

Figure 7: a. N<sub>2</sub>O emissions from soil planted to corn after four different crops (2015); b. Precipitation; c. Soil moisture; T indicates when the crop prior to corn was terminated; ↓ indicates when corn was planted; S and \$ indicate spring manure application and side-dress N application, respectively; \* significant difference among treatments at p value <0.05.

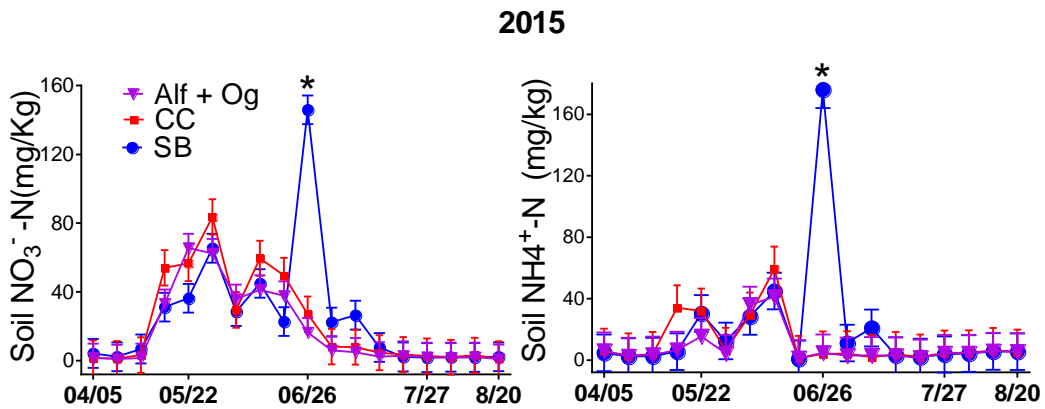


Figure 8: 2015 Soil nitrate and ammonium concentrations, \* Indicate significant difference among treatments at p = 0.05

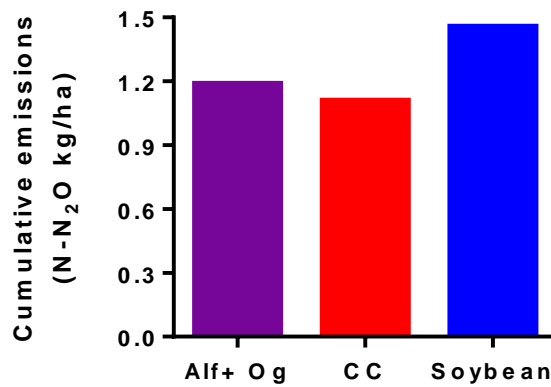


Figure 9: Cumulative N<sub>2</sub>O emissions from soil planted to corn after three different crops (2015)

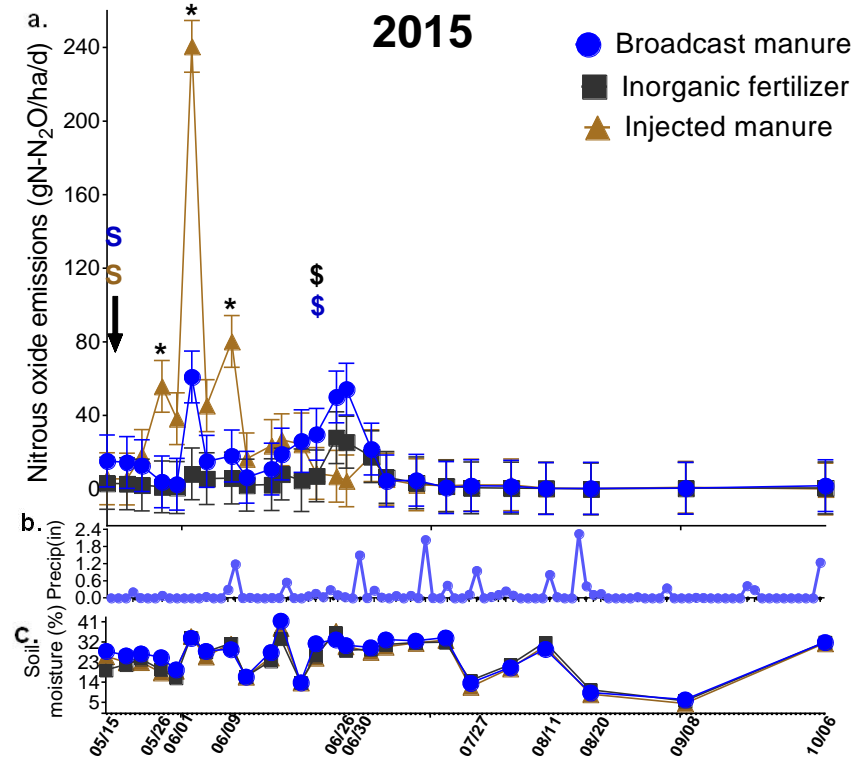


Figure 10: a. N<sub>2</sub>O emissions from soil planted to corn with three different N inputs (2015); b. Precipitation c. Soil moisture; ↓ indicates when corn was planted; S and \$ indicate spring manure application and side-dress N application, respectively; \* significant difference among treatments at p value <0.05.

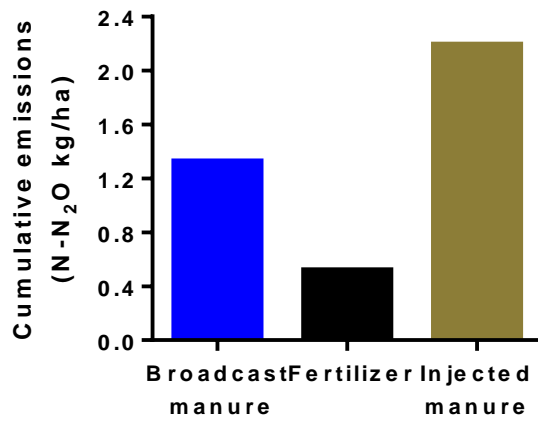


Figure 11: Cumulative N<sub>2</sub>O emissions from soils planted to corn after three different N inputs (2015)

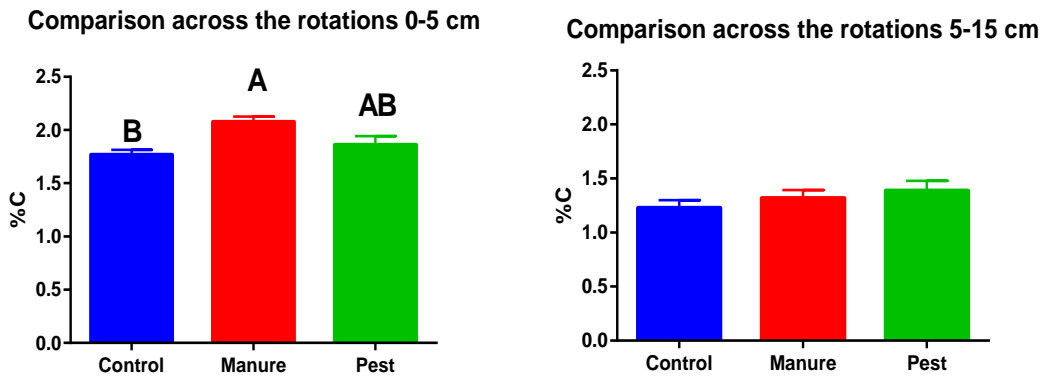


Figure 12: Soil carbon (C) levels across rotations. A, B, and C indicate treatments that differ at  $p < 0.05$

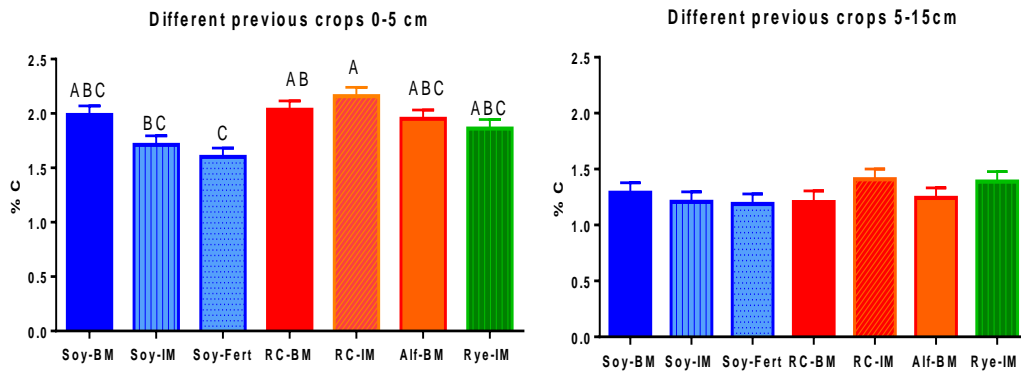


Figure 13: Soil carbon (C) levels after different previous crops. A, B, C indicate treatments that differ at  $p < 0.05$

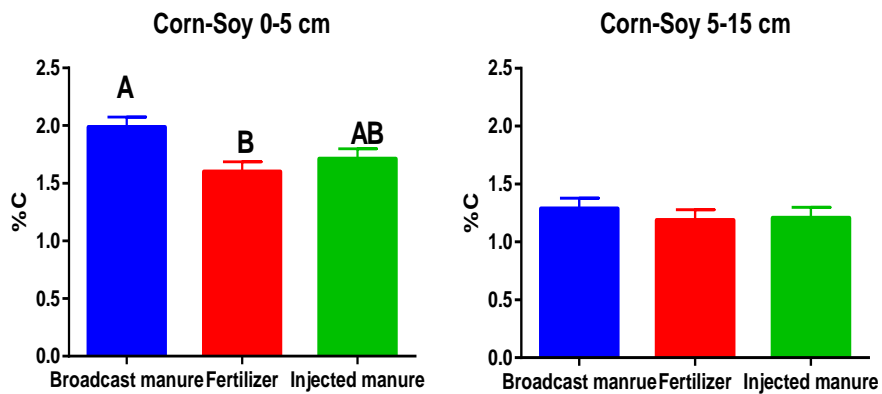


Figure 14: Soil carbon (C) levels with different N treatments in Corn soy-rotation. A, B, C indicate treatments that differ at  $p < 0.05$

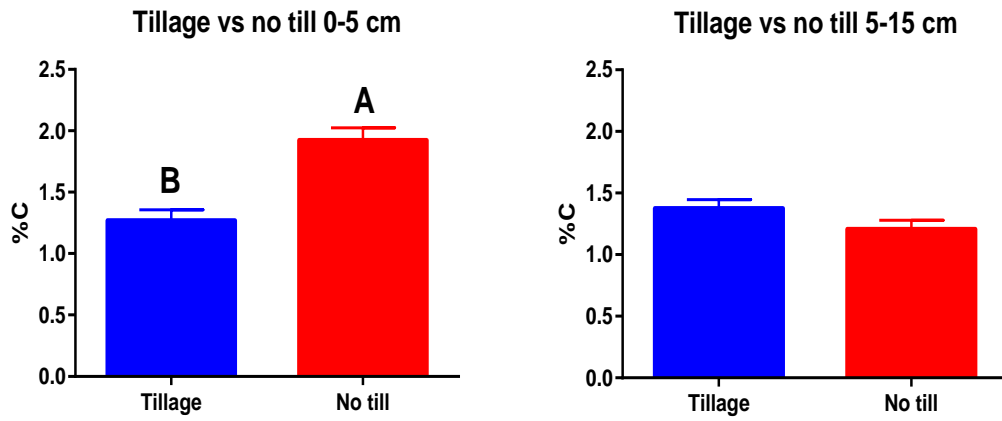


Figure 15: Soil carbon (C) levels in tilled and no tilled soil. A, and B indicate treatments that differ at  $p < 0.05$  Tillage vs no till