

# AMERICAN SPRING 2022 soybean

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People. Policy. Profitability.

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## FARMERS CHALLENGED by Threats to Ag Economics

### SOY FACES

Four ASA Leaders Talk  
Supply Chain Problems

### SOY FORWARD

Cybercriminals  
Storm Agriculture

### ISSUE UPDATE

The Year of Tax Policy

### INDUSTRY PERSPECTIVE

Inflation Frustration

  
American Soybean  
Association

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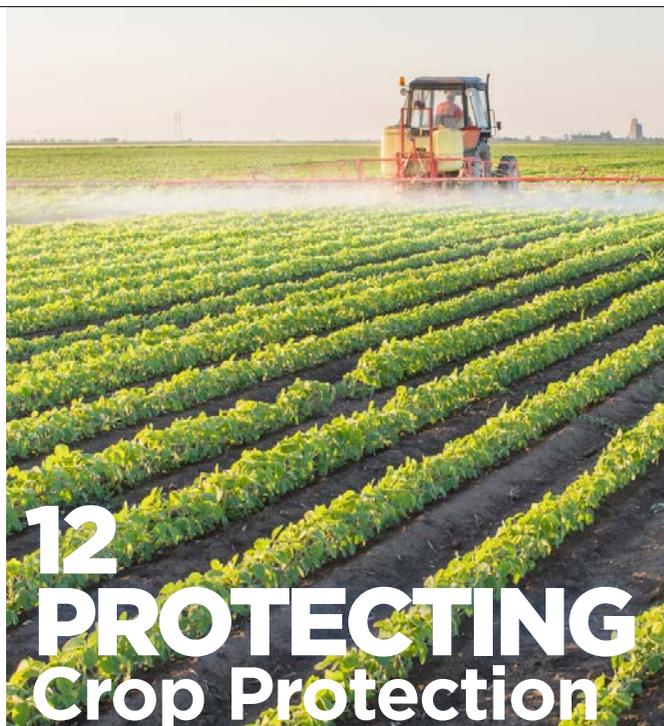
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The American Soybean Association (ASA) represents U.S. soybean farmers on domestic and international policy issues important to the soybean industry. ASA has 26 affiliated state associations representing 30 states and more than 500,000 soybean farmers.

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# ASA leadership corner

BradDOYLE



Brad Doyle, ASA President

Starting an article to say “agriculture faces many challenges” would not be exactly new material, but I can say that the challenges agriculture faces are unto themselves often quite unique. Weather conditions are always going to rear their pesky heads, and the same could be said of many other usual suspects that haunt farmers trying to sleep at night. But, five years ago, we would not have predicted a modern-era, global pandemic, and just a year ago, we would not have predicted the current heartbreaking conflict between Russia and Ukraine—all of which bear consequences for world supply and demand and add constraints to what can be a delicate supply chain.

The Environmental Protection Agency and, in turn, U.S. courts have been making critical decisions on crop protection tools lately. And, a new boogeyman lurks ready to strike in our homes and farms—cybercrime. Talk about the stuff that bad dreams are made of! Part and parcel with aforementioned current events, combined with other circumstances, inflation is a repeat offender back on the scene.

In this issue of *American Soybean*, we take a look at these and other stressors on the agriculture industry. While these topics certainly can cause the palms to begin sweating, be heartened that your ASA farmer-leaders and staff are working with devotion to combat these issues and even head them off at the pass where possible. ASA’s annual policy resolutions process began in January and was shaped by input from states, ASA board members and other farmer-leaders and staff who serve on ASA’s advocacy teams covering various soy policy areas. These guiding principles are a map for addressing soy’s new challenges and years-old offenders alike.

The resolutions approved for 2022 highlighted soy policies that tackle a host of issues, including supply chain, crop protection and a strong safety net for the 2023 Farm Bill. Recently, yours truly testified on behalf of soy before the House Agriculture Committee on the farm bill. These congressional hearings are part of the 5-year reauthorization process. Internally, ASA has gotten a jump on planning so that, when Congress does come calling for testimony, we are prepared to share your needs. If you missed participating in our farm bill survey or the many listening sessions ASA hosted by farm bill title and also by growing region, please share your thoughts in an email to [farmbill@soy.org](mailto:farmbill@soy.org).

Among the 2022 approvals are resolutions supporting:

- An improved Title I farm safety net in the next farm bill and continued support for crop insurance
- Sufficient in-person staffing at USDA county offices
- Policies that ease supply chain delays and obstructions
- The use of sound science, grower engagement, and flexibility on pesticide Endangered Species Act mitigations
- Biofuels enhancement programs in the 2023 Farm Bill
- Increased USDA investment in soybean research proportionate to soybean’s farmgate receipts
- Engagement in negotiations for new free trade agreements, including in the Indo-Pacific region
- Promotion of U.S. soy as the most sustainably produced soy in the world
- Inclusion of soy and bio-based products in the next farm bill and beyond
- Federal agencies working together to improve broadband spectrum licensing decisions and cyber security
- Full funding of the Environmental Quality Incentives Program (EQIP)
- Definition of biodiversity that encompasses the wide variety of beneficial species tied to agriculture
- Energy development on private land that protects farmers’ interests
- A reaffirmation of producers’ right to repair their equipment and machinery
- The national soybean checkoff, which helps develop new uses and expands markets

I encourage you to sign up for ASA’s weekly electronic newsletter, *eBean*, if you’ve not already. Just visit the ASA website, [soygrowers.com](http://soygrowers.com), and a pop-up box on the home page makes it simple to sign up and see all the efforts of your national soy policy organization from week to week.

The challenges we face in agriculture will ebb, flow, morph, and reappear, but realistically will never go away. Yet, like our personal health and finances, they too are manageable, and ASA is hopeful we can help soy farmers rest a little easier at night through strategic risk assessment and solid advocacy.

## Foliar Fertilizers Rarely Increase Soybean Yield



Image Credit: Soybean Research & Information Network

Do foliar fertilizer applications during early reproductive growth boost soybean yields?

Soybean Extension specialists across the U.S. were hearing this question from farmers and agronomists more often. High soybean prices, interest in pushing yields to the next level or plans for in-season fungicide and insecticide applications often prompted the question.

“As we talked to contacts in other states, we realized very little information was available about current foliar fertilizer products,” says Rachel Vann, assistant professor and extension soybean specialist for North Carolina State University. “We decided to work together to find answers. The soy checkoff charged us with cooperating across states to help farmers through the Science for Success initiative, and this topic emerged as one that would benefit farmers throughout the country.”

Funded by the soy checkoff, Science for Success brings U.S. soybean extension specialists together to collaborate on

research and outreach for soybean production. In 2019 and 2020, they worked together to test applications of foliar fertilizers. Trials in individual states were funded by a combination of state soy checkoffs and leveraging those checkoff investments to secure industry and university support. The process of combining data and developing recommendations was supported by the United Soybean Board.

“We used the same research protocol at trial locations in 16 states over two years,” Vann says. “We compared six macronutrient and micronutrient fertilizer products applied at the R3 growth stage, and aggregated data from 46 total trials.”

She says this approach allows researchers to effectively capture data across a wide range of environmental variability and soybean production systems in a relatively quick timeframe.

“Based on this work, we can confidently say that applying foliar fertilizer to soybeans at early pod development when no visible symptoms of nutrient deficiencies are present provides no yield or

economic benefit,” she reports. “Given the uniformity of the response across all the trials, we will not recommend blanket foliar fertilizer applications. Some inputs make a difference for soybean yields, but this is not one of them.”

Researchers came to this conclusion based on a variety of trial data. They collected leaf tissue samples following fertilizer application to learn if current high-yielding soybean varieties need supplemental fertilizer. They also collected yield and soybean composition data and provided pricing for an economic analysis. Emma Matcham, a graduate student at the University of Wisconsin-Madison, took the lead in aggregating the data.

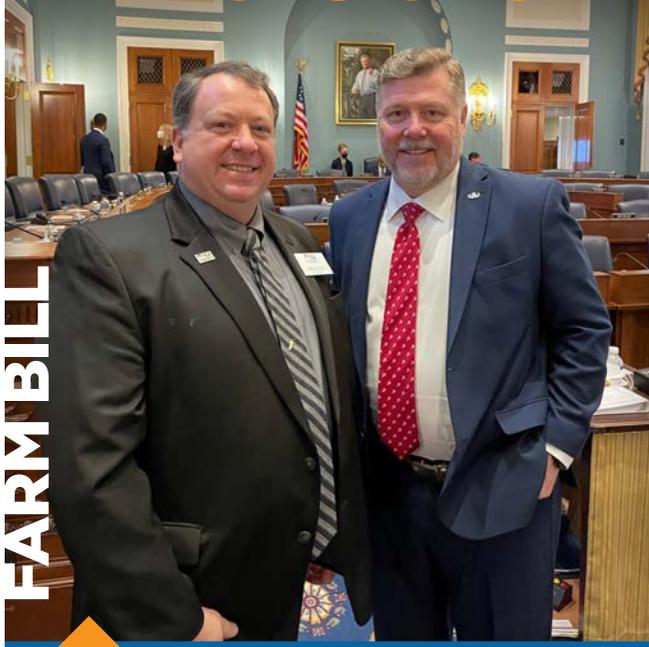
The results showed slight increases in nutrient concentrations in leaf tissues following fertilizer applications, but that didn’t translate to yield. Differences in soybean protein and oil content were observed between sites, but not among treatments, and soil properties didn’t impact foliar fertilizer responses.

A key to Science for Success is sharing research information with farmers. The team worked together to produce a full report for farmers, *Foliar Fertilizers Rarely Increase Yield in U.S. Soybean*.

“The collaborative approach of Science for Success allows us to make more robust recommendations,” Vann adds. “We can identify consistencies across soybean production, as well as areas where the environment interacts with a practice to make a difference.”

Source: Soybean Research & Information Network

# ASA in action



FARM BILL

ASA President Brad Doyle (AR) visits with Rep. Rick Crawford (R-AR) after his testimony during the House Ag Committee hearing on Title I of the Farm Bill in March.

HILL VISITS



Kendell Culp (IN) reported on state Hill visits during the ASA March board meeting in D.C.

## REGULATORY ISSUES



(From left) ASA Director of Government Affairs Kyle Kunkler, Missouri Soybean Association Vice President Renee Fordyce, Sen. Roy Blunt (R-MO) and ASA Director Matt McCrate (MO) discuss trade, supply chains and regulatory issues during a Hill visit in March.

## SOY POLICY



During very sunny Hill visits, Congressman David Scott (D-GA) (left), Chairman of the House Agricultural Committee, talks soybean policy issues with ASA Director Andrew Moore (GA) (right) and his son, Jacob.

# SATELLITE TECHNOLOGY

*(From left) ASA CEO Stephen Censky, ASA Vice President Daryl Cates (IL), ASA President Brad Doyle (AR), NASA Director of Earth Science Dr. Karen St. Germain, ASA Chairman Kevin Scott (SD) and ASA Executive Director of Government Affairs Christy Seyfert meet in D.C. to discuss satellite technology capabilities for agriculture.*



# INNOVATION TO MARKET



*(From left) ASA Chairman Kevin Scott (SD), ASA Secretary Caleb Ragland (KY), At Large Executive Committee Member Scott Metzger (OH), ASA Director Alan Meadows (TN) and ASA Director of Government Affairs Kyle Kunkler discuss regulatory and legislative issues during an Innovation to Market (I2M) Work Group meeting.*

*Ahead of the fourth anniversary of the China trade war, ASA Director Dave Walton (IA) joined Sen. Joni Ernst (R-IA), fellow farmers and economists at a "Tariff Town Hall" hosted by Farmers for Free Trade.*



*ASA President Brad Doyle (AR) (left) talks WOTUS with Sen. Kevin Cramer (R-ND) and EPA Assistant Administrator for Water Radhika Fox during Ag on the Mall in D.C..*

# ASA in action



Food and agriculture play a vital role in not only feeding the country but ensuring a thriving U.S. economy. The Feeding the Economy study shines a spotlight on little known, yet critical information on our significant contributions to everyday American life and the continued economic success of our nation. The American Soybean Association is proud to support this handy tool—an outstanding reference when connecting with both policymakers and consumers, who rely on a steady supply chain but aren't always familiar with food and ag's economic significance.

**BRAD DOYLE**  
ASA President & Arkansas soy grower



New data released from the Feeding the Economy annual impact study highlights how the food and ag sectors influence the local and broader U.S. economies. ASA and nearly 30 other food and ag groups sponsored this sixth annual report, which can be found at [feedingtheeconomy.com](http://feedingtheeconomy.com).



ASA Director and Conservation Champion Wayne Fredericks (IA) chats with Rep. Cheri Bustos (D-IL) during a National Agriculture Day celebration on the National Mall in D.C.

## CONSERVATION



## CHAMPIONS



ASA's Conservation Champions met in Washington, D.C., in conjunction with National Ag Day and the Ag on the Mall event. The Conservation Champions are a select group of farmers who are strong communicators and passionate about conservation and sustainability. They advocate with elected officials, share their stories with media and other audiences, and educate others on how today's farmers are using modern agriculture tools and stewardship practices to enhance the sustainability and environmental friendliness of their operations. The group was established by ASA in 2019 with a grant from the Walton Family Foundation. The Champions who participated in the program included ASA President Brad Doyle (AR), ASA Directors Wayne Fredericks (IA) and Charles Atkinson (KS), and Andy Bensed (WI), Hunter Grills (TN), Laurie Isley (MI), Danny Murphy (MS), and Richard Wilkins (DE).

The 38th class of American Soybean Association Corteva Agriscience Young Leaders completed its training March 8 – 12, 2022, in New Orleans, La., in conjunction with the 2022 Commodity Classic convention and trade show. This year's Young Leaders are: Wes Kirkpatrick (AR); Matt & Liz Hulsizer (IL); Tyler & Keyaira Smith (IN); Jacob & Lindsay Bolson (IA); James and Liz Moreland (KS); Adam Phelon (KS); Daniel & Paige Adams (KY); Matt & Amanda Gajdzik (KY); Joseph & Megan Bunge (MI); Erik & Sara Krieger (MI); Mary Dybedahl & Paul Mesner (MN); Nathan & Lindy Legatt (MN); Brian & Lynn Martin (MO); Tyler & Desiree Rezac (NE); William Monds & Dana Marshall (NC); Grayson Wells & Abigail Barber (NC); Dustin Helmick (ND); Shelby & Ethan Fite (OH); Tanner & Sara Hento (SD); Peyton Harper (TN); Jonathan & Rebecca Hudson (VA); and Kevin Vanderspek (CAN).



## YOUNG LEADERS



## THE FACT IS, IT PAYS TO USE BIODIESEL.

B20 biodiesel made from Illinois grown soy fuels your bottom line. B20 adds more than 10% to the price of soybeans. In addition to being a quality fuel source, B20 also reduces soy protein waste which aides your financial stability. And Illinois offers farmers incentives to use biodiesel so B20 is often less expensive than fuel made from foreign oil. Today's biodiesel is better than ever. Discover the truth and fuel up today. To learn more visit, [ilssoy.org/farmer-resources-biodiesel](http://ilssoy.org/farmer-resources-biodiesel).

# 2022 commodity classic

## Commodity Classic a Big Hit in the Big Easy



The 2022 Conservation Legacy Award winners were recognized during ASA's awards banquet in New Orleans, where the national winner was announced. Congratulations to (L to R) Grier Stayton (with daughter Corinne), Lincoln, Delaware (Northeast Region); Jamie and Brian Johnson, Frankfort, South Dakota (Upper Midwest Region); Wayne and Ruth Fredericks, Osage, Iowa (Midwest Region/National Winners); and (with wife Lana) Shane Burchfiel, Dyersburg, Tennessee (South Region). Photo Credit: Joseph L. Murphy



ASA President Brad Doyle (AR) presents Bob Worth, Lake Benton, Minnesota, with the Outstanding State Volunteer Award at ASA's annual banquet held during Commodity Classic. Photo Credit: Joseph L. Murphy



Dan Lemke, left, interviews ASA Director Steph Essick (IA), right, for Linder Farm Network during Commodity Classic in New Orleans.

ASA Director Roberta Simpson-Dolbear (IL) shares a dance with the director of the brass band that opened the SoyPAC "Beans and Beignets" auction in New Orleans. Photo Credit: Stephen Dolan



During a night of "Beans and Beignets" at ASA's annual SoyPAC auction, ASA Directors/spotters (L to R in yellow shirts) Jim Kukowski (MN) and Chris Hill (MN), along with spotter John Buck (OH), share a laugh with ASA Chairman Kevin Scott (SD), Jannell Scott and Judy Stephens. Photo Credit: Stephen Dolan



North Dakota Soybean Growers Association Executive Director Nancy Johnson addresses the crowd after being recognized with ASA's Distinguished Leadership Award during the annual ASA awards ceremony in New Orleans. Photo Credit: Joseph L. Murphy



ASA President Brad Doyle (AR), center, on the General Session stage talks soybean policy priorities with emcee Mark Mayfield, right, during the Presidents' Roundtable. Photo Credit: Stephen Dolan



ASA Director Don Lutz (WI) discusses a policy resolution during the Voting Delegates Session in New Orleans. Photo Credit: Stephen Dolan



House Ag Committee Ranking Member GT Thompson (PA) stops by the ASA booth to chat with ASA Executive Committee members and senior staff. From left: ASA Chairman Kevin Scott (SD), ASA CEO Stephen Censky, ASA At Large Member Stan Born (IL), ASA At Large Member Ronnie Russell (MO), ASA President Brad Doyle (AR), Rep. Thompson, ASA Vice President Daryl Cates (IL), ASA At Large Member Caleb Ragland (KY), ASA At Large Member Scott Metzger (OH), ASA At Large Member George Goblisch (MN), and ASA Treasurer Josh Gackle (ND).



ASA President Brad Doyle (AR) presents John Gordley with ASA's top honor during the annual banquet ceremony at Commodity Classic. The Pinnacle Award is an industry-wide recognition of a lifetime of work that demonstrates the highest level of contribution and leadership within the soybean family and industry. Photo Credit: Joseph L. Murphy



(From left) Brownfield's Meghan Grebner talks top soybean policy issues with ASA Directors Brandon Wipf (SD) and Fred Sipes (KY) on stage at ASA's booth. Wipf and Sipes took to the stage to talk farm bill, conservation and other soy priorities.



Leadership of the Commodity Classic host organizations meet with USDA Secretary Tom Vilsack before his remarks during the General Session in New Orleans. From left: American Soybean Association (ASA) CEO Stephen Censky, Association of Equipment Manufacturers (AEM) President Megan Tanel, National Association of Wheat Growers CEO Chandler Goule and President Nicole Berg, AEM Sr. VP Marketing Product Support & Strategic Projects Todd Stucke, USDA Secretary Tom Vilsack, National Sorghum Producers (NSP) CEO Tim Lust, National Corn Growers Association (NCGA) President Chris Edgington, NSP Chairman Kody Carson, NCGA CEO Jon Doggett and ASA President Brad Doyle. Photo Credit: USDA



# PROTECTING CROP PROTECTION

Vital weed control tools face continuing barrage of regulatory and legal challenges, supply chain disruptions and price increases in 2022 and beyond.

By Jason Jenkins

When northeast Oklahoma farmers Pam and Steve Snelson ordered soybean seed last October, they had devised a solid plan for success in 2022. Little did they know concern for a beetle would nearly derail their season long before the planter ever rolled.

In January, the U.S. Environmental Protection Agency issued new seven-year labels for Corteva's Enlist herbicides that contain 2,4-D choline—but with county-level bans in many states intended to provide additional protection to the endangered American burying beetle.

The development sent growers

who had planned to use Enlist products, including the Snelsons, scrambling for alternatives. Eleven weeks of uncertainty ensued as EPA reviewed more data, eventually restoring Enlist access in most of the counties at the end of March.

The Snelsons and other soybean growers collectively exhaled. Had they wanted to ride a rollercoaster, they would've visited an amusement park.

"The EPA nearly took a tool out of our toolbox," says Pam, who serves on the American Soybean Association Board of Directors. "This experience has been both

eye opening and unsettling."

Crop protection products in the United States seem to face a nearly endless cycle of regulatory and legal battles. The registration and re-registration process is practically continual, and label amendments and litigation can pop up at almost any time. The impact of these decisions has only been intensified by the COVID-19 pandemic. Supply chain disruptions and manufacturing and transportation delays have led to decreased product availability and increased prices.

As soybean growers enter the 2022 growing season and look

beyond, their greatest concern is meaningful and affordable access to post-emergent products to control weeds effectively and sustainably, says Kyle Kunkler, ASA director of government affairs.

“All of these unprecedented circumstances are causing a lot of anxiety,” he says. “We’ve been trying to communicate with regulators, encouraging them to first do no harm. As counterintuitive as it may seem, reducing access to those tools could inadvertently harm the environment as opposed to helping it.”

*Currently, four main chemistries are available for in-season application over soybeans: glyphosate, glufosinate, dicamba and 2,4-D choline. These “Big Four” each face a unique set of challenges that impact their overall availability, cost and use.*



## Fighting for the ‘Big Four’

Currently, four main chemistries are available for in-season application over soybeans: glyphosate, glufosinate, dicamba and 2,4-D choline. These “Big Four” each face a unique set of challenges that impact their overall availability, cost and use, Kunkler says.

Glyphosate—the first herbicide sprayed “over the top” with the Roundup Ready system more than 25 years ago—is still important to soybean farmers and others, including landscaping professionals and golf course superintendents. All of today’s herbicide-tolerant

soybeans can be sprayed with glyphosate, and it’s a popular choice for terminating cover crops before planting.

Pandemic-related supply chain disruptions tightened supplies of glyphosate beginning early in 2021, and Mother Nature compounded the issue when Hurricane Ida forced the largest U.S. producer of glyphosate offline in August 2021. As a result, the herbicide’s availability continues to be impacted, and its price has skyrocketed.

In Oklahoma, the Snelsons say they’re paying \$50 or more per gallon for glyphosate. Last year, that gallon cost \$18. In West Tennessee, soybean grower Alan Meadows says his glyphosate cost has doubled.

“My retailers seem to be living hand to mouth, so to speak, when it comes to glyphosate,” says Meadows, who chairs the ASA Regulatory Committee. “If you’re spraying today, they have glyphosate. But there aren’t many willing to sell you 100% of your glyphosate for the year.”

On the regulatory front, EPA issued an interim decision to re-register glyphosate in January 2020, which prompted litigation that is still ongoing. ASA strongly endorses continued access to glyphosate, joining with nine other groups as defendant-intervenors in the case.

“We recently reaffirmed our support for the chemistry in court and how important it is both for production and conservation purposes,” he says. “It’s an essential tool that we will go to the mat for every time.”

Like glyphosate, glufosinate, the herbicide used in the LibertyLink weed management system, also has been impacted by supply issues. Kunkler says that of the Big Four, glufosinate seems to have been inordinately impacted. “Most producers are telling me they would love to buy it if they could get their hands on it,” he says.

Scott Kay, BASF vice president of U.S. crop protection, says the company has experienced much higher demand than production has allowed.

“A lot of people have forgotten about it, but the Texas freeze in February 2021 hurt the whole industry because of all the inert ingredients that are produced by plants there,” Kay says. “When things froze up, those plants suffered damage. So, we were sitting idle, waiting on those ingredients, and our production was delayed.”

As with glyphosate, the market price growers pay for glufosinate has doubled or more since 2021. EPA issued an interim registration decision for the chemistry in 2017, indicating the product met the standard for registration under the Federal Insecticide, Fungicide, and Rodenticide Act. No major milestones or legal challenges are pending.

The same cannot be said for dicamba.

Ever since EPA first granted conditional, two-year registrations to dicamba products in 2016, the weed management system has been under constant scrutiny. Yet soybean growers have adopted the chemistry in droves to combat herbicide-resistant weeds. In 2021, dicamba-tolerant soybeans exceeded 50 million acres, accounting for a majority of the U.S. crop, Kunkler says. In October 2020, EPA granted a four-year registration with some additional restrictions.

“It wasn’t a secret EPA was planning on reviewing how dicamba performed under the new registration,” says Kunkler, noting that ASA is involved in ongoing litigation on the matter. “Where I think we were caught off guard and somewhat frustrated was the way in which that review took place.”

He adds, EPA seemed resolute on putting greater restrictions on

(continued on page 14)

(continued from page 13)

dicamba's use ahead of the 2022 growing season—something that could be catastrophic considering the current availability of crop protection products. In March, EPA announced new cutoff dates for dicamba use in Iowa and Minnesota. "If our growers would be required to pivot, there aren't many alternatives out there right now," Kunkler says.

In West Tennessee, Meadows' entire 2021 soybean crop was dicamba-tolerant, something he adopted to combat herbicide resistance in populations of Palmer amaranth and other pigweeds. He says without dicamba, he would have a difficult time raising a soybean crop.

"If they take it and some of these other products off the market, it would totally change the way I farm," Meadows says. "The plows have been parked here for a long time. If we have to go back to that, there's no way that's sustainable."

While prices for all dicamba products have increased, production of the chemistry has been more robust. "There doesn't seem to be an issue getting your hands on dicamba, but it's going to cost you more than last year," Meadows adds.

According to Bayer, makers of the dicamba herbicide XtendiMax, the company is doing everything it can to get tools to farmers and does not anticipate significant supply challenges in 2022. Bayer has also broadened its supplier base for glyphosate to source raw ingredients, adding more bulk trucks to deliver product more efficiently.

Supplies of 2,4-D choline also have fared better thanks to fewer disruptions to manufacturing, but prices are still up from 70% to 100% as compared to last year, Kunkler says. Of greater concern is the herbicide's future registration status. The Enlist registrations issued by EPA in January were conditional-use registrations for in-season application on tolerant cotton, corn and soybeans. The



ASA Director Pam Snelson (OK) spoke with RFD-TV in March regarding the relief she and her fellow Oklahoma growers feel now that EPA has lifted county Enlist bans.

underlying registration for the chemistry is under review, with a proposed interim decision expected in the third quarter of 2022.

Enlist was the first product to undergo EPA's revised process that incorporates assessments for endangered species, says Cynthia Ericson, Corteva's vice president of U.S. marketing. The additional step required more time; however, successfully completing the process has resulted in a legally defensible label for Enlist products.

"We couldn't be more pleased that EPA moved as quickly as it did to review the data and to arrive at a 'no effect' determination," she says. "We prioritized the American burying beetle and the eastern massasauga rattlesnake because they presented the majority of restricted acres. We have provided EPA with data on other species to support removal of county restrictions where they remain."

ASA advocates for a science- and evidence-based regulatory system. "We were pleased that EPA worked quickly to restore access to Enlist where the science and data supported it," Kunkler says.

After enduring the uncertainty, the Snelsons were thankful the Enlist ban was lifted from their county in Oklahoma. Due to the June 30 cutoff for spraying dicamba, varieties tolerant to it aren't a good option for their double-crop soybeans, which often aren't planted until July. The Enlist

system offers them effective in-season weed management for these late-planted acres.

"We've already been in touch with our chemical rep to get price information," said Snelson just one day after EPA reversed course.

## Maximizing ROI in 2022

While the over-the-top products receive most of the headlines, they aren't the only piece of the crop protection puzzle affected. The costs of burn-down or pre-emergent products also have increased. Fortunately, there are many more options available.

"Work with your local retailer to come up with a Plan A, B, C and D," says BASF's Kay. "Be agile in terms of your program, and work to improve that return on investment. With commodity prices high, we see growers doing all they can to maximize their yield potential. We're seeing demand outstrip our production of fungicides, so we flew 300 cargo planes loaded with our fungicide products into the U.S. to try and help."

One product likely unavailable this year is the insecticide chlorpyrifos, which EPA banned in February. While a federal court denied two requests for a stay of the ban, a group of 20 agricultural organizations—including ASA—has filed a lawsuit against the agency.

"The punches keep coming, but we'll keep fighting," Kunkler says.

# Myriad Factors Bring Challenges to Agriculture

By Scott Gerlt, ASA Economist

Supply chain disruptions have garnered attention since the COVID-19 pandemic began, and agriculture has not only had issues from the pandemic but many other factors that have created challenges: Hurricane Ida, which destroyed port facilities, tariffs and export restrictions, and most recently, international military conflicts, to name a few.

Supply chain disruptions can manifest in two ways: lack of goods or services or an increase in the price of goods and services. The former has manifested in many ways in agriculture: Cooperatives have had trouble hiring seasonal labor to unload grain trucks; agricultural implements and parts can have long lead times; truck drivers are in short demand; certain herbicides and fertilizers may not be available, etc. While reports of these events are widespread, the impact is hard to measure due to a lack of data on shortfalls.

On the other hand, price increases have been widely reported. USDA's National Agricultural Statistics Service (NASS) tracks prices paid by farmers. The overall index for prices paid in the U.S. crop sector has increased by 12% the past year. There has been wide variation within the categories, though. For instance, fertilizer has seen a tremendous year over year increase in prices. This is due to a number of factors: natural gas prices have risen, increased demand, China's ban on exports, sanctions on Belarus, Russian's invasion of Ukraine, and tariffs on imports. These factors have resulted in farmers paying over twice the amount for nitrogen



from a year ago and 62% more for phosphate and potash. This underestimates the true price spike, as phosphate prices were already high heading into 2021 due to tariffs.

Likewise, diesel fuel prices rose dramatically. The 36% increase in the chart occurred before the Russian invasion of Ukraine. On-farm diesel prices have risen by over 150% since last March in Illinois, according to USDA Agricultural Marketing Service data. Russia historically exports 15% of world crude oil trade, so the disruptions have rippled through to fuel costs.

Furthermore, farm machinery production has faced many issues, such as lack of parts from suppliers, employee absenteeism and shipping issues that have increased costs born by producers. Farm chemical prices have jumped over 21% on average, although for particular chemistries price increases can be many times the average. Many variables have caused problems in this sector, including Hurricane Ida shutting down a major production facility in the U.S., international shipping issues and COVID lockdowns.

Multiple inputs have been affected by supply chain issues,

and the ability to handle crops after they leave the farm has not been spared either. The American Trucking Association estimates the industry is short 80,000 drivers. Given that soybeans leave the farms on trucks, this issue directly impacts soybean delivery. In addition, container shortages have plagued shipping. For instance, container rates from China to the West Coast have gone from about \$1,500 before the pandemic to rates that have topped \$20,000. While most soybeans are exported in bulk, specific regions and types of soybeans do utilize containers.

The supply chain issues have been challenging for agriculture, but they are fortunately occurring at a time of elevated crop prices, which has helped cover some of the increased costs. However, this dependence on higher prices creates much greater risk for farmers, as a price drop after planting or a yield shortfall can cause an inability to offset the higher expenses. Most experts believe it will take some time to work through all these supply chain issues, which could lead to pressure on many inputs through at least the rest of the year.

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In my world, last year will be labeled “The Year of Tax Policy.” When I joined ASA in 2020 as the new government affairs staffer handling international trade issues, it was expected that, although tax policy would be part of my priority, it would be a miniscule topic that would rarely need coverage. After all, Congress had just passed the Tax Cuts and Jobs Act in 2017, and historically the gaps between major tax legislation span around 10 years.

How wrong I was.

In 2021, President Biden has pushed two major policy priorities—investments in infrastructure, and a second, less-traditional infrastructure package focused on “human” infrastructure that included proposals on issues such as universal pre-K, paid family leave and increased food assistance. However, tucked into that second package were major

policy proposals that could have brought significant changes to the U.S. tax code that would negatively impact U.S. soybean growers. This proposal included changes to the ability to step up in basis on capital gains taxes, changes to the estate tax, and limitations on the ability to utilize 1031 like-kind exchanges.

ASA sprung into action.

Through our grassroots efforts, we knew just how damaging changes to stepped-up basis or the estate tax would have been for our members. Working strategically through the Tax Aggie Coalition and the Family Business Estate Tax Coalition, ASA sent a strong message to Congress: U.S. soybean growers did not, and would not, support any proposals that included changes in stepped-up basis, 1031 like-kind exchanges, or the estate tax.

Thanks in large part to the unified voice of soybean growers, we seem

to have dodged a bullet. When the House passed its final version of the human infrastructure package (Build Back Better, or BBB), the text included no changes whatsoever to stepped-up basis, 1031 like-kind exchanges, or the estate tax—a huge win for agriculture!

Attention shifted to the Senate, and it seems that the Senate has killed BBB with the old “death by a thousand cuts.” While there has been significant opposition to multiple components of the package, there remains opposition in the Senate to any of these proposed tax changes. However, parts of BBB remain active and could be bundled into future, smaller bites of legislation, and ASA remains vigilant and vocally opposed to using any tax code changes as a mechanism to fund current or future pieces of legislation.

# INDUSTRY

## perspective

By Matt Erickson

### Inflation Frustration

Economic disruptions from COVID-19 have led to the highest inflation rates for agricultural inputs in more than a decade. The U.S. was entering the third year of the global pandemic with a growing sense of normalcy when Russia's decision in February to invade Ukraine again jolted the world and increased inflationary pressure.

U.S. agricultural producers have seen their overall input costs rise significantly over the past year. Fertilizer costs are at record highs. Since Sept. 1, 2021, the beginning of the current corn and soybean marketing year, national average prices for anhydrous have nearly doubled; MAP has increased by approximately 25%; and potash about 45%.

Producers also are paying more for consumer goods—groceries, appliances, furniture and more. The last time consumers were pinched this tight by year-over-year price increases was January 1982. From fuel and fertilizer to farm machinery and equipment to a gallon of milk, the entire supply chain that producers and their families depend on has been impacted by inflation.

The Russia-Ukraine conflict makes it unlikely we will see inflation recede in the foreseeable future. Russia is among the world's largest oil exporters. In the aftermath of the invasion, oil began trading at highs not seen since 2008, and U.S. drivers saw pump prices rise to an average of \$4.30 and \$5.10 per gallon for gas and diesel, respectively.

The conflict also poses a risk to food markets. Together, over

the past five years, Russia and Ukraine account for an average of 28.5% of the world's wheat export market, while Ukraine accounts for an average of approximately 15% of total world corn exports. Russia's ability to export crops is hampered by both sanctions and transport challenges; Ukrainian farmers face significant export challenges and may not even get seeds in the ground this spring. A prolonged disruption to these two countries' food exports will add fuel to an already hot inflationary fire.

COVID and the Russia-Ukraine conflict have each proven a formidable market force. The confluence of these two events has had an unprecedented impact on global markets, and U.S. agriculture will feel the underlying effects in both the short- and long-term.

Last fall, supply chain issues resulting from COVID were so profound, producers couldn't be certain of fertilizer supplies for the 2022 growing season. Many farmers who purchased fertilizer in the fall had to take delivery and pay upfront, forcing them to lock in their crop mix early. This significantly impacted cash flows for 2021 and 2022 and left producers vulnerable to downside risks for inputs and commodity prices—especially at a time when commodity prices were at or below breakeven and the spring crop insurance price hadn't been established.

As harvest wrapped up, the market knew domestic demand for corn and soybeans were at or near record highs, but the magnitude of drought in South America hadn't



*Matt Erickson, Agricultural Economic and Policy Advisor for Farm Credit Services of America and Frontier Farm Credit*

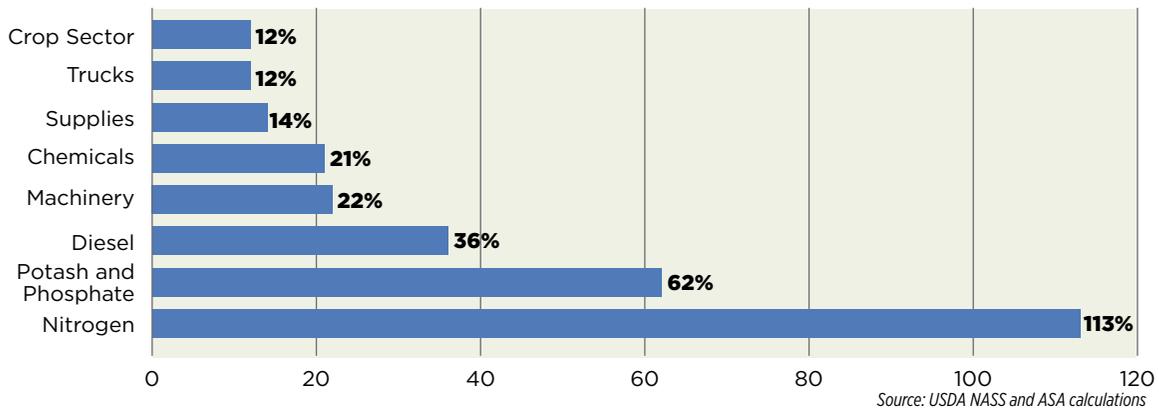
fully been realized and the Russia and Ukraine war was not even a thought. Today, corn and soybean prices are higher than they were in the last quarter of 2021.

Producers are price takers in the market, a position that isn't always appreciated by those outside of agriculture. U.S. producers bear the responsibility of providing food, feed, fiber and fuel, not only for us but for the world. Yet, it's nearly impossible for producers to market a crop at its optimal price, especially in the face of unknown black swan-type events such as those coming to a head today.

In fact, the November 2022 futures price for soybeans averaged \$12.42 per bushel in the final four months of 2021 versus \$13.71 in January and February 2022. This is a significant difference when managing cash flow.

From an inflationary standpoint, producers were faced with rising fertilizer costs ahead of the run-up in commodity prices. This encouraged marketing to alleviate the risk of commodity prices falling below breakeven levels. Not a bad strategy given the facts of the day. But this partially eliminated

## Increase in Prices Paid by Farmers between Feb. 2021 and Feb. 2022



the upside potential now seen in the market, demonstrating the challenge of timing one's sales in today's environment.

Rising inflation also leads to greater competition for farmland from investors. Corporate equities saw their largest year-over-year gain of 62% between the first quarters of 2020 and 2021, before inflation set in. Now, with borrowing still at historical lows and inflation running high, investors are looking for investments to protect capital. Returns on farmland have shown to be resilient during times of heightened inflation, while other major asset classes are largely susceptible to inflation and unpredictable recessions. As investors bid up farmland prices through speculative buying, producers must either pay higher prices for ownership, or pay a higher cost to rent or lease that farm ground.

In Iowa, where Farm Credit Services of America (FCSAmerica) appraises 21 benchmark farms every six months to track real estate trends, farmland values rose an average of

25.1% in the last half of 2021. This was on top of previous gains, putting current values 16% ahead of 2013 records. Demand for farm ground across the four states served by FCSAmerica (Iowa, Nebraska, South Dakota and Wyoming) is red hot, and interest from investors in the market is occurring.

The result of all this is upward pressure on cash rents. The last time producers operated in a record-setting commodity price environment was the 2012/2013 marketing year. Corn and soybean prices dropped considerably during the next three marketing years. Corn went from \$6.89 to \$3.61 per bushel; soybeans from \$14.40 to \$8.95 per bushel. Despite these drops, average cash rents in Iowa increased—from \$235 per acre in 2012 to \$260 per acre in 2014. It took four years for the average cash rental rate in Iowa to drop to 2012 levels amid continued price declines. During this same four-year period, corn dropped 48% and soybeans 38%.

The lesson: Downside volatility is much greater for commodity

prices than for the cash rental market. Today's inflationary environment alongside high commodity prices and continued low interest rates will result in producers paying higher prices to rent or lease farm ground. And if history is a guide, these higher prices may be felt in the agricultural economy for many years.

The run-up in corn and soybean futures seen earlier this year allowed for marketing and crop insurance to manage 2022 crop profitability while also helping offset some of last fall's inflationary costs. The war between Russia and Ukraine will extend already existing supply chain issues. The labor market remains extremely tight, interest rates are expected to rise, the market is highly volatile and inflationary risk continues to grow.

As U.S. producers anxiously wait to plant their 2022 crop, the lagging effects raised from today's inflation will pressure profitability in 2023 and beyond. The question is, to what extent?

***“Producers also are paying more for consumer goods—groceries, appliances, furniture and more. The last time consumers were pinched this tight by year-over-year price increases was January 1982. From fuel and fertilizer to farm machinery and equipment to a gallon of milk, the entire supply chain that producers and their families depend on has been impacted by inflation.”***

— Matt Erickson, Economist, Farm Credit Services of America

## Kinks in the Supply Chain are Biggest Concern

As 2022 got underway, soybean prices in the teens were good news for farmers facing sharply higher crop input prices. But with inflation, the ongoing pandemic and unsettled world events, the American Soybean Association (ASA) 2022 officers say supply chain challenges weigh on farmers and will be the greatest threat to the ag economy in the coming months. Each shares his perspective on supply chain problems, as well as on critical secondary issues.

### ASA President Brad Doyle (AR)

“Soybean farmers the last several years have been able to increase yields, but the profit from that increase is being eaten up by the steep increase in input costs. Fertilizer and herbicide prices especially have gone up, and we have to be more conservative on making repairs and buying equipment. Farmers are going to have to decide where to make cuts on inputs when possible and assume they might not get the

amount of every product they need.

“One of the challenges with this scenario is that lenders want to see a budget. If you are a young farmer, that is hard to overcome because you may have limited assets and require financing to farm. Cash rents are also climbing, so you have to determine how to gross more per acre to stay afloat. We are vulnerable to accepting funds from state and federal programs to compensate for income loss, such as conservation and hunting opportunities. ASA is keeping the lines of communication open and talking with companies about the impact this has on agriculture.”

### Climate regulations

“We have to anticipate there will be restrictions on farmers for such things as fuel use. This may require some farmers to upgrade diesel engines or cut tillage in areas like ours where no-till has limited success. Planting cover crops may also be regulated. That is a concern in our area where we have surface drainage issues and use

irrigation. We have to be able to manage best practices that work in our area, so we must continue conversations with lawmakers and regulators that include voluntary actions and possible incentives.”



*Cates is a fourth-generation farmer from Columbia, Illinois, who raises soybeans, corn, wheat and double-crop beans. The operation includes his wife, Sandy. Cates has served in multiple leadership positions with the Illinois Soybean Association, including chairman. He also serves on the ASA World Initiative for Soy in Human Health committee. Photo Credit: Illinois Soybean Association*

### ASA Vice President Daryl Cates (IL)

“The biggest threat to farming is the uncertainty of the supply chain and trying to get crop inputs. Herbicide production is still down because of events like last year’s Texas freeze that shuttered an ingredient manufacturing facility until last November. My supplier says to expect 50-60% of the herbicide product volume we had in 2021. Herbicide prices have skyrocketed, and fertilizer prices jumped from \$189 a ton last year to \$600 a ton this year. One of the main issues with that was China’s decision to shut plants down to clear the air for the Olympics.

“I am concerned the supply chain problems could persist for



*Doyle, a farmer from Poinsett County, Arkansas, has been a member of the ASA board since 2017. He is a past president of the Arkansas Soybean Association. Doyle serves as vice-chair of the Midsouth Soybean Board and is a board member of the Natural Soybean and Grain Alliance. Along with his son and wife Joyce’s family, he operates Eagle Seed Company. Photo Credit: Kurt Lawton*

the next couple of years. Getting back to normal will take a lot of time, and we have to engage lawmakers to make sure there is no price gauging. There is not much farmers can do to change the situation, and I am hopeful that soybean and corn prices don't drop to \$10 and \$4, respectively. That would make a tough financial situation even tougher, and we probably couldn't make a profit."

### **Aging farmers**

"We have to start asking, who is going to take over family farms? My children do not want to farm, and more of my neighbors are starting to retire. I don't know if the trend is toward all mega farms, or if the younger generation will be able to make a living from farming."

### **ASA Secretary Caleb Ragland (KY)**

"Supply chain concerns are the number one issue for soybean farmers and really all industries. People need to get back to work and help relieve the shortage of chemicals and other ingredients we must have to farm. When one part or ingredient is missing, it disrupts the whole process.

"Conflicts and war are also now a global concern that has just made getting fertilizer worse since much of it comes from overseas. Nitrogen prices are three times higher than last year. Current soybean prices help offset some of that, but farmers still face high risk with production costs per acre this year. We can't grow a crop without inputs, and we must stop any opportunistic pricing. Farmers who bought chemicals and fertilizer last summer are in better shape, but it will be hard to keep everything in balance and make a profit going forward."



*Ragland, from Magnolia, Kentucky, raises soybeans, corn and winter wheat with a farrow-to-wean hog operation. He has been an ASA director since 2017 and serves as chair of the Kentucky Soybean Association's legislative committee. Also, he is president of the Kentucky Livestock Coalition. He and his wife, Leanne, have three boys. Photo Credit: United Soybean Board*

### **Endangered species**

"Regulators are trying to take a new approach to protect endangered species. ASA is working behind the scenes, calling on the Environmental Protection Agency to consider new data and stop county-level Endangered Species Act (ESA) use prohibitions on new Enlist registrations for 2022. It is overreach and a disincentive to innovation."

### **ASA Treasurer Josh Gackle (ND)**



*Gackle, from Kulm, North Dakota, began serving on the ASA board in 2017. He raises soybeans, corn, wheat and barley. Gackle has served as a director of the North Dakota Soybean Growers Association (NDSGA) for three years. Photo Credit: Wanbaugh Studios*

"Getting the right crop inputs on time is the biggest threat to soybean profitability, but I also am concerned about getting parts for equipment and other items that factor into the cost of farming. We are going to have to be flexible and maintain our good relationships with dealers, and understand they are trying to help as best they can. If soybean prices can remain historically high, that will continue to help deal with the extra costs. ASA and other commodity groups are in contact with those in the supply chain to try and improve the situation. And while we are all dealing with these uncertainties, I am hopeful we will see improvements this spring."

### **Agriculture story**

"Telling the production agriculture story accurately remains a priority, as with each generation, people are personally further from the farm. There is not enough understanding of exactly what farmers do to produce food sustainably and safely. As we increase soybean production and sell more soybeans at home and internationally, we are going to have to regularly engage with consumers, policymakers and others to assure our successful future."



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# SOY checkoff news



## All Eyes on Soybean Oil Demand

U.S. soybean meal has had a steady hand on the wheel of demand for many years, with oil riding shotgun. But it's a new day: Oil is in the driver's seat, offering new routes to farmers.

Demand for soybean oil is on the rise; it's a popular input for a wide variety of products. In February, according to the USDA Production, Supply and Distribution database, soybean oil demand had grown even within the past year. During the last marketing year (2020/21), 9% of U.S. soybean oil was exported, 54% was used for food, feed and other industrial uses and 37% went to biofuels. Compare that to this marketing year, with a dip in exports to 5% and a bump in domestic demand for use in biofuels to 42%.

"We've seen a recent surge in soybean oil demand here in the U.S., which is projected to continue to grow in the next couple of years," says Mac Marshall, vice president of market intelligence for the soy checkoff and U.S. Soybean Export Council. "That's driven by the build-out of renewable diesel facilities, which use soybean oil as a feedstock."

Marshall says food remains the No. 1 use for U.S. soybean oil, but, thanks to the soy checkoff, demand in other market segments is driving growth.

"Thanks to checkoff investments, we're advancing utilization of soybean oil in other applications as well—adhesives, lubricants, coatings," says Marshall. "The diversity of applications is a testament to the versatility of the soybean, but also to the sound investments our farmers have made over the years."

Philip Good, Mississippi soybean grower and fifth-year checkoff farmer-leader, couldn't agree more.

"Our soy checkoff has been a huge part of sharing the story of U.S. soybean quality and sustainability," says Good. "Sharing our message has affected our position both within the U.S. and throughout the world as a sustainable solution for the future."

The soy checkoff is led by a group of farmers, so investments made by more than 515,000 U.S. soybean farmers are designed to make an impact at the farm level. And this shift in demand dynamics

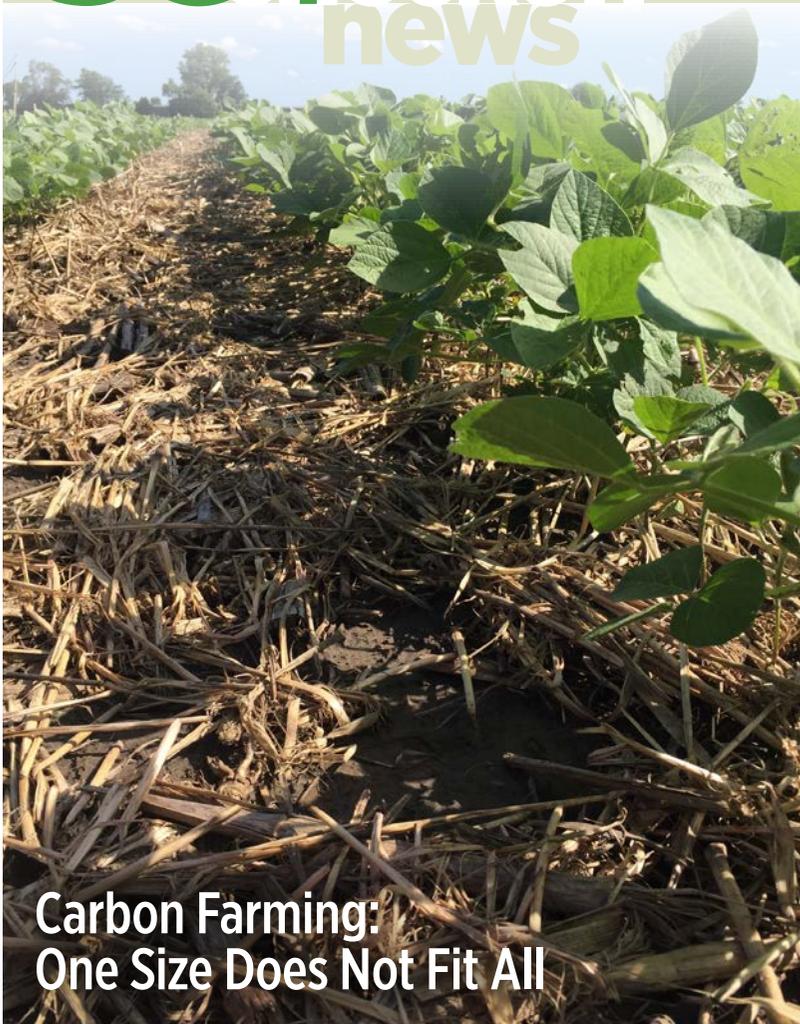
is no exception as farmers look to future growing seasons.

"About 50% of our acres are going to be planted in soybeans this year with the balance in corn and cotton," says Good. "That diversity gives us a solid foundation to move towards more soybean acres without potentially affecting our income should the market shift."

While this year's crop mixes are already decided on most farms across the country, Good says increased soybean oil demand could be a driver for more farmers to continue to increase their soybean acreage. In fact, it looks like soybean production may be up again this year, trending in the same direction as oil demand. According to the USDA Oil Crops Outlook, global soybean production for this marketing year is expected to eclipse 2020/21 production by 6.3 million metric tons.

"Soybean oil is the market driver right now, not meal. That, along with many other developments, has brought us to a new level in the market for possibilities," says Good. "These are exciting times in the soybean market."

*Source: United Soybean Board*



## Carbon Farming: One Size Does Not Fit All

Carbon farming, carbon sequestration, carbon credits—whatever it's called, the topic continues to gain momentum globally. A quick Google search will get you 300 million results in a matter of seconds. But what are farmers saying about it?

Ask April Hemmes about capturing carbon on her Iowa farm, and she'll tell you she's been doing it for more than 20 years.

"It's called taking care of the land," says Hemmes, a fourth-generation family farmer who farms more than 1,000 acres in the northeastern part of the state. "Farmers have been doing this for decades, but now it's being called

something different, and someone wants to pay us for it."

Another definition comes from Peter Kuikman, carbon and land use expert at Wageningen University and Research in the Netherlands, who participated in a recent U.S. Soybean Export Council webinar on carbon farming and soy.

"It means using farm practices that effectively remove carbon dioxide from the atmosphere, and that's done by ultimately converting plant biomass into soil organic matter," he explains. "It's not a single technology or something you buy—it's something you have to do, and that requires a long-term strategy."

For Hemmes, that means farmers have to know their land and what it requires to keep it as healthy as possible.

"There is no silver bullet to solving this. Farming just doesn't work like that. You have to know what works best for you, and you have to stick with it," Hemmes says.

Like choosing to grow cover crops, for example. Cover crops are proven to slow erosion, improve soil health and increase biodiversity. Five or six years ago, Hemmes decided to grow a cover crop of cereal rye on 200 acres of highly erodible land after harvesting corn.

"It's made my soil healthier, keeps the moisture in and hasn't affected the yield. The seed is applied by air, it grows and then I terminate it the day before I plant or just after. It takes management, but what doesn't if you want it to work?"

So, what about choosing a carbon program? Hemmes says, "It's kind of the Wild West out there, and many farmers I've talked with are taking a wait-and-see approach to see what is offered and if it's a fit for their farms."

Nevertheless, she isn't going to change the way she farms because of the potential of being paid for carbon.

"I'm not doing it to get paid for it," says Hemmes. "I'm doing it to make my soil healthier because I want to pass it on to future generations in better shape than I got it. That's why I do it. End of story."

But in the meantime, work goes on to assess the risks and opportunities of carbon farming. The soy checkoff has begun a study on the programs currently available and the associated risks and potential rewards for farmers.

*Source: United Soybean Board*



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*WISHH is a program of the American Soybean Association and is funded in part by the United Soybean Board and state soybean board checkoff programs.*

# WORLD

## soy



## WISHH's Food Security Panel Highlights U.S. Soy's Value in Exports & Global Diplomacy

WISHH Committee Member Craig Williams, an Indiana soybean grower, is featured on the big screen as WISHH premieres its new video, "The Power of Protein: U.S. Soybean Growers Take Action for Global Food Security," at WISHH's USB-funded panel discussion at Commodity Classic.

ASA's World Initiative for Soy in Human Health (WISHH) Commodity Classic panel showcased U.S. soy's export opportunities in global food security and also tapped into the timely topic of how U.S. soy contributes to America's diplomacy with other countries. The expert speakers from across the value chain stressed the important role U.S. farmers have in growing crops that meet the high-quality requirements for these foods to remain safe for people to eat months after they are shipped from the United States.

WISHH Program Committee Chair and ASA Director Gerry Hayden and WISHH Executive Director Gena Perry joined three experts from the soy value chain at WISHH's March 10, USB-supported panel discussion. WISHH also premiered its new video, *The Power of Protein: U.S. Soybean Growers Take Action for Global Food Security*.

"I was so pleased to see 80 soybean growers attend our important WISHH panel to hear how U.S. soybean growers can be leaders in global food security," said Hayden. "WISHH and USB are

working together to bring the power of U.S. soy protein to improving food security around the world."

The panel builds on the December 2021 USB-funded dialogue on global food security that WISHH organized in conjunction with a tour of Edesia Nutrition in Rhode Island. Participants included soybean growers from seven states as well as representatives from USDA and U.S. Agency for International Development, and university faculty and soy processing representatives.

Edesia Nutrition Executive Director Maria Kasparian joined WISHH's Commodity Classic panel to follow up on opportunities that the group identified in December. The enterprise uses only U.S. soy flour to manufacture its high-protein food packets that are distributed in more than 60 countries. Edesia forecasts it will use 7.5 million pounds of soy flour this year, requiring the equivalent of 170,000 bushels of soybeans.

Other panel speakers included World Food Program (WFP) USA Chief Engagement Officer Rebecca Middleton. WFP is globally

recognized for its life-saving distribution of food, including currently in Ukraine. Tiger Soy and SEMO Milling Commercial Manager Adam Thomas described how the Tiger Soy processing plant in Mexico, Missouri was built to meet the demand for soy flour in U.S. global food security programs.

Thomas, Middleton and Kasparian all described how food security is tied to national security and that programs, such as Public Law 480, purchase U.S. soy-containing food products in an act of U.S. diplomacy. The U.S. government has mandated the use of U.S. commodities in the historic P.L. 480 program since its creation after World War II.

Hayden and Perry shared how WISHH connects trade and development, which improves food security in the regions where WISHH works. USB is also supporting WISHH's exploration of partnerships, including for global food security, that contribute to the USB vision of partners to deliver sustainable soy solutions to every life, every day.

# #SOY SOCIAL

## Check out what's trending in U.S. soy on social media

Spotted on Twitter: House Ag Committee Ranking Member **GT Thompson** (PA) gives a shoutout to ASA after visiting with the ASA Executive Committee and senior staff at the ASA Commodity Classic booth in New Orleans.



**House Ag GOP** @HouseAgGOP

.@CongressmanGT spending time at @ComClassic last weekend with good friends from @nationalcorn, @wheatworld, @sorghumgrowers, and @ASA\_soybeans discussing the critical issues facing our farmers, like trade, prices, crop insurance, and sustainability.

#Classic22

You Retweeted

**Sen. Kevin Cramer** @SenKevinCramer · Mar 22

Enjoyed seeing companies like @Case\_IH and @JohnDeere, along with the @CornRefiners and @ASA\_Soybeans at @aemadvisors' Celebration of Modern Agriculture.

The innovation of our agriculture industry is second to none. Thank you for hosting me!

4 10 25

**Sen. Kevin Cramer** (ND) took to social to highlight his visit with ASA and others on the National Mall in D.C. for Ag Day in March.



Throughout the year, "national holidays" provide a springboard for ASA to highlight fun facts and important U.S. soy messages on social media.



**American Soybean Association** @ASA\_Soybeans · Mar 19

Happy #NationalPoultryDay to one of U.S. soy's biggest customers! According to ASA's SoyStats, 60.9% of U.S. soymeal was used in poultry feed in 2020. 🌱🐔🍗 #USSOY

2 6

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## Bad Seed: Cybercriminals Storm Agriculture By Will Rodger



Cyber security expert Stephen Streng is worried about your co-op. And your trucking company, your tractor, your combine—and, well, everything from the field to the dining room table that connects to the internet. Cyberattacks keep increasing, and the good guys are having trouble keeping up.

“They’re all connected to the internet, right?” Streng says. “In the cab of the tractor, the combine, or whatever is connected to the internet, there are probably multiple devices in there that are connected to the internet and to the world. And those are all windows to their operations that didn’t exist 20 years ago—windows that somebody could climb into uninvited.”

Streng is a researcher at the University of Minnesota’s Food Protection and Defense Institute. He says the average farmer may not worry his tractor will get hacked anytime soon, but that shouldn’t be cause for complacency.

The tales from 2021 alone are chilling.

In October, large dairy processor Schreiber Foods was paralyzed for close to five days after a criminal gang infected its systems with ransomware.

Schreiber, like most victims, paid an undisclosed amount.

In September, Minnesota agricultural firm Crystal Valley Cooperative fell victim to a ransomware attack the same week the Russian hacker gang Black Matter stole data from Iowa’s NEW Cooperative Inc. NEW shut down its network entirely to clean up the damage and buttress its defenses.

Crystal Valley, which sells supplies like fertilizer to farmers and buys their crops, took its systems down Sunday, Sept. 19. Payments took a hit, as they no longer had connection to major credit card companies. The co-op operates eight grain elevators that can store 25 million bushels in total.

In late May, meatpacking company JBS closed at least one Iowa pork processing plant as well as all nine of its U.S. beef plants before paying hackers \$11 million in ransom.

“The food and agriculture sector has been behind in terms of cybersecurity, behind other sectors and in part because other industries got the wake-up call earlier because they were targeted earlier,” Streng says.

“The financial sector banks, the retail sector, the big retail corporations like Target, health companies, hospitals, schools—as those industries harden their defenses, then attackers are going to start looking for softer targets, and the food and ag sector is, I think, probably one of the softest targets still out there. And agricultural production is the softest in the whole supply chain.

“Food processors and manufacturers—their transformation into digital operation also occurred a lot earlier, too. That also holds true for equipment manufacturers.”

### Surveillance—but why?

There’s no doubt: Ransomware is the most common of all attacks launched today. But that won’t likely be the end of it for agriculture. The Chinese government, in particular, employs untold numbers of cyber vandals who break into western networks and conduct extensive mapping expeditions to discover the ins and out of their networks and provide quick entry and exit when needed. Spies and criminals use those maps for a variety of purposes, intellectual property theft among the most prominent. Food and ag networks have been probed, too.

### Still Vulnerable: Hacking for hire

Ari Schwartz is managing director for cybersecurity at the Venable law and consulting firm in Washington, D.C. He was formerly special assistant to the President and senior director for cybersecurity on the United States National Security Council Staff.

(continued on page 30)

(continued from page 29)

Big players beyond China, he says, are involved. He's as worried about Russian agents as he is about anyone else. The intruders are often known criminals "hired" in lieu of serving lengthy prison sentences at home or abroad. The Russians decide for how long they work for them. The hackers have monetary interests, but the Putin dictatorship—its interest is also geopolitical.

"The Russians have a strange structure for this," Schwartz says, "After all, the government is truly a kleptocracy...and there is some work that's being done by the Red Army. But there's a lot that is done by people that are criminals during the day."

Schwartz points to Alexsey Belan, a member of the FBI's 10 Most Wanted list, dubbed the most dangerous hacker in all of Russia.

Belan's rap sheet includes the Democratic National Committee hack of 2016, as well as a massive Russian Federal Security Service-sponsored 2014 Yahoo hack, which exposed the emails of other people Russian intelligence wanted to track, such as the former minister of economic development of a country bordering Russia and staff at a Swiss Bitcoin wallet provider.

## Hacking the tractor

An old maxim goes like this: "Easy-to-use software is not secure. Secure software is not easy to use."

And the easiest-to-use software of all? The stuff we all use—whether it's on our desktop, tractor, in our pocket or on a tablet—end-user technology, is the simplest to compromise.

That everyday stuff was put on trial last August at the DefCon computer security conference, arguably the most prestigious of conferences for the often wild and woolly hacker (both good and bad) community.

So-called white hat hackers look for vulnerabilities in software and often push other software developers to do better. They



*Cyberattacks are on the rise, and your trucking company, your tractor, your combine—nothing is off limits. But experts say there are steps growers can easily take on their own to protect themselves.*

commonly respond to bounty programs that pay programmers to discover and fix problems before criminals discover them.

At the 2021 conference, one white hat hacker known as "Sick.Codes" asserted he could have taken control of any John Deere tractor, combine or other large implement via the company's centralized operations center just months before.

"We could literally do whatever the heck we wanted with anything we wanted on the John Deere Operations Center, period," he told the crowd. As it turned out, Sick.Codes had first disclosed the vulnerabilities to John Deere, which reportedly fixed the problems within days.

Quick action from John Deere kept the vulnerabilities discovered by Sick.Codes simply theoretical. Then again, no software is provably secure. The best anyone can hope for, experts say, is to stay one step ahead of the bad guys. People like Sick.Codes help. In the end, though, it's on all of us to watch our computers and the networks they connect to, because if we don't, someone else will.

## Who Ya Gonna Call?

Scott Algeier heads the Information Technology-Information Sharing and Analysis Center (IT-ISAC), which gives large organizations the opportunity to share details of attacks they have suffered without worrying about retaliation or legal liability. It includes a special interest group devoted to food and agriculture.

Cybersecurity is massively complex in the details, but Algeier says growers can do most, if not all, of the things they need on their own.

Here is a list of the most important ones:

- Install antivirus software.
- Keep all software updated, automatically when possible.
- Use multi-factor authentication in addition to strong passwords.
- Use a password manager when you have many different passwords to juggle.
- Stop and think before clicking on a link or an attachment or responding to a text or email that seems even just a little unusual.
- Call when in doubt: If you aren't sure with whom you are dealing, call the person you contacted you and make sure everything is legitimate, since phishing remains the primary way systems become compromised.
- Back up all your data with an automated routine—and then try to restore it to make sure you understand the process thoroughly for when trouble comes knocking.
- Have a contingency plan. If bad guys hacked your network to pieces, what would you do? How would you communicate? When?
- Finally, hire a professional if you lack confidence or get stuck. While security pros aren't cheap, even a large farm can be protected for not a lot of money. Everyone has different needs and desires. It's oftentimes easier and cheaper to hire someone who can help.

# Do you know the function of SoyPAC?



## SoyPAC is an important national soy advocacy tool.

The ASA SoyPAC is the only political action committee representing the interests of solely soybean growers. SoyPAC provides ASA with resources that help support legislators who champion soybean farmer priorities.

The list of issues affecting agriculture and soybeans is long and diverse. ASA staff work year-round to respond to these issues.

**For more than 100 years, ASA has led efforts to advocate for U.S. soybean farmers on policy and trade.**

Learn more about how SoyPAC advances ASA's mission by visiting [SoyGrowers.com/soypac](http://SoyGrowers.com/soypac)



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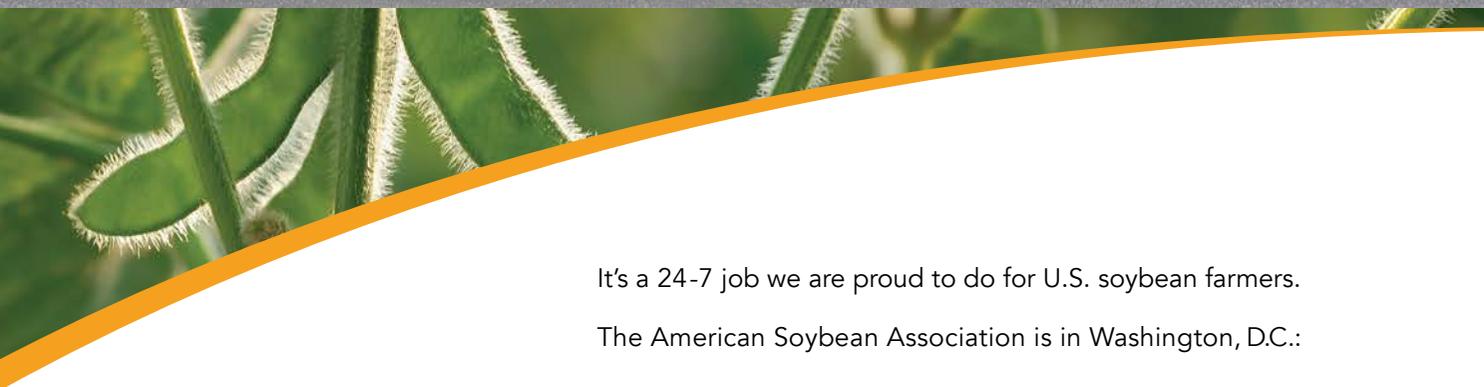
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SoyPAC funds raised are for the benefit of political candidates and activities on a national level that support the soybean industry. Contributions to SoyPAC are voluntary and you have the right to refuse to contribute without reprisal. Your contribution to SoyPAC must be personal – not corporate. Maximum annual individual contribution to SoyPAC is \$5,000. Contributions to SoyPAC are not deductible as charitable contributions for federal income tax purposes. Any suggested amounts are suggestions only and not enforceable; more or less than the suggested amount may be given, the amount given by the contributor, or the refusal to give, will not benefit or disadvantage the person being solicited. Federal law requires us to use our best efforts to collect and report the name, mailing address, occupation and name of the employer of individuals whose contributions exceed \$200 in a calendar year. Under federal law, only U.S. Citizens and Lawful Permanent Residents (i.e., green card holders) may contribute to SoyPAC.



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- Protecting soybean interests in the farm bill
- Fighting against burdensome EPA regulations
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