2011 Research Trials Show Promising Results

Corn Starter Fertilizer Trials

We have been experimenting with different corn starter blends and additives for 5 years in our research trials. Nothing has shown a more positive response than adding AVAIL Phosphorous Enhancement to a starter package. Whether it is 10-34-0 in a 2x2 placement, or a pop up starter such as 9-28-2, when adding AVAIL we have consistently seen positive results. Below is a chart with all the trials we have done with AVAIL in corn starter fertilizer, with an average return of 10.75 bushels per acre over basic starter fertilizer!

We have also found that because the corn plant is taking up more phosphorus, it is also bringing up more micronutrients. When Corn Mix (micro blend highest in zinc) is added, we see a combined return of 14.45 bushels per acre over basic starter fertilizer!
Foliar Feeding “to put the icing on the cake”

Build your base fertility, protect your N, P, & K, get your pH in line with lime, and then...add the icing to the cake with foliar products!

Our research plots have routinely showed that foliar feeding does pay, if you choose a basic foliar mix that makes agronomic sense. It is important, however, to remember that supplemental foliar feeding plants is just that, supplemental! Products and practices such as nitrogen stabilizers, phosphorous efficiency improvement, lime, drainage, and base fertility build the base for successful yields, and foliar products are more of an “icing on the cake” idea to capitalize on your previous investments.

**Corn Foliar Fungicides**

Early fungicide applications are a new introduction to the industry in the past two years. We began testing V5 applications in 2010, and had extremely positive results in all of our trials. The idea for these applications is very similar to the Corn Mix EDTA application at the same timing: keep the plant healthy and mitigate stress to develop the maximum potential ear size during the critical early development period. We chose to use Quadris and Quilt Xcel fungicides in our trials, because they are the only strobilurin fungicides known to give a growth regulator effect (green up of the plant), and have xylem movement throughout the plant, providing continued protection as the plant grows.

In 2011, with late planting and earlier disease development, Quilt Xcel (curative and preventative) outperformed Quadris (preventative only), especially where applications were made toward the V7-V8 timeframe. Our trials show the best time to apply is V4-V6 with Quadris, and V6-V8 with Quilt Xcel. **Combined results show an average yield gain of 6.61 bushels in a foliar application!**

Where the fungicides were combined with Corn Mix EDTA, we saw results from 9-30 bushel advantages. Consider trying a field of Quadris/Corn Mix at V4-V6 on your farm this year!

**What we learned about wheat fungicides in 2011.**

There is no doubt that 2011 was one of the most challenging years we have had in a long time raising wheat. Extreme wet conditions in the spring made fungus a problem on wheat, and later wet weather threatened the plants with head scab. In general, we saw very good response with Quilt Xcel protecting the leaves from diseases this spring, and got significant yield response where fields were treated. It is hard to distinguish which application did the most good, if one was better than the other, short of comparing them to non-treated fields. It was our observation in scouting fields that the Quilt Xcel definitely lived up to its expectations, keeping the flag leaf clean and building a base for high yields.

We recommend considering this application again this year if we experience similar conditions, and leaving the head scab application up to the University weather models to determine whether an application is needed. These past two years have proven that timely ground applications for head scab are undoubtedly more effective than aerial applications in wheat. Coverage of the fungicide on the head of the plant, with a larger volume of carrier is critical to the suppression of head scab!
Long term results show protecting your nitrogen with a stabilizer is a great investment!

All five years of doing research with Buckeye Ag Testing, we have had trials involving the effectiveness of Nutrisphere-N, Instinct, and other nitrogen stabilizers. This long term study involves both pre-emerge and side-dress applications of UAN 28% liquid nitrogen, as well as 46-0-0 Urea nitrogen. Throughout the years of testing, we have experienced all kinds of weather patterns, putting the products to the test to see how consistent and effectively they can manage the nitrogen and increase corn yield.

**Nutrisphere-N side-dress 28%**

Placing Nutrisphere-N in a side-dress application of UAN 28% has been the largest and longest part of our study with nitrogen stabilizers. We have seen visual results between treated and non-treated plots, and the yield results back up what we see with our eyes. Nitrogen is the most important nutrient to the corn plant, and Nutrisphere-N has been able to manage that nitrogen season long, providing a 4 year average gain of 16.3 bushels!

**Pre-Emerge N Protection**

In 2010, we studied the effectiveness of the nitrogen stabilizers in a pre-emerge situation, applying 50 gallon of 28% with and without Nutrisphere-N, as well as Instinct and other competitive products. Nutrisphere-N and Instinct both showed positive yield results when compared to the untreated check. **Nutrisphere-N showed at 6 bushel advantage, and Instinct showed a 3.8 bushel advantage!**

By using Nutrisphere-N nitrogen manager, you are able to protect your nitrogen from being lost through volatilization, nitrification, and leaching. Keeping more nitrogen available to the plant will lead to stronger, healthier plants, stronger stalks and roots, and higher yields. Competitive products haven’t shown the consistency that Nutrisphere-N has shown us in these trials. It makes economical sense to take care of the most important nutrient, and one of the most expensive inputs to your corn crop, so that it is not lost to the environment!
MTM improves manure nutrient efficiency, animal health, and handling!

Specialty Fertilizer Products introduced More Than Manure (MTM) on February 13th as a product that helps to manage the nitrogen loss from volatilization and leaching, as well as keep the phosphorous from becoming fixated in the soil and unavailable to the plant. It is a product specifically designed for manure, based off the successful polymers found in AVAIL and Nutrisphere-N.

MTM was originally designed for the agronomic benefits of managing the nitrogen and preventing fixation of the phosphorous in liquid and dry manures. We have had outstanding yield results with the AVAIL and Nutrisphere-N products, and expect the same response from MTM. Much like the products for dry and liquid fertilizer, MTM makes agronomic sense. Keep more of the nutrients available to the plants for a longer period of time, and more nitrogen and phosphorous will be taken up by the plant. More nutrient uptake by the plants always equates to a healthier plant, and higher yield potential. Trials throughout the corn belt are averaging around 10 bushels per acre increase where MTM is used on Hog, Dairy, or Poultry manure.

How do I apply MTM to my manure?
The rate is simple, 18 oz. per acre. With liquid manure, dump in the pit or lagoon before agitating, and with dry manure spray it over the top after application with at least 15 gallon of carrier. It is easy to handle, and non toxic to animals and the environment!

Side Benefits to More Than Manure
- Immediate ammonia reduction in the air
- Reduced crusting on manure pits
- Less flies and rodents due to less crusting
- Decreased odor, better animal health
- Solid reduction on bottoms of pits/lagoons
- Foam reduction from feeding DDG’s

We have “More Than Manure” in stock if you are interested in trying it on your farm.

Learn more by searching for “more than manure” on YouTube!

Why is MTM good for the environment?
MTM helps to keep nutrients in forms available to the plant, instead of letting them get converted to forms susceptible to loss, or fixated in the soil.

Phosphorous—MTM helps to keep the phosphorous in the BrayP1 form, available to the plant. It does not keep it in solution with a chance for runoff, but it does keep the phosphorous from fixating and becoming unavailable to the plant. Keeping the Phosphorous in the plant available form ensures the plant takes up more P, leaving less in the soil for potential runoff.

Nitrogen—Like phosphorous, MTM helps to keep the nitrogen from the manures in the ammonium form, stable and less likely to be lost. More nitrogen into the plant, larger healthier plants, and more yield potential pulling more nutrients from the soils leaves less nitrogen available to be lost.
Burndown Essential to Resistance Management

Resistant weed problems have progressed into major weed control issues in the past two years. It is essential to have a plan to not only fight resistant weeds before they get too big to kill, but also to be a good steward to the new technologies as they arrive so that they are useful for years to come.

Marestail has been the resistant weed that has given the most widespread problems in Ohio, and we have learned in the past year what works, and what does not work, when it comes to marestail control.

Burndown applications are essential to controlling marestail. Effective control can be achieved if the marestail are still in the rosette stage, and 2,4-D combined with a proven residual and glyphosate are included in the plan of attack. Killing the first flush of marestail before they bolt is the key to control. An effective residual such as Sonic will help to hold back the next flush until the crop canopies and the germination cycle is complete.

If 2,4-D cannot be included in the burn-down application because of planting restrictions, herbicides such as Liberty, Sharpen, or Gramaxone may be used to help in the burndown. Keep in mind these herbicides are more susceptible to weather conditions in the amount of control they will provide. Also, when using Sharpen many residual products cannot be used in conjunction without planting restrictions. Be sure to check the label before using Sharpen for marestail control.

Liberty Link soybeans have been suggested as a viable option for an in-crop application for marestail control. Sound management practices such as burndown with residual should still be utilized, as Liberty is weaker than glyphosate on key weeds such as lambsquarters and several grasses.

Below is a 2010 OSU marestail study. Notice a 14 bushel advantage where effective burndown and residual herbicides are used correctly!

Get to Know the Enemy
Marestail 101

Marestail is tough, hence its nickname “Ironweed”. In order to control it, we must understand its growth habits and basic biology.

-Marestail has 2 modes of emergence - late summer into fall & late March through June.

-Marestail remains in low growing rosette stage thru late April, and then elongates (bolts) to a height of 3-6ft. Plants that emerge in the fall will start bolting faster than spring emerged plants

-Marestail competes with soybeans throughout the growing season, and mature in late summer to early fall.

-Marestail has the ability to produce over 250,000 seeds per plant, with up to 80% viable immediately off the plant.

-There is documented widespread resistance of Marestail to Glyphosate and ALS Inhibitors (Classic, First Rate, etc.)

Dow AgroSciences has developed the Enlist herbicide system for both corn and soybeans. Enlist will give more options for herbicides, including a new form of 2,4-D that can be applied over the top of soybeans. Visit the website for more info!

www.enlist.com
Thank you for taking the time to read our newsletter. The articles in this newsletter are always topics that we feel are important and relevant to you, and we welcome the ideas and concerns you would like to be addressed in upcoming issues of Steppin’ Up. As always, we appreciate your business and the opportunity to serve you! Have a safe spring!

Assess wheat stands for yield potential.

Much of our 2011-2012 wheat crop was planted later than usual, and experienced less than ideal conditions throughout the winter. That being said, a lot of the wheat looks pretty good where it wasn’t damaged by water. It will be important to assess your wheat stands and determine what the yield potential is. This will help you to make an educated decision, along with insurance and crop prices, whether to keep your wheat field or plant it to another crop. Below is a website to a video from Penn State to help you assess your stands and determine yield potential. If you need help in this process, please contact us.

http://cmeg.psu.edu/video/wheat_stand/wheat_stand_assessment.cfm

Find this link on our website www.bambauerfertilizer.com