Monitor These Technology Trends

MANAGE WINTER FUEL WISELY

AIM FOR SUCCESSFUL SUCCESSION PLANNING
COVER STORY

6 Industry Watchers Name Five Trends in Farm Technology

Agriculture technology has erupted into another era of growth. The opportunities that are available will affect not only Illinois soybean farmers, but also global society. Find out from industry watchers what will be hot in 2015.

FREEDOM TO OPERATE

8 Sustainability Thrives Across the Pond

Sustainability is more than a 21st century American buzzword. From environmental concerns to food security and economic and social issues, sustainability is prevalent in agricultural research efforts in the United Kingdom as well. Read about some of the studies underway.

TRANSPORTATION

10 Winter Care Helps Biodiesel Run Smoothly

Winter is here, and farmers must think about cold fuel maintenance, especially for biodiesel. While the National Biodiesel Board (NBB) says biodiesel blends can stand up to harsh weather conditions, there are some tips farmers should consider for best possible storage and use.

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Livestock farmers in Illinois face different definitions to classify and regulate their farms and protect air, soil and water quality. The Illinois soybean checkoff funds technical environmental support to help its top customer address existing and new regulations.

YIELD, COMPOSITION & PROFITABILITY

13 Profitability Matters: Transition Farm Ownership Effectively

According to the 2012 USDA Agricultural Census, the average age of the American farmer is 58. With increasing numbers of farmers planning for retirement, Kevin Spafford, Certified Financial Planner and founder of Legacy by Design, LLC, shares the steps farmers can take to successfully transition their farms to the next generation.

MANAGEMENT MATTERS MYTHBUSTER

14 Cover Crops Not the Same as your Grandfather’s

Thanks to renewed interest in protecting water quality and building overall soil health, Illinois cover crop acreage has risen 64 percent since 2010, according to the USDA Illinois Conservation Programs State Profile. Learn how farmers can take advantage of cover crops today.
Look Forward to the Next 50

The Illinois Soybean Association (ISA) last summer celebrated its 50th anniversary, along with 100 years of soybean production in Illinois. That milestone provided not only an opportunity for reflection, but also an opportunity to look ahead to what the next 50 years might hold.

Based on the direction the ISA board has chosen, and the projects and programs we have in place to get there, I am excited for what the future holds for Illinois soybean farmers.

Here are a few things to mull over as we enter a new year:

• USDA projected late last year that Illinois soybean farmers produced a record 551.6 million bushels in 2014. That would be tops in the nation with a 56-bushel-per-acre estimated average yield. We’d be in the number one production spot for a second straight year. One Illinois farmer topped 100 bushels in the Yield Challenge. We’ve come a long way since USDA’s estimated 24 bushel average of 1950.

• Speaking of achievement, Illinois Soybean Growers (ISG) commended President Barack Obama last month on his efforts to normalize relations and open up business opportunities with Cuba. This is a very good opportunity for Illinois soybean farmers and the businesses who use our beans. We are happy to have been part of an effort to make this happen. It opens a lot of doors for both soybean and meat exports, and we’re excited about exploring trade opportunities with Cuba in 2015 and beyond.

• ISA’s goal is to achieve maximum profitability and global competitive positioning for Illinois soybean producers. The targeted result is utilization of 600 million bushels of Illinois soybeans by 2020. Last year’s production, combined with our efforts to support our number one customer animal agriculture, and other buyers, are steps in the direction. Read more about our partnership with pork producers for Illinois soybean producers. The targeted result is utilization of 600 million bushels in 2014. That would be tops in the nation with a 56-bushel-per-acre estimated average yield. We’d be in the number one production spot for a second straight year. One Illinois farmer topped 100 bushels in the Yield Challenge. We’ve come a long way since USDA’s estimated 24 bushel average of 1950.

• ISA’s strategic focus this year has five areas. Those in order of priority are animal agriculture; transportation; yield, composition and profitability; freedom to operate and organizational excellence. These are the areas that can help us reach our 600 million bushel goal and are critical to our long-term competitive and comparative advantages.

Illinois has the cropping systems, access to domestic and global markets and the farmer leadership to continue growing soybean production for the future. As we look toward the next 50 years, I am confident we can do what it takes to remain on top.

BILL RABEN
ISA Chairman

Checkoff Represents 40 Years of Illinois Investments
The Illinois soybean checkoff and Illinois Soybean Program Operating Board (ISPOB) were created in 1974. At that time, the state had 84,000 soybean farmers, checkoff annual income was nearly $400,000, and 60 percent of checkoff dollars were used to expand markets, 30 percent for production and utilization research and 10 percent for miscellaneous efforts.
Many different ways to plant soybeans exist, and every farmer has their favorite. You name it, you’ve got it: drill, air seeder, row crop planter, broadcast and roll. Then, you also have to choose a row width variety: 7.5", 10", 15", 20", 22" or 30".

What is the best? That’s the million-dollar question. It depends who you ask and where you are.

As technology progresses, we see farmers move away from drills and invest in their corn planters to plant soybeans. Don’t get me wrong - a drill is a very useful tool to have in the shed. But it’s old technology. A drill is a controlled spill. It doesn’t have much precision to it, and, in most cases, it is harder to get soybeans in the ground at a consistent depth with a drill.

Modern planters with electric drives and hydraulic down force have the ability to make sure each individual row is planted at the desired depth for more consistent emergence.”

RUSH OLSON, precision planting specialist, McLean, Ill.

Soybeans are generally more sensitive to planting depth than corn. Soybeans should not be planted deeper than 1.5”. In a study done by Michigan State University, a drill only planted about 20 percent of the seeds at the intended depth, with 68 percent planted too deep and the other 12 percent planted too shallow. Row crop planters have the ability today to have individual row control over depth and population rather than more planter-wide average. Modern planters with electric drives and hydraulic down force have the ability to make sure each individual row is planted at the desired depth for more consistent emergence.

Many studies have been done on population. In most cases, if you can achieve 100,000 plants per acre in narrow rows (15” or smaller) and 80,000 plants per acre in 30” rows, you have the potential for great yields. There are benefits from both 15” and 30” row beans. Bushel increases can go either way. My personal preference, and what we use in our operation, is 30” rows.

Honestly, it was the way to go for our outfit. No more driving down rows of beans when spraying, decreased seed cost or decreased initial planter cost. We are able to use all the new technology we use in planting corn in planting our soybeans. Agronomically, I think the soybeans do better getting out of the ground and better with disease pressure.

Farming is a technology-driven industry. Every year is different in the farming world, and we must prepare to do the best job we can. As a precision planting specialist at Central Illinois Ag, I see the value of using technology in the field to increase return on investment. I have seen firsthand the advancements that have been made to do a better job at putting crops in the ground. As a result, we are seeing healthier plants and better yields than we have ever seen.

Rush Olson was born and raised on a grain farm near McLean, Ill. He works at Central Illinois Ag as the precision planting specialist, and he farms with his dad and uncle on their family farm. He holds a passion for farming, helping others, and continuously educating growers about technology. Olson resides in Heyworth, Ill., with his wife, Jessie, and their three children.
By the Numbers

55-64
The fastest-growing age bracket on Twitter.
Source: Pew Research

5
The number of years it takes from the time research funds are invested in technology development to the time the technology is first implemented.
Source: American Society for Horticultural Science article

9
The number of biotech crops grown commercially in the United States.
Source: Center for Food Integrity

$15.6 BILLION
The global value of biotech seed in 2013.
Source: International Service for the Acquisition of Agri-Biotech Applications

1 DIESEL ENGINE FROM 1996 puts out the same emissions as 100 OF THE SAME ENGINES MANUFACTURED TODAY
Source: Based on EPA standards

$11.16 MORE PER ACRE IN ILLINOIS

SOYBEAN QUALITY MATTERS

MORE DEMAND. BETTER PRICE.
If Illinois farmers increased the protein content in their soybeans by just 1 percentage point, they could earn an additional $11.16 per acre.
AND THAT ISN’T CHICKEN FEED.

FIND OUT HOW YOU CAN IMPACT YOUR QUALITY AT www.BEYONDtheELEVATOR.com
Agriculture mechanization ranked among the 10 greatest engineering achievements of the 20th century, according to the National Academy of Engineering. And since the turn of the current century, growth in agriculture technology has erupted into another era of opportunities that are expected to significantly impact not only farming, but our global society.

“We all can recall the growth of technology in the past 20 years in modern agriculture, but the impact of technology today -- it’s different,” says Chad Colby, product support representative for 360 Yield Center and AgTechTalk.com developer. “This technology will allow us to do so much more than we ever thought possible.”

From technology in their pockets to evolving opportunities in the sky, industry watchers say farmers have the power to adopt or expand upon several farm technology trends in 2015.

1. **SMARTPHONE AND TABLET STOCK RISES**

   The iPad's existence falls shy of five years, yet its acceptance has been explosive.

   “You still can't discount the value of smartphones and tablets to the farmer,” confirms Colby. “The value there without a lot of cost is pretty intense.”

   Even for the least computer-savvy farmers, the devices offer simple point of entry to information by comparison to starting a computer, navigating a web browser and locating programs. One-touch access to applications proves fast and relatively simple. But as important, farmers can monitor weather, markets and email while on the go in a faster, easier method to stay connected.

   “One of the farmer’s biggest limitations is the value of his time, and that will not change,” Colby says. “He has more work to do than time will allow in the day.”

   Apps developed by various businesses and universities can help calculate grain bin contents, record field activities, determine fertilizer removal by crop, estimate yield, locate farm equipment and more. Find a comprehensive, ag-specific list at www.agwebappfinder.com.

2. **PLANT BY PRESCRIPTION**

   Variable rate technology (VRT) has been around as long as glyphosate-resistant soybeans. Yet adoption of VRT’s full potential in planting applications has proven much slower.

   Hydraulic drives offer more than convenience over changing sprockets and gears on chain drives, Colby says. The ability to prescribe seeding rates within a field appropriately distributes seed, increases yield potential and improves overall management, even in fields that farmers have planted for generations.

   “You can save money and be more effective and a better steward of the land and all those things with the technology you already have,” Colby says.

   Oneida, Ill., farmer and Channel seed dealer Brett Swanson started writing planting prescriptions for his family’s farm in 2013. He also writes prescriptions for some of his seed customers, now that he has learned the skill from a local equipment dealer.

   “The biggest value is that as the margins get tighter, it is a way to cut some costs,” he says. Swanson admits the process takes time, and the best prescriptions come from analysis of multi-year yield data. The youngest generation of operators in his area have adapted more quickly to the practice. Some farmers have held back due to lack of interest or planter capability.

   “Eventually I think all farmers will be doing it as the industry changes and the next generation takes over the farms,” he says.

3. **UNMANNED AERIAL SYSTEM LAUNCHES**

   While unmanned aerial vehicles (UAVs) shouldn’t eliminate on-foot crop scouting, the...
While UAVs shouldn’t eliminate on-foot crop scouting, the technology could make seeing more acres realistic.

4. WHOLE-FARM DATA TOOLS EMERGE

Farmers naturally rely on experience to tell them what varieties to plant and when to spray. Yet a growing number of large agribusinesses and even innovative private companies like Farmer’s Edge, a global agronomy and precision technology company, use whole-farm data to help farmers make better management decisions.

“If you plant the wrong variety, it can cost you 15 to 20 bushels. If you fertilize a week too soon, that also can cost you,” says Wade Barnes, chief executive officer of Farmer’s Edge. “Efficiency of scale is lost on larger farms if they make wrong decisions on a few fields.”

Farmer’s Edge integrates agronomy, hardware and software tools into its services. The company collects, combines and analyzes data related to field-based weather conditions, soil fertility, topography, tractor performance, fuel use, yield and more to guide management decisions. Team members write prescriptions for variable-rate application of fertilizer, seed and fungicides. They use satellite imagery to help make yield predictions, and they provide other services that encourage an efficient experience for farms that seek to enhance management practices.

5. DATA RIGHTS INTEREST GROWS

With evolving technology and its power of information, farmers face new decisions and issues surrounding privacy of their data. Ownership of big data -- a term commonly used to define high volumes of data collection -- has emerged as a big topic of conversation.

“Right now our position is that farmers own the data,” says Ron Moore, soybean farmer from Roseville, Ill., and American Soybean Association (ASA) Ag Data Work Group chair. “If the ag technology provider wants to share that, they have to get permission from the owner to share it.”

Major agribusinesses and farm groups, including ASA, have met to discuss and set industry principles. Business interests vary from a hands-off approach to companies that want to collect all data, analyze and use it to provide farm recommendations or direct product development.

Moore notes farmers have a choice in whether to participate in data collection and should understand the contract they sign. “We have principles outlined but haven’t dealt with how we handle a breach of data,” he says. “That’s the next question that needs to be asked.”

OUTSIDE INVESTMENT INTEREST RISES

Agriculture’s precision application systems are attracting mainstream investors. In fall 2014, Farmer’s Edge, a global provider of precision agriculture and variable rate technology, announced an investment from Silicon Valley-based venture capital firm Kleiner Perkins.

"Big technology guys now want to be in agriculture," says Wade Barnes, CEO. "It sends a message to the industry that agriculture is pretty important and worth watching."
Sustainability Thrives Across the Pond

UK Efforts have Objectives Similar to U.S.

> BY BARB BAYLOR ANDERSON

Illinois soybean farmers, with funding from the Illinois soybean checkoff, have found ways to measure and promote sustainable production practices to meet global demand.

The same is happening in the United Kingdom (UK). From environmental concerns to food security and economic and social issues, sustainability is prevalent in agricultural research efforts underway throughout the UK.

BANKING SEEDS FOR THE FUTURE

Shelves and shelves of catalogued seed are found at the Kew Royal Botanic Garden's Millennium Seedbank, which opened near London in 2000. Scientists at the facility started collecting plants indigenous to the United Kingdom at that time, and now have nearly two billion seeds in store representing about 10 percent of the world’s wild plant species.

The next goal is to collect 25 percent of the planet's plants -- 75,000 species -- by 2020. Ultimately they seek 340,000 plant species, which will be about 15 billion seeds. They are working to collect seed with more than 150 institutions in 80 countries, including the U.S.

"The priority is to collect seed from alpine, dryland, coastal and island ecosystems most vulnerable to climate change, along with useful plants. Other priorities are to preserve seeds from plants that are endemic, economically important or endangered. The focus is on useful plants and crop wild relatives," says Ruth Eastwood, Crop Wild Relative project coordinator.

While soybeans are not a collection priority -- since the hope is to preserve biodiversity by storing samples of plants that might otherwise become extinct first -- they may someday be included. Scientists estimate 20 percent of the world's plant species are threatened by extinction.

"There is no technological reason why any plant species should become extinct," says Eastwood. "Kew's role is primarily to provide plant-based solutions to environmental challenges. Plant-based solutions will be required for all major environmental challenges, including food and water scarcity, energy, human health, loss of biodiversity and climate change."

RESEARCH INTO GREATER SUSTAINABLE PRODUCTION

New ways to increase crop productivity and quality and to develop environmentally sustainable solutions for food and energy production is the goal of the Rothamsted Research Station near London. Rothamsted is the longest running ag research station in the world, created in 1843. As a comparison, the University of Illinois' Morrow Plots were established in 1876.

Rothamsted has a history of comparing use of inorganic and organic fertilizers on crop yield. Scientists have studied wheat and grassland and have a collection of soil, grain and straw samples dating back to the 1840s. They've expanded their work into soil, plant nutrition and crop protection from weeds, pests and diseases. Notable discoveries are the pyrethroid class of insecticides and advances in virology, nematology, soil science and pesticide resistance.

"Food security is a global problem, requiring global solutions," says, Adam Stains, joint head of agriculture and food security. He cites globally 50 percent more demand for energy, 50 percent more food...
Checkoff Funds Ways to Secure Sustainable Future

ISA invests in projects that highlight Illinois soybean sustainability. ISA defines sustainable agriculture as meeting today’s needs while helping future generations to meet their needs by:

- Increasing productivity to meet future needs while decreasing environmental impact.
- Improving access to safe food and feed, and production of renewable fuel that reduces air quality impacts.
- Improving the social and economic well-being of farmers and the global community.

FREEDOM TO OPERATE
Winter Care Helps Biodiesel Run Smoothly

BY AMY ROADY

Winter is here, and farmers must think about cold fuel maintenance, especially for biodiesel. While the National Biodiesel Board (NBB) says biodiesel blends can stand up to harsh weather conditions, there are some tips farmers should consider for best possible storage and use.

"Biodiesel is definitely more sensitive to the cold," confirms Brigette Harlan, renewable fuels supply manager for Growmark. Harlan has the following tips for farmers to prevent problems:

- Regularly check tanks and equipment for leaks, seepage and seal decomposition. Biodiesel is extremely absorbent, so any moisture will be pulled into the fuel.

- Keep tanks topped off whenever possible to reduce condensation. "We see moisture issues most commonly during seasonal changes," Harlan says. "There is greater condensation when we have large overnight warm to cold temperature swings and biodiesel blends will absorb that moisture."

- Make sure filters are biodiesel compatible. Not all filters are recommended for biodiesel blend use.

- Treat biodiesel blends with winter additive early. When blending with more than 10 percent biodiesel, Growmark staff recommends a double rate of treatment.

"Many people get caught by an early cold snap because they have not additized their fuel yet," Harlan says. "A lot of folks wait to treat their blend in order to save on the cost of additive, but when an unexpected cold snap comes then it is too late and you have an issue." She recommends to start at least a 1x (standard) treatment by October 1.

To avoid gelling and ensure success all winter, the National Biodiesel Board advises:

- Use a high-quality fuel that meets the ASTM specification purchased from a reputable supplier.

- Discuss fuel options with your supplier to ensure that both the diesel fuel and biodiesel are blended only after meeting their respective specifications.

- Develop a good fuel management plan, in partnership with your supplier. The plan should include additization, just like for regular diesel, to improve cold weather operability.

- Test fuel periodically to verify its cold weather properties.

- Remain diligent on your tank maintenance program to help ensure fuel cleanliness.

Biodiesel Plays Prominent Role in Illinois

Decades of soybean checkoff investment in biodiesel development and promotion have made Illinois a hub for biodiesel production and use. For example, the American Lung Association and Illinois Soybean Association are launching the Illinois B20 Biodiesel Club to engage and reward biodiesel users. Visit www.b20club.org. Also, the Chicago Department of Aviation (CDA) recently announced development of a 4,000-square-foot travel center featuring a range of alternative fuels and food options on city-owned vacant land near O’Hare International Airport. Located at the southeast corner of Higgins Road and Patton Drive, the center will offer compressed natural gas (CNG), biodiesel, fast-charge charging stations for electric vehicles, conventional gasoline and food. The target open date for is early 2016.
Expert Helps Farmers Decode and Meet Livestock Regulations

> BY LAURA TEMPLE

How do you recognize a livestock farm? You may see hog buildings, hear cattle in a feedlot, or catch a whiff of silage.

How does the Illinois government recognize a livestock farm? That gets complicated.

It also involves more than one agency. The Illinois Department of Agriculture (IDOA) and Illinois Environmental Protection Agency (IEPA) each use different definitions to classify and regulate livestock farms and protect air, soil and water quality.

To help farmers successfully navigate regulations from both groups, the Illinois soybean checkoff funds technical environmental support from engineering consultant Ted Funk, Ph.D. New and existing regulations don’t change the unique advantages Illinois offers livestock production, including abundant feed supplies and access to local and global markets.

Animal agriculture is the top customer for soybeans in Illinois.


One way Funk alleviates uncertainty and ensures compliance is by making on-farm visits to Illinois Pork Producers Association (IPPA) members. Funk has visited 17 farms since the service started in 2013.

"We wanted to have a third-party eye examine our operation to find any chinks or potential issues," says Dereke Dunkirk, hog and crop farmer from Morrisonville, Ill., and IPPA board member. "There always is room for improvement."

Dunkirk and Funk spent half a day at two barn sites, discussing ways to improve manure use as fertilizer, landscaping to filter dust and odor, and managing mortality composting.

“The time was well spent,” Dunkirk says. “For example, the recommendations and report from this visit helped balance our manure applications better.”

Funk offers these principles to help farmers prepare for government inspections:

• Create and maintain records and plans. Paperwork that shows manure applications, emergency plans and soil tests satisfies many requirements in Illinois regulations and helps farmers make better use of nutrients in manure.

• Keep clean water clean, and dirty water dirty. Funk has strategies that keep rainwater and livestock runoff separate to protect water quality.

• Any discharge of pollutants needs to be fixed, or you have to apply for a permit. And with a permit, the discharge still needs to be fixed. He shares a decision tree and factors to help farmers determine their status, needs for permits and ways to eliminate discharges.

• Take time to understand and manage composting. Well-managed composting handles livestock mortalities effectively. But it also can be an overlooked source of runoff, and a target during inspections.

• Confused? Ask for help. Funk recommends tools like phone apps, which include Manure Calculator and Manure Monitor, and worksheets for practical assistance. State associations and government agencies have resources from expertise to funding to help Illinois livestock farms prosper. ■

Livestock Regulations Quiz

Illinois livestock farmers navigate an alphabet soup of agencies and regulations to protect environmental quality. How many of these acronyms do you recognize?

1. AFO 6. LMFA
2. IPCB 7. EQIP
3. CNMP 8. NRCS
4. CAFO 9. ASE
5. NPDES 10. MRTN

ANSWERS: 1. ANIMAL FEEDING OPERATION, 2. ILLINOIS POLLUTION CONTROL BOARD, 3. COMPREHENSIVE NUTRIENT MANAGEMENT PLAN, 4. CONCENTRATED ANIMAL FEEDING OPERATION, 5. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM, 6. LIVESTOCK MANAGEMENT FACILITIES ACT, 7. ENVIRONMENTAL QUALITY INCENTIVE PROGRAM, 8. NATURAL RESOURCES CONSERVATION SERVICE, 9. AGRICULTURAL STORMWATER EXEMPTION, 10. MAXIMUM RETURN TO NITROGEN
The 2015 Soybean Summit, hosted by the Illinois Soybean Association (ISA), will be held at two locations and dates this year: Friday, Jan. 30, 2015, at the Keller Convention Center in Effingham, Ill., and Friday, March 6, 2015, at the Peoria Civic Center in Peoria, Ill. Both events, which are funded in part by the Illinois soybean checkoff, will encourage participants to examine and explore various soybean management techniques that can lead to higher yields and greater profitability, including:

- Developing habits to become a "Soybean Master."
- Discovering new trends and techniques that can help boost yield potential.
- Finding new ways to overcome production challenges.
- Learning how Illinois soybean farmers can meet growing soybean demand.

"No matter what part of Illinois you farm in or soil you have to work with, the bar for soybean yields is being reset," says Bill Raben, soybean farmer from Ridgway, Ill., and ISA chairman.

In 2014, farmers across the state proved larger yields are possible. Dan Arkels from Peru, Ill., harvested a record-breaking 103.95 bushels per acre on his 30-acre ISA Soybean Yield Challenge test plot in LaSalle County.

"We’re excited to have Dan share the techniques he used on the way to reaching 100-bushel soybeans in Illinois at both summits," says Don Guinnip, soybean farmer from Marshall, Ill., and ISA Production Committee chairman.

Other keynote speakers include David Holshouser, Virginia Tech; Brent Gloy, economist and farmer; Steve Johnson, Iowa State University; and Elywnn Taylor, Iowa State University. Four breakout sessions also are included in both agendas, which can be viewed at ilsoy.org/summit.

The Soybean Summit is free to Illinois farmers. Online registration is available at ilsoy.org/summit or by calling 888-826-4011. The registration deadline for the Effingham Summit is Jan. 13, 2015, and for the Peoria Summit is Feb. 22, 2015.
According to the 2012 USDA Agricultural Census, the average age of the American farmer is 58. With increasing numbers of farmers planning for retirement, Illinois Field & Bean spoke with Kevin Spafford, Certified Financial Planner and founder of Legacy by Design, LLC, about steps farmers can take to successfully transition their farms to the next generation.

What is your top piece of advice to farmers drafting a succession plan?

You need to make a real commitment to succession planning. Everything else rests on that. Too many people put it off until "someday." But then it comes time to transition and they don’t have a plan. Remember a succession plan isn’t just useful the day you plan to retire. There are steps to prepare the family and farm for transition, so it will help you years before you plan to retire.

What are the most common mistakes farmers make in planning the ownership transition?

Very often, farmers simply don’t plan for succession because it seems too difficult to begin. Conversations are a great starting point, but you need to put pen to paper. Don’t make the mistake of not creating a written plan. I always say, "If it’s not written, it’s not real."

Although succession is ultimately the farmer’s decision, there are many stakeholders in a farming operation. Farmers should not hesitate to ask other people about their opinions and needs. Opening the discussion up to family members ensures everyone’s ideas matter.

Succession planning blends family and business. How can you establish clear boundaries?

Everything about succession is emotional. The first step is to understand there is no way around the emotions that come with family dynamics. Next, farmers should clearly separate business and family issues. It helps to use a clear meeting structure, setting aside distinct times to discuss each area. It also can help to get a professional facilitator involved for an objective viewpoint.

How can farmers who don’t have a next generation available plan for retirement and continue their farm’s legacy?

Many farmers who run successful farms don’t have children available to take over day-to-day operations. To meet the demand, we created eLegacyConnect. The web community matches aspiring young farmers with retiring farmers who don’t have successors. We have hundreds of young adults with agriculture degrees and farming experience looking for opportunities, so we try to connect them with farmers nearing retirement who don’t have a successor in place.

For more tips on farm profitability, listen to ISA’s Management Matters: Focus on Profitability series at www.ilsoy.org/profitability/management-matters. This checkoff-funded series provides insight on how Illinois soybean farmers can manage their farms and keep profit top of mind.
TRUE or FALSE?
Cover Crops Not the Same as Your Grandfather's?

TRUE: Many farmers may remember growing up with small grains and forages greening the countryside. Today, a new trend toward increased use of cover crops is re-greening Illinois. Thanks to renewed interest in protecting water quality and building overall soil health, Illinois cover crop acreage has risen 64 percent since 2010, according to the USDA Illinois Conservation Programs State Profile. And they are not the same as your grandfather's.

Dan Towery, president of Ag Conservation Solutions in Lafayette, Ind., says interest in cover crops began increasing about five years ago. Cover crops can reduce soil erosion, improve water infiltration and help hold nutrients for the crop, along with building healthier soils.

"We had some successful no-till growers who were very knowledgeable about soil health and were looking at what they could do to take it to the next level," he says.

Here are three "old school" concepts that can be rediscovered:

- **Cover crops are old-fashioned.**

FALSE. Joel Gruver, Ph.D., assistant professor of soil science and sustainable ag, Western Illinois University, says farmers now use cover crops in new ways.

"Farmers raising cover crops today are at the forefront of innovation," he says. "Precision cover cropping is not what your grandfather did."

Towery agrees that the mindset toward cover crops is shifting.

"The big motivation for cover crops used to be to reduce soil erosion on sandy soils or steep slopes, but that is 'old school,'" he says. "The new approach involves understanding how important it is to have a living root growing in the soil every day possible."

Both Gruver and Towery say using auto-steer technology and a corn planter allows farmers to precisely manage seed placement for crops such as radishes. Towery adds that in spring after the radishes have decayed, growers can plant on top of the same residue-free row, capturing the benefits of the nutrients scavenged by the radishes. Plus, radish root channels help cash crop roots access moisture and nutrients from deeper within the soil profile.

Get More Information about Cover Crops
To learn more about cover crop use in Illinois, visit the soybean checkoff-funded production management website, ILSoyAdvisor.com. Additional information is found at mccc.nsu.edu.
There’s no value in planting cover crops on better soils.

**FALSE:** Gruver says farmers need to think strategically about how they use cover crops. “They’re not just for highly erodible soils, but an important best management practice to improve soil health,” he says.

Even in productive soils, cover crops can bring benefits, adds Towery. “People look at black soils high in organic matter (OM) and they think those soils are as productive as they can be,” he says. “But they may actually consist of a centuries-old passive OM component. The active OM component is what microbes eat and what we’re building when we’re using cover crops.”

Cover crops don’t pay.

**FALSE:** Another misconception about cover crops is that they don’t pay, says Gruver. He asserts there is one instance where the short-term payoff for cover crops is clear: livestock producers who winter graze animals on crop residue. “With the addition of cover crops, there’s an increase in the quality of the animals’ diet, and it shows in their performance.”

Towery says farmers start seeing a larger portion of the crop’s nitrogen coming from the soil itself, typically after five years, but that measuring results requires looking at long-term trends, not just the performance of a single year.

Gruver recommends farmers consider both short- and long-term benefits of adding cover crops to a cropping system. "I always tell farmers to think about whether erosion control pays," he says. "Most farmers say they don’t see the immediate payback, but they know there are definitely advantages to long-term soil conservation.”

GET MORE INFORMATION ABOUT COVER CROPS

Western Illinois University’s Joel Gruver says precision management of cover crops can be defined in several ways:

- **Management of cover crops to achieve specific objectives.**
- **Strategic placement of cover crops in specific fields or parts of fields.**
- **Strategic placement of cover crop rows in relation to other cover crop rows and/or cash crop rows (often using GPS guidance).**
- **Planting of cover crops with a precision planter.**

Regardless of the definition used, Gruver emphasizes the key to managing cover crops is to ensure they meet the goals of the farming operation. "We don’t need all cover crops planted with a precision approach," he says. "We need cover crops on the landscape, but only in a cost-effective manner that meets the needs of the farmer.”

IPHONE:

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Illinois Soybean Growers Legislative Issues to Watch

Illinois Soybean Growers (ISG) is monitoring critical key federal and state issues as 2015 gets underway. ISG will provide alerts to members for response as needed.

• GMO LABELING – Rep. Mike Pompeo, R-Kan., is expected to reintroduce his bill mandating the labeling of genetically modified foods (GMO) to the 114th Congress. He is pointing to the Food and Drug Administration (FDA) to create a national standard for GMO labeling. The bill would preempt any state laws. ISG supports a national standard for GMO labeling. A patchwork of state GMO labeling policies would make it difficult for the agriculture and food industries to manage, and most likely would drive up food prices for American families. A few state GMO labeling initiatives narrowly escaped becoming laws in the 2014 general election.

• NUTRIENT LOSS REDUCTION STRATEGY – The Illinois Statewide Nutrient Loss Reduction Strategy was introduced last November. Public comments are being accepted until midnight, Jan. 24, 2015. The strategy provides a framework for reducing phosphorus and nitrogen losses to improve water quality in Illinois waterways and the Gulf of Mexico. It outlines practices to reduce point and nonpoint losses and focuses on nutrient losses to the environment, not on reducing nutrient use for Illinois agriculture. ISG has been directly involved with developing this strategy and supports the use of voluntary, incentive-based programs focused on the implementation of best management practices to address nutrient losses from Illinois farm fields.

• ISG WELCOMES PROGRESS WITH CUBA – ISG looks forward to the U.S.’ next steps in opening up business with Cuba. ISG has been working to increase soybean and ag exports to Cuba for several years. Efforts include visiting Cuba and meeting with top officials four times since 2012, along with educating Illinois legislative and business leaders about the economic value of trade with Cuba. Cuba relies on foreign suppliers for soybeans. The U.S. was once the dominant supplier of all Cuba’s soy products. Brazil moved in during 2011 and 2012 and Argentina in 2013. The U.S. exported more than $108 million in soybeans and meal to Cuba in 2013. ISG believes the U.S., specifically Illinois, has a chance to gain back business.

• RENEWABLE FUEL STANDARD (RFS) – The EPA announced in November that it would not finalize the 2014 RFS Renewable Volume Obligations (RVO) in 2014. The EPA’s proposed rule, issued in November 2013, generated significant controversy by setting the RFS RVO at 1.28 billion gallons for 2014 and 2015 – a level less than the annual production rate of nearly 2 billion gallons. The EPA also extended the 2013 RFS compliance reporting into 2015 and plans to take action on the 2014 standards when it makes the 2015 standards.
Get in the Game

A fourth-generation farmer who grew up on his family’s farm in Shelby County, Illinois, Stan Born earned a bachelor’s degree in chemical engineering from the University of Illinois and took a “33-year sabbatical” from farming to work at Caterpillar Inc. He held multiple roles in construction and agricultural equipment, ranging from product management to research and development. He retired in 2012, returned to his family’s farm, bought more land and some used equipment and started a small farming operation. In 2014, Born was elected as director on the ISA board for District 5.

Why advocate for Illinois agriculture?
“With urbanization, more people are moving into town and getting further away from the family farm, which has changed dramatically just during my generation. At the same time, growers are becoming a smaller minority of the population. So it’s essential for our industry that we let decision-makers know what’s important to us, and how their actions affect us and the state’s economy, because we’re the nation’s food source.”

Why not leave advocacy to the American Soybean Association (ASA)?
“ASA is a good organization and they represent all soybean-growing states. They advocate for different issues across that broad landscape. In Illinois, it’s our responsibility to speak up on issues unique to our market and our environment. For example, our transportation situation in Illinois is different than Minnesota or North Dakota. They’re mainly concerned with rail issues. In contrast, we’re more concerned about maintaining our competitive advantage with our river system – making sure our locks and dams are in good operating condition. That’s why Illinois needs to have its own voice, in addition to being part of ASA’s efforts.”

Why should Illinois farmers take the lead?
“I’m new to the board, so my experience is limited. I’ve made one trip to Springfield and one to Washington, D.C., and had the opportunity to meet with representatives and senators from our area. So far in the engagements I’ve had with legislators, they seem to sincerely listen to what we have to say. And if we don’t speak up, there’s always someone else willing to – and they may not have our best interests in mind.”

Why use Voice for Soy?
“It’s very easy to use. Illinois Soybean Growers puts together messages that you can use as is or customize. I worked for 33 years at an industrial company, and I was a member of their political action committee – and they had a similar system. Voice for Soy is every bit as good and simple to use.”
Time to Apply for ISA’s Crop Science Scholarships

The application period is open for college students interested in applying for ISA’s crop sciences scholarships for the 2015-16 school year. The scholarships are funded through the state soybean checkoff, and are available to qualified students entering their junior year in the fall of 2015.

ISA will offer up to 10 scholarships worth $4,000 each for the 2015-16 school year to students majoring in crop sciences at Illinois State University, Southern Illinois University Carbondale, University of Illinois at Urbana-Champaign and Western Illinois University. Awards are based on exceptional academic ability, leadership and financial need.

Students must follow an agricultural course of study with a major in crop production or a crop science discipline. Recipients are encouraged to find on-campus employment in soybean research, attend graduate school and choose a career in soybean research. Recipients also can reapply to receive another $4,000 for their senior year.

The IAA Foundation administers the scholarship program. Guidelines and all application materials are available at www.iaafoundation.org. Direct any questions to Susan Moore, the IAA Foundation director and program administrator, at 309-557-2230 or smoore@ilfb.org. Completed applications must be postmarked on or before Feb. 1, 2015.

USSEC Releases Soy Transportation Study

The U.S. Soybean Export Council (USSEC) has released a new transportation study. USSEC partnered with the Soy Transportation Coalition (STC) to commission the study comparing cost, transit time and predictability of soybean movement from the U.S., Brazil and Argentina to nine international destinations. The study details factors that make the U.S. soybean industry the most cost effective and reliable supplier of soybeans and soy products.

For example, the study found soybean shipments from the U.S. arrive within three days of expected delivery date, compared to seven days from Argentina and 15 days when arriving from Brazil. The full study can be viewed at www.soytransportation.org.

“This study proves what international customers of U.S. soy have known for some time. We provide them with more than just quality soy products,” says USSEC CEO Jim Sutter.

WSF Highlights Illinois Farmer

The World Soy Foundation (WSF) recently highlighted ISA director Stan Born in their Farmer Leader Feature. The feature is intended to highlight different farmers from across the United States who work with WSF to reduce malnutrition through soy consumption. The article highlights Born’s career, including travel to 36 countries, retiring to farm full-time and his involvement with ISA. Born says his passion for mission projects and helping communities in need to manage their own food in a sustainable way has lead him on his current path. Read more about how to get involved by visiting www.worldsoyfoundation.org/donate-now/.

IDOCA Trip Helps Increase Ag Exports

The 2014 Illinois Grain Tour helped the state boost its ag exports. The five-day “reverse trade mission” sponsored by the Illinois Department of Agriculture brought 32 buyers from nine countries to Illinois in November 2014 to shop for grain products.

Tour stops included two corn and soybean farms, GSI in Assumption, Ill., Marquis Ethanol in Hennepin, Ill., and Seedboro Equipment in Des Plains, Ill. The tour produced $88 million in anticipated sales for Illinois agribusiness. In 2011, the state sold $8.2 million in agricultural products overseas, making it the third-leading agricultural exporter in the United States.

“The results are very encouraging,” says Illinois Ag Director Bob Flider. “They indicate a strong demand for Illinois grain and grain-related products in foreign markets. Our challenge now is to build upon the relationships started on this tour and turn initial sales into repeat business.”

Calendar of Events

- **Midwest Ag Expo**  
  > January 28-29  • Springfield

- **ISA Soybean Summit**  
  > January 30 • Effingham

- **Illinois Pork Expo**  
  > February 3-4 • Peoria

- **Illinois Soybean Growers Annual Meeting & Resolution Meeting**  
  > February 5 • Bloomington

- **Grain and Feed Association of Illinois Meeting**  
  > February 15-17 • Springfield

- **ISA Soybean Summit**  
  > March 6 • Peoria

For more information, visit www.ilsoy.org
Rex Steffes, Manhattan, Ill.

“I think the desire to always try new things came from watching my dad build racecars when I was growing up. He would change the racecars until they would win. He was always adapting. He taught me there is always a better way to do something.”

Illinois Farmer not Afraid to be Production Trailblazer

“I think the desire to always try new things came from watching my dad build racecars when I was growing up. He would change the racecars until they would win. He was always adapting. He taught me there is always a better way to do something.”

Rex Steffes is an outspoken farmer who isn’t afraid to try new things. He wants other farmers to consider his techniques. Here’s what he has to share:

WHAT’S YOUR BACKGROUND?
I am a fifth-generation farmer from Will County. I have been farming for more than 40 years. I became sole operator of the farm in 2009 and now farm with my three sons.

WHAT DO YOU GROW?
We have grown many things throughout the years, from corn and soybeans, to vegetables and sweet corn. In 2014, we had 4,000 acres of soybeans only. I have grown soybeans on soybeans six years in a row on the same field. My yields just keep rising, so I keep doing that. Our best yields were soybeans on soybeans this year.

HOW DID YOU MAKE THAT WORK?
I started using manure on soybeans after trying it on corn, and got a 15-bushel-per-acre pop. I had been treating my corn crop and taking care of it and was leaving soybeans on their own. That was wrong. Anyone can grow corn, but not everyone can be a good soybean producer. Once I saw that yield bump, I decided to put my attention there.

WHERE DO YOU GET YOUR FARMING EDUCATION?
I took many courses at University of Illinois soybean, spray and planter schools. I also have attended many marketing classes throughout the state. I got my real estate sales broker license in about 2005, and that is what I do during the winter. It fills my time and I wanted to learn about the good farms up for sale.

WHO INFLUENCES YOUR DECISIONS FOR TRYING NEW THINGS?
I think the desire to always try new things came from watching my dad build racecars when I was growing up. He would change the racecars until they would win. He was always adapting. He taught me there is always a better way to do something.

WHEN YOU DECIDED TRYING NEW THINGS WAS IMPORTANT, DID YOU HAVE A GOAL IN MIND AND FOUND THE TECHNOLOGY TO MATCH, OR ARE YOU ALWAYS LOOKING?
I think many things influence my decisions. I was basically a manager for my family farm in my 20s. I have always tried new things. I experiment every year and try different rates and products and see what works. I also read Missouri yield champion Kip Culler’s book and decided not to rewrite the book. I did what he did and everything started clicking. I’ve kept up with technologies. We do all GPS and precision planting. My sons tell me about the newest technologies and I am up for trying anything.

WHAT DID YOU TRY THIS YEAR?
Picking good varieties is important. I also put down fungicides when the beans were eight inches tall and again with an aerial sprayer. I used Bio-Forge as well. About four or five years ago I started using seed treatments, and now I never plant a “naked” soybean. I believe it’s all about keeping the plant healthy. It’s amazing when you apply something and go back a week later and can see where you skipped a part of the field.

WHAT IS YOUR ADVICE TO FARMERS HESITANT TO TRY NEW THINGS?
I want people to try the things I do. I don’t hide it. I want people to know 2014 was as strange as 2012. When things are strange, you can’t stop applying fungicides and give up on your crops. When prices dropped, some people stopped spraying to save costs. I didn’t. Farmers are a tough, but stubborn bunch. You have to be able to try new things. Even when Mother Nature hits you in the head, you can get back up. ■
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I’ve replanted less acres since I started planting with Beck’s Escalate.

Watch the interview at [www.BecksHybrids.com/OnTrackFarming](http://www.BecksHybrids.com/OnTrackFarming)

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Matt Birky
On Track Farming Inc.