



RESEARCH UPDATE: **MLC CORN**

TRIAL DETAILS

LOCATION

Ewing, IL

CORN VARIETY

P1077AM (110 day maturity)

AVG. SEED RATE

30,000

COOPERATOR

Extension Agent

PLANT DATE

May 24, 2021

HARVEST DATE

November 1, 2021

TRIAL DESCRIPTION AND EXPERIMENTAL DESIGN

This field trial was replicated 5 times and arranged in a strip-plot design and non-irrigated. Soil properties: pH: 7, CEC: 17.5 meq/100g, OM: 2.2%, BS: K 1.8%, Ca 72%, and Mg 9%.

TREATMENTS

Treatment	Rate	Application	Row Spacing	Plot Size	Reps
MLC	2 qt/A	In-furrow	30 in	20ft x 100 ft	5
Control	--	--	30 in	20ft x 100 ft	5

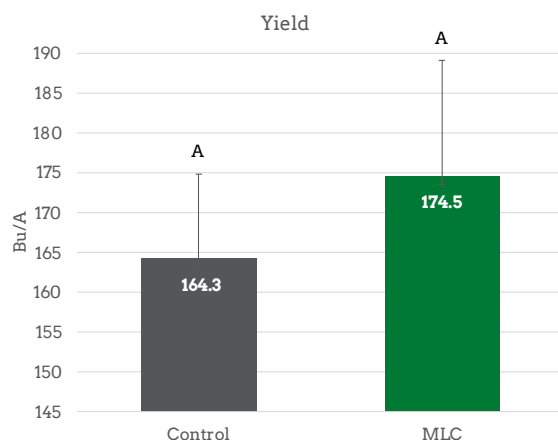
MAINTENANCE

All plots received a burndown application on 4/16/2021 of Roundup PowerMax 32 oz/A and Ammonium Sulfate 17lb/100 gal. Pre-emergence herbicide was applied on 5/24/21 including Roundup PowerMax 40 oz/A, Aatrex 4L 32 oz/A, Acuron 80 oz/A, 2,4-D LV4 16 oz/A, and Ammonium Sulfate 17 lb/100gal. Fertility was applied to all plots and consisted of a pre-plant (4/23/21) application of 0-0-60 at 150 lb/A and a pre-emergence application (5/27/21) of urea with Agrotain at 200 N/A.

TRIAL RESULTS SUMMARY

Monty's Liquid Carbon (MLC) significantly increased stand population by 6.25% (Fig. 3A), leaf tissue levels of K and B, and soil K and Bs K% within 30 days after application (DAP). MLC increase yield by an average of 10.2 bu/A (Fig. 1). MLC increased soil K and Bs K% by 22.3% and 21.8% compared to the control plots, respectively (Fig 2A and 2B). An average increase of 21% and 19% of K and B plant tissue content was measured 30 DAP (Fig 2C and 2D). MLC decrease soil compaction in the root zone from 6-11 inch depth (Fig. 3B). An average ROI of **\$45.62/A** was achieved from 2 qt/A application of MLC in-furrow.

RESULTS



Treatment	ROI/Control per Acre
MLC	\$45.62

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

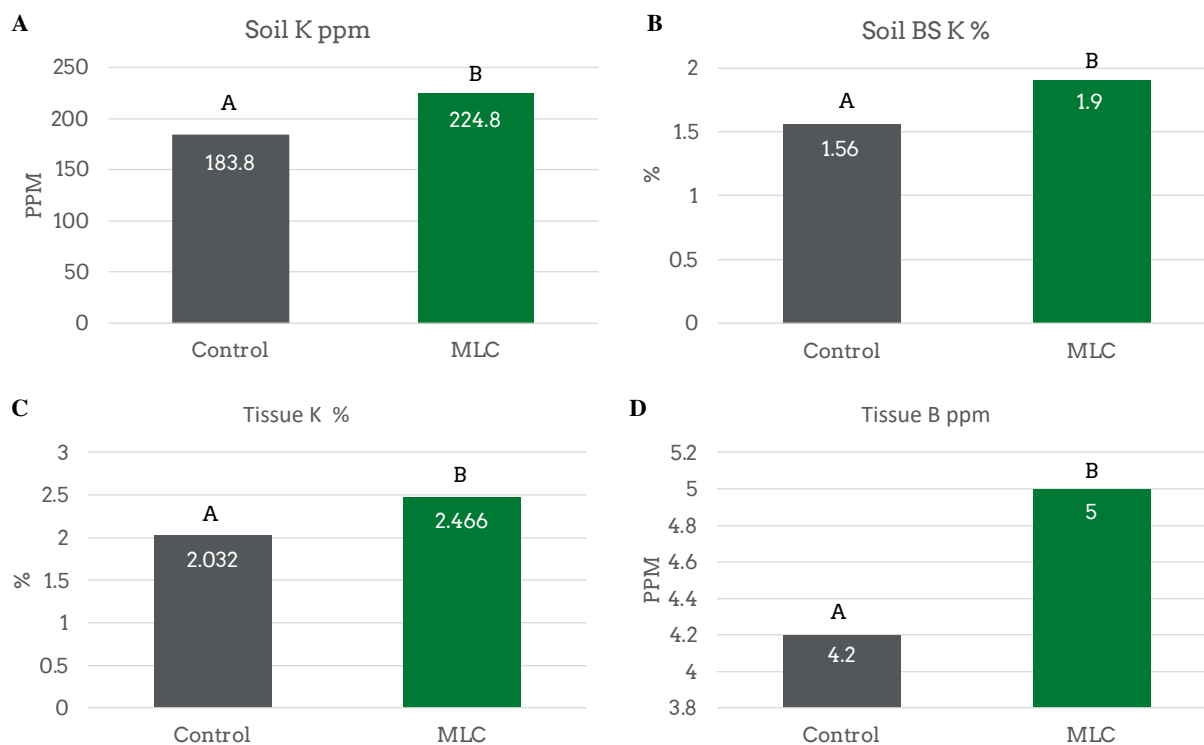


Figure 2. Soil and plant nutrients that are significantly increased 30 days after MLC application. (A) Soil potassium levels ppm, (B) soil base saturation potassium %, (C) tissue potassium levels %, (D) tissue boron levels ppm. Letters above bars that are different represent statistical significance at a P-value of 0.10.

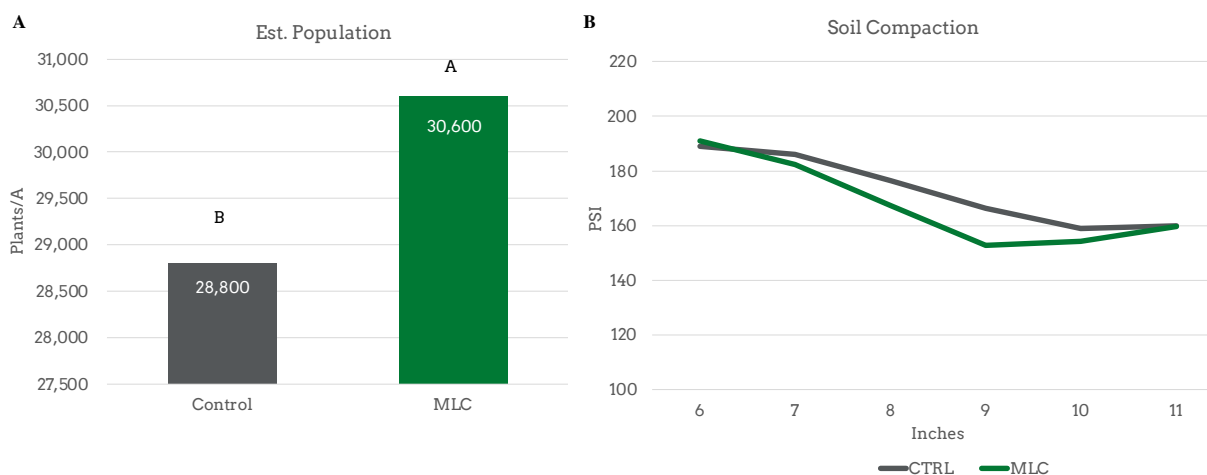


Figure 3. Average plant population represented in plant/A (A). Soil compaction levels in PSI from 6-11 in soil depth.