Spray particle deposition study in Wisconsin
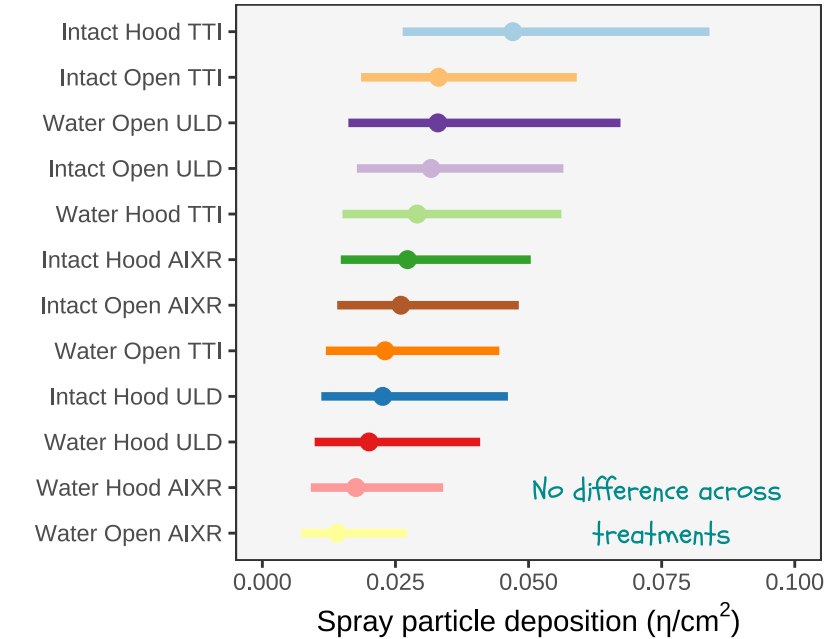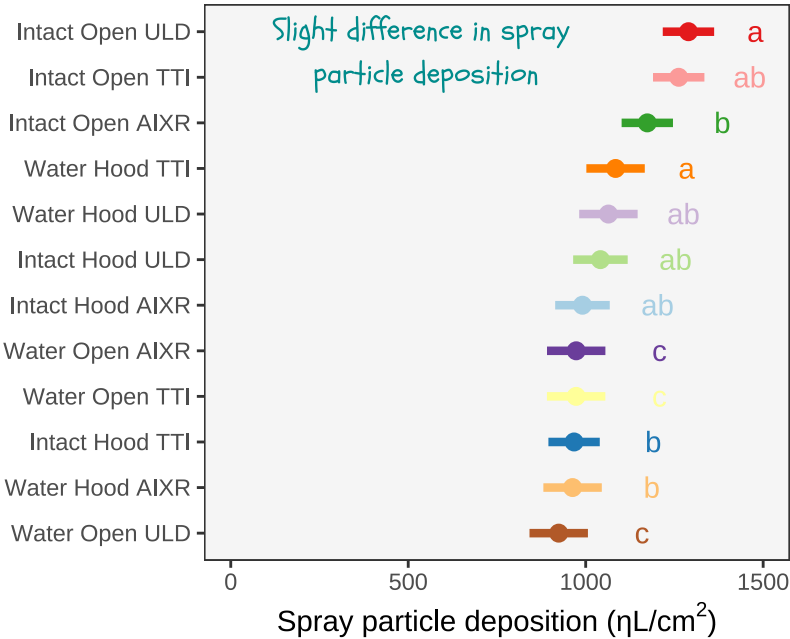
Investigations of spray particle deposition at upwind, inswath and downwind. ANOVA was perfomed for pray particle deposition at upwind and inswath, and a Linear Model was used to predict pray particle deposition with distance at downwind. Hooded sprayer makes a bigger difference on spray particle deposition, followed by nozzle and drift reduction agent.
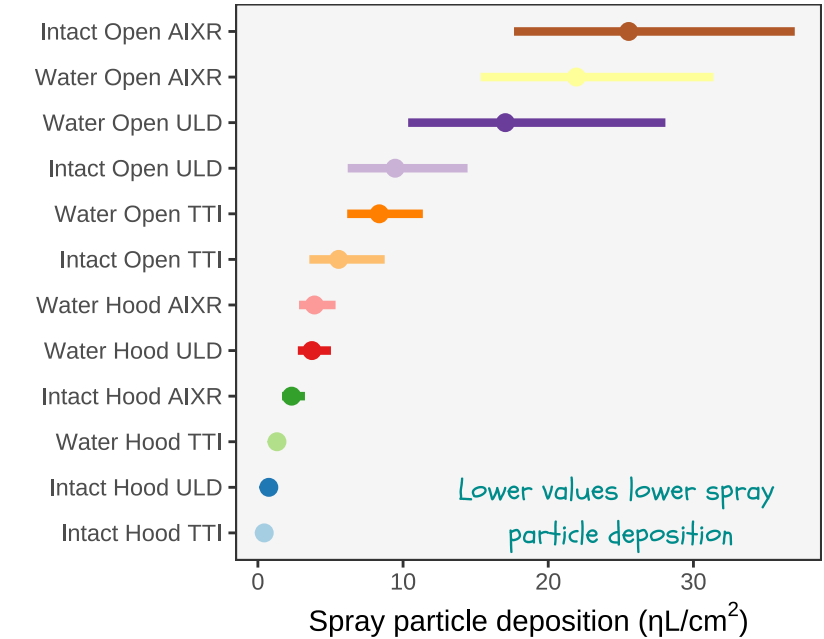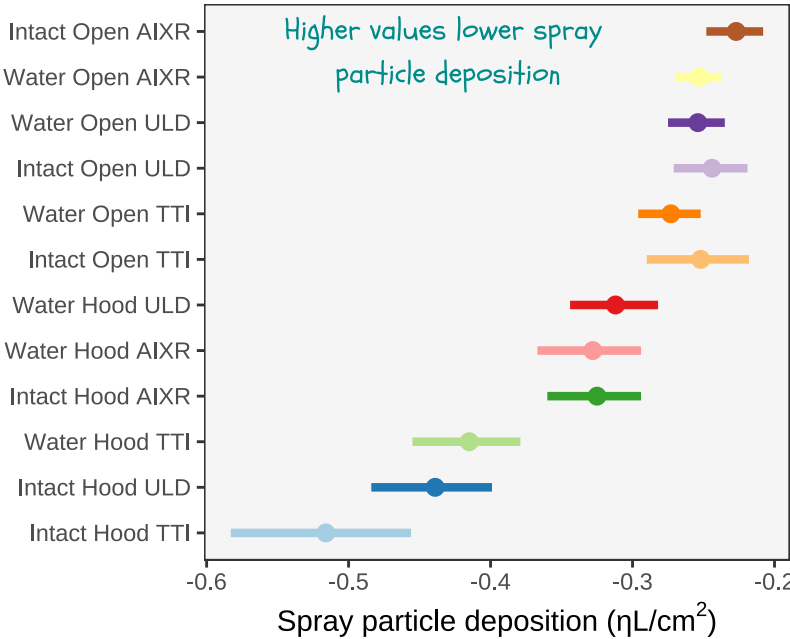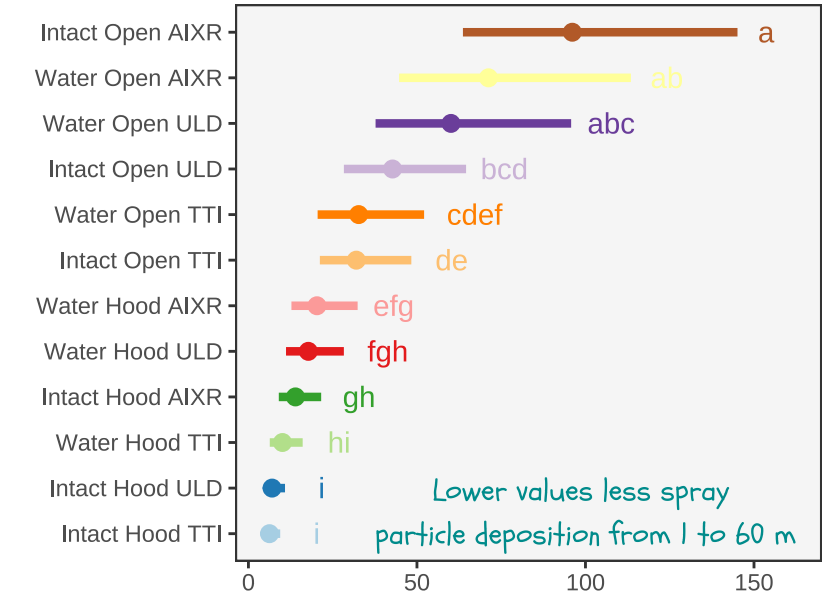

Deposition upwind

No difference across treatments

Spray particle deposition (η/cm^2)

Deposition inswath

Slight difference in spray particle deposition

Spray particle deposition ($\eta L/cm^2$)

Intercept at downwind

Lower values lower spray particle deposition

Spray particle deposition ($\eta L/cm^2$)

Slope at downwind

Higher values lower spray particle deposition

Spray particle deposition ($\eta L/cm^2$)

Area under the curve at downwind

Lower values less spray particle deposition from 1 to 60 m

Predicted downwind distance (m)

Intact Open AIXR — 113
Water Open AIXR — 87
Water Open ULD — 67
Intact Open ULD — 39
Water Open TTI — 31
Intact Open TTI — 22
Water Hood ULD — 12
Water Hood AIXR — 12
Intact Hood AIXR — 7
Water Hood TTI — 3
Intact Hood ULD — 2
Intact Hood TTI — 1

Distance where spray particle deposition reached 0 nL/cm^2