vol. 53 December 2017

The Seed Consultant

A BI-MONTHLY NEWSLETTER NEWS AND VIEWS FROM THE FIELD

Lessons Learned from the 2017 Growing Season

As harvest wraps up and growers look back at the challenging 2017 growing season, there are a few lessons that can be learned. With the challenging spring, delayed planting, wet weather throughout the growing season, periods of stress, and then more wet weather during harvest, there were plenty of challenges to producing a crop.

Importance of Timely Spring Field Work

In many areas of the eastern Corn Belt there was a window of opportunity for planting around April 20th. Crops planted on or around this date got off to a successful start, more likely to survive the cold wet weather that would arrive about a week later. In some areas where crops weren't planted weather created delays that kept equipment out of the fields for almost a month. The spring of 2017 reinforced the importance of being prepared to go to the field when conditions are favorable for seed germination and growth.

Critical Seed Imbibing Period

The initial 24 to 48 hours after planting is a critical period that determines the viability of seedlings. During this period seeds imbibe water required for germination. A cold rain during this critical time can cause cold shock and imbibition injury to seeds. Fields that were planted right before cold rainy weather this year had reduced stands and needed to be replanted in some cases. Heavy rains also resulted in hard crusts on soil surfaces that kept seedlings from emerging and caused corn plants to leaf out underground. The cold wet weather at the end of April showed the importance of the period during which seeds imbibe water and that planting right before a cold rain event can have a disastrous impact on seed viability.

continued on page 2

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Lessons Learned...
continued

Corn Planting Depth
Corn planting depth is important because it impacts many aspects of corn plant growth including germination, emergence, and root development. Agronomists and university experts advise that corn should be planted at a depth of at least 1.5 inches. Corn that was planted too shallow in 2017 experienced problems including uneven emergence, rootless corn syndrome, herbicide injury, reduced plant stands, and yield loss.

Importance of Scouting Fields
With adverse weather beginning in the spring, disease presence, and periods of dry weather in late summer, crops were exposed to many stress-inducing conditions throughout the year. Field scouting was an important activity in identifying problems and determining management decisions. In areas where diseases were present, scouting paid off by allowing growers to make timely fungicide applications to reduce yield losses. In areas where heavy rains and ponded water occurred after nitrogen was applied in corn, N deficiencies began to show up early in the growing season. Scouting in these areas was key to identifying areas where stalks could be cannibalized for ear formation which led to weaker stalks and lodging in the fall. Taking time to walk fields in 2017 helps growers make sound decisions.

Timely Harvest
With delayed planting and replant this spring, crops were delayed in maturing in the fall. In some areas corn was left in the field in order to save on grain drying costs. Soybean harvest was also delayed due to delayed maturity and green stem syndrome. Wet weather in late October and early November further delayed harvest in many areas. While it is important to balance cost saving measures and timely harvest, delaying harvest too long leads to standability issues, grain quality concerns, and soil compaction if a pattern of wet weather arrives.

Although 2017 was a challenging season, there are some lessons to be learned, and growers who use the lessons learned to make sound decisions in the future will have successful growing seasons in the years to come.

JOHN DEERE FINANCIAL Rabo AgriFinance

SCI FINANCING

TWO Great Financing Choices for 2017-18
1% through John Deere Financial
1% through RABO AgriFinance

These financing programs are only available to John Deere Financial Preferred Customers and/or RABO AgriFinance approved customers. To apply for a John Deere Financial Preferred Account or RABO account or to increase your John Deere Financial or RABO line of credit, contact your SCI representative, so the necessary paperwork may be completed with John Deere Financial &/ or RABO.

GUIDELINES

- Must be a John Deere Financial Preferred Customer or approved by RABO AgriFinance.
- Approval and credit limits established by John Deere Financial &/or RABO…not by SCI.
- Terms and conditions apply. See respective credit applications for full terms and disclosures.
- To increase or establish your credit line call John Deere Financial (800-433-8964) or RABO (888-395-8505).
- Must be enrolled and approved to qualify for discounts.
- Discounts applied on approval date from John Deere Financial &/or RABO.
- Signed terms of disclosure on file.
- Minimum purchase of $1,000.
- Due date of December 2018.

Finance Plan	John Deere Financial	RABO
Purchase & Approval Date	Fixed 1%	Fixed 1%
Dec. - January 5, 2018	4.5%	4.5%
January 2018	3.5%	3.5%
February 2018	2.5%	2.5%
March 2018	1.0%	1.0%
April 2018	0.0%	0.0%
May 2018	0.0%	0.0%
In Season	0.0%	0.0%

2018 SCI Winter Agronomy Meetings

During January and February of 2018 Seed Consultants will again host several Winter Agronomy Meetings across the Eastern Corn Belt. 2017 was a challenging year that everyone can learn from and SCI's agronomy staff will have a great deal of information to discuss. In addition to a review of 2017, agronomists will address important factors that are currently affecting our customers. What is the best herbicide program to control herbicide-resistant weeds? How does planting depth impact corn and what is the optimal range of depths? How did wet weather impact crops? Did fungicide applications pay in 2017? For answers to these questions and more, make sure to attend a Winter Agronomy Meeting in your area.

DATES AND LOCATIONS:

(All meetings will begin with lunch at 11:30 a.m.)

DATE	LOCATION	RESTAURANT
January 2	Washington Court House, OH	Rusty Keg
January 3	Warsaw, IN	Wyndam Garden, catered by Champagne Jam
January 4	Nashport, OH	Virtues Golf Club
January 5	Bowling Green, OH	Holiday Inn Express, catered by SamB's
January 8	Ottawa, OH	Red Pig Inn
January 9	Decatur, IN	Back 40 Junction
January 9	Tiffin, OH	Camden Falls
January 10	Bunker Hill, IN	Dutch Café
January 11	Wooster, OH	Jakes' Steakhouse
January 11	Terra Haute, IN	Ricks Smoke House
January 12	Brookville, OH	K's Restaurant
January 15	Plain City, OH	Der Dutchman
January 16	Bellville, OH	Der Dutchman
January 17	Hillsboro, OH	Ponderosa
January 30	Owensboro, KY	MoonLite BBQ
January 30	Seymour, IN	The Pines
January 31	Richmond, KY	Golden Corral
February 1	Hagerstown, IN	Willies and Reds

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Use Plot Data to Make Sound Planting Decisions

As harvest is completed across the Eastern Corn Belt, seed companies, universities, and growers will have the chance to compile and analyze data from yield testing. One of the most important decisions a farmer will face all year is deciding what variety to plant and in which field to plant it. To ensure that the best possible decision is made next spring, it is critical to spend some time looking at yield data. While reviewing data is critical, knowing how to determine whether it is accurate and useful is equally important. Below are some tips for using data to make sound planting decisions next spring.

Look for Replicated Data

Don't rely on yield results from one strip plot on a farm or from a single plot location. Look for data from randomized tests that are repeated multiple times and across multiple locations. Replications in testing increase the reliability of the data. For strip plot data, was a "tester" used?

Strip plots planted on farms can cover large areas of a field. In many fields in the Eastern Corn Belt there are several soil types. If a plot crosses several soil types how can you be sure it is accurate? By planting a "tester" variety between each entry in the plot, you can calculate adjusted yields based on the variability of the tester yield across the plot. This ensures more accurate data.

Look for Consistency

According to Bob Nielsen, Purdue Extension Agronomist, "Documented consistency in yield performance is still the key to success in selecting hybrids that will perform well in your farming operation." When choosing a variety based on plot data, it is important to look for consistent performance—across several plot locations and between multiple years. Choose varieties that consistently performed well in 2016 and 2017, in multiple locations, and different growing conditions.

Statistical Significance

On published plot data look for foot notes that indicate the least statistically significant yield difference, or LSD. In many plots, the performance of the top 5 or 10 varieties may not be statistically different. Although there are small differences in yield, statistical analysis of the data indicates that all varieties within the LSD have an equal chance of winning the plot.

While plot data can be very useful in making decisions, some plot data is significantly more accurate and reliable. The key to getting the most out of yield data is having the ability to sort through the large amounts of information to identify the data that most accurately and reliably represents crop performance.

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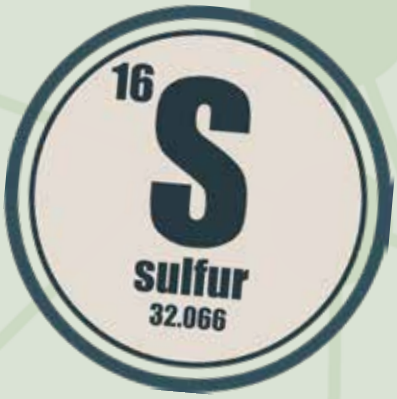
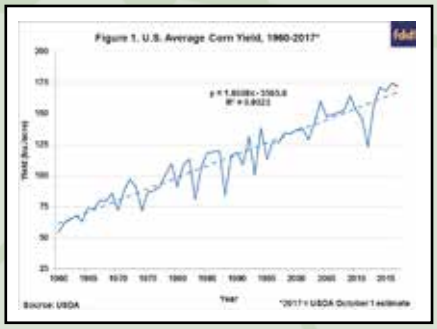
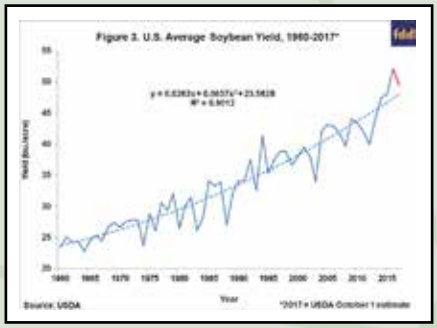
UNDER THE HUSK

The Second Most Neglected Nutrient, Sulfur



During times when we harvest less bushels then we had hoped for and at lower commodity prices then we would like, we tend to cut back on some of our inputs. Whether on purpose or by accident, we neglect sulfur. Sulfur is a key nutrient. When sulfur is limited, chlorophyll production is reduced causing the new leaves in the top of the plant to appear yellow. We've all seen the striping in the newest leaves of corn plants and although sulfur deficiency isn't the only nutrient shortage that causes this, in most cases, sulfur is the missing nutrient. It is the component of several enzymes that regulate photosynthesis and nitrogen fixation. Without the proper Nitrogen to Sulfur ratio, we won't get the full benefit of our nitrogen applications. There are differing opinions on what that ratio should be. Some say 10:1 while others use 5:1. No matter which ratio is correct, I do feel that we need to have sulfur in our fertilization program.





A 160-bushel corn yield will take up 23 pounds of sulfur and remove 13 pounds with the grain. While a 50-bushel soybean crop will take up 17.5 pounds of sulfur and remove 9 pounds of sulfur. An 80-bushel wheat crop will remove 8 pounds of sulfur with the grain and if the straw is removed, another 11 pounds leaves the field. (You could get different results from other sources.)

Sulfur has benefits in addition to chlorophyll production and nitrogent fixation. It increases plant protein levels, improves nodulation in legumes, increases rooting ability, and assists in disease prevention. According to a book published by the American Phytopathological Society called "Mineral Nutrition and Plant Disease" sulfur helps in the control of Southern Rust in corn and root rot in wheat.

We may have sulfur in our soil but it may not be in a usable form. Tissue and/or soil testing will help determine if the sulfur present is usable. Tissue testing results will tell you if there are adequate amounts of sulfur in the plant. Soils that are very well drained, sandy, light textured, or low in organic matter are the most likely to show sulfur deficiencies. However, in those soils with higher organic matter, the organic sulfur has to be converted to a sulfate form to be available for use by the corn plant. Microorganisms break down the organic sulfur into a sulfate form but if soil conditions are too cold, too wet or too dry the process may be too slow. This process can be further impeded if in a No-Till situation, as sulfur can be immobilized during the decomposition of crop residues. Another problem with sulfur is that when it is in its useable form, sulfate, it is highly mobile and can be leached from the soil.

According to Neal Kinsey of Charleston, Missouri, a well-known Fertility Expert, our soil test levels should be a minimum of 50 ppm of sulfur. If they aren't then there are forms of sulfur that are acceptable to remedy this problem. You could use an elemental form or a sulfate form, such as Ammonium Sulfate or Ammonium Thiosulfate. There are also some excellent Homogenized Fertilizers that can also be used. Talk to your local supplier to find what form they stock. Don't be hesitant if the only form that they carry is an elemental form. As long as it is water soluble it should be available to the plant within 7 to 14 days. Manure may not be as good a sulfur source as one might think. Make sure to have your manure tested to see if additional sulfur will need to be applied to your crop.

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Seed Consultants, Inc.
Bulk Soybean Bin Program

SCI began the bulk soybean bin program for several reasons. For starters, pro boxes cost $700+ each. This price translates to more than $14/unit of soybeans stored, assuming 50 units per box. (Actually $17/unit if there are only 40 units per box.)

Pro boxes must be returned, cleaned and nested. And growers must provide a covered structure for storage, unload, and load boxes. The pro boxes eat up growers' storage space (equipment must be moved outside or to other buildings). Growers are also liable for damages to pro boxes.

An even bigger headache can be bulk bags.

The benefits of bulk soybean bins stack up. SCI currently has more than 150 bulk soybean bins on customers' farms. The majority are 521- bushel GSI bins with bean ladders. We are pleased with the bulk bin program, but believe many growers are missing out on the benefits.

HOW CAN YOU PARTICIPATE?

- Contact your area seedsman and sign an agreement.
- Pour a pad
- Order beans, minimum 400 units/variety/bin
- Order early and take early delivery
- SCI provides the bin at no charge

THE TOP REASONS TO GO BULK BINS!

SAFETY Bins eliminate the need to climb in and out of seed tenders and seed wagons, untying bulk bags. Bins also eliminate the risk of straps tearing or bags teetering over. You cannot put a value on injury to a family member or yourself.

CONVENIENCE You can set the conveyor, pull under, turn on conveyor, open the bin door, and fill your seed tender.

LABOR SAVING One person can unload bins and fill seed tenders with little effort. Bulk bags, on the other hand, require at least two workers. Bulk bag pallets must also be returned and bags disposed of, and pro boxes must be nested for return, stored, and loaded.

COST EFFECTIVE The bins eliminate the need for additional storage buildings by growers, reduces manpower requirements at planting and the conveyor can also be used for other loading/unloading chores.

Between the Rows

Updates from Daniel Call, general manager

What a finish to an incredibly difficult year. Record replant throughout our market footprint, followed by record rainfall for many of our customers in June and July. Compound the wet weather with an extended dry period for many growers in August. Yet we still managed to harvest a very respectable crop in 2017. The crop was strong enough for the USDA on November 10, to estimate the national corn yield at 175.4 bushels per acre. Which will be an all-time record yield. USDA estimated soybeans at a very respectable 49.5 bushels per acre for 2017.

There were several dynamics that went into the successful 2017 harvest. First, it is apparent today's genetics can tolerate a significant amount of stress from both drought and wet weather throughout the growing season. Second, changes in cultural practices have helped our soils become more resilient during times of adverse weather. Growers have done an excellent job of monitoring crop needs throughout the growing season to make necessary treatments to correct issues as they arise. Cool weather during grain fill always leads to big yields. Additionally, significant focus has been given to fungicide seed treatments to help maximize stand establishment and early season growth during very difficult weather events.

Seed Consultants is focused on finding the absolute best seed applied fungicide options for our customers. Allowing our customers to plant with confidence in less than ideal springs. We will continue to change our formulations as new products come through the pipeline, allowing us to keep our leader position in seed applied fungicide technologies. We are excited to introduce DuPont™ Lumisena™ fungicide seed treatment to our Turbo Treated soybean package this spring. DuPont™ Lumisena™ seed treatment will be the first of its kind product for control of phytophthora root rot. DuPont™ Lumisena™ seed treatment will revolutionize our soybean fungicide package giving us broad spectrum control by using 4 seed applied fungicides. We will have up to 6 fungicides applied to our seed corn for spring 2018 plantings.

We realize we can offer the best traits on the best possible germplasm, but if we do not achieve adequate stand establishment those traits and genetics are irrelevant. Stand establishment, as we all witnessed this spring, is the most important step in raising a good crop in our market footprint. Seed Consultants is committed to helping you achieve maximum stand establishment. Allowing you to see why we are, Simply, the Best Value in the Seed Industry™.

Successfully,

Daniel Call

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