Illinois Field & Bean

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Prep for Season—Long Pest Control

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Peer into the Product Pipeline
YIELD, COMPOSITION & PROFITABILITY
Watch for these Soybean Yield Robbers
There’s plenty of opportunity from root to canopy for soybeans to lose yield potential. Find out what the top 10 yield robbers are, along with some general estimates of possible loss.

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ISA Helps Move Research from Lab to Application

Soybean production research has long been an important tool for helping farmers increase yields, reduce damage from pests, battle plant diseases and fertilize efficiently. We traditionally have relied on university researchers using Illinois soybean checkoff dollars, and increasingly private company scientists, to perform those basic and applied research projects.

Recently, ISA has shifted its research focus slightly to even better meet farmer needs. While we recognize continued value in basic research, we also are investing in more technology transfer. That’s to say, we are putting more investment into giving farmers the practical applications of research results. By providing the management tools farmers need to use research findings, we all can enhance our soybean yield potential, and ultimately, our profitability as farmers.

On the basic and applied studies front, we support a number of in-state projects. For example, in the last year or so, we helped fund evaluation of new technologies that improve nematode identification, use of nitrogen in soybean production, management in high-yield environments, and herbicide resistance and risk of herbicide injury in soybean production.

At the same time, we have provided more technology transfer opportunities. For example, last year we organized and led a double-crop initiative roundtable. The purpose of the roundtable was to bring together technical expertise to discuss the double-crop wheat-soybean system, what the limitations and opportunities are, and what activities and tasks need to be done to improve productivity. The goal is to develop strategies to increase yield of double-crop soybeans without sacrificing wheat yield. We continue to lead that initiative.

Other technology transfer opportunities include the Illinois Soybean Summit held in Effingham and Peoria, Ill., this winter. Farmers who attended one of these events took home practical information they can use in their fields this season. The Summit covered new trends and techniques to boost yield potential and new ways to overcome production challenges.

This issue of Illinois Field & Bean provides more information and resources for you to manage your 2015 crop. I also encourage you to visit our production management website, ILSoyAdvisor.com, to keep up to date, as well as ask questions and interact with other farmers.

Have a safe planting season. •

BILL RABEN
ISA Chairman
Maximize Plant Genetic Expression for Better Yield Potential

> BY JEFF MIDDLETON

Every soybean producer understands the importance of strong genetics, fertility and control of weeds, disease and insects — things easily seen and managed. However, even after these have been addressed, soybean yields and quality can often turn out to be disappointing as a result of crop stress, no matter how good the crop looks during the season.

Understanding how naturally occurring hormones function within plants provides the ability to overcome many of the stress factors limiting plants’ natural growth cycles and genetic expression. Plant hormones affect virtually all aspects of plant growth and are present in different levels at different development stages. An imbalance in plant hormones at any time leads to plants never being able to reach full genetic and yield potential.

FOCUS ON PLANT HEALTH

Healthier plants mean healthier yields. Yet, during every growing season, plant health and yield potential are compromised by stress factors such as excessive moisture, reduced sunlight, extreme temperature, drought and even high plant populations and various agronomic practices.

Any factor that places stress on a crop can cause an imbalance between a plant’s growth hormones (auxin, cytokinin and gibberellic acid) and its stress hormones (ethylene and abscisic acid). And any stress factor, regardless of severity, will negatively affect yield.

Any disturbance impacts plant growth, maturity and yield. By up-regulating key genes to restore proper balance, reducing stress and moving sugars to the grain, producers can get the most from every plant, every acre and every field.

SUPPORT CONTINUOUS ROOT GROWTH

Maximizing genetic expression begins with establishing a vigorous root system at germination followed by fast, uniform emergence. Plant hormones are produced in the root tips, which are the growth control center for all growth processes. Roots play a key role in monitoring nutrients and moisture and signaling the plant to absorb nutrients and produce hormones. Maintaining and prolonging healthy root tip growth is critical to ensuring healthy plants and optimizing the hormone balance needed for maximum genetic expression and improved yield potential.

MANAGE REPRODUCTIVE STRESS

Maintaining proper hormone balance has a huge impact on plant reproduction. Soybeans enter their reproductive stage when temperatures are highest. High temperatures result in plants not being able to synthesize enough of the key hormone, auxin, which is needed to activate cell division and food movement within the plant. Additionally, soybeans typically abort 60 to 75 percent of their flowers and pods. Optimizing hormone balance can increase flower and pod retention and significantly improve yields.

GET BETTER PLANT PERFORMANCE

Whether a planned, proactive program, or an in-season treatment, managing and maintaining hormonal balance results in better plant health, higher yields and greater return on investment.

“Maximizing genetic expression begins with establishing a vigorous root system at germination followed by fast, uniform emergence.”

JEFF MIDDLETON

Jeff Middleton is general sales manager/director of sales, eastern U.S., for StollerUSA. He is responsible for all sales programs and activities, sales staff and implementation and management of business plans. For more than 40 years, Stoller has been dedicated to helping producers farm differently to maximize crop genetic expression.
Watch for these **Soybean Yield Robbers**

There’s plenty of opportunity from roots to canopy for soybeans to lose yield potential. And there’s lots of pests waiting to prey on those plants. Knowing about the potential yield robbers below and others can help you manage through the “what ifs” of the 2015 season.

The average soybean plant at harvest has 40-60 filled pods. Soybeans generally abort 60% or more of flowers and pods during development. The abortion rate can reach 80% under heat and drought stress.

Soybeans can tolerate defoliation up to about 15 to 20% without yield loss. The amount of defoliation at various crop stages will affect yield loss.

Japanese beetles defoliate soybeans. Loss can reduce yield 10-20%.

Aphids can cause nearly 50% yield loss if left untreated.

Bean leaf beetle and soybean mites can develop in the right conditions, so scout early and often. Yield loss varies with the year.

Up to 50% of soybean yield can be lost if weeds infest during the first four weeks after emergence and are left unchecked. Later-emerging weeds contribute to the weed seed bank, but do not threaten yield that year. Watch for top yield robbers – marestail, waterhemp, Palmer amaranth and common ragweed.

**TOP 10 SOYBEAN YIELD LIMITING FACTORS**

1. Genetics and variety selection
2. Planting date – Average yield loss of 0.4 bushels per acre per day when soybean planting is delayed past the first week in May.

3. Row spacing – Narrow rows yield 7% more than wide rows
4. Potassium deficiency
5. Seeding diseases
6. Poor seedling management

7. SDS and brown stem rot
8. White mold
9. SCN
10. Soybean aphids

**SOURCE:** SHAWN CONLEY, UNIVERSITY OF WISCONSIN
What **Bugs** You?
Look Ahead to Potential Pests of 2015

> BY ALISSA KIEDROWSKI

**Let’s face it:** Farming would be a lot easier and less risky if each year came with its own instructions. But in the real world, a solid game plan is needed to weather whatever surprises the growing season may bring. Here’s an overview of some of 2015’s top pest possibilities.

**WATCH FOR WEEDS**

- **Waterhemp** – Whether you call it waterhemp or pigweed, Mark Bernards, Ph.D., assistant professor of agronomy, crop science and weed control at Western Illinois University says the predominant member of the amaranth family in Illinois for the last 15 years will continue to be a challenge in 2015. The key, he says, is telling the difference between waterhemp and Palmer amaranth, especially when plants are young.

  Farmers looking to differentiate between the species can submit leaf samples to the University of Illinois Plant Clinic to verify them, says Pat Tranel, Ph.D., professor of molecular weed science in the University of Illinois Department of Crop Sciences.

- **Palmer amaranth** – More prevalent in southern Illinois, Palmer amaranth has been documented in more than 20 Illinois counties and continues to spread by multiple means. It can be a formidable foe for soybean farmers.

  “Palmer amaranth makes waterhemp look wimpy,” says Tranel. “It can look ok one day, and a week later you can find it’s grown more than six inches.”

  In fact, Palmer infestations can lead to rapid crop loss. “Once you have a heavy infestation of Palmer amaranth, you can find that it’s not economically viable to even drive through the field to attempt to harvest the crop,” he says.

- **Marestail** – Marestail, also commonly called horseweed, is showing widespread glyphosate resistance throughout the state, according to Tranel.

- **Giant ragweed** – While herbicide-resistant giant ragweed has not been documented in Illinois, Bernards says it’s present in all surrounding states, so it could become a problem.

**BEST THE BUGS**

- **Soybean aphids** – These insects have become a recurring problem since they were first reported in 2000, according to Glen Hartman, Ph.D., research plant pathologist and professor, USDA-Ag Research Service based at the University of Illinois. He says aphids tend to occur in northern areas, but there have been recent reports of aphid outbreaks farther south. It is impossible to predict where outbreaks will occur, however, so choosing resistant varieties is an important consideration.

  “If we had a crystal ball, we could say, ‘this is the place to plant resistant varieties,’ but there’s no way to be sure,” he says. In addition to selecting resistant soybean varieties, farmers may use insecticides when aphids hit economic thresholds during the season.

- **Japanese beetles** – Like aphids, beetles are similarly unpredictable. Hartman says they have been a serious problem in the Bloomington, Ill., area in the past. Many farmers have sprayed to manage localized outbreaks that hit economic thresholds.

Less common insects that may lurk in Illinois fields in 2015 include:

- **Marmorated stinkbug** – This insect, identified in several Illinois locations in recent years, has not developed into a significant pest. Hartman says marmorated stinkbugs have been a huge problem in states east of Illinois, so it may be just a matter of time.

- **Kudzu bug** – Common in states south of Illinois, these insects are marching north, according to Hartman, although it’s still uncertain if they can overwinter in Illinois. For growers in southern parts of the state, he advises to keep a watch this season.

- **Bean leaf beetles** – Hartman says bean leaf beetles are becoming more common in Illinois. In addition to feeding on leaves, they also can transmit the bean pod mottle virus. “In some years, this is a very significant problem,” he says. Researchers are studying the virus, and believe overwintering may affect severity and risk.
**DISARM DISEASES**

- **Sudden death syndrome (SDS)** – “The most important disease we saw in high numbers last year was SDS,” confirms Carl Bradley, Ph.D., associate professor of plant pathology at the University of Illinois. While some growers may feel a little bit of SDS means good yields, Bradley says SDS early in the season can create major soybean yield losses.

- **Soybean cyst nematode (SCN)** – SCN is an annual concern, and widely claimed as the leading yield-robber in soybeans. “It is easy to forget about SCN when we have good yields and few SCN symptoms,” says Bradley. “Farmers need to practice proper management, or SCN will cause yield losses.”

- **Phytophthora root rot** – Variety selection is the most effective option for treating Phytophthora root rot, says Hartman. It is most likely to occur on heavy, poorly drained soils or soils that have been saturated for an extended time. The disease can attack soybeans as seed rot, seedling blight or attack the roots or stem root.

For farmers who have had problems with SCN, SDS or also Phytophthora root rot, Hartman says the best bet is to choose resistant varieties to protect yields. “Variety selection is the number one management choice for those diseases,” he says. “There really are no options for managing these conditions once they occur, so it is important to pick the right variety.”

- **Sclerotinia or white mold** – Sclerotinia often plagues growers in northern Illinois, but Hartman says it is only a concern in fields with a history of sclerotinia. Because no sclerotinia-resistant varieties exist, growers will need to adopt other management practices, such as wider rows and possibly use of foliar fungicides.

  “Some years it’s rare, and other years, it is devastating. It really depends on the environment,” says Hartman. “There’s really only a short window when it affects yields, typically when conditions are moist and warm at flowering.”

- **Frogeye leaf spot** – Southern Illinois farmers are more familiar with frogeye leaf spot than others in the state. This disease also is very weather dependent and thrives under good growing conditions. Hartman says management options include selecting resistant varieties, as well as scouting and spraying if an outbreak happens early in the season.

- **Brown spot** – This disease occurs during good growing conditions throughout the state. “Brown spot tends to come up from the bottom of the plant, defoliating leaves,” says Hartman. “However, it does not tend to affect the top of the canopy and has minor effect on yields.” Brown spot can be controlled with a late fungicide, but yield benefits may be minor. Hartman advises using fungicides to control severe outbreaks.
Congratulations to Dan Arkels of Peru, Illinois, on becoming the first grower to top 100 bu/A in the Illinois Soybean Association’s 100 Bushel Yield Challenge.

Learn how Dan achieved his record-breaking yield of 103.95 bu/A at StollerUSA.com/farmedifferent
TRUE or FALSE?
On-Farm Research has Real-World Applications

**TRUE:** Every growing season brings new challenges, and every year researchers uncover advancements to improve crop production. Farmers throughout Illinois are making the most of this opportunity with more on-farm trials. Following the example set by university and industry research, soybean farmers are setting up test plots ranging from a half acre to 50 acres, and are experimenting to discover best practices tailored to their specific farms.

- **Setting up an on-farm trial is relatively easy.**

  **TRUE:** While making a change across multiple fields could pose a challenge, Tim Seifert, soybean farmer from Auburn, Ill., says small test plots are an easy way to try new ideas. “A test plot doesn’t require many acres, but the results will provide valuable insight farmers can implement in the following years,” he says.

  Dave Callan, CCA, certified crop specialist with GRAINCO FS, recommends keeping trials simple for best results. “Farmers should limit the number of added treatments and changes in the test plot so they can determine which change contributed to any gains or end results.”

- **Setting up on-farm research takes a lot of time.**

  **FALSE:** Although the setup for each trial varies, Callan says it doesn’t take long, and advance planning can minimize that time. “We usually treat our normal fields and save the trial area for last,” he explains. “Then we add the trial product at the end of the spray job. Planning makes the process run smoothly.”

  Callan adds that partnerships are another key to success. “People bring different areas of expertise when you work with a team,” he says. Seifert, who works with his supplier, agrees that teamwork is critical. “My number one tip is to find a good partner or group,” he says. “It’s best to work with professionals — a dealer, a CCA or a local cooperative — to spread the workload and get credible results.”

- **You will not see results immediately.**

  **TRUE:** While some growers report changes after one season, the best research results are found after investing at least two years in a trial. “Any time a grower tries something different in their fields, it will take time to see results,” says Linda Kull, ISA director of strategic research programs. “It’s best to see how that trial affects the crop over time, but it certainly varies. A grower will find results with a new variety before they see a change in soil characteristics.”

  Seifert agrees that it depends on the trial at hand. “I will test a variety or population change for two to three years, but it may take four to five years to establish a new tillage system,” he says.

- **On-farm research is expensive.**

  **FALSE:** A common misconception with on-farm research is that it requires farmers to invest money and technology they don’t have. “University research must be precise and account for all variables, but on-farm research doesn’t need that level of detail,” says Kull. “Farmers are looking for quickly usable information to make decisions tailored to their farms. Doing their own research delivers those results.”

  Dave Callan agrees that the investment in on-farm research is minimal, especially compared to the benefits it can provide. “On-farm research can be modified to fit any producer’s budget,” he says. “In my experience, farmers discover incremental yield increases without a lot of money.”
DECADE OF
THE SOYBEAN

Coming Technologies Give Farmers More Options

BY JOANIE STIERS

For years, Jeff Lynn has maintained buffer zones around select fields and followed strict harvest clean-out procedures for regulated trials of glyphosate- and dicamba-resistant soybeans. Today, the Cass County farmer and ISA director expresses excitement for the coming commercialization of the soybeans — Roundup Ready 2 Xtend soybeans. Monsanto officials anticipate the product should launch in 2016, pending global regulatory approvals.

“I think it’s a technology that we need to have out there to slow down the resistance to herbicides,” Lynn says. “With this product coming out, it’s giving us a different mode of action than we have seen in soybeans before.”

The product represents one of many soybean technologies poised to leap soybeans into a new era of functional pest management and crop composition traits. Several innovations are approaching final stages in the approval pipeline, and may generate some excitement for the soybean industry.

“At Monsanto, we say this is the decade of the soybean,” says Mindy Whittle, soybean industry affairs lead for Monsanto. “There are a lot of really neat things going on, and it’s not all biotech. We’re doing a lot on the agronomic science side, too.”

Soybean breeders from several companies are investigating advanced methods of resistance to devastating effects of sudden death syndrome (SDS), soybean cyst nematode (SCN) and Phytophthora. Scientists are working with microbials, and how these natural bacteria in the soil can improve plant growth. They are studying biologicals — technologies that can help a plant develop faster and increase yield. Even data utilization plays a role for in-season decisions.

And while none may offer the cure-all to every food demand of a growing population, or alone eliminate evolving weeds, insects or diseases, they do load the farmer toolbox with a promising variety of advancements to support those efforts.

Whittle says several new soybean traits and seed treatments may hit the market as early as the 2016 growing season. And she notes their paths have been timely and expensive — a biotech trait alone takes 12 to 15 years and an investment of $150 million to arrive at commercialization.

HERBICIDE-TOLERANT OFFERINGS EXPAND

Enlist soybeans from Dow AgroSciences and Enlist E3 soybeans co-developed by MS Technologies are another product offering weed control options. Enlist soybeans with Roundup Ready 2 Yield and Enlist 3 soybeans combine 2,4-D, glyphosate and glufosinate tolerances.

“With Enlist soybeans and Enlist E3 soybeans, weed control gets easier,” says John Kalthoff, cross-platform portfolio marketing leader for Dow AgroSciences. “The Enlist system has the same flexible planting and application timing growers are used to with the Roundup Ready system, with the added efficacy of a new 2,4-D in Enlist Duo. Enlist Duo can be applied from burndown through R2 in Enlist soybeans and Enlist E3 soybeans.”

Enlist Duo herbicide, a blend of glyphosate and the new 2,4-D choline, is available for the 2015 growing season in conjunction with limited seed production of Enlist soybeans in Dow AgroSciences’ Field Forward program. Kalthoff says commercial launch of Enlist soybeans and Enlist E3 soybeans awaits import approvals from additional countries.

Monsanto’s glyphosate-dicamba tolerant Roundup Ready 2 Xtend soybeans are designed to combat some of the toughest weeds, including waterhemp, Palmer amaranth and marestail.

“We’re excited from the standpoint of being able to offer farmers more choices for that weed control and then of course we’ll have high-yielding varieties and strong germplasm with this trait so they can still have yield and have an additional mode of action,” Whittle says.

Ahead of and after the pending 2016 launch of Roundup Ready 2 Xtend soybeans, she advises farmers not rely solely on the glyphosate-dicamba combination.

“It’s not the silver bullet,” Whittle says. “It gives farmers one more tool to combat difficult-to-manage weeds. After launch, we will continue to recommend multiple modes of action and use of residual herbicides.”
ISA Launches HY+Q
ISA recently launched HY+Q — High Yield Plus Quality — a program to help support any trait that increases soybean value. The first step is looking differently at soybean protein improvement. To learn more about building long-term value, visit ilsoy.org/composition.

Funded by the ILLINOIS SOYBEAN CHECKOFF

BIOTECH SHOWS CONSUMERS DIRECT BENEFIT
Beyond production benefits, consumers will read the benefits of soybean biotechnology on a nutrition label for the first time. Monsanto’s Vistive Gold high-oleic soybeans replicate healthy, mono-unsaturated fat content of olive oil and low saturated fat of canola oil.

The United Soybean Board (USB) partnered with Monsanto and DuPont Pioneer to broaden the availability of high-oleic soybeans several years ago to try and revolutionize the soybean oil industry. USB contends high-oleic soybeans carry the potential to attract more food customers, appeal to new industrial users and increase the value of all U.S. soybeans. The soy checkoff set a goal of 18 million planted acres of high-oleic soybeans by 2023.

Monsanto expects its new Vistive Gold soybean will launch in 2016, pending global regulatory approval. DuPont Pioneer’s Plenish high-oleic soybeans are moving forward on a similar schedule.

“The United Soybean Board investment has enabled us to expand our breeding program for Vistive Gold,” says Whittle. “We hope it will be available in the near future to Illinois farmers.”

NEW LAYER OF PROTECTION EMERGES
SDS made headlines last year, while SCN remains the top pest for Illinois soybean farmers, and researchers continue to seek new innovations to help farmers control them.

Syngenta’s launch of Clariva Complete Beans nematicide/insecticide/fungicide seed treatment in 2014 offers management options for both, including season-long SCN protection and reduced damage from SDS, says Wouter Berkhout, North America seedcare product lead for Syngenta.

While SCN protection combats the ever-present pest, he says added SDS protection offers the potential to improve profitability in a repeat year of SDS prevalence. Syngenta’s Mertect seed treatment available this year offers even greater SDS protection. Berkhout says the treatment helps ensure broad spectrum pest protection when combined with Clariva Complete Beans or CruiserMaxx Vibrance. CruiserMaxx Vibrance is an insecticide and fungicide seed treatment that combines protections from established products as a pre-mix. Berkhout says unlike custom blends, the product has a longer shelf life and offers assurance of EPA review and approval.

“From a grower perspective, the heart of a good soybean crop is getting it off to a good start,” says Doug Tigges, NK soybean genetics product manager for Syngenta. “Anything you can do to protect the soybean plant from early-season insects and diseases on through a high-performance seed treatment maximizes its yield potential.”

“I think glyphosate-dicamba tolerant soybeans is a technology that we need to have out there to slow down the resistance to herbicides. With this product coming out, it’s giving us a different mode of action than we have seen in soybeans before.”

JEFF LYNN, Cass County farmer and ISA director

PHOTO BY KEN KASHIAN, ILLINOIS FARM BUREAU

PHOTO BY KEN KASHIAN, ILLINOIS FARM BUREAU
Local Load Posting Highlights Need for Infrastructure Improvements

> BY MEGAN KELBEL

As roads and bridges age, they limit efficient movement of agricultural products from the farm to the elevator, to the loading facility and ultimately to end users. To reduce these obstacles, the Illinois Soybean Association (ISA) works with local government and industry to raise awareness of infrastructure challenges and develop solutions for the benefit of soybean farmers.

Such was the case in Beardstown, Ill. Following a regular bridge inspection on Nov. 17, 2014, in the midst of peak harvest deliveries of local and regional crops, the Illinois Department of Transportation (IDOT) issued an order for load posting on the Beardstown Bridge. The bridge crosses the Illinois River on Highway 67 in Cass County. The 15-ton posting prohibited truck traffic, including agriculture transport, until Dec. 30 when temporary repairs were completed.

“The bridge’s bearings have seized up and failed from fatigue over time, so loads were beyond its original design,” says ISA Transportation and Export Infrastructure Lead Scott Sigman, of the 67-year-old bridge. “IDOT acted in the interest of safety by issuing the posting immediately.”

The Beardstown economy relies heavily on agriculture, with major facilities and grain terminals located near the bridge. Due to the posting, trucks took alternate routes via the nearest bridges up and down the river, ranging from 18 to 36 miles each way, to reach Beardstown. This meant traveling an additional 72 to 144 miles out of route.

Jeff Lynn, Cass County soybean farmer and ISA director, explains that the load posting happened at a crucial time as farmers wrapped up a late harvest. “The farmers who live and farm around...
Beardstown were heavily affected because some of them farm on both sides of the river.”

Lynn adds that the posting affected farmers who market grain a year in advance and couldn’t wait for the bridge to reopen. “If you market grain for December and have to move it, you would have added hundreds of dollars to your transportation costs,” he says. “That cuts into margins.”

Steve Pirkle, general manager of one of the Beardstown Cargill facilities, agrees that Beardstown was affected because local business is heavily trucked. “We receive about 120 trucks per day, and we constantly have supplies coming in and out,” he says. “Luckily our animals are contracted so we didn’t lose incoming supplies. But the pork supply chain lost efficiency due to the extra miles traveled. That bridge is a critical link to the world from this side of the river.”

Despite the challenges local farmers and businesses faced during the load posting, many agree the ag community kept them well-informed from the initial inspection to the bridge’s reopening.

“One thing I really appreciate is the steady communication throughout the posting,” says Pirkle. “We bring in hogs from multiple states, so it is great to have a solid group you can depend on to keep you informed. We were able to give advance notice to our drivers, and that saved them extra miles and headaches along the way.”

“We work to share news of postings to lessen their effect on local business and to draw attention to the need for improvements,” says Sigman. “It’s part of our effort to help farmers achieve the best return on investment, as opposed to spending money and time overcoming obstacles in delivering their grain to market.”

**By the Numbers**

8-10

Number of days after tillage when **weeds** will typically start to emerge.

Source: University of Illinois

3-4 INCHES

Suggested depth of herbicide operation for most tillage tools.

Source: University of Illinois

250

Minimum number of **soybean aphids** per plant at R1-R5 that warrant foliar spray.

Source: University of Illinois

1847

The year mixed **chemical fertilizers** were first sold commercially.

Source: RandomHistory.com

30 to 60

Suggested **spray pressure** with a flat-fan or hollow-cone nozzle to produce small droplets and improve canopy penetration.

Source: University of Illinois
Eight million consumers. More than four million jobs. About $547 billion in annual gross regional product. By the numbers, Chicago and its collar counties are impressive, and the third largest metropolitan area in the nation. Chicagoland is unique in its position, power and influence, and the value it adds to Illinois and its soybean farmers. But bright city lights can draw attention away from the rest of the state. According to Illinois Soybean Association (ISA) surveys, 84 percent of Illinois soybean farmers agree that outside influences — ranging from more government regulation to environmental concerns — pose challenges to their ability to operate profitably. Eighty-eight percent also say consumer support of farmers and farming is very important. Chicago has an influence on agriculture.

For example, more than 3,600 international flights flew in and out of the world’s busiest O’Hare International Airport last year, according to the Federal Aviation Authority. For agribusiness professionals like Dan Basse, that is opportunity walking right past his business’s front door.

Choosing Chicago as the home of his agricultural advisory and research company was easy. “I can’t tell you how many people pass through our offices just because they happen to be in Chicago. If I was downstate, it would be much more difficult to conduct business,” says the president of AgResource Company.

“Here in Chicago we have access to the global marketplace where demand growth is sitting,” Basse says. “We can more efficiently offer assurances of supply and quality, which is why foreign buyers like U.S. soybean products.”

Illinois ranks third in the nation for agricultural exports. In 2012, Illinois exported nearly $70.9 billion in merchandise. Agriculture accounts for about 12 percent of that total.

“Chicago is a financial island in the middle of some of the world’s best and most productive farmland,” says Joe Mathewson, Medill business editor and former correspondent for The Wall Street Journal. Mathewson believes Chicago’s diverse business environment holds a lot of opportunity for agricultural influence.

“There is continuing interest in agriculture among business people in Chicago because there is more ag futures and stock trading taking place,” Mathewson says. “They don’t have to know how to plant a row of corn. But they have to understand what drives farming and determines value factors such as weather and input costs.”
CLOSING THE GAP

These business people and their neighbors are the Chicago consumer population — one that is hungry for food and farming information to help them care for their families and do their jobs.

According to 2014 Center for Food Integrity consumer trust research, only 28 percent of consumers say they trust today’s food system. For the past few years, Illinois Farm Families has been working to change Chicago consumers’ minds through farm tours. Eighty-three percent of moms who have visited farms say they have changed their perception of farmers, and 92 percent say the tours have affected the way they choose food for their family. For folks like Mathewson, there is great opportunity to continue changing mindsets, especially with the expanding foodie culture in the city.

“Organic farming has gained a hold in Chicago and has augmented consumers’ understanding about agriculture — the fact that there really are farmers working in fields in the rest of the state,” Mathewson says. “While some in the industry may discredit this food trend, I believe it has opened consumers’ eyes to the world of agriculture and how food is grown and raised. That’s a great opportunity for farmers to share their story.”

Food companies play a role in educating consumers, too. Sixty-six percent of consumers say they would like to see the food industry educate people more about how their food is produced, according to 2014 “FoodThink” research by Sullivan Higdon & Sink. Building relationships with stakeholders along the food chain will help farmers be more successful.

“Consumers will have a greater influence on food choices and prices, especially as grain prices remain depressed and farmers look for ways to increase profitability,” says Basse. “It’s a basic supply and demand lesson. Consumers drive demand with their pocketbooks — the more types of food they buy, the more food processors have to meet demand. Farmers have to differentiate and gravitate toward crops that food processors are demanding in order to meet consumer needs.”

“I have seen firsthand the influence we can have in Chicago,” says Duane Dahlman, soybean farmer from Marengo, Ill., and ISA director. “As part of an ag literacy outreach in Chicago, I met with several legislators and business leaders who appreciate the work farmers are doing, but have questions about how we grow and raise food. They like to hear from the source instead of just relying on what they read online or hear from friends or colleagues.”

Basse and others believe supporting farmers to meet local and global consumer demand requires participating in conversations and business transactions in the center of influence. Access to Chicago affords Illinois soybean farmers opportunities to educate stakeholders on the importance of today’s farming practices, soybeans and the impact they have on the economy.

IMPROVE YOUR YIELDS!

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FREEDOM TO OPERATE

Chicago-area moms connect the dots from farm to plate during an Illinois Farm Families farm tour at Lindale Holsteins, operated by Dale and Linda Drendel, in Hampshire, Ill., Sept. 14, 2014.

PHOTO BY ISAF

PHOTO BY ISA

PHOTO BY ILLINOIS FARM FAMILIES
Thank Genetic Modification for Low American Food Prices

> BY CRAIG GUNDERSEN

About one in eight people across the world does not have enough food to eat. Addressing this problem of food insecurity is daunting, and it will become even more so as we face a projected increase of the world’s population to nine billion by 2050.

Almost 50 million Americans suffered from food insecurity in the past year. While the magnitude, severity and consequences of food insecurity differ here in comparison to low-income countries, that so many Americans are food insecure is of great concern.

Fortunately, major advances in agricultural technologies over the past 20 years have enabled higher yields without having to use more of our limited resources. Perhaps the most important development has been in advances of genetically modified organisms (GMOs). Through the use of GMOs, we are able to produce enough food at affordable prices to the world.

We are proud that America has the safest, most affordable food supply. GMO crops allow farmers to produce affordable food by using less land, water and pesticides, which reduces input costs and results in higher yields. GMOs are in 70-80 percent of the foods we eat, and play a vital role in Illinois agriculture, food processing and other industries.

Of critical importance is that GMOs help keep food costs low; if GMOs did not exist, food prices would be dramatically higher in the U.S. and across the world. This is especially critical to low-income consumers who have limited amounts of money to spend on food. Unfortunately, some are not aware of the benefits associated with GMOs nor of their proven safety record, and have asked for state-by-state labeling. This could jeopardize the ability of farmers and food producers to continue producing safe, affordable food for all Americans.

The question of mandatory GMO labeling is about more than the cost of placing a new sticker on packaging. A 50-state patchwork of labeling requirements would require establishment of costly new supply chains and segregation techniques and thousands of dollars in unnecessary expenses — the majority of which will be passed on to consumers with especially damaging effects on the well-being of low-income consumers. These new labeling requirements could discourage researchers from developing even better GMOs and discourage farmers from planting them.

Fortunately, there is a better way for consumers, farmers, food manufacturers and our economy. H.R. 4432, the Safe and Accurate Food Labeling Act, is bipartisan legislation that would empower the U.S. Food & Drug Administration (FDA) to enact federal standards to provide consumers with accurate, consistent information on GMO products.

This legislation would eliminate confusion and provide consistency by establishing FDA as the nation’s single authority over GMO product use and labeling. It also will advance food safety by empowering FDA to review new GMO technologies before they enter the market and to require labeling of GMO ingredients if they find a health, safety or nutrition issue present. It will inform consumers by establishing FDA standards for companies that voluntarily label products as containing or not containing GMO ingredients, including a federal definition of “natural.” This legislation is a commonsense solution that will protect consumers by eliminating confusion and help eradicate food insecurity. Congress should strongly consider this legislation as a means to help build a national framework for the future of food safety and labeling.

Craig Gundersen is the Soybean Industry Endowed Professor in Agricultural Strategy in the University of Illinois Department of Agricultural and Consumer Economics, and executive director of the National Soybean Research Laboratory.

Modified with permission from an editorial which ran in the Jan. 6, 2015, Chicago Sun-Times.
Governor Rauner Selects Past ISA Chair to Lead Ag Department

Illinois Governor Bruce Rauner has named Philip Nelson as Illinois Department of Agriculture director. Nelson, who is from Seneca, Ill., is a fourth-generation farmer. He also is a past chairman of the Illinois Soybean Association, served as a vice president for the American Soybean Association, was vice president of the Illinois Farm Bureau from 1999–2003, and president from 2003–2013. He was voted the first annual “Farmer of the Year Award” in 2014 by Senator Mark Kirk, and has been the recipient of numerous other honors over the years.

“The department is not just about agriculture, but also food. We can reach out to consumers in the same way Illinois Farm Families does,” Nelson said in a statement. Illinois Farm Families is supported by the soybean checkoff and several Illinois farm organizations.

New App may Help Save Lives

The Illinois Corn Marketing Board and Grain and Feed Association of Illinois have partnered up to create a new app that may help save lives. The app, called the Grain Rescue Tube Locator, aims to reduce the number of fatal grain bin entrapments in Illinois.

When downloaded, the app allows anyone to locate the nearest rescue tube if a farmer becomes stuck in a grain bin. There are hundreds of tubes available across Illinois to assist farmers in the event of such an emergency. The app provides a list of locations even without GPS, and can be downloaded for free in the Apple store and Google Play stores.

According to data compiled by Purdue University’s Agricultural Safety and Health Program, more than 900 grain bin entrapments have occurred nationwide since 1964. Illinois had 10 grain entrapments in 2010 alone, and reported five in 2013, most recent data show.

ASA Announces Conservation Legacy Awards

The American Soybean Association (ASA) recently announced their Conservation Legacy Award winners. Winners of the award this year include Steve Bergner from Iowa; Mike Starkey, Indiana; and Jimmy Thomas, North Carolina. One will be chosen as the national winner.

The Conservation Legacy Awards program is designed to recognize the outstanding environmental and conservation achievement of U.S. soybean farmers, and is sponsored by BASF, Monsanto, Corn & Soybean Digest and the United Soybean Board and Soy Checkoff.

In selecting winners, a national selection committee of farmers, conservationists and natural resource professionals evaluates nominees on their environmental and economic program.

Calendar of Events

WISHH/USMEF Project Trip
> March 15-20 • Mexico City and Guatemala

ISA Field Days
> Aug. 4-6 • Locations TBD

ISA International Biotech Symposium
> Aug. 31 • Bloomington, IL

Farm Progress Show
> Sept. 1-3 • Decatur, IL

For more information, visit www.ilsoy.org.

CORRECTION: In the January issue of Illinois Field & Bean Partner News, the article titled, “IDOA Trip Helps Increase Ag Exports,” contained a misprint. In 2011, Illinois sold $8.2 billion in agricultural products overseas. We regret the error, and thank the alert reader who brought it to our attention.
Issues to Watch

With the first legislative session of 2015 underway, Illinois Soybean Growers (ISG) is watching more than 100 bills and amendments. Here is a preview of key issues on our federal and state agendas.

FEDERAL

• **GMO LABELING** – This issue is moving toward center stage in 2015 with legislation being drafted at both the state and federal levels. ISG supports GMO labeling rules at the national level because individual state labeling laws would raise grocery prices and do nothing to advance food safety. While Rep. Mike Pompeo R-Kan., continues enforcing his Safe and Accurate Food Labeling Act, states, including Florida, Arizona, Vermont, Minnesota, Idaho and more, are pursuing their own regulations.

• **RENEWABLE FUEL STANDARD (RFS)** – The Senate Environment and Public Works Committee is taking on RFS this session. Language could be added as an amendment to other bills passing through Congress. The Environmental Protection Agency (EPA) announced in November that it was delaying finalizing 2014 RFS Renewable Volume Obligations until this year. The agency plans to take action on 2014 when it makes 2015 standards. According to the EPA, biodiesel consumption dropped to 1.75 billion gallons in 2014 — just under the average production rate of nearly two billion gallons and below 2013’s 1.8 billion gallons.

• **SUSTAINABLE LAND USE** – Initiatives to protect the environment are expected this session. First, the EPA has promised to continue supporting the Waters of the United States (WOTUS) proposed rule despite Congress’ move to block it last year. At the same time, the agency is pushing for more pesticide regulations with an eye on insecticide use, including neonicotinoids.

STATE

• **ILLINOIS BUDGET DEFICIT** – Illinois’ 99th General Assembly is determining new rules for the state under Republican Gov. Bruce Rauner. Legislators have the heavy task of addressing the state’s estimated $5.7 billion budget deficit. ISG is watching for any measures that would impact farmers, including any sales, machinery or biodiesel tax changes.

• **FOOD LABELING** – Rep. Andre Thapedi (D) has introduced a seafood origin labeling bill. ISG knows consumers are hungry to know more about where their food comes from, and is watching for any food labeling legislation that could impact farmers.

• **WATERWAY IMPROVEMENT** – ISG is partnering with others in the industry to improve Illinois waterways. Together, groups have reached out to U.S. Army Corps of Engineers to discuss improvements to the reliability of the lock and dam system, and the possibility of a public/private partnership (PPP) initiative to solve funding concerns. This is one step in improving Illinois’ infrastructure to get quality soybeans to market to meet expanding global demand.

Please register at [www.VoiceforSoy.org](http://www.VoiceforSoy.org) to stay up to date on the latest issues and to take action when necessary.
Emily Droste grew up on a corn, soybean and wheat farm near Nashville, Ill., that also includes a contract hog operation. She will graduate from the University of Illinois this May with a degree in crop sciences and a concentration in agribusiness. Droste was a 2011 recipient of the ISA crop sciences scholarship and would like to be an agronomist with a major crop inputs company.

HOW DID YOU GET INTERESTED IN CROP SCIENCES?
I always knew I wanted to have a career in agriculture when I was growing up, but I wasn’t sure what I wanted exactly. Once I saw how much technology and science go into growing crops, I knew I wanted a career with plants. Crop sciences was the best way to get there.

WHAT HAVE YOU DONE DURING YOUR TIME IN COLLEGE TO MEET YOUR PROFESSIONAL GOALS?
I have had many classes that focus on areas of agronomy like soil fertility, plant pathology, weed science and entomology. I am active in Sigma Alpha Professional Agricultural Sorority, Field and Furrow Agronomy Club, Collegiate Farm Bureau and am a Crop Sciences Student Ambassador. I just concluded my fifth semester working for the National Soybean Research Laboratory (NSRL). There I help do web research and reports for the staff as they work to incorporate soybeans as a healthy staple food in countries with high rates of malnourishment.

My two internships in production and sales with DuPont Pioneer allowed me to understand the quality standards in the industry for soybean and wheat production. A sales internship helped me develop my skills working with customers. I enjoyed talking and working with customers during my internships to help them maximize their yields and stay on top of best management practices. I would love to continue that as career.

HOW HAS THE SCHOLARSHIP HELPED YOU BEYOND THE FINANCIAL ASSISTANCE?
I am so thankful that soybean checkoff dollars fund a fantastic scholarship like this one. Because of the scholarship, I had the opportunity to attend a top-ranked agricultural university and earn a degree that helps me stand out and be competitive among other job seekers. Because of this scholarship, I thought very seriously about what kinds of challenges the soybean industry faces and what I could do to be a part of change to better the industry. That’s what got me really excited when I found a soybean production internship. This scholarship also got me thinking about different jobs on campus, which led me to the NSRL where I learned about the multiple ways soybeans can be used and how important soybeans are as a food crop.

WHAT IS YOUR ADVICE TO OTHER STUDENTS CONSIDERING CROP SCIENCES AS A CAREER?
There is a need for students who are willing to be a part of a huge industry that feeds the world. Not only do people with farm backgrounds like me get excited about raising crops to feed the growing population, but even my friends from urban backgrounds get excited about the science and technology. Agriculture is becoming more advanced to grow more crops with fewer resources than ever before. It is going to take bright minds willing to lead the way for the future.

“I have learned about the challenges the soybean industry faces and how we can make it better.”

Emily Droste, University of Illinois Crop Sciences Scholar
RESULTS

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