Illinois Field & Bean

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HOW WILL YOU PRODUCE A HEALTHY CROP?

Kill Tough Weeds?

Zap Bugs?

Dismiss Disease?

Build Fertility?
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COVER STORY

2016 Pest Possibilities Wash into Fields
Illinois received an abundance of rainfall in 2015, and agronomists say the flooding that occurred in many counties will influence the pests that appear in 2016 soybean fields. Learn what to be on the lookout for in your area this year.

Bug Zappers
The right knowledge can lead to the right treatment decisions when it comes to insect infestations in soybeans. Get tips from the bug zappers about scouting and treating and what to watch for at various stages of crop production.

Battling Herbicide Resistance
A joint project between the Illinois Soybean Association (ISA) checkoff program and University of Illinois gives farmers and industry partners new insight into the spread of waterhemp herbicide resistance throughout the state. Find out more about the spread of resistance and how researchers are working to identify and manage the results.

Size Up the Market for Soybean Meal
Illinois livestock farmers remain the top local market for soybean meal, which is why Illinois soybean farmers find value in offering support to greater protein production. Discover some of the educational events and activities the ISA checkoff program helps fund.

MANAGEMENT MATTERS MYTHBUSTER

Do Soybean Production Basics Matter?
It’s true that one key to high soybean yields and profitability is good attention to the basics. Agronomist Dan Davidson explores the facts and myths surrounding foundational agronomics.

ISA Teams Explore Asian Markets, Discover Differences
ISA checkoff program teams traveled to various countries in Asia earlier this year to explore market opportunities and build customer relations. Read about the two countries’ similarities and differences, and what they may mean for future Illinois soybean sales.
Beyond the Winter Flood Waters

With spring just around the corner, it’s time to really focus on the 2016 growing season. For many Illinois soybean farmers, that includes still making some adjustments from winter floods.

Farmers in more than 20 Illinois counties experienced unseasonal flooding last December. In fact, a lot of farmers in my southern Illinois region spent the first few days of the new year protecting stored grain, equipment, livestock and homes from record or near-record water levels caused by excessive rain throughout the mid-Mississippi River region. Governor Bruce Rauner declared most of the counties along the Illinois and Mississippi rivers disaster areas.

But beyond the obvious and unfortunate cleanup required by many farmers, what does the flooding mean for our upcoming planting season, if anything?

For starters, farmers with fall-applied nitrogen will need to evaluate the impact of the heavy rains and flooding on soil nutrients. Others may be repairing bin, equipment and building damage now so they are ready to pull planters into the fields at the first opportunity.

Once we are in season, however, the direct impact of winter flooding should be behind us. Agronomists and other crop specialists say we should prepare to protect our soybean crop just like any other year. We collected some of their thoughts, and you can read in this issue about 2016 pest possibilities, including soybean diseases, insects and weeds. We also included handy guidelines for zapping bugs and identifying herbicide-resistant weeds.

Protecting our production from pests is only part of the 2016 equation. We also must protect and grow the markets where we sell our soybeans in the months ahead.

To that end, the Illinois Soybean Association (ISA) checkoff program sent small teams of farmers and staff to six Asian countries in January to maintain and build relationships with key buyers. China, Indonesia, India, Thailand, the Philippines and Hong Kong were chosen for visits because of the strong demand they each have for high-quality soybeans and significant growth in their poultry, livestock and aquaculture markets. During the visits, we put ourselves in front of buyers and influencers, asked questions and talked about our farms. Learn more about the mission in the pages ahead.

Let’s move beyond the winter flood waters and take on the 2016 season with renewed optimism. Hopefully the tips and advice in this issue will help enhance your profitability. Safe planting.

DARYL CATES
ISA Chairman
Manage Pests for Profitability

> BY LANCE TAROCHIONE

Each year, farmers hope for bountiful yields. It is in our DNA to produce the best crops we can. But as most soybean growers will attest, getting consistently high yields can be a challenge.

Soybean farmers in Illinois saw their best overall yields ever in 2014 and 2015. No one knows how soybeans will fare in 2016. But as profit margins are squeezed tighter, consistently producing high yields becomes even more critical. The top driver of profitability is yield.

The challenge is that weather generally is the biggest yield-impacting factor, and we have no control of it. Promoting yield with no regard for production expenses or grain marketing strategy likely will not be profitable, either. So, production practices need to be economically sound.

Determining yield may seem like a mystery. But mathematically it is very simple; seeds per acre times weight per seed. Seed per acre is controlled by the number of pods and number of seeds per pod, while seed weight is influenced by seed number and the environment during grain fill.

Obviously various stresses can have a cumulative impact on yield — stresses caused by weed competition, a lack of essential nutrients, soil compaction and diseases will interact with weather-related stresses. It is very common to see an additive effect to multiple stresses.

After weather, the next biggest yield influence is disease. Diseases that reduce photosynthetic capability of plants, damage root systems or kill plants prematurely can reduce pod numbers, seeds per pod, weight per seed or all of the above. If you notice how healthy soybeans are when they do not die prematurely, it is easy to see how much yield can be lost to disease. Record-yielding beans often are desiccated to harvest them on time because they are tough and green.

“It is in our DNA to produce the best crops we can.”

LANCE TAROCHIONE
Monsanto Technical Agronomist

Soybeans perform well on ground not recently planted to beans because disease and soybean cyst nematode (SCN) pressure is much lower. Soybean breeders have been working for decades to improve host plant resistance to SCN and diseases like sudden death syndrome (SDS), brown stem rot (BSR), sclerotinia stem rot (white mold), Phytophthora root rot and others. Great gains have been made, but soybeans yield much better in the absence of diseases and pathogens.

Selecting soybean varieties with genetic resistance to your most common and likely disease problems is a good place to start. Seed treatments, inoculants, fungicides and other cultural practices also can help reduce yield losses to soybean pathogens.

Depending on density and species when it comes to weeds, university studies have shown soybean yield loss from weed competition can begin as early as 4” weeds. Spring-applied soil residual herbicides and more timely post applications are needed to prevent yield-robbing weed competition and address hard-to-control and resistant weed populations.

Insect and mite pests, such as bean leaf beetle, soybean aphids, stinkbugs, spider mites and others, also can reduce yield when populations become too high or soybeans are under drought or other environmental stress. Some seed treatments offer protection against early season pests, while foliar sprays are a cost effective option later in the season if there is economic damage.

Remember, basic cultural practices such as timely planting, reduced row spacing, soil health and fertility can help you make the most of the weather this season, along with minimizing negative impacts of soybean diseases, weeds and insects. For more information, visit AgAnytime.com. ■

Lance Tarochione is a technical agronomist with Monsanto, providing support to district sales managers, seed dealers and farmer customers for Dekalb and Asgrow products in seven counties in west central Illinois. He also is an ISA Soy CCA (certified crop adviser) Envoy.
2016 Pest Possibilities
Wash into Fields

> BY LAURA TEMPLE

WATER, WATER EVERYWHERE
Illinois received an abundance of rain in 2015. But in many areas — especially river bottoms — it was too much. Agronomists say that flooding will influence pests in 2016 soybean fields.

“Flooding forced some fields to be planted very late and prevented others from being planted,” says Steve Gonzalez, who raises crops and cattle near Prairie Du Rocher, Ill. “We had flooding again in late December and early January, so bottom ground went under water again.”

Gonzalez serves on the Prairie Du Rocher and Modoc Levee and Drainage District Board. He farms ground inside the levee along the Mississippi River.

“We received about 60 inches of rain last season, flooding fields inside the levee,” he says, which created problems not seen in an average weather year. “Because the river stayed high all season, we weren’t able to open levee gates to drain the area. Some fields had standing water all season.”

Gonzalez and others expect all the water to shift the spectrum of soybean field pests this year.

“Flooding moves large amounts of soil and residue,” says Phil Krieg, southern Illinois agronomic service representative for Syngenta. “With that, weed seeds, nematodes and disease spores also move. Wildlife patterns change, allowing birds and animals to carry pests to new areas.”

Krieg encourages farmers to pay close attention to areas of fields that had standing or moving water last season to catch changing or spreading pest pressure.

TOP PRIORITY: WEED CONTROL
Agronomists rank weed control as the top priority in soybean fields for 2016. Not only flooding, but also potential herbicide resistance will add to the challenge.

“Fields where weed control wasn’t as good as intended last year due to flooding will have more weed seeds in the seedbank,” says Krieg. “Plus, weed resistance continues to spread in Illinois, generally from south to north.”

For the past eight years, Gonzalez no-tilled his fields. Last summer and fall, weeds overran the fields that drowned out or weren’t able to be planted.

“I disked to control 6- to 8-foot weeds, and I am starting to see glyphosate resistance,” he says.

Nick Weidenbenner, regional agronomist for Bayer CropScience, shares similar observations. “Glyphosate resistance is a reality south of Springfield, and resistant weeds are increasing north.”

Weidenbenner adds that problem resistant weeds, like Palmer amaranth, can be found in pockets throughout the state and as far north as Boone and Winnebago counties.

Weed resistance to multiple herbicides continues to spread, confirm University of Illinois researchers. Illinois waterhemp resistant to two, three and four modes of action has been documented in the state, and Palmer amaranth resistance has been found to two modes of action.

“Unpredictable weather reinforces the need for residual herbicide use or multiple passes to control resistant weeds,” says Weidenbenner. “Never underestimate the value of residuals.”

Gonzalez agrees. His weed control plan combines preemergence herbicides with residual control herbicides and glyphosate.

WEED CONTROL TIPS
• Till or burn down early spring weeds.
• Start clean at planting.
• Use preemergence herbicides.
• Include residual herbicides.
• Time herbicide applications for weeds at recommended sizes.
• Select herbicide active ingredients and modes of action to manage resistance.

PROBLEM WEEDS
• Waterhemp
• Palmer amaranth
• Marestail

Sources: Nick Weidenbenner, Bayer CropScience; Phil Krieg, Syngenta
HIDDEN RISK: DISEASE PRESSURE

Soybeans need a strong root system to thrive, and soil-borne diseases limit soybean root health. That can directly and negatively affect yield potential, says Weidenbenner.

Many soil-borne soybean diseases thrive in moist conditions. Fungi that foster sudden death syndrome (SDS), brown stem rot and others survive on crop residue. Soybean cyst nematode (SCN), like several nematode species, is viable even in anaerobic conditions like flooded soil.

Given such characteristics and soil and residue movement due to flooding, Krieg expects diseases to show up in new fields or parts of fields in 2016. He and Weidenbenner note seed treatments may be a sound option to deliver cost-effective protection from soil diseases, on top of the genetic defensive packages built into soybean varieties.

“Most foliar diseases don’t get out of hand in Illinois,” Weidenbenner says. “In northern and northeastern Illinois, fields prone to white mold are at risk in cool, wet and humid weather at flowering.”

Krieg reported high levels of frogeye leaf spot in southern Illinois last season, which can appear early. He recommends prevention and timely fungicide application to prevent yield loss.

POTENTIAL THREAT: OVERWINTERING INSECTS

The mild weather that allowed extensive flooding may give bugs a strong start in 2016.

“The mild winter makes it more likely that bean leaf beetle life cycles start earlier in the spring,” says Weidenbenner. “That would allow higher populations to be present at planting.”

Bean leaf beetles start feeding on seedlings as they emerge, which causes more damage than feeding later in the season. He recommends scouting for chewed cotyledons, stems or early leaves as soybeans emerge.

Japanese beetles burrow underground during the winter, so mild temperatures could lead to higher populations in 2016, especially in pockets with pressure last year.

“In southern Illinois, stinkbugs have become an issue in the past three to five years,” says Krieg. “Like resistant weeds, they are moving from south to north, spreading every year.”

Krieg explains that stinkbugs pierce leaves instead of chewing on them like most insects, so it is hard to see their damage. But they introduce viral diseases to soybeans that can’t be controlled.

“Scout well so you don’t overlook pests,” says Krieg. “Fields may have a complex of insects that together warrant treatment, even though no single population reaches the economic threshold.”
WASHED OUT: FLOODING CREATES ADDITIONAL PESTS

Flooding washed out more than just crops and yields last season. The water forced some farmers to contend with unexpected “pests” on their way to the field last fall and this spring.

“We received 54 inches of rain through the growing season, getting two to four inches of rain with each storm,” says David McCullough, farmer from Watseka, Ill., which was hit hard by flooding. “We had our worst crop ever. Yields were less than the drought of 1988.”

The heavy rainfall and water pressure damaged rural infrastructure.

“Flooding washed out entire bridges, covered roads, carved gullies in fields and blew out drainage ditches,” McCullough says. “Tile washed out in one place in a field, but the ground didn’t cave until I drove over it, dropping my combine into an eight-foot gully. Holes in my drainage ditches would not allow trucks to drive through. Many farmers had equipment, field and other damage, and we didn’t have time or access to repair everything last fall.”

Natural disasters like the 2015 floods weaken rural infrastructure that is already crumbling.

“ISA invests soybean checkoff dollars in helping prioritize bridge and other infrastructure repairs that keep farmers from getting soybeans to market. We facilitate public-private partnerships to fund those projects,” says Paul Rasmussen, soybean farmer and ISA director from Genoa, Ill. “Challenges like this reinforce the need to improve bridges, roads, waterways and railways.”

On July 29, 2015, this Franklin County field was still covered with water.

Phil Krieg, southern Illinois agronomic service representative for Syngenta, trains sales representatives on soybean management.

Nick Weidenbenner, regional agronomist for Bayer CropScience, scouts for soybean pests.

“DON’T LET YOUR CROPS HAVE A BAD DAY.
KEEP THEM HEALTHY THE ENTIRE GROWING SEASON.”

DAN ARKELS    PERU, ILLINOIS
First Illinois Soybean Grower to Break 100 bu/A (2014)

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Bug Zappers
Treat Smarter, Not Harder in 2016

> BY BARB BAYLOR ANDERSON

To treat or not to treat? That is a question soybean farmers may ask when it comes to insects, especially in years like 2016 where profit margins already are slim. The answer, according to many crop advisers, is that the right knowledge can lead to smarter treatment decisions.

“Scouting is critical. Don’t ever spray for insects without knowledge of the population that may be present. There is room for money to be saved when treating for insects, and unwarranted applications are a recipe for resistance development,” says Nicholas A. Tinsley, crop sciences postdoctoral research associate with the University of Illinois. Tinsley helps with the annual University of Illinois insect surveys, which are completed in July and August in 28 counties across Illinois. Researchers look primarily for corn rootworm in corn, but also visit nearby soybean fields to collect any pests and calculate densities.

“Insect densities have been low in recent years, except for Japanese beetles, primarily in northern Illinois,” says Tinsley. “Many insects have been at low levels for awhile, including bean leaf beetles, grasshoppers, soybean loopers and green cloverworms. Aphids usually are only a problem north of I-80.”

Tinsley encourages farmers and crop scouts to use sweep nets in July and August to check for densities, look for defoliation during reproductive stages and then consider rescue treatments.

“Don’t just check field edges, where you may find grasshoppers and Japanese beetles in abundance. Go in 60 to 100 yards and check for insects there as well,” he says, adding farmers can find still valuable information at “on Target” (ipm.illinois.edu/ontarget). “It was last updated in 2014, but the studies are good. I also recommend farmers check bordering state data as well.”

TIME YOUR INFESTATION TREATMENTS
Purdue University offers guidelines to help farmers determine when to treat insect infestations in soybeans by stages during the growing season and in situations where replanting is needed:

### Bean Leaf Beetle, Japanese Beetle, Mexican Bean Beetle, Blister Beetle

- **PRE-BLOOM**: When greater than 40 percent defoliation.
- **BLOOMING TO POD FILL**: When greater than 15 percent defoliation.
- **FULL POD TO MATURITY**: When greater than 25 percent defoliation.
- **POD FEEDING**: When five percent or more of marketable pods are damaged, and 10 or more beetles per foot of row.

### Green Cloverworm, Thistle Caterpillar, Woollybear

- **PRE-BLOOM**: When greater than 40 percent defoliation.
- **BLOOMING TO POD FILL**: When greater than 15 percent defoliation.
- **FULL POD TO MATURITY**: When greater than 25 percent defoliation.

### Grasshoppers

- **PRE-BLOOM**: When greater than 40 percent defoliation.
- **BLOOMING TO POD FILL**: When greater than 15 percent defoliation.
- **FULL POD TO MATURITY**: When greater than 25 percent defoliation.
- **POD FEEDING**: When approximately 10 percent of pods are damaged, pods are green and grasshoppers are actively feeding.

### Cutworms

When cutworms are numerous and actively feeding, and stand counts are nearing the lower end of the scale in regard to plant population necessary to achieve good yields.

### Soybean Aphid

Average of 250 or more aphids per plant from beginning bloom to full pod. If aphids are increasing well beyond 250 per plant during seed fill and plants are under moisture stress with few predators or diseased aphids present, controls should be considered at the later stage.

### Two-Spotted Spider Mite

If leaf discoloration is apparent, mites are positively identified, and hot, dry conditions are expected to persist, a control may be considered.
Herbicide resistance in weeds is nothing new in Illinois. But a joint project between the ISA checkoff program and the University of Illinois gives farmers and industry partners new insight into the spread of waterhemp herbicide resistance throughout the state.

Pre-identified crop protection company representatives send waterhemp samples to the university's Plant Clinic. ISA will support testing 100 additional fields this year. Lab tests are done for genes that reveal resistance to the Group 9 site of action herbicides (glyphosate) and resistance to Group 14 site of action herbicides (protoporphyrinogen oxidase or PPO inhibitors). Once results are finalized, the lab sends a report to the submitter and adds results to their waterhemp resistance database. The database tracks Illinois' spread of resistant waterhemp.

"The research method was developed by an ISA and DuPont Pioneer-funded project. We now have transitioned testing from the research lab to the diagnostic lab to be able to provide the service to Illinois farmers and agriculturists in a more timely manner," says Plant Diagnostic Clinic and IPM Coordinator Suzanne Bissonnette, Ph.D. "In 2015, the Plant Clinic tested 1,350 waterhemp plants from 338 fields in Illinois for glyphosate or PPO inhibitor resistance."

**EXTRACTING PLANT DNA: THE PROCESS**

Waterhemp samples sent to the Plant Clinic first go through a laboratory process to extract the DNA and test it for both glyphosate and PPO inhibitor resistance. Within about two weeks, the agronomist or crop protection rep receives a report diagnosing the weed as either “resistant” or “susceptible to resistance.” Results are benchmarked against the surrounding area to track the spread of resistant weeds.

Plant Diagnostic Outreach Specialist Diane Plewa adds plant DNA to small wells in a microplate. Most wells in the plate contain chemicals needed to test for resistance, while others, the control group, do not.

Once filled and sealed, the microplate is placed in a centrifuge. This centrifuge spins the samples, ensuring the DNA can be collected.

The microplate is then placed in the sample drawer of the microplate DNA reader. The reader detects reactions in the microplate that signify chemical resistance.

The DNA reader connects to a nearby laptop, which displays the results of the DNA chemical reactions. Herbicide resistance results are saved on the computer and used for records and reporting.
CAMPAIGN HELPS FARMERS TAKE ACTION ON WEED RESISTANCE

Controlling herbicide-resistant weeds can be challenging, but it is a challenge farmers and the industry can fight together. Take Action is an industry-wide partnership between university weed scientists, major herbicide providers and corn, cotton, sorghum, soybean and wheat organizations to help farmers manage herbicide-resistant weeds. The website, http://takeactiononweeds.com/, is partially funded by the soybean checkoff, and can help farmers learn how to diversify weed control techniques to fight herbicide resistance.

THE PLANT CLINIC’S 2015 waterhemp sample testing found resistance to glyphosate in 49 of the 56 counties tested and resistance to PPO-inhibitor in 48 of the counties tested.

LEARN MORE ABOUT SPREAD OF RESISTANCE

Aaron Hager, University of Illinois weed scientist, encourages farmers to take a close look at patterns in weed migration to fight resistance in their fields.

- **Indigenous weeds** – Waterhemp is indigenous to the Midwest, and is now commonly found in all Illinois counties. Palmer amaranth is not native to the Midwest. When it appears, assume the seed was physically moved there.

- **Spread of resistance** – Resistance is an evolutionary process, so no assumption can be made that it moves south to north, or west to east. The first sample of PPO resistant waterhemp was in western Illinois. The first case of HPPD resistance anywhere in the world was found in McLean County.

- **Multiple resistance** – In Illinois, the most significant challenge farmers face is not just the fact that they may have a resistant population — it may be a population resistant to herbicides from multiple site-of-action families. Populations and individual plants resistant to herbicides from three, four and even five site-of-action families exist.

- **Advice to farmers** – The more resistance present in a field, the fewer options available to control those weeds. Farmers must manage wisely the tools that remain effective, and make sure no resistant seed is added back into the seedbank.

For more information on weed resistance research, visit the Illinois soybean checkoff-supported website, www.ILSoyAdvisor.com.
Soybean components are found in thousands of products. Crushed soybeans yield meal, oil and hulls, which are blended or separated for different uses.

Soybean oil is refined for food, biodiesel and industrial uses.

About three percent of soy protein goes into human food. The bulk predominantly is fed to livestock and poultry, which makes soybean meal use a primary focus for Illinois soybean sales.

“Nearly 80 percent of each soybean becomes feed. Animal agriculture is the top market for soybeans,” says John Hagenbuch, soybean farmer from Utica, Ill., and ISA director. “Soybeans are a high-quality feed ingredient for pigs, poultry, cattle, fish and more.”

Some crushing processes first de-hull soybeans. The fiber and hulls go into livestock feed. After oil is extracted, the meal provides easily digestible amino acids. The Soybean Meal Information Center reports meal delivers 44 to 49 percent protein for feed rations.

“Soybean meal sets the market standard for protein in animal feed,” says Nic Anderson, livestock business developer for the Illinois Livestock Development Group (ILDG). “It is the most dependable, consistent source of protein, and it is most efficient for animals to eat. Feeding soybean meal in rations supports animal care and performance.”

Nationally, animals consume 27.9 million tons of soybean meal per year, according to the Economic Analysis of Animal Agriculture funded by the soybean checkoff. Poultry — chickens, laying hens and turkeys — eat more than half. Hogs eat another 28 percent.

Illinois animals, primarily hogs, eat almost 876,000 tons of soybean meal. Beef and dairy cattle eat meal and hulls. Meal is fed to sheep, meat goats, fish, shrimp, horses and pets.

**Crushed Soybean Yield**

- **High Protein Meal**: 73%
- **Soybean Oil**: 18%
- **Hulls**: 6%
- **Loss**: 3%

**1 Bushel**

**6% Hulls**

**18% Soybean Oil**

**73% High Protein Meal**


**MORE THAN MEAL: Soy Hulls Supplement Cattle Feed**

The hard coating found on soybeans, the hull, becomes a byproduct in some crushing processes. But that byproduct has become a valuable beef and dairy cattle feed.

“Soybean hulls are widely used as a protein and energy supplement for cattle,” says Travis Meteer, Extension educator and beef specialist for the University of Illinois. “They provide nutrients in a fiber-based feed that works well for ruminants.”

As digestible fiber, hulls complement forages often found in cattle rations. Hulls are economical and fit many diets, adds Meteer. Hulls add value to stored forages when grazing isn’t possible, and for total mixed rations in feedlots and a variety of dairy stages.

“Soybean hulls flow better than dried distillers grains (DDGs) or corn gluten byproducts, so they store in bins and transport well,” he says, adding that the average Illinois beef herd has 40 head of cattle. “Hulls are easy to handle, especially with minimal equipment.”

Soybean hulls also are a good feed ingredient when transitioning cattle from drylot rations to lush pastures. They add dry matter and energy without excess protein.

“Illinois is an ideal place to raise cattle,” says Meteer. “We are spoiled due to the abundance of feedstuffs and supplements available here. Soybeans are part of that.”

Hogs and soybeans go together on a farm like pork and beans on a plate. The two commodities complement each other’s strengths and are an opportunity for Illinois farmers.

“Illinois ranks fourth in U.S. pork production,” says Phil Borgic, hog farmer near Raymond, Ill. “Hogs allow farms to diversify when grain margins are tight, and they offer the chance to bring young people back to farm.”

Borgic believes several factors contribute to the state’s thriving hog industry:

• Accessible feedstuffs — soybeans, corn, dried distillers grain (DDG) and other byproducts — grow hogs efficiently.
• Multiple packers provide competition.
• Fields use nutrients from hogs to grow more feed sustainably at a net gain.
• Reasonable hog population density lessens disease pressure and permits more control of animal health.

LIVING THE DREAM

Borgic chose to focus on hog production 20 years ago. “Hogs offer predictability for planning and year-round income,” he says. “I enjoy the industry dynamics.”

Borgic farrows sows at his main farm and works with other farmers around the state to raise pigs from 12 to 285 pounds.

“I love providing long-term careers to young people in rural Illinois who want to farm,” Borgic says, noting that raising hogs provides full-time farm income, crop nutrients and equity for other farming expenses. With these benefits, his network continues to grow.

“In the past year, I started with two new young people so they could leave their off-farm jobs,” he says. “We are still building.”

Hogs have allowed farms to expand for generations, including Matthew Starr who raises hogs and crops with his father and uncle near Nauvoo, Ill.

“Adding hogs allowed my dad to join the farm in the late 1970s,” says Starr. “Building a farrow-to-finish operation provided labor and income so he could return.”

The Starrs transitioned to a wean-to-finish operation in 1998, and purchased shares in a Carthage Veterinary Service sow farm.

“My long-term goal was to farm, but Dad recommended I work off the farm first,” says Starr. “I worked in seed production for five years after college. I didn’t realize how much I enjoyed the work and freedom of farming until I worked in the corporate world.”

The income stream from the hogs allowed Starr to join the farm in 2007 to raise his family there just as his father did.

“My daughters and son, ages six, four and one, will grow up with farm responsibilities and opportunities,” he says. “We plan to give them the option to farm or be informed landowners. I want to see our farm legacy continue.”

SERVE UP SOYBEAN MEAL

Hogs give farmers like Borgic and Starr opportunities that translate into a growing local soybean market.

Both producers acknowledge soybean meal provides amino acids hogs need to build lean muscle. Protein content dictates soybean meal value and transportation also figures into the price they pay. Blended with corn, vitamins and minerals and other feedstuffs, soybean meal delivers healthy nutrition to hogs.

“We grind and mix our own feed, and we rely on soybean meal for all the protein our hogs get,” Starr says. “A four-ton load of feed for young pigs contains one ton of meal.”

For Borgic, feed mill nutritionists evaluate feed ingredients based on cost of gain, measuring feed costs to produce one pound of pork.

“Our rations change every three weeks, and we have nine different rations to fit different stages,” says Borgic. “Soybean meal rates start at 25 to 30 percent for piglets, and as their needs change, it drops to about five percent for finishing hogs.”

Between the years 2004 and 2014, the Illinois hog industry expanded 36.4 percent to nearly 1.8 million animal units. Those hogs ate more than 650,000 tons of soybean meal.


PORK the Perfect Complement for Beans

Between the years 2004 and 2014, the Illinois hog industry expanded 36.4 percent to nearly 1.8 million animal units. Those hogs ate more than 650,000 tons of soybean meal.


U.S. Market Soybean Meal Use = 27,862,710 tons

Soybean Meal Use

Soybeans TALK TURKEY in Illinois

Poultry account for just 11 percent of Illinois animal agriculture by sales, but is the largest market for U.S. soybean meal sales.

Mike Yordy raises turkeys, corn and soybeans near Morton, Ill. A fourth-generation turkey farmer, he raises five flocks per year from day-old poults to 40-plus-pound birds as an independent contractor. Yordy shares his perspective on the industry in Illinois.

WHAT ADVANTAGES AND CHALLENGES DOES ILLINOIS OFFER TURKEY FARMERS?

Illinois has a readily available supply of corn and soybean meal. We manufacture our feed using our corn and soybean meal from three central Illinois processors. The moderate climate offers less sustained heat than the Southeast and less sustained cold than Minnesota. Our isolation from heavily populated turkey production areas provides biosecurity advantages, which was important last year when Iowa, South Dakota, Wisconsin and Minnesota were plagued with avian influenza. Since most turkey processing takes place in neighboring states, distance to processors can be a challenge.

WHY DO YOU FEED SOYBEAN MEAL?

Poultry need high amounts of protein, and soybean meal is the primary source. Soybean meal inclusion rates range from 300 to 900 pounds per ton of complete turkey feed. We feed eight different diets from day one to market, which is 19-20 weeks, with the highest soybean meal rate included in diet one. This meets the nutritional needs of the birds at various growth stages to maximize their genetic potential.

WHAT MAKES TURKEY PRODUCTION SUCCESSFUL?

• Feed good feed. We work with a nutritionist to maximize the potential of each bird.
• Provide a healthy environment. Turkeys need quality air at the right temperature, water and space to thrive.
• Take good care of the birds. Paying attention to details ensures a healthy flock.

Do you enjoy shrimp cocktail, fried catfish, grilled salmon, baked trout or crusted tilapia? Producers of these and other farmed fish are increasingly mixing soy into feed rations.

“Commercial aquaculture has grown rapidly during the last 30 to 40 years because seafood demand has outstripped supply of wild harvest,” says Steve Hart, vice president of education and outreach for the Global Aquaculture Alliance (GAA).

The U.S. imports 91 percent of its seafood.

More than half the seafood people eat is farmed, including salmon, tilapia, shrimp, catfish and shellfish, says Hart. China produces about 60 percent of the global supply. But with growing demand, they became a net seafood importer five years ago.

“This shift could change U.S. aquaculture,” Hart explains. “As seafood becomes harder to source globally, the U.S. must develop a domestic industry or face decreased supply.”

The U.S. currently ranks 14th in worldwide aquaculture production, with catfish the top species. Farmers also raise shellfish, salmon and trout.

“Recently, the U.S. established regulations for permitting fish farms in Gulf of Mexico federal waters,” Hart says. “If it proves successful, other U.S. regions will likely follow.”

Hart adds sustainability is critical for aquaculture. For example, harvesting wild anchovies and sardines for fishmeal, the industry’s main protein feed source, affects ocean ecosystems and increases feed costs.

“Ingredients like soybean meal improve the long-term sustainability of aquaculture,” he says. “Aquaculture needs fishmeal alternatives to grow as an industry. Soybean meal fits. It is now the number one ingredient used in aquafeeds globally, with about 13.2 million short tons fed annually.”

Aquaculture development equals growth potential for soybean meal markets. The Soy Aquaculture Alliance (SAA) supports work to learn how soy protein replaces fishmeal. Illinois soybean checkoff dollars have been invested in SAA’s efforts.

“Aquaculture is the fastest-growing food sector on earth, and it needs protein,” says Bridget Owen, SAA executive director. “Soy is...
a complete protein that serves terrestrial animals well, so it makes sense to consider it for fish and shrimp."

However, diet research must be done by individual species. Seafood includes hundreds of species, so current research focuses on common U.S. and international species, she says.

“We’ve learned that some fish, especially freshwater species, like soybean meal that is conventionally produced,” Owen explains. “Others, especially marine species and young fish, require higher protein concentrations in addition to soybean meal.”

Soy protein concentrate can meet those additional needs, reducing or removing carbohydrates and other elements in meal and delivering 60 to 65 percent protein.

“The Illinois Soybean Association deserves credit for their foresight to invest in growth opportunities, demonstrated by their long-term support of aquaculture,” she says. “We appreciate Illinois soybean farmers’ support of market development, research and advocacy for aquaculture. As the industry grows, they will benefit.”

TUNA RANCHING IS NEW SOY FEED FRONTIER

Seeing potential for expanding the soybean meal market, the Illinois soybean checkoff is funding research to use soy protein in feed rations for ranched tuna.

“Tuna ranching has become a viable, profitable enterprise worldwide. However, it presents many challenges,” says Alejandro Buentello, fish nutritionist with Ichthus Unlimited and ADM. “Feed accounts for around 60 percent of variable operating costs. Current feeding practices are impractical, unsustainable and ecologically risky.”

The research project brings together a wide variety of partners, from Texas A&M and Kansas State universities to ADM. American Protein Corporation, Midwest Ag Enterprises, American Protein Corporation, Midwest Ag Enterprises, Omega Protein, Tyson, Krill Canada and Originates supply key ingredients to help tuna ranching attain commercial success and ecological sustainability.

“We are developing feed prototypes that meet nutritional needs and are palatable for tuna, with taste and texture similar to their natural food; sardines, squid and mackerel,” he says.

Land-based facilities in Panama, Mexico and Spain will test experimental diets. Tuna responses will be documented to identify the best replacements for fishmeal and fish oil.

“We aim to provide optimal nutrition and improve feed conversion ratios,” he says. “Our goal is to be ready for commercial trials by the end of 2016. Commercial tuna farmers are eager to try these diets.”

### Soy Protein in Common Fish Rations

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<thead>
<tr>
<th>SPECIES/TYPE</th>
<th>SOY PERCENTAGE RANGE</th>
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<tbody>
<tr>
<td>TILAPIA</td>
<td>30-40%</td>
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<tr>
<td>MARINE</td>
<td>15-30%</td>
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<tr>
<td>CATFISH</td>
<td>30-40%</td>
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<td>TROUT</td>
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<td>SHRIMP</td>
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Soybean Farmers Generate Local Livestock Support

> BY LAURA TEMPLE

Illinois livestock farmers remain the top local market for soybean meal, which is why Illinois soybean farmers find value in offering support to greater protein production. “Supporting Illinois hog and cattle farmers helps our closest customers be successful,” says Rob Shaffer, farmer and ISA director from El Paso, Ill. “We work with livestock associations to serve these customers and secure our local soybean meal market.”

Jennifer Tirey, Illinois Pork Producers Association (IPPA) executive director, appreciates that perspective, noting Illinois hog farmers need industry growth and strong relationships with regulators to be successful. Reid Blossom, Illinois Beef Association (IBA) executive vice president, shares similar needs for beef farmers: growth, education and regulatory support are all critical to their prosperity.

“ISA has been very proactive aiding our industry,” says Blossom. “They provide a big boost to Illinois cattle producers. Programs like Beef & Beyond are rooted in real producer needs. ISA’s investment creates certainty that would not be there otherwise.”

The annual Beef & Beyond Summit shares current technology with Illinois beef farmers.

RAISE THE STEAKS (AND THE BACON)
ISA also supports the industry through membership in the Illinois Livestock Development Group (ILDG). Rob Shaffer is the current president. “This group brings Illinois agriculture together to grow our livestock industry,” he says.

That growth can come from farm diversification. Blossom says he regularly hears from beef producers and others that want to diversify the commodities they raise.

“We refer them to ILDG to guide them through the process of updating old barns or building new ones,” he says. “Working together allows us to provide more resources than the beef industry can alone.”

The same is true of the pork industry. Tirey appreciates Illinois soybean checkoff support for educational discussion panels at the Illinois Pork Expo and other events to share diversification options with farmers.

HEAD TO SCHOOL
“We provide livestock farmers access to information to increase efficiency, improve business management and manage risk so that they can produce meat, poultry and dairy products cost-effectively,” explains Shaffer. “This assistance builds local demand for soybean meal and it adds value to our crops.”

The Illinois soybean checkoff partially funds other educational events and meetings for livestock farmers. For example, ISA supports meetings to share changing governmental regulations for livestock farms. Currently, ISA sponsorship provides materials for Common Industry Audit workshops for pork producers.

“Pork producers transitioned to a new standard audit, rather than each packer having separate requirements for farmers supplying hogs,” explains Tirey. “These materials are helping us prepare our producers for on-farm audits with this new process.”

“The partnerships and support between IPPA and ISA benefit all our members,” she continues. “We value ISA’s strong membership base, willingness to share information and support of our goals.”

ISA supports Common Industry Audit workshops that explain a new on-farm audit process to hog farmers.

Ted Funk (right) visits livestock farms to help farmers like beef producer Mike Martz (left), a farmer from Maple Park, Ill., meet regulations.

**Checkoff FACT:**
To help livestock farmers successfully navigate government regulations and protect resources, the Illinois soybean checkoff funds technical environmental support from engineering consultant Ted Funk, Ph.D. He addresses compliance and other issues.

“Dr. Funk is a resource to help farmers follow guidelines,” explains Jennifer Tirey, IPPA executive director. “He answers questions about biosecurity, sustainability and nutrient management. His expertise helps our farmers continue to be good stewards of the land.”
Do Soybean Production Basics Matter?

**TRUE:** One key to high soybean yields and profitability is good attention to the basics. *Illinois Field & Bean* explores the facts and myths surrounding foundational agronomics.

**1. SOYBEAN YIELDS ARE STAGNANT, AND MANAGING THEM DOESN'T PAY.**

**FALSE:** Soybeans have a lot more yield potential these days, especially if you understand the crop and its needs, asserts Dan Davidson, Ph.D., agronomist and ISA research technical coordinator. “With the right management and attention, soybeans can provide results that are competitive with your corn acres,” he says.

ISA Production Committee Chair John Longley, who farms near Aledo, Ill., has seen leading growers prove today’s soybean varieties respond to better management. “In ISA’s Yield Challenge competition, several growers achieved yields in the mid- to upper- 80s and even 90 bushels per acre in 2015,” he says. “After variety selection, many of these farmers attribute their success to basic, foundational agronomic practices.”

**2. IT’S FINE TO PLANT SOYBEANS ANY TIME AFTER MY CORN ACRES ARE DONE.**

**FALSE:** “Plant as soon as soil conditions allow,” advises Jeff Brown, agronomy manager with United Prairie, LLC, in Tolono, Ill. “The last week of April is ideal and will provide maybe five percent higher yields versus planting in mid-May.”

He also recommends treating seeds with at least a fungicide, and says farmers should take special consideration with planting narrow rows. “Narrow, 15-inch rows provide consistently better yields than 30-inch rows,” Brown says. “You want an emerged population of about 100,000 plants per acre, so seed at 140,000 or a little higher for narrower rows.”

**3. PROPER SEEDBED PREPARATION PAYS OFF.**

**TRUE:** Davidson advises growers to consider what the seed needs to thrive. “You want quick germination and uniform emergence. Soil should be a little moist and crumbly to reduce sidewall compaction,” he says. “You want to plant as early as you can, but be sure you have the right soil temperature and condition first.”

Check your planter settings, too. “You want seed placed at the bottom of the furrow, 1.5 to 1.75 inches deep. Planters with a seed meter mechanism will provide better seed drop and more precise placement,” he says.

**4. FERTILITY ISN’T AS IMPORTANT FOR SOYBEANS AS CORN.**

**FALSE:** Soybean yields will benefit from proper fertility. “Beans like a slightly higher pH, so get your pH up, ideally in the 6.4 to 6.8 range,” Brown says. “Make sure your phosphorus and potassium levels are adequate. Base those decisions on soil tests taken at least every four years.”

Davidson also advises not skipping fertility. “Modern crops remove large amounts of nutrients, so at least replace those. Don’t let beans just scavenge leftovers from your corn crop,” he says.

**5. A STRAIGHT GLYPHOSATE PROGRAM WORKS IF YOU DON’T HAVE RESISTANT WEEDS.**

**FALSE:** Overreliance on a single mode of action eventually will lead to resistance. “Everyone needs to use multiple modes of action and layer residuals,” Brown says.

He also suggests soybean farmers consider other trait technologies beyond Roundup Ready that may offer better yield potential, as those technologies have matured. “Make sure to adjust your sprayer’s carry volumes based on label recommendations for each material,” he says. “Consult with a trusted seed dealer or retailer on building a program approach if you’re not already.”

Along with seed selection, a well-planned and carefully executed crop management plan will help maximize your yield and profit potential.
ISA Teams Explore Asian Markets, Discover Differences

In January, Illinois Soybean Association (ISA) checkoff program board members and staff met with key importers and business leaders in Asia to explore market opportunities and build customer relationships. What they learned is that two of those countries — India and China — are similar, but different.

For example, both countries have more than 1.2 billion people with a growing middle class, strong aquaculture industries and high vegetable oil consumption. The GMO debate continues in India and China, and both countries only grow non-GMO soybeans.

While China is the U.S.’ top soybean importer, until recently, India was a top soybean meal exporter. China has infrastructure to handle bulk commodities, while in India commodities are still transported in bags. China is a communist country and India has a strong democracy. Each country also has its own trade barriers.

For more perspectives on ISA’s trip, visit the Soy Insights blog: SoyInsights.com.

INDIA

In India, soybeans are sold at a mandi, which is an open market and auction, where buyers bid for soybeans. Prices vary depending on perceived soybean quality and appearance. In Indore, some soybeans sold for twice as much as others. The process moves very quickly. Once soybeans are sold, they are bagged for delivery.

INDIA PHOTOS BY AMY ROODY
The China team visited the Shanghai Maotian Wetland state-owned fishery. China is the top user of soy in aquaculture at about 408 million bushels per year. Aquaculture is a growing opportunity for Illinois soybean farmers, as extruded pellets are fed to the fish.

Xhang Youliang, general manager of the farm, provided background about the area. The entire farm is 250 acres, with the pond area making up 100 acres. The pond houses mostly grass carp, with the intent to cultivate more local varieties in the future. Two, four-section ponds use intensive pond aquaculture (IPA). Through a partnership with the U.S. Soybean Export Council (USSEC), the fish are grown in a controlled environment.

By sectioning off the pond, production is more environmentally and economically efficient, requires less antibiotic use and saves nutrients though the filters. The ponds are created to slope towards the filter so that waste is easily removed. Fresh water waves in from the other side of the pond, and oxygen is injected into the cells.

Fish are harvested in July-August and November-December. It is a goal of the team to create indoor and heated sections so they might cultivate fish year round.
Sustainably Certified Soy Exports Grow

The U.S. Soybean Export Council (USSEC) recently announced that soy exports certified through the U.S. Soy Sustainability Assurance Protocol (SSAP) hit a record two million metric tons. The SSAP was developed by USSEC and other soybean organizations, including the American Soybean Association (ASA), United Soybean Board (USB) and Qualified State Soybean Boards (QSSBs) like ISA. Industry partners include North American Export Grain Association (NAEGA) and National Oilseed Processors Association (NOPA).

The SSAP allows U.S. exporters to efficiently and cost-effectively communicate the sustainability of U.S. soybeans and is designed to provide sustainability assurance to buyers worldwide with a simple certification tool. To learn more, visit www.ussec.org.

Truck Maker Approves B20 Use

PACCAR, a Peterbilt and Kentworth truck maker, announced at the National Biodiesel Board (NBB) conference in January that it had begun using biodiesel blends in its old and new engines. This will allow more than 100,000 trucks, which run 12 billion miles annually, to join the renewable fuel ranks. PACCAR was honored during the event with the Eye on Biodiesel Award.

More than 78 percent of diesel vehicles coming off production lines today are approved for use with B20 — a 20 percent biodiesel and 80 percent diesel blend. All of Detroit's automakers -- Ford, General Motors and Fiat Chrysler — have supported biodiesel blends for nearly a decade.

Grain Shippers Commend and Criticize 2015 Rail Service

Agricultural shippers provided mixed reviews of the nation's largest railroads in the sixth annual Soy Transportation Coalition (STC) Railroad Report Card released earlier this year. For the fourth time, Union Pacific was regarded as the top performing railroad, while BNSF Railway was rated as most improved, increasing its overall score by 26 percent from the previous year.

Survey respondents ranked Canadian Pacific in last place for the fifth year in a row. Three of the seven evaluated railroads — Union Pacific, BNSF and Canadian Pacific — were provided higher overall scores from 2014. Four of the seven — CSX, Norfolk Southern, Canadian National and Kansas City Southern — were given lower overall scores.

USFRA Launches Foundation for Consumer Education

The U.S. Farmers and Ranchers Alliance (USFRA) has launched a new philanthropic nonprofit foundation that will focus on furthering agricultural education among America’s consumers. The foundation, called the U.S. Farmers and Ranchers Foundation (USFRF), has a mission to educate and interact with children and young adults, and to be a part of their lives as they grow and learn. One project from the organization will be to create a curriculum guide on farming and agricultural practices, based off the documentary the group previously created. To learn more about the Farmland documentary and USFRF, visit www.discoveringfarmland.com.

Calendar of Events

- Illinois Soybean Summit
  > March 11 · Rockford, Ill.

- Midwest Petroleum and Convenience Trade Show
  > March 22 · Indianapolis, Ind.

- ISA Annual Meeting
  > July 27-29 · Springfield, Ill.

- IL Soy Advisor Regional Field Days
  > Aug. 2-4 · TBD
How Well do you Know Your Soybean Checkoff?

When you sell your soybeans in Illinois, the first purchaser subtracts an assessment otherwise known as the soybean checkoff. The collective monies from the checkoff fund state and national programs. But how well do you know the basic details of the checkoff? TAKE OUR QUIZ:

1. WHAT IS THE AMOUNT OF AN INDIVIDUAL’S SOYBEAN CHECKOFF CONTRIBUTION?
   - One cent per bushel
   - 0.5 cents per bushel
   - 0.5 percent of the market price per bushel sold
   - 1.0 percent of the market price per bushel sold

2. HOW ARE THE FUNDS DIVIDED BETWEEN STATE AND NATIONALLY DIRECTED PROJECTS?
   - 50 percent state, 50 percent national
   - 60 percent state, 40 percent national
   - 100 percent state
   - 100 percent national

3. WHO MANAGES THE ILLINOIS SOYBEAN CHECKOFF?
   - State of Illinois
   - Illinois Soybean Board
   - Illinois Soybean Growers
   - USDA

4. WHO MANAGES THE NATIONAL SOYBEAN CHECKOFF?
   - United Soybean Board
   - American Soybean Association
   - National Soybean Board
   - U.S. Soybean Export Council

5. YOUR SOYBEAN CHECKOFF CONTRIBUTIONS CAN PAY FOR LOBBYING REPRESENTATION.
   - True
   - False

6. HOW MANY OF THE 70 VOLUNTEER FARMER-LEADERS ON USB ARE FROM ILLINOIS?
   - One
   - Two
   - Four
   - Ten

7. WHEN WAS THE CURRENT SOYBEAN CHECKOFF PROGRAM CREATED?
   - 1970
   - 1980
   - 1990
   - 2000

ANSWERS

1. Individual checkoff contribution is calculated as 0.5 percent of the net market price per bushel sold.
2. Collected funds are split 50-50 between the state and national programs.
3. Illinois Soybean Board programs are executed by the Illinois Soybean Association.
5. Illinois Soybean Growers and the American Soybean Association focus on state and national policy issues, which the checkoff cannot.
6. Four farmers are nominated by the state board and appointed by the U.S. Secretary of Agriculture to serve three-year terms.
7. 1990. Illinois soybean leaders joined other state leaders to draft guidelines for a uniform national soybean checkoff, which has become a major funding source.
USDA-ASA Partnership Lays Groundwork for Exports

International soybean competition is intense. The American Soybean Association (ASA) says the U.S. exported 1.79 billion bushels in 2015, while Brazil exported 1.69 billion bushels.

Continuing to build a global network of international trade is a major opportunity for U.S. soybean farmers, which is part of the reason ASA partners with USDA to promote exports. Specifically, USDA’s Foreign Agricultural Service (FAS) provides important resources for developing trade relationships through its Market Access Program (MAP) and Foreign Market Development (FMD) Program. MAP focuses on product promotions and ensuring continued access to existing markets, while FMD helps organizations build new markets.

Through these programs, FAS awarded more than $200 million in fiscal year 2016 to support nonprofit organizations, cooperatives and trade associations, including ASA.

When developing a unified export strategy, ASA Vice President and Roseville, Ill., soybean farmer Ron Moore says this partnership on trade development is crucial.

“It’s about creating a preference for U.S. soy,” says Moore. “These funds help us put boots on the ground to open new markets and further develop existing ones.”

According to USDA, the Illinois soybean crop is valued at $5.6 billion. Moore says roughly 60 percent of U.S. soybeans are exported. Forming connections in foreign markets like Asia and ensuring access remains open and equal is a top priority for Illinois Soybean Growers (ISG).

“Illinois is one of the top soybean-producing states in the country offering a dependable supply and consistent quality,” says Mike Levin, ISG director of issues management and analysis. “Our farmers have a competitive advantage. Working with ASA has increased our advocacy efforts to maintain and expand international trade markets for Illinois soybeans.”

MAP and FMD funding for ASA supports consultants and experts who build relationships with customers and provide information on how to use U.S. soy.

“Especially in Asian markets like China — which imports roughly 25 percent of U.S. beans for livestock feed — it’s critically important to build and service those relationships,” says Moore.

“Through these trade programs, we can provide technical assistance and demonstrate how our soybeans are reliable, sustainably grown and overall a more attractive product.”

Moore adds that international markets offer soybean farmers many opportunities for economic growth. From government-funded programs like MAP and FMD, to the Trans-Pacific Partnership (TPP), Levin says ISG is embracing opportunities and advocating for policies that increase international trade — and Illinois soybean farmer profitability. ■
Karen Corrigan grew up on a family corn and soybean farm south of Seneca, Ill. She has a bachelor’s degree in crop sciences from the University of Illinois, a master’s degree in weed science from the University of Wisconsin and is a certified crop adviser.

She formed McGillicuddy Corrigan Agronomics with John McGillicuddy in 2003 to provide agronomic and technical services to growers and agribusinesses in Illinois and several other nearby states. Together, they offer consulting, agronomic education through field days and seminars, and soil sampling.

Corrigan is active in the McLean County Farm Bureau and is on the committee for the Turner Hall Renovation at the University of Illinois. She was the 2015 Young Alumni Award winner for the University of Illinois College of ACES.

WHY DID YOU CHOOSE TO BECOME AN AGRONOMIST?

Even though I grew up on a farm and participated in FFA, I wasn’t drawn to farming itself. I liked the science of agronomy — the plant physiology, herbicide chemistry, soil mechanics and piecing together the whole system.

I was drawn specifically to weed science while working as an undergraduate in the University of Illinois Weed Science Lab. After graduation, I hoped to be a technical rep for a chemical company. However, at that time companies were consolidating and positions were scarce. In my current position, I believe I act as a technical rep, just directly for growers as opposed to a company. It is a unique position since the grower’s success is the most important aspect of my work. I can make recommendations I believe will help farmers be profitable without any restrictions.

WHAT ARE THE GREATEST CHALLENGES AND OPPORTUNITIES AGRONOMISTS FACE TODAY?

The greatest challenge is profitability for our clients. Tough economic times encourage farmers to scrutinize every decision to determine its impact on profit.

Opportunities lie in finding yield-limiting factors for each field and helping increase yields on those fields.

HOW DO YOU PLAN TO HELP FARMERS IMPROVE YIELDS AND PROFITS FOR THE FUTURE?

Each field is its own unique case and needs to be treated as such to achieve both profits and higher yields. I firmly believe that more emphasis needs to be placed on the profits of each field. For example, soil fertility often is overlooked in soybean production, but needs to have more attention. In the past few years we have had some major weed escapes, some in part due to Mother Nature. These fields need to have specific strategies to keep those weed seeds from becoming a yield-limiting factor.

WHAT CAN ILLINOIS SOYBEAN FARMERS DO, AGRONOMICALLY SPEAKING, TO MAINTAIN THEIR ROLE AS A LEADER IN WORLDWIDE SOYBEAN PRODUCTION?

Illinois soybean farmers need to continue to produce a consistent, reliable crop. Farmers should focus on key factors that impact yield in a profitable manner. Farmers may also look to improve components of their soybeans to attract more high-end buyers, whether that is oil or protein content.
A SOYBEAN DISCUSSION IS HAPPENING ACROSS ILLINOIS.

JOIN THE CONVERSATION NOW.

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DID YOU KNOW?

YOUR CHECKOFF FUNDS developed the ILSoyAdvisor webinar series to highlight tools and technologies to improve soybean production.

Find out more at ILSoyAdvisor.com