

Figure 1. Extractable soil inorganic nitrogen at 10 cm depth during the cover crop growing season in a corn grain system. Solid lines represent the high nitrogen treatment, which included an application of N in mid fall. Dashed lines represent the standard fertility treatment. Fal, Int, and Post indicate the cover crop treatments of fallow, interseeded ryegrass, and post-harvest seeded cereal rye, respectively.

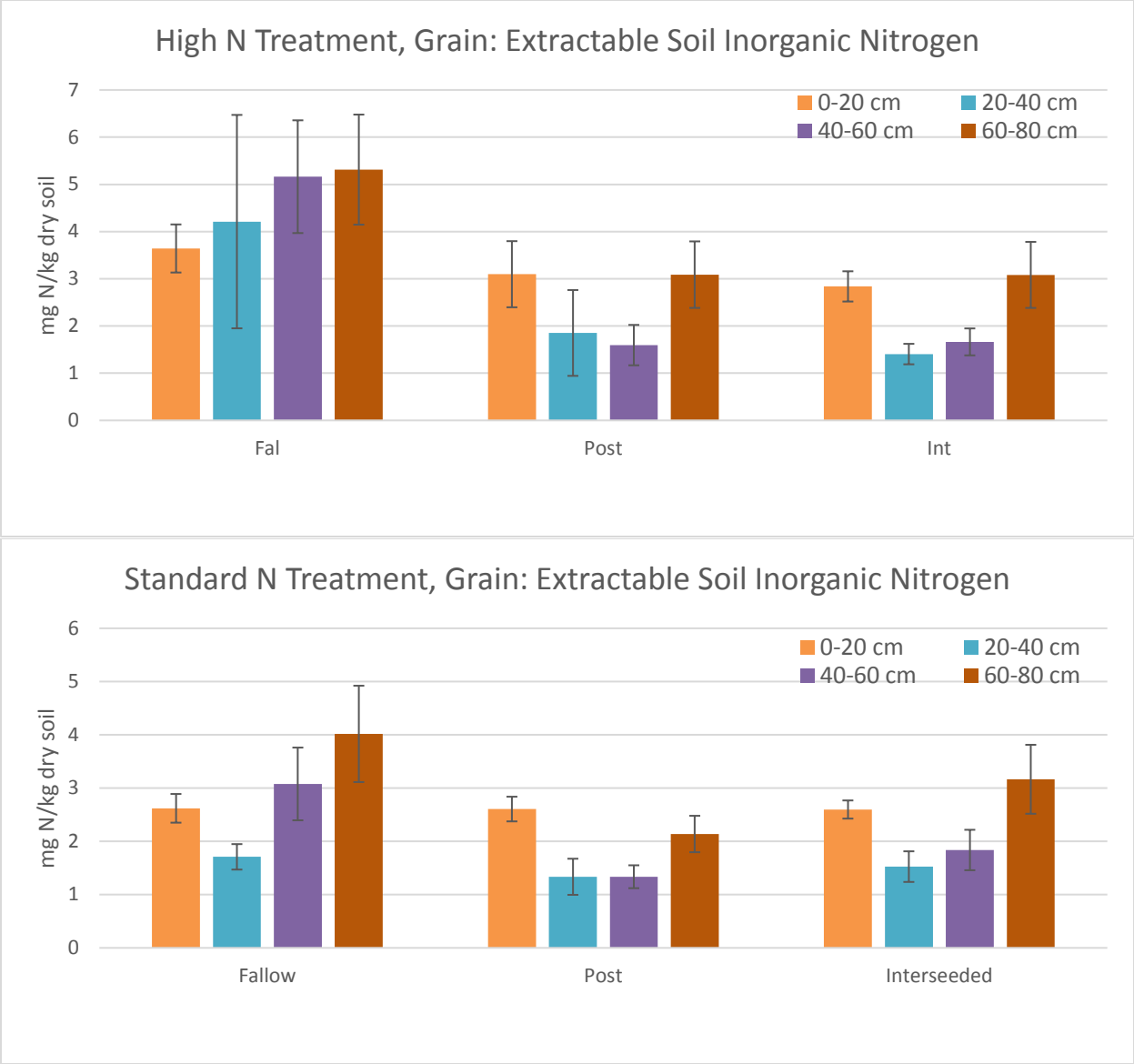


Figure 2. Extractable soil inorganic nitrogen four different depths at the end of the cover crop growing season in a corn grain system. Samples were collected in May 2018 to represent peak cover crop growth. The top graph is from soils in the high N treatment, and the bottom graphs is from the standard N treatment.

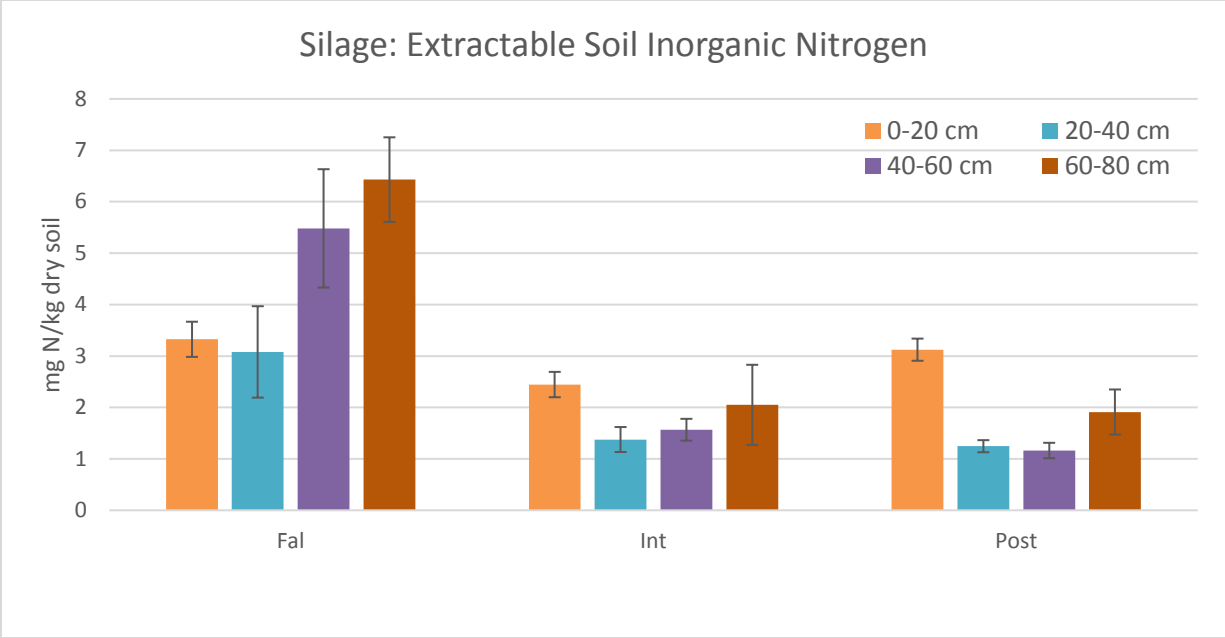


Figure 3. Extractable soil inorganic nitrogen four different depths at the end of the cover crop growing season in a corn silage system. Samples were collected in May 2018 to represent peak cover crop growth.

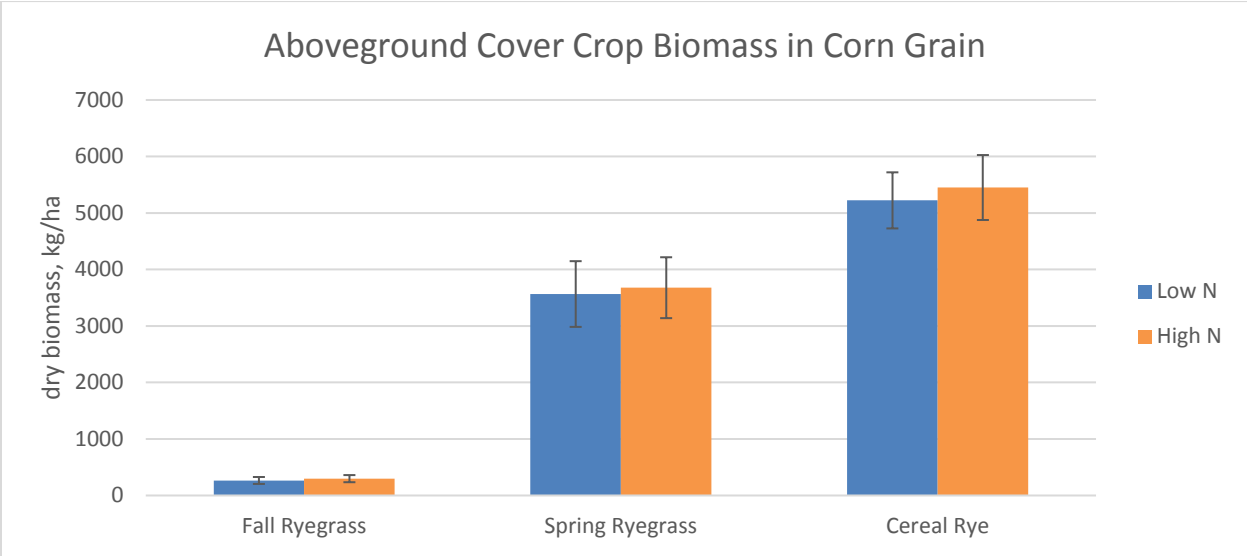


Figure 4. Aboveground cover crop biomass was clipped in late fall and late spring to represent peak cover crop biomass in each season. Both the low (standard) N and high N are shown in the corn grain system.

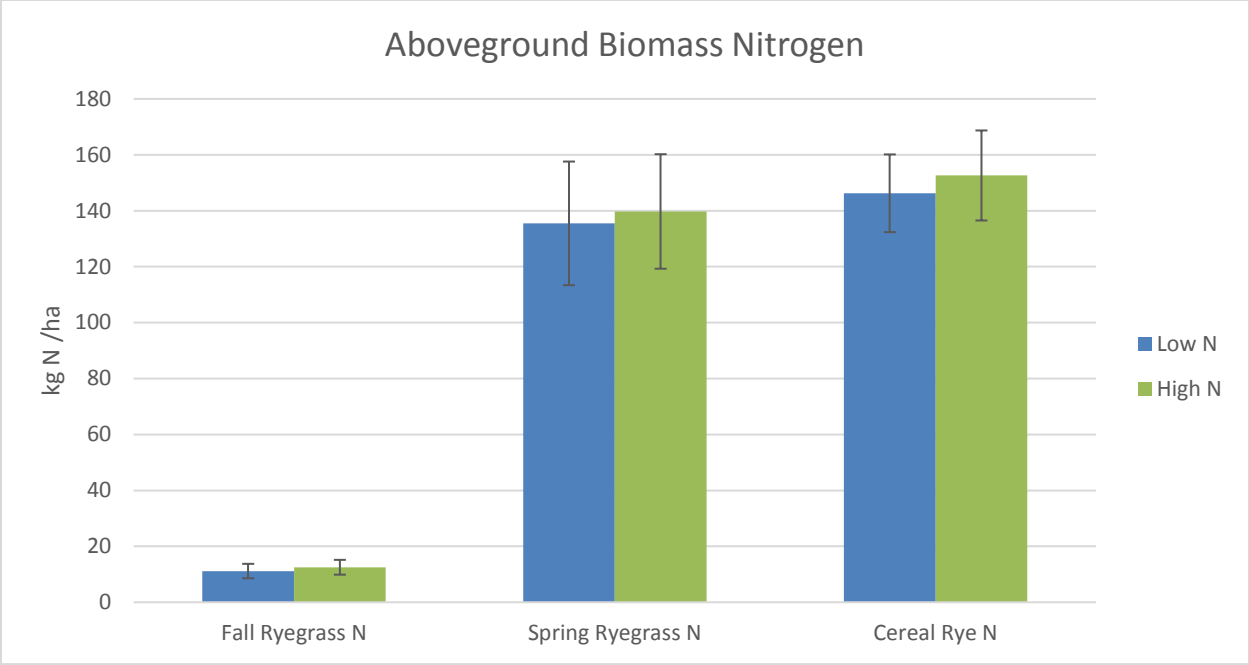


Figure 5. Aboveground cover crop biomass was clipped in late fall and late spring to represent peak cover crop biomass in each season, and the percent N was determined from this biomass on an elemental analyzer. Both the low (standard) N and high N are shown in the corn grain system.

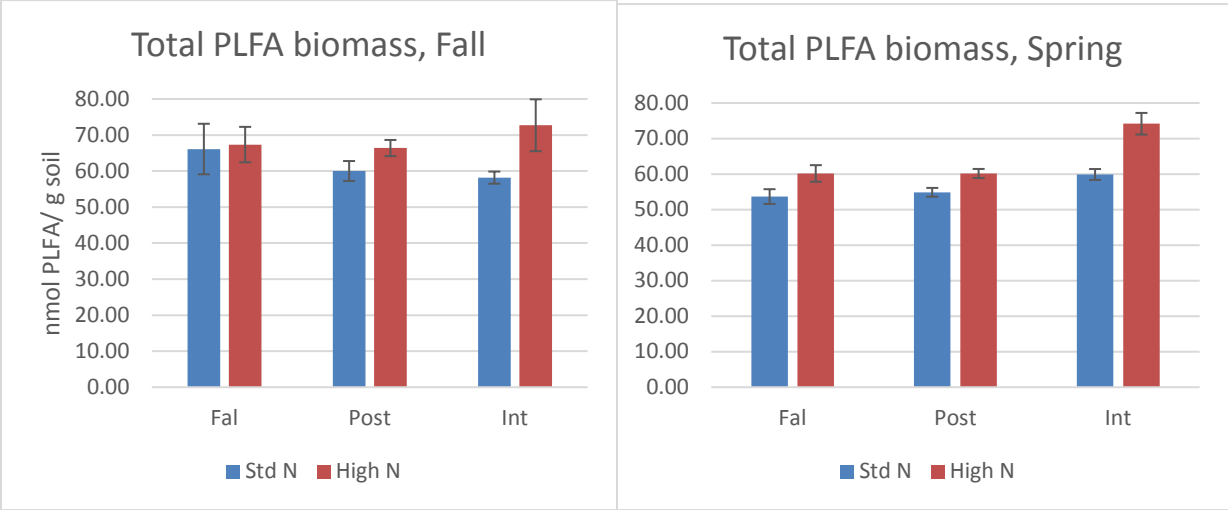


Figure 6. Total phospholipid fatty acids (PLFA) in nmol per g soil in the corn grain systems. Blue bars represent the standard N treatment and red bars represent the high N treatment.

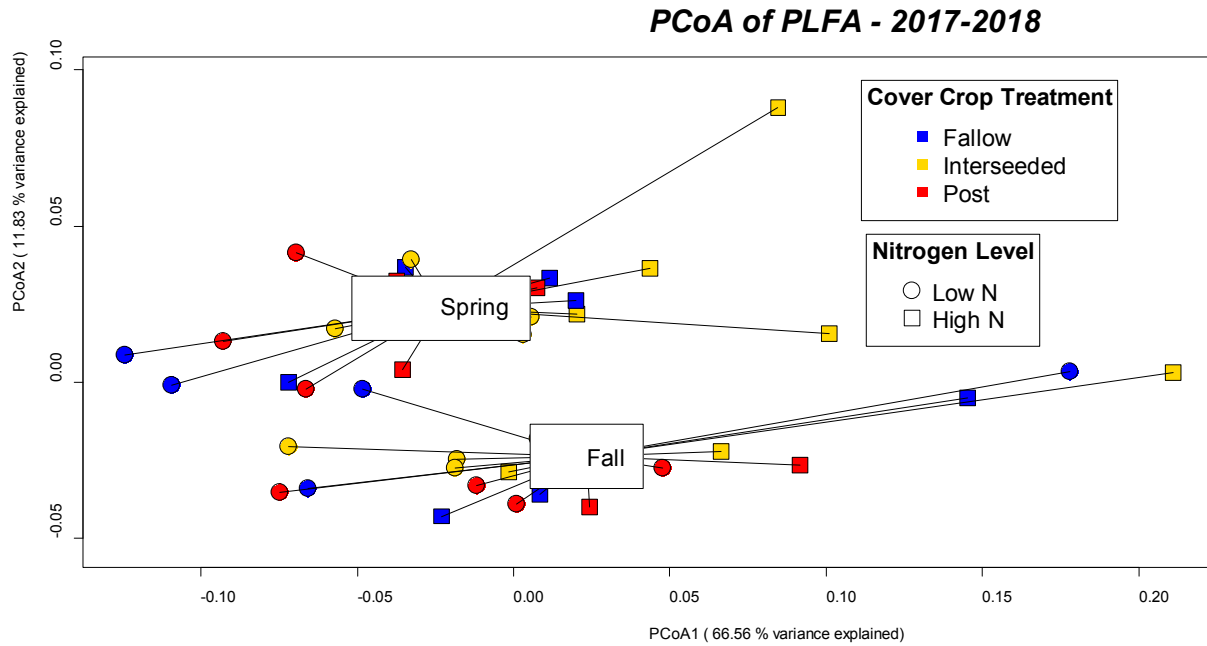


Figure 7. Principal Coordinates Analysis (PCoA) of phospholipid fatty acids (PLFA) with raw fatty acid peak data. Boxes overlaid on the graph show clustering by spring and fall seasons, and shape and colors of points corresponding to nitrogen level and cover crop treatment respectively.