Ag Assists COVID-19 Response
Illinois Farmers Aid Poultry Partners
Online Resource Connects to Research
Tech Innovation Boosts Nutrient ROI

ROOTING INNOVATIVE PARTNERSHIPS
Whether you’re dealing with drought, flood, heat or other climate-related stress, the soy checkoff is working behind the scenes to diversify U.S. soybean genetics and increase stress tolerance. We’re looking inside the bean, beyond the bushel and around the world to keep preference for U.S. soy strong. And it’s helping make a valuable impact for soybean farmers like you.

See more ways the soy checkoff is maximizing profit opportunities for soybean farmers at unitedsoybean.org
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COVID-19 ACCENTUATES OUR INTERDEPENDENCE

There is no doubt that the last few months have been some of the most challenging in our lifetime, not only for farmers, but for all Americans.

We have seen commodity prices crash, links in the food supply chain break, our economy weaken, and, in some cases, watched family or friends become ill. It’s tough. But as draining as this time has been, COVID-19 has accentuated our interdependence. The impact of a pandemic on the ag industry structure underscores the value of our partnerships.

It shows how everything is truly interrelated. For example, most Illinois soybean farmers also are corn farmers. The Illinois Soybean Association (ISA) checkoff program can partner with the Illinois Corn Marketing Board where we have mutual interests. In April, we worked together on a hand sanitizer project you can read more about in our cover story. And at the end of May, we partnered again with corn growers and Illinois Farm Bureau to sponsor a University of Illinois farmdoc webinar regarding perspectives on the pandemic and policy responses affecting farmers.

Partnerships with the livestock and poultry industries are just as critical to our survival. Animal agriculture remains the top customer of Illinois soy, so helping fund beef, pork and poultry promotions here and around the world advocates for Illinois soybeans at the same time. One of those alliances with the U.S.A. Poultry and Egg Export Council (USAPEEC) is featured ahead.

Today’s tight production margins highlight the value of research deals. ISA checkoff dollars are invested with research partners to help Illinois soybean farmers increase yield and efficiencies while cutting costs. We are fortunate to have agtech companies based at the University of Illinois Research Park, which has become a leading technology hub for cultivating startups and accelerating innovation. Read on to learn more about some of the projects underway.

Bottom line, as we focus on the future, we need to continue to embrace and financially support the projects that make the most sense for increasing the use of Illinois soybeans and those projects that help us produce higher quality, more profitable soybeans. That is why ISA exists. The more we can sustain our customers and the facilities that use our soybeans, the better.

My hope is that we beat COVID-19 and learn lessons for managing challenges like this, should they reoccur. If the pandemic has taught us one thing, it is the value of our partnerships, both personal and professional. We are all connected, and we must nurture our relationships to thrive. ■
Protection has increasingly become a word we hear on a regular basis. With COVID-19 dominating how we go about our daily lives, we are constantly taught how to protect our health, protect our children and parents, and protect the businesses that operate in our communities.

What about protection for Illinois soybean farmers? During these uncertain times, farmers are doing all they individually can to try and produce a crop while battling weather, low prices and the unknown impact of a pandemic on future soybean demand.

That is why it is just as important now for Illinois soybean farmers to protect their livelihoods. Our family farms are stretched thin, no question. We must raise our collective voice and secure our farm policy protection. Because without adequate protection, our generations-old farms face decline—the possibility of losing acres, losing customers and losing risk management tools.

Voice for Soy is the pathway to take action on issues like trade, farm policy and crop insurance.

Illinois Soybean Growers (ISG) monitors and advocates for trade expansion and market access for soybeans, sharing updates on Voice for Soy. That includes asking the Administration for resolution to the China tariff situation and pushing for new free trade agreements (FTAs).

We remain hopeful this year that the 2020 U.S.-China Phase 1 Agreement will still produce some tariff relief for soybean farmers and a return to market-driven exports. ISG would like to see an official commitment by China to remove the harmful 25 percent retaliatory tariff on U.S. soybeans, as well as fulfillment of the increase in agricultural sales promised in the pact.

At the same time, we ask the U.S. Trade Representative (USTR) to negotiate new FTAs with countries that have the potential to increase soy and livestock purchases. New, bilateral trade agreements with Japan, the European Union and United Kingdom are positive, but we also need FTA negotiations with other significant importing countries like Indonesia and the Philippines.

In addition to market protection, we require access to tools like ARC and PLC to manage risk and keep food on tables in America and worldwide. The current farm bill offers income support programs that help farmers get through events like the planting delays of 2019 and global pandemic of 2020. To maintain that support, ISG is already discussing ideas to pursue in the 2023 Farm Bill to continue to adequately protect the future of farming in Illinois.

Similarly, with crop insurance, ISG teams up with other farm organizations to maintain support for federal policy and oppose any reduction in funding in annual budgets. We must ward off proposals that make cuts to programs farmers strongly support as a cornerstone for their risk management planning, especially with low prices and volatile trade conditions.

Protection prevents rejection. Visit voiceforsoy.org and help protect the soybean industry.
The now famous advice from Mr. Fred Rogers is to look for the helpers. “When I was a boy and I would see scary things in the news,” Rogers said to his television neighbors, “my mother would say to me, ‘Look for the helpers. You will always find people who are helping.’”

And while the agricultural community has been feverishly posturing to meet unprecedented demands during the nation’s COVID-19 era, never has such an opportunity existed for farmers to answer the call to help. With the support of technological advancement, mind-bending science, shared vision casting, and an uncompromising commitment to collaboration, the Illinois ag community is showing up in big ways to say yes to the plea of neighbors and the nation.

These are the days to be helpers.

PORK DONATIONS FILL VOID

The Illinois Pork Producers Association (IPPA) has stepped up its support of regional food banks in Illinois, getting oversupplied pork harvest to those most in need. So far in 2020, IPPA has donated 46,159 pounds of ground pork—20,000 pounds specifically when COVID-19 first hit. Since a few of the food banks reach outside of state lines, neighboring state pork associations have joined the helpers’ cavalry to further the reach.

The Indiana and Iowa Pork Producers Associations have equally matched Illinois Pork’s donation amount to their respective bordering food banks. ISA and the Illinois Corn Marketing Board have contributed to the program, reflecting the heart and concern shared by all farmers.

According to Jenny Jackson, IPPA director of communications, help hasn’t just included supply donation, it’s also been an effort in new levels of transparency, communication and accessibility.

“We are sending emails two to three times a week to our producers letting them know about all of the changes in the industry,” says Jackson. “Social distancing due to COVID-19 has pushed us as an association to be even more present online and more immediately responsive.”

According to Jackson, the association has also converted their pork education materials to online friendly versions to ensure that pork is still relevant in virtual classrooms and in the home. Consumers and restaurants alike also benefit from their new #PorkToGo campaign.

HAND SANITIZER PROTECTS ESSENTIAL AG WORKERS

ISA recognized another critical need and teamed up with the Illinois Corn Marketing Board and GROWMARK Inc. to distribute hand sanitizer, a scarce commodity at the top of the pandemic, to ag retailers and equipment dealers throughout Illinois.

“As planting season was ramping up, the concern was real in farm country that ag retailers wouldn’t be able to stay open for business, and that would have drastically impacted our farmers’ ability to put the crop in,” says ISA Chief Executive Officer John Lumpe. “Together with the Illinois Corn Marketing Board, we were able to collaborate and address this important concern, and doors stayed open and planting progressed. In challenging seasons, you make lemonade out of lemons, and I’m proud of what the state grain commodity boards accomplished together.”

Hand sanitizer was made with corn-based ethanol at Marquis
Energy in Hennepin, Illinois, the largest dry-mill ethanol facility in the world. It was also produced with glycerin from soybeans, a byproduct of biodiesel production, from Renewable Energy Group. Evergreen FS warehoused the product, while GROWMARK Energy and Logistics team members and Environmental Safety and Insurance Services members distributed the product. So far, the Illinois associations have purchased 1,100 cases at four gallons per case for a total of 4,400 gallons of hand sanitizer.

“This time of year, farmers need access to inputs, parts and the many services that agriculture retailers and dealers provide. So, doing their part to mitigate the threat of COVID-19 to ag businesses and producers is a priority that will benefit the entire industry,” says Lumpe.

ISA also partnered with the Chicago Park District to produce hand sanitizer for its workforce and Chicago first responders in an effort to assist urban neighbors as well.

ILLINOIS STUDENTS GET ONLINE AG LESSONS

Kevin Daugherty, Illinois Farm Bureau education director and the driving force behind “Ag in the Classroom,” describes the process of folding classroom presentation material into teachers’ e-learning curriculum. The ISA checkoff program helps fund the effort.

“We’ve developed a daily lesson which teachers are able to upload and make available as part of their online lesson planning. These daily lessons include a learning component, children’s literature, and a fun, engaging element. To no one’s surprise, the ‘fun’ components are the most popular in each lesson,” says Daugherty.

“I think conversations with kids about agriculture is especially timely during the pandemic. They gain a greater appreciation for the food chain, how their food is grown and gets delivered to us as consumers. They are living the lessons we work to deliver in a meaningful capacity,” he says.

EQUIPMENT INNOVATION MEETS PPE NEEDS

John Deere, in collaboration with the UAW, Iowa Department of Homeland Security and Illinois Manufacturers’ Association, has been producing protective face shields at John Deere Seeding Group in Moline, Illinois. Deere employees initially produced 25,000 face shields to meet the immediate needs of healthcare workers in several of its U.S. manufacturing communities.

“Our manufacturing and supply management teams, along with our production and maintenance employees, the UAW, and our partners have worked tirelessly to ensure we could lend our support and protect our health-care workers during this crisis,” says John May, chief executive officer, Deere & Company. “By working closely with the communities where our employees live and work, we can help support the needs we’ve identified close to home and, as the project expands, address additional, urgent needs across the country.”

Deere has orders for more than 350,000 face shields, with plans to produce 400,000 total face shields. The company is using an open-source design from the University of Wisconsin-Madison for the project and leveraging expertise, skills and innovation of its employee base. Deere factory managers and other leaders in each location have been in constant communication with their respective healthcare providers. During these conversations, health-care professionals provided a list of the personal protective equipment (PPE) needed to support front-line healthcare workers.

“The hospitals and healthcare agencies in the communities where our employees work need PPE to protect their healthcare workers,” says Dan Bernick, manager for public relations at Deere & Company. “Since some of our factories are located in smaller towns, they may not be getting the required PPE that larger towns may get, and we are helping them with this critical need.

“John Deere teams have done an incredible job acquiring material to support this initiative, and employees have been highly engaged in this process by providing their manufacturing expertise, innovation and creativity,” he adds. “It has been an all-hands-on-deck approach, and it has been amazing to see our employees step up and take quick action to make this happen.”

As in all of these examples, the innovation made possible through Illinois agriculture and its many key players, is on full display. And Illinois soybean farmers can call themselves helpers. ■

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ISA recognized another critical need and teamed up with the Illinois Corn Marketing Board and GROWMARK Inc. to distribute hand sanitizer, a scarce commodity at the top of the pandemic, to ag retailers and equipment dealers throughout Illinois.
NEXT GEN AGTECH FOR THE ’20S

Soybean Farmers Benefit from University Research Park Efforts

> BY TIM ALEXANDER

With the 2010s in the rearview mirror, startup agtech companies at the University of Illinois Research Park in Champaign have their R&D schedule focused on the 2020s and beyond.

In addition to gener8tor’s Illinois AgTech Accelerator program, which will take five fledgling agtech startups under its wing, others like Aspiring Universe and EarthSense are developing and marketing next generation, field-applicable technology that will benefit soybean farmers.

Laura Bleill, associate director
www.researchpark.illinois.edu

The agtech ecosystem at the 20-year-old University of Illinois Research Park is alive and thriving with innovators hard at work on the latest advancements in soybean production technology, according to Laura Bleill, director of communications and external engagement.

“We see startups addressing a variety of ag issues,” she says. “In our earlier years, the agtech sector was a little slow to develop. Growth exploded, really, with the ability to use data for applications in improving performance with seed, inputs, plant health, equipment and more.”

The Research Park engages in what Bleill describes as “enhanced technology commercialization.” By providing an incubator for their research, ag-related startups are able to accelerate their university lab research and develop it for the marketplace. University of Illinois students comprise more than 850 of the park’s 2,200 employees.

Licensing activity for marketable products is the domain of the park’s tech transfer office.

“The College of ACES is generating a lot of (agtech startups). It’s a growing area, and we consistently see new ideas and faculty and graduate student engagement in agtech,” says Bleill.

Chinmay Soman, CEO and co-founder
www.earthsense.co

When EarthSense co-founder Chinmay Soman first marketed his Terra Sentia machine in 2018, it was literally hidden under the soybean canopy. The ground-level drone, which allows farmers and crop breeders to peer between rows and under soybean foliage to scout their fields, has been on the market for three years. Today, Soman and his team of researchers are developing the next generation of Terra Sentia – one that will scout crop fields for pests, diseases and other issues, but also remove plants or spot-apply herbicides, fertilizers and pesticides.

“Crop breeders plant millions of test field plots around the world every year. Right now, the tools they have to determine which varieties perform well are limited. A few use drones, but by and large they go by end-of-season harvest data, and most literally walk through fields during the season and take notes by hand. This slows down the rate at which you can improve crops,” says Soman. “Our robot collects more data using cameras. Our software converts that data into useful plot traits. For example, we can measure the stem diameter of every single corn plant in a plot. In soybeans, we do pod and node counts and canopy structure measurements.”

Next versions of Terra Sentia that are currently under development will offer expanded ability to treat plants with nutrients and other inputs. Soman is also working on a “simple soil removal” appendage to the vehicle and implements for removing diseased or overcrowded plants.

“Another application is sidedressing, which can be tricky, especially in-season. Doing it with a large machine can become inefficient. Cover crop seeding in standing corn is another application where aerial application doesn’t work that well,” says Soman. “There are a number of applications a smaller machine can do that a larger one cannot do as well, and those are the applications we are going after with our next generation of robots.”
Dennis Beard, managing partner, Serra Ventures
www.gbetaagtech.com

Though the COVID-19 pandemic has pushed back its launch until this fall, nationally ranked startup accelerator gener8tor and Champaign-based venture capital fund manager Serra Ventures will soon announce the first five agtech startup businesses to participate in their Illinois AgTech Accelerator program at Research Park. The first cohort (group) will use gener8tor’s gBETA seven-week curriculum. Each of the five participating startups in the first cohort will receive a $25,000 investment to help gain early customer traction on their product or idea.

The Illinois AgTech Accelerator plans to offer two gBETA agtech programs per year. In addition, the consortium will operate an annual flagship accelerator program that will bring agtech startups from around the world to Champaign for an intensive, 12-week session, according to Serra Ventures managing partner Dennis Beard. “Serra does early stage technology investing, including agtech. With our investing partners in the AgTech Accelerator, we will coach companies in the agtech space. The nature of the applicants and investor interests will determine which agtech areas are the focus of each cohort,” he says.

The first five companies will receive assistance with networking and participate in educational seminars and programs. Near the end of the accelerator, they will meet potential investors.

Beard anticipates much of the technology supported in the program will benefit soybean farmers. “Illinois is the number one soybean state. We felt the University of Illinois campus would be the natural host for this program. If you are working in soybean, corn or animal sciences, we think this is the natural place for you. There are no other agtech accelerators in the state,” he adds.

Applications for the program are presently being accepted at www.gbetaagtech.com.

Kaiyu Guan, co-founder
www.aspiringuniverse.com

Spun off from the University of Illinois College of ACES, Aspiring Universe uses technology transfer and licensing agreements to bring the best science and technology from the university lab to the agricultural industry. Integrating remote sensing technology, artificial intelligence, crop modeling domain knowledge and financial risk modeling, Aspiring Universe would like to monitor and predict the performance of every global acre of cropland. This would, “transform the ag industry from passive observation to actionable insights and eliminate the challenge of collecting information from 600 million farmers,” says Guan.

It is a mission to “de-risk and sustain modern agriculture for all of humanity,” Guan adds. “We combine different sources of data and our proprietary models determine farm-level productivity, water use, soil health and sustainability, and provide actionable insight. This allows farmers to make informed decisions on how to optimize their productivity.”

Guan’s team developed software that has provided daily, field-scale, cloudless satellite imagery since 2000. Combining historical data and real time projections, Aspiring Universe can offer farmland metrics on productivity and resilience, leading to increased soybean yield and quality.

“One of the key goals is to help farmers achieve high yields,” says Guan. “We want to make sure farms are sustainable, improve resource efficiency and reduce the environmental footprint.”

Guan said the company is working to improve its networking capabilities with farmers. He hopes to expand the company’s relationship with state agricultural commodity associations to help increase Aspiring Universe’s profile and develop partnerships.

In addition to soybean farmers, Aspiring Universe technology may assist crop insurers, farmland investors, supply chain and grain elevators, food manufacturers and government agencies. ■
A growing number of Illinois farmers manage soybean and corn fertilizer completely separately. And new technologies not only make it easier, they can boost return on investment (ROI).

“The trend of fertilizing crops separately has been growing annually for several years,” confirms John Watkins, Certified Crop Adviser (CCA) and marketing manager for Nutrien in Cerro Gordo, Illinois. “Research and a growing understanding of the science of crop production is showing the value of spreading plant nutrition throughout the growing season.”

That can include up to 18 essential nutrients. Former ISA CCA Envoy David Rahe noted via ILSoyAdvisor last season that nitrogen, phosphorus and potassium are the most likely to be added as fertilizer. “Water, carbon and oxygen come from air and water. Calcium, magnesium and sulfur are needed in large amounts as well, and in Illinois we generally take what we get from nature,” he noted. Rahe passed away this spring, but his passion for soil health and nutrient management can still be found in his blogs and podcasts.

Watkins shares a variety of innovations that can increase fertilizer efficiency, soil health and yield. “Plant nutrition has transformed from a snake oil market 10 year ago, where we threw products into plants hoping for a response, to one based in true science,” Watkins says. “Today it’s all based in plant and soil science that can be explained.”

According to Watkins, farmers typically choose a few nutrient options that best fit their system and budget. “The ROI is usually about three-to-one on many of the technologies.”

**BIOCHEMICAL FERTILIZER CATALYSTS**

Though soybeans fix nitrogen, they need phosphorus and potassium. Farmers often apply those nutrients as dry fertilizer – DAP (diammonium phosphate) and potash – in fall or early spring. The most recent numbers from the University of Illinois to estimate nutrient removal in the state are 0.75 lbs. of phosphorus and 1.17 lbs. of potassium per bushel of soybeans.

“Dry fertilizer is very inefficient,” Watkins says. “Only 10 to 30 percent of phosphorus is available to the crop in the first year. The range for potassium is 20 to 60 percent availability.”

To improve efficacy and nutrient availability, many companies treat dry fertilizers with biochemical fertilizer catalysts. “These additives mimic biological agents found in the soil to enhance fertilizer breakdown and increase nutrient availability by 15 to 20 percent,” he says. “They also improve availability of existing nutrients in the soil.”

**QUICK TISSUE ANALYSIS**

“Feeding soybeans throughout the season is key to pushing yield and improving crop management,” Watkins says. “It also helps farmers adapt to the growing season.”

He believes the availability of quick, cost-effective tissue analysis will grow in-season nutrition applications. It pinpoints nutrient issues to address based on weather, yield potential and markets.

“Farmers or their agronomists can start taking samples from V2...
through V6 stages and get results in 48 hours to know what the crop needs,” he says, noting analysis costs $10 to $12 per sample. A sample can account for about 20 acres, allowing for zone treatment of any deficiency.

Rahe noted a few cautions concerning tissue testing:

- Time of day sampled can make a difference.
- Sometimes dust on the plant can skew results.
- Don’t test when the crop is stressed.

Watkins says micronutrients are often the cheapest way to fix a variety of problems. Soybeans may experience deficiencies in boron, iron, manganese, sulfur or zinc. Adding them to nutrition programs addresses microbe and plant health problems. Options exist to add micronutrients to any application, from dry fertilizer through post-emergence herbicide and fungicide applications.

“The first step in getting your micronutrient levels in order is to get your soil pH right. Soil pH affects the availability of all plant nutrients, but in order to keep micronutrients available, pH needs to be in the sweet spot between 6.0 and 7.0,” Rahe wrote.

Late in the season, soybeans may also need additional macronutrients. “For example, 80 bushel-per-acre soybeans need 275 pounds of nitrogen, which is actually more than corn,” he says. “They fix most of that themselves. But late in the season, nodulation slows, and plants may need help to get the nitrogen—or even potassium—needed to fill pods.”

**PLANT GROWTH REGULATORS**

“Plant growth regulators (PGRs) are part of fertility,” asserts Watkins. “They increase early season vigor, support root and shoot growth and reduce early season stress.”

He explains that plants use their root hairs to take in two-thirds of their nutrients, but that individual root hairs last just five to seven days before they damp off. Roots need to keep growing to ensure plants can take up nutrients as needed.

“Many PGRs actually work by supporting soil health. They feed soil microbes,” he says. “For example, one teaspoon of soil contains 50 billion microbes, and we have only identified one percent of them. We are learning more about what they need and how they impact crops, and this area could provide the next big yield breakthrough.”

PGRs can be applied with seed treatments or post-emergence herbicide applications, with flexibility similar to other nutrients. Carrier systems developed for all of these products get them to where plants need them, one reason Watkins believes current nutritionals are more effective.

**NANOTECHNOLOGY**

Understanding nutrient delivery at the molecular and atomic levels also improves fertilizer efficiency, regardless of application timing. “Using nanotechnology to deliver plant nutrients has the potential to improve fertilizer and nutrient efficacy,” says Landon Bunderson, Ph.D., and chief science officer for Aqua-Yield, an ag nanotechnology company. Though one nanometer is one billionth of a meter, nanoparticles have mass that matter in solution and can better penetrate plants instead of getting washed away.

“Our technology attracts and loads the chemical ions and molecules in inputs like fertilizer into nanoparticles,” he explains. “Particles in solution typically move into plants through channels that plant cells regulate like border control. Larger nanoparticles can circumvent typical channels because they may be treated like a foreign body. They are pulled into the plant and quickly broken down, releasing a high concentration of nutrients more efficiently.”

Bunderson cites research demonstrating value of nanotechnology as a fertilizer delivery system. In a North Dakota soybean trial, using nanotechnology to deliver micronutrients increased content of iron, manganese, boron, copper and zinc in plant leaves. Trials in other crops show fertilizer rates can be reduced 20 to 25 percent or more, while still delivering target yield.

Like other technologies, Aqua-Yield’s delivery system has just become available in recent years. The company expects use to increase as farmers learn its value to nutrient management plans.

**PRECISION APPLICATION TECHNOLOGY**

Precision application of all of these technologies would add even another layer of efficiency, and Watkins expects to see more of that in the future as it becomes possible.

For many of these nutrient technologies to deliver a high ROI, they are applied with other products or during other field operations. But equipment is not yet available to allow variable rate applications of multiple inputs—with different prescriptions—at the same time.

These innovations and more are here or on the horizon and gaining traction. Together, they could allow farmers to grow more profitable, high-quality soybeans with more efficient input use.
Environmental Stewardship Benefits Landlords and Tenants

Illinois has one of the highest proportions of rented farmland in the country. Illinois also is one of the top states with excessive levels of nutrient runoff headed to the Gulf of Mexico. That presents an opportunity for Illinois farmers—an opportunity to work with their non-operating landowners to improve conservation practices on rented acres and enhance the state’s overall environmental stewardship through more effective landlord-tenant partnerships.

According to USDA’s Tenure, Ownership and Transition of U.S. Ag Land survey from 2014, 47 percent of Midwest farmland is rented. In certain counties, more than 80 percent of farmland is rented. In Illinois, half of all farmland is owned by a non-operating landowner. To achieve watershed and landscape conservation objectives, such as those in the Nutrient Loss Reduction Strategy (NLRS) in Illinois, requires improved conservation outcomes on rented farmland.

“Healthy soils are crucial for maintaining clean water supplies and creating resilience to extreme weather events,” says Megan Baskerville, The Nature Conservancy (TNC) ag program director in Illinois. “When farmers work with landowners on conservation agriculture, they’re investing in the long-term viability of that land, but also helping to ensure clean water beyond the farm.”

The Illinois Soybean Association (ISA) encourages the state’s farmers to take necessary steps to work with their landlords and participate in this process. “There is a disconnect between farmers and landowners who are generations removed from the farm, and ISA can serve as a liaison for sharing tips to enhance that stewardship partnership,” says David Wessel, ISA Production and Outreach Committee chairman and soybean farmer from Chancileville, Illinois. “Sustainable production adds value to the land, increases profitability potential and helps the environment.”

LANDOWNERS: A WILLING AUDIENCE

Illinois farmers should not hesitate to talk with non-operating landowners about conservation. Surveys find landlords want to hear from their tenants about conservation issues.

Results from an American Farmland Trust study show these landowners broadly value conservation and soil health, with 96 percent agreeing or strongly agreeing that they consider soil quality when making land management decisions. Ability to avoid erosion, prevent contaminating waterways and maintain soil productivity were among preferred attributes that landowners value in a farm operator, more than amount of rent a farmer will pay and whether they like the farmer.

Other findings include:

- Landowners do not perceive significant barriers to additional conservation practices.
- They do not perceive social barriers, such as upsetting family members, neighbors or the farmer, by discussing conservation. However, about half of respondents say enough soil and water conservation practices have already been implemented on their rented property.
- Bottom line, results suggest when given an “Easy Button” by their farmers to sustain or implement soil health benefitting practices, many are willing to make such changes.

START TALKING CONSERVATION WITH LANDOWNERS

For farmers who need a place to start the conversation, here are some of the talking points TNC recommends in sharing potential benefits of conservation with non-operating landowners:

- Enrich the land. Landowners and farmers win and nature thrives with conservation.
- Protect the investment. Soil health practices like reduced tillage and cover crop use can reduce erosion and soil loss, ensuring land remains productive and does not lose value.
- Obtain incentives. Improve access to public and private cost-share and other incentives when landowners partner with tenants on new conservation activities.
- Build a legacy. Land can remain productive and protected for future generations when landowners empower tenants through co-investment in conservation activities.
- Improve resilience. Farmers are better equipped to handle extreme weather and market disruptions when tenants and landowners jointly commit to conservation practices.

DISCUSS ESTABLISHED STEWARDSHIP PRACTICES

While non-operating landowners may be familiar with some conservation tactics, they may need to be more informed about others. Here are some starting points to spark that discussion:

- The Nutrient Loss Reduction Strategy is an active state strategy for improving water quality by reducing the nutrient load from point and non-point sources that flow to the Gulf of Mexico from Illinois. Farmers can help reduce nitrogen and phosphorus levels in rivers and streams through voluntary in-field and edge-of-field practices.
- In-field practices are soil health and nutrient management practices. Reduced tillage decreases soil disturbance and improves the soil’s ability to retain nutrients and sequester carbon dioxide from the atmosphere. Planting cover crops maximizes the time living roots are building soil nutrients and keeping the soil surface protected. Diverse crop rotations build nutrients, limit erosion and foster soil carbon sequestration, while fertilizer application timing can help reduce nutrient loss into water.
- Edge-of-field practices mitigate nutrient loss right before water leaves the field, either on the surface with stream buffers and field borders, or by treating sub-surface tile water with bioreactors, constructed wetlands and saturated buffers.
ASK FOR A MULTI-YEAR AGREEMENT

Many farmers operate on annual rental leases, but multi-year agreements have benefits as well.

“The benefits of soil health practices take multiple years before realized,” says Baskerville. “Annual leases, even if renewed over multiple years, provide no assurances the farmer will still have access to the land when expected benefits of conservation are realized. A multi-year agreement with annual rent and term modifications removes the barriers.”

Other multi-year lease agreement advantages include:

• Unlocking guaranteed access to the land, which enables tenants to adopt and steward practices consistently over time.

• Providing security and peace of mind for landowners and tenants alike during uncertain market conditions and unexpected weather swings.

• Ensuring long-term stewardship and preventing potentially disruptive planting seasons.

• Opportunity to add cost-sharing lease addendums that can provide potential tax benefits for landowners and put tenants on stronger footing with lenders.

“Help your landowner understand the challenges you face in improving the health of their soil. By working collaboratively on conservation farming practices through long-term and consistent investment, you can identify solutions that will benefit you both,” says Baskerville.

PROVIDE ROI PROOF FOR CONSERVATION PRACTICES

Maximizing return on investment using conservation practices can be a reality. The Illinois Corn Growers Association has established a Precision Conservation Management (PCM) program to help farmers understand and manage risks associated with adopting new conservation practices. The objective is to assist with making sound financial decisions.

“This unique program evaluates conservation practices on both their impact to the environment and their impact to family farmer profitability,” says Megan Dwyer, nutrient loss reduction manager for the Illinois Corn Growers Association. “It uses whole field data to assess financial and environmental outcomes associated with adopting conservation practices.”

PCM’s extensive database of actual farm results reveals how specific practices are good for Illinois soil and water. For example, no-till is the most common tillage practice for the highest profit soybean fields. Details about all practices can be found in the resources section below.

“Because PCM was created by farmers for farmers and takes a hard nose financial look at the return on investment of conservation practice adoption, it is a great tool to help farmers engage not only with their landlords but also ag lenders. They can show how conservation practices can make farmland more profitable and improve resources for the future,” she says.

LEARN MORE FROM THESE CONSERVATION PARTNERSHIP RESOURCES

• Cost-share programs are available to reduce the investment outlay in conservation practices. USDA Natural Resources Conservation Service (NRCS) funding assistance is at www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/?cid=stelprdb1048817.

• University of Illinois Agricultural Law lease addendums guide farmers through the multiple different ways conservation can be added to the farm/lease at https://farmdoc.illinois.edu/agricultural-law.

• Illinois Corn Growers Precision Conservation Management www.ilcorn.org/pcm

• Iowa Corn Growers Association Conservation Conversations https://www.iowacorn.org/corn-production/environmental/conservation-discussions-with-landlords/


PROVIDE ROI PROOF FOR CONSERVATION PRACTICES

Maximizing return on investment using conservation practices can be a reality. The Illinois Corn Growers Association has established a Precision Conservation Management (PCM) program to help farmers understand and manage risks associated with adopting new conservation practices. The objective is to assist with making sound financial decisions.

“This unique program evaluates conservation practices on both their impact to the environment and their impact to family farmer profitability,” says Megan Dwyer, nutrient loss reduction manager for the Illinois Corn Growers Association. “It uses whole field data to assess financial and environmental outcomes associated with adopting conservation practices.”

PCM’s extensive database of actual farm results reveals how specific practices are good for Illinois soil and water. For example, no-till is the most common tillage practice for the highest profit soybean fields. Details about all practices can be found in the resources section below.

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77% of NOLs* indicated that their farmer is an important source for conservation information

88% of NOLs indicated that maintaining soil productivity is a very important quality for a farm operator

88% of NOLs indicate that they are committed to their farmer continuing to farm their land

17 years the average number of years that NOLs and farmers have been working together.

* non-operating landowner
Production research reports may not be light reading for the masses. Valuable nuggets in them aren’t always easy to find. But they are now simpler to access, understand and apply on the farm.

“To promote checkoff-funded production research, the United Soybean Board (USB) has partnered with the North Central Soybean Research Program (NCSRP) to create the Soybean Research & Information Network (SRIN—www.soybeanresearchinfo.com),” says Cate Newberg, USB/NCSRP program manager leading the effort. “The site is dynamic, easy to consume and offers farmers one place with past and present checkoff-funded research projects.”

Illinois soybean farmer Nick Harre, who also is an ISA district director and Ph.D. visiting scholar for Purdue University, has already bookmarked the website in his phone.

“It has become a valuable diagnostic tool for me in the field,” says Harre, who operates a dairy and grain farm near Nashville, Illinois. “In addition to research, the site also contains quality pictures and useful information to help identify and manage key pests in soybeans.”

Farmersburg, Iowa, farmer Suzanne Shirbroun agrees. “The crop scouting season is when I use the site the most. There are great pictures of the diseases and a lot of good information on each disease. With so many sources on this site, if I need more information it is just a click away. I also use the insect tab quite often. The information is clear and concise for what I need.”

RESEARCH ALL IN ONE PLACE

Newberg says the SRIN site was developed to be the communications arm of the National Soybean Checkoff Research Database—www.soybeanresearchdata.com—a database that has been built up during the last several years. The site contains state and national research funded by various checkoff programs. It is accessible by all soybean organization staff, farmers, university and company researchers, agronomists and others interested in study results.

“The research database is essentially a warehouse of all the production research nationwide dating back to 2008,” says Newberg. “There is a lot of data for researchers to compare and contrast, see what has been done on various topics and find collaboration. It’s highly technical.”

Complementing the database with the new SRIN site provides the opportunity to present research in a digestible fashion. Newberg says users can mine the site for projects of interest by entering the state and/or subject area. The research articles on the SRIN site also link back to original research in the database as well as to related research from other states and regions.

“Our goal is to prevent research overlaps and to save checkoff funds. We use the database to identify gaps in our current research so that we can be more efficient in helping farmers make informed decisions,” says Joyce Doyle, soybean farmer from Weiner, Ark.

Newberg adds she is also sharing some of the research found through the SRIN site on social media and other outlets. “We promote articles so we can get real world management ideas out there that impact farmer production and conservation efforts. It is this research knowledge and information sharing that will help advance the soybean industry,” she says.

As both a farmer and a researcher, Harre is excited about the prospects for the site. “All too often high-quality research goes
unnoticed because it is not communicated effectively. Farmers may only learn of results if they happen to attend a field day or come across an article highlighting a select project,” he says. “Moreover, scientists in academia are under pressure to publish findings in peer-reviewed journals. Unfortunately, most farmers do not have access to such resources.”

Harre says the searchable repository of research projects that helps summarize key findings in a relatable way is a great way to improve farmer profitability. “After all, it’s soybean farmer checkoff dollars that make such research possible. Enhanced transparency is key,” he says.

As the site continues to be populated, Newberg says farmers can expect additional pest and disease information, production-related resources and links to publications and annual reports.

“The site will continue to grow and farmers will be able to see the benefits of their investments,” says Newberg. “We also are piloting a project with aquaculture data to gauge interest in that.”

Newberg asks that Illinois soybean farmers contact her with feedback and suggestions after viewing what is available via the site. She can be reached at cnewberg@iasoybeans.com.

**SRIN SUPPLEMENTS ILSoyAdvisor**

While Illinois soybean farmers visiting the SRIN site will find information on past and ongoing research projects funded by state checkoff dollars, the information can also supplement information on ISA’s ILSoyAdvisor website, says Megan Miller, ISA ag innovations manager.

“Seeing a website compiling soybean checkoff research results is hugely exciting for the ILSoyAdvisor team and the CCA Soy Envoys. Both farmers and CCAs look to ILSoyAdvisor for the latest management tips for profitably growing beans in Illinois. And now they have easy access to the research that went into developing those management tips,” says Miller. “They are organized into easy-to-navigate categories with hopes they can serve as on-the-go resources.”

Since research on the SRIN site can be sorted by state, Miller adds Illinois farmers can monitor problems and solutions developing in surrounding states, too. And while not on the SRIN site yet, two ISA checkoff projects underway this fiscal year will post results later in the year.

University of Illinois researcher Nathan Kleczewski is gathering information on red crown rot distribution and seed treatment efficacy in Illinois. Red crown rot (RCR) is a new disease in the state’s soybeans with no current management recommendations.

Red crown rot historically has only been an issue in peanut/cotton/soybean rotations in the Deep South. Its symptoms are similar to sudden death syndrome (SDS), and it can be easily misidentified if not properly diagnosed. No resistance to RCR is available in soybean cultivars and efficacy of fungicide active ingredients and seed treatments is not yet known.

Since RCR has not been detected in any other Midwest state, researchers hope to learn about the disease and begin to develop strategies to mitigate future losses. Last year, Kleczewski estimated infected Illinois fields suffered an approximate 25 bushel-per-acre yield loss.

Seed treatments will be evaluated this year by Kleczewski’s lab. A collaborative statewide network of experts will help drive a survey regarding previous RCR distribution. Look for SRIN and ILSoyAdvisor to eventually provide information about how to properly identify RCR, distinguish it from similar diseases and offer data on variety selection and treatment efficacy.

University of Illinois researcher Nick Seiter is exploring how long insecticide applications provide effective soybean pest control.

Often foliar applications of broad-spectrum, contact insecticides are made at specific growth stages. But damaging populations may occur at different times throughout the season and target different plant growth stages. Information on the effective window of control provided by an insecticide is usually not readily available to farmers and can vary dramatically from product to product and depend on weather conditions.

By evaluating the residual activity period of common insecticides and making the information available, farmers can then use the tools more effectively for insect control to optimize timing and improve return on investment. The study will determine the effective window of control of common broadcast insecticides. Field experiments will evaluate insecticide materials against four target insects: stink bugs, bean leaf beetles, Japanese beetles and green cloverworm.

Residual activity information regarding the four pests and insecticide applications will be published via the SRIN site and ILSoyAdvisor once results from the study are available. ■
CONTROLLING YOUR PROBLEM WEEDS?

DON’T WORRY. WE’RE ON IT.

Herbicide-resistant weeds cost soybean farmers time and money, impacting profitability. Fortunately, your state soybean checkoff is on the job with research projects to help you adopt the best management practices to preserve crop-protection technologies and enhance the overall sustainability of your U.S. soy crop.

The Soybean Research & Information Network provides you with information to work smarter and more efficiently. Visit soybeanresearchinfo.com and check out the hard work behind your hard work.
In Illinois, corn and soybean organizations are working together to build demand for crops the state’s farmers raise. One of the ways the Illinois Soybean Association (ISA) checkoff program and Illinois Corn Marketing Board (ICMB) complement each other is through promoting poultry exports to Mexico. Both groups support the USA Poultry and Egg Export Council (USAPEEC).

The relationship between USAPEEC and commodity groups is based on a simple premise—the more U.S. poultry and eggs exported, the more demand for U.S. soybeans and corn.
T he support ISA and Illinois Corn provide to USAPEEC in the same region is unique,” says John Lumpe, ISA CEO. “Our checkoff organizations are a little different but it’s great when we can team up and invest in ways that complement each other and ultimately help Illinois farmers.”

USAPEEC is a non-profit trade association whose members account for more than 95 percent of U.S. poultry and egg exports. USAPEEC’s mission is to increase U.S. poultry and egg exports by protecting, opening and developing markets while serving as the industry’s voice on trade and policy issues. With a record number of 23 commodity groups as USAPEEC members, including ISA and ICMB, funding from various checkoffs accounts for 28 percent of program funding.

“The success of USAPEEC depends on a balance between marketing activities and trade policy work. The initiatives undertaken by USAPEEC through funding from ISA and ICMB work hand in hand and have been imperative in establishing Mexico as the number one export market for U.S. poultry year after year,” says Greg Tyler, USAPEEC senior vice president. “USAPEEC is grateful for the mutually beneficial relationship established with farmers in Illinois.”

The U.S. poultry industry, as the largest livestock consumer of soybeans and corn, accounts for 55 percent of all soybean meal and 33 percent of all corn meal produced in the United States.

- Corn consumed by the U.S. poultry and egg industry in 2019 was 2.198 billion bushels.
- Soybean use reached 1.075 billion bushels—more than the soybean production of Illinois and Indiana combined.
- About 145 million soybean bushels and 296 million corn bushel equivalents were exported through U.S. poultry and eggs worth $4.5 billion in 2019.
- U.S. poultry exports are projected to reach more than 170 million soybean bushel equivalents worth $6 billion by 2022.

**ISA IS LONG-TIME MEXICO WORK PARTNER**

During the last 24 years, USAPEEC has partnered with ISA on more than 78 projects in 16 different countries, as well as on trade policy work that spans the globe. ISA has partnered on promotion activities in Mexico since ISA began funding USAPEEC activities in 2001.

“Mexico is one of our strongest trading partners. We think it’s important to invest in areas where Illinois has a strategic advantage and where there is opportunity to grow demand for poultry that eat Illinois soybean meal and corn,” says ISA Marketing Committee Chairwoman Roberta Simpson-Dolbeare, who farms in Pike County. “We value our work with USAPEEC in Mexico and feel that it’s an important long-term investment that provides value to our state’s farmers.”

Mexico was the largest market for U.S. poultry product exports in 2019 with an equivalent of 33.5 million soybean bushels worth $1 billion.

USAPEEC believes the Mexican market continues to show significant opportunities, particularly in meat processing. That’s because only about four percent of locally produced chicken meat in the country and two percent of U.S. poultry are sold as value-added products. USAPEEC activities with Mexican poultry and meat processing companies has opened the door to high-quality, affordable U.S. raw chicken as a main ingredient to produce high-value meat products.

**SOY, CORN GROUPS FUND START-TO-FINISH SUCCESS**

USAPEEC’s Mexico strategy includes funding from not only Illinois corn and soybean farmers, but also the United Soybean Board, Kansas Soybean Commission and Ohio Soybean Council.

For example, USAPEEC Mexico’s multi-year, multi-phase strategy begins and ends at the two largest food shows in Latin America targeting the meat processing and foodservice sectors. Both are funded by the United Soybean Board. First, USAPEEC Mexico hosts about 15 members in a double-decker pavilion at Expo Carnes y Lacteos, the largest trade show for meat processors. The pavilion serves as a spot for one-on-one meetings with potential clients and as a platform for USAPEEC Mexico to meet new meat processors that may be interested in U.S. poultry.

Funding from the Ohio Soybean Council creates a platform for USAPEEC Mexico to identify and engage with meat processors. Through this funding, USAPEEC Mexico has been able to strengthen
strategic relationships with associations such as the Mexican Association of Poultry Science Specialists (ANCEA) and the Mexican Association of Federal Inspected Plants (ANETIF). Sponsorship of both of their annual congresses and some courses enables USAPEEC to increase its visibility and influence among poultry and meat processors.

“Once USAPEEC Mexico identifies players in the meat processing industry that would benefit from learning about U.S. poultry use in further processed products, ISA funding comes into play. With ISA support and strategic alliances with ANETIF, the U.S. Meat Export Federation (USMEF) and Tec de Monterrey private university, USAPEEC coordinates a program composed of six, three-day courses of 144 hours of training. The program encourages Mexican companies to use more U.S. chicken and turkey as raw ingredients for processing new ready-to-cook and ready-to-eat products and helps update them on processing, packing and storage technologies so they can meet international standards,” says USAPEEC Mexico Director Alma Lilia de Leon.

With ISA assistance, USAPEEC has been able to reach nearly 799 processors from 209 local processing companies during the last six years, which covers 90 percent of the total production of processed meats and poultry in Mexico or 97 percent of targeted Mexican meat processors. Nearly 50 new value-added poultry products have launched in the market as a result.

Once targeted processors complete the program, USAPEEC Mexico uses funds from the Kansas Soybean Commission to provide specialized technical assistance to targeted medium-size meat processors, foodservice, retail and bakery companies. USAPEEC also provides assistance on marketing endeavors and research and development to successfully launch new products that use U.S. poultry and egg ingredients. To date, USAPEEC has provided individual technical assistance to 23 meat processors resulting in commercial production of 34 new products with U.S. poultry ingredients valued at nearly 17,000 metric tons per year. Results of this project have already exceeded the expected outcome, which was 30 to 32 new launches by 2021.

Finally, USAPEEC Mexico participates in Expo ANTAD & Alimentaria Trade Show, funded by the United Soybean Board. The trade show is a crucial platform for launching new products developed through customized technical assistance to the foodservice sector. The show also serves as a forum where exhibitors from the USAPEEC pavilion have contacted large department chains like Walmart and la Comer. After the 2019 show, exhibitors were surveyed and estimated total sales of $575,000 were recorded in the six-month period after the trade show.

“Through these projects, the interactions and support provided to launch, market and export local poultry products have allowed USAPEEC Mexico to convey the message that the U.S. is a reliable poultry ingredient supplier and Mexico can be a processing product center with great results, creating a win-win and helping the poultry industry grow as a whole,” says Tyler.

“USAPEEC must be technically prepared from scientific and policy perspectives to advocate sound policies with our government and with foreign governments and to engage in constant education about fair trade in poultry and egg products,” says Tyler. “Success in maintaining a healthy U.S. export industry depends on constant communication between the poultry industry and government officials and on effective advocacy for fair and transparent trade policies.”
The COVID-19 pandemic laid bare in the United States the value of the food supply chain. As agriculture confronts the ongoing, dramatic challenges, the Illinois Soybean Association (ISA) is engaging various partners about the importance of investment to strengthen that infrastructure. That includes the river system and waterways that move Illinois soybeans to export locations.

“Half of the Illinois soybean crop is exported as whole beans and another 10 percent is exported as value-added soy and livestock products,” says Paul Rasmussen, ISA district director from Genoa, Ill. “About one-third of Illinois soy moves to port by rail, primarily to the Pacific Northwest. The majority is moved by barge to terminals in Louisiana. The container market, an important growth component of our exports, accounts for five to eight percent.”

Scott Sigman, ISA transportation lead, stresses efficient soybean movement requires attention to freight and infrastructure details. “Everything is linked across overlapping, complex supply chains that integrate many roles. ISA works with private and public stewards of infrastructure, like the U.S. Army Corps of Engineers, to facilitate transportation to export terminals,” he says.

Navigation and management of flooding risk are common missions of the Corps districts that touch Illinois in supporting the nation’s waterways and developing water resources. In the words of Corps colonels, here’s a look at what they do and its impact on Illinois soybean farmers.

Activities that benefit Illinois soybean farmers.

Last year’s flood fight, which was the second or worst flood we have battled, affected every levee district in Illinois. I am happy to report all levees held on the Mississippi and Illinois Rivers. That took teamwork with local communities. No agricultural land was flooded by levee breaks, saving tens of millions of dollars in crop value. When it got dry last July, there was three times the usual sedimentation in the Illinois and Mississippi Rivers from the floods. We performed massive dredging before fall so there were no long closures and only minor grounding for fewer outages for soybean transport.

Future plans that support Illinois soy transportation.

The Rock Island District is involved with the rehabilitation of five locks and dams on the Illinois River that closed this summer from LaGrange to Dresden Island. Closures are varied with anticipated down time of three to four months. LaGrange is a major rehab and replacement, Peoria is scheduled for gate and machinery work, Starved Rock and Marseilles are getting new miter gates and Dresden Island is also set for new gates. The work will help locks and dams operate reliably for another 50 years. We will not have another round of significant closures for about three years. The Mississippi River is under routine maintenance this year with dredging and managing other tough engineering challenges.

In addition to these Corps districts, Cairo, Illinois, drainage districts in Alexander and Pulaski counties are managed by the Memphis District, but it has no river navigation duties.
Activities that benefit Illinois soybean farmers.

Recent realignment of the Chicago District improves unity of service and gives the district a more robust navigation mission. We now maintain three locks in Illinois: the Chicago Harbor & Lock, Lockport and T.J. O’Brien Lock & Dam. There has been no disruption of service on the waterway due to this realignment. Our district grew from about 4,000 square miles to more than 31,000 square miles. It includes the entire Chicago Area Waterway System (CAWS), which ends just below the Lockport lock as it flows into the Des Plaines River. Lockport is the entry and exit point for traffic along the waterway in the Chicago District’s area of operations.

Future plans that support Illinois soy transportation.

The Chicago Area Waterway requires infrequent maintenance dredging to maintain sufficient depth for navigation. Most of the waterways were constructed by cutting channels into bedrock. The constructed channels are extremely stable and not susceptible to significant bank and bed erosion that create dredging needs on other waterways. The waterways experience significant flows during flood conditions, so most portions are self-flushing and do not experience frequent shoaling.

For lock and dam assets, periodic inspections and operational condition assessments establish a decent baseline for maintenance prioritization. Lockmasters at each site and their employees are subject matter experts on day-to-day operations and maintenance. Usually the upgrading of smaller critical components and assets are performed locally. Maintenance of larger assets usually comes from a district-owned maintenance section. Our engineers play a key role at each district to ensure alterations made to assets will not impact asset operation negatively.

Activities that benefit Illinois soybean farmers.

We maintain seven locks and dams on the Ohio River to ensure commodities move efficiently. Recent work on the Olmsted Locks and Dam allows soybeans to now move on the lower Ohio River without delays from the aging infrastructure at Locks and Dams 52 and 53. Demolition of the marine portion of Lock and Dam 52 will be complete by September 2021. Phase I marine demolition of Lock and Dam 53 concluded in November 2019 and Phase II is scheduled for completion in late 2021.

Future plans that support Illinois soy transportation.

We are engaged with representatives for the Russell-Allison-Ambru and Sainte Marie agricultural levees to prevent breaches. Other levee systems can request rehab assistance following floods if levee systems are maintained to federal standards. If drainage district water issues related to flooding along the river/existing levees for counties covered by the Louisville District occur, our regulatory program includes permitting work in streams and wetlands that are Waters of the United States. We also manage calls concerning neighboring farmers building private levees that push water on other properties as these projects may require permitting if the levees are built in Waters of the United States.
As of July 1, 2019, the U.S. Census Bureau estimated the millennial generation officially eclipsed baby boomers as the country’s largest generation. More than 80 million people were born between 1982-2000. Millennials are often characterized by their distinctive traits, including their love of all things digital, their penchant for constant connection and communication and their innate curiousness and willingness to try something new. It’s a tech-savvy, multi-tasking group, and they are coming home to farm.

AgAmerica Lending cites that eight percent of farmers are now millennials and, on average, own 7.7 connected devices. This same group also states that between 2007-2012, the ag industry lost roughly 100,000 farmers between the ages of 45-54.

As they say—the times they are a changin’, and agriculture knows this to be true.

> BY RACHEL PEABODY

Joining his family operation full time in 2013, Chad Bell, age 33, farms 1,200 acres of corn and soybeans with his dad, Greg, in northwestern Illinois. He has a 2,400-head capacity wean-to-finish hog building. He and wife, Brittany, and children, Amelia, 6, and Charlie, 3, live in Viola.

For Bell, he knew it was always part of the plan at some point to come back to the farm. “When my dad had some health challenges in the fall of 2011, I came home for harvest and that spurred everything in me getting back on the farm,” he says.

If Bell had a specialty, you could say it is intensely managing every acre through the use of cover crops, which isn’t a practice you find much of in the northern part of the state. But being young and curious and interested in finding a way to combat soil erosion, he gave it a try.

“We first tried cover crops on 20 acres in 2012, then one-third of our acres in 2013, and then we jumped in 100 percent after that. We put cover crops on all of our acres every fall,” he says.

Primarily seeding with cereal rye, Bell likes the root system of the plant and how easy it is to get established. He’s not only finding soil erosion benefits but added weed control across his acres.

His next experiment includes working with double-crop wheat on a new 40-acre patch his family bought a year ago. The ground has zero history of cover crops on it and he plans to run trials.

“I’ll be doing straight corn and bean acres with no cover crop, and then double-crop wheat. I’ll also soil health test across those acres to see how we are progressing there,” he says.

And, he’s doing things a bit differently with technology, too, now that he’s back on the farm. He’s integrating more GPS technology into his equipment, particularly with his planter and sprayer. He’s making decisions based on data he’s collected with Ag Leader SMS precision farming software. “It’s all about making sense of my own data so I can make better decisions with it,” he says.

“If you’re not trying to improve or learn something new on your operation, then you’re not growing. You’re dying,” says Bell. “I’ll always be looking for different methods to try. It’s just the mentality I want to follow on my farm.”

- Chad Bell
“All I ever wanted to do growing up was farm with my dad and milk cows. It's the same for my boys, Isaac, age 6, and Cameron, age 4, and hopefully our new baby due in October,” says Matt Mackinson, age 36, a corn, soybean and dairy farmer in Pontiac. He farms 3,500 acres of corn and soybeans, and milks 300 cows with his wife, Amy; dad, Donald; and uncle, Roy.

For Mackinson, it’s all about legacy, and creating a farm that the next generation gets the luxury to come home to, just as he did in 2004. And to preserve that legacy, he admits that he’s “always up for something new to try,” whether that be earlier planting of soybeans or data management.

“If I come home with some new idea I want to try, my dad has always been willing to let me try it out,” he says. “Growing and comparing new hybrids, or even giving new herbicide systems a go, I’m always willing to attempt something new if it means we can improve.”

Since Mackinson has been home on the farm, he’s helped institute several new practices on the crop side of their operation. “Now we buy our chemicals wholesale and save money. We also VRT (variable rate technology) spread all of our own dry fertilizer. We field map everything and we soil test,” he says. “The on-farm recordkeeping has definitely increased, but we are smarter today with our inputs. Why put it where you don’t need it?”

He cites willingness to try new practices to just being of a different generation – validating the traits that millennial farmers are becoming known for – non-conventional, self-starter ways. And, the new ways are paying off, too.

“Particularly when I think of what we do now with data – I can take the iPad anywhere and I’ve taken it to meetings with landlords. They can make better decisions when they see pictures and a yield map that breaks everything down per square foot. I’ve gotten landlords to invest in drainage tile after some meetings because data has made the case for investment,” he says.

Farming will always be a business rooted in tradition, but it also is exciting to watch a new generation put their spin on the family operation.

Are you a young farmer currently taking your farm to the next level? Check out the Illinois Soybean Association (ISA) Soy Ambassador Leadership Program. Participants get the opportunity to gain leadership experience and industry exposure while learning how to fill crucial future leadership roles in the soybean and agriculture industry. Also inquire about upcoming Illinois Soybean Board district director and at-large director positions if you are interested in serving the state soybean industry.

Ag industry leadership needs the thoughts and talents of the next generation and there is no better time to get involved. Start young! ISA looks forward to meeting young farmers who are encouraged to drop a line to ilsoy@ilsoy.org to learn about future leadership opportunities.

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- Matt Mackinson
5 PRACTICAL TIPS FROM TECH-SAVVY FARMERS

"The Climate FieldView platform integrated with my John Deere equipment is my favorite app. It stores on the cloud all the field operation information I used to write in a seed corn notebook so now I can access it on my phone. This spring while planting, I could find and check field performance from two years ago to anticipate challenges. I often struggled to find the right notebook page, but that information is easy to access on my phone."

- STEVE PITSTICK, Maple Park, Illinois

"One of my favorite apps is onX Hunt. It’s essentially a plat map in your pocket, so I can verify neighboring landowners. It was developed for hunters, but I find it helpful for farming, as well. And it’s fairly cheap to upgrade and have access to the whole country. We also rely on Granular, a farm business management tool from Pioneer and Corteva, that tracks the cost of production per field and per crop."

- RICK RUBENACKER, McLeansboro, Illinois

"I go paperless as much as possible to help with organization and record keeping, and the app TurboScan is a key tool for that. It’s a scanner in my pocket, storing images so they can easily be found. I scan seed bag tags, receipts for farm expenses, FSA (Farm Service Agency) paperwork that needs to be shared with landlords, and more."

- JENNY MENNENGA, LeRoy, Illinois

"I use the AccuWeather subscription service, which provides a longer outlook and actual rain amounts. I’ve found its Minutecast, covering the next 120 minutes, to be pretty accurate at predicting just when rain will start and end. Other apps provide similar information, but I like the layout and the cost is worth the information. For diagnosing problems in the field, I’ve bookmarked the Soybean Research & Information Network’s diagnostic guides on my phone. They have the best collection of pictures for finding the culprit, the cost is worth the information. For diagnosing problems in the field, I've bookmarked the Soybean Research & Information Network’s diagnostic guides on my phone. They have the best collection of pictures for finding the culprit, the cost is worth the information."

- NICK HARRE, Nashville, Illinois

"We work hard at customer service, building relationships with our landowners. I use our drone to take short, 30- to 60-second videos during key times to send to landlords, and they love them. We also share the videos during our annual landlord appreciation event."

- BETSEY EMERICK, Vandalia, Illinois
A “new normal”—certainly, a phrase we have all used in 2020 as COVID-19 has rocked the world to its core. New daily routines, procedures and precautions, new stressors – new everything, really. And for me personally, this new normal hit less than 30 days into my role as the new ISA CEO, reminding us all that there are things you can plan for, and things you can’t.

But new isn’t always bad. What I’ve witnessed in the Illinois agriculture community over the last several months is a new level of partnership and service to our constituents and the industries we are proud to serve. We’ve banded together and supported our producers when times got tough.

We’ve looked at issues, collaborated to figure out solutions, and we’ve pulled off some pretty amazing things—like getting more than 4,000 gallons of hand sanitizer delivered to Illinois ag retailers during planting season through a partnership with the Illinois Corn Marketing Board.

Another example is our contribution to the Illinois Pork Producers Association’s Pork Power program. We helped with an effort that took an overstock of market-ready animals caught in the supply chain breakdown and turned them into nutritious protein for Illinois food banks. Most recently, ISA worked with fellow state commodity groups to secure dedicated funding from the federal CARES Act in the state budget to address the financial crisis livestock producers face.

When it comes to innovative partnerships, I hope this new normal for Illinois ag continues. This spring has demonstrated to me that for any Illinois industry’s success, relationships must be built throughout the state, out of state, in industry and out. That’s work I’m eager to see ISA maintain.

I committed to the ISA board on delivering a first 90-day plan. That included items like meeting all 24 of our board members face-to-face, or via Zoom and FaceTime in many instances. Also on that list was taking a look under the hood of the organization and providing a fresh, outside perspective. And, I knew I wanted to come in focused on building relationships and fostering collaboration from day one. I’m happy to report that by day 90, we were on our way with some strengthened relationships and some renewed enthusiasm for our collaborative work in the Illinois ag industry, particularly with our counterparts at the Corn, Beef, Pork and Farm Bureau organizations.

Again, it’s an exciting new normal for ISA and one I look forward to continuing.

It’s been an incredible journey so far at the helm of ISA. I am excited to do some great work together. And by together, I mean driving an organization that works tirelessly for the good of the Illinois soybean farmer who funds this checkoff makes up our membership and makes this good work possible. Here’s to a new normal working together and brighter days ahead.

To our readers: What’s a positive new normal on your farm? I encourage you to find the silver lining in the midst of challenges. If there’s anything ISA can do to provide better service, please send us a note at ilsoy@ilsoy.org. We enjoy hearing from you.

> JOHN LUMPE, CEO, Illinois Soybean Association
ISA Hosting Agribusiness Management Program Webinar Series

The ISA soybean checkoff’s Agribusiness Management Program is hosting a five-week webinar series this month and next. The series, featuring advice from agribusiness experts, includes such topics as how to run the farm like a business, succession planning, wealth management, growing leased acres with farm managers and investors and more. Registration can be done via www.ILSoyAdvisor.com for all eight webinar sessions in the series. A reminder is sent for each session, so farmers can attend all of them or just those of interest.

ILSoyAdvisor to Host Conservation Lease Webinar

ILSoyAdvisor will host a webinar, August 20 at 10 a.m., with University of Illinois ag economist Gary Schnitkey, to discuss various farmland lease addendums farmers should consider when working on conservation with non-operating landowners. University of Illinois Agricultural Law lease addendums guide farmers through the multiple different ways conservation can be added to the farm/lease at https://farmdoc.illinois.edu/agricultural-law, including nutrient management, soil health and conservation and conservation habitats. Learn more at ILSoyAdvisor.com.

Illinois Farm Families Shares Food Production Details During Pandemic

Illinois Farm Families is helping share the role of farmers and food production with non-farmers during the global pandemic. Illinois Farm Families includes Illinois Corn Growers, Illinois Beef Association, Illinois Farm Bureau, Illinois Pork Producers Association, Midwest Dairy and ISA checkoff program. Illinois Farm Families has published and shared articles about food safety and the expectation of food delivery, as well as capitalized on the requirement for people to stay at home by using more social media to bring virtual farm tours to the audience. Farmer Friday takeovers are another highlight, including one with ISA directors Elliott Uphoff and Brad Daugherty. Each Illinois farmer provides photos and videos of his or her work on the farm and invites non-farmers to participate in the virtual on-farm experience. Learn more at the website, www.watchusgrow.org.

Spencer Meenen Receives State FFA Fiber & Oil Crop Production Award

Spencer Meenen, Melvin, Illinois, was selected this spring as the State FFA Proficiency Winner in Fiber & Oil Crop Production. The award was sponsored by the ISA checkoff program. Meenen is a member of the Gibson City-Melvin-Sibley FFA Chapter. A graduating senior, Meenen was an active agriculture education student and FFA member during high school. He served this last year on the FFA chapter officer team as treasurer. Meenen was selected as the state winner by a committee of agriculture teachers, who reviewed records online and conducted virtual interviews. He will compete in the National FFA Awards competition this month.

Chicago Suburban Fleets Among 100 Best in Americas

Two Chicago-area fleets that are biodiesel users rank among the 100 Best Fleets in the Americas, an annual list of top public fleets in North and South America. The Forest Preserve District of DuPage County ranked 28 and Village of Arlington Heights was honorable mention. The program encourages performance improvement and innovation among public fleets. The Forest Preserve District of DuPage County is a nationally recognized conservation agency that uses B20 in its diesel vehicles, reducing emissions. Village of Arlington Heights, one of the state’s largest municipalities, operates diesel vehicles and off-road equipment with B20 to reduce tailpipe soot, hydrocarbon and carbon monoxide emission levels. Both are members of the B20 Club, a partnership between the ISA checkoff program and American Lung Association, that includes Illinois fleets committed to cleaner air through use of biodiesel blends of B20 and higher.

photo submitted by FFA

photo by ISA
Has IFF changed opinions of dietitians and urban influencers via these tactics?

IFF successfully provides dietitians with resources for learning more about agriculture. Dietitians are scientists who often wait until they know more about a subject before drawing conclusions or forming opinions. They are open-minded and ask great questions. College dietetics programs and agronomy programs include the same biology and chemistry classes, so it is easy to translate what they know about nutrition and the human body to agronomic and livestock practices.

What value is there in maintaining or expanding an open dialogue with these groups?

Farming used to require two things: access to land and equipment and the know-how to grow and harvest a crop. Today, farmers need to add social license to operate. Essentially, this is the public perception of what agriculture is doing and the public’s approval for doing that.

Without consumer trust, it is going to be challenging to retain social license to operate. It’s all about transparency. Research shows that the millennial and gen Z audiences particularly value transparency and view those who aren’t transparent as having something to hide. With the public becoming more and more removed from the farm, it’s more important than ever to communicate what farmers are doing and take time to answer questions about practices used.

What does IFF have planned for the future?

IFF in 2021 will continue dietitian partnerships, as well as focus on featuring farmers through various social media opportunities. IFF is looking at new virtual opportunities to continue engaging consumers as well. Help IFF continue to grow by following on Facebook (facebook.com/IllinoisFarmFamilies), Instagram (@ILfarmfam), and on the website at WatchUsGrow.org. IFF is interested in hearing from farmers willing to serve as volunteers.

IFF is a unified consumer engagement platform working to connect Illinois farmers and other experts in agriculture, food and nutrition with their urban counterparts to share more about food and the people who grow and raise it. IFF is a collaboration between the Illinois Beef Association, Illinois Corn Marketing Board, Illinois Farm Bureau, Illinois Pork Producers Association, Illinois Soybean Association checkoff program and Midwest Dairy.
Whether it’s improving soybean meal to outperform the competition or promoting the sustainability of U.S. soy, the soy checkoff has been working behind the scenes to help farmers satisfy their customers’ needs. We’re looking inside the bean, beyond the bushel and around the world to keep preference for U.S. soy strong. And for U.S. soybean farmers like you, the impact is invaluable.

See more ways the soy checkoff is maximizing profit opportunities for farmers at unitedsoybean.org