

# SFG UPDATE



**Smith Fertilizer & Grain**  
**January/ February 2011**  
**Mark Young**  
**Knoxville Agronomy Manager**

Did you know about 41% of corn yield in the United States is directly attributable to the use of nitrogen fertilizer? Regardless of the advances that crop breeding and modern bioengineering have brought to increased yield potential, fertilizer is still a major component of yield.

It's not just nitrogen fertilizers that are critical to yield! Crops require sixteen other essential nutrients to maximize their yield potential. The three that are required in the greatest amounts are nitrogen, phosphorus, and potassium. There is no disputing the fact that for most crops, nitrogen is the nutrient that has the largest effect on yield. For crops that don't require nitrogen fertilizer, like soybeans and alfalfa, not applying appropriate amounts of phosphorus and potassium usually limit yield the most.

Even in crops that require nitrogen fertilizer - phosphorus, potassium and the other essential nutrients are critical to the nitrogen response. Balance nutrition may be one of the most important components of high yields. No nutrient stands alone in importance to crops. Adequate amounts of soil phosphorus promote the uptake of ammonium nitrogen, and in the crop itself, phosphorus is critical for nitrogen metabolism and for all of the energy transfer reactions.

Potassium is critical for efficient nitrogen utilization because it is necessary to drive the enzymes that assimilate nitrogen into biochemical compounds. Also, potassium is critical to maintaining water relations in crops.

It appears that the most profitable fertilizer rates are based on crop response, fertilizer costs and commodity prices. The optimum rate is where the yield increase just pays for the last pound of nutrient. This is usually just below the maximum yield level, but this relationship changes with the price of fertilizer and commodity prices. Given today's fertilizer and commodity prices, maximum economic yield is still very near the maximum yield potential.

To get the most return from applied fertilizer, have your SFG agronomist help put it where you have the best chance of getting a return on your investment. Obviously, this is going to occur on your higher yielding fields and/or on soils with low soil test for P and K.

In 2011, you will be shooting for yields higher than ever before. Many factors contribute to crop quality. Good hybrids and varieties, timely planting, proper plant populations, good pest management, and good weather are all necessary, but a good fertility program, from SFG, will contribute to a significant portion of the yield.

High yields require high fertility. Your goal should be to build your soils to a high enough fertility level so that you can reach your maximum yield potential for any given crop rotation and weather condition. High soil fertility supports yields in good years; it also provides yield stability in less than ideal years. All in all, maintaining a good fertility program will help get the most from your fields in any given year.





**Jerry Don Johnson**  
**Albia / Centerville Agronomy Sales**

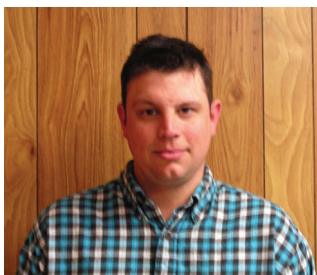
Frost seeding is the broadcasting of legume and grass seed on existing grass establishments. Frost seeding is easy and relatively inexpensive. Far less labor and energy is required for frost seed than conventional seeding methods.

According to Stephen Barnhart, ISU Extension agronomist, there are some keys to being successful at frost seeding.

1. **Select a suitable site.** Areas with thin stands of grass will have a greater success rate than those with vigorous stands. Areas with poor drainage and low PH are better suited for clovers and trefoil than alfalfa.
2. **Control weeds.** Start planning in advance. Prior to reseeding, spray pastures with a quality pasture chemical to control weeds. Weeds reduce stand establishment and can be controlled by clipping once legumes are established.
3. **Test soil and apply needed lime and fertilizer.** Again, planning a year ahead of reseeding is important. Test soils to determine what action is needed to maintain adequate plant nutrients. Lime should be applied 1 year ahead of reseeding for best results. Nitrogen should not be used the season before or the year of the reseeding because it will stimulate weed and grass growth, making them too competitive. P & K is needed for proper legume growth and should be applied accordingly.
4. **Graze closely the fall before seeding.** Close grazing reduces grass competition and aids in establishment. Better seed to soil contact can be accomplished in areas that are grazed close.
5. **Broadcast seed in late February or March.** Seeding should be done when the ground is frozen. Avoid seeding over heavy snow. The probability of a successful stand decreases with the onset of spring.
6. **Manage grazing after seeding.** Controlling grass and weed competition during the first two or three months of the growing season is critical for the establishment of adequate legume stands. Use moderate grazing, mow and maintain fertility to encourage a productive and long-lived forage stand.

**The following are suggested seeding rates in pounds per acre.**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. When seeded alone           <ul style="list-style-type: none"> <li>*Alfalfa – 6 to 10</li> <li>*Red Clover – 6 to 10</li> <li>*Alsike Clover - 2 to 5</li> <li>*Ladino Clover – 2 to 5</li> <li>*Birdsfoot Trefoil – 5 to 8</li> <li>*Lespedeza – 8 to 15</li> </ul> </li> </ol> | <ol style="list-style-type: none"> <li>2. Mixtures           <ul style="list-style-type: none"> <li>*Alfalfa 5 to 8 Red clover 3 to 5</li> <li>*Red clover 3 to 8 Ladino 2 or Alsike 3</li> <li>*Trefoil 4 to 6 Red clover 3 to 5 Ladino 2</li> </ul> </li> </ol> |
|--|---|



**Brad Kaufman**  
**Pleasantville Agronomy Sales**

When thinking about fertility programs many of us just think about the big three; N, P, and K. However, we are seeing a growing number of sulfur deficiencies in crops throughout Iowa that we have not seen in the past. Why do plants need sulfur? Sulfur is essential in the formation of chlorophyll and nodulation, in legumes. Sulfur deficiency shows up as younger leaves yellowing and the plants are shorter. Therefore, the plants are not as green and most growers think it is a N shortage or the roots aren't to the N yet.

Why are we seeing more and more sulfur deficiencies? One of the big reasons is all the rain we had to endure over the last two growing seasons. Sulfur is mobile in the soil. With the rain, we have had, much of it has leached out of the rooting zone. Another reason is higher crop yields, 150 bu corn takes 26 pounds of sulfur per acre and 200 bu corn takes 34 pounds of sulfur per acre.

If you have priced sulfur you probably have found out that it gets pretty costly. However, at SFG, we offer a price effective way of supplying sulfur to plants, Smith Super Grow. If you apply one ton of Super Grow you get 130-10-20-80S, that's right 80 pounds of sulfur. This is a cost effective way to supply the plants with the sulfur and other nutrients they need. If you have any further questions on Super Grow or any other needs contact your local SFG agronomist, we will be happy to assist you.

## Corey Garrington Knoxville Agronomy Sales



In order for a plant to grow and thrive it needs a number of different chemical elements. A couple of the most important ones are Phosphorus and Potassium (aka potash). Determining the nutrient levels in the field can only be done by soil sampling. The first step in determining the amount of fertilizer to apply is to estimate how much is required for a target yield. A realistic yield goal takes into account the climate, soil and management limitations. Remember that water is the limiting factor in some areas. Here are a couple examples of the important roles fertilizers have in crops.

Phosphorus is a major component in the plant DNA, the material responsible for the transfer of genetic characteristics in all living things. Phosphorus is also critical in early root formation, photosynthesis, and respiration just to name a few. Phosphorus concentration is higher in the seed than any other part of the plant. Therefore, it improves the seed quality of the grain crops.

All plants require fairly high concentrations of potassium for normal growth and development. Potassium encourages root growth and helps plants resist disease and insects by strengthening stalks and stems, and building up a natural resistance mechanism. It increases grain size and quality, making it essential for high quality forage crops.

Phosphorus and potassium are immobile nutrients. In other words, a plants root system has to explore the soil to find available phosphorus and potassium. Only a small percentage of the soil's total phosphorus and potassium exists in a form available for plant uptake. The remainder is tied up with other elements and organic matter. These bound nutrients can become plant-available sometime during the growing season. This is what makes it so important to properly fertilize. If you would like more information about plant pull off and proper application please contact your local SFG agronomy sales person.



## Larry Baker Feed Sales



Producers that are engaged in cow calf production and heifer development are reaching a very important time in the reproduction cycle. Bred cows are entering into the last trimester of pregnancy. Nutrition, vitamins and minerals become very important to the success of a calving program. We need to make sure that we provide extra protein and plenty of trace minerals. Adding Crystalyx and Stockmaster mineral from Hubbard or Kent's 365 mineral will meet the cows' extra requirements from calving through breeding season.

The results of supplementation through this critical period will help the baby calf's overall health. A lot of research trials have been done and results show calves that start healthy and aggressive have significantly more value at marketing time than calves that get off to a slow start. Cows rebreed earlier and the future calf crop has the same potential to produce significantly more income for the owner, even if the marketing date is in the future.

Developing heifers to be used in the cowherd, calls for some thought and nutritional help. A cow herd, in which the average cow weighs 1100 lbs. need to have a heifer at 65% of the mature cow's weight or at least 715 lbs. at breeding time. Winter grazing of corn stalks and winter pastures, along with native hay, mineral and protein supplementation, can help achieve growth needed for breeding.

Heifers need to graze high quality spring forages to support compensatory gains and provide a positive energy balance. A well fortified protein supplement with vitamins and minerals, containing Bovatec and Rumensin, will allow the bred heifer to enter the cow herd productively. We can expect this heifer to produce larger calves for a longer period of time, thus making more profit for the producer.

SFG has a complete line of Hubbard Crystalyx products and both Hubbard and Kent mineral products. These products can help reach goals in the cow herd that will put dollars in the producers pocket. At this time, the price of livestock is very conducive to selling livestock that has reached it's full potential. A little money spent will provide big returns.

Call us at SFG - we'll help you set up a program and sell you the products to achieve your goals.

Thanks for your business, Larry Baker

## Casey Cortum Seed Specialist



As we struggle through the “Dog Days” of winter, complete the chores and remove the snow, we are one day closer to spring. Before you know it, the countryside will be littered with new calves and the machines will once again start another year. This year brings excitement and nervousness all in one with the ultra high grain prices that continue to soar into uncharted territory. So between now and planting, most of you will sit down and go through a field by field plan to maximize your returns and yields. With that, most of you will look for extra ways to put more money in your pockets by increasing your yields. A practice that is becoming more popular each year is applying inoculants to our soybeans with the seed treatment that most of you are already using.

Like most products in our industry, inoculants have evolved immensely in the past 10 years. Not that long ago you could still buy the little packets of dry, black inoculants and stir it into each seed box. Now it is a clear liquid that can be applied directly to each seed through a seed treater right along with your seed applied insecticides and fungicides. Inoculants are rather simple. They contain a high amount of rhizobia bacteria that help each plant grow more nodules and fix more nitrogen from the atmosphere. Now, in a lot of Iowa fields rhizobia are naturally occurring bacteria in the soil but by providing more directly on the seed ensures that you have enough rhizobia to fix the proper amount of nitrogen for your crop. It also reduces the stress on the plant because the rhizobia is already in the proper place for the plant to use. A good rule of thumb is to always inoculate your soybeans going into sod, pasture or fallow because the bacteria may not be present in the soil at sufficient levels due to not having soybeans in that field for a long period of time. Inoculants also have other benefits such as lowering nitrogen costs in the next crop, replenishing native supplies of bacteria and counteracting poor growing conditions.

Intuitively, a question that almost always follows my response is, will it pay if I inoculate my soybeans that are rotated with corn? The answer is yes. The reason being is that anytime we can reduce stress on a plant by providing it in ample supply in an area where it does not have to work harder to find the bacteria, we will increase yield. Several yield trials show up to a 3 bushel yield bump with the proper conditions. Let me do the math, to inoculate a bag of soybeans it will cost you roughly **\$2/unit** at SFG and even if you only gain 1 bushel per acre you are still getting a profit of over \$10/acre with soybean prices today and a possibility of making an extra \$30 per acre. Now it doesn't take an agronomist to figure out that this is a good investment on your soybean crop!

SFG will be glad to treat any of your beans with an inoculant. Our product of choice will be Vault SP, which is a product that can be treated at our new seed facility in Knoxville. Vault is a proven product that has been consistently increasing yields for over 3 years now. So don't wait, order your VAULT today! Some of you may have noticed the new seed facility in Knoxville, as we approach spring we would like to invite all of you to stop in and check out the new seed treater in action! Remember, here at SFG we have all your seed needs covered! If you have any questions don't hesitate to call 641-891-8560.

### Raising The Bar

Presented by: SFG at Honey Creek Lodge

March 2, 2011

9 am — 2 pm

Join us for a day of information about various ways to improve your farming operation

Watch your mail for postcards and flyers with more information about this event

**Please RSVP by February 28, 2011 to:**

Centerville: Sharon 641-856-2828

Albia: Rachel 641-932-2100

Knoxville: Shannon 641-828-8500

## **Burl Sealls** **Super Grow Salesman**



In less than 90 days, field work & corn planting will be well underway in Iowa. Red, green and blue planters will be crisscrossing the Iowa landscape in a battle against time, weather and other human contrived obstacles. The goal, to harness mother nature's resources in a timely manner and reap a potential bounty greater than your previous record corn yields. A major part of this annual endeavor is the timely application of fertilizer. Most of you who contracted fall/winter applied Super Grow fertilizer for nitrogen have seen the product applied already. The result of these applications is the Super Grow tying up tightly to the soil particles awaiting spring's soil warm-up. This soil warming releases the fertilizer to the nitrate state which is then available to the corn crop.

As with any fall/winter nitrogen program, the very best way to get your corn crop off to a great start is to use a split treatment of nitrogen. Start with your fall, winter or spring application such as Super Grow or  $\text{NH}_3$  (Anhydrous Ammonia). Then do a second nitrogen application at planting or later. This could be with starter fertilizer at planting, 28% or 32% mixed as a carrier for your pre-emerge herbicide treatment before crop emergence or side dress your corn using 28% or 32%. Experience has shown that split treatments of nitrogen consistently produce higher yielding corn crops than single applications of nitrogen alone.

Super Grow performance not only includes a reliable source of nitrogen but also contains P, K and S (sulfur) nutrient elements, all necessary for raising a healthy, high yielding corn crop. These nutrients are a bonus when using Super Grow versus other forms of nitrogen like  $\text{NH}_3$  which doesn't contain additional nutrients. Super Grow offers this additional nutrient value while still retaining the lowest cost of nitrogen, pound for pound.

Super Grow users, listen to the Korte Brothers of Laurel, IA. Doug and Kevin Korte farm about 2000 acres of row crops in Jasper County. Doug stated, "We tried Super Grow on a few hundred acres last year and were very impressed with the overall results. We're trying to use less  $\text{NH}_3$  and still maintain the great consistent performance of that product. Even in a very wet year, the Super Grow delivered an excellent corn crop. From the moment the corn emerged, it looked healthy and green. The weigh wagon results spoke for the product overall. Yields of the Super Grow treated fields were as good or better than our anhydrous treated fields. Overall our 2010 crop yields mirrored the previous high yielding year in 2009. My storage bins are virtually full and the rising price of corn has just substantially increased the season's profit." "We've switched a much larger number of acres to Super Grow this season," Kevin added. "In fact, it's already on the ground ready for spring planting. We're using significantly more of the Super Grow product this year and eliminating much of the expensive  $\text{NH}_3$ . Super Grow is doing a great job for us". "Heck, I'm even using it on my wife's garden again this season" Doug stated. "Also, on our pastures we like the performance of Super Grow at the lower rate. It makes the grasses grow and develop into lush grazing ground for our cattle herd. The pastures were the best I've seen in years." Smith Super Grow.....it really works!!



## **Amanda Swarts** **Agronomy Assistant**



Boy is it good to be back! Last year we held a spring kick off event at the Honey Creek Lodge near Moravia. We talked about growing "300 bushel an acre corn". It was a major success! This year mark your calendars for March 2, 2011 for another outstanding day at Honey Creek. We will have a great line up of speakers and organizations present. Marc Carlton and Steve Barnhart from ISU will talk about side dress nitrogen and pasture renovation, Hubbard Feed will speak about Crystalyx, as well as representatives from DeKalb/ Asgrow, and Garst just to name a few.

Registration begins at 9 am with our first break-out session beginning at 9:30 am. You will have a choice of one of three speakers to listen to until 10:25 am. You will have thirty minutes to converse with the various organizations present at their respected booths. Then we will all join back together at noon for lunch. We will finish off with a key note speaker concluding at 2 pm.

Make plans to join us for a day filled with incredible knowledge about various ways to improve your farming operation. Keep an eye out for flyers and postcards with additional information about this event.