS.

Precautions:

- For preplant application, to the extent possible, avoid moving treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

USE RESTRICTIONS

Preemergence Maximum Rate	Postemergence Maximum Rate	Seasonal Maximum Rate	Yearly Maximum Rate	Maximum Number of Applications	Minimum Application Interval	Fall Application Allowed
3.53 pt/A	3.53 pt/A	7.06 pt/A/year	7.06 pt/A/year	2	7 days	No

Maximum Application Per Year

2) **Maximum Annual Rate:** 7.06 pt/A/year (equivalent to 1 lb dicamba ae/A and 2.0 lb S-metolachlor/A)
   a. **DO NOT** exceed 1.9 lb ai/A/year of *S*-metolachlor-containing products on coarse-textured soils.
   b. **DO NOT** exceed 2.48 lb ai/A/year of *S*-metolachlor-containing products on medium- or fine-textured soils.
   c. **DO NOT** exceed 1.0 lb ae/A/year from all combined dicamba-containing products.

Last Application Growth Stage

Postemergence in-crop applications can be made over-the-top of dicamba-tolerant soybeans through V4 soybeans, unless additional state specific use restrictions are specified.

Geographic Restrictions

DO NOT use in Gaines County, TX; Wilson County, TN; or Palm Beach County, FL, or Nassau and Suffolk Counties, NY. Check the registration status of this product in each state before using.

Soil Restrictions

- **DO NOT** make more than one application on coarse-textured soils.
- **DO NOT** use on sand or loamy sand soils.
- **DO NOT** use on Taloka silt loam.

State-Specific Restrictions

The user must check www.TaviumApplicationRequirements.com no more than 7 days before application of this product for additional labeling, including state specific labeling. Where applicable, users must comply with additional requirements found on this website.

Additional Restrictions

- **DO NOT** apply less than 3.53 pt of this product/A (equivalent to 0.5 lb dicamba ae/A and 1.0 lb *S*-metolachlor/A).
- **DO NOT** make more than one preplant or at-planting or preemergence application, and/or one postemergence (In-crop) application on medium-or fine-textured soils.
- **DO NOT** use where water is likely to "pond" over the bed.
- **DO NOT** apply to non-dicamba-tolerant soybean.
- **Pre-harvest Interval (PHI):** 75 days

Grazing Restrictions

- **DO NOT** feed treated forage or hay to livestock for 30 days following a preplant, at-planting, or preemergence application.
- **DO NOT** graze or feed treated forage or hay to livestock following a postemergence application.

13.0 Adjuvants

Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check www.TaviumApplicationRequirements.com for a list of qualified VRAs and of VRA application rates.

When a specific adjuvant product such as a Drift Reduction Adjuvant (DRA) is to be used with this product, Syngenta recommends the use of those adjuvants certified by the Council of Producers & Distributors of Agrotechnology (CPDA).

Adjuvant	Rate	Additional Information
13.1 **Activator Adjuvants**		
Non-Ionic Surfactant (NIS)	Use NIS containing at least 80% active ingredient at 0.25% v/v (1 qt/100 gal) of the finished spray volume.	
Crop Oil Concentrate (COC)	Use a nonphytotoxic COC containing 15–20% approved emulsifier at 0.5–1.0% v/v (2-4 qt/100 gal) of the finished spray volume.	Not Advised for use with postemergence applications
Methylated Seed Oil (MSO)	Use a nonphytotoxic MSO containing 15–20% approved emulsifier at 0.5–1.0% v/v (2-4 qt/100 gal) of the finished spray volume.	Not Advised for use with postemergence applications
13.2 **Nitrogen Source**		
Ammonium Sulfate (AMS)	**DO NOT** apply Tavium Plus VaporGrip Technology with ammonium sulfate (AMS) or any products that contain AMS	

14.0 Tank Mixing Directions

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check www.TaviumApplicationRequirements.com for a list of qualified VRAs and of VRA application rates.

14.1 Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

- For 15 gallons per acre spray volume, use 2.5 cups (591.5 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
- Add components in the sequence indicated in the Mixing Order section below using 2 teaspoons for each pound or 1 teaspoon for each pint of labeled use rate per acre.
- Cap the jar and invert 10 cycles between component additions.
- When the components have all been added to the jar, let the solution stand for 15 minutes.
- Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface; fine particles that precipitate to the bottom; or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, then do not mix the ingredients in the same tank.

14.2 Mixing Order

Always read and follow label directions for all products in the tank mixture. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

1. Ensure application and mixing equipment are clean and in proper working order.
2. Water - Begin by agitating a thoroughly clean sprayer tank three-quarters full of clean water.
3. Agitation - Maintain constant agitation throughout mixing and application.
4. Drift Reducing Adjuvants (DRA).
5. Inductor - If an inductor is used, rinse it thoroughly after each component has been added.
6. Products in PVA bags - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
7. Water-dispersible products (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions).
8. Water-soluble products.
9. Emulsifiable concentrates (such as oil concentrate when applicable).
10. Water-soluble additives (when applicable).
11. Add remaining quantity of water.

Maintain constant agitation during application

15.0 Equipment Cleanup / Sprayer Cleanout

As part of the Restricted Use Product requirements, applicators must document that they have complied with the Sprayer Clean-out section of this label.

Severe crop injury may occur if any of this product remains in the spray system equipment following an application and the equipment is subsequently used for application to sensitive crops. After using this product, clean all mixing and spray equipment (including tanks, pumps, lines, filters, screens, and nozzles) with a strong detergent based sprayer cleaner. The rinsate must be disposed in compliance with local, state, and federal guidelines.

Inadvertent contamination can also occur in equipment used for bulk product handling and mixing prior to use in the spray system. Care should be taken to reduce contamination not only in the spray system but in any equipment used to transfer or deliver product. For example, bulk handling and mixing equipment containing this product should be segregated when possible to reduce potential for cross-contamination. Consider using block and check valves to avoid backflow during transfer. Piping should be reviewed to ensure there not potential for product build-up. Dedicated nurse trucks and tender equipment should be used when possible.

To avoid subsequent injury to other crops, thoroughly clean mixing and application equipment immediately after spraying using the triple rinse procedures below:

1. **DO NOT** clean sprayer near desirable vegetation, wells or other water sources.
2. Drain and flush tank walls, boom and all hoses with clean water.
3. Prepare a cleaning solution with a detergent or a commercial sprayer cleaner or ammonia according to the product's use directions.
4. Be sure to wash all internal parts of the tank, including the inside top surface with the cleaning solution. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
5. Flush hoses, spray lines and nozzles for at least one minute with the cleaning solution.
6. Repeat steps 3-5 for two additional times.
7. Remove nozzles, screens and strainers, and clean separately in the cleaning solution after completing the above procedures.
8. Drain lines, filters and sump.
9. Rinse the complete spraying system with clean water.
10. Clean and wash off the outside of the entire sprayer and boom.
11. Dispose of all rinsate according to local, state and federal regulations.

16.0 Weeds Controlled or Suppressed

16.1 Weeds Controlled by Tavium Plus VaporGrip Technology Applied Prior to Weed Emergence

Common Name	Scientific Name
Amaranth, Palmer	*Amaranthus palmeri*
Amaranth, Powell	*Amaranthus powellii*
Barnyardgrass	*Echinochloa crus-galli*
Crabgrass, large	*Digitaria ischaemum*
Crabgrass, smooth	*Digitaria sanguinalis*
Crowfootgrass	*Dactyloctenium aegyptium*
Foxtail, giant	*Setaria faberi*
Foxtail, green	*Setaria viridis*
Foxtail, yellow	*Setaria pumila*
Goosegrass	*Eleusine indica*
Nightshade, Eastern black	*Solanum ptychanthum*
Panicum, fall	*Panicum dichotomiflorum*
Pigweed, prostrate	*Amaranthus blitoides*
Pigweed, redroot	*Amaranthus retroflexus*
Pigweed, smooth	*Amaranthus hybridus*
Pigweed, tumble	*Amaranthus albus*
Pusley, Florida	*Richardia scabra*
Signalgrass, broadleaf	*Urochloa platyphylla*
Waterhemp, common	*Amaranthus rudis*
Waterhemp, tall	*Amaranthus tuberculatus*
Witchgrass	*Panicum capillare*

16.2 Weeds Controlled by Tavium Plus VaporGrip Technology Applied Postemergence to Weeds

Common Name	Scientific Name
Amaranth, Palmer	*Amaranthus palmeri*
Amaranth, Powell	*Amaranthus powellii*
Amaranth, spiny	*Amaranthus spinosus*
Beggarweed, Florida	*Desmodium tortuosum*
Buckwheat, wild	*Polygonum convolvulus*
Buffalobur	*Solanum rostratum*
Burcucumber	*Sicyos angulatus*
Buttercup	*Ranunculus* spp.
Carpetweed	*Mullugo verticillata*
Chickweed, common	*Stellaria media*
Cocklebur, common	*Xanthium strumarium*
Copperleaf, hophornbeam	*Acalypha ostryifolia*
Croton, tropic	*Croton glandulosus*
Cutleaf eveningprimrose	*Oenothera laciniata*
Falseflax, smallseed	*Camelina microcarpa*
Fleabane, annual	*Erigeron annus*
Goosefoot, nettleleaf	*Chenopodium murale*
Henbit	*Lamium amplexicaule*
Horseweed/Marestail	*Conyza canadensis*
Jimsonweed	*Datura stramonium*
Knotweed, prostate	*Polygonum aviculare*
Kochia	*Kochia scoparia*
Lambsquarters, common	*Chenopodium album*
Lettuce, prickly	*Lactuca serriola*
Mayweed	*Anthemis cotula*
Morningglory, ivyleaf	*Ipomoea hederacea.*

Common Name	Scientific Name
Morninglglory, tall	*Ipomoea purpurea*
Mustard, black	*Brassica nigra*
Mustard, blue	*Chorispora tenella*
Mustard, tansy	*Descurainia pinnata*
Mustard, tumble	*Sisymbrium altissimum*
Mustard, wild	*Brassica kaber*
Nightshade, black	*Solanum nigrum*
Nightshade, cutleaf	*Solanum triflorum*
Pennycress, field	*Thlaspi arvense*
Pepperweed, Virginia	*Lepidium virginicum*
Pigweed, prostrate	*Amaranthus, blitoides*
Pigweed, redroot	*Amaranthus retroflexus*
Pigweed, smooth	*Amaranthus hyrbidus*
Pigweed, tumble	*Amaranthus, albus*
Prickly sida (Teaweed)	*Sida spinosa*
Puncturevine	*Tribulus terrestris*
Purslane, common	*Portulaca oleracea*
Pusley, Florida	*Richardia scabra*
Ragweed, common	*Ambrosia artemisiifolia*
Ragweed, giant	*Ambrosia trifida*
Rocket, London	*Sisymbrium irio*
Sesbania, hemp	*Sesbania exaltata*
Shepherd’s purse	*Capsella bursa-pastoris*
Sicklepod	*Senna obtusifolia*
Smartweed (lady’s thumb)	*Polygonum persicaria*
Smartweed, Pennsylvania	*Polygonum pensylvanicum*
Sowthistle, annual	*Sonchus oleraceus*
Spanish needles	*Bidens bipinnata*

Common Name	Scientific Name
Spurge, prostrate	*Euphorbia humistrata*
Spurge, leafy	*Euphorbia esula*
Spurry, corn	*Spergula arvensis*
Sunflower, common	*Helianthus annuus*
Thistle, Canada	*Cirsium arvense*
Thistle, Russian	*Salsola iberica*
Velvetleaf	*Abutilon theophrasti*
Waterhemp, common	*Amaranthus rudis*
Waterhemp, tall	*Amaranthus tuberculatus*

17.0 Storage and Disposal

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. Do not allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal.

17.1 Container Type

Not Applicable

17.2 Pesticide Storage

Keep container closed to prevent spills and contamination.

17.3 Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

17.4 Container Handling

17.4.1 Less than or equal to 5 gallons

Non-refillable container. DO NOT reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

17.4.2 Greater than 5 gallons

Refillable container. Refill this container with pesticide only. DO NOT reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Non-refillable container. DO NOT reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER

18.0 Conditions of Sale

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold Syngenta and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

19.0 Changes from Previous Label

Not Applicable.

20.0 Market Claims

Not Applicable.

21.0 Appendix – State Labeling

21.1 State Additional Labeling

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

Syngenta Crop Protection, LLC
P. O. Box 18300
Greensboro, North Carolina 27419-8300

This labeling expires 02/06/2028. DO NOT use or distribute this product after 02/06/2028.

DICAMBA	**GROUP**	**4**	**HERBICIDE**
***S*-METOLACHLOR**	**GROUP**	**15**	**HERBICIDE**

Primary Brand Name:
Tavium® Plus VaporGrip® Technology

Active Ingredients:

Diglycolamine salt of dicamba*:	17.7%
S-metolachlor**:	24.0%
Other Ingredients:	58.3%
Total:	100.0%

*CAS No. 104040-79-1
**CAS No. 87392-12-9

Tavium Plus VaporGrip Technology is a capsule suspension (CS) formulation containing 1.12 pounds of dicamba acid equivalent (ae) and 2.26 pounds of *S*-metolachlor per U.S. gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional precautionary statements, restrictions, and directions for use inside booklet.

EPA Reg. No. 100-1753

All applicable directions, restrictions and precautions on the EPA registered label are to be followed. Before using Tavium Plus VaporGrip® Technology as permitted according to this labeling, read and follow all applicable directions, restrictions, and precautions on the EPA registered label on or attached to the pesticide product container. This labeling contains revised use instructions and or restrictions that may be different from those that appear on the container label. This labeling must be in the possession of the user at the time of pesticide application. It is a violation of Federal Law to use this product in a manner inconsistent with

its labeling.

USE RESTRICTIONS

Users must comply with additional requirements including state restrictions found on www.TaviumApplicationRequirements.com . The user must check www.TaviumApplicationRequirements.com no more than 7 days before application of this product for additional labeling.

Record keeping Requirement: Maintain a copy of the product label and any labeling that supplements the product label.

21.2 Additional Iowa-specific restrictions

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

Syngenta Crop Protection, LLC
P. O. Box 18300
Greensboro, North Carolina 27419-8300

This labeling expires 02/06/2028. DO NOT use or distribute this product after 02/06/2028.

These instructions for Tavium Plus VaporGrip® Technology are only applicable to the state of Iowa

Primary Brand Name:
Tavium® Plus VaporGrip® Technology

See additional precautionary statements, restrictions, and directions for use inside booklet.

EPA Reg. No. 100-1753

All applicable directions, restrictions and precautions on the EPA registered label are to be followed. Before using Tavium Plus VaporGrip® Technology as permitted according to this labeling, read and follow all applicable directions, restrictions, and precautions on the EPA registered label on or attached to the pesticide product container. This labeling contains revised use instructions and or restrictions that may be different from those that appear on the container label. This labeling must be in the possession of the user at the time of pesticide application. It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Additional specific restrictions as found on www.TaviumApplicationRequirements.com

syngenta

Application Directions

In order to apply Tavium Plus VaporGrip® Technology in Iowa, the following requirements apply:

Dicamba-Tolerant Cotton:
- DO NOT apply after June 12 or 1st square, whichever comes first

Dicamba-Tolerant Soybean:
- DO NOT apply after June 12 or V4, whichever comes first.

21.3 Additional Minnesota-specific restrictions

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

Syngenta Crop Protection, LLC
P. O. Box 18300
Greensboro, North Carolina 27419-8300

This labeling expires 02/06/2028. DO NOT use or distribute this product after 02/06/2028.

These instructions for Tavium Plus VaporGrip® Technology are only applicable to the state of Minnesota

Primary Brand Name:
Tavium® Plus VaporGrip® Technology

See additional precautionary statements, restrictions, and directions for use inside booklet.

EPA Reg. No. 100-1753

All applicable directions, restrictions and precautions on the EPA registered label are to be followed. Before using Tavium Plus VaporGrip® Technology as permitted according to this labeling, read and follow all applicable directions, restrictions, and precautions on the EPA registered label on or attached to the pesticide product container. This labeling contains revised use instructions and or restrictions that may be different from those that appear on the container label. This labeling must be in the possession of the user at the time of pesticide application. It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Additional specific restrictions as found on www.TaviumApplicationRequirements.com

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Application Directions

In order to apply Tavium Plus VaporGrip® Technology in Minnesota, the following requirements apply:

DO NOT apply south of Interstate 94 after June 12. **DO NOT** apply north of Interstate 94 after June 30.

Statewide restriction: **DO NOT** apply if the air temperature of the field at the time of application is over 85 degrees Fahrenheit of if the National Weather Service's forecasted high temperature

for the nearest available location for the day exceeds 85 degrees Fahrenheit. Forecasted temperature must be recorded at the start of application.

21.4 Additional Illinois-specific restrictions

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

Syngenta Crop Protection, LLC
P. O. Box 18300
Greensboro, North Carolina 27419-8300

This labeling expires 02/06/2028. DO NOT use or distribute this product after 02/06/2028.

These instructions for Tavium Plus VaporGrip® Technology are only applicable to the state of Illinois

Primary Brand Name:
Tavium® Plus VaporGrip® Technology

See additional precautionary statements, restrictions, and directions for use inside booklet.

EPA Reg. No. 100-1753

All applicable directions, restrictions and precautions on the EPA registered label are to be followed. Before using Tavium Plus VaporGrip® Technology as permitted according to this labeling, read and follow all applicable directions, restrictions, and precautions on the EPA registered label on or attached to the pesticide product container. This labeling contains revised use instructions and or restrictions that may be different from those that appear on the container label. This labeling must be in the possession of the user at the time of pesticide application. It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Additional specific restrictions as found on www.TaviumApplicationRequirements.com

syngenta

Application Directions

In order to apply Tavium Plus VaporGrip® Technology in Illinois, the following requirements apply:

1) Temperature Restriction
A pesticide containing dicamba shall not be applied on soybeans if the air temperature at the field at the time of application is over 85 degrees Fahrenheit or if the National Weather Service's forecasted high temperature for the nearest available location for the day of application exceeds

85 degrees Fahrenheit. Local National Weather Service forecasts are available at https://www.weather.gov.

2) Cut-off Date Restriction
Application on soybeans of a pesticide containing dicamba shall not be made after June 20 of each year.

3) Before applying a pesticide containing dicamba on soybeans, the applicator shall consult the FieldWatch sensitive crop registry (https://www.fieldwatch.com) and comply with all associated recordkeeping and label requirements.

4) Application on soybeans of a pesticide containing dicamba shall not be made if the wind is blowing toward:

a. Any Illinois Nature Preserves Commission site that is adjacent to the field of application; or
b. An adjacent residential area.

21.5 Additional Indiana-specific restrictions

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

Syngenta Crop Protection, LLC
P. O. Box 18300
Greensboro, North Carolina 27419-8300

This labeling expires 02/06/2028. DO NOT use or distribute this product after 02/06/2028.

These instructions for Tavium Plus VaporGrip® Technology are only applicable to the state of Indiana

Primary Brand Name:
Tavium® Plus VaporGrip® Technology

See additional precautionary statements, restrictions, and directions for use inside booklet.

EPA Reg. No. 100-1753

All applicable directions, restrictions and precautions on the EPA registered label are to be followed. Before using Tavium Plus VaporGrip® Technology as permitted according to this labeling, read and follow all applicable directions, restrictions, and precautions on the EPA registered label on or attached to the pesticide product container. This labeling contains revised use instructions and or restrictions that may be different from those that appear on the container label. This labeling must be in the possession of the user at the time of pesticide application. It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Additional specific restrictions as found on www.TaviumApplicationRequirements.com

syngenta

Application Directions

In order to apply Tavium Plus VaporGrip® Technology in Indiana, the following requirements apply:

Dicamba-tolerant Cotton:
- **DO NOT** apply after June 12th

Dicamba-tolerant Soybean:
- **DO NOT** apply after June 12th

21.6 Additional South Dakota-specific restrictions

RESTRICTED USE PESTICIDE

To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

Syngenta Crop Protection, LLC
P. O. Box 18300
Greensboro, North Carolina 27419-8300

This labeling expires 02/06/2028. DO NOT use or distribute this product after 02/06/2028.

These instructions for Tavium Plus VaporGrip® Technology are only applicable to the state of South Dakota

Primary Brand Name:
Tavium® Plus VaporGrip® Technology

See additional precautionary statements, restrictions, and directions for use inside booklet.

EPA Reg. No. 100-1753

All applicable directions, restrictions and precautions on the EPA registered label are to be followed. Before using Tavium Plus VaporGrip® Technology as permitted according to this labeling, read and follow all applicable directions, restrictions, and precautions on the EPA registered label on or attached to the pesticide product container. This labeling contains revised use instructions and or restrictions that may be different from those that appear on the container label. This labeling must be in the possession of the user at the time of pesticide application. It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Additional specific restrictions as found on www.TaviumApplicationRequirements.com

syngenta

Application Directions

In order to apply Tavium Plus VaporGrip® Technology in South Dakota, the following requirements apply:

- **DO NOT** apply after June 30th.

EXHIBIT 2

Memorandum Supporting Final Decision to Approve Registration for the Uses of Dicamba on Dicamba-Tolerant Cotton and Dicamba-Tolerant Soybean

Approved by: _____ Digitally signed by EDWARD MESSINA Date: 2026.02.06 17:25:35 -05'00'

Ed Messina, Esq., Director
Office of Pesticide Programs
US Environmental Protection Agency

Date: February 6, 2026

Table of Contents

I. INTRODUCTION

This memorandum presents the rationale to support the final decision of the U.S. Environmental Protection Agency (EPA) to register three end use dicamba products for weed control in dicamba tolerant (DT) cotton and DT soybean under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) section 3(c)(5).

II. CHEMICAL INFORMATION and BACKGROUND

Dicamba is a systemic benzoic acid herbicide that is used for selective control of emerged broadleaf weeds in a variety of food and feed crops and in non-agricultural settings. The Weed Science Society of America (WSSA) classifies dicamba as a Group 4 synthetic auxin type herbicide. Dicamba mimics auxins, a type of plant hormone, and causes abnormal cell growth by affecting cell division. The three pesticide products covered by this memorandum contain two forms of dicamba, as described in Table 1 below:

Table 1. Chemical Name Identification for Dicamba

Chemical Name	Alternate Chemical Name	Common Name	Chemical Abstract Service (CAS) Number
Dicamba (benzoic acid, 3,6-dichloro-2-methoxy-, aka 3,6-dichloro-o-anisic acid)	Diglycolamine salt of dicamba (3,6- dichloro-o-anisic acid)	Dicamba DGA salt	104040-79-1
Dicamba: N,N-Bis-(3-aminopropyl) methylamine salt of 3,6- dichloro-o-anisic acid	None	Dicamba BAPMA salt	1286239-22-2

Dicamba was first registered for “over-the-top" (OTT) use on dicamba tolerant (DT) cotton and DT soybean in 2016. Prior to the 2016 registration actions for dicamba, dicamba uses on soybeans and cotton were limited to use on preplant and preharvest soybeans and on preplant and postharvest cotton. These 2016 registrations (M1768 HERBICIDE/XtendiMax with VaporGrip Technology (EPA Registration Number 524-617), Engenia Herbicide (EPA Registration Number 7969-345), and DuPont FeXapan (EPA Registration Number 352-913)) were time-limited with automatic expiration dates in late 2018. In November 2018, EPA granted requests from the registrants (Bayer, BASF, and DuPont) to extend the expiration dates to December 20, 2020. At the same time, EPA approved amendments to the terms and conditions of the registrations as well as amendments to add labeling restrictions to further reduce the potential for off-site movement of dicamba from the treated fields. In April 2019, EPA approved an application from Syngenta Crop Protection, LLC to register a product containing a combination of dicamba and S-metolachlor (Tavium Plus VaporGrip Technology (EPA Registration Number 100-1623)) for OTT use on DT cotton and DT soybeans with an expiration date of December 20, 2020.

In June 2020, the U.S. Court of Appeals for the Ninth Circuit vacated the registrations of three of the four dicamba products registered for use on DT cotton and DT soybean on the basis that EPA “substantially understated risks that it acknowledged and failed entirely to acknowledge other risks.”

Following the vacatur, in July 2020, Bayer CropScience LP and BASF submitted applications to register new XtendiMax with VaporGrip Technology (EPA Registration Number 264-1210) and Engenia Herbicide (EPA Registration Number 7969-472) products, respectively, for use on DT cotton and DT soybean. Shortly thereafter, Syngenta Crop Protection, LLC submitted an application to extend its registration of Tavium Plus VaporGrip Technology (EPA Registration Number 100-1623), which was not vacated by the Ninth Circuit but was set to expire in December 2020. On October 27, 2020, EPA granted the registrations and registration amendment and established an expiration date of December 20, 2025 for these three registrations. That decision is described in the *Memorandum Supporting Decision to Approve Registration for the Uses of Dicamba on Dicamba Tolerant Cotton and Soybean* in Docket Number EPA-HQ-OPP-2020-0492 at www.regulations.gov.

On December 23, 2020, Center for Biological Diversity, Center for Food Safety, National Family Farm Coalition, and Pesticide Action Network North America filed a complaint in the U.S. District Court for the District of Arizona challenging EPA's October 27, 2020 approval of the registrations of XtendiMax (EPA Registration Number 264-1210) and Engenia (EPA Registration Number 7969-472) and the registration amendment for Tavium (EPA Registration Number 100-1623). On February 6, 2024, the court issued an order and judgment vacating the registrations for XtendiMax (EPA Registration Number 264-1210), Engenia (EPA Registration Number 7969-472), and Tavium (EPA Registration Number 100-1623), holding that EPA had violated FIFRA section 3(c)(4) by approving these registrations without providing notice and an opportunity for public comment. The vacatur of these registrations became effective on February 6, 2024. Accordingly, as of that date, these products were unregistered. On February 14, 2024, EPA issued an existing stocks order[1] ("2024 Existing Stocks Order") containing EPA's provisions for the disposition of any existing stocks of the formerly registered products. Except as described in the 2024 Existing Stocks Order, sale or distribution of these products was unlawful as of February 6, 2024.

III. REQUESTED ACTION and USE PROFILE

Bayer CropScience LP (Bayer), BASF Corporation (BASF), and Syngenta Crop Protection, LLC (Syngenta) each submitted a registration application for a new dicamba product between March and June 2024. These applications seek approval of new uses for dicamba postemergent, "over the top" (OTT), of DT cotton and DT soybean in certain states (Alabama, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, Wisconsin). Syngenta's product also contains the active ingredient S-metolachlor in the product formulation. While EPA assessed these new uses in all the states listed above, registrants may decide to not pursue state registration in any state. Syngenta indicated that it does not intend to register Tavium Plus VaporGrip Technology (EPA Reg. No. 100-1753) in Arizona. The use of S-metolachlor on DT cotton and DT soybean is not considered a new use, because S-metolachlor is currently registered for postemergent use on cotton and soybean; thus, this document is primarily focused on the registration of dicamba for postemergent use on DT cotton and DT soybean.

The products Stryax Herbicide (initially proposed as KHNP0090 HERBICIDE) (EPA Registration Number 264-1241) and Tavium Plus VaporGrip Technology (EPA Registration Number 100-1753) are restricted use pesticide products formulated as a liquid concentrate and a capsule suspension, containing 42.8%

[1] https://www.epa.gov/system/files/documents/2024-02/dicamba-notice-existing-stocks-order_02142024.pdf

and 17.7% of the active ingredient (ai) dicamba diglycolamine (DGA) salt, respectively. In addition, Tavium Plus VaporGrip Technology (EPA Registration Number 100-1753) contains 24% S-metolachlor. The product Engenia Herbicide (EPA Registration Number 7969-507) is also a restricted use pesticide product (RUP) and is formulated as a liquid concentrate containing 60.8% of the ai dicamba N, N-bis-(3-aminopropyl) methylamine (BAPMA) salt.

Table 2. Dicamba Products Registered for Use on DT Cotton and DT Soybean

EPA Registration Number	Product Name	Registrant	Form of Dicamba
100-1753	Tavium Plus VaporGrip Technology	Syngenta	DGA salt
264-1241	Stryax Herbicide (initially proposed KHNP0090 Herbicide)	Bayer	DGA salt
7969-507	Engenia Herbicide	BASF	BAPMA salt

For all three products, broadcast, banded, or spot treatment applications on DT cotton and DT soybean are permitted via ground equipment only. The single use maximum application rate is 0.5 lb acid equivalents (ae)/acre (A). These applications are permitted during preplant, at-plant, preemergence, and/or postemergence crop stages, where specified. Aerial and chemigation applications of these products are prohibited on the product labels. No more than two applications are permitted per growing season for a maximum annual application rate of 1.0 lb ae/A. A minimum retreatment interval of 7 days is specified on the Stryax Herbicide (264-1241) and Engenia Herbicide (7969-507) product labels.

All three products are for application only by certified applicators to agricultural use sites and require workers to wear baseline attire (i.e., long-sleeve shirt, long pants and shoes plus socks) along with personal protective equipment (PPE) including chemical-resistant gloves when handling these products. A NIOSH-approved dust/mist filtering respirator with any R, P, or HE filter is also required for all handlers of the BAPMA salt formulated product. A restricted entry interval (REI) of 24 hours is required on all three product labels.

IV. EVALUATION

In evaluating a pesticide registration application, EPA assesses a wide variety of exposure information (i.e., where and how the pesticide is used) as well as environmental fate (i.e., how the chemical will move in the environment) and toxicity studies (i.e., effects on humans and other non-target organisms) to determine the likelihood of adverse effects (i.e., risk) from exposures associated with the use of the product. Risk assessments are developed to evaluate the environmental fate of the compound as well as how it might affect a wide range of non-target organisms including humans, terrestrial wildlife, and aquatic wildlife (plants and animals). In addition, a benefits and impacts assessment may be conducted.

FIFRA provides that EPA shall approve a registration if the Agency determines that the pesticide will not generally cause “unreasonable adverse effects on the environment.” This standard consists of two parts: the pesticide may neither cause an “unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of [the] pesticide” nor, in the case of a pesticide resulting in residues in food or feed, cause a human dietary risk that is not safe.

Sections IV.A and IV.B describe the costs of the use of the pesticide in terms of the risk posed by use of the pesticide on human health and the environment. These 'costs' of the use a) are measured using terms such as margins of exposure (MOE) for human health and risk quotients (RQ) for ecological risks, b) can be described qualitatively, or c) may be described in both quantitative and qualitative terms. Risk assessments also describe who or what organism bears the identified risk. EPA considers a wide range of potential adverse effects and the potential costs that could result. In the case of OTT dicamba, for example, there could be adverse effects on crops in areas adjacent to fields treated with dicamba, potentially imposing economic and social costs on neighboring farmers. Section IV.C summarizes the history of dicamba-related incidents and consequences of off-target movement. Section IV.D describes the benefits associated with the use of the pesticide. Benefits assessments use a weight-of-evidence approach to describe who will use the pesticide and how it will potentially improve outcomes (e.g., agricultural production).

Based on these assessments, EPA evaluates the risks and benefits to determine whether the use of the pesticide will generally cause unreasonable adverse effects. As part of this evaluation, EPA reviews language on draft pesticide labeling submitted as part of an application for registration and works with the applicant to revise the label as needed to ensure the directions for use are appropriate to mitigate potential risks to a level that they are not unreasonable. In this way, the pesticide label communicates essential directions for use, including limitations and mitigations that are necessary to avoid unreasonable adverse effects to human health and environment. It is a FIFRA violation to use a pesticide in a manner inconsistent with its labeling. EPA also met its obligations under the Endangered Species Act (ESA) section 7 by assessing the potential effects of the new OTT use of dicamba on federally listed threatened or endangered ("listed") species and their designated critical habitats, determining whether mitigations were needed to address potential impacts on listed species or designated critical habitats, incorporating those mitigations into the proposed registrations, initiating formal consultation with the U.S. Fish and Wildlife Service on this action, and determining that issuing these registrations is consistent with ESA section 7(d).

A. Assessment of Risks to Human Health

EPA requires a wide range of studies to assess a pesticide use scenario (see 40 CFR Part 158[2]). For the new uses of dicamba on DT cotton and DT soybean, the database of studies required to support the assessment of risk to human health is complete.

This section summarizes EPA's '*Dicamba and Dicamba BAPMA Salt. Human-Health Risk Assessment for Proposed Section 3 Registration on Dicamba-tolerant Cotton and Dicamba-tolerant Soybean*.' The complete assessment can be found in Docket Number EPA-HQ-OPP-2024-0154 at www.regulations.gov.

1. Toxicology Profile

Dicamba (3,6-Dichloro-o-anisic acid) is a selective benzoic acid herbicide currently registered in various acid and salt formulations for use on a variety of agricultural and non-agricultural use sites. Dicamba is an auxin agonist that induces abnormal and uncontrolled growth to disrupt normal plant functions at high concentrations. For dicamba-tolerant varieties, the dicamba mono-oxygenase (DMO) gene is introduced into seeds to encode the enzyme dicamba *O*-demethylase to convert dicamba into the non-herbicide metabolite 3,6-dichlorosalicylic acid (DCSA), thus causing the plant to tolerate the herbicidal

[2] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-E/part-158

effect of dicamba. Dicamba-tolerant varieties demonstrate further hydroxylation of DCSA to form the 2,5-dichloro-3,6-dihydroxybenzoic acid (DCGA) metabolite.

EPA considered available study data for the dicamba acid, dicamba salt forms [isopropylamine (IPA) and DGA, and BAPMA], and metabolites [DCSA, DCGA, and 5-hydrocydicamba (5-OH dicamba)] when assessing human health risks from exposures to dicamba. Based on available toxicity studies and structural similarities, the various forms of dicamba are generally considered to be of comparable toxicity and are assessed concurrently. Because the use patterns, restrictions, and application rates across the three products and two use sites are similar, these actions were evaluated concurrently.

The dietary, incidental oral, and dermal endpoint determinations for dicamba acid are protective for assessing anticipated exposures from the dicamba DGA salt and dicamba BAPMA salt formulations because of their comparable toxicity. However, due to differences in the toxicological inhalation endpoints between the dicamba acid (which is protective of the DGA salt form) and BAPMA salt forms, separate inhalation points of departure (POD) have been selected for these assessments. The toxicological endpoints and PODs for assessing human health risks from exposures to the dicamba DGA salt and the BAPMA salt formulations are summarized below.

For this assessment, the safety factor for infants and children, the Food Quality Protection Act (FQPA) Safety Factor (SF), has been reduced to 1x for all exposure routes, except for inhalation for the BAPMA salt. The 10X FQPA SF is retained for assessing inhalation risks for the dicamba BAPMA salt. The reduction of the FQPA SF to 1x where applicable was for the following reasons:

1. The toxicity database for dicamba is complete and adequate for FQPA SF consideration.
2. For the dicamba acid, there is no evidence of increased susceptibility following *in utero* exposures to rats and rabbits and following pre and/or post-natal exposure to rats in a two-generation reproduction study. For the dicamba acid and BAPMA salt, no developmental toxicity was seen at the highest doses tested in the prenatal developmental studies with rats. Although quantitative offspring susceptibility was observed in the 2-generation reproduction study for the DCSA metabolite based on decreased pup weights, the degree of concern for the susceptibility is low because there is a well-established no observed adverse effects level (NOAEL) for offspring toxicity in that study and DCSA has rapid clearance. Additionally, the current points of departure are health protective and therefore address the concern for offspring toxicity observed in this reproduction study.
3. Consistent neurotoxic signs (e.g., ataxia, decreased motor activity, impaired righting reflex and gait) were observed in multiple studies in rats and rabbits. After considering the available toxicity data, EPA determined that there is no need for a developmental neurotoxicity study or additional uncertainty factors (UF) to account for neurotoxicity for the following reasons: (1) although clinical signs of neurotoxicity were seen in pregnant animals, no evidence of developmental anomalies of the fetal nervous system were observed in the prenatal developmental toxicity studies, in either rats or rabbits, at maternally toxic doses up to 300 or 400 mg/kg/day, respectively; (2) there was no evidence of behavioral or neurological effects on the offspring in the two-generation reproduction study in rats; (3) the ventricular dilation of the brain in the combined chronic toxicity and carcinogenicity study in rats was only observed in females at the high dose after two years of exposure at doses of 127 mg/kg/day. The significance of this observation is questionable, since no similar histopathological finding was seen in two sub-chronic neurotoxicity study at the limit dose or other chronic studies.

4. There are no residual uncertainties identified in the exposure databases. The dietary food exposure assessments were performed based on tolerance-level residues for the acute dietary, average field trial data for the chronic dietary and available percent crop-treated information. Conservative ground and surface water modeling estimates were used. Similarly, conservative residential SOPs were used to assess residential exposure. These assessments will not under-estimate the exposure and risks posed by dicamba.

The acute dietary POD for dicamba is based on ataxia, unsteady gait, and convulsions in the dams (considered a single-dose effect since the signs occurred within 3 hours after dosing) observed at the lowest observed adverse effects level (LOAEL) of 86 mg/kg/day in a rat developmental study for the dicamba BAPMA salt. The NOAEL of 29 mg/kg/day is selected for deriving the acute reference dose (RfD). A UF of 100X (which includes 10X to account for interspecies extrapolation, 10X for intraspecies variation, and a FQPA SF of 1X) is applied to the NOAEL to obtain an acute RfD of 0.29 mg/kg/day. A separate acute dietary risk assessment was not conducted for females since developmental toxicity endpoints of concern attributable to a single dose (exposure) were not identified in the database.

The chronic dietary POD for dicamba is based on decreased pup body weights observed at 37 mg/kg/day LOAEL in a two-generation reproduction toxicity study with the DCSA metabolite. The NOAEL of 4 mg/kg/day is selected for deriving the chronic RfD. An uncertainty factor of 100X (10X to account for interspecies extrapolation, 10X for intraspecies variation, and 1X for FQPA SF) is applied to the NOAEL to obtain a chronic RfD of 0.04 mg/kg/day.

The incidental oral POD was selected from the two-generation reproductive toxicity study in rats dosed with parent compound (dicamba acid) and based on impaired pup growth observed at the LOAEL of 450 mg/kg/day; the NOAEL of 136 mg/kg/day was selected as the POD for this scenario. The Level of Concern (LOC) for incidental oral exposures is 100, which includes the 10X factor to account for interspecies extrapolation, a 10X factor to account for intraspecies variation, and a 1X FQPA SF.

Dermal endpoints were not selected for dicamba acid or its salts, as there are no adverse systemic effects in the database from dermal exposure at the limit dose (1000 mg/kg/day) and no evidence of susceptibility in available developmental and reproductive studies.

Route-specific inhalation studies are currently available for the dicamba acid and dicamba BAPMA salt formulations. Because the dicamba BAPMA salt is demonstrated to be more toxic than the dicamba acid, separate inhalation PODs have been selected for assessing risk from inhalation exposures to the dicamba DGA salt and dicamba BAPMA salt formulations. For the dicamba DGA salt, the inhalation POD was based on the route-specific dicamba acid inhalation toxicity study in Wistar rats with a lowest observed adverse effect concentration (LOAEC) of 0.050 mg/L based on local effects of hyperplasia in the lungs and lymph nodes (no observed adverse effect concentration (NOAEC) = 0.005 mg/L, non-systemic, pulmonary regional deposited dose ratio (RDDR) = 0.590). For the dicamba BAPMA salt, the inhalation POD is based on the dicamba BAPMA salt inhalation toxicity study in rats with a LOAEC of 0.0014 mg/L based on local effects of hyperplasia and ulceration of the larynx (no NOAEC, non-systemic, extra-thoracic RDDR = 0.190). The standard interspecies extrapolation UF is reduced from 10X to 3X for dicamba acid (and DGA salt) and BAPMA salt due to the calculation of human equivalent concentrations (HEC) accounting for pharmacokinetic (not pharmacodynamic) interspecies differences. The LOC for dicamba BAPMA salt inhalation exposures is 300 (3X for interspecies extrapolation, 10X for intraspecies variation, and a 10X UF_L (uncertainty factor for use of a LOAEC) is applied due to lack of a NOAEC). For all

other forms of dicamba, the inhalation exposure LOC is 30 (3X for interspecies extrapolation, 10X for intraspecies variation, and 1X for FQPA SF when applicable).

Dicamba is classified as "Not Likely to be Carcinogenic to Humans" based on an absence of treatment-related tumors in mice and rats.

A summary of the PODs selected for human health risk assessments can be found in Tables 3, 4, and 5.

Table 3. Toxicological Doses and Endpoints for Dicamba Acid and Dicamba BAPMA Salt for use in Human Health Risk Assessments

Exposure/ Scenario	POD	UF, FQPA SF/ RfD, PAD, LOC	Study and Toxicological Effects
Acute Dietary (General population including infants and children)	NOAEL = 29 mg/kg/day (20 mg/kg/day as acid equivalent)	UF_A = 10X UF_H = 10X FQPA SF = 1X aRfD = 0.29 mg/kg/day aPAD = 0.29 mg/kg/day	**Dicamba BAPMA Salt** **Rat Prenatal Developmental Study (MRID 49441802)** **Maternal** LOAEL = 86 mg/kg/day in dams, based on ataxia, unsteady gait and convulsions observed shortly after dosing (60 mg/kg/day as acid equivalent) **Developmental** NOAEL > 288 mg/kg/day (200 mg/kg/day as acid equivalent)
Acute Dietary (Females 13-49 years of age)	N/A	N/A	No developmental toxicity attributed to acute exposure in the toxicology database. The abortions in the rabbit developmental study occurred at gestation day 22.
Chronic Dietary (All populations)	Offspring NOAEL = 4 mg/kg/day	UF_A = 10X UF_H = 10X FQPA SF = 1X cRfD = 0.04 mg/kg/day cPAD = 0.04 mg/kg/day	**DCSA Metabolite** **Rat Reproductive Toxicity Study (MRID 47899517)** Offspring LOAEL = 37 mg/kg/day based on decreased pup weights in F1 generation on PND 14 and 21 (both sexes) and week 18 (females)
Short-Term (1 - 30 Days) Incidental Oral	Offspring NOAEL = 136 mg/kg/day	Residential LOC = 100 UF_A = 10X UF_H = 10X FQPA SF = 1X	**Dicamba Acid** **Rat Reproductive Toxicity Study (MRID 43137101)** Offspring LOAEL = 450 mg/kg/day based on decreased pup weights.
Short- and Intermediate-term Dermal	No dermal assessment for dicamba acid or salts since the dermal toxicology studies for dicamba acid, IPA and DGA salts all had NOAELs of 1000 mg/kg/day.		
Dicamba Acid Short- and Intermediate-Term Inhalation	NOAEC = 0.005/0.005 mg/L (M/F) See Table 4.5.3.2 for HEC/HED Calculations	Residential/ Occupational LOC = 30 UF_A = 3X UF_H =10X FQPA SF = 1X	**Dicamba Acid** **Rat Aerosol Inhalation Study (MRID 49461101)** NOAEC = 0.005/0.005 mg/L (M/F) LOAEC = 0.050/0.050 mg/L (M/F), based on minimal multifocal bronchiole-alveolar hyperplasia in males; multiple microscopic findings in the lung and associated lymph nodes in females

Table 3. Toxicological Doses and Endpoints for Dicamba Acid and Dicamba BAPMA Salt for use in Human Health Risk Assessments			
Exposure/ Scenario	**POD**	**UF, FQPA SF/ RfD, PAD, LOC**	**Study and Toxicological Effects**
Dicamba BAPMA Salt Short- and Intermediate-Term Inhalation	LOAEC = 0.0014 mg/L (0.001 mg/L as acid equivalent) See Table 4.5.3.3 for HEC/HED Calculations	Residential/Occupational LOC = 300 UF_A = 3X UF_H =10X UF_L = 10X	**Dicamba BAPMA Salt** **Rat Inhalation Study (MRID 49441803)** NOAEC = NA LOAEC = 0.0014 mg/L (LDT), based on ulcers in epithelial tissues of the larynx and single/multi-focal hyperplasia in the larynx (0.001 mg/L as acid equivalent)
Cancer (Oral, dermal, inhalation)	Dicamba is classified as "Not Likely to be Carcinogenic to Humans."		

Point of Departure (POD) = A data point or an estimated point that is derived from observed dose-response data and used to mark the beginning of extrapolation to determine risk associated with lower environmentally relevant human exposures. NOAEL = no observed adverse effect level. LOAEL = lowest observed adverse effect level. UF = uncertainty factor. UF_A = extrapolation from animal to human (interspecies). UF_H = potential variation in sensitivity among members of the human population (intraspecies). UF_L = use of a LOAEL to extrapolate a NOAEL. UF_S = use of a short-term study for long-term risk assessment. FQPA SF = FQPA Safety Factor. PAD = population adjusted dose (a = acute, c = chronic). RfD = reference dose. MOE = margin of exposure. LOC = level of concern. N/A = not applicable.

Table 4. Summary of HEC/HED values used for interspecies extrapolation for Dicamba Acid*.

Population	Scenario[§]	Toxicity Duration Adjustment[A]		HEC[B]		HED (mg/kg/day)[H]
		Daily	Weekly	mg/L	mg/m^3	
Occupational	Handler	8	5	0.002[C]	2.21	0.21[i]
Residential	Handler	NA	NA	0.003[D]	2.95	0.07[J]
	Outdoor post-application	NA	NA	0.003[E]	2.95	0.08[K]
	Indoor post-application	NA	7	0.002[F]	2.11	0.05[L]
	Bystander	24	7	0.001[G]	0.53	--

*The inhalation values have been calculated based on the 2016 revised spreadsheets. The HED calculation has been revised to be based on the same breathing rate used to derive the HEC – resulting in a single HED as the toxicological point of departure. In terms of risk estimates, the effect of this error correction is not unidirectional – some previously-calculated risks will be higher, while some will be lower.
NA = not applicable (the expected duration of the exposure scenario is less than the duration in the available inhalation toxicity studies; downward adjustments are not permitted).
[§] While all possible scenarios are included in this table, the relevant scenarios for the use pattern include occupational handler and residential bystander.
[A] Toxicity duration adjustment from 6 hours/day, 5 days/week in the route-specific inhalation study.
[B] HEC = human-equivalent concentration; HEC = rat POD x daily duration adjustment x weekly daily duration adjustment x RDDR.
[C] Occupational Handler HEC (portal of entry endpoint) = 0.005 mg/L * (6 hrs/8 hrs) * (5 days/5 days) * 0.59 = 0.002 mg/L
[D] Residential Handler HEC (portal of entry endpoint) = 0.005 mg/L * 0.59 = 0.003 mg/L
[E] Residential Outdoor Post Application HEC (portal of entry endpoint) = 0.005 mg/L * 0.59 = 0.003 mg/L
[F] Residential Indoor Post Application HEC (portal of entry endpoint) = 0.005 mg/L * (5 days/7 days) * 0.59 = 0.002 mg/L
[G] Residential Bystander HEC (portal of entry endpoint) = 0.005 mg/L* (6 hrs/24 hrs) * (5 days/7 days) * 0.59 = 0.001 mg/L
[H] HED = human-equivalent dose; HED = HEC (mg/L) x human specific conversion factor (11.8 L/hr-kg) x respiratory tract to oral absorption ratio (1) x duration of daily exposure for activity (occupational handler = 8 hrs/day, residential handler and indoor post-application = 2 hrs/day, residential outdoor post-application = 2.3 hrs/day).
[i] (0.0022 mg/L) x (11.8 L/hr/kg) x 1 x (8 hrs)= 0.21 mg/kg/day
[J] (0.003 mg/L) x 1 x (11.8 L/hr/kg) x (2 hrs)= 0.07 mg/kg/day
[K] (0.003 mg/L) x 1 x (11.8 L/hr/kg) x (2.3 hrs)= 0.08 mg/kg/day
[L] (0.002 mg/L) x 1 x (11.8 L/hr/kg) x (2 hrs)= 0.05 mg/kg/day

Table 5. Summary of HEC/HED values used for interspecies extrapolation for Dicamba BAPMA Salt*.						
Population	**Scenario[§]**	**Toxicity Duration Adjustment[A]**		**HEC[B]**		**HED (mg/kg/day)[H]**
		Daily	**Weekly**	**mg/L**	**mg/m³**	
Occupational	Handler	8	5	0.00[C]	0.20	0.02[i]
Residential	Handler	NA	NA	0.00[D]	0.27	0.01[J]
	Outdoor post-application	NA	NA	0.00[E]	0.27	0.01[K]
	Indoor post-application	NA	7	0.00[F]	0.19	0.00[L]
	Bystander	24	7	0.00[G]	0.05	--

*The inhalation values have been calculated based on the 2016 revised spreadsheets. The HED calculation has been revised to be based on the same breathing rate used to derive the HEC – resulting in a single HED as the toxicological point of departure. In terms of risk estimates, the effect of this error correction is not unidirectional – some previously-calculated risks will be higher, while some will be lower.
NA = not applicable (the expected duration of the exposure scenario is less than the duration in the available inhalation toxicity studies; downward adjustments are not permitted).

[§] While all possible scenarios are included in this table, the relevant scenarios for the use pattern include occupational handler and residential bystander.

[A] Toxicity duration adjustment from 6 hours/day, 5 days/week in the route-specific inhalation study.

[B] HEC = human-equivalent concentration; HEC = rat POD x daily duration adjustment x weekly daily duration adjustment x RDDR.

[C] Occupational Handler HEC (portal of entry endpoint) = 0.0014 mg/L * (6 hrs/8 hrs) * (5 days/5 days) * 0.19 = 0.0002 mg/L

[D] Residential Handler HEC (portal of entry endpoint) = 0.0014 mg/L * 0.19 = 0.0003 mg/L

[E] Residential Outdoor Post Application HEC (portal of entry endpoint) = 0.0014 mg/L * 0.19 = 0.0003 mg/L

[F] Residential Indoor Post Application HEC (portal of entry endpoint) = 0.0014 mg/L * (5 days/7 days) *0.19 = 0.0001 mg/L

[G] Residential Bystander HEC (portal of entry endpoint) = 0.0014 mg/L* (6 hrs/24 hrs)*(5 days/7 days)* 0.19 = 0.00005 mg/L

[H] HED =human-equivalent dose; HED = HEC (mg/L) x human specific conversion factor (11.8 L/hr-kg) x respiratory tract to oral absorption ratio (1) x duration of daily exposure for activity (occupational handler = 8 hrs/day, residential handler and indoor post-application = 2 hrs/day, residential outdoor post-application = 2.3 hrs/day).

[i] (0.0002 mg/L) x (11.8 L/hr/kg) x 1 x (8 hrs) = 0.02 mg/kg/day

[J] (0.0003 mg/L) x 1 x (11.8 L/hr/kg) x (2 hrs) = 0.01 mg/kg/day

[K] (0.0003 mg/L) x 1 x (11.8 L/hr/kg) x (2.3 hrs) = 0.01 mg/kg/day

[L] (0.0001 mg/L) x 1 x (11.8 L/hr/kg) x (2 hrs) = 0.002 mg/kg/day

2. Dietary (Food + Water) Risks

Dietary risk assessment incorporates both exposure and toxicity of a given pesticide. For acute and chronic assessments, the risk is expressed as a percentage of a maximum acceptable dose (i.e., the dose that EPA has concluded will result in no unreasonable adverse health effects). This dose is referred to as the population-adjusted dose (PAD). The PAD is equivalent to the point of departure (POD) divided by all applicable UFs, including the FQPA SF. EPA is concerned when estimated non-cancer dietary risk exceeds 100% of the PAD. Acute and chronic aggregate dietary (food and drinking water) risk assessments were conducted to include all registered and new uses of dicamba. These assessments assume 100 percent crop treated (PCT) and EPA default processing factors, where applicable. Estimated drinking water concentrations (EDWC) were modeled and incorporated directly into these dietary assessments. An unrefined acute dietary assessment was conducted using tolerance level residues. Acute dietary risk estimates are not of concern for the general U.S. population and all population subgroups assessed (<100% acute population-adjusted dose (aPAD)) at the 95th percentile; with the most highly exposed population subgroup being all infants (<1 year old) at 39% of the aPAD. A refined chronic dietary assessment was conducted using average field trial residues for crops, and tolerance level residues for livestock commodities. Chronic dietary risk estimates are not of concern for the general U.S. population and all population subgroups assessed (<100% chronic population-adjusted dose (cPAD)); with the most highly exposed population subgroup being children ages 1-2 at 51% of the cPAD.

3. Occupational Handlers Risks

Occupational exposure is anticipated for the new OTT uses. For occupational assessments, risk is presented as a Margin of Exposure (MOE) which is the ratio of the point of departure to the predicted or estimated human exposure dose. EPA is concerned when non-cancer MOEs are less than the level of concern (LOC). Since no dermal hazard has been identified for dicamba, quantitative occupational handler and/or post-application dermal risk assessments were not conducted at this time. Only occupational handler inhalation exposures were assessed. All occupational handler inhalation risk estimates are not of concern; MOEs range from 470 to 770 (i.e., MOEs ≥ inhalation LOC of 30 for the DGA salt; and ≥ inhalation LOC of 300 for the BAPMA salt) assuming 'baseline' attire (defined as a single layer of clothing consisting of a long-sleeved shirt, long pants, shoes plus socks) and label required PPE (i.e., waterproof gloves for all three labels and a respirator for BAPMA salt formulation only).

4. Residential Exposure

The end-use products are labeled as restricted use pesticides intended for application by certified applicators to agricultural use sites only. Since there are no residential uses and/or use sites as part of these registrations, quantitative residential handler and/or post-application assessments were not conducted at this time. However, existing residential uses of dicamba have been assessed in previous risk assessments. There were no residential handler and/or post application risk estimates of concern (i.e., all inhalation MOEs ≥ inhalation LOC of 30; and all incidental oral MOEs ≥ incidental oral LOC of 100) identified for currently registered uses of dicamba. Since no dermal hazard was identified for dicamba, quantitative residential handler and/or post-application dermal risk assessments were not conducted.

5. Aggregate Risk

In an aggregate assessment, EPA considers the combined pesticide exposures and risks from food, drinking water, and residential exposures. Since there are no acute or chronic residential exposures expected from the new or previously registered uses, the acute and chronic aggregate risk estimates for dicamba include food and drinking water only and are equivalent to the acute and chronic dietary risk estimates, which are not of concern. No dermal hazard has been identified for dicamba, and the inhalation and incidental oral endpoints are selected based on different toxicological effects, therefore, the short-term aggregate risk assessment only includes applicable oral exposures (e.g., food, water and residential incidental oral). As a result, a short-term aggregate assessment was not conducted for adults, because it would be equivalent to the dietary assessment (i.e., no residential incidental oral exposures for adults; only food and water). For children, the short-term aggregate [food, water, and residential (incidental oral)] MOE is above the LOC of 100 and not of concern.

6. Cumulative Risk

Unlike other pesticides for which EPA has followed a cumulative risk approach based on a common mechanism of toxicity, EPA has not made a common mechanism of toxicity finding as to dicamba and any other substances and dicamba does not appear to produce a toxic metabolite produced by other substances. For the purposes of this action, therefore, EPA has not assumed that dicamba has a common mechanism of toxicity with other substances.

7. Non-Occupational Spray Drift Risk

EPA conducts human health spray drift assessments to determine potential risk from indirect exposure to pesticides that may drift during or immediately after an application. Pesticide applications made in the form of a spray and applied with ground equipment may result in pesticide drift and deposition in non-target areas adjacent to the application site.

Since dicamba is currently registered for use on turf, EPA considered whether the risk assessment for the turf use is protective of any type of exposure expected to result from spray drift. The maximum crop application rate (0.5 lb ae/A), adjusted for maximum anticipated spray drift deposition potential (0.26), was found to be less than or equal to the existing turf application rate (1 lb. ae/A). Therefore, the conducted post-application exposure assessment for turf is considered protective of anticipated spray drift exposures from the new DT cotton and DT soybean agricultural uses of dicamba DGA salt, and a quantitative non-occupational spray drift assessment has not been conducted at this time for dicamba DGA salt. No residential post-application risks of concern were identified for the registered use on turf.

A quantitative non-occupational spray drift assessment was conducted for dicamba BAPMA salt. Adult dermal and children (1 to <2 years old) dermal exposures were not assessed since there were no adverse effects observed in the route specific dermal toxicity study up to and including the limit dose. Therefore, only incidental oral exposures for children (1 to <2 years old) are quantitatively assessed. Using default turf transferable residues (TTR) assumptions, children (1 to <2 years old) incidental oral risk estimates from exposure to dicamba BAPMA salt associated with spray drift residues results in no risks of concern (i.e., MOEs ≥ LOC of 100) at the field edge for ground boom applications.

8. Non-Occupational Bystander Inhalation Exposure and Risk

The potential for non-occupational exposures to vapor phase dicamba residues emitted from treated fields for application rates up to 2.0 lb ae/A were evaluated previously using the Probabilistic Exposure and Risk model for FUMigants (PERFUM) and chemical/formulation-specific flux data. EPA concluded that while volatilization of dicamba from treated crops (at rates up to 2.0 lb ae/A) does occur and could result in bystander exposure, airborne concentrations, even at the edge of the treated fields, were not of concern for bystanders. EPA notes that the volatilization assessment standard operating procedures, methodologies, and data assumptions remain current. Since the new agricultural uses of dicamba DGA salt and dicamba BAPMA salt are at application rates lower (0.5 lb ae/A) than those previously assessed (2.0 lb ae/A), these assessments are considered protective for the new DT cotton and DT soybean uses. Therefore, there are no non-occupational bystander inhalation risks of concern anticipated from these new uses.

B. Assessment of Environmental and Ecological Risks

EPA prepared a final ecological risk assessment (ERA) that examines the potential for adverse effects to non-target organisms associated with the new OTT uses of dicamba and accounts for any mitigations on the labels as submitted by the registrants in their applications or determined to be necessary by EPA and agreed to by the registrants. The taxa evaluated in the final ERA include mammals, birds (which serve as surrogates for reptiles and terrestrial-phase amphibians), bees (which serve as surrogates for terrestrial invertebrates), fish (where freshwater fish serve as surrogates for aquatic-phase amphibians), aquatic invertebrates, and aquatic and terrestrial plants. Ecological risk characterization integrates the

results of the exposure and ecotoxicity data to evaluate the likelihood of adverse ecological effects. The means of integrating the results of exposure and ecotoxicity data is called the quotient method. For this method, risk quotients (RQ) are calculated by dividing exposure estimates by ecotoxicity values, both acute and chronic (RQ = Exposures/Toxicity). RQs are then compared to the EPA's acute and chronic risk levels of concern (LOC) for each taxon. The LOCs are used by the EPA to indicate a level above which there is a potential risk of concern to non-target organisms from a pesticide, when used as directed. RQs equal to or below an LOC indicate there are no risks of concern for that taxon. The LOCs for non-listed species are meant to be protective of community-level effects. If the RQ exceeds the LOC, then the EPA further characterizes and describes the associated risk of concern.

EPA also prepared a final Biological Evaluation (BE) containing EPA's effects determinations for listed species and designated critical habitat from the new OTT uses of dicamba, including EPA's predictions of the potential likelihood of future jeopardy for listed species and adverse modification of designated critical habitats (J/AM). EPA's final BE also assesses how mitigations were identified to avoid any predictions of potential likelihood of future J/AM. While EPA is predicting that there is not a potential likelihood of future J/AM from these new OTT uses of dicamba when considering the aforementioned mitigations, the U.S. Fish and Wildlife Service is responsible for making the final J/AM findings for these new uses.

EPA considered, and applied as appropriate, the Agency's Herbicide Strategy (HS),[3] which describes how EPA intends to identify potential mitigations to reduce identified potential population-level impacts to listed species from the agricultural use of conventional herbicides in the contiguous 48 states from spray drift and runoff. The HS describes the calculation of the magnitude of difference (MoD), which is the ratio of the herbicide estimated environmental concentration to its corresponding toxicity threshold value for population-level impacts to a single species. EPA also considered, and applied as appropriate, the Vulnerable Species Action Plan (VSAP), which provides a framework for EPA to identify the need for mitigation to address potential population-level impacts for 27 listed species that EPA identified as particularly vulnerable to pesticides.

This section summarizes EPA's '*Final Ecological Risk Assessment and Biological Evaluation Including Effects Determinations for Federally Listed Endangered and Threatened Species and Designated Critical Habitat for the Section 3 New Use Registration of Dicamba on Dicamba-Tolerant Cotton and Soybean*'. The complete assessment can be found in docket Number EPA-HQ-OPP-2024-0154 at www.regulations.gov.

1. Environmental Fate Profile

In laboratory studies, dicamba was found to be soluble (6,100 mg/L) and mobile (K_{oc} = 13.4 L/mg o.c.). Dicamba is an anion at environmental pHs (pKa = 1.9) and is not expected to bioaccumulate in aquatic organisms. Dicamba degrades rapidly via aerobic metabolism with half-lives on the order of days, while it is generally stable to abiotic processes, and it is generally more persistent under anaerobic conditions. Dicamba may reach surface water via runoff, by spray drift during application, and by vapor drift from volatilization. Based on academic and registrant studies, incident data from the Incident Data System (IDS), and the potential for increased volatility during warmer temperatures and in later season applications, EPA completed an analysis of movement of vapor volatilized from the treated field. Dicamba is less likely to be available to leach to groundwater because it is susceptible to aerobic

[3] https://www.regulations.gov/document/EPA-HQ-OPP-2023-0365-1137.

degradation. However, any dicamba reaching groundwater would be somewhat persistent (due to its relative stability to hydrolysis).

Dicamba (acid and salt forms), 3,6-dichlorosalicylic acid (DCSA) and 2-chloro-6-hydroxybenzoic acid (6-CSA) are the residues of concern for the ecological risk assessment based on exposure potential for each compound. The DCSA degradate is produced under anaerobic conditions, is soluble, and is slightly to moderately mobile. DCSA is persistent, accounting for > 60% of the applied dicamba after 365 days of anaerobic incubation in a laboratory-based environment consisting of sediment and water phase. DCSA is not persistent when formed under aerobic conditions and degrades roughly at the same rate as the parent. Based on a log KOW of -0.53, bioconcentration of DCSA is not a primary concern. DCSA may be transported to surface water via runoff or to groundwater via leaching. DCSA tends to be more stable to aerobic metabolism than dicamba with most half-lives ranging from 2 to 6 weeks. Data are not available to assess DCSA's stability to abiotic processes or anaerobic conditions. Based on structural modeling, DCSA is classified as being intermediately volatile from dry non-adsorbing surfaces. DCSA may be transported to surface water via runoff or to groundwater via leaching. 6-CSA is similar in structure to DCSA; therefore, EPA assumed that it is similar in toxicity to DCSA. Based on previous assessments, EPA modeled both parent and degradate exposure for cotton and soybean uses (i.e., DCSA + 6-CSA).

2. Ecological Effects Profile and Potential Impacts

EPA considers the ecological risk database to be complete with respect to the new OTT uses (see **Section 1.4** of the final ERA). In the ecological risk assessment conducted for dicamba, EPA identified potential on-and off-field risks of concern for terrestrial and wetland plants, and aquatic non-vascular plants in the Wetland Plant Exposure Zone (WPEZ). Additionally, there are potential on-field risks to aquatic-phase amphibians, terrestrial invertebrates (chronic exposure of honey bee larvae to dicamba), mammals, and birds (surrogates for terrestrial-phase amphibians and reptiles). There were no concerns for aquatic invertebrates.

Chronic effects from dicamba exposure have been observed in laboratory studies in mammals (reduced weight and delayed sexual maturation), birds (reduced number of offspring), and honey bees (reduced weight, survival, and adult emergence). No effects have been observed for fish or aquatic invertebrates (up to the highest concentration tested in available chronic exposure studies). In plants, dicamba acts by mimicking auxins (a type of plant growth hormone) and causing abnormal cell growth, generally showing greater toxicity to the tested dicot terrestrial plant species (up to an order of magnitude or more comparing the most sensitive dicots and monocots) and widely varying toxicity to the tested aquatic vascular and non-vascular plant species.

Non-Listed Species Conclusions

Terrestrial and Wetland Plants

Vegetative vigor endpoints are the most sensitive endpoints for dicamba. Considering the submitted toxicity data, dicamba has targeted toxic effects to dicots in comparison to observed effects to monocot species. EPA identified potential on- and off-field risks of concern for non-listed terrestrial and wetland plants from drift, runoff and volatility exposure. Volatility exposure is expected both near the field and across wide landscape areas. For spray drift, EPA determined that potential impacts to individual non-listed species may extend out to approximately 240 feet. For exposure in the terrestrial plant exposure zone (TPEZ), there are LOC exceedances for non-listed dicots (RQs = 960; LOC =1) and for non-listed monocots (RQs = 3.6; LOC = 1) for both cotton and soybean. For exposure in the WPEZ, there are LOC

exceedances for both non-listed dicots (RQs = 120-963; LOC = 1) and monocots (RQs = 0.45-3.6; LOC = 1) for both cotton and soybean.

Aquatic Plants

Aquatic plants may be exposed to dicamba from spray drift, runoff and volatility. Runoff and spray drift are dominant exposure pathways for aquatic plants. As a result of volatilization, atmospheric concentrations of dicamba may be deposited into the waterbody, but concentrations resulting in water would be far below those than from runoff and spray drift contribution. Therefore, the assessments for spray drift and runoff are expected to be protective of volatility-based exposure for aquatic plants. Additionally, the extent of spray drift exposure to terrestrial habitats is expected to account for exposure to aquatic habitats given that the terrestrial spray drift assessment accounts for a relatively higher exposure relative to aquatic spray drift assessment. For exposure in the Aquatic Plant Exposure Zone (APEZ), there are no LOC exceedances for non-listed aquatic vascular or non-vascular plants (RQs = <0.01-0.13; LOC = 1). For exposure in the WPEZ, there are no LOC exceedances for non-listed aquatic vascular plants (RQs = 0.01-0.09; LOC = 1), and there are LOC exceedances for non-listed aquatic non-vascular plants (RQs = 0.15-2.0; LOC = 1).

Terrestrial Vertebrates

EPA determined there is a potential for acute risk to on-field birds (surrogates for terrestrial-phase amphibians and reptiles) from exposure to dicamba (RQs = <0.01-1.6; LOC = 0.5), however, a low potential for chronic risk to birds, terrestrial-phase amphibians and reptiles from exposure to dicamba (RQs = 0.02-0.27; LOC = 1). EPA determined that there is not an acute or chronic risk concern for birds, terrestrial-phase amphibians and reptiles from chronic exposure to DCSA.

EPA determined there are no acute (RQs = <0.01- 0.03; LOC = 0.5) or chronic (RQs = <0.01-0.60; LOC = 1) non-listed LOC exceedances for mammals from exposure to dicamba. Additionally, there are no chronic non-listed LOC exceedances from exposure to DCSA from DT-cotton use (RQs = <0.01-0.34; LOC = 1). EPA identified a potential for chronic risk to non-listed on-field mammals from exposure to DCSA residues in common dietary items following dicamba applications to DT soybeans only (RQs = <0.01-3.3; LOC = 1).

Terrestrial Invertebrates

For terrestrial invertebrates, honey bees (*Apis mellifera*) serve as surrogates for both social and solitary *Apis* and non-*Apis* bees and for other terrestrial invertebrates in the absence of data for non-honey bee terrestrial invertebrate species. Overall risks to honey bees from dicamba are expected to be low. For dicamba, the comparison of the acute non-definitive contact endpoint to estimated environmental concentrations indicates a low likelihood of adverse effects on adult bees from acute contact and oral exposure. The acute RQ for larval honey bees is below the acute LOC (max RQ = 0.06; LOC = 0.4), and the on- and off-field chronic risk to adult bees is low, as the chronic RQs for dicamba (RQ = 0.85) are less than the chronic LOC for honey bees (LOC = 1.0). However, chronic RQs for dicamba for honey bee larval dietary exposure are above the chronic risk LOC of 1.0 (RQ = 1.3).

For other terrestrial invertebrates, EPA determined that the use of the most sensitive life stage (larval) honey bee data indicates potential chronic risk concerns using insect residue estimates modeled for non-bee terrestrial invertebrates (RQ = 1.8; LOC = 1). There were no LOC exceedances for vegetation residues (RQ = 0.81; LOC = 1) and contact risk using the insect residue data is expected to be low.

Aquatic Vertebrates
There are no LOC exceedances for fish toxicity endpoints for dicamba on both an acute (RQ < 0.01) and chronic basis (RQ <0.01), as all RQs are below the acute LOC of 0.5 and chronic LOC of 1.0, respectively. Non-definitive fish endpoints are several orders of magnitude above the estimated environmental concentrations. For aquatic-phase amphibians, there are no LOC exceedances in the APEZ (RQs = <0.01-0.04; LOC = 0.5), but there is potential risk in the WPEZ on an acute exposure basis for soybean use only (RQs = 0.04-0.55; LOC = 0.5).

Aquatic Invertebrates
There are no LOC exceedances for aquatic invertebrates for dicamba on a chronic basis (LOC = 1), as freshwater and estuarine/marine invertebrate chronic RQs are <0.01. Non-definitive aquatic invertebrate endpoints on an acute basis are several orders of magnitude above the estimated environmental concentrations. Therefore, EPA concludes low risk to aquatic invertebrates from the new OTT uses on an acute and chronic basis.

Listed Species Conclusions

Terrestrial and Wetland Plants
EPA identified on- and off-field risks of concern for listed individuals, populations and communities of terrestrial and wetland plants from drift, runoff and volatility exposure. Volatility exposure is expected both near the field and across wide landscape areas. For spray drift, EPA determined that potential impacts to individual listed species may extend out to approximately 310 feet, while potential impacts to populations of listed species may extend out to 15 feet. For exposure in the TPEZ, there are listed LOC exceedances for individual listed dicots (RQs = 2050; LOC = 1) and monocots (RQs = 6.8; LOC = 1). Population- and community-level impacts are not expected in the TPEZ (MoDs = 0.08-0.73). For exposure in the WPEZ, there are listed LOC exceedances for individual listed dicots (RQs = 256-2051; LOC = 1) and monocots (RQs = 0.85-6.8; LOC = 1). Additionally, population-level and community-level impacts are expected in the WPEZ (population-level MoDs for dicots = 16; population-level MoDs for monocots = 1.8; community-level MoDs = 4.9).

Aquatic Plants
Listed aquatic plants may be exposed to dicamba from spray drift, runoff and volatility. Runoff and spray drift are dominant exposure pathways for listed aquatic plants. As a result of volatilization, atmospheric concentrations of dicamba may be deposited into the waterbody, but concentrations resulting in water would be far below those than from runoff and spray drift contributions. Therefore, the assessment for spray drift and runoff are expected to be protective of volatility-based exposure for listed aquatic plants. Additionally, the extent of spray drift exposure to terrestrial habitats is expected to account for exposure to aquatic habitats given that the terrestrial spray drift assessment accounts for a relatively higher exposure relative to aquatic spray drift assessment. For exposure in the APEZ, there are no listed LOC exceedances for listed aquatic vascular plants (RQs = <0.01-0.04; LOC = 1). There are listed LOC exceedances for listed non-vascular plants in the APEZ (RQs = 0.02-1.6; LOC = 1). The potential for impacts to aquatic plant communities in the APEZ is ‘not likely’ (MoDs = <0.01-0.06). For exposure in the WPEZ, there are no LOC exceedances for listed aquatic vascular plants (RQs = 0.05-0.6; LOC = 1) and there are LOC exceedances for non-vascular plants (RQs = 1.8-34; LOC = 1). EPA determined the potential for impacts to aquatic plant communities in the WPEZ is considered ‘low’ (MoDs = 0.06-1.3).

Terrestrial Vertebrates
For dicamba, EPA determined that there is potential for individual-level impacts to on-field listed birds, terrestrial-phase amphibians and reptiles on an acute exposure basis (RQs = <0.01-0.56; LOC = 0.1). Because all RQs are <1, the potential for population-level impacts based on dicamba exposure is considered 'not likely' from use of dicamba on DT cotton and DT soybean. Additionally, EPA considered the potential chronic exposure to the degradate DCSA and determined that there is not an acute or chronic risk concern for listed birds, terrestrial-phase amphibians or reptiles from chronic exposure to DCSA.

EPA determined there are no acute (RQs = <0.01- 0.03; LOC = 0.1) or chronic (RQs = <0.01-0.60; LOC = 1) listed LOC exceedances for mammals from exposure to dicamba. Additionally, there are no chronic listed LOC exceedances from exposure to DCSA from DT-cotton use (RQs = <0.01-0.34; LOC = 1). EPA identified a potential for chronic risk to individual listed on-field mammals from exposure to DCSA residues in common dietary items following dicamba applications to DT soybeans only (RQs = <0.01-3.3; LOC = 1). The potential for population-level impacts to listed mammals from exposure to DCSA residues in common dietary items following dicamba applications to DT soybeans is considered 'not likely' (MoDs = <0.01-0.56).

Terrestrial Invertebrates
EPA used honey bee data as a surrogate for listed terrestrial invertebrates and determined that the use of the most sensitive life stage (larval) honey bee data indicates potential impacts to individuals using insect residue estimates modeled for non-bee terrestrial invertebrates (RQ = 1.8; LOC = 1). Using insect residue estimates, EPA determined the potential for population-level impacts to listed terrestrial invertebrates to be 'not likely' (MoD = 0.9). There were no listed LOC exceedances for vegetation residues (RQ = 0.81; LOC = 1) and contact risk using the insect residue data is expected to be low.

Aquatic Vertebrates
There are no individual-level listed species LOC exceedances for freshwater or estuarine/marine fish on an acute or chronic exposure basis in the WPEZ or APEZ (RQs = <0.01; acute LOC = 0.05, chronic LOC = 1). For individual-level effects to aquatic-phase amphibians, there are no listed species acute LOC exceedances in the APEZ for DT soybean or DT cotton uses (RQs = <0.01-0.04; LOC = 0.05), but there were LOC exceedances for soybean and cotton uses in the WPEZ (RQs = 0.04-0.55; LOC = 0.05). Because the RQs in the APEZ and WPEZ were <1, MoDs were not calculated and the potential for population-level impacts is considered 'not likely'.

Aquatic Invertebrates
All dicamba RQs for aquatic invertebrates are less than the listed species LOC in the APEZ and WPEZ (RQs = <0.01; acute LOC = 0.05, chronic LOC = 1). Therefore, direct effects to listed aquatic invertebrates are not expected for dicamba.

3. Final Effects Determinations under the Endangered Species Act

EPA developed a biological evaluation (BE) to assess the potential effects of the new OTT uses of dicamba on listed species and designated critical habitats (CH). The federal action area for this action is the 34 states where application of dicamba would be authorized by these registrations plus any additional areas where effects would be reasonably expected to occur based on the potential use sites associated with the new OTT uses of dicamba. EPA conducted an overlap analysis to determine which listed species and designated CHs occur within this action area. EPA also considered life history, toxicity,

and exposure information to determine if the new OTT uses of dicamba have no effect (NE) or may affect (MA) listed species and designated CHs. Because one of the products contains both dicamba and S-metolachlor, Tavium Plus VaporGrip Technology (EPA Registration Number 100-1753), EPA also assessed the use of S-metolachlor on DT cotton and DT soybean in addition to dicamba. The effects determinations below apply to the products containing dicamba only and containing dicamba and S-metolachlor.

EPA's Herbicide Strategy (HS) provides a framework that describes how EPA plans to identify potential mitigations to reduce the potential for population-level impacts to listed species from the agricultural use of conventional herbicides in the contiguous 48 states. EPA's Vulnerable Species Action Plan (VSAP) provides a framework for EPA to identify the need for mitigation to address potential population-level impacts for 27 listed species that EPA identified as particularly vulnerable to pesticides. The mitigations identified herein are informed by and consistent with expected mitigation outcomes for spray drift and runoff as described in these strategies and cover the same listed species as each of the documents.

EPA completed effects determinations for all listed and proposed species and their designated and proposed CHs related to these registrations. In its assessment, EPA considers use data layer (UDL) overlaps inclusive of the farthest off-field drift and runoff distances when making effects determinations. EPA assessed 1,736 species and 951 CHs for the new OTT uses of dicamba and the use of S-metolachlor on DT cotton and DT soybean. EPA made NE determinations for 1,333 species and 837 designated CHs, based primarily on low overlap, no direct toxicity, and/or the lack of an exposure pathway based on the habitat of the species. EPA made MA determinations for 403 listed species and 114 CHs, all under the authority of the U.S. Fish and Wildlife Service (FWS). Where EPA made a MA determination, EPA determined whether the uses are likely to adversely affect an individual when considering the species-specific habitat, life history, and other considerations of exposure and toxicity. EPA made not likely to adversely affect (NLAA) determinations for 74 species and 35 CHs, based primarily on unlikely exposure due to a species' habitat or scenarios where specific physical or biological features (PBFs) for the CH are not expected to be impacted by these uses new. EPA made likely to adversely affect (LAA) determinations for 329 species and 79 CHs. EPA worked with the applicants to ensure that the final version of the registrations incorporate necessary mitigation measures (*i.e.*, mitigations beyond those provided with the initial application submissions) to address EPA's initial predicted likelihood of future J/AM from these new OTT uses of dicamba. After accounting for these mitigations, EPA predicts that the registration of dicamba for these new OTT uses is not likely to jeopardize any listed species or lead to adverse modification of any listed species' designated CH. For more information, see Section 4 of the *Final Ecological Risk Assessment and Biological Evaluation Including Effects Determinations for Federally Listed Endangered and Threatened Species and Designated Critical Habitat for the Section 3 New Use Registration of Dicamba on Dicamba-Tolerant Cotton and Soybean*, which can be accessed in Docket Number EPA-HQ-OPP-2024-0154 at www.regulations.gov.

Table 6. Number of Listed Species Effects Determinations and Predictions of Potential Likelihood of Future Jeopardy by Taxon After Considering EPA Identified Mitigations.[1]

Taxon	Number of Species[2]	NE	NLAA	LAA/No J Predicted	LAA, J Predicted
Plants	942	751	0	191	0
Mammals	96	65	1	30	0
Birds	96	69	0	27	0
Amphibians[3]	47	36	1	10	0
Reptiles	59	34	0	25	0
Terrestrial Invertebrates[4]	122	80	12	30	0
Fish	172	136	26	10	0
Aquatic Invertebrates	202	162	34	6	0
Total Listed and Proposed Species	1736	1333	74	329	0

[1] NE = no effect; NLAA = not likely to adversely affect; LAA = likely to adversely affect; J = predicted potential likelihood of future jeopardy

[2] Reflects listed and proposed species as of January 2025.

[3] "Amphibians" include those species that have both a terrestrial and aquatic phase.

[4] "Terrestrial Invertebrates" includes 7 species of damselflies and 1 species of dragonfly which have both a terrestrial and aquatic phase.

Table 7. Number of Designated and Proposed Critical Habitat Effects Determinations and Predictions of Potential Likelihood of Future Adverse Modification based on the EPA Identified Mitigations[1].

Taxon	Number of CH[2]	NE	NLAA	LAA/No Future AM Predicted	LAA/Future AM Predicted
Designated and Proposed Critical Habitat	951	837	35	79	0

[1] CH = designated and proposed critical habitat; NE = no effect; NLAA = not likely to adversely affect; AM = Adverse Modification

[2] Reflects the designated and proposed critical habitats of listed and proposed species as of January 2025.

C. Incident Assessment

This section discusses historical dicamba incidents and summarizes EPA's '*Status of Over-the-Top Dicamba: Summary of 2021 Usage, Incidents and Consequences of Off-Target Movement, and Impacts of Stakeholder-Suggested Mitigations* and *Dicamba Use on Genetically Modified Dicamba-Tolerant (DT) Cotton and Soybean: Incidents and Impacts to Users and Non-Users from Proposed Registrations'* and the '*Final Ecological Risk Assessment and Biological Evaluation Including Effects Determinations for Federally Listed Endangered and Threatened Species and Designated Critical Habitat for the Section 3 New Use Registration of Dicamba on Dicamba-Tolerant Cotton and Soybean*'. The complete assessments can be found in Docket Numbers EPA-HQ-OPP-2020-0492 and EPA-HQ-OPP-2024-0154 at www.regulations.gov.

The Agency found that reported incidents involving dicamba continued during the 2022, 2023, and 2024 seasons but in fewer numbers than previous years. The information reviewed includes a summary of the Agency's Incident Data System (IDS), data from Prairie Rivers Network, Association of American Pesticide Control Officials surveys of state lead agencies of incidents, and registrant submitted materials. EPA has interpreted available incident data, taking into account uncertainties in the data. For example, in some cases, reported incidents are anecdotal and reflect one person's perspective of what happened. Incidents may or may not include corroborating information, such as environmental sampling, unique characteristics of exposure, or other evidence that can relate the incident to a particular pesticide product or active ingredient. Many incidents are also likely underreported because no one has observed them, potential reporters do not know how to report incidents, neighbors may not want to negatively impact their relationships with each other and/or fear retaliation, or other reasons. The Agency found that the factors that contributed to reported incidents were generally consistent with findings in the 2021 memorandum mentioned in the above paragraph. The majority of incidents continue to be associated with non-DT soybeans, but reports also included dicamba exposure on specialty crops, ornamental plants, home gardens, and trees, as well as university and registrant research and soybean seed production fields. There are several complicating factors when only looking at incident numbers because of the behavioral changes in planting practices, community response, and/or reporting fatigue. The only data set that has continual sampling efforts in the same geographic region over time is in Illinois from Prairie Rivers Network. Prairie Rivers Network describes agricultural incidents as reported to the Illinois Department of Agriculture as declining since their peak in 2019. However, they claim that evidence of exposure and damage to plants in non-crop areas, including rural and urban areas, have continued at a "heightened" level and reports have continued to increase since 2019.

Details provided to the Agency from registrants, state lead agencies, and state agricultural extension agencies suggest that spray drift and volatility were the main causes of reported incidents. These incidents may have resulted from factors such as the presence of sensitive vegetation near dicamba applications, applicator error (e.g., applying to the wrong field), tank contamination due to inadequate cleaning, and potential non-compliance with label instructions. This includes not adhering to buffer requirements, cutoff dates, and temperature restrictions (in states with such restrictions), applying when a sensitive crop was downwind, using higher than labeled rates, applying non-OTT dicamba products to DT crops, and not adding the required volatility reducing agent (VRA) to the tank during applications. Non-OTT dicamba products are registered for use across a number of use sites, including corn and pastures, that overlap with acres of DT soybean and DT cotton that could be treated with OTT dicamba products. Incidents associated with registered and typical use of non-OTT dicamba products may have occurred. In many cases, investigators could not determine the exact source of dicamba exposure or concluded that multiple factors likely contributed to the incident. Overall, each factor can contribute to a reported dicamba-related incident, but the Agency cannot quantify the proportion of incidents attributable to any single variable. Incidents have been observed in counties that have at least one listed species; however, EPA has not received any reporting indicating that a listed species has been impacted by dicamba.

Generally, incident reports provided few details, making it difficult to quantify the impacts of off-target dicamba exposure on sensitive plants and crops associated with any particular incident. The Agency previously concluded that the impact of an incident depends on several factors including the frequency, duration, and dose of exposure; growth stage at the time of exposure; and species sensitivity. Therefore, there are likely a range of consequences and impacts caused by off-target movement of dicamba. Potential consequences of dicamba exposure include distorted leaf tissue, which may be cosmetic or severe enough to cause yield and quality losses. For ornamental nursery trees, cosmetic injury can be

significant since aesthetics, rather than yield, determine financial loss. Trees that are too damaged may be considered a total loss.

The direct impacts to non-target plants may impose other costs. For example, due to potential damage from off-target movement, some growers are likely still engaging in defensive planting of DT traits. Additionally, growers in some areas may be starting to collaborate to reduce dicamba injury. This involves growers in a geographic area planting crop varieties with the same herbicide-tolerance traits, imposing various costs to coordinate and reach consensus. It is unknown if community planning would reduce impacts on non-crop areas or regions with specialty crop production; however, the efforts could reduce the number and/or severity of incidents. Incidents also impose burdens on state lead agencies. The magnitude of that burden to state lead agencies depends on the number of incident reports received and whether the state has changed how incidents are handled compared to how they were handled in the past (e.g., reported but not investigated versus reported with an investigation). Given resource constraints, state lead agencies may have to forego other important activities while focusing on dicamba incidents, which imposes costs in lost services.

A lower number of reported incidents over time could be due to several factors, including familiarization with label requirements through OTT dicamba-specific training, increased adoption of DT traits through grower preference for the seed genetics, defensive planting, community planning efforts, or increased familiarity with label mitigations, like the addition of a pH buffering VRA. Earlier cutoff dates in select states may have led to applications occurring when temperatures were lower, and volatilization was less likely compared to later in the season. Of the 3 states for which EPA has data, earlier cutoff dates suggest incidents declined by 50 to 70% when an earlier cutoff date was required. Furthermore, in Minnesota, incidents were further reduced by 95% when an earlier calendar date cutoff date was coupled with a temperature cutoff (85°F). While the data suggest that earlier cutoff dates result in applications when temperatures are lower and can be useful in minimizing incidents, other factors could have contributed to fewer incidents. Weather conditions can play a role; for instance, a wet spring could delay planting such that applications cannot be made because the timing falls after the cutoff date for applications. Additionally, underreporting might occur for reasons such as jeopardizing crop insurance payouts, reporting fatigue, fear of damaging relationships with neighbors, or pressure from stakeholders wanting to preserve OTT dicamba use. The interaction of these factors is complex, so the Agency does not view changes from one year to the next as predictive of future incident levels. With these new OTT dicamba registrations, EPA is requiring robust mitigation measures to minimize incidents of offsite movement of dicamba from spray drift and volatility due to applications to DT cotton and DT soybeans.

D. Benefits Assessment

This section summarizes the benefits of the OTT dicamba products to users of the new OTT dicamba use registration as described in EPA's '*Assessments of the Benefits for Dicamba Use in Genetically Modified, Dicamba Tolerant Cotton and Soybean Production*.' The complete assessment can be found in Docket Number EPA-HQ-OPP-2024-0154 at www.regulations.gov.

The United States is the world's third-largest cotton producer and the leading cotton exporter, accounting for one-third of global trade in raw cotton. The U.S. cotton industry accounts for more than $21 billion in products and services annually. In the U.S., 84.9 million acres of soybean are harvested on average annually, valued at around $57.6 billion. The U.S. is the world's leading soybean producer and

has historically been the second leading exporter, and soybeans comprise about 90% of the U.S.'s oilseed production.

Weeds compete with crops like cotton and soybean for limited resources such as space, nutrients, moisture, and may serve as reservoirs or hosts for insect pests and/or pathogens. To effectively manage weeds in fields producing cotton and soybean, growers rely on several management tactics that can include crop rotation, mechanical cultivation, and herbicides. Hand weeding is usually not economically feasible for soybean and cotton. Cultivation is rarely practiced due to crop row spacing being too narrow for cultivation equipment, the relatively slow speed and expense of cultivation operations compared to herbicide application, and soil erosion concerns.

The primary uses of the new dicamba products are postemergence applications to DT cotton and DT soybean, also referred to as "over the top" or OTT use, to remove emerged target broadleaf weed species. The three OTT dicamba products will be used primarily to target pigweed species, such as Palmer amaranth and waterhemp, that have developed resistance to other primary OTT herbicides, particularly Acetolactate Synthase (ALS) inhibitor herbicides and glyphosate, as well as other problematic broadleaf weeds present in soybean and cotton cropping systems. The new dicamba products for use in DT cotton and DT soybean will provide increased flexibility in timing for preemergence applications of these products in DT crops as compared to currently registered dicamba products.

The primary alternative OTT herbicides to dicamba are 2,4-D and glufosinate. Since similar OTT dicamba products were previously registered, target weed species, particularly Palmer amaranth and waterhemp, have developed resistance to dicamba, as well as to 2,4-D and glufosinate. The benefits of the OTT dicamba to cotton and soybean producers will, therefore, vary at the farm level or even at the field level and will depend on the specific resistance characteristics of the weed population at that particular site. On soybean and cotton acres where pigweeds have developed resistance to dicamba, the benefits of OTT dicamba products are low. On acres where weed resistance to dicamba, 2,4-D and glufosinate is not present, then the benefits of OTT dicamba products will be primarily for resistance management, as growers have multiple alternative herbicide options including one with the same herbicidal mode of action (2,4-D) as dicamba. However, on acres where resistance to glufosinate or 2,4-D is present, the benefits of an OTT dicamba product are high as dicamba is the primary herbicide for OTT control of problematic resistant broadleaves and has high benefits for resistance management.

Historically, registered OTT dicamba products have been less expensive than OTT 2,4-D and glufosinate.[4] If the price of OTT dicamba products remains similar to that of glufosinate and OTT 2,4-D products, the requirement to include in the tank mix a VRA and a drift reduction agent (DRA) will increase the costs of making an application of dicamba. When the cost of the required DRA and VRA are included, the cost of OTT dicamba application is expected to cost more than an application of OTT 2,4-D but may still be less than or similar to the cost of an application of glufosinate. EPA recognizes that requiring the addition of the VRA and DRA reduces the cost advantage that growers could have otherwise realized by utilizing the OTT dicamba system over an alternative system (i.e., the 2,4-D system).

[4] Kynetec USA, Inc. 2024a. "The FarmTrak® Study from Kynetec USA, Inc." iMap Software. Database Subset: 2021-2023.

V. PUBLIC COMMENTS

On May 3, 2024, June 4, 2024, and July 23, 2024, the EPA published Notices of Receipt (NORs) in the Federal Register of applications for registration of Bayer, BASF, and Syngenta dicamba products, respectively, for use on DT cotton and DT soybean, including proposed product labeling, and announced three separate 30-day public comment periods. EPA received more than 18,000 comments during the three comment periods. Comments were both in support of and against the applications for registration discussed in this memorandum. The comments can be found in Docket Number EPA-HQ-OPP-2024-0154 at www.regulations.gov. On July 23, 2025, EPA published the *Memorandum Supporting Proposed Decision to Approve Registration for the Uses of Dicamba on Dicamba-Tolerant Cotton and Dicamba-Tolerant Soybean* and opened up a 30-day public comment period that was subsequently extended to 45 days. EPA received more than 70,000 comments and considered those comments in this final decision. EPA has addressed all comments received on the NORs and the proposed decision memorandum in the *Response to Public Comments on EPA's Notices of Receipt of the Proposed New Use of Dicamba on Dicamba-Tolerant Cotton and Dicamba-Tolerant Soybeans and the Memorandum Supporting Proposed Decision to Approve Registration for the Uses of Dicamba on Dicamba-Tolerant Cotton and Dicamba-Tolerant Soybean*, which can be found in Docket Number EPA-HQ-OPP-2024-0154 at www.regulations.gov.

VI. FINAL REGULATORY DECISION

In accordance with FIFRA section 3(c)(5), the EPA only registers a pesticide when it determines that it will not cause unreasonable adverse effects on humans or the environment, while taking into account the economic, social, and environmental costs and benefits of the use of the pesticide. Under FIFRA, the EPA is charged with balancing costs (or risks) posed by the use of a pesticide against its benefits. The EPA must determine if the benefits in light of its use outweigh the risks in order for the EPA to register a pesticide.

FIFRA 3(c)(5) requires EPA to approve registration of a pesticide if the Agency determines that: (a) its composition is such as to warrant the claims for it; (b) its labeling and other material required to be submitted comply with the requirements of this subchapter; (c) it will perform its intended function without unreasonable adverse effects on the environment; and (d) when used in accordance with widespread and commonly recognized practice it will not generally cause unreasonable adverse effects on the environment.

A. Rationale and Risk Mitigation

This memorandum supports EPA's issuance of unconditional registrations under FIFRA section 3(c)(5) for the following products for use on DT cotton and DT soybean with an automatic expiration date of February 6, 2028:

- Engenia Herbicide (EPA Registration Number 7969-507)
- Tavium Plus VaporGrip Technology (EPA Registration Number 100-1753)
- Stryax Herbicide (EPA Registration Number 264-1241)

To determine whether the products will cause unreasonable adverse effects under FIFRA, EPA is charged with considering the economic, social, and environmental costs and benefits of the use of the pesticide.

To determine the risks and benefits, the Agency reviewed a large body of information to determine how these products would be used according to the labeling. EPA determines whether a product will generally cause unreasonable adverse effects by considering whether the benefits of the product outweigh any potential risks of concern or adverse impacts from its use. Considering the assessed risks to human health and the environment, and the evaluated prospective benefits, the Agency has decided that dicamba use on DT cotton and DT soybean, as outlined in this decision memorandum, meets the regulatory standard under FIFRA.

EPA has determined that the database is complete for assessment of risks to human health and the environment for the new uses of dicamba on DT cotton and DT soybean. Based on these data, EPA has not identified any dietary, aggregate, non-occupational or occupational risks of concern for potential human health exposure. Additionally, EPA has not identified any risks of concern for aquatic invertebrates, fish, or aquatic plants. EPA identified on-field chronic risk to terrestrial invertebrates, mammals, and birds and acute risk to on-field birds and aquatic-phase amphibians. EPA has identified low risk for honey bees and other non-listed bees from the new uses of dicamba. In addition, as expected of an herbicide, dicamba does pose risks of concern to certain plants. EPA identified on-and off-field risks of concern for non-listed terrestrial and wetland plants, and aquatic non-vascular plants.

These off-field risks also include the potential for dicamba to volatilize in certain conditions and damage, for example, ornamental gardens, desirable trees, or a neighbor's soybean field if not planted with seed with the DT trait. The impacts of offsite movement of dicamba to non-users may be substantial. High value crops may suffer yield and quality losses, organic growers could lose organic certification, research and crop breeding programs could be disrupted, and plantings in residential areas and landscapes could be damaged. Plants near residences may be damaged, causing frustration for those that value the beauty of ornamental plants or their personal garden and orchard harvests.

Growers may experience frustration with a perceived lack of choice; if they choose to grow non-DT (dicamba sensitive) crops, their livelihood could be impacted. Though the product labels are protective of human health, people in agricultural areas may see the impacts of dicamba on plants and know it is in the air, which can cause health worries. These factors have led to social issues in rural areas based on those who support dicamba OTT use and those who are opposed. Offsite movement of dicamba has resulted in conflict between neighbors, ranging from degradation in neighbor relationships to one fatal shooting early in the registration of this use pattern. EPA is requiring mitigation to minimize offsite movement from spray drift and volatility. EPA is requiring that these mitigations (described below) be on the product labels to reduce the risks (costs) while also considering how the mitigation impacts the benefits of the use.

Endangered Species Mitigation

EPA is requiring mitigations on the product labeling to reduce the likelihood of impacts to listed species. EPA also determined that additional mitigations were needed to address potential population-level effects to some listed plants and obligates to plants (*i.e.*, a potential likelihood of future J/AM). For these species, additional mitigation measures are implemented for certain Pesticide Use Limitation Areas (PULAs) through bulletins in Bulletins Live! Two. In these PULAs, the additional mitigation measures further restrict pesticide application for the specific geographic areas/crops to protect listed species and designated CHs. The product labeling directs users to access and follow the directions in Bulletins Live! Two for their PULA. The mitigations contained in the PULAs addresses EPA's initial predictions of potential population-level impacts to certain listed species (*i.e.*, the potential likelihood of future J/AM). The language for mitigations specific to certain PULAs is described in Section VI.C, below.

Spray Drift Mitigation

Spray drift mitigation measures are required on the labeling to address risks to non-target plants including direct effects to listed terrestrial and wetland plants and effects to species that rely on terrestrial and wetland plants for diet and/or habitat. These measures include a 240-ft wind directional spray drift buffer for ground applications from the application site to surrounding habitats. This buffer distance is based on the distance from the treatment area at which impacts extend to non-listed individuals to the degree that they would display 10% visual signs of injury (VSI), which is protective of 5% reductions in plant height with a high degree of certainty. The use of 10% VSI is a conservative and protective threshold because based on the available toxicity data, 95% of observed cases of VSI at exposures causing a 5% height reduction were greater than 10% VSI. More information on the establishment of VSI endpoints can be found in Appendix E of the EPA's '*Final Ecological Risk Assessment and Biological Evaluation Including Effects Determinations for Federally Listed Endangered and Threatened Species and Designated Critical Habitat for the Section 3 New Use Registration of Dicamba on Dicamba-Tolerant Cotton and Soybean*' in docket Number EPA-HQ-OPP-2024-0154 at www.regulations.gov.

Most of the data set on which the buffer was based includes a drift reducing adjuvant/agent (DRA), therefore EPA is requiring an oil emulsion DRA that constitutes 0.3% volume-to-volume (v/v) in every application of the new products. To further address potential drift from the application site and to provide growers/applicators increased flexibility, the product labeling includes a list of mitigation measures that reduce spray drift to areas adjacent to the treated area and can, therefore, be used to reduce the size of the buffer, as well as a list of managed areas that may be included in the buffer (see Section VI.C.). Therefore, growers/applicators have flexibility in selecting options which best fit their circumstances while providing a sufficient level of protection. These lists are based on similar lists found on EPA's Mitigation Menu website,[5] but the buffer reduction options have been edited to remove those that are already required on the labeling and are thus accounted for in calculating the 240-ft buffer. In addition, the list of managed areas that can be included in the buffer has been reduced from those listed on EPA's Mitigation Menu website for these new products (see Section VI.C.), based on risk management decisions to limit exposure to non-target species that may be sensitive and thus could cause unreasonable impacts if damaged.

Runoff Mitigation

Similarly, the labeling requires users to achieve 3 points of runoff mitigation to reduce direct effects of runoff to terrestrial, wetland and aquatic areas. By implementing these mitigations in the labeling, the risk to these areas decreases by approximately one order of magnitude. These runoff mitigation measures are therefore expected to address impacts to generalist species (*i.e.*, species that can thrive in a wide variety of environmental conditions and utilize a variety of different resources). The labeling includes a direction for use that directs the user to access EPA's Mitigation Menu website, which includes a menu that aims to provide flexibility for growers/applicators to select runoff mitigations that are best for their situation when applying dicamba OTT. EPA has scored the efficacy of each mitigation measure using a point system, and for dicamba OTT, the number of runoff mitigation points needed to avoid population-level impacts to listed species and designated CH ranges between 3-6 points depending on the exposure zone. Generalist risk from runoff is addressed with 3 points for all uses and application sites outside of a species-specific PULA. For the listed plants and listed species that have

[5] https://www.epa.gov/pesticides/mitigation-menu

obligate relationships to plants in non-flowing wetland areas, EPA has determined 3 additional points of runoff/erosion mitigation (for a total of 6 points) are necessary to avoid potential likelihood of future J/AM. Because those additional points are necessary in specific geographic areas, they apply only in identified PULAs. EPA sought to provide growers and/or applicators with as many options as possible to tailor mitigation to their specific field to achieve the necessary points, including consideration of measures already in place. The flexibility allows for growers and/or applicators to weigh the burden of implementing a specific mitigation measure against the agronomic benefit the mitigation measure can provide to adjust the overall set of mitigation measures adopted to what best suits their situation and meets the required 3 or 6 points.

Volatility Mitigation

EPA has also identified risks of concern from volatility associated with the use of OTT dicamba products on DT cotton and DT soybean. The new product labeling includes a requirement to implement measures to mitigate direct effects of volatility on terrestrial and wetland plants and prey, pollination, habitat and/or dispersal (PPHD) effects to listed species that rely on plants. With the implementation of the mitigations on the labels, as described below in Table 9, the likelihood of impacts to terrestrial and wetland plants is decreased. These volatility mitigation measures allow EPA to change its initial prediction of population-level impacts to generalist species to no longer predicting population-level impacts. In addition, the measures reduce the likelihood of damage to other economically and socially valuable species.

To minimize volatility from use sites to non-target areas, applicators must include a pH buffering VRA with all applications of OTT dicamba products. The user must follow the labeling directions which direct them to check the registrant's product-specific website for a list of qualified VRAs and VRA application rates. EPA initially proposed 3 options for qualified VRAs at specific rates based on available data, noting that additional VRAs may be evaluated and approved for use with these OTT dicamba products in the future. The website will allow registrants to update the list of qualified VRAs and rates and will get that information to users quickly and efficiently. VRA products may be added to the list of qualified VRAs following EPA review and confirmation that their use with OTT dicamba products achieves the necessary level of volatility reduction. The labeling also requires users to follow temperature dependent mitigations to reduce volatility. These aim to provide flexibility for growers/applicators to only increase mitigations at higher temperature situations when applying dicamba OTT, because the likelihood of volatility of dicamba increases at higher temperatures. Maximum temperature restrictions are for the day of application and the day after application. When temperatures are forecasted to be ≥ 85˚F, the treated area must be limited to 50% of the DT cotton and DT soybean acres managed by the grower within the county where the application is occurring. For purposes of this mitigation, "grower" is defined as the individual or business entity managing the crop on the land on which the product is being applied. Users may return the third day after the initial OTT dicamba application to treat the remaining untreated part of the DT crop fields they manage. All label restrictions, including these temperature-based restrictions, also apply for subsequent treatments. Applications are prohibited when temperatures are forecasted to be ≥ 95˚F on the day of or the day after treatment. These mitigations are described below in Table 9. Users will need to obtain a forecast by NOAA/National Weather Service on the day of application showing the forecasted maximum temperature prediction for the day of and day after application and measure the temperature on the field prior to application to determine which temperature cutoff category that they fall into. EPA expects this mitigation to minimize volatility, thus addressing the impacts from volatility that have been reported in the past. Mixing ammonium sulfate (AMS) with dicamba can increase dicamba volatility, therefore the labels restrict against mixing the OTT products with AMS or any AMS-containing product. Though EPA is confident in the label mitigations to

be effective and understandable, some states have indicated that certain changes to the labeling for their state would be beneficial, such as adding date cutoffs that are related to temperature patterns in their individual state. Because the changes discussed are reasonable, are more restrictive than the current labeling, and do not decrease benefits to the point that the registrations are no longer beneficial, EPA and the registrants have agreed to include a requirement that users check for and follow any state-specific labeling (which could also apply to Tribes if requested) on an indicated website. The registrants are welcome to amend their registrations to add state-specific restrictions as they are available.

Label Complexity
EPA has received feedback that OTT dicamba products in the past have had complicated and reportedly difficult-to-follow labeling. The three registrants for the new OTT dicamba products developed structured labeling for these products. The uniform structure is aimed at making the label easier to read, understand, and follow. It will also make training for use of OTT products more straightforward. The OTT dicamba product labeling requirements for volatility mitigation are unique but are intended to allow for growers to use OTT dicamba products while mitigating potential volatility risks. The Agency acknowledges that the required addition of VRA and certain requirements for different actual and forecasted temperatures is more complex than what would typically be required on an herbicide label. However, the labeling language is expected to be simpler to follow than labeling for previous OTT dicamba registrations. The temperature restrictions allow for more flexibility in application timing than crop growth stage and calendar date restrictions implemented for previously registered OTT dicamba products. Because the mitigations are based on temperature rather than calendar date, variability in application restrictions across the different regions of the country will be reduced. By nature, calendar date restrictions can inadvertently restrict use in certain areas of the country at times when volatility risk may actually be low. Mitigations are also consistent for both DT cotton and DT soybean, reducing confusion.

Additionally, the new labeling language provides more nozzle choice flexibility, as it allows users to choose their nozzle type and does not require users to access a website to determine which nozzles are acceptable to use. Similarly for tank mixing with other pesticides, previously registered OTT dicamba products required users to access a website to determine which tank mix partners were allowed. In the new labeling, there are no tank mix partner restrictions (other than AMS or AMS-containing products as mentioned above). To support this decision, EPA reviewed data that show a consistent pattern of more acidic (lower pH) tank solutions resulting in increased dicamba volatilization. While in the past, tank mix partners were required to be evaluated one by one to ensure the pH did not become low enough to form dicamba acid, VRAs work as buffering agents to increase and stabilize the pH of the tank mixture and thus reduce the potential for volatility. The buffering of the tank solution to not only raise but stabilize the pH is essential to the effectiveness of VRAs.

While prohibiting tank mixing with other pesticides was initially a proposed mitigation option when applications would be made when the air temperature was forecasted to be a maximum of 85˚F-95˚F, EPA and stakeholders identified that prohibiting tank mixing would increase costs for growers, as they would need to make additional passes through each field. EPA and stakeholders also identified that prohibiting tank-mixing would be detrimental to herbicide resistance management. Given the requirement to include VRA in the tank at all temperatures, the increased feasibility of the 50% limit on managed-area-level treatment, comments on the tank mix prohibition, and resistance management

consequences and high costs of not tank mixing, the OTT dicamba labels do not prohibit tank-mixing[6]. Also, the maximum required buffer distance is the same for all areas, making it more straightforward than location-specific buffer requirements on previously registered dicamba OTT products, increasing the ease of use for applicators, and any reductions in the buffer distance are choices that the user is able to make based on their preference and unique situation.

Previously registered OTT dicamba products restricted applications to 1 hour after sunrise through 2 hours before sunset to prevent applications at times of day when temperature inversions often occur. The proposed labeling for the new OTT dicamba products would not have required these restrictions, and would instead have only required applicators to determine if a temperature inversion is actually occurring, which would have allowed for more flexibility in application timing while still protecting against offsite movement. However, feedback received during the public comment period noted that the sunrise/sunset restriction was simpler to follow and more enforceable than the restriction against applying during a temperature inversion alone. Therefore, to be more protective, the labeling now requires that applications be made in the time period from 1 hour after sunrise through 2 hours before sunset to protect from off-site movement of dicamba due to temperature inversions in addition to including a restriction against applying during a temperature inversion.

The proposed labeling for the OTT dicamba products required the user to not apply if NOAA/National Weather Service predicts a 50% chance or greater of 1 or more inches of rainfall to occur within 48 hours following application. However, the Ecological Mitigation Support Document to Support Endangered Species Strategies Version 2.0[7] notes that not applying pesticides 48 hours before a rain or irrigation event is only likely to reduce the EECs for a subset of chemicals with an aerobic soil metabolism half-life of 5 days or less. Dicamba has an aerobic soil metabolism half-life of ~7.5 days, so EPA has determined this restriction is not needed, which further simplifies the labeling. The OTT dicamba product labels do contain advisory language asking users to avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours).

EPA proposed a limitation of treatment area to 60% of a single field to allow applications of OTT dicamba products between 85˚F and 95˚F. This decreases the amount of dicamba applied at temperatures when volatility is possible, reducing the total amount of dicamba applied per 48-hour period. EPA concluded based on public comments that many DT cotton and DT soybean growers would find it difficult to limit area treated at the field level because growers would likely need to treat the same field multiple times which increases costs. Furthermore, the three-day window between treating the initial 60% of the field and the remaining 40% of a field may let fast-growing weeds continue to grow. For example, if a grower had to wait to treat 40% of a field infested with Palmer amaranth, they may be facing weeds too big for effective control with OTT dicamba products potentially resulting in decreased soybean or cotton yield due to weed interference and potentially increasing the development of resistance. The final labeling, in comparison, limits the area treated to 50% of DT cotton and DT soybean acres managed by the grower in that county. This should be less impactful as it allows users to treat entire fields at one time, reducing application costs. Implementing the 50% area treated restriction in this way also allows DT cotton and DT soybean growers greater ability to plan applications across their managed DT cotton and DT soybean acres, reducing the impacts of this mitigation. This labeling still achieves the goal of decreasing the amount of dicamba applied at temperatures when volatility is possible and reducing the total amount of dicamba applied in a 48-hour period.

[6] Other than with AMS or AMS-containing products as mentioned above.
[7] https://www.regulations.gov/document/EPA-HQ-OPP-2024-0299-0249.

EPA found that applications in higher temperatures are not only likely to occur but are also important for certain growing areas, especially soybean and cotton production areas in the Southern US where higher temperatures occur earlier in the season when weed control is critical. EPA acknowledges that the mitigation to apply to a limited area between 85˚F and 95˚F may increase costs of using OTT dicamba products; however, EPA also acknowledges that achieving maximal control of problematic broadleaf weeds, like Palmer amaranth, throughout the growing season is imperative for cotton and soybean production, thereby supporting the inclusion of the unique volatility mitigation measures. EPA has developed an implementation document to provide support for users of OTT dicamba products in DT soybean and DT cotton to help them comply with required mitigation measures. The document showcases varying application scenarios and accompanying expectations of the user to aid in understanding the requirements for utilizing these new OTT dicamba products. That document, *Implementation Guide and Application Day Scenarios for Users of Over-The-Top (OTT) Dicamba Products in Soybean and Cotton*, can be found in Docket Number EPA-HQ-OPP-2024-0154 at www.regulations.gov.

The proposed labeling would have required that certain information related to applications of OTT dicamba products be recorded and kept as required by the Federal Pesticide Record Keeping Program, 7 CFR Part 110. Following the proposal, EPA became aware that USDA rescinded the regulations at 7 CFR Part 110, which pertained to record keeping on restricted use pesticides by certified applicators.[8] EPA is aware that record keeping can be an important tool for enforcement of pesticide labeling. Therefore, the labels now require record keeping in accordance with any applicable federal and state record keeping requirements.

These new dicamba products for use in DT cotton and DT soybean will provide increased flexibility in timing for preemergence and postemergence applications compared to currently registered dicamba products, and will provide control of problematic broadleaf weeds that may be resistant to other herbicide options. EPA's determination that the benefits of the use of dicamba on DT cotton and DT soybeans outweigh the potential risks is based in part on the requirement that EPA Registration Numbers 7969-507, 100-1753, and 264-1241 automatically expire on February 6, 2028, unless the EPA takes further action to amend the registration. Amendments to the registrations to add state-specific labeling will not impact the registration expiration date. Registering the new use of dicamba on DT cotton and DT soybeans until February 6, 2028 will enable cotton and soybean growers to have access for at least a limited time for a tool that is important to control herbicide resistant weeds, while simultaneously allowing EPA and states to monitor the impacts of the new control measures and positioning the Agency to be responsive to any impacts. The terms and conditions of the registrations include directions for the registrants to follow in order to apply for renewal of this registration before the automatic expiration date on February 6, 2028 in order to allow time for EPA to make a determination in time to give growers certainty about the registrations when making their seed decisions for the year.

Considering the assessed risk to human health and the environment, and the associated economic, social, and environmental costs, and the benefits, consistent with the requirements of FIFRA section 3(c)(5), EPA has determined that dicamba use in DT cotton and DT soybean meets the regulatory standard under FIFRA and concludes that registering the new OTT dicamba products will not cause unreasonable social or economic impacts or adverse effects on human health or the environment. The

[8] 90 Fed. Reg. 20083, May 12, 2025.

Agency concludes that the benefits of having a broad spectrum, non-selective foliar-applied herbicide for control of broadleaf weeds as a rotational tool, partnered with the mitigation measures for any risks, outweigh any potential risks of concern.

B. Endangered Species Assessment

As discussed in more detail in Sections IV.B.2 and IV.B.3, above, EPA completed effects determinations for listed species for the new uses of dicamba in the areas where it may be applied. EPA made NE determinations for 1333 species and 837 CHs. EPA made NLAA determinations for 74 species and 35 CHs and LAA determinations for 329 listed species and 79 CHs, all under the authority of FWS. For the CHs with LAA determinations, adverse effects on essential physical and biological features (PBFs; or inferred PBFs) related to plants, habitat quality for the listed species, and water quality were the primary factors leading to the determinations. With the mitigations that are required, EPA is predicting no potential likelihood of future J/AM for listed species and designated CHs. However, if certain mitigations were not required by the registration, EPA would predict potential likelihood of future J/AM as discussed in the draft BE. Based on the final BE, EPA has initiated formal consultation with FWS.

C. Label Requirements

The following label requirements are included on the product labels for Tavium Plus VaporGrip Technology, Stryax Herbicide, and Engenia Herbicide (EPA Registration Numbers 100-1753, 264-1241, and 7969-507):

1. Restricted Use Pesticide (RUP): To be used by certified applicators only; NOT to be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers.

2. *For Stryax Herbicide (EPA Reg. No. 264-1241), Engenia Herbicide (EPA Reg. No. 7969-507)*: This product is only for use on dicamba-tolerant soybean and dicamba-tolerant cotton in the following states[9]:

   Alabama, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, Wisconsin.

   For Tavium Plus VaporGrip Technology (EPA Reg. No. 100-1753): This product is only for use on dicamba-tolerant soybean and dicamba-tolerant cotton in the following states:

   Alabama, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma,

[9] While EPA assessed these new uses in all states listed below, registrants may decide to not pursue state registration in any state.

Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, Wisconsin.

3. This product may only be used on dicamba-tolerant cotton and dicamba-tolerant soybean fields.

4. The user must check [Insert label-specific URL directing to a registrant website] no more than 7 days before application of this product for additional labeling, including any additional state-specific labeling. Where applicable, users must comply with additional labeling found on this website.

5. Personal Protective Equipment (PPE):
    a. Tavium Plus VaporGrip Technology and Stryax Herbicide: All mixers, loaders, certified applicators, and other handlers must wear: Long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks.
    b. Engenia Herbicide: All mixers, loaders, certified applicators, and other handlers must wear: Long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks, plus a NIOSH-approved dust/mist filtering respirator with any R, P, or HE filter.

6. To address effects to non-target vulnerable species and the Critical Habitats of those species included in the "Bulletins Live! Two" web-based system (BLT), the end-use products direct all users to access the BLT prior to application, according to the label statement below: **ENDANGERED AND THREATENED SPECIES PROTECTION REQUIREMENTS:** Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

    Certain areas will have Bulletins with the following direction: "This crop use is located within a PULA. Therefore, 3 ADDITIONAL points (for a total of 6 points) of runoff/erosion mitigations must be achieved for this crop use using EPA's Mitigation Menu website (https://www.epa.gov/pesticides/mitigation-menu)." Other areas will have Bulletins with the following restriction: "Do not apply this product within the use limitation area between September 15 and May 15."

7. Restricted entry interval: Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

8. Mandatory Training: Prior to applying in any calendar year, the certified applicator must complete dicamba-specific annual training for that year. Only certified applicators may apply this product. This product must not be used by uncertified persons working under the supervision of a certified applicator, except that uncertified persons may transport containers. If state-approved OTT dicamba training is required and provided by the state where the certified applicator intends to apply this product, the certified applicator must complete that training

before applying this product. Otherwise, the certified applicator must complete dicamba-specific training provided by one of the following sources: a) a registrant of a dicamba product approved for OTT use with dicamba-tolerant crops, or b) a state-authorized provider.

9. Record Keeping: Records must be created, maintained, and made available to federal and state officials in accordance with any applicable federal and state record keeping requirements. To the extent consistent with such requirements, records for this product include:
    1. Full name of the certified applicator
    2. Certification number of the certified applicator
    3. Product name
    4. EPA registration number
    5. Total amount applied of this product
    6. Application month, day, and year
    7. *Start and Finish Times:* the time the applicator begins and the time the certified applicator completes applications of this product.
    8. Location of the application. If maximum temperatures are forecasted to be 85-<95˚F on the day of treatment or the day after treatment, the location and the percentage of treated dicamba-tolerant cotton and dicamba-tolerant soybean fields managed by grower in the county, and the total number of acres of dicamba-tolerant cotton and dicamba-tolerant soybean managed by the grower in the county.
    9. Crop or site receiving the application
    10. Size of area treated
    11. *Training Requirement:* proof that the certified applicator completed dicamba-specific training described in this section
    12. *Application Timing:* whether the certified applicator applied this product preemergence or postemergence in relation to the crop.
    13. *Receipts of purchase:* receipts for the purchase of this product, and for the purchase of the required VRA and required DRA.
    14. *Product Label:* A copy of the product labeling including state-specific labeling and any information that supplements the product label, such as relevant bulletins.
    15. *Sensitive Areas, Sensitive Crops, and Residential Awareness*: Documentation that the applicator checked an applicable sensitive crop/specialty crop registry; and that the applicator surveyed all adjacent fields for any sensitive areas, sensitive plants, or residential areas surrounding the field prior to application. Date the applicator consulted the sensitive crop registry/specialty crop registry and the date the applicator surveyed for sensitive plants on adjacent areas and within the required spray buffer distance for downwind spray buffer distance calculations, and the name of the sensitive crop registry/specialty crop registry the applicator consulted.
    16. *Spray Buffer Requirement:* Required downwind buffer distance (240-ft) determination and any areas included within the buffer distance determination. If the buffer distance was reduced, what qualifying practices supported that reduction.
    17. *Spray System Cleanout:* Documentation that the applicator complied with the section of this label titled: “Spray System Equipment Clean-out” including the date the applicator performed the required cleanout, and cleanout method that the applicator followed.
    18. *Tank Mix Products:* a list of all products (pesticides, adjuvants, and other products) that the applicator tank mixed with this product for each application including EPA registration numbers in the case of any pesticides.

19. *Required Tank Mix pH Buffering Volatility Reducing Agent:* the VRA and use rate that was tank mixed with this herbicide.
20. *Required Tank Mix Drift Reducing Agent:* the DRA and use rate that was tank mixed with this product.
21. *Nozzle Selection:* which spray nozzle the applicator used to apply this product, and the nozzle pressure the applicator set the sprayer to.
22. *Air Temperature:* the air temperature at boom height at the time the applicator starts applications of this product, and every time the spray tank is refilled, and documentation of a weather forecast by NOAA/National Weather Service on the day of application showing the forecasted maximum temperature prediction for the day of and day after application.
23. *Wind Speed and Direction:* the wind speed and direction at or above boom height at the time the applicator starts applications of this product, and the wind speed and direction at or above boom height every time the tank is refilled during application.
24. Runoff/Erosion Mitigation Points: List of how the required total of runoff/erosion mitigation points were achieved. The creation and keeping of these records counts as one point toward the total points required for use of this product, in accordance with Runoff/Erosion Mitigation Relief Options as listed on EPA's Mitigation Menu website.

10. Required Adjuvants: Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) of the final spray tank volume and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check [Insert label-specific URL directing to a registrant website] for a list of qualified VRAs and VRA application rates.

11. Rate and Timing:
    DT Cotton:
    - This product may be applied Preplant, At-Planting, Preemergence, and Postemergence.
    - A maximum of two applications of 0.5 lb. acid equivalent (a.e.) dicamba per acre may be made up to 7 days prior to harvest.
    - Do not apply more than 0.5 lb. acid equivalent (a.e.) dicamba per acre per application.
    - Do not exceed 1 pound acid equivalent (a.e.) dicamba per acre per calendar year from all combined dicamba-containing products.

    DT Soybean:
    - This product may be applied Preplant, At-Planting, Preemergence, and Postemergence
    - A maximum of two applications 0.5 lb. acid equivalent (a.e.) dicamba per acre may be made.
    - Do not apply more than 0.5 lb. acid equivalent (a.e.) dicamba per acre per application.
    - Pre-harvest interval (PHI) for Soybean Forage: Do not harvest or feed soybean forage until 7 days after application. Pre-harvest interval (PHI) for Soybean Hay: Do not harvest or feed soybean hay until 7 days after application.
    - Do not exceed 1 pound acid equivalent (a.e.) dicamba per acre per calendar year from all combined dicamba-containing products.

12. Spray volume: Apply a minimum of 15 gallons of spray solution per acre.

13. Application Equipment:
    Application by air is prohibited.

Apply only using ground equipment.
Spray system equipment cleanout: Ensure entire sprayer system is properly cleaned in accordance with Section 15.0 before and after application.

Droplet requirement: Apply this product with nozzles calibrated to apply coarse or coarser droplets only in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).

Spray boom height: Maximum boom height is 24 inches above target pest or crop canopy.
Ground speed: Do not allow application equipment to exceed 15 mph while applying this product.

14. Spray Drift Management:

MANDATORY SPRAY DRIFT MANAGEMENT

- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes), must register between 3 and 10 miles per hour. Do not apply if wind speed is below 3 mph or above 10 mph.
- Wind speed and direction must be measured on location using a windsock or anemometer (including systems to measure wind speed or velocity using application equipment). This information must be measured before the application begins and every time the spray tank is refilled. Wind direction may vary during the application. Downwind buffers must be adjusted according to changing wind direction.
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- Do not release spray at a height greater than 2 feet above the ground or crop canopy.
- Applicators must select nozzle and pressure that deliver coarse or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).
- Inversions:
    - Do not make applications at night. Applications may only be made starting one hour after sunrise and ending two hours before sunset. Do not apply this product outside of this time frame.
    - Do not spray during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

BOOM HEIGHT

For ground equipment, the boom should remain level with the crop and have minimal bounce.

HOODED (OR SHIELDED) SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

WIND

Drift potential generally increases with wind speed.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

MEASURING WIND SPEED AND WIND DIRECTION

Best Management Practices for measuring wind speed and direction of wind direction:

- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods when wind speed is likely to fall outside the permissible range.
- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:
    - Relying on equipment on the application equipment that measures wind speed
    - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop at least every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.

- Using a windsock. Wind can be estimated with a windsock using the stripes on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every hour to estimate wind speed and direction.
- Using an aircraft smoke system. Laying down several puffs of smoke along different lines using an aircraft smoke system can provide an accurate view of what the wind speed and direction for the application.
- Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

15. Downwind Requirements:

Sensitive plants downwind: Do not apply if sensitive plants are planted on an adjacent downwind field or area. If wind direction shifts such that the wind is blowing toward adjacent sensitive plants or residential areas, STOP the application until the wind is no longer blowing toward adjacent sensitive plants or residential areas.
Sensitive plants in agricultural and/or residential settings include, but are not limited to:
- non-DT soybeans
- cucumber and melons, including all members of EPA Crop Group 9: Cucurbit Vegetables
- flowers
- fruit trees
- grapes
- ornamentals including greenhouse-grown and shadehouse-grown broadleaf plants and ornamental plants in a residential area
- peanuts
- peas and beans, including all members of EPA Crop Group 6: Legume Vegetables (Succulent or Dried) and EPA Crop Group 6-22: Legume Vegetable Group with the exception of DT soybeans
- peppers, tomatoes, and other fruiting vegetables, including all members of EPA Crop Group 8-10: Fruiting Vegetable Group
- potato
- sugarbeets
- sweet potato
- tobacco

Downwind buffer: After determining no adjacent sensitive plants are downwind, the applicator must maintain a 240-foot downwind buffer between the last treated row and the nearest downwind field edge unless applying a qualifying practice listed in Table 8 below. More information and definitions of the qualifying practices can be found at https://www.epa.gov/pesticides/mitigation-menu-measure-descriptions. After determining your total % reduction in the buffer distance, determine the distance that may be reduced in feet, subtract that distance from the 240- foot buffer distance, then round to the nearest 5-foot increment to determine the required buffer distance.

No downwind buffer is required if:
Use of the buffer reduction options results in a buffer reduction ≥100%.
Use of the buffer reduction options results in a buffer <10 feet, after rounding to the nearest 5 ft increment.

Table 8. Options for Reducing 240-ft Downwind Buffer Distance

Option*	Qualifying Practice	Reduction in Buffer Distance**
Small field size/Reduce treatment area	Treatment area of 1/10 acre to 1 acre	75%
	Treatment area of >1 acre to 4 acres	35%
	Treatment area of >4 acres to 10 acres)	15%
Downwind Drift Barrier	Basic windbreak/hedgerow/artificial screen	50%
	Advanced windbreak/hedgerow/artificial screen	75%
Use of directed sprayer equipment	Over-the-top Hooded Sprayer	50%
	Row-middle Hooded Sprayer	75%
	Sprays below crop canopy using drop nozzles or layby applications	50%
	(difference between the crop height and release height is ≥ 1 ft, and that there are more than 4 consecutive rows of crop on the field that meet this parameter)	

* Descriptions of spray drift buffer reduction measures are available on EPA's website at: https://www.epa.gov/pesticides/mitigation-menu-measure-descriptions

**Buffer reduction measures are additive in nature. For example, a 50% reduction in buffer distance for one measure plus a 15% reduction in buffer for another measure, when used in combination, results in an overall 65% reduction in an identified buffer.

The following managed areas may be included in the buffer only if they are immediately adjacent/contiguous to the treated field in the downwind direction and people are not present in those areas (including inside closed buildings/structures). Buffer reduction options do not apply to these managed areas, as they are included in the buffer distance.

- Untreated portions of the treated field.

- Roads, paved or gravel surfaces, mowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area.
- Areas present and/or maintained as a drift buffer reduction measure as listed on the buffer reduction table above. Examples include vegetative windbreaks and hedgerows.
- On-farm contained irrigation water resources that are not connected to adjacent water bodies, including on-farm irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, farm ponds, and tailwater collection ponds.
- Areas present and/or maintained as a runoff/erosion measure as listed on EPA's Mitigation Menu website. Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement.

16. Management of Runoff:

MANDATORY RUNOFF MITIGATION

Applicators must access and search Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the "Inside a PULA" section below and in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below.

Outside a PULA:
THREE mitigation points are required for all crops listed on this label. Follow the steps below to determine which applications need to achieve points, determine your eligibility for runoff/erosion mitigation relief, and determine options to achieve mitigation points.

Inside PULAs:
SIX runoff/erosion mitigation points are required inside specific PULAs for all crop uses. Follow the steps below to determine which applications need to achieve the points, determine eligibility for runoff/erosion mitigation relief, and determine options to achieve runoff/erosion mitigation points.

Steps to Achieve Points:
Step A. To achieve the runoff/erosion mitigation points specified above, visit EPA's mitigation menu website (www.epa.gov/pesticides/mitigation-menu) to determine which applications need to achieve points and for a full list of mitigation and mitigation relief options.

Step B. Determine if you are eligible for runoff/erosion mitigation relief. Runoff/erosion mitigation is NOT needed if certain field/application parameters are present at the time of application (*e.g.*, subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, etc). Refer to the mitigation menu for a complete list of field/application parameters.

Step C. If the application site does not meet the field/application parameters specified on EPA's mitigation menu website, choose among the runoff/erosion mitigation and/or runoff/erosion

mitigation relief options on EPA's mitigation menu website to meet or exceed the required points noted on this label before applying this product.

Step D. To achieve runoff/erosion mitigation points for the application, the mitigation and mitigation relief measures must be:

- Employed in accordance with the instructions and descriptions on EPA's Mitigation Menu Website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's Mitigation Menu Website.

Step E. Additional restrictions may be present on the labeling or in bulletins—always follow the most restrictive instructions across the labeling and any bulletins. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between all the tank-mixed products' labeling and bulletins.

EPA may periodically update the Mitigation Menu Website, for example, by adding new mitigation measures or updating a mitigation measure description.

17. Rainfall Restriction:
    DO NOT apply during rain.
    DO NOT apply when soil in the area to be treated is saturated (if there is standing water on the field or if water can be squeezed from soil).

    Rainfall Advisory Statement: Avoid making applications when rainfall is expected before the product has sufficient time to dry (minimum 4 hours).

18. Management of Volatility:
    Do not tank mix ammonium sulfate (AMS) or any products that contain AMS with this product.

    Applications of this product must include an oil emulsion Drift Reduction Agent (DRA) at a concentration of 0.3% volume-to-volume (v/v) and a qualified pH buffering Volatility Reduction Agent (VRA). The user must check [Insert label-specific URL directing to a registrant website] for a list of qualified VRAs and VRA application rates.

    Temperature Restrictions:
    - On the date of application, applicator must obtain a daily high temperature forecast as predicted by the NOAA/National Weather Service for the day of and the day after application. Detailed National Weather Service forecasts for local weather conditions may be obtained on-line at: www.weather.gov. In addition, the applicator must check the temperature at boom height in the field when an application begins and every time the spray tank is refilled.

    - If the measured temperature is higher than that forecasted for the day, the applicator must follow the label directions corresponding to that measured temperature. If the measured temperature is below the forecasted temperature, application must follow label directions corresponding to the forecasted temperature. The highest temperature on the day of application or forecasted for the day after application is the value that must be used to determine the label restrictions for that application.

- If temperatures are forecasted to be 95˚F or above at the application site either on the day of treatment or the day after treatment, DO NOT apply this product.
If the measured temperature at the application site is above 95˚F at any point during the planned day of application, DO NOT begin application or STOP application if it has already begun.

- If temperatures are forecasted to be 85-<95˚F at the application site either on the day of treatment or the day after treatment, application of this product is limited to 50% or less of the total number of acres of dicamba-tolerant soybean AND dicamba-tolerant cotton under production by the grower within the county. For purposes of this label, "grower" is defined as the individual or business entity managing the crop on the land on which the product is being applied. Do not treat additional/remaining dicamba-tolerant soybean AND dicamba-tolerant cotton acres managed by the grower within the county the day of application or the day after application. Remaining untreated 50% of DT crop acreage managed by the grower may be treated on the third day after initial treatment. All label restrictions including temperature-based restrictions apply to subsequent treatments.

- If temperatures are forecasted to be <85˚F, the application has begun, the measured temperature at the application site is 85-<95˚F at any point, and more than 50% of the total number of dicamba-tolerant soybean AND dicamba-tolerant cotton acres managed by the grower within the county have been treated: STOP application immediately. If less than 50% has been treated at the time that the measured temperature exceeds the forecasted <85˚F temperature, the application plan for the day must be modified to comply with the 50% limitation on the treatment of the grower's managed dicamba-tolerant soybean and dicamba-tolerant cotton acres within the county.

Table 9. Requirements for application of OTT dicamba products at varying temperatures.

Maximum Forecasted Air Temperature*	**Rates of OTT dicamba product + Required Adjuvants** + Additional Mitigation**
< 85˚F	0.5 lb dicamba + VRA + DRA
≥ 85˚F - < 95˚F	0.5 lb dicamba + VRA + DRA **PLUS** Do not treat more than 50% of DT cotton and DT soybean acres managed by grower within the county***
≥ 95˚F	No application allowed

* Maximum temperature must be forecasted by NOAA/National Weather Service not to exceed what is noted for both the day of application and the day after application. The highest temperature (forecasted or measured) on the day of application or the day after application is the value that must be used to determine the label restrictions for that application.
** The user must check [Insert label-specific URL directing to a registrant website] for a list of qualified VRAs and rates of VRA application.

*** Do not apply these products to the untreated 50% of DT crop acreage the day of or the day following initial treatment. Remaining untreated 50% of DT crop acreage may be treated the third day after initial treatment. All restrictions apply for subsequent treatments. The "grower" is the individual or business entity managing the crop on the land on which the product is being applied. If the grower is not the applicator, it is the responsibility of the applicator to ensure that they have communicated with the grower to obtain information on the number of DT cotton and DT soybean acres managed by the grower.

VII. SUPPORTING DOCUMENTS

Where EPA determines that initiating formal consultation is appropriate on a FIFRA action, the Agency may still be able to proceed with the action before completing consultation if it determines that doing so will not result in "any irreversible or irretrievable commitment of resources . . . [that] has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate [ESA section 7(a)(2)]." See 16 U.S.C. § 1536(d). EPA has determined that such a finding is appropriate for this action after considering public comment on the proposed registration actions, additional mitigations added to the registrations, and the final BE. *See Endangered Species Act Section 7(d) Consistency Determination with Respect to the Application for Uses of Dicamba on Dicamba-Tolerant Cotton and Dicamba-Tolerant Soybean*.

This document, and all other supporting documents (including EPA's risk assessments and final biological evaluation), can be found in Docket Number EPA-HQ-OPP-2024-0154 at www.regulations.gov.

United States Court of Appeals
For The Eighth Circuit
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February 25, 2026

Jeremy Joseph Broggi
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RE: 26-1326 ASA v. EPA, et al

Dear Counsel:

We have received a petition for review of an order of United States Environmental Protection Agency in the above case, together with payment in the amount of $600 for the docket fee. Receipt for docketing fee, if paid by check, will be sent through the mail.

Counsel in the case must supply the clerk with an Appearance Form. Counsel may download or fill out an Appearance Form on the "Forms" page on our web site at www.ca8.uscourts.gov.

The petition has been filed and docketed. A copy of the petition is hereby served upon the respondent in accordance with Federal Rule of Appellate Procedure, 15(c).

Your attention is invited to the briefing schedule pertaining to administrative agency cases, a copy of which will be sent under separate Notice of Docket Activity. The clerk's office provides a number of practice aids and materials to assist you in preparing the record and briefs. You can download the materials from our website, the address of which is shown above. Counsel for both sides should familiarize themselves with the material and immediately confer regarding the briefing schedule and contents of the appendix.

On June 1, 2007, the Eighth Circuit implemented the appellate version of CM/ECF. Electronic filing is now mandatory for attorneys and voluntary for pro se litigants proceeding without an attorney. Information about electronic filing can be found at the court's web site www.ca8.uscourts.gov. In order to become an authorized Eighth Circuit filer, you must register with the PACER Service Center at https://pacer.psc.uscourts.gov/pscof/login.xhtml. Questions about CM/ECF may be addressed to the Clerk's office.

Susan E. Bindler
Clerk of Court

RDB

Enclosure(s)

cc: Pamela Bondi
Sean M. Donahue
Joel S. Nolette
Hume M. Ross
Sara Beth Watson

District Court/Agency Case Number(s): EPA-HQ-OPP-2024-0154

Caption For Case Number: 26-1326

American Soybean Association

Petitioner

v.

United States Environmental Protection Agency; Lee M. Zeldin, in his official capacity as Administrator of the United States Environmental Protection Agency

Respondents

Addresses For Case Participants: 26-1326

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