Micronutrient Evaluation - Corn (19-1219)

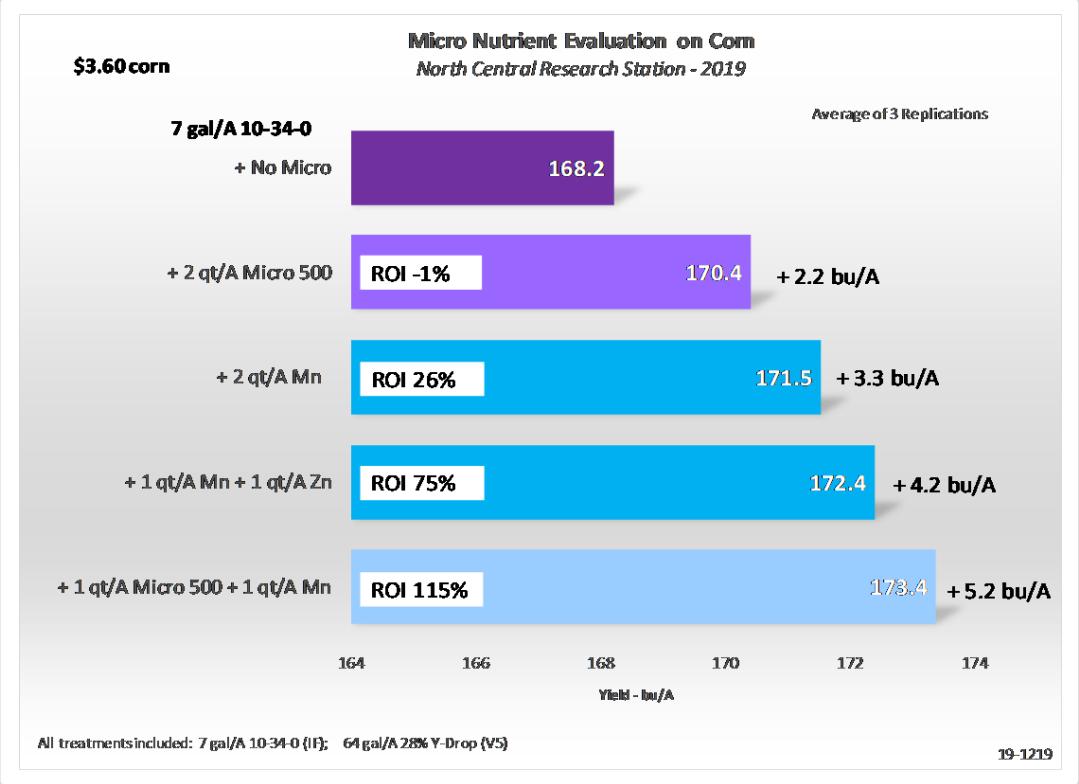
Experiment Info:	
Planted:	5/27/2019
Harvest:	11/5/2019
Yield Goal:	175 bu/A
Target Fert.:	193-85-184
Variety:	P9608 AM
Population:	32,000
Row Width:	30"
Prev. Crop:	Corn
Plot Size:	15 x 670
Replications:	3

Soil Test Values (ppm):	
pH:	7.4
CEC:	18.1
%OM:	8.2
Bray P1:	11
Bicarb P:	8
K:	59
S:	17
%K:	.8
%Mg:	19.2
%Ca:	79.6
%H:	0
Zn:	2.2
Mn:	2
B:	.7

Objective:

To evaluate the response of micronutrients on corn yield.

Economic times may have producers evaluating every input necessary for growing corn. Even though micronutrients are needed by the plant in small amounts they can still have an impact on final yields. This experiment used a base potassium source of 300 lbs/A 0-0-62 broadcast spread ahead of planting and a base phosphorus source of 7 gal/A of 10-34-0 through the planter. Pro-Germinator was not used in this experiment because it contains small amounts of micronutrients in its formulation. Each treatment added different AgroLiquid MicroLink micronutrients or combinations to the phosphorus source and all were applied in-furrow using a split stream application through the Precision Planting SmartFirmer. Return on Investment (ROI) is shown in the chart as dollars increased per bushel advantage over the check divided by the cost of the micronutrient treatment and shown as a percent.



LSD(0.2)6.1, CV:4.6%

Conclusions:

- The micronutrient manganese was especially low in this soil test. Each treatment that included that nutrient increased the yield over the check with no micronutrients.
- Micro 500 contains zinc, manganese, iron, copper and boron. When 1 qt/A of Micro 500 was used in combination with 1 qt/A manganese, the highest yield and return on investment was achieved. Utilizing a micronutrient package plus some additional manganese to address the deficiency is a beneficial recomendation. The 115% ROI covered the cost of the micronutrient and yielded an additional cost plus 15%.

Note: A 0% return would mean the extra bushels covered the cost of the micronutrients.