Appendix 3: Spearman Rank Correlation Plots. A p-value < 0.05 indicates a significant relationship. The rho value indicates the strength of the gradient. Negligible (rho ≤ 0.09), weak (0.10 ≤ rho ≤ 0.39), moderate (0.40 ≤ rho ≤ 0.69), strong (0.70 ≤ rho ≤ 0.89) and very strong (rho ≥ 0.90) (Schober et al. 2018).

Statistically Significant Correlation Plots

Surface Water

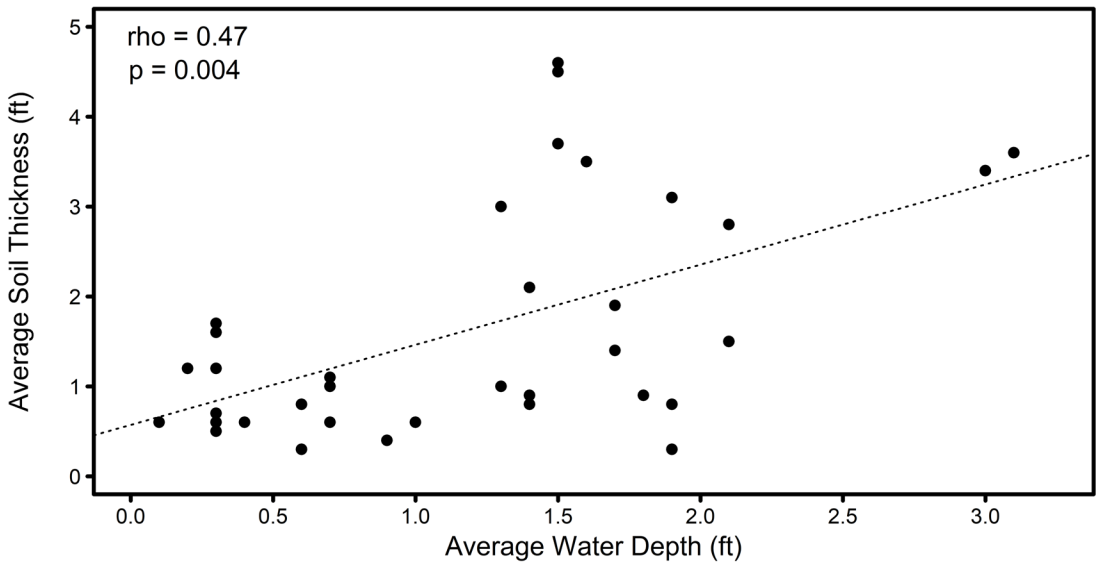

Figure 3-1: Spearman correlation plot showing the relationship between average water depth (ft) and average soil thickness (ft)

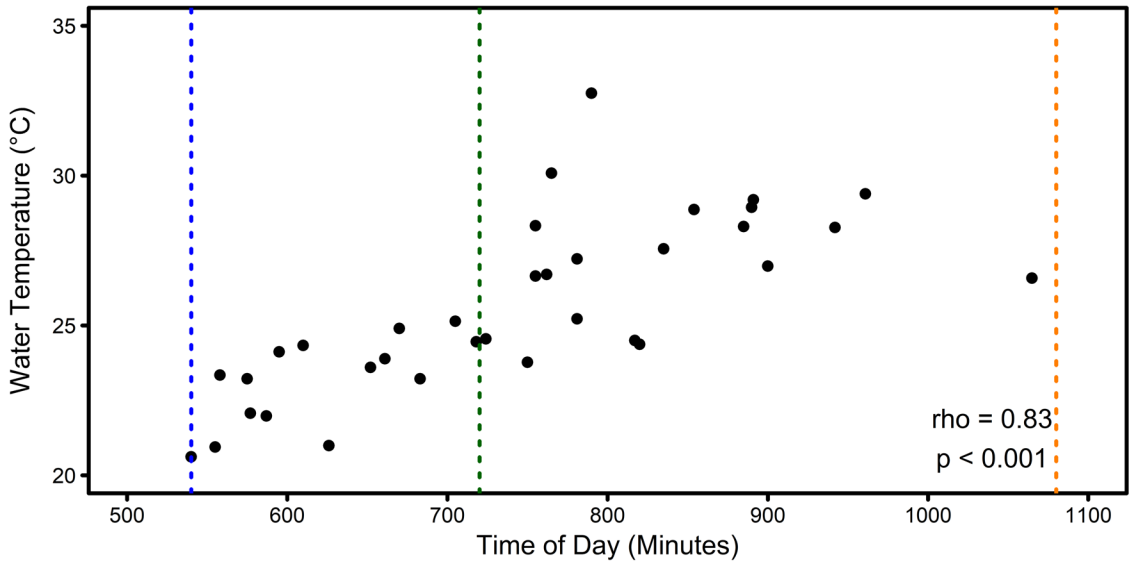

Figure 3-2: Spearman correlation plot showing the relationship between time of day (minutes) and surface water temperature (°C). Vertical dashed lines in the plot indicate 9:00am (blue), 12:00pm (green) and 6:00pm (yellow).

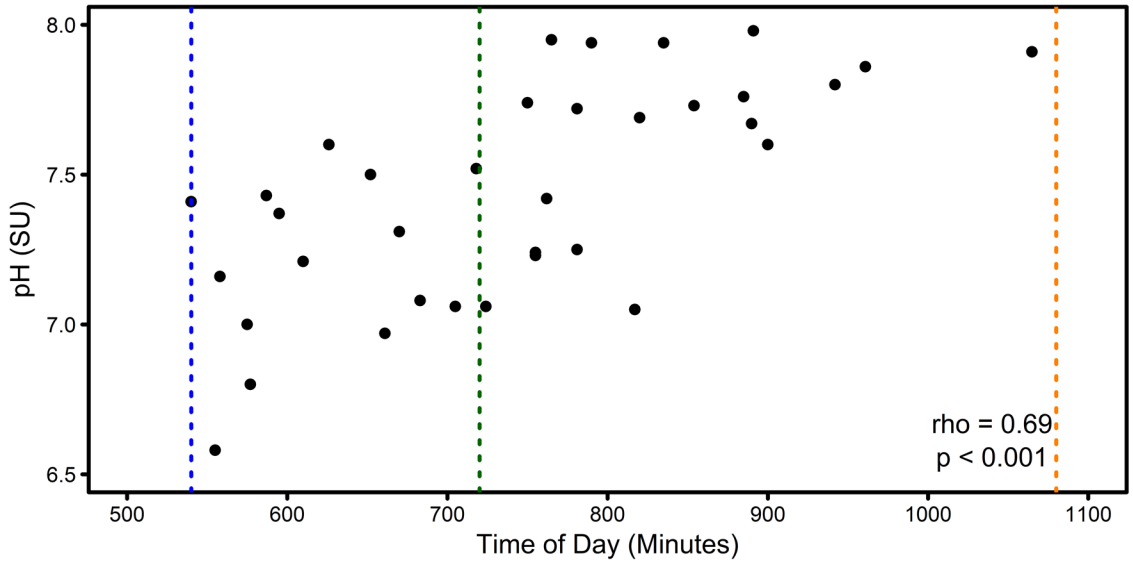

Figure 3-3: Spearman correlation plot showing the relationship between time of day (minutes) and surface water pH (SU). Vertical dashed lines in the plot indicate 9:00am (blue), 12:00pm (green) and 6:00pm (yellow).

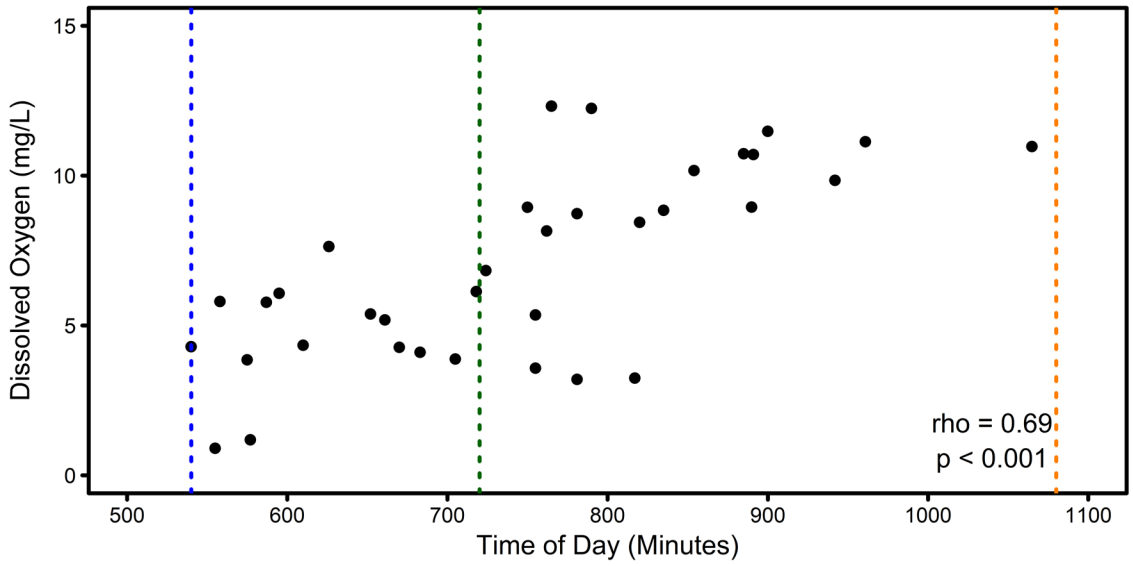

Figure 3-4: Spearman correlation plot showing the relationship between time of day (minutes) and surface water dissolved oxygen (mg/L). Vertical dashed lines in the plot indicate 9:00am (blue), 12:00pm (green) and 6:00pm (yellow).

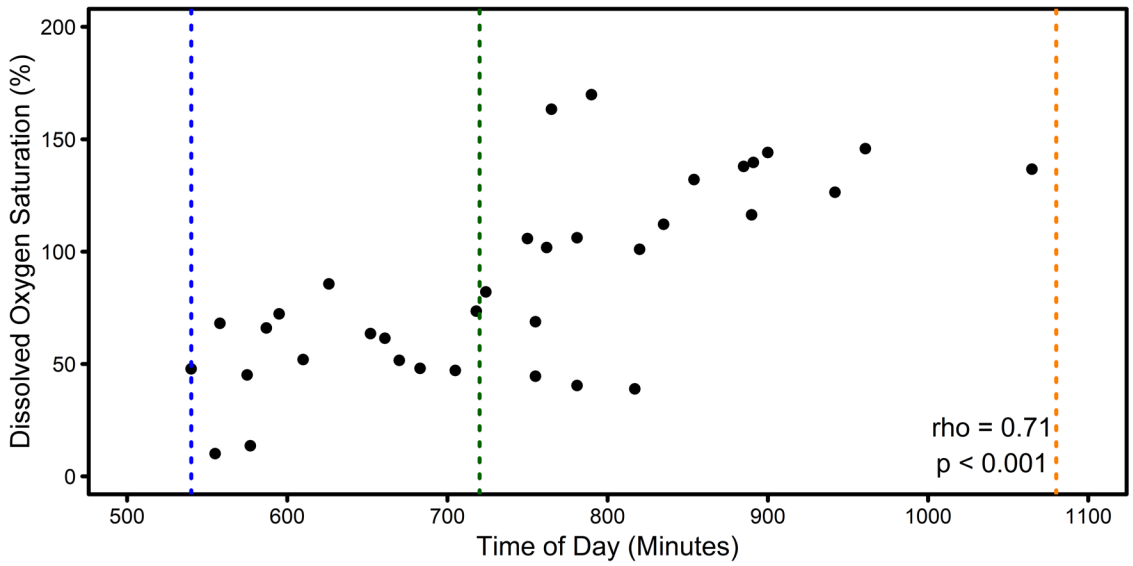

Figure 3-5: Spearman correlation plot showing the relationship between time of day (minutes) and surface water dissolved oxygen saturation (%). Vertical dashed lines in the plot indicate 9:00am (blue), 12:00pm (green) and 6:00pm (yellow).

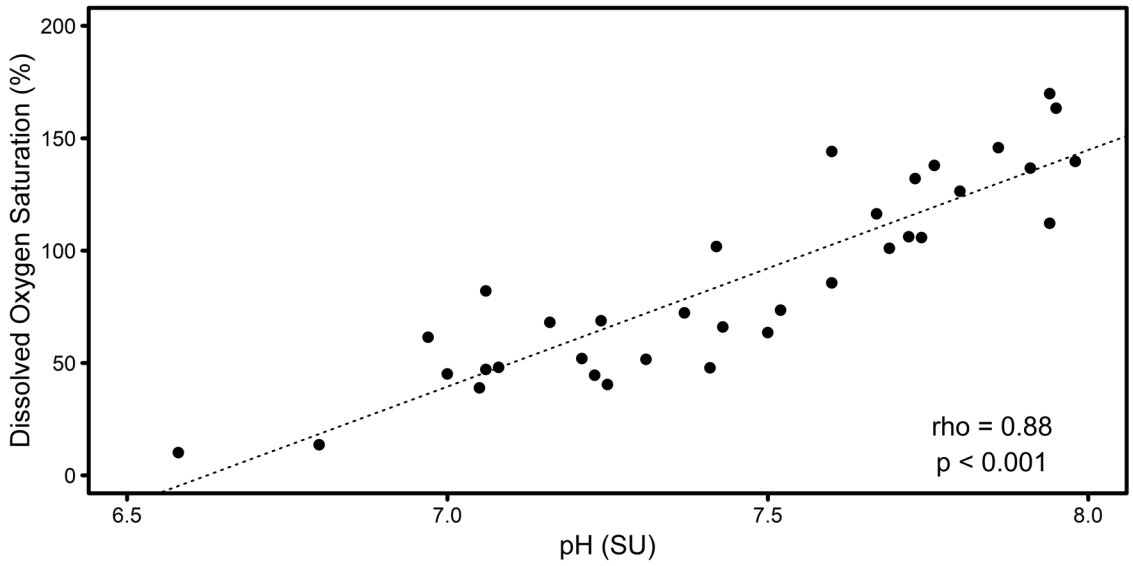

Figure 3-6: Spearman correlation plot showing the relationship between surface water pH (SU) and surface water dissolved oxygen saturation (%)

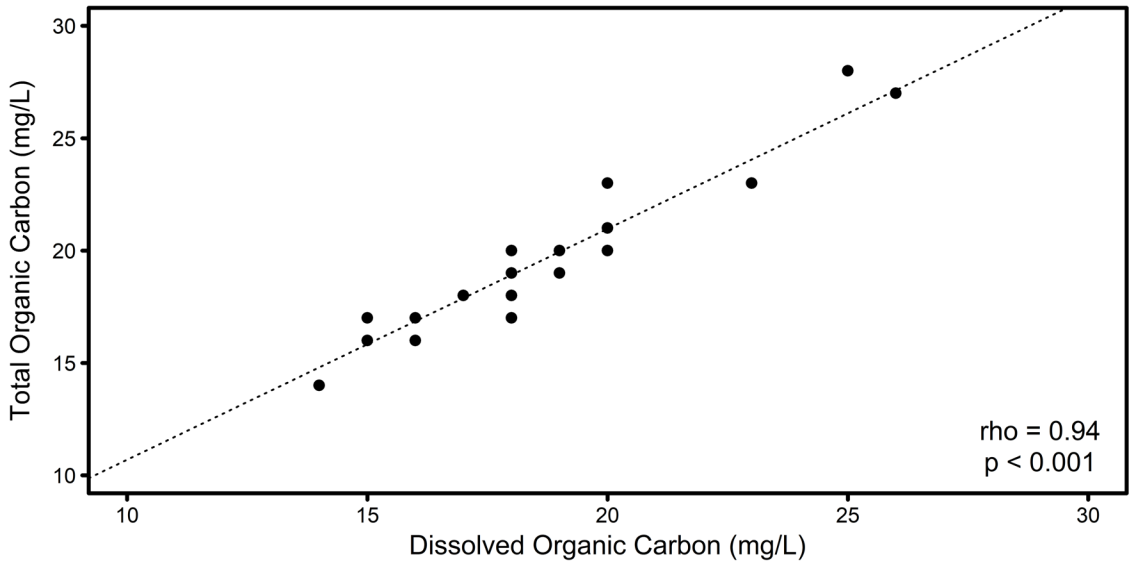

Figure 3-7: Spearman correlation plot showing the relationship between surface water dissolved organic carbon (mg/L) and surface water total organic carbon (mg/L)

Soil

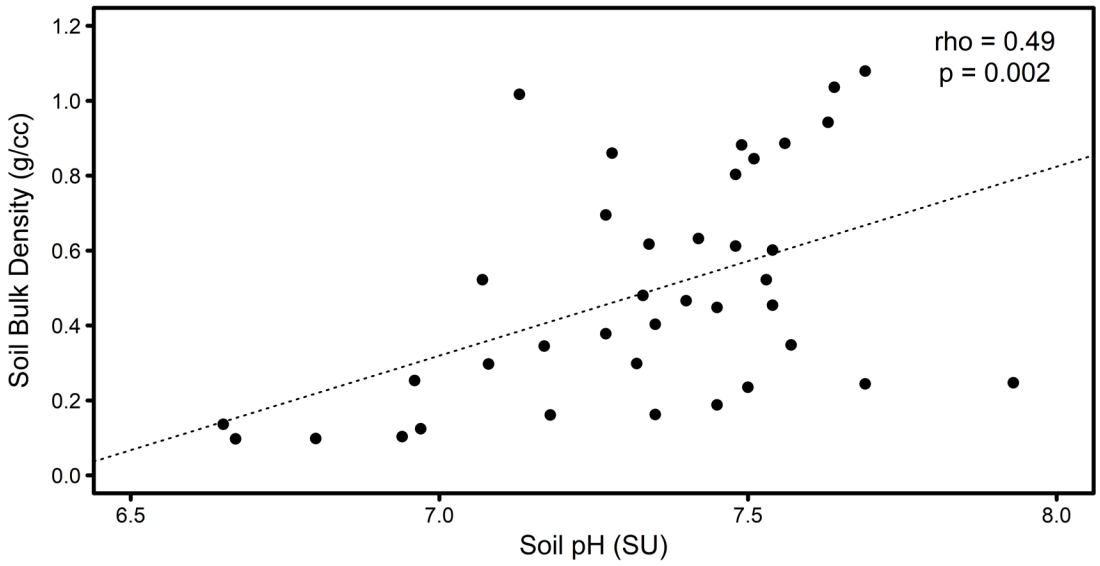

Figure 3-8: Spearman correlation plot showing the relationship between soil pH (SU) and soil bulk density (g/cc)

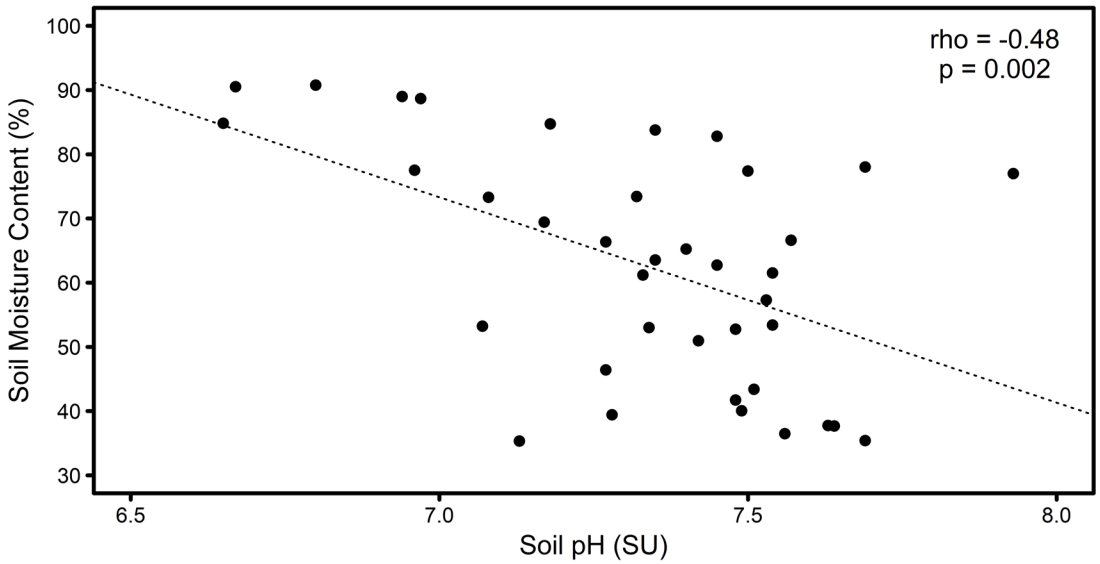

Figure 3-9: Spearman correlation plot showing the relationship between soil pH (SU) and soil moisture content (%)

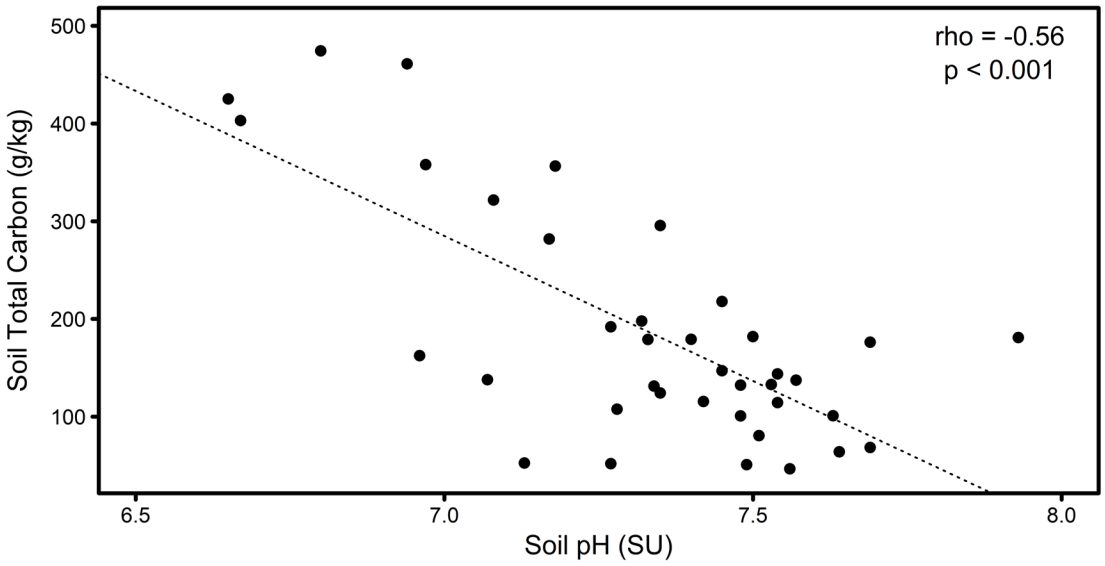

Figure 3-10: Spearman correlation plot showing the relationship between soil pH (SU) and soil total carbon (g/kg)

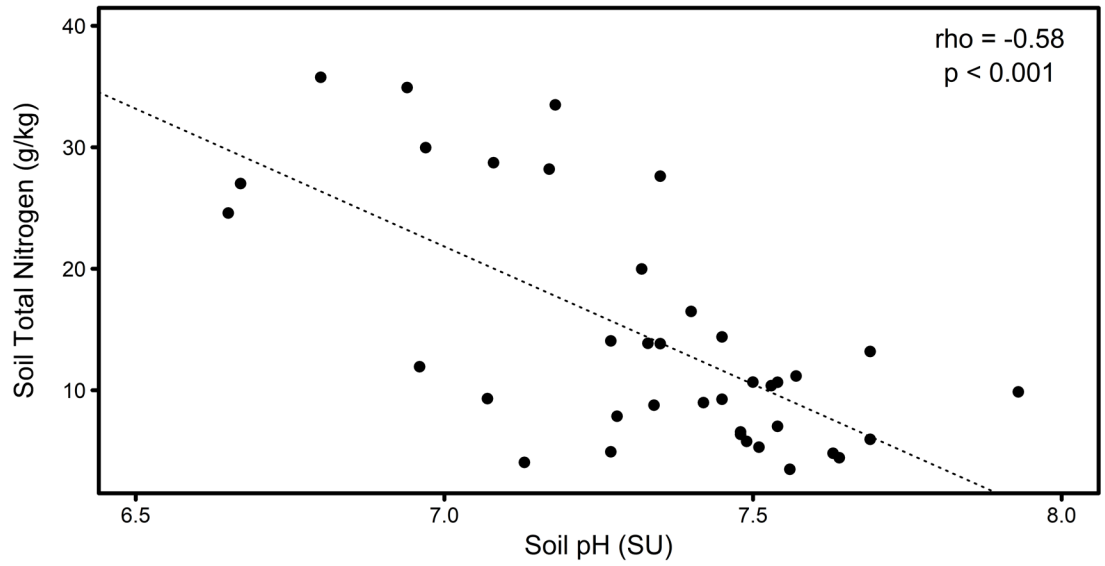

Figure 3-11: Spearman correlation plot showing the relationship between soil pH (SU) and soil total nitrogen (g/kg)

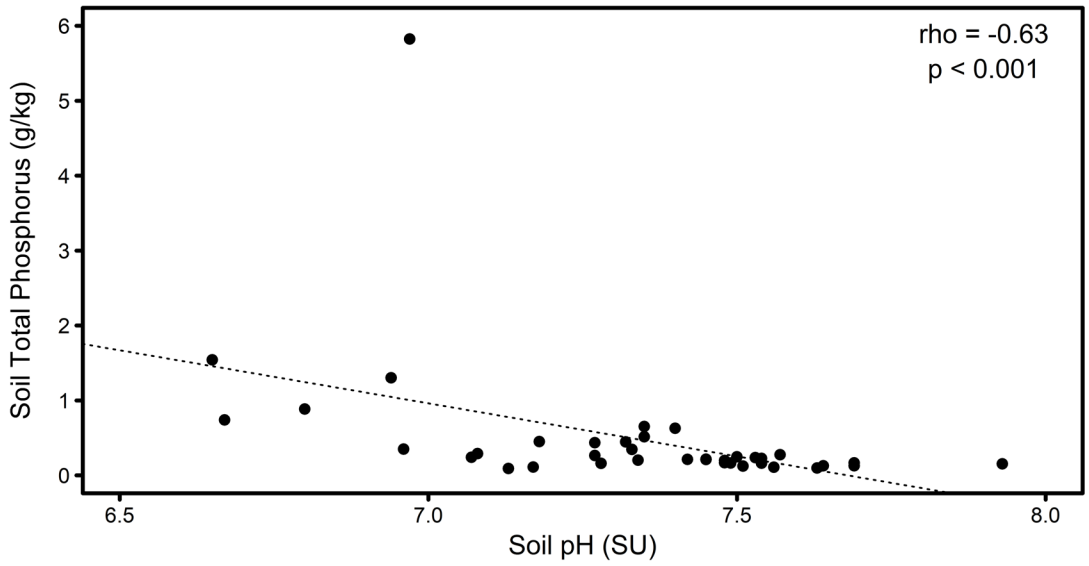

Figure 3-12: Spearman correlation plot showing the relationship between soil pH (SU) and soil total phosphorus (g/kg)

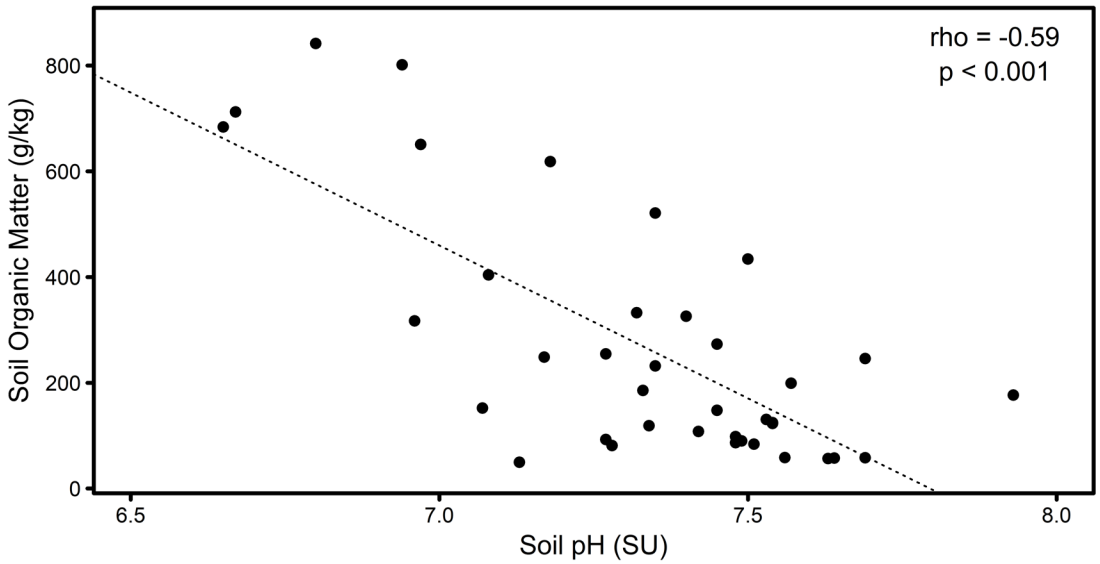

Figure 3-13: Spearman correlation plot showing the relationship between soil pH (SU) and soil organic matter (g/kg)

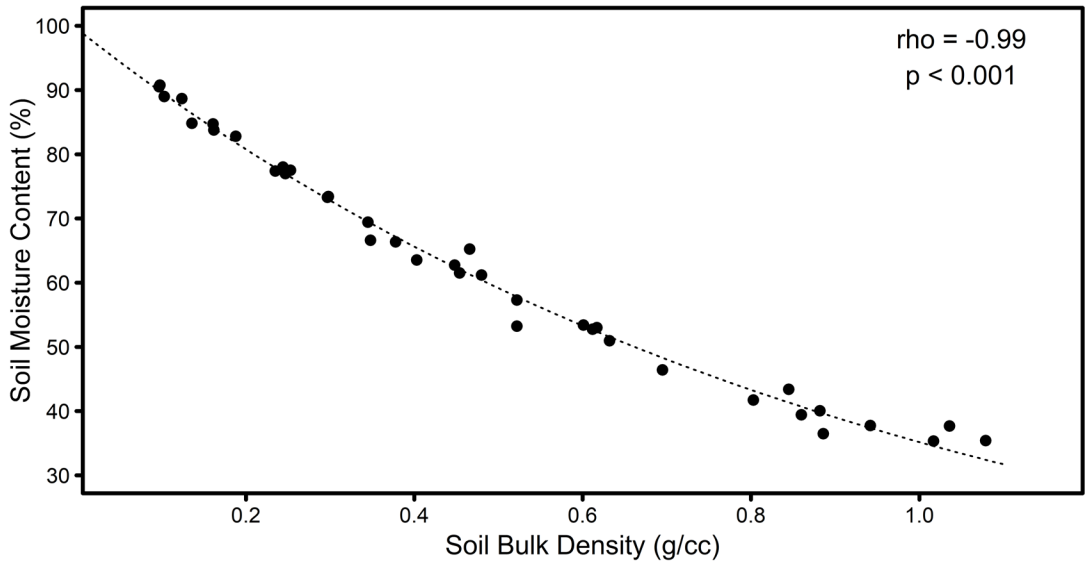

Figure 3-14: Spearman correlation plot showing the relationship between soil bulk density (g/cc) and soil moisture content (%)

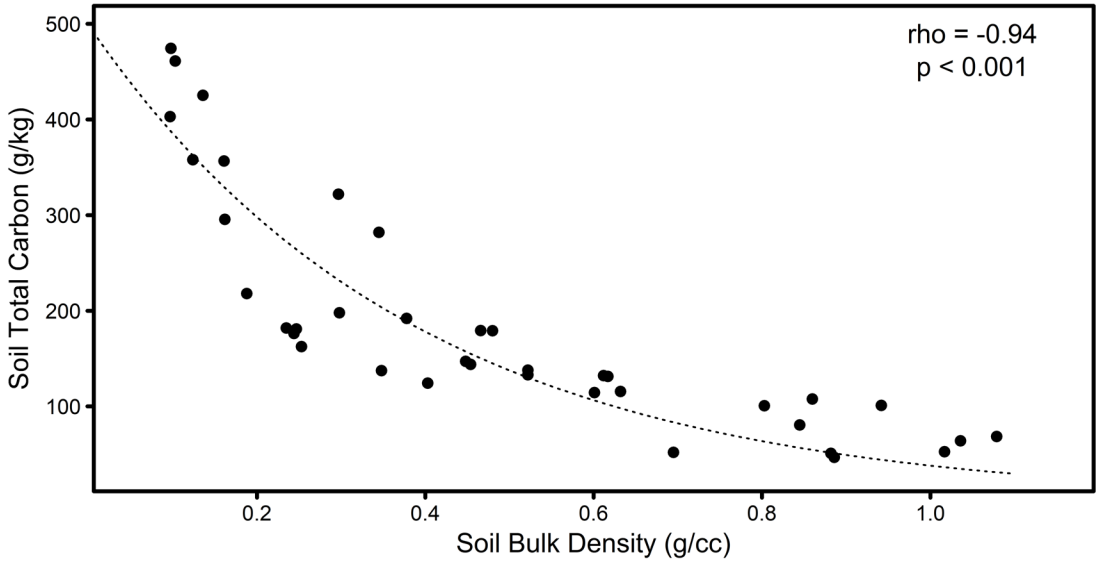

Figure 3-15: Spearman correlation plot showing the relationship between soil bulk density (g/cc) and soil total carbon (g/kg)

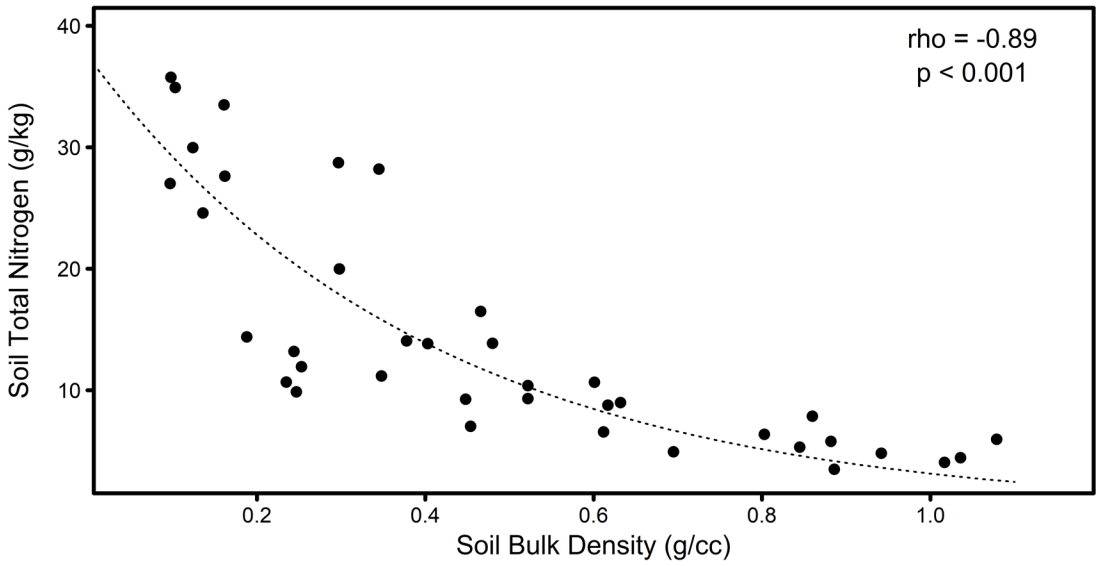

Figure 3-16: Spearman correlation plot showing the relationship between soil bulk density (g/cc) and soil total nitrogen (g/kg)

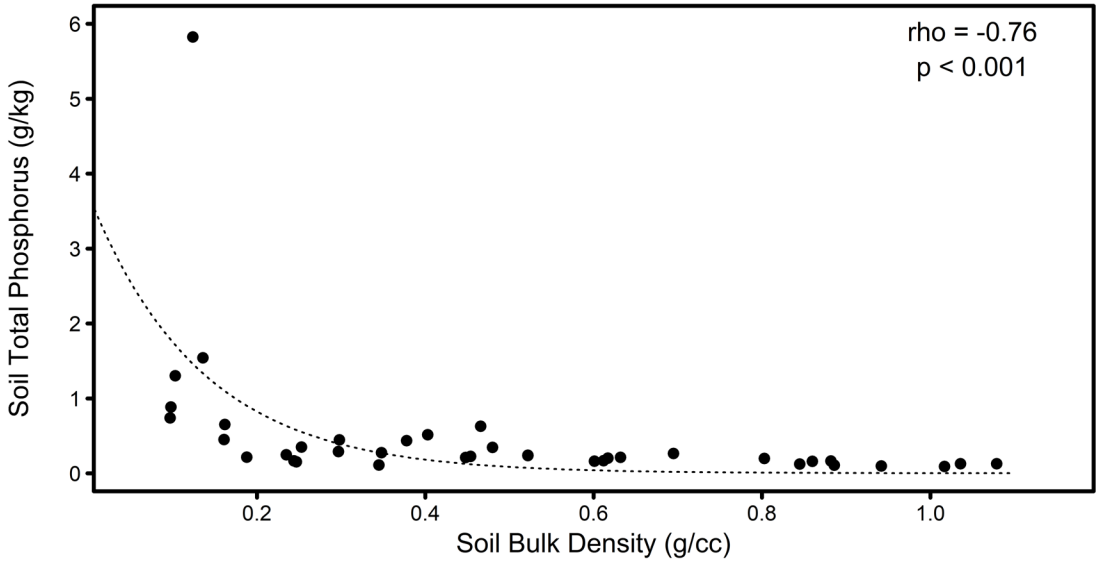

Figure 3-17: Spearman correlation plot showing the relationship between soil bulk density (g/cc) and soil total phosphorus (g/kg)

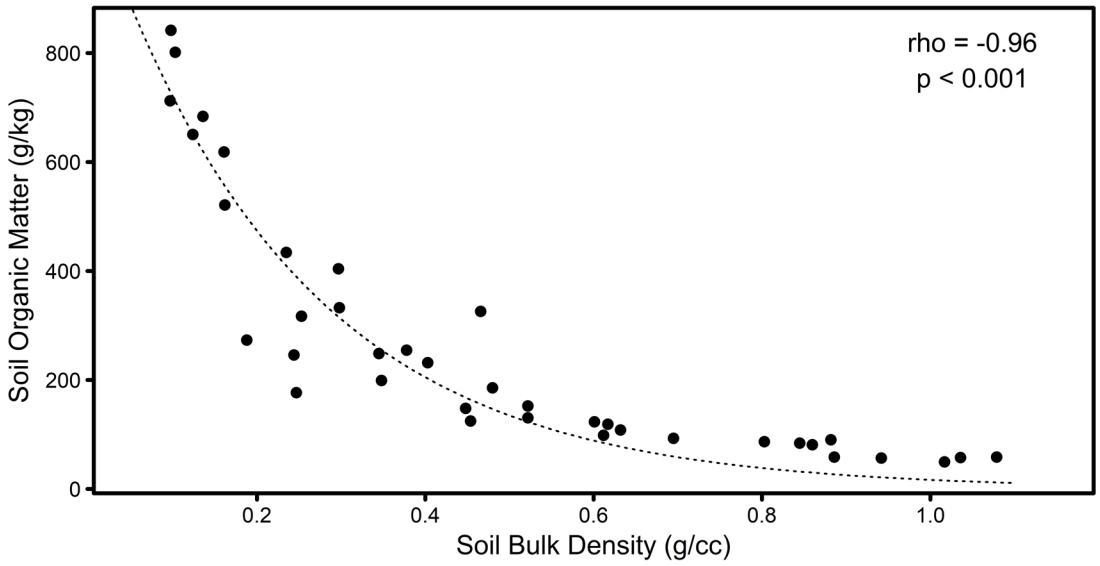

Figure 3-18: Spearman correlation plot showing the relationship between soil bulk density (g/cc) and soil organic matter (g/kg)

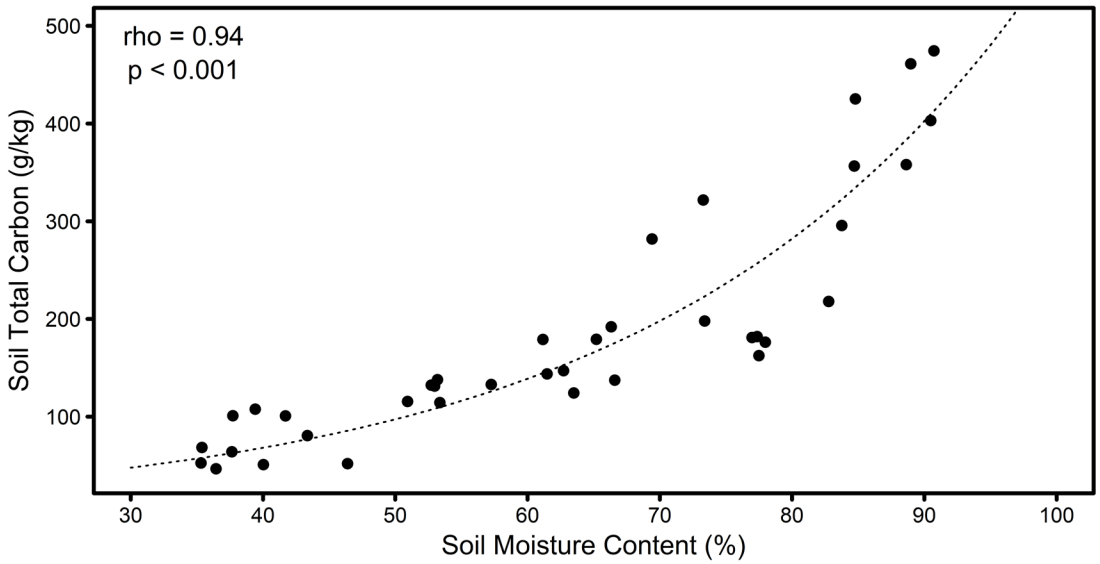

Figure 3-19: Spearman correlation plot showing the relationship between soil moisture content (%) and soil total carbon (g/kg)

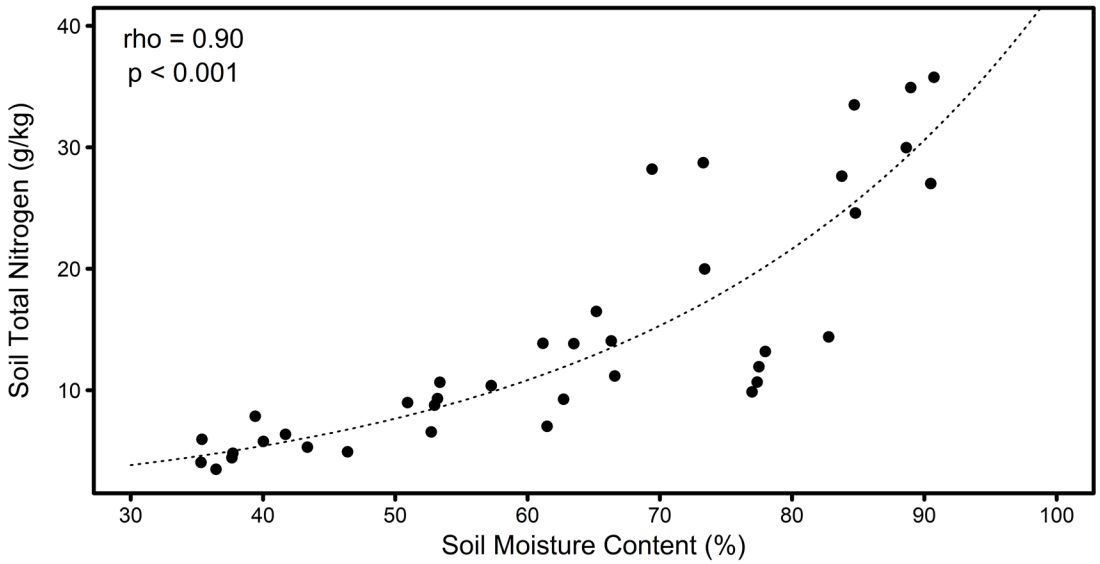

Figure 3-20: Spearman correlation plot showing the relationship between soil moisture content (%) and soil total nitrogen (g/kg)

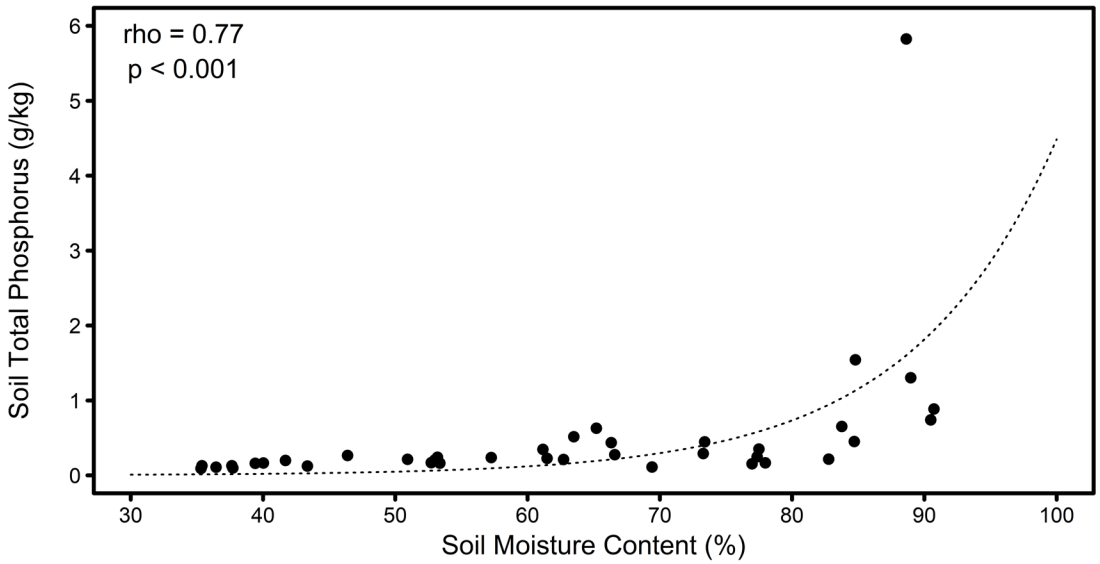

Figure 3-21: Spearman correlation plot showing the relationship between soil moisture content (%) and soil total phosphorus (g/kg)

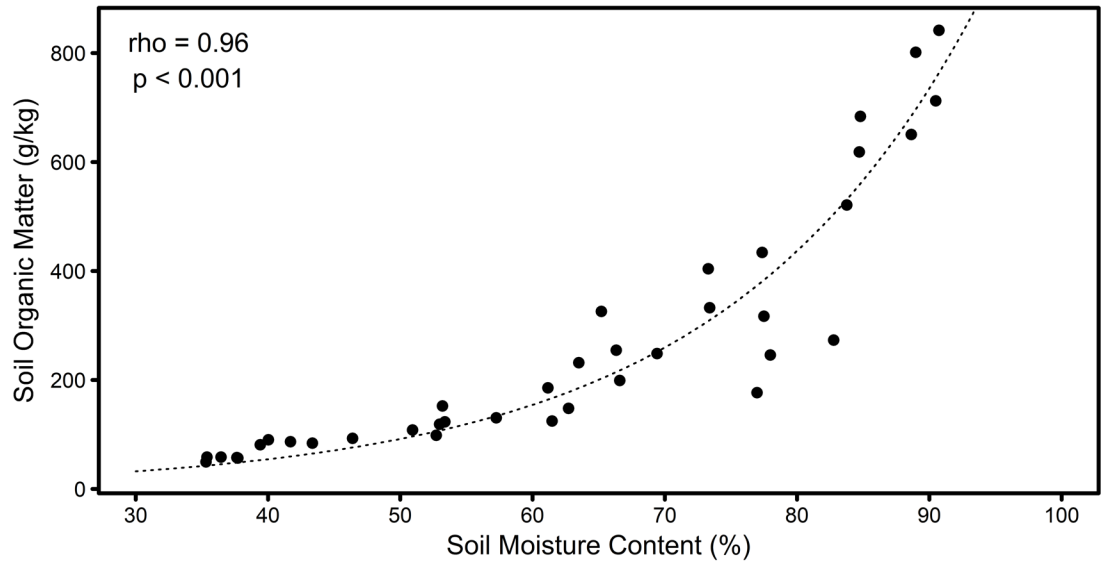

Figure 3-22: Spearman correlation plot showing the relationship between soil moisture content (%) and soil organic matter (g/kg)

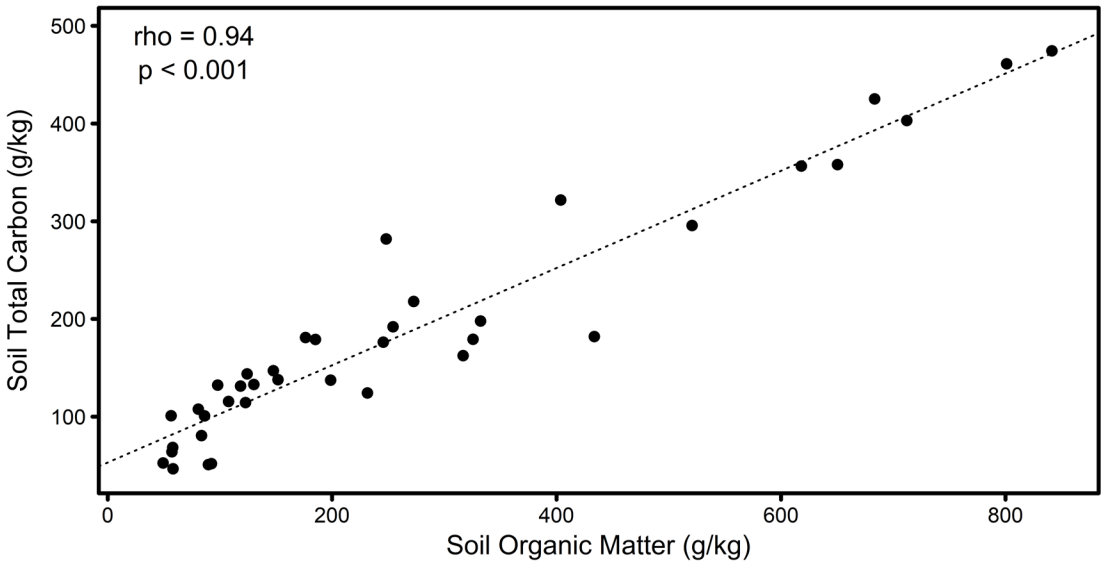

Figure 3-23: Spearman correlation plot showing the relationship between soil organic matter (g/kg) and soil total carbon (g/kg)

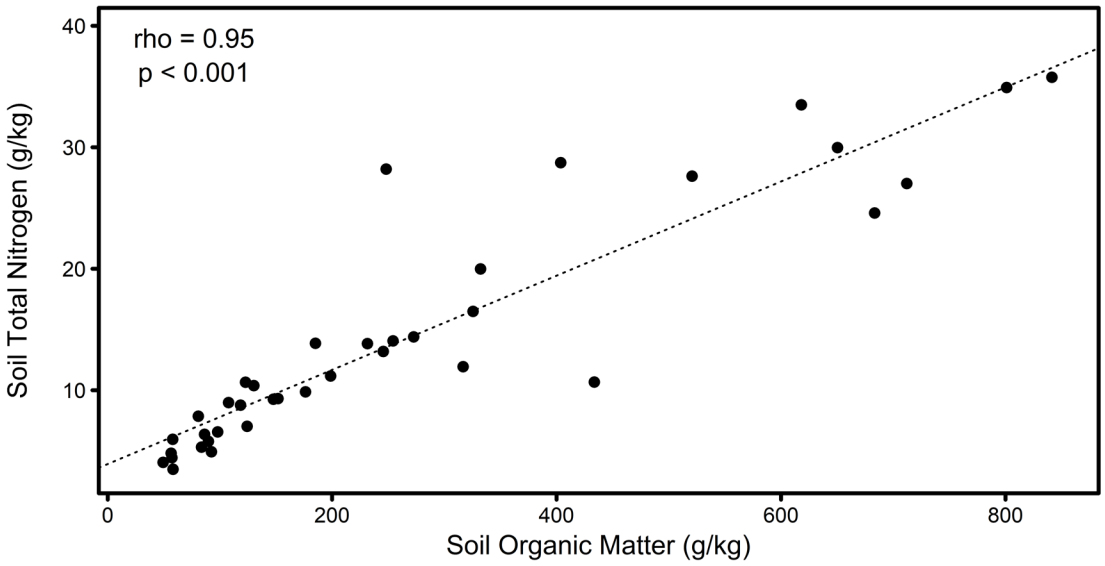

Figure 3-24: Spearman correlation plot showing the relationship between soil organic matter (g/kg) and soil total nitrogen (g/kg)

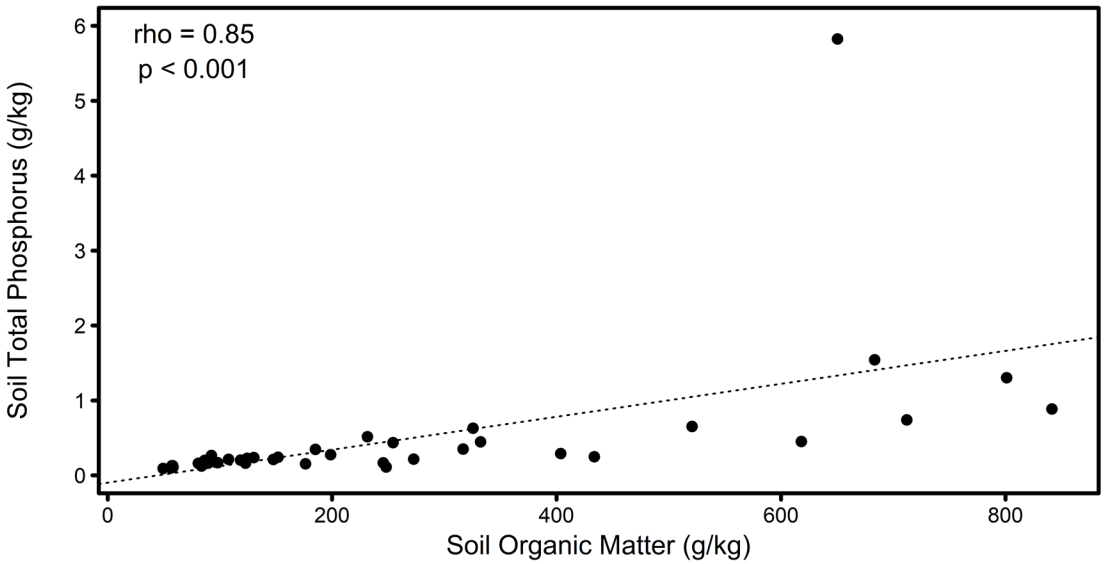

Figure 3-25: Spearman correlation plot showing the relationship between soil organic matter (g/kg) and soil total phosphorus (g/kg)

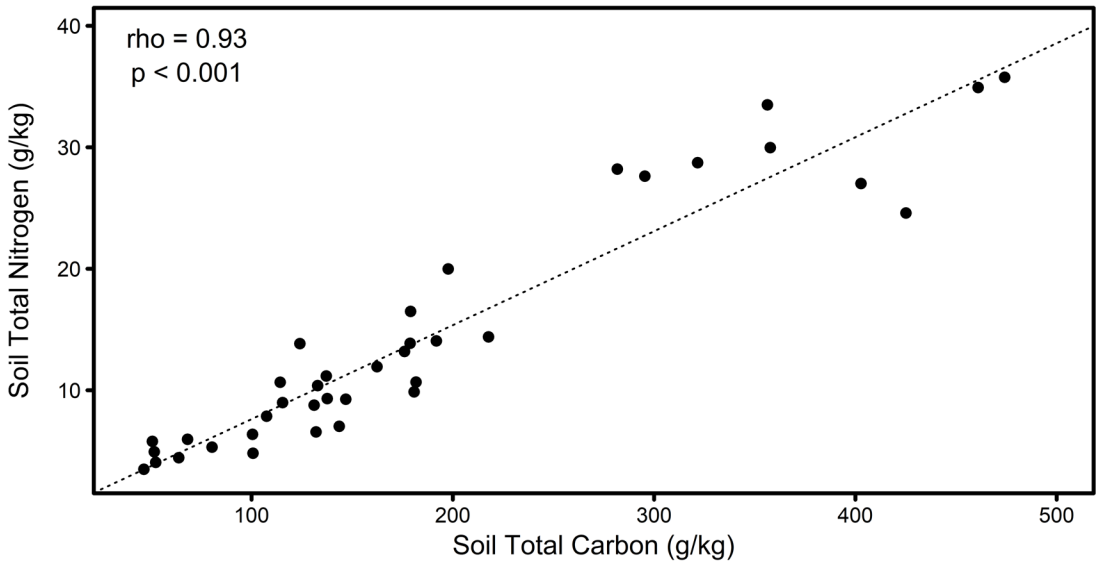

Figure 3-26: Spearman correlation plot showing the relationship between soil total carbon (g/kg) and soil total nitrogen (g/kg)

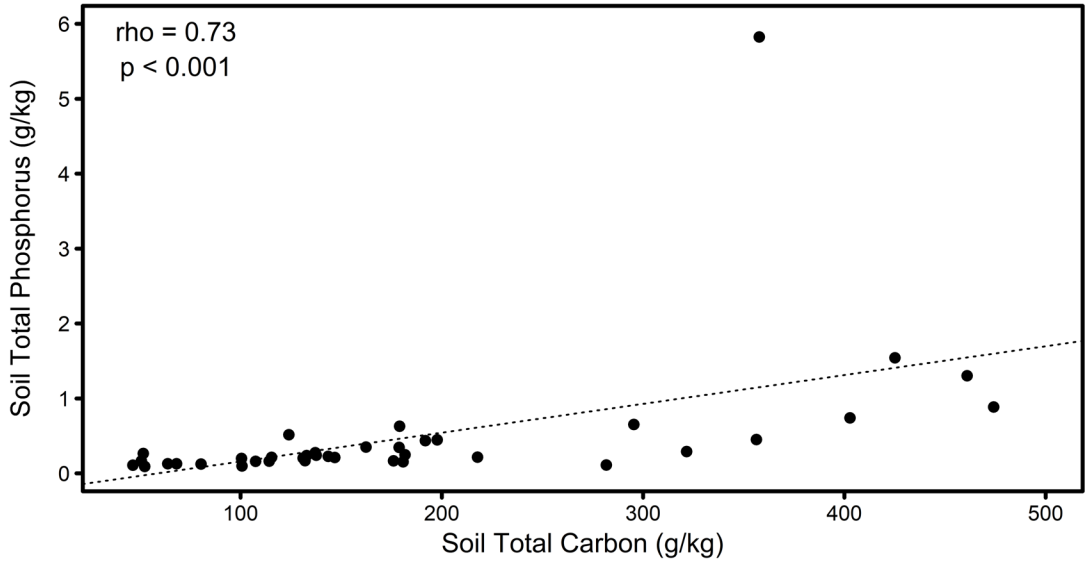

Figure 3-27: Spearman correlation plot showing the relationship between soil total carbon (g/kg) and soil total phosphorus (g/kg)

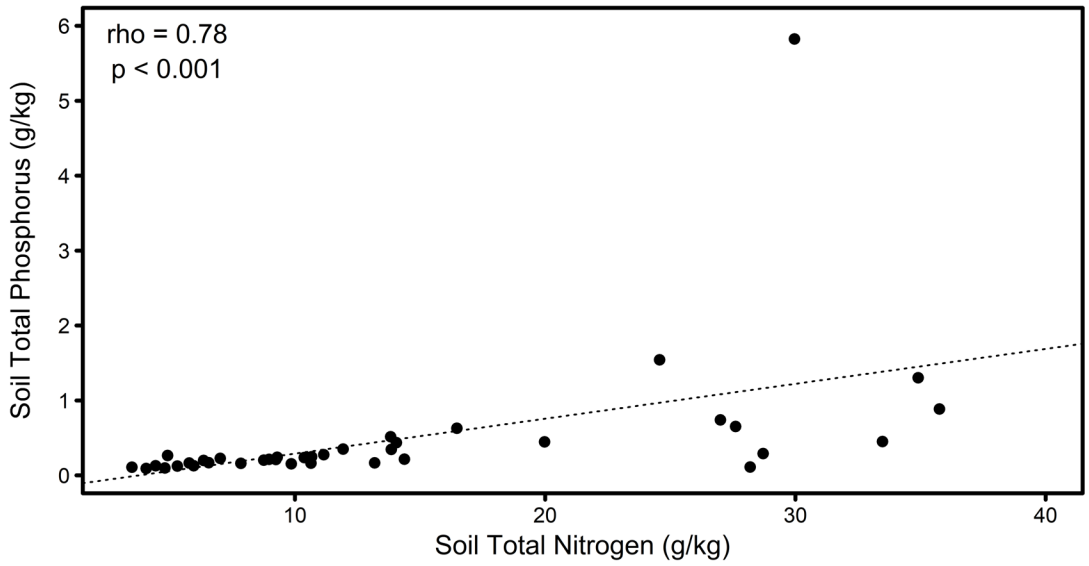

Figure 3-28: Spearman correlation plot showing the relationship between soil total nitrogen (g/kg) and soil total phosphorus (g/kg)

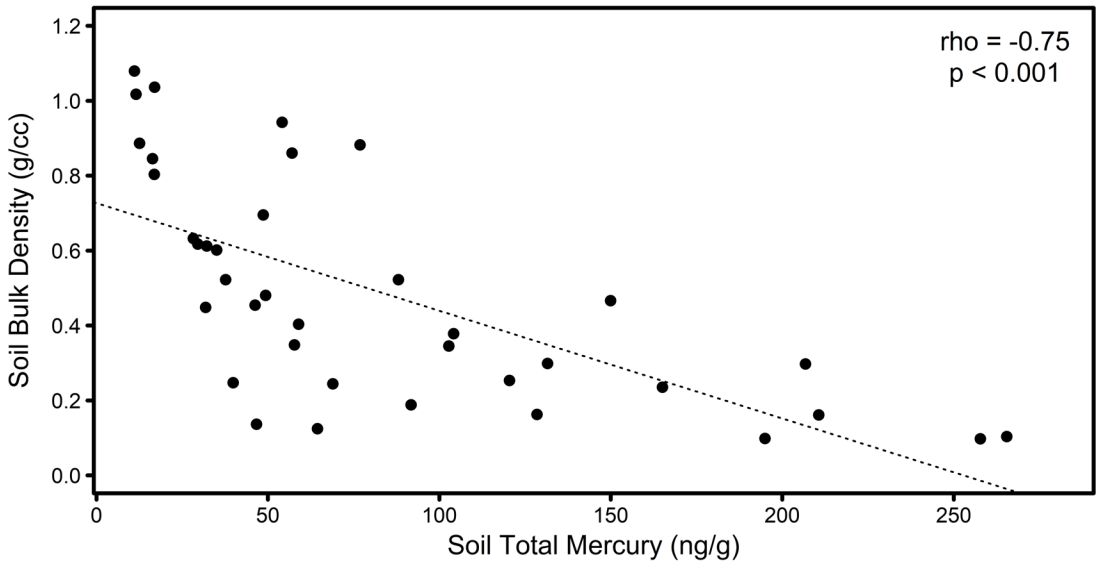

Figure 3-29: Spearman correlation plot showing the relationship between soil total mercury (ng/g) and soil bulk density (g/cc)

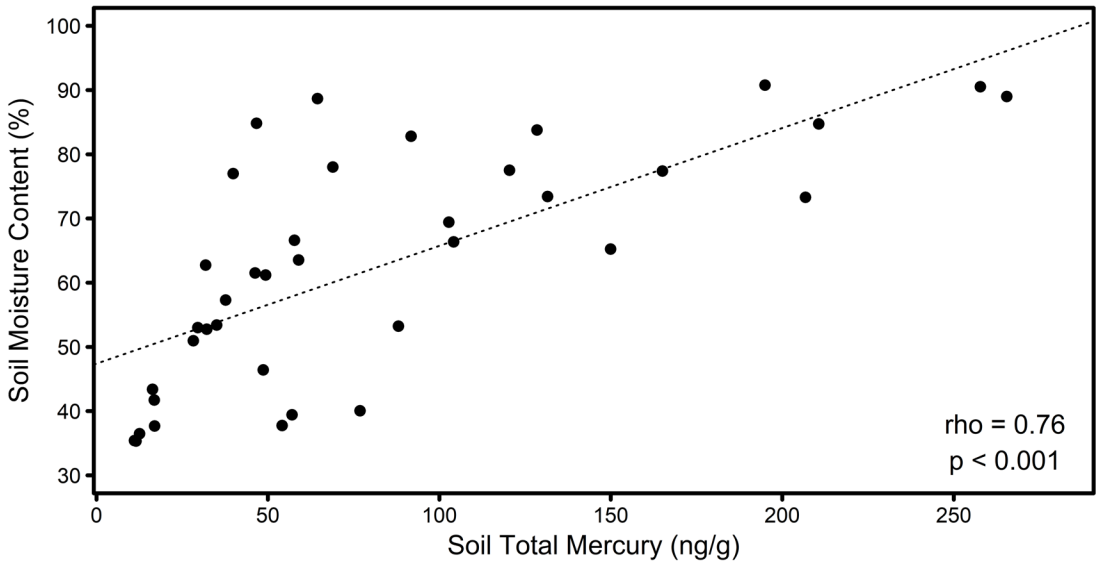

Figure 3-30: Spearman correlation plot showing the relationship between soil total mercury (ng/g) and soil moisture content (%)

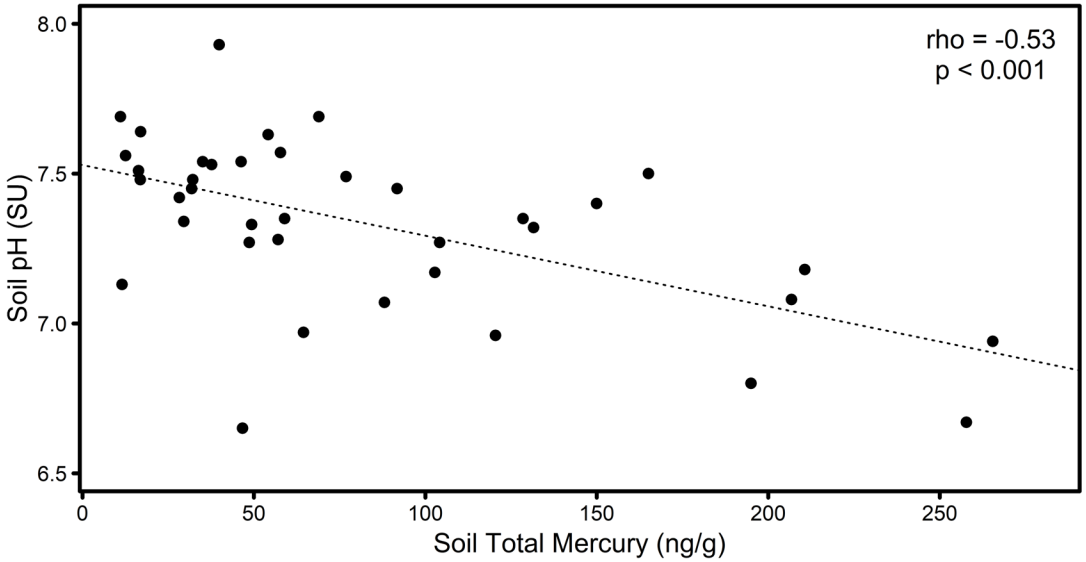

Figure 3-31: Spearman correlation plot showing the relationship between soil total mercury (ng/g) and soil pH (SU)

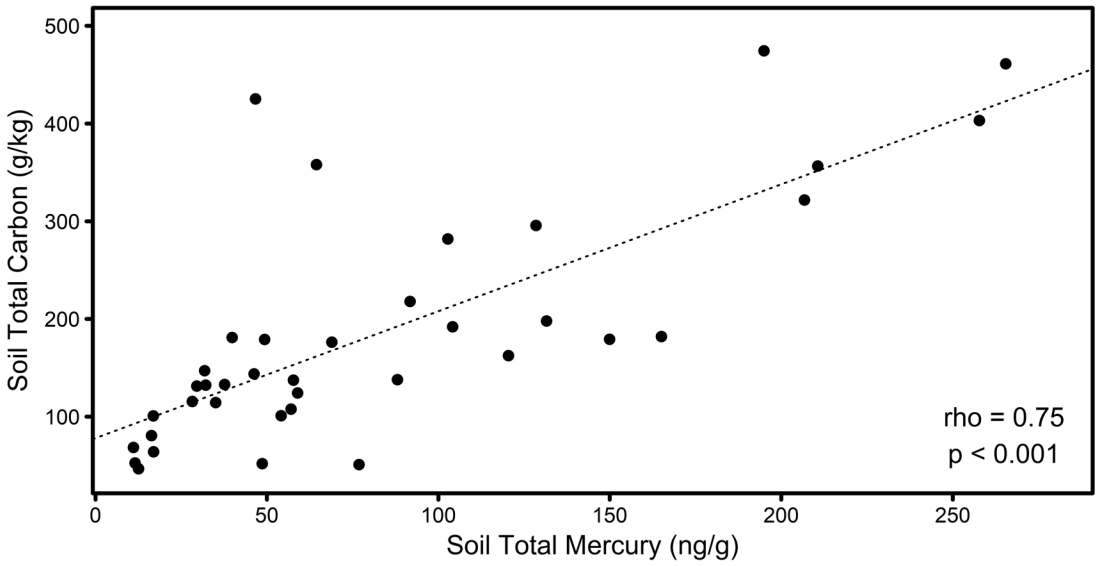

Figure 3-32: Spearman correlation plot showing the relationship between soil total mercury (ng/g) and soil total carbon (g/kg)

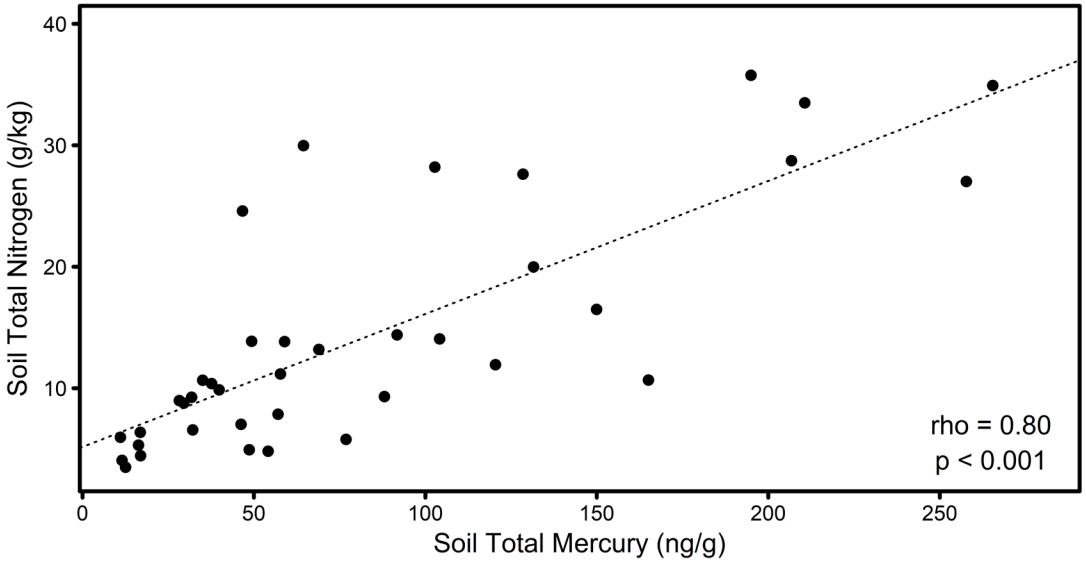

Figure 3-33: Spearman correlation plot showing the relationship between soil total mercury (ng/g) and soil total nitrogen (g/kg)

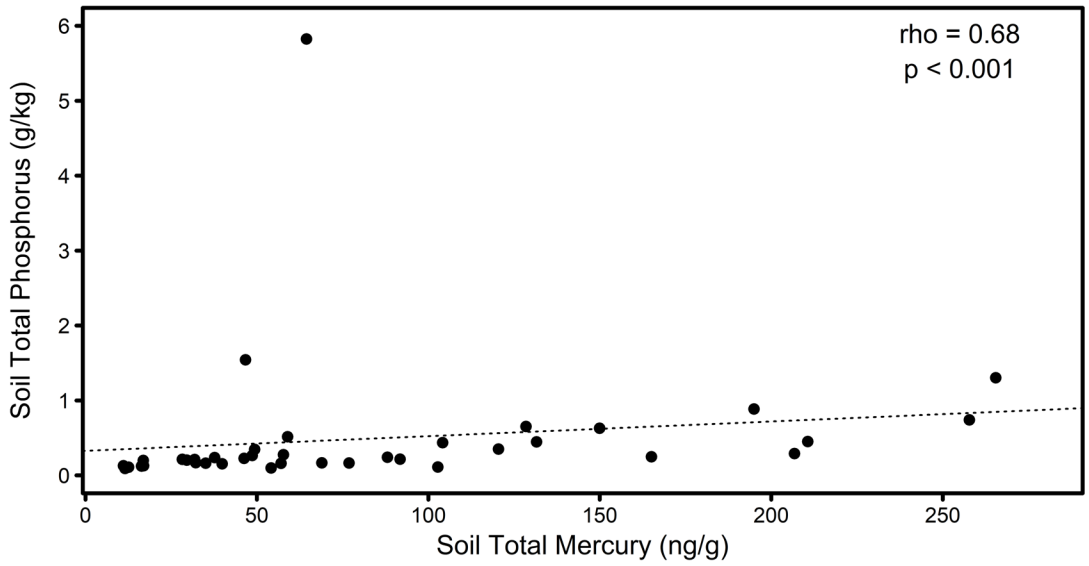

Figure 3-34: Spearman correlation plot showing the relationship between soil total mercury (ng/g) and soil total phosphorus (g/kg)

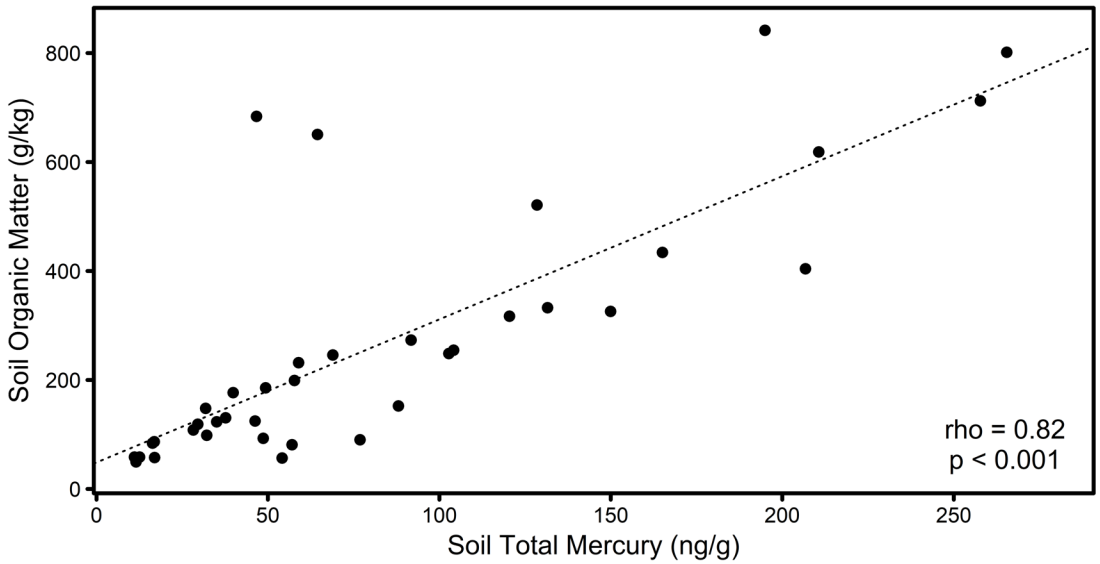

Figure 3-35: Spearman correlation plot showing the relationship between soil total mercury (ng/g) and soil organic matter (g/kg)

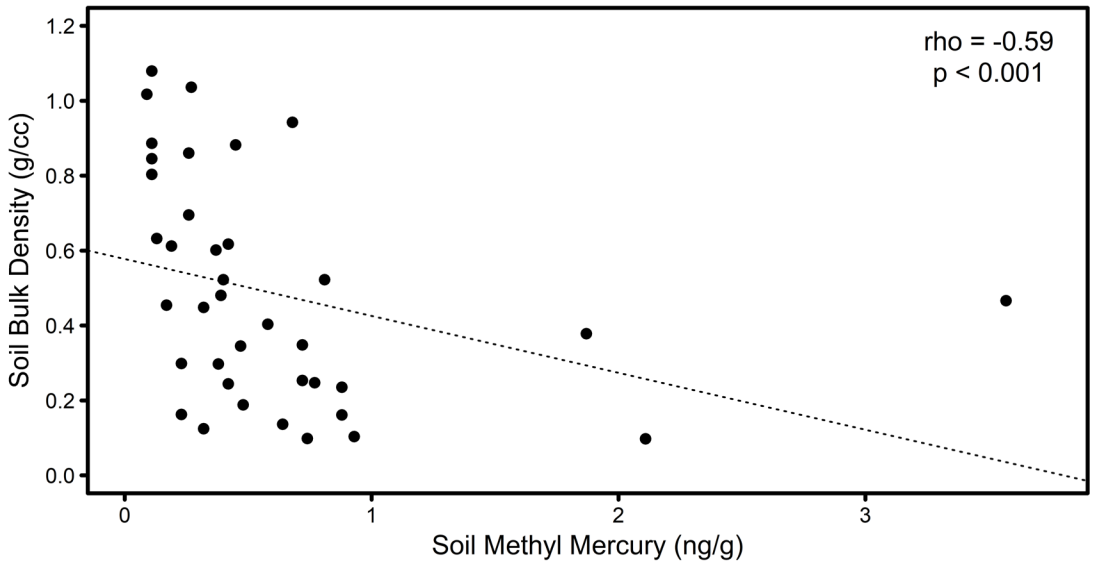

Figure 3-36: Spearman correlation plot showing the relationship between soil methyl mercury (ng/g) and soil bulk density (g/cc)

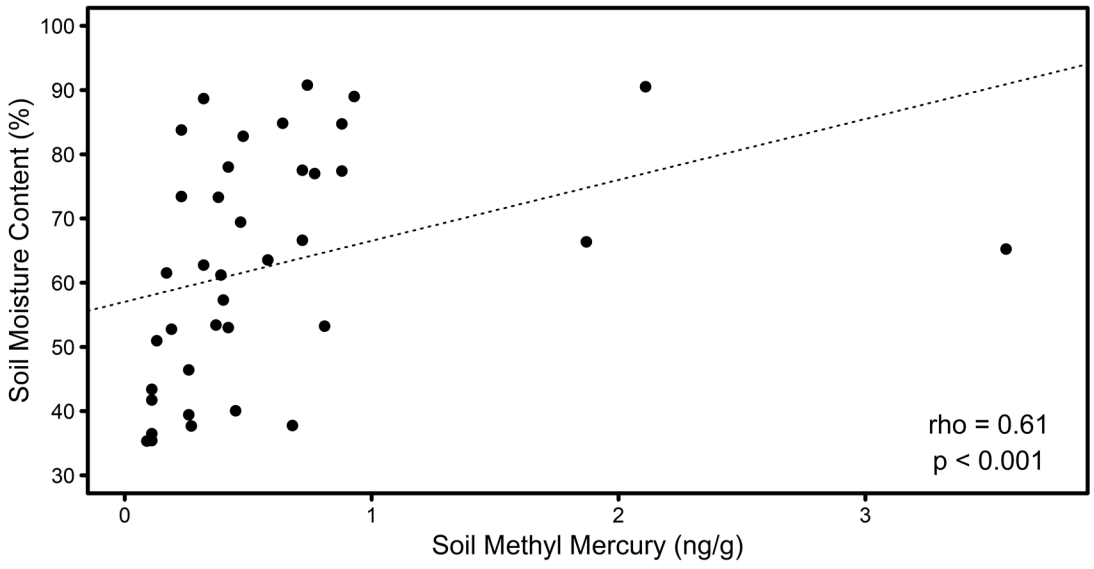

Figure 3-37: Spearman correlation plot showing the relationship between soil methyl mercury (ng/g) and soil moisture content (%)

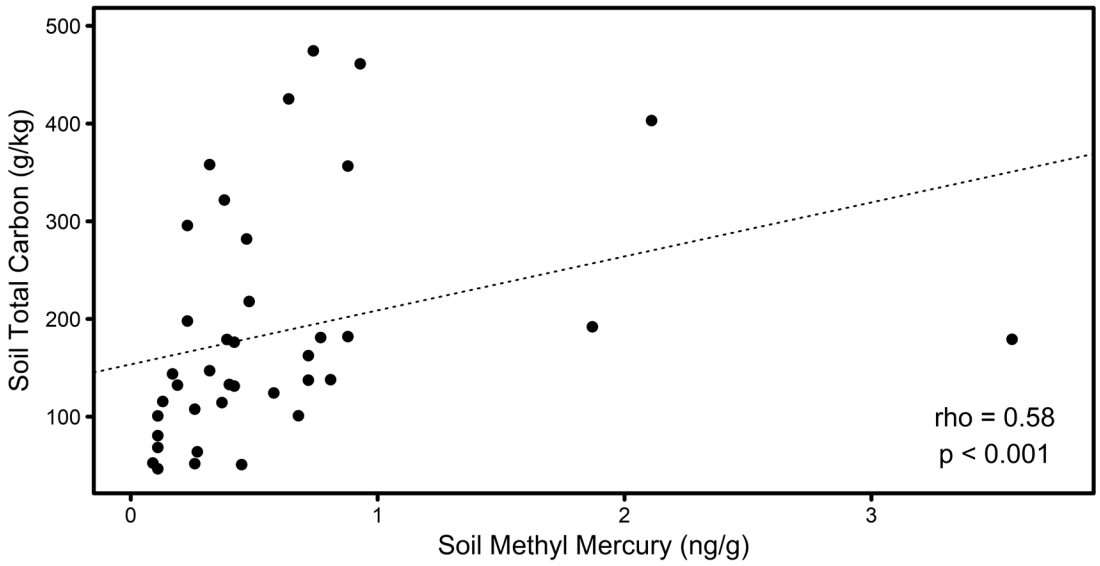

Figure 3-38: Spearman correlation plot showing the relationship between soil methyl mercury (ng/g) and soil total carbon (g/kg)

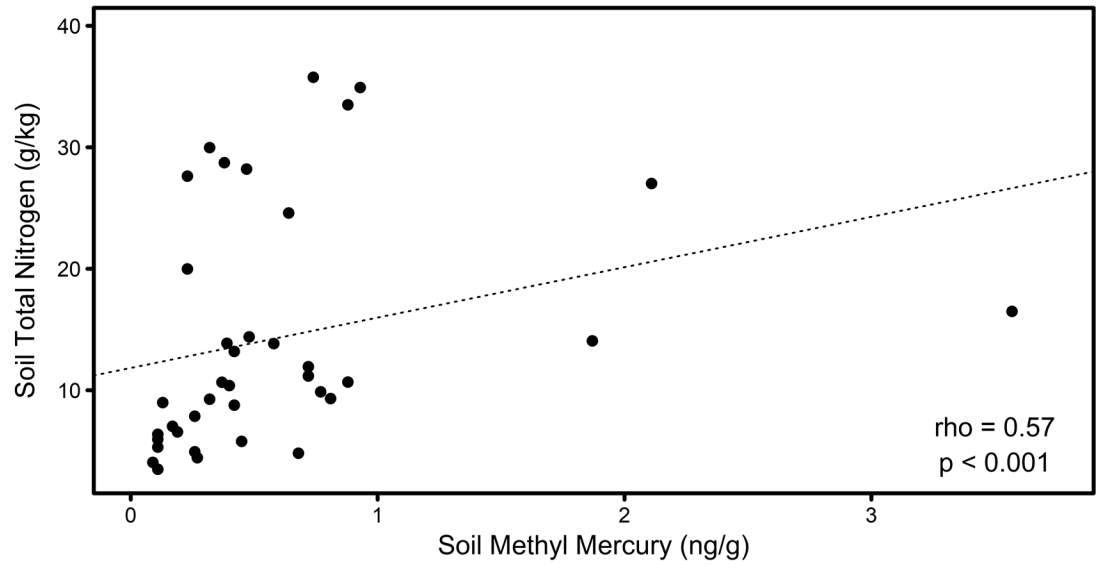

Figure 3-39: Spearman correlation plot showing the relationship between soil methyl mercury (ng/g) and soil total nitrogen (g/kg)

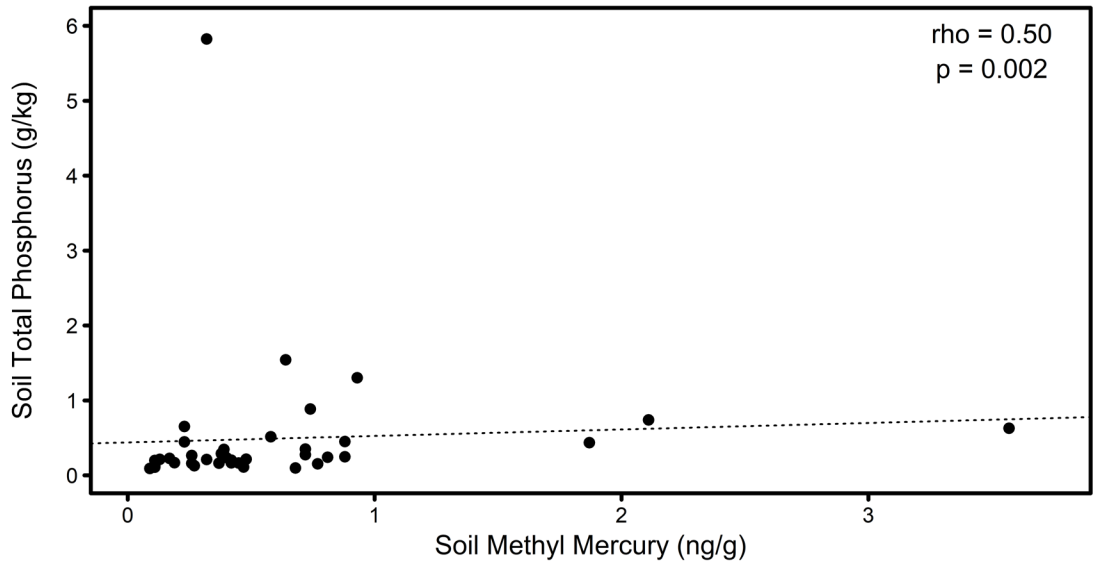

Figure 3-40: Spearman correlation plot showing the relationship between soil methyl mercury (ng/g) and soil total phosphorus (g/kg)

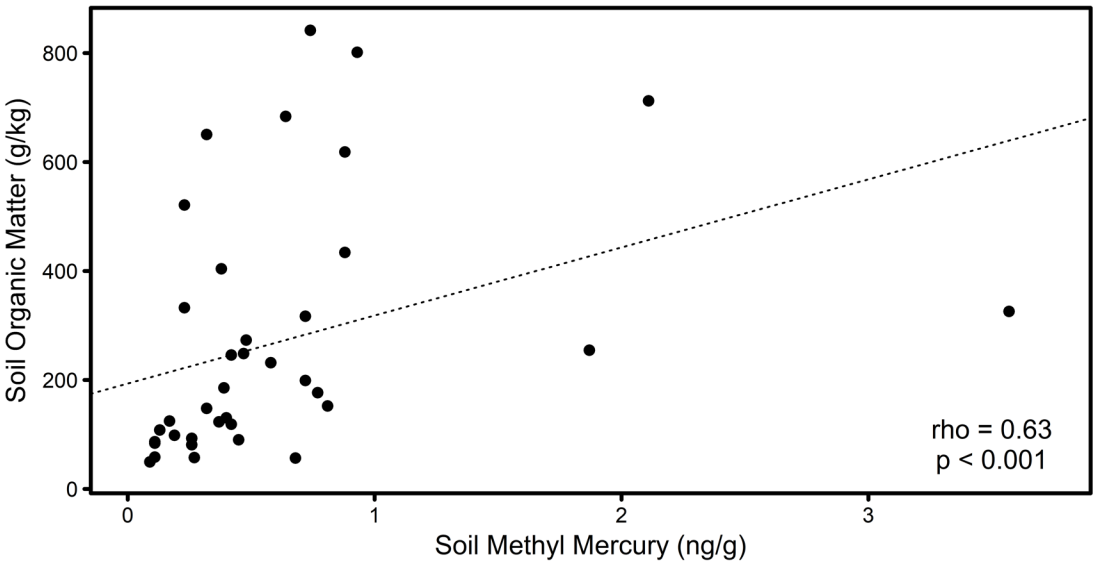

Figure 3-41: Spearman correlation plot showing the relationship between soil methyl mercury (ng/g) and soil organic matter (g/kg)

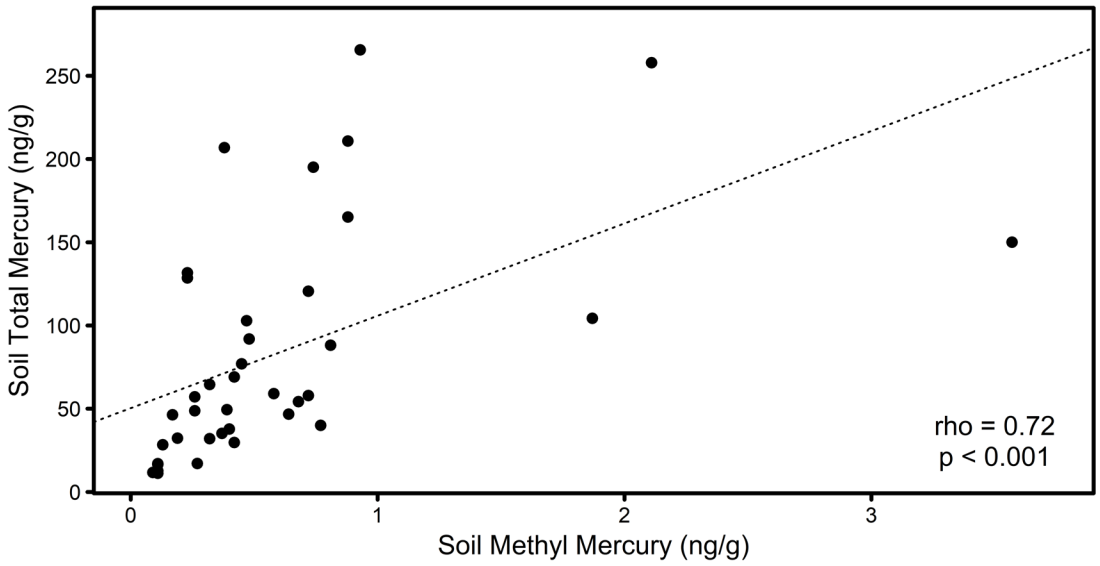

Figure 3-42: Spearman correlation plot showing the relationship between soil methyl mercury (ng/g) and soil total mercury (ng/g)

Non-statistically significant correlations

Surface Water

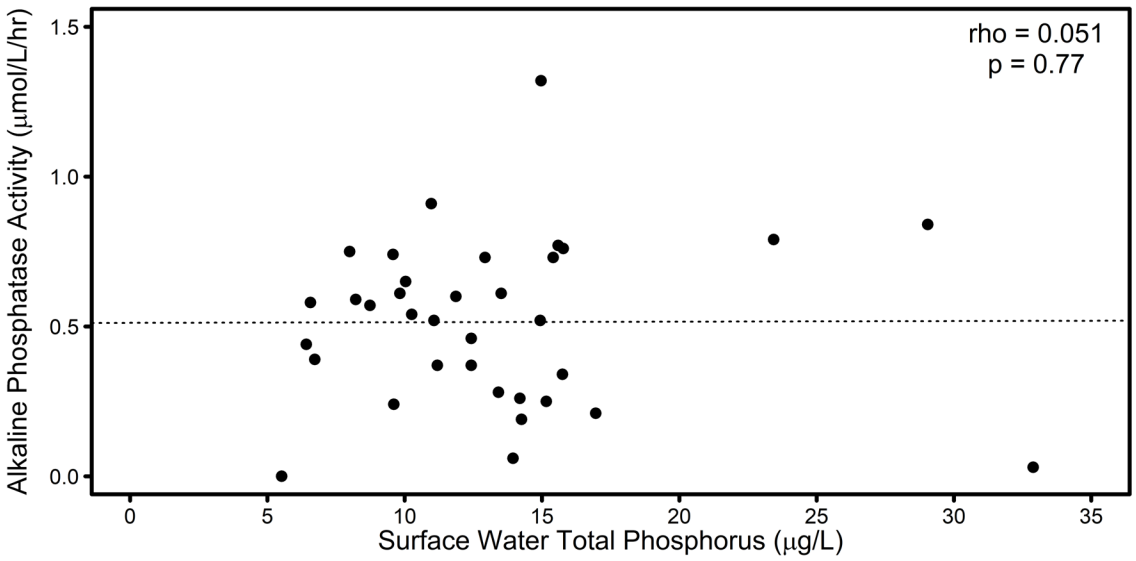

Figure 3-43: Spearman correlation plot showing the relationship between surface water total phosphorus (µg/L) and surface water alkaline phosphatase activity (µmol/L/hr)

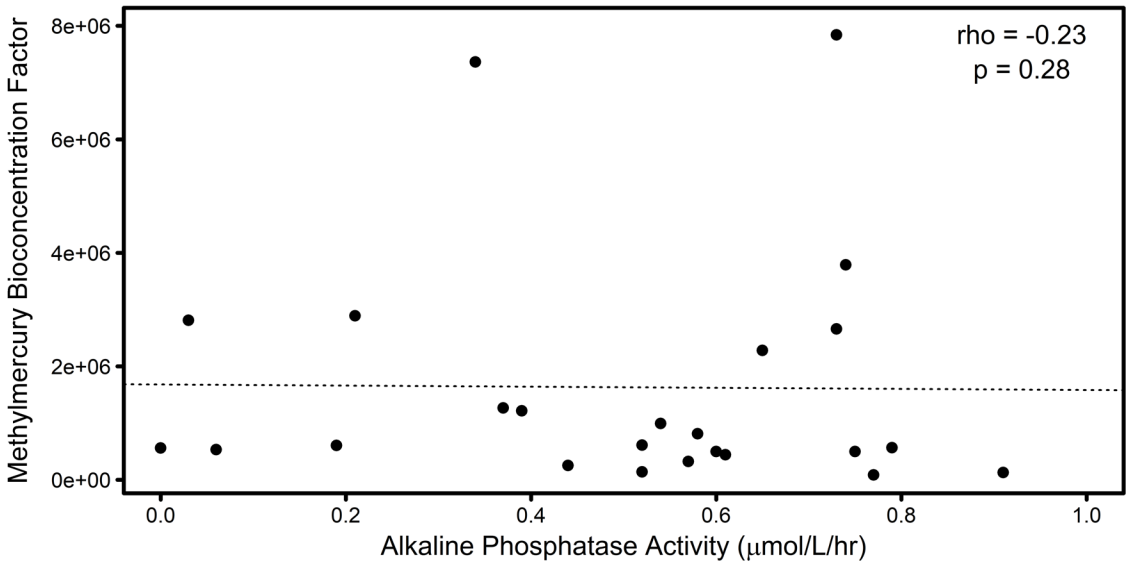

Figure 3-44: Spearman correlation plot showing the relationship between surface water alkaline phosphatase activity (µmol/L/hr) and total mercury bioconcentration factor for mosquitofish from water

Soil

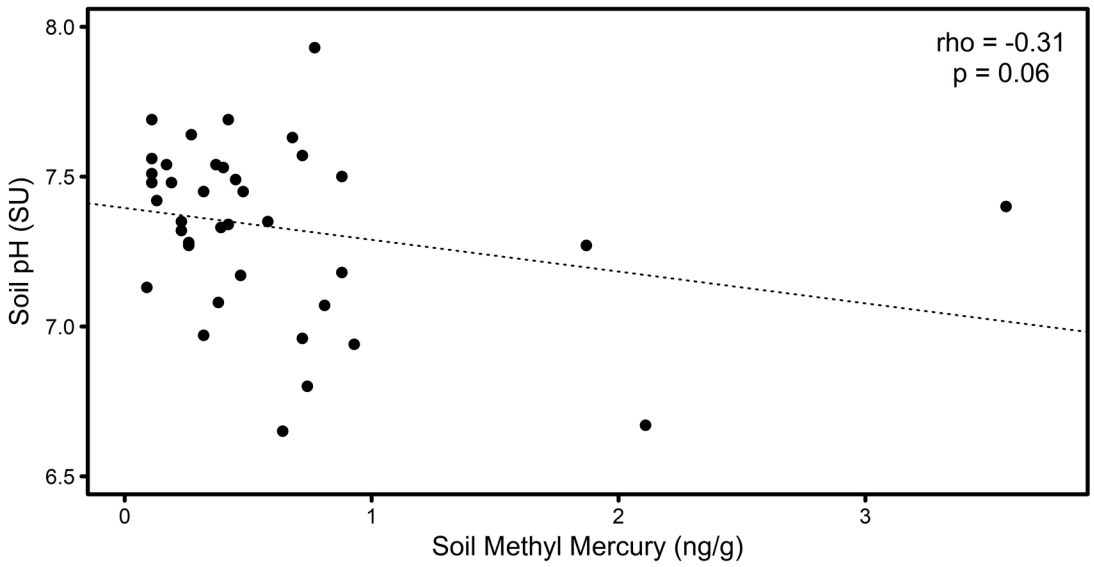

Figure 3-45: Spearman correlation plot showing the relationship between soil methyl mercury (ng/g) and soil pH (SU)