



Effect of eNhance Applied In-Furrow on Soil Test Values: pH (20-1219)

Experiment Info:

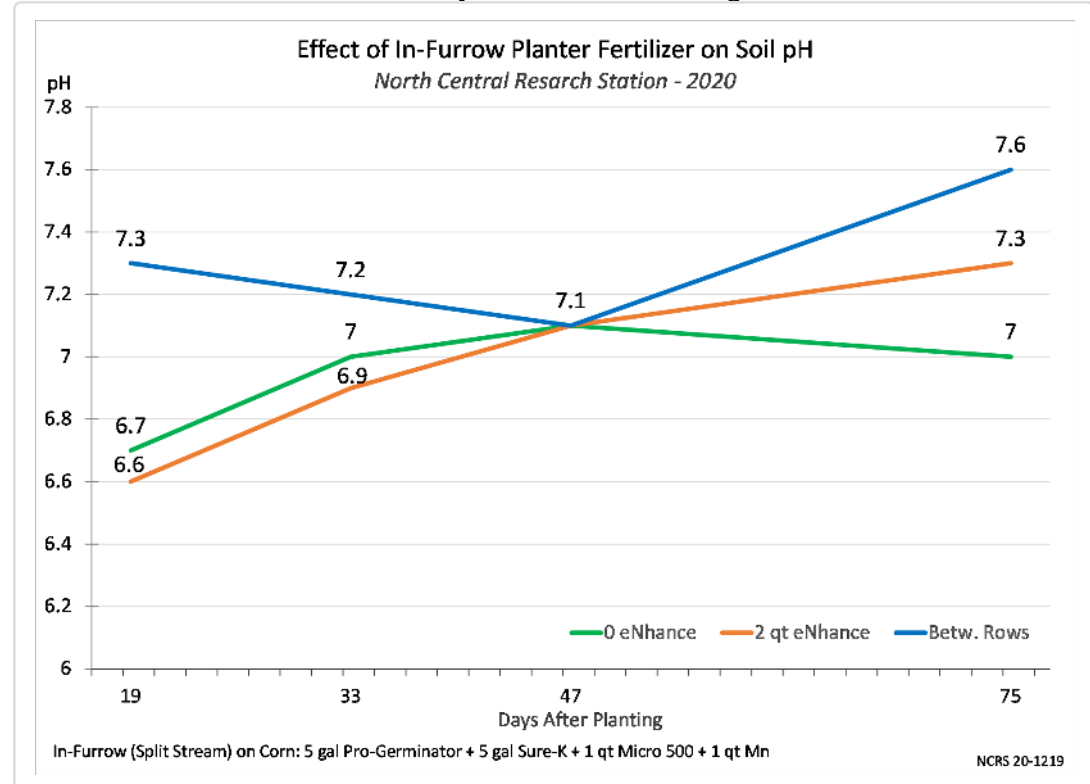
Planted:	5/7/2020
Harvest:	10/29/2020
Yield Goal:	175 bu/A
Target Fert.:	193-55-124
Variety:	P9998 AM
Population:	32,000
Row Width:	30"
Prev. Crop:	Corn
Plot Size:	15 x 172.5
Replications:	3

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, it is considered to be seed safe at recommended rates. According to the product label, the sulfur is derived from ammonium sulfate, manganese sulfate and zinc sulfate. There have been questions about the ability of eNhance to reduce seed zone soil pH when it is applied In-Furrow with planter fertilizer. However, it is elemental sulfur that has the ability to reduce soil pH due to the action of soil bacteria that convert the sulfur to sulfuric acid. But the effects of eNhance on soil measurements had not been measured, so an experiment was conducted. In this experiment, two treatments were applied at planting using a split-stream on a seed firmer: 1. Planter fertilizer alone and, 2. Planter fertilizer + 2 qt eNhance. Soil samples (6" depth) were collected in the seed furrow or between the rows. For this graph, the Between Row results were very close, so the average was used.



Conclusions:

- Based on the Between Row sample, which had no fertilizer, the soil pH was slightly alkaline at 7.3. The two planter fertilizer treatments had similar effects at lowering the pH after planting, and then saw pH elevation over time. This is likely due to plant uptake of applied fertilizer.
- The eNhance did not lower pH any more than the planter fertilizer alone. Both Pro-Germinator and Sure-K have pH values below 7 that would have a reducing effect.