

# CEC NEWS

Volume 14

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## Planning for 2016 & Beyond-

It is always important to look at what's ahead of you, more so, than what is behind you. CEC continues to evolve by constantly assessing and improving our facilities, equipment, and products, and having the employees in place to succeed in the future.

Since last spring, we have added 8000 sq. ft. of dry fertilizer storage and also added more liquid storage tanks, enabling us to store over 1.5 million gallons. Additionally, we upgraded our conveyor at the railroad siding to improve our speed

and efficiency unloading dry fertilizer rail cars.

We have purchased a new five-hopper dry fertilizer tender trailer, capable of transporting 30+ ton. A 2005 Peterbuilt ten-wheel box delivery truck was added, as well as, two 2012 Rogator Crop Sprayers.

A 2016 Peterbuilt road tractor and new seven-hopper cornmeal auger trailer were added to enhance delivery service for our feed customers. We also completed improvements at the LeRoy cornmeal plant

that included updating our computer automation, automatic inventory measurements, and adding a second grinder.

Joe Augello joined our staff in January. He is a Certified Crop Adviser with nine years experience as a commercial applicator. In addition to operating all custom application equipment, Joe will be working on researching and implementing new technology for our equipment. Additionally, he will also be working with our sales team and with new and existing customers.



### In This Issue:

- Protecting Nitrogen from Environmental Loss
- Pop-Up Fertilizer—Would You Benefit?
- Granular Pelletized Gypsum

Our Investment in our future is also an investment in your future.

Treatment	Avg Moisture %	Avg Test Wt. lbs.	Avg Yield Dry Bu./Ac.	Return Advantage/Acre @ \$4.00/bu Corn
Guardian DF	19.8	57.0	184.09	\$56.32
SuperU	19.9	56.9	179.55	\$30.45
30 % Untreated Urea/ 70 % ESN	19.7	57.5	179.02	\$33.08
Agrotain Dri-Maxx	19.6	57.2	177.30	\$33.98
Untreated Urea	19.8	57.2	166.25	0

**Table 1. Summarized 2015 Plot Results. Note: The return advantage per acre is after the additional cost of the NEF treatments.**

## Protecting Nitrogen from Environmental Loss

With lower grain prices, tighter margins, and an ever-increasing focus on the agriculture sector's impact on our environment, protecting nitrogen from environmental loss is a growing concern. According to the Food and Agriculture Organization (FAO), crop production has a profound effect on the environment, representing a substantial contributor to potential water and air pollution through unprotected nitrogen sources. This growing concern was a major contributing factor in encouraging CEC and Krenzer Farms of Scottsville to participate in an unbiased, joint venture to explore the effectiveness of several of the nitrogen efficiency fertilizer (NEF) treatments presently on the market.

CEC Agronomist, Jeff Williard, established a product test plot on 53 acres of Hilton Loam soil with 0-3% slope located in Scottsville and operated by Krenzer Farms. The soil had an average pH of 5.7 with an average organic matter content of 1.3%. The entire plot was planted on April 28, 2015 using Pioneer P0157AMX hybrid corn seed at a seeding rate of 35,000 seeds per acre on 30 inch row spacing. Four NEF treatments (Guardian® DF, SuperU®, Agrotain®Dri

-Maxx and a 70% ESN®/30% untreated urea blend) along with untreated urea were compared in a randomized block design with each treatment replicated three times. Each treatment was applied at a rate of 500 pounds per acre in the form of 26-0-26 pre-plant broadcast dry fertilizer using an Air-Flow self-propelled field applicator to provide the future grain corn crop with 130 units of nitrogen per acre. The surface-applied fertilizer was incorporated within 24 hours of application. In addition, 22 gallons per acre of liquid starter (18-18-0-3.2sulfur w/boron + zinc) was placed in a two x two band at the time of planting, providing an additional 45 units of nitrogen per acre for a total of 175 units of nitrogen per acre. There was no additional nitrogen applied to any corn in this trial.

The corn was allowed to mature and harvested October 10, 2015 at an average moisture of 19.8% and an average test weight of 57.2 pounds per bushel. Each replicated treatment was harvested and weighed. All weights were averaged for all three replications of the four NEF treatments and untreated urea. The results have been summarized in Table 1 above based on plot yield data

and 2015 fertilizer prices.

Based on the harvest reports, there were apparent financial advantages to protecting the applied nitrogen against environmental loss in spite of the added upfront cost of the various products available. In this particular trial, Guardian DF produced the greatest return on investment, but there is reason to believe that the ESN/urea blend would have yielded a substantially higher return if not for the significant yield drag from the nitrogen loss from the untreated urea portion of the blend.

A surface-applied Urea Ammonium Nitrate (UAN) treatment will be included in the subsequent comparison study in 2016 to quantify the financial advantages of protecting the urea and nitrate portions of UAN against environmental loss. These and other published study results are our way of demonstrating CEC's ongoing dedication to providing value-added products and services to our customers.

So, stay tuned for the next addition of our newsletter for the latest results or contact us at (585)345-4141.

## Look What Popped Up!

In the 2015 growing season, CEC customer, Joe Ryan, decided to compare the use of CEC's Platinum pop-up fertilizer blend in furrow with no pop-up applied. Joe broadcasted and incorporated 200 pounds per acre of a 26-0-26 urea/potash blend pre-plant along with banding 220 lbs./acre of a blend of 10-20-20-6s with boron and zinc blend in his dry corn planter. Joe wondered what would happen if he turned off the valve to the pop-up fertilizer tank for one pass through the field. This photo was taken right before Joe side-dressed this field of corn. There is a definite height difference between the corn with the pop-up applied and the one with no pop-up applied. There were no loads of grain weighed at harvest so there is no documented evidence of a yield difference between the two sections of the field. Even though there was no documented yield advantage determined, there was enough perceived increase to warrant a side-by-side, replicated study for 2016. Be on the lookout for our next newsletter issue to see the results.



CEC Customer, Joe Ryan, standing in his corn field in Spencerport. This field was all planted on the same date in 2015.

## Are Pop-Up Fertilizers Beneficial for Your Operation?

Pop-up fertilizers are seed-safe, in-furrow fertilizers applied in-row with the seed. Often, insecticides, such as Capture® LFR® for corn, can be added to the blend. Starter fertilizers differ in that they typically are placed in a 2" x 2" band, away from the seed placement, at a higher rate.

Pop-up blends can benefit the plant by allowing an earlier, more vigorous start with better root mass. This can lead to healthier plants, better quality crops, with higher yields.

CE-Crocker produces their own pop-up blends. The standard base blend is 7-20-4-1.4s with several packages of essential micronutrient and yield-boosting additives available. CEC's pop-up is a high-quality, virtually clear, stable product that flows well even in cold temperatures! Our easy-to-handle product is also priced less than most competitor's brands!

Available in bulk, or 275 gallon totes, contact your CEC sales rep for more information.

# Granular Pelletized Gypsum Now Available!

CEC now inventories a granular pelletized gypsum. Derived from calcium sulfate, it is 21% Calcium, 17% Sulfur, with a bulk density of 56 pounds per cubic foot. It can be blended with other granular fertilizer ingredients or applied separately. Gypsum is highly soluble and is, therefore, an excellent source of calcium and sulfur, especially for those crops that are particularly responsive to either calcium or sulfur.

There are, however, a few misconceptions about gypsum that need clarification in order to use it most efficiently. A common misconception is that gypsum will help reduce mechanical soil compaction. Even though there is no research data to support that claim, gypsum has proven to reduce the possibility of crusting on the soil surface by increasing calcium saturation of the surface layer. This can benefit the grower by reducing the possibility of inhibited seedling emergence. A second misconception is that gypsum will increase soil pH due to its significant calcium content. It is true that gypsum contains significant amounts of calcium, much like agricultural lime (ag lime), but gypsum consists of calcium sulfate, where as, ag lime consists of calcium carbonate and magnesium carbonate. The acid-neutralizing properties of ag lime are caused by the carbonate portion of the lime, not the calcium portion.

## Contact Us

Give us a call for more information about our services and products

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Information contained herein was obtained from multiple sources & publications. Changing commodity, fertilizer &/or chemical markets may make some information outdated or obsolete.



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