



Effect of eNhanCe Applied In-Furrow on Soil Test Values: Yield (20-1219)

Experiment Info:

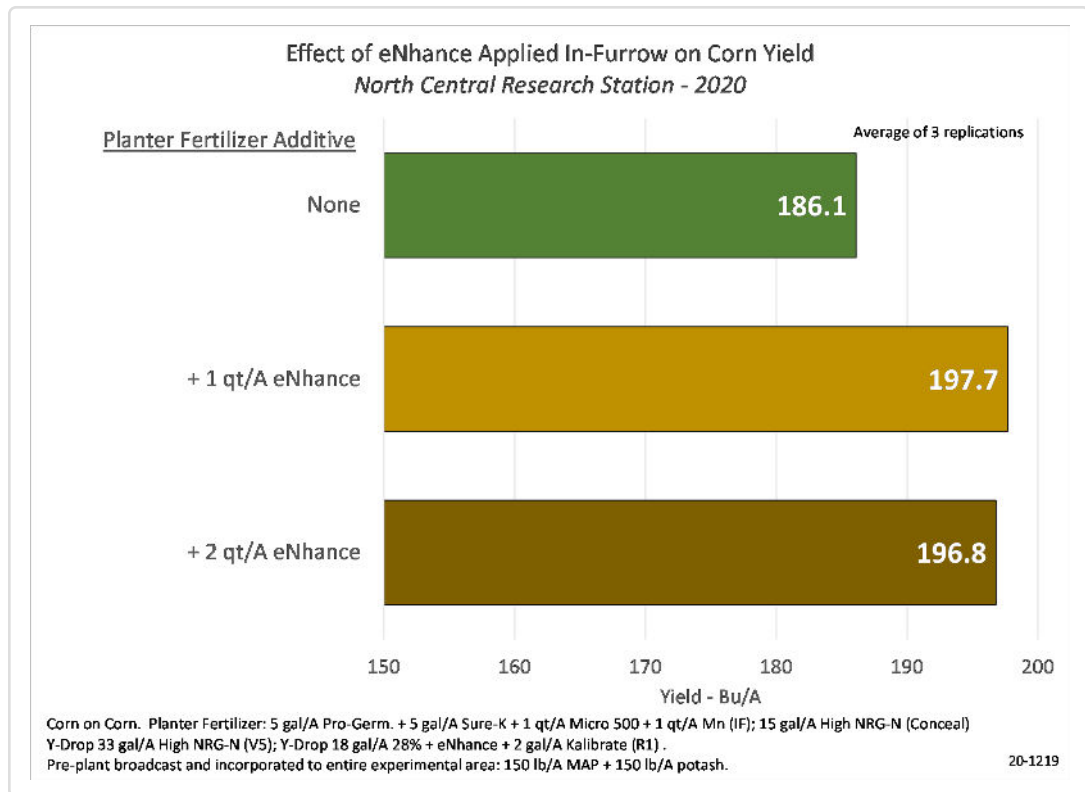
Planted:	5/7/2020
Harvest:	10/29/2020
Yield Goal:	175 bu/A
Target Fert.:	193-55-124
Variety:	P9998 AM
Population:	32,000
Row Width:	30"
Prev. Crop:	Corn
Plot Size:	15 x 172.5
Replications:	3

Soil Test Values (ppm):

pH:	7.6
CEC:	19.5
%OM:	7.8
Bray P1:	17
Bicarb P:	8
K:	95
S:	6
%K:	1.2
%Mg:	20.2
%Ca:	78.4
%H:	
Zn:	1.9
Mn:	1
B:	.5

Objective:

The fertilizer product eNhanCe has been demonstrated to be an effective sulfur additive to In-Furrow applications of planter fertilizers on corn. Even though it contains almost 9% sulfur (from ammonium-, zinc- and manganese sulfate) it is considered to be seed safe at recommended rates. In previous reports on this experiment, it was found that addition of eNhanCe to In-Furrow fertilizer had little or no effect on soil pH, soil test sulfur, phosphorus or potassium levels. However, what is the effect on yield? Can there be an increase even though there was no measurable effect on soil nutrients? In this experiment, three treatments were applied In-Furrow at planting: (1) Planter fertilizer alone; (2) Planter fertilizer + 1 qt eNhanCe, and (3) Planter fertilizer + 2 qt/A eNhanCe. The Planter Fertilizer was 5 gal/A Pro-Germinator + 5 gal/A Sure-K + 1 qt/A Micro 500 + 1 qt/A Manganese. Soil samples were collected from the same planter row in one replication for the no additive and the 2 qt/A eNhanCe additive. Yields were taken on 3 reps of those plus a 1 qt/A treatment.



LSD(0.1): 10.5. CV: 5.5%

Conclusions:

- Despite no strong evidence of eNhanCe changing soil test values compared to that of a no eNhanCe treatment, there was a significant yield increase with both 1 and 2 qt/A eNhanCe.
- eNhanCe assists with nitrogen uptake, and possibly other nutrient uptake. It is possible that there was some slight enhancement of early nutrient uptake as well as that of the sulfur from the eNhanCe itself.
- This type of experiment with soil sampling in the seed furrow could provide valuable information when coupled with tissue sampling plus replication of treatments over more plots.