

# Seeds for Success

## Agronomy Update

VOLUME 11 • ISSUE 2 • FEBRUARY 2016

### Agronomy Update

is a monthly publication provided to producers free of charge. AgVenture, Inc. and its independently owned and operated Regional Seed Companies are dedicated to providing producers exceptional seed products – genetics and technologies, professional service, and local knowledge of agronomic conditions impacting producer profitability.

**Grow with Confidence!**



**Planting with Perfection Takes Planning** AgVenture’s experience has proven that you can’t afford not to plant carefully and with impeccable standards. Exceptional plant stand establishment is the culmination of many factors. Uniform emergence and equidistant spacing are the results of consistent depth control and precise metering of seeds as they are placed into the seedbed. Consider implementing the following tools to help you establish an ideal stand:

- Floating row cleaners on every row should be installed
- Plant at no more than 5.0 mph and no less than 2” deep
- On your better ground and with better fertility conditions, remember 2 – 4 – 6:
  - Planting depth of 2 – 2 ¼”
  - Planting speed of 4.0 mph
  - Up to 36,000 planting rate/acre with early harvest

AgVenture Yield Specialists are committed to your planting perfection. Contact them today to learn how to dramatically increase yields, lower cost per bushel and advance your overall profitability.

**Starter Fertilizer Role in Increasing Corn Yield** Starter fertilizers can provide essential nutrients to young corn plants during early season growth periods. While it is difficult to predict exactly if yield response will occur, under some conditions, starter fertilizers can greatly improve the potential for yield response. According to University of Illinois research, starter fertilizers provided benefits:

- ✓ **Where phosphorus (P) availability is low** – readily available P is essential early in the growing season. Young corn seedlings need P near the row on soils testing less than 20 pounds P per acre. However, University of Illinois indicates that even on medium- to higher-testing soils, starter will increase yield potential if the soil remains cool for several weeks after plant emergence. High pH soils (>7.3) often respond well to starter fertilizer since high pH reduces P availability.
- ✓ **Cool soil temperatures** – in reduced tillage systems, where residue reduces soil temperatures, root growth can be slow, and thus is the nutrient uptake near the seed. Cool soils also reduce the rate of microbial release of nitrogen (N) from soil organic matter. Starters help provide N near the seed. U of I research shows significant corn yield increase 90 percent of the time in no-till situations, but roughly 30 percent of the time in conservation tillage systems. N combined with P gave better responses.

University of Minnesota research rigorously tested starter fertilizers in a variety of growing environments over several years. Results of their studies show that starter fertilizers containing N, P, and Sulphur (S) increased early growth and reduced plant variability of continuous corn with reduced tillage. Yield responses were inconsistent but were more likely on poorly-drained and glacial-till soils. Where starter fertilizers were used containing N, P & S, grain moisture at harvest was also reduced. Potassium (K) starters are important especially in reduced tillage or low K soils. Complete NPK starters typically provide more consistent responses. Always start with your soil test. Consult your AgVenture Yield Specialist.

## AgVenture, Inc.

is the nation's largest network of independently owned regional seed companies. Based in Kentland, Indiana, AgVenture provides a growing network of independently owned and managed regional seed companies with seed products meeting exacting standards for quality, together with leading-edge genetics and technology.

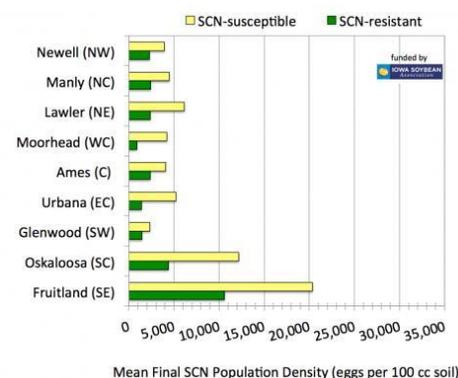
Since 1983, this unique marketing approach has allowed each individual company to match the hybrids it sells to the specific needs of the geographical area it serves. Combined with professional seed representation at a local level, AgVenture strives to help every grower realize more profit from every field.

**Grow with Confidence!**

**The Swing Effect** Planting should only be initiated when soil temperatures reach at least 50° F at 2-inch depth and preferably with a warming trend in the 3-5 day forecast. But a lesser known fact that has a definitive impact on seedling growth and development is the temperature "swing" effect. Even if the average soil temperatures are above optimum, seedlings can become stunted, issue distorted leaves, or may or may not emerge from the soil. Swings in soil temperatures of more than 27 ° F (from soil high temperature to soil low temperature) can adversely affect mesocotyl growth. This so called swing effect can and does vary from seedling to seedling, causing erratic and uneven stands. Sandier soils can often be planted earlier in the spring as they dry out faster than heavier soils. However, it is important to note that due to their light nature, sandy soils tend to experience wider temperature fluctuations especially on clear nights with cold temperatures.



**SCN News** Soybean varieties resistant to Soybean Cyst Nematode (SCN) yield more and allow less SCN reproduction than susceptible varieties. Those are results from Iowa State University. However, they note that the effectiveness of SCN-resistant varieties is eroding. That's because almost all SCN-resistant soybean varieties in the Midwest possess resistance genes from a breeding line or source of resistance called PI 88788. Continued use of the same set of resistance genes has over time allowed the very few nematodes in the field that originally could overcome PI 88788 resistance genes to build up in numbers.



And as with buildup of weed resistance to herbicides, using multiple management strategies is the best approach to managing the problem of the buildup of SCN on PI 88788 SCN resistance. Growers are encouraged to use all available SCN management tools to slow the buildup of SCN on soybean varieties with PI 88788 resistance. Currently, other SCN management tactics include growing non-host crops, such as corn, and using nematode-protectant seed treatments on seeds of resistant soybean varieties. Talk with your AgVenture Yield Specialist about varietal selection (sources: Iowa State University <http://crops.extension.iastate.edu/cropnews/2016/01/scn-resistance-continues-pay-twice-2015>).

Connect with us on: Facebook Twitter LinkedIn YouTube  
[www.agventure.com](http://www.agventure.com)