Precision Ag: A Path to Profitability

- Tools to Tweak Sustainability
- Lessons from the Panama Canal
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Smooth Sailing into 2012

This past year has been filled with positive transitions for ISA. A year ago this month, the board of directors approved new vision and mission statements. We set ambitious goals. And now we are nearly halfway through the FY12 fiscal year pursuing profitability in specific target areas.

I am excited about the progress we’ve made in reaching our goals, but acknowledge we have work ahead of us, too. We will show Illinois soybean farmers the progress we make through the use of key performance indicators. We will measure our results in areas such as raising awareness of animal agriculture and the crucial role soy plays in animal nutrition. We will benchmark needs in our transportation infrastructure and pursue solutions that can strengthen our basis. We will seek ways to enhance yield, quality, sustainable production and much more.

One of the ways we seek to make measurable improvements in these areas is through our stakeholders. Twice a year, ISA holds a Soy 2020 forum. ISA brings state and national soybean industry leaders together to discuss the future of the industry. Our most recent gathering focused on biodiesel. The topic is timely, as the state’s sales tax exemption renewal was passed last December.

Biodiesel is a bright spot, and the industry can take “all the oil soybean farmers can provide,” Joe Jobe, National Biodiesel Board (NBB) CEO, told Soy 2020 participants last November. U.S. biodiesel production has set new monthly records every month since last April.

Illinois leads the nation in production, thanks to plentiful soybeans, multiple crushing facilities and biodiesel refineries, and the fuel’s exemption from state sales tax. The tax incentive has been a tremendous driver for new business development. Before the exemption in 2003, Illinois produced 20 million gallons of biodiesel. In 2010, production hit a record 188 million gallons. NBB was projecting that it would exceed that level last year. The industry supports $2.65 million of Illinois gross domestic product and nearly 8,000 jobs in the state.

You can read more in this issue about biodiesel, and how it has helped support soybean prices in the last year. Market watchers predict prices may drift lower this winter. But we are hopeful that long-term demand for biodiesel and other uses will eventually firm up soybean prices again.

I am optimistic our industry is headed in the right direction. I look forward to working with other Illinois soybean farmers this year in pursuing new avenues to bolster our profitability.
Illinois soybean growers should view each spring as a unique opportunity to take advantage of the most current technologies that will advance crop yield and profitability. Growers can change minor details and try new ideas for plant growth without breaking the bank. Growers also can invest in state-of-the-art equipment, genetics, mapping software or seeding prescriptions during the winter to meet expectations or even gain an edge in maintaining a successful operation.

The need for increasing domestic soybean yields is becoming a more serious and apparent issue because of competition abroad and a steadily rising human population that must be fed. One way to increase soybean yields by 10-15 bushels per acre is by utilizing precision agriculture. Yield truly is in the details. Farming should be done precisely by the inch, not by the acre.

Soybean growers have room to better manage the factors they can control to increase yields and profitability. For example, meter performance, proper seeding depth and variable rate systems are important for increasing soybean profitability. Controlling such variables as consistent germination, plant spacing, even planting depths and creating an optimal seed environment, also play important roles in optimizing soybean performance.

Paying attention to these details can help build grower margins year after year. And increasing margin in a $10.00 soybean market can be huge. For example, industry-leading improvements to planters have generated returns on investments that have significantly increased yield. Use of variable rate technology and an evenly emerged soybean stand in most cases allow for a five percent reduction in seed cost. That is roughly 324 soybean acres when planting $40 bags. On a per acre basis, that is up to $2 in seed savings and a 9.4 percent increase in germination. (http://precisionplanting.com/Products/Keeton-Seed-Firmer/For-Drill.aspx)

Finding the right new technology to reduce inputs, add to profits, enhance operational efficiency, and, most importantly have a very quick return on investment, is critical when considering the profit potential of a single growing season. But growers must acknowledge that the investment in precision agriculture methodology will pay. Convincing growers that the risk from traditional techniques to precision agriculture is worthwhile can be a challenge. Many Illinois growers are not willing to risk the transition. But I can tell you those that do have had great success.

First-year investments must be made and seen as an opportunity to higher profits in years that follow. The good news is that the return on investment for precision agriculture is generally shorter and requires fewer acres today at current soybean prices. Certain fixed input costs, such as herbicides, pesticides, fertilizer and fuel, are continually paid year after year. Technology is paid for once, with the benefit of the investment seen in higher yields every fall.

Precision agriculture should be considered the next large step in agricultural advancements. It has already begun to have an impact. Precision agriculture’s implications will only continue to develop as growers realize its importance to their profitability.

Eric Schuler is part of the Precision Planting (www.precisionplanting.com) product support team. He is from Lexington, Ill., and is a recent graduate of the University of Illinois where he majored in technical systems management and minored in crop and soil management.
Fine Tune your Farming Practices

Technology Offers On-Farm Research Opportunities

By Barb Baylor Anderson

When farmers think of tools, the first things that may come to mind are wrenches, pliers and screwdrivers. However, as precision farming tools become more prevalent on Midwest soybean farms, agronomists and technology specialists are giving farmers something else to consider. These experts are finding new ways for farmers to use these tools and be more profitable. Such strategies include on-farm research trials that can help farmers fine-tune their farming practices.

“Most farmers use one or more precision ag tools today, whether they know it or not. It has become more of a normal practice,” says Harold Reetz, independent agronomy consultant from Monticello, Ill., who has worked with precision farming since the 1980s. “Controlling variability in the field is the key to higher yield potential. Farmers need to capitalize on that accordingly. Agronomic research is catching up with ‘hardware’ technology, so science-based, site-specific decisions can be made. Data can be analyzed and turned into better informed decisions.”

Brian Watkins has been working with precision agriculture since the mid-1990s. The sixth-generation corn, soybean and pork producer farms 7,000 acres near Kenton, Ohio. He began with yield mapping and variable rate fertilizer application, and has since added variable rate seeding, grid soil sampling and management zone sampling, variable rate lime applications and remote imaging. Watkins uses RTK-based machine control for steering, boom, surface and subsurface drainage. He also uses geo-referenced data as a source of value and decision support both for himself and on a cooperative level with other producers.

Precision Farming Pays

“Fine-tuning is the next step,” he confirms. “Precision farming is no silver bullet. But it does pay. We used to farm on a field-by-field basis. Now I manage on grids of less than an acre. Yield and fertility maps allow me to break the farm into small pieces for variable applications.”

Machine control offers obvious payback. Watkins says autosteer allows him to get more work out of a day and reduce fatigue. Variable rate fertilizer, especially with lime, also yields returns.

“Nitrogen variable rate is on the cusp of a big payback, but there is a huge amount of learning going on yet. Returns from variable rate seeding and other nutrients are not as obvious,” he says. “We also use precision agriculture for overall data gathering. We analyze farming efficiency and determine yield limiting problems. You need to track the variables through efforts like on-farm research and not make decisions based on one data point.”

Tweak Production through Trials

Most ag companies have research budgets. Tim Smith, CropSmith Inc., Monticello, Ill., says farmers should be no different. He endorses on-farm trial use.
Step Up Soybean Fertility

Soybean farmers can test methodologies for stepping up fertility with minimal investment. Kevin Born, Environmental Tillage Systems, Faribault, Minn., encourages soybean farmers to give their crops a shot of potassium (K) or phosphorus (P) where needed, using precision ag capabilities, rather than broadcast the nutrients over the whole crop.

“Farmers can ‘change it up’ with the SoilWarrior, and see what yields they get versus broadcasting the nutrients in a general fashion,” he says. “Farmers have the ability to put in strips that match their planter and see what variable rates do to their yields.”

The SoilWarrior is a zone tillage machine that allows farmers to perform deep zone fall and spring tillage and directed fertilizer applications. The fall pass is effective in northern states like Minnesota, or northern Illinois and Ohio, where there is more clay in the soils. The second pass in heavier soils in the spring depends on winter weather. Farmers with lighter soils may be able to go with one pass in the fall and plant right into the zones in the spring.

Born says the tool lifts and fractures soil in the zone so that variable rate applications can be made with precision guidance. “Precision ag is the whole key to the system. If you get off the zone, you will see a significant yield decrease,” he says. “By utilizing precise placement in the zone with one or two passes, you use less diesel fuel, lower input costs and sometimes even cut application rates. You see better soil health, residue breakdown and nutrient availability.”

Born says tillage is one component of building yield. “We take no-till and apply precision placement with variable rate fertilizer,” he says. “We know one farmer that is applying P and K in variable rates, along with liquid nitrogen and a cover crop. We are anxious to see the results.”

The SoilWarrior tool lifts and fractures soil in the zone so that variable rate applications can be made with precision guidance.

Take Steps to Establish Trials
- Keep research simple. Look for areas that will increase yield or decrease costs the most.
- Make a multi-year plan. Gather three years of data from multiple places on your farm. Consider evaluating tillage systems, fertilizer rate and placement, fungicide and micronutrient applications and seeding rates.
- Understand variability. Get good yield maps and compare them to soil survey maps. Scout and consider other available data from previous crops.
- Hire a consultant or speak with your crop inputs dealer. They can help you lay out trials. Certified Crop Advisers (CCAs) are good resources.
- Confine statistical analysis to easy tools available in Microsoft Excel.
- Evaluate and keep each year in context. Always pursue findings.

“We have seen progress within our operation, although we cannot attribute it to just precision ag. Genetics and other factors influence our return on investment,” says Watkins. “While we have no idea which one is most important, precision ag is definitely part of that puzzle.”

Photos by Environmental Tillage Systems
Soy Crucial to Modern Animal Agriculture

If you raise hogs or soybeans today, you may not recall when soybeans were considered a novel ingredient for swine diets—much like the situation for DDGs today. Back in the 1930s, pork producers were just learning how to feed this new “by-product of soybean oil production.”

“The biggest hurdle pork producers faced in feeding soybean meal during that period was poor animal performance. While raw soybeans are high in crude protein, they also possess high levels of trypsin inhibitor—an enzyme present in the small intestine which helps assure efficient protein digestion,” says Chris Hostetler, director of animal science, Pork Checkoff.

“However, it wasn’t long before research revealed that heating soybean meal could inactivate the high levels of trypsin inhibitor, allowing trypsin to activate other protein-digesting enzymes in the intestine,” he says. “This improved protein digestion and enhanced growth.”

Since then, soybean meal use in swine diets has become almost universal. Many of the modern advancements in animal performance could not have been made without inclusion of soybean meal. Swine nutritionists like meal because of its high protein content, and more importantly, its amino acid profile, which closely meets the pig’s requirements for maintenance and growth.

“Research is currently focused on the effect of fiber particle length on the nutritient digestibility of high fiber feedstuffs,” says Hostetler. “The research may provide insight into making soy hulls a suitable feedstuff for swine as well.”

“ISA is exploring these and other research opportunities to be sure Illinois soybean farmers are helping enhance our product for use in pork and poultry rations,” says Pat Dumoulin, soybean and pork producer from Hampshire, Ill., and ISA vice chair for animal agriculture.

Popular with Poultry

Soybean meal remains the most important source of dietary protein in U.S. poultry diets, even with use of animal by-product meals and corn distillers dried grains in recent years, says Tom Frost, director of nutrition and research, Wayne Farms LLC, Oakwood, Ga.

“The main reasons soybean meal has remained a key component of poultry and animal feeds is its amino acid content, additional energy release from new enzyme technologies, and improved quality control methods during manufacturing and processing,” Frost says.

Soybean meal provides a significant supply of essential amino acids, particularly lysine, says Frost. Soybean meal also contains a considerable fraction of carbohydrates, which have historically been nutritionally unavailable to poultry.

“New technological contributions from feed enzymes during the past few years have added more value to soybean meal by releasing a portion of the energy stored as non-starch polysaccharides,” he says. “Several measures of quality can be effective tools for the industry to monitor soybean processing standards. Each method allows feed industry nutritionists to ensure soybeans grown for feed are processed to meet the highest quality standards for food production.”

A recent United Soybean Board study finds broilers accounted for 11.3 million tons of soybean meal use in 2009-10, while hogs and pigs consumed 8.7 million tons.
As the number and types of soybean seed treatments continue to rise, soybean market watchers remind farmers that treated soybean seed needs to remain out of the marketing stream.

“We see a lot of soybean seed treatments being advertised this time of year. As we head to the fields this spring to plant, we must remember that no leftover treated soybean seed should be in the marketplace,” says Dean Campbell, soybean farmer from Coulterville, Ill., and ISA director. “We know from our experience with corn that one treated seed in a vessel means the load is contaminated and must be destroyed. If you can’t return it, keep it or destroy it.”

Jason Bond, plant pathologist, Southern Illinois University Carbondale, agrees. He is conducting more research with seed treatments versus foliar products.

“If you have leftover treated seed, it has no value for planting. The seed will not be viable next season,” he says. “Fungicides, insecticides and nematicides all are being used as seed treatments, so it would be a huge risk to animal and human health to have treated beans in the supply chain.”

Most farmers identify quality with too-low or too-high moisture, damage and foreign material (FM). Soybean processors and end-users view quality as protein and oil content. The obvious risk to profitability comes when elevators look at grade, moisture content and FM percentage and apply a dock to the price. Protein and oil levels impact the bottom line in a more obscure way.

“Any soybean loads with more than 13 percent moisture receive dockage,” says Steve Dennis, Evergreen FS, Bloomington, Ill. “Also, because processors discount elevators for FM, for example, elevators in turn discount producers for FM in their beans. In essence, the elevator passes the cost of shrink on to the farmer. We know that if we take high-moisture beans from a producer, put them in our bin and aerate them, we will lose money from the resulting shrink.”

However, that doesn’t mean farmers aren’t ultimately paid or docked for protein and oil, too, notes Chris Schroeder with Centrec Consulting Group. “Farmers don’t see how protein and oil levels impact the prices they get at the elevator,” he says. “Low-quality soybeans don’t deliver what processors really want, protein and oil.”

Processors receive less for their end-products, which ultimately reduces the price that they can pay for soybeans. “What a processor pays the elevator, and thus the farmer, is a direct reflection of what the processor actually got out of the beans,” says Schroeder.

Dennis adds that if farmers can deliver beans with maximum protein and oil, the elevator can deliver more valuable beans to processors, which contributes to higher overall soybean prices.

ISA is helping Illinois soybean farmers improve oil and protein content in soybeans. “We want to make sure the state’s farmers are maximizing the value of soybeans at the elevator while meeting the needs of end users purchasing oil and feed millers purchasing meal,” says Tim Seifert, soybean farmer from Auburn, Ill., and ISA second vice chair for high quality.
Illinois soybean farmers use a variety of tools and techniques to maximize production in a sustainable manner. In recent years, precision agriculture has become a key component in helping farmers improve sustainability, productivity and profitability.

“What we are able to do with precision ag tools is manage for specific inputs in an area smaller than a field,” explains Sid Parks, precision farming manager, GROWMARK, Inc., referring to such tools as satellite-based field mapping, combine yield mapping and soil sampling. “We collect data site-specifically and make recommendations site-specifically.”

Precision ag can be used to identify ways to better manage field activities, including planting and application of inputs, especially as soil variability affects production.

Manage Variability

“Look at a soil survey map and you’ll see different soil types that influence soil texture and drainage. That, along with past management practices, all impact input needs and productivity levels,” says Parks. “With so much variability within a field, it makes sense to manage that variability as much as possible through precision ag.”

Parks finds growers can improve profitability by increasing productivity or decreasing costs by putting inputs like fertilizer exactly where they are needed.

Ron Moore, soybean farmer from Roseville, Ill., and ISA vice chair for sustainability agrees. He believes precision ag makes sense both from a sustainability and profitability standpoint.

“Precision ag allows me to sustain high levels of soybean production using techniques that help me make the most efficient use of inputs and other natural resources,” Moore says. “At the same time, as margins have gotten smaller, precision ag has allowed me to continue to be profitable and sustain my farming operation through economic variability.”

While reducing inputs may make sense in some situations, precision ag teaches that optimizing productivity isn’t so much about always using less, but using what you have more effectively.

“I’m about optimizing performance,” says Parks. “If that requires adding extra fertilizer or crop protection products to leverage seed technology interaction, a farmer may spend more money up front. But increasing production per acre will also make him more profitable in the long run than if he just cut back inputs to reduce costs.”

Parks notes that precision ag requires detailed recordkeeping. He advocates taking notes whenever field operations are performed and using precision ag tools to document activities.

“One of the greatest opportunities we have as agronomists working with growers is keeping track of what’s going on,” says Parks. “Today’s portable GPS, handheld tablets and even smartphones make it easy for us to collect and record information any time we’re out in the field.”

“Farmers do a phenomenal job of keeping up with technology, so it’s not a huge leap for us to document what we’re doing,” Moore says. “In the face of potential sustainability certification requirements, the recordkeeping aspect of precision ag will show customers and end-users that we already are doing much of what may be required by a sustainability certification.”

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Photo by Ken Kashian, Illinois Farm Bureau

Ken Knapp (left) and Kevin Knapp of Magnolia, Ill., review yield map data following harvest.

Ron Moore believes precision ag makes sense both from a sustainability and a profitability standpoint.
Finding Ways to Tweak Nutrient Use

ISA is taking proactive steps to help soybean farmers maintain their freedom to operate through participation in a new nutrient stewardship practices program. The “Keep it for the Crop by 2025” (KIC) program was announced during the Farm Progress Show last fall.

“The goal of the program is to help promote, implement and track the rate of adoption of enhanced nutrient stewardship practices by Illinois agricultural producers. ISA provided a share of the start-up funding for KIC because we want to help keep the pathways for making prudent and sustainable production decisions open for Illinois soybean farmers,” says Mike Marron, soybean farmer from Fithian, Ill., and ISA vice chair for market access and advocacy.

KIC focuses on the 4Rs of nutrient stewardship: right source, right rate, right time and right place. The program lays out a framework to continually promote, implement and measure adoption of the 4R system by producers and retailers who provide custom nutrient application.

KIC efforts will focus on six priority watersheds identified for nutrient reductions by the Illinois Environmental Protection Agency. Those watersheds include Lake Bloomington, Lake Vermilion, Lake Decatur, Vermilion River (Illinois Basin), Salt Fork Vermilion River (Wabash Basin) and Lake Mauvaisse Terra.

“Lakes and rivers in these watersheds have water quality problems due to too much nitrogen, phosphorus or both. Illinois EPA strongly endorses efforts to promote voluntary action by producers to adopt nutrient stewardship practices. If everyone does their part, we can assure clean water for future generations,” says Marcia Wilhite, IEPA’s Bureau of Water chief.

The Illinois Council on Best Management Practices (CBMP) implements the KIC program. The council recently hired Dan Schaefer as director of nutrient stewardship to work with ag retailers and growers to educate, implement and record progress. Schaefer has a master’s degree in agronomy from the University of Illinois and is a Certified Crop Adviser (CCA). He was the agronomist for Illini FS, where he had a 30-year career working with growers on agronomic recommendations and assisting with on-farm research to improve nutrient efficiency.

“Dan has a full-time passion for helping farmers be more productive,” says Jean Payne, president of the Illinois Fertilizer & Chemical Association (IFCA). “He will work in the priority watersheds with growers and retailers to implement the 4Rs, which includes using the latest equipment and product technology to enhance nutrient use efficiency.”

Those practices may include strip-tilling, precision nutrient placement and nitrogen efficiency management, including rate, application, timing and stabilization practices. Payne says the goal will be to demonstrate through on-farm research plots what works best and build a foundation of Illinois-based 4R practices that can be applied on a farm-by-farm basis throughout the state.

“Farmers are among the original soil and water stewards. KIC, with Dan Schaefer’s help, will provide the resources, knowledge and outreach needed to ensure that growers make the best possible decisions when it comes to implementing practices that protect our streams and rivers and further enhance nutrient efficiencies in agricultural production,” says Marron.
Transportation

Canal Expansion Draws Attention to U.S. Needs

The time could come when Illinois farmers raise the soybeans foreign buyers want, but can’t get them to market. ISA is aware of and hoping to prevent that scenario.

Perhaps nowhere is that concern more evident than in areas that facilitate Illinois soybean movement. The Panama Canal is a significant link in the U.S.’ global logistics chain for soybean exports, and is expanding to accommodate market needs.

The U.S. will likewise need to step up its transportation infrastructure to remain competitive. ISA believes the U.S. internal system must be modernized to improve efficiency and U.S. ports updated to handle larger volume ships once the expansion is complete in 2014.

“The expansion will have direct implications for grain transportation because the bigger ships (that can pass through the canal after the expansion) will enable a reduced cost per bushel,” says Scott Sigman, ISA transportation and export infrastructure lead.

Sigman says the expansion will increase capacity and efficiency. The new channel being built will accommodate ships that are 50 percent wider and 30 percent longer with two to three times more cargo capacity than will fit through the original channel. The overall capacity will increase when both the original and new channels are operational is still under analysis.

The $5.25 billion dollar project is being funded through private investments. Panama passed a referendum in 2006 to allow for the expansion. Once complete, users will be charged an additional toll to pay off the loans and build capital for ongoing maintenance.

A few ISA board members visited Panama in November 2011 to see firsthand the Panama Canal expansion work underway and to better define U.S. needs.

“Panama was able to get this project going because the Panamanian people were behind it,” says Ron Kindred, soybean farmer from Atlanta, Ill., and ISA vice chair for transportation. “The Panama Canal Authority had a goal. They related the potential impact on the economy and number of jobs that would be created in a way everyone could support. Then the Authority and the government worked together to get it approved. They are executing it on time and on budget.”

Lessons to be Learned

U.S. waterways are not privately financed. Instead, waterways are funded through governmental appropriations subject to change each year. The system has created an $8 billion backlog in construction projects, according to the Waterways Council, Inc.

“We need to change our system somehow to have the waterways fund themselves so we can remain globally competitive. We fall further and further behind on maintenance and upgrades each year due to our current system,” says Kindred.

“I would hate to see the U.S., as a leader in providing food for the world, let our infrastructure fail to the point that we cannot deliver in a timely manner.”

The Waterways Council, Inc. is working on behalf of its members, including many commodity organizations and industry partners, to pass the Inland Marine Transportation System Capital Development Plan. In addition, the Army Corps of Engineers is developing an asset management program to better identify and prioritize improvements needed based on a formal condition rating system.

Kindred is hopeful the Soy Transportation Coalition’s study, “America’s Locks and Dams: A Ticking Time Bomb for Agriculture,” will spell out the implications of further disrepair and help spur action.
Growing Specialty Soybeans Makes More “Cents!”

Selling differentiated soybeans can bring in extra revenue without having to expand acres. Isn't it time you looked into getting more per bushel?

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*Funded by the Soybean Checkoff
Take Advantage of Membership Special

Illinois soybean farmers interested in having their needs represented in Springfield and Washington D.C., still have time to take advantage of the holiday membership special. A three-year ISA membership is available at a discounted rate of $145 through Jan. 31, 2012. A three-year membership includes these benefits that more than double your investment:

- $100 in biodiesel coupons
- Preferred pricing on the purchase or lease of most new Chrysler, Dodge and Jeep vehicles up to twice per year (one percent below factory invoice plus a $75 fee)
- Access to the Ford Partner Recognition X-Plan Pricing Program, providing exclusive savings on the purchase or lease of eligible Ford and Lincoln vehicles up to twice per year (partner pricing varies by brand and is clearly marked on vehicle invoice)
- 100 units of Optimize 400 soybean seed treatment valued at more than $200

Join now at www.ilsoy.org/membership, call 309-663-7692 or email ilsoy@ilsoy.org.

SoyConnect Fortifies Policy Work

Soybean checkoff dollars cannot be used to fund ISA policy work. SoyConnect, ISA’s network of industry partners, helps enhance legislative efforts in Washington D.C. and Springfield.

“All first purchasers retain two percent of checkoff funds, if payments are remitted in time. Illinois is the only state that allows this deduction,” says Mike Marron, soybean farmer from Fithian, Ill., and ISA vice chair for market access/advocacy. “ISA asks first purchasers to ‘give the two percent back’ and invest in the SoyConnect program.”

All SoyConnect Partners receive automatic ISA membership, plus the opportunity to participate and provide input at special invitation events, research forums/tours, and marketing and education tours. ISA appreciates the partnership with SoyConnect subscribers, which to date include:

- ADM
- Akron Services
- Big River Resources D/B/A Monmouth Grain & Dryer
- Bunge NA
- Cargill
- Consolidated Grain
- East Lincoln Farmers Grain
- Monsanto Company
- Pioneer Hi-Bred
- Rumbold & Kuhn
- Sorrell’s Farm Supply
- Stanford Grain
- Syngenta
- The Andersons
- Twomey Company
- Ursa Farmers Co-op
Partner News

WISHH Expands Opportunities for Soy

The Soy Value Pyramid illustrates how, with assistance from WISHH programs, soy can boost both nutrition and economic growth in developing countries. Most recently, WISHH officials signed a three-year “FEEDing Pakistan” program aimed at improving capacity, productivity and quality in the Pakistani aquaculture sector. The focus is on high-quality fish feed produced with U.S. soybean meal. FEEDing Pakistan is a collaboration of the American Soybean Association’s (ASA) expertise with the Fisheries Development Board, Provincial Ministry of Livestock and Fisheries, Kansas State University, progressive fish farmers and feed millers.

Solid Return from Meat Exports

Harry Kaiser, professor of applied economics and management, Cornell University, and Cornell Commodity Promotion Research Program director, calculated the return on USDA and U.S. beef, pork, corn and soybean checkoff investments in the U.S. Meat Export Federation’s (USMEF) export market development programs over the last decade.

Kaiser’s economic model shows that combined producer and USDA marketing expenditures increased U.S. red meat exports by more than 30 percent per year. The study also finds that reducing funding by 75 percent between 1995 and 2010 would have reduced U.S. beef exports by 36.1 percent and U.S. pork exports by 30.1 percent. Kaiser says the results suggest that U.S. export promotion has a very important impact on demand for U.S. beef and pork.

Court Rejects RFS2 Petition

The U.S. Supreme Court ruled to not hear the case brought by the National Petrochemical and Refiners Association, American Petroleum Institute and others that would suspend the Renewable Fuel Standard (RFS2). “The RFS program is working just as Congress intended. It is creating jobs. It is breaking our addiction to oil. It is helping clean our air, and it is reducing greenhouse gases,” notes Anne Steckel, NBB vice president of federal affairs. “The biodiesel industry is on pace to produce at least 800 million gallons of advanced biofuel while supporting more than 31,000 jobs. We are pleased to see the Supreme Court put an end to this litigation.”

Illinois Poultry Leaders Outline Soy Needs

Key Illinois poultry and soybean leaders met in late November 2011 to discuss critical issues facing the state’s poultry producers. The two groups meet for a roundtable twice per year for an open dialogue between soybean producers and customers. ISA’s goal is to gather information to help determine soybean research priorities. In the most recent roundtable, poultry stakeholders identified important research needs, including scientific investigation into soybean meal inclusion rates in young pullet diets, amino acid profiles from current soybean meal, how best to educate both general consumers and health care professionals about nutrition aspects of poultry, and overall improvement of efficiencies and the poultry industry’s carbon footprint.
Leadership through Social Responsibility

Social responsibility often is defined as a balance between the economy and the environment. ISA is equipping Illinois soybean farmers to wisely lead the industry with an eye on social responsibility through projects funded by the soybean checkoff in the image building target area.

“Most soybean farmers operate with an emphasis on conservation and sustainability. We are exploring ways to build on that effort,” says Doug Winter, soybean farmer from Mill Shoals, Ill., and ISA vice chair for image building. “We also are reaching out to consumers to provide accurate and accurate information about soybean production and agriculture. And we are sharing soy nutrition and knowledge about it with the underserved and undernourished around the world.”

ISA’s social responsibility focus includes some of the following activities:

- **Leadership Development.** ISA provides training for board members, corporate-sponsored leadership opportunities and the Soy Ambassador Program.

- **FoodPlay.** During National Soy Foods Month, the FoodPlay theatrical group tours more than 40 Illinois schools to share messages about healthy eating and active living, including information about the value of soy in the diet.

- **WISHH.** Through the World Initiative for Soy in Human Health (WISHH), ISA shows concern for undernourished people around the globe through market development, humanitarian assistance, education and research.

- **Other projects** previously featured in Illinois Field & Bean include sustainability, crop sciences scholarships, Illinois Farm Families and Pork Power.

ISA Service = Learning Experience

Lyle Wessel is in the midst of his second term as an ISA director. The semi-retired Waterloo, Ill., soybean farmer was first on the board from 1998-2004. His second term began in 2007.

“I was asked to join ISA several years ago, and decided to get more involved with soybeans after my term was up serving on the Monroe County Farm Bureau board,” says Wessel. “Being on the board twice has made me more knowledgeable. I get to see firsthand the research work being done at the different state universities. I also appreciate the opportunity to see what our competition is doing and help educate customers from overseas about what we are doing.”

Wessel has served a number of programs as an ISA director, including the Waterways Council Initiative and National Biodiesel Board. He currently serves as vice chair for ISA’s industrial utilization area, which includes biodiesel. He is past president of the Monroe County Farm Bureau and Monroe County Planning Commission and has served as trustee for the Waterloo Fire District.

He has an associate’s degree in political science from Southwestern Area College.

“Serving on the ISA board is a tremendous learning experience,” he says. “While it can be time consuming, it is fun and you get to work with top-of-the-line farmers from around the state that are dedicated to making Illinois soybean production more profitable. I appreciate more what all is involved with investing soybean checkoff dollars now that I have been part of the process.”

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—Lyle Wessel
Soybeans Still Best for Biodiesel

Not all biodiesel is refined straight from soybeans. But soybeans are the foundation for biodiesel made from the other feedstocks, which helps contribute to Illinois farmer profitability.

“Soybeans are the base that holds up the biodiesel industry, whether it is produced directly from soybean oil or via animal fat, cooking oil, or others,” says Tom Verry, National Biodiesel Board (NBB) director of outreach and development, Jefferson City, Mo. “Soybeans processed for several different uses, such as cooking oil and livestock feed, create byproducts that can be then refined into biodiesel, making it one of the most diverse fuels in the world.”

Biodiesel also is the only commercially produced fuel considered an advanced biofuel by the Environmental Protection Agency (EPA). Advance biofuels must reduce greenhouse gas emissions by more than 50 percent. NBB reports the EPA actually found that biodiesel reduces greenhouse gas emissions by 57 to 86 percent, depending on the feedstock used.

“The biodiesel industry started because we needed a use for surplus soybean oil,” says Lyle Wessel, soybean farmer from Waterloo, Ill., and ISA vice chair for industrial utilization. Wessel also is an NBB member. “The biodiesel industry has indeed built demand for surplus soybean oil. In producing the amount of biodiesel required to meet the Renewable Fuel Standard, biodiesel accounts for about 25 cents per bushel of our soybean price.”

Full-Circle Illinois Impact

Wessel says biodiesel has obvious environmental benefits and helps reduce dependence on foreign oil. And since biodiesel is adaptable to many feedstocks, the alternative fuel can add economic value at many different points along the Illinois agricultural production cycle.

For example, soybeans are harvested from an Illinois field and delivered to an Illinois processing plant to be crushed for soybean meal and oil. The oil may then be processed into cooking oil. Next, the cooking oil may be used at a truck stop restaurant. The used oil is then taken to a local refinery and made into biodiesel. The B100 (100 percent biodiesel) is blended with diesel and sold at the same truck stop where it is pumped into a grain truck ready to deliver more soybeans.

“Soybeans are the most used, most desired biodiesel feedstock,” says Wessel. “But regardless of what is used, biodiesel is important to our economy and creates demand for our soybeans.”

**Biodiesel Bits**

*Did you know…*

- About half of U.S. biodiesel is produced from virgin soybean oil.
- The biodiesel industry has increased soybean oil demand and consequently increased soybean meal availability, helping hold livestock feed prices down.
- U.S. biodiesel production hit a record high in 2011 of more than 800 million gallons.
- Biodiesel displaced nearly one billion gallons of petroleum diesel in 2011, while supporting some 31,000 jobs across the country.

*Source: National Biodiesel Board*
Tag along with Naperville, Ill., mom Amy Rossi on her bi-weekly trip to a Target superstore, and you appreciate just how much food a family of eight eats every week.

“I do a big grocery shop usually twice a week, filling one cart to the brim,” says Rossi, “and most of a second.” Topping her list are a variety of lean proteins – including family-favorites chicken and pork tenderloin and chops – and fruits, vegetables and at least six gallons of milk.

Rossi and her husband are parents to six kids, ranging from age 15 to two. She strives to give her family home-cooked dinners most nights of the week. She explains that is not an easy task when you add in a busy after-school schedule with multiple kids playing sports, being active in extra-curricular activities and feeding a picky eater or two.

“I feel good about the food I feed my family,” she says. “For us it is all about balance; a little good, a little not so good. I try to be practical.”

Still, Rossi has questions about food and farming. “It is easy to sit in Naperville and go to the grocery store and not have to think about having to work for our food,” says Rossi.

She wants to know how farmers grow her food, what chemicals they use and how animals are treated. She also was eager to meet farm families and see if they are like her and her family.

“We’re eager to engage in conversations with moms, to answer questions and to show how we grow their food,” says Deb Moore, who farms near Roseville, Ill., with husband, Ron. “I grew up in Cook County. But for the last 30 years, I’ve been an Illinois family farmer. It’s time for farm moms to open our doors and let city moms see what we do on our farms every day.”

On a recent farm tour, Rossi learned how soybeans are grown, harvested and fed to livestock. “How one family can grow and raise enough food to feed hundreds of consumers and families like mine amazes me,” she says. “I like knowing that farmers use all of their resources to the best of their ability. Nothing is wasted. I was impressed by their love of their farm and the people and animals that live there. I won’t look at my food in the same way ever again.”

Rossi’s curiosity about food and farming led her to become an Illinois Farm Families’ field mom. She and nine other Chicago-area moms were selected last year to visit farms throughout Illinois. The field moms will meet farm families like the Moores and learn what they do to care for the land and animals. They will share their stories through the www.watchusgrow.org website, social media and one-on-one events.

Providing safe, healthy food for her six growing children is a priority for Naperville, Ill., mom, Amy Rossi. She is learning how farmers grow and raise food.

Amy Rossi (third on right) listens as Illinois soybean farmer, Lynn Martz, explains the relationship between feeding cattle and using manure as fertilizer. Rossi likes how everything at the farm is used and reused, adding, “Recycling at its finest!”

Illinois Farm Families are Illinois farmers who support the Illinois Soybean Association, Illinois Farm Bureau, Illinois Pork Producers Association, Illinois Corn Marketing Board and the Illinois Beef Association. Farmers involved with the program are committed to having conversations with consumers, answering their questions about food, farmers, and farming, and sharing what really happens on today’s Illinois family farms.
Panama Canal Locks in Future

Several ISA farmer leaders traveled to Panama in November 2011 to attend a transportation and logistics roundtable. They also learned what impact the Panama Canal expansions will have on grain exports and other U.S. trade.

The farmers heard presentations from the Panama Canal Authority on what steps have been taken to make the expansion possible. They learned how officials will continue to maintain the channels. The group saw many of the operational locks and dams, as well as those under construction, while taking the 50-mile train ride from the Atlantic port to the Pacific port. Farmers gained a better understanding of the magnitude of the Panama Canal, and how critical the canal is to global trade (see related story on page 12).

The Panama Canal has been an important link in the global transportation chain for more than 100 years. Grain cargo tonnage accounts for nearly 20 percent of the total cargo through the Panama Canal, and 30 percent of the drybulk vessel tonnage. About 42 percent of U.S. grain exports transit the canal each year, including about 550 million bushels of soybeans; the largest volume among U.S. agricultural commodities.

Containerized shipping has become a viable option for transporting Illinois value-added soybeans into Asian markets. Nearly 25 percent of the cargo that goes through the Panama Canal is containerized.

ISA directors (left to right) David Niekamp, Ron Kindred and Mark Sprague stand with Mike Levin, ISA director of issues management/analysis, on a hill that will be removed to make room for the new channel.

Construction to build the new channel to accommodate larger ships is about 30 percent complete. The expansion is scheduled to be completed in 2014.

Two-thirds of the Panama Canal’s cargo traffic originates in, or is destined for, the U.S. About one-third of all cargo last year was transported between the U.S. East Coast and Asia.

The Panama Canal Authority has financial independence in maintaining and operating the canal. Funds for the expansion came from private sources. A toll will be collected from canal users to repay the loans and cover maintenance, once the expansion is complete.

Photos by Scott Sigman
We can talk all we want about why we think CruiserMaxx Beans is the best seed treatment. But at some point, somebody's just got to put some seeds in the ground.

Which is exactly what a group of Midwest soybean growers did last summer. And what they found was convincing: seed treated with CruiserMaxx® Beans insecticide/fungicide seed treatment combination came out of the ground faster, reached canopy faster and yielded better than untreated soybeans, as well as those treated with a competitive product. In fact, studies show that seed treated with CruiserMaxx Beans has historically offered a 4:1 average return on investment. To learn more, visit cruisermaxxbeans.com or talk to your seed supplier or Certified CruiserMaxx Beans Treater.