RESEARCH UPDATE: MLC CORN

TRIAL DETAILS

LOCATION
Roper, NC

COOPERATOR
NCSU: Dr. Ron Heiniger

CORN VARIETY
Pioneer '1077 YHR'

AVG. SEED RATE
34,000

PLANT DATE
April 27, 2021

HARVEST DATE
September 16, 2021

TRIAL DESCRIPTION AND EXPERIMENTAL DESIGN

This field trial was replicated 4 times and arranged in a RBCD. Soil type is a Pettigrew muck.

TREATMENTS

Treatment	Rate*	Application	Row Spacing	Plot Size	Reps
MLC	2 qt/A	In-furrow	30 in	10ft x 50 ft	4
Control	--	--	30 in	10ft x 50 ft	4

*Treatments were applied with water at 5 gal/a.

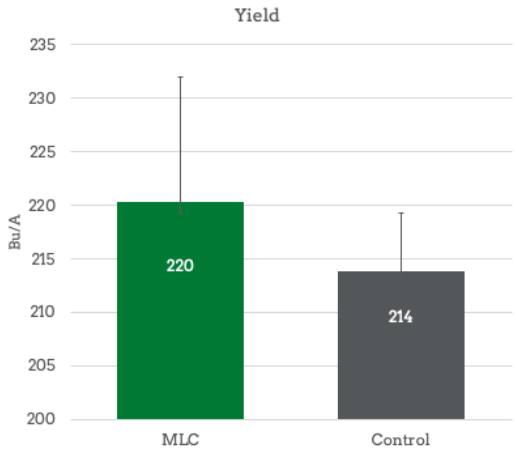
MAINTENANCE

All plots received 20 gal/a 30% UAN (64 lb N/a) broadcast at planting. On June 7, 42.5 gal/a of 30% UAN was applied with drop nozzles as a layby application. Acetachlor plus atrazine (2 q/a) was applied at planting and Steadfast Q (1.5 oz/a) with atrazine (1 qt/a) and Status (2.5 oz/a) was applied at layby on 7 June using drop nozzles to control weeds.

TRIAL RESULTS SUMMARY

Monty's Liquid Carbon (MLC) treatment had significantly greater biomass and greater plant uptake of both nitrogen and phosphorous. MLC had numerically greater yield with 7 bu/a more compared to the control when applied in-furrow at planting. MLC increased plant biomass by 14% compared to the control. MLC increased all nutrients in tissues assessed at V10. MLC increased N and P plant uptake by 15% and 26%, respectively. An average ROI of *$23.96/A* was achieved from 2 qt/a application of MLC in-furrow.

RESULTS



Treatment	ROI/Control per Acre
MLC	$23.96

Figure 1. Average yield in Bu/A and ROI calculated at $5.45 bu.

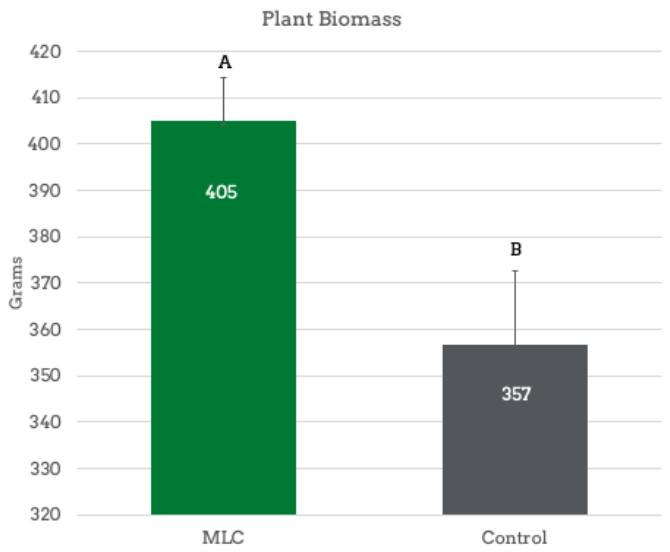


Figure 2. Plant Biomass in grams at V10 stage. MLC increased plant biomass by 14% compared to the control.

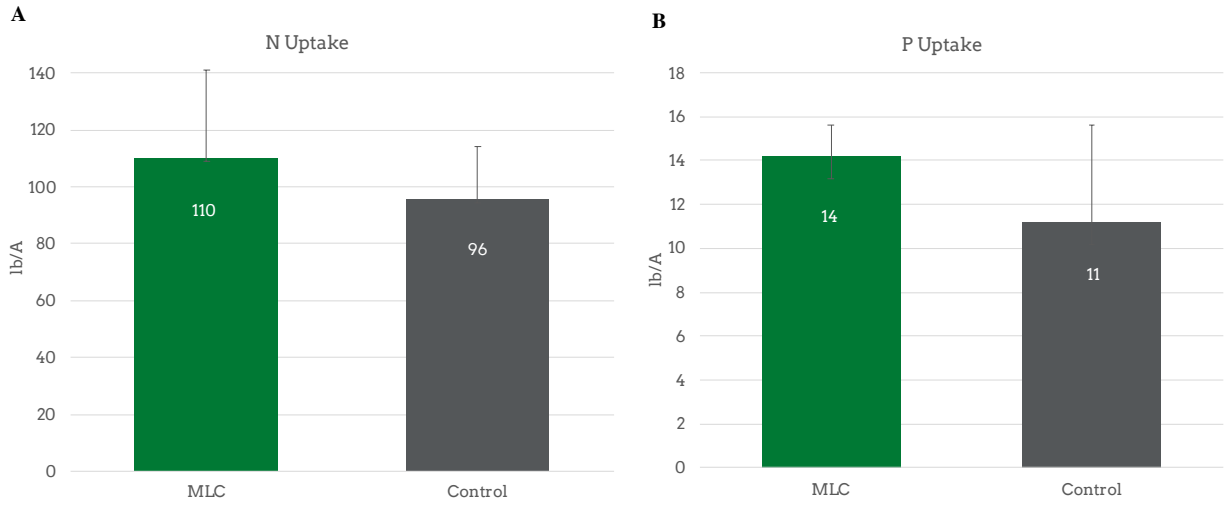


Figure 3. Plant nutrient uptake at V10 stage (A) Nitrogen, (B) Phosphorous.