# Effect of accesS at Sidedress on Corn Yield (20-714)

| Experiment Info: | |
|---|---|
| Planted: | 4/27/2020 |
| Harvest: | 10/20/2020 |
| Yield Goal: | 170 bu/A |
| Target Fert.: | |
| Variety: | P0306 AM |
| Population: | 33,000 |
| Row Width: | 30" |
| Prev. Crop: | Soybeans |
| Plot Size: | 15 x 210 |
| Replications: | 4 |

| Soil Test Values (ppm): | |
|---|---|
| pH: | 6 |
| CEC: | 10.2 |
| %OM: | 2.4 |
| Bray P1: | 9 |
| Bicarb P: | 0 |
| K: | 92 |
| S: | 3 |
| %K: | 2.3 |
| %Mg: | 16.5 |
| %Ca: | 66.6 |
| %H: | 14.3 |
| Zn: | 1 |
| Mn: | 5 |
| B: | 0.3 |

## Objective:

After multi-year evaluations, determine the better side-dress treatment for corn.

There are a number of additives available for application at sidedress to corn. In recent years there has been a reported shortage of sulfur in soils due to high yield crop demands and also from cleaner air no longer providing sulfur in rain. AgroLiquid has accesS which is an excellent additive for sulfur. It can be applied away from the seed at planting, or as is very popular, as an additive to UAN.. AgroLiquid also offers the sulfur product eNhance. This is as an additive to UAN solutions to reduce N losses and enhance uptake and not as a sulfur source. But due to enhanced efficiency it is possible to reduce the UAN application volume by up to 20%. It is added to 28% UAN at 2 gal/T and 32% at 2.25 gal/T.

In this experiment, a multi-year comparison of sidedress treatments was evaluated. The target N rate was 170 lb/A or 57 gal/A of 28% and 47 gal/A of 28%/eNhance with 18% rate reduction. There was no additional sulfur added to the eNhance treatment.

**Sidedress Comparisons in Corn**

*North Central Research Station (NCRS 714)*

| Sidedress treatment | gal/A | 2014 | 2016 | 2018 | 2020 | Avg. |
|---|---|---|---|---|---|---|
| 28% UAN/eNhance | 47 | 186.2 | 160.9 | 189.3 | 194.2 | **182.6** |
| 28% UAN + accesS | 57 + 4 | 206.4 | 164.3 | 198.2 | 204.1 | **193.3** |

Planter treatment: 3 gal/A Pro-Germinator + 5 gal/A Sure-K + 2 qt /A Micro 500.
Sidedress: Mid-row coulter 2014 and 2016. Y-Drop 2018 and 2020.
Sidedress applications approximately 30 days after planting.

LSD(0.01): 8.3. CV: 10.4%

## Conclusions:

- There is only 4 ppm S in the Fall 2018 soil test at this location and it is apparent that there was a strong demand for sulfur as indicated by the higher yields with accesS. Although the UAN rates were different, these are rates that often are used and it cannot show for certain that the Nitrogen rate may be a factor. But highest yield was where accesS was used.
- Sulfur should be part of every high-yield corn nutrient program, and accesS is both easy to use and is effective.
- In another experiment it was shown that addition of accesS to 28%/eNhance has increased corn yield vs no accesS (20-506). Research will continue with sulfur.