UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

MEMORANDUM November 19, 2001

SUBJECT: SCI-GROW estimates of concentrations in groundwater for azinphos methyl

TO: Veronique LaCapra, Chemical Review Manager
Reregistration Branch 2

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THROUGH: Elizabeth Behl, Chief
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This memo reports estimates of the concentration that might be in ground water under highly vulnerable conditions as made with SCI-GROW (Barrett, 1997). These estimates are supplemental to those in the EFED Science Chapter for azinphos methyl. A input parameter for K_{oc} of 579 L kg^{-1} was estimated from the batch equilibria data . This represents the median K_{oc} in accord with current SCI-GROW manual. Note that K_{oc} was not found to be valid description of binding for azinphos methyl The best estimate half-life from the aerobic soil metabolism study of 32 d was used for the half-life parameter as discussed above. A list of SCI-GROW estimates for variety of different crops are listed in the table below.

Table 2. SCI-GROW estimates for azinphos methyl use in vulnerable groundwater for various crops.		
Crop	Annual Maximum Total Application (lb $acre^{-1}$)	Ground water Concentration (µg ℃ L^{-1})
Walnuts	6 lb $acre^{-1}$	0.40
apples, pears, southern pine orchard seedlings	4.5	0.3
almonds	4.0	0.27
peaches	3.375	0.23
cherries, grapes	3.0	0.20
pistachios	2.25	0.15

The recommended value for drinking water assessment is 0.4 µg L^{-1} from walnuts. It again worth repeating that the Agency does have some evidence that concentrations may be as great as 70 µg L^{-1} in areas with karst terrain. This is of particular concern in the Potomac Basin where apples are grown. However, the data is of insufficient quality to support regulatory action. It does warrant further investigation if dietary risk levels of concern are exceeded.