

# THE FARMER'S REPORT

## Sound policymaking needed to fully scale sustainable aviation fuel

By BRIAN DUNCAN

Illinois Farm Bureau President

Ethanol represents a significant market for my Ogle County family farm. We can deliver corn to seven ethanol plants within a 70-mile radius, and distillers' grains are a valuable input for our livestock enterprises.

Biofuels like ethanol can benefit both the economy and the environment. Illinois, which ranks third in the nation for ethanol production, is meeting the demand of consumers and industries for cleaner, domestic energy sources.

But this demand did not build itself.

Decades of sound policymaking created channels and incentives for the agriculture and biofuels industries to supply a growing market.

The expanded Renewable Fuel Standard mandating the use of renewable fuels in transportation, and year-round use of higher blends of homegrown biofuels such as E15 and E85 have bolstered the ethanol market. State and federal tax credits tied to biofuels have been economic game changers for our state.

Sustainable aviation fuel (SAF), a bio-based jet fuel made from corn ethanol or soybean oil, holds similar economic and environmental opportunities as a path to decarbonize the aviation industry with homegrown biofuels.

While farmers, airlines and the ethanol industry are eager to embrace SAF,



**Brian Duncan** 

challenges persist in scaling up SAF production. Sound, reasonable policies are needed to ensure that significant changes and cost investments are worthwhile.

A first step came with recently released guidance from the U.S. Treasury Department acknowledging that feedstocks grown utilizing conservation practices can reduce overall SAF greenhouse gas emissions. This will play a role in the federal SAF production tax credits authorized under the Inflation Reduction Act.

Known as 40B, a \$1.25-per-gallon tax credit will be awarded to SAF products with greenhouse gas emissions scores 50% lower than petroleum-based

jet fuels along with additional incentives. This credit is retroactive to 2023 and extends through 2024.

The Greenhouse Gases, Regulated Emissions, and Energy Use in Technologies (GREET) model will be used to assess the 50% emission reduction.

Illinois Farm Bureau policy supports use of the GREET model in scoring the carbon intensity of agricultural feedstocks for SAF and other biofuels. We have advocated with federal officials to select GREET because it incorporates accurate, updated data around emissions and land-use changes, and recognizes on-farm practices to lower the carbon intensity of SAF and biofuel feedstocks.

The Treasury's guidance for ethanol and biodiesel facilities will require farmers to demonstrate multiple sustainable practices including no-till farming, cover crops and energy-efficient fertilizer use. The bundled requirements are restrictive and lack the flexibility farmers need to use carbon-reducing practices that work for their farm.

Development of 45Z SAF tax credit guidance for 2025 through 2027

should include more options and flexibility in farming methods that qualify and allow farmers to adjust their methods from year to year.

It should also utilize the existing feedstock calculator available for use with GREET to determine on-farm carbon intensity of practices implemented by farmers to grow grain for SAF.

Federal and state-level incentives, such as Illinois' \$1.50-per-gallon SAF purchaser and user tax credit, are crucial for stimulating the SAF market. About 25 million gallons of SAF were produced in 2023, far below the current administration's SAF goal of 3 billion gallons by 2030 and 35 billion gallons by 2050.

Modeling from Iowa-based Decision Innovation Solutions suggests U.S. agriculture has the production capacity of meeting about half of future SAF grain demand. SAF produced from soybean oil would account for four billion gallons, while SAF made from corn ethanol would make up another 6 to 11 billion gallons.

To contribute to those production levels, Illinois would need to establish 14

more 200-million-gallon ethanol plants and invest in other SAF infrastructure. Such expansion could lead to an extra \$13 billion in economic activity per year, DIS models show.

Without a viable SAF market, corn farmers risk losing out on \$2 billion per year through 2050. These are real, tangible dollars that farm families can use to sustain their operations and pass them on to the next generation.

To fully scale SAF technology and realize its market potential, today's policy decisions around SAF must provide the certainty and flexibility farmers need to meet demand.

Airlines and biofuel producers require a solid backstop to their major investments into SAF technology just as much as farmers deserve credit for adopting and implementing sustainable farm practices used to produce SAF feedstocks.

This economic opportunity is too valuable to get wrong.

(This story was distributed through a cooperative project between Illinois Farm Bureau and the Illinois Press Association. For more food and farming news, visit FarmWeekNow.com.)





## THE FARMER'S REPORT

## New program in Illinois compares farming practices and outcomes

By KEVIN BESSLER

The Center Square

SPRINGFIELD – A farming program in Illinois aims to improve farm incomes and environmental outcomes.

Precision Conservation Management recently released a summary of nine vears' worth of in-field data from Illinois farms. Farmers enrolled in PCM receive annual data analysis for their farm in addition to access to conservation experts and guidance on cost-share programs available to farmers. Through their data analysis, the program aims to identify conservation practices that effectively address environmental issues without risking the farmers' bottom line. "It definitely sheds light on what a person is doing and if someone else is doing it the data set can give you a glimpse into a different practice that maybe you aren't doing that you want to do," said Zach Wells, a farmer in Champaign County.

According to PCM data, the most frequently observed tillage systems on the most profitable acres were onepass light tillage for corn and no-till for soybeans.

PCM surveyed enrolled farmers in 2024 and found that 64% of farmers who don't already use reduced tillage practices agree that they are likely to reduce or eliminate tillage due to information they have received from PCM.

Reducing tillage can also have a significant impact on

soil erosion and water quality. PCM began as a response to the Illinois Nutrient Loss Reduction Strategy in 2015, which guides state efforts to improve water quality at home and downstream by reducing nitrogen and phosphorus levels in lakes, streams and rivers.

"Between now and 2025, we all have to do something different on each acre to achieve the goals of the Illinois Nutrient Loss Reduction Strategy," said Dirk Rice, a Champaign County farmer. "We can't do what we've always done and avoid negative publicity or difficult regulations like we see in surrounding states."

Farmers in Kentucky and Nebraska are also taking part in the program.



## Illinois apple orchard succeeds over insect, weather challenges

By PHYLLIS COULTER FarmWeek

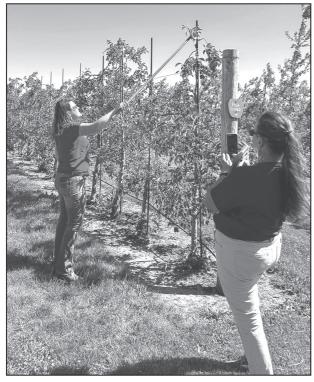
Two wagonloads of specialty growers were guided through rows of apples at Jonamac Orchard and learned how this year's crop was saved from frost damage.

The U-pick orchard, part of a 105-acre family-owned farm in DeKalb County, consists of more than 20,000 trees growing more than 30 varieties of apples.

Spychal and McArtor family members shared some apple-growing challenges and triumphs June 6 at the Summer Horticulture Field Day organized by the Illinois State Horticultural Society.

When temperatures at the DeKalb County farm drop to 29 degrees for an hour, the orchard can lose 10% of the apple crop, said Mike Spychal, one of Jonamac's

And if the temperature



Jenna Spychal demonstrates how she installs a codling moth mating disruptor to apple trees at the Illinois State Horticultural Society's summer field day at Jonamac Orchards in Malta on June 6. (Photo by Phyllis Coulter of FarmWeek) falls to 25 degrees, crop loss can grow to 90%.

Raising the temperature by 4 degrees matters. "It's the difference between having a season or not," Spychal said.

The orchard invested in two frost machines — basically a helicopter blade on a tall tower — and used them twice this year. Each cost \$40,000.

But saving the crop required more than machines alone; manual labor was also needed.

Workers place barrels with wood from pruning trees among the rows of apple trees that create heat for the frost machines to distribute. The team must light 180 fires throughout the orchard, often about midnight.

And frost isn't the only challenge for the orchard.

challenge for the orchard.

Jenna Spychal, Mike's wife, and the granddaughter

of founders Jerry and Mary

Lynn McArtor, is leading the orchard's fight against codling moths, whose larvae can tunnel fruit and produce "wormy" apples.

"It's the first time we tried mating disruption," she said. She demonstrated how she puts the disrupter on the trees with a long pole, tree by tree.

The Jonamac team also uses a trap system. By monitoring the traps, they also know when the threshold has been reached to spray, said Kaci Athey, University of Illinois entomologist and assistant professor.

While the family could control frost damage, trees in one part of the orchard showed signs of winter damage, several to the point of dying.

Mohammad Babadoost, a plant pathologist and U of I professor, said he has seen more winter damage problems in central and northern Illinois in the past several years.

When the tree's vascular system suffers from winter damage, the tree is more susceptible to fungi, he said.

"It's beyond a pathology problem. We need more research on why this is happening," Babadoost said. "It's complex."

Mike Spychal said the dead and dying trees will be removed and drainage improved in that area before replanting.

Babadoost praised the management of Jonamac Orchard. "This is one of the cleanest orchards, disease-wise, in Illinois," the pathologist said.

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#### Illinois farmer's know-how answers prayers, hikes yields in Uganda

#### By PHYLLIS COULTER FarmWeek

LaSalle County farmer Joe Schmidt recalls standing in a field in Uganda in disbelief.

The family he just met could barely grow enough white maize to feed themselves. They couldn't afford to pay tuition for their children to attend school. There wasn't any surplus corn to sell.

But the soil is nice. The weather is generally good. And two crops a year are produced.

"I can't fathom why the crops are so poor," he told FarmWeek. "Everything I saw was a question. I felt like 'I've got to help.' This is God grabbing me to do this."

That visit led Schmidt and his wife, Nathalie, to create TUF, Transforming Ugandan Farmers. They set up demonstration plots and hired Peter Baguma, a local agronomist. And in three years, the couple has helped farmers there quintuple their corn yields.

"They tell us we are an answered prayer," Schmidt

In 2020, inspired by members of First Presbyterian Church in Ottawa, the couple started working with two groups of farmers in two demo gardens of an acre each in the Kamwenge District of Uganda. One



Nathalie and Joe Schmidt point out the airport in Uganda where they arrive as part of their Transforming Ugandan Farmers program that has helped farmers increase their maize yields fivefold. Their adult daughters and families, First Presbyterian Church in Ottawa, LaSalle County Farm Bureau are among their biggest supporters in Illinois. (Photo by Phyllis Coulter of FarmWeek)

30-member group consisted of women and the other included the Reformed Poachers Association. The former poachers had hunted chimps, elephants and other wildlife to survive. "They were shunned" and the poorest of the poor, Schmidt said.

A year later, the Schmidts added two more groups and then another two in 2022. They were taught to plant in 30-inch rows to control weeds and reduce the need for hand hoeing, to plant only two inches deep, not

four, and to plant one seed

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in a hole, instead of two or more.

But there was skepticism.

Most saved and used the same seed year after year. "Only 1% ever bought a bag of seed," he said. Those who graduated from the training program after the first season were given a bag of quality white maize to plant the next year.

Working alongside the Ugandan nonprofit, Innovations for Transformation Initiative, the couple bought a 5-acre permanent demonstration farm in 2023.

Test plots there helped compare various practices side by side. In those where the seed was broadcast, as is traditional there, harvest was 10 bushels per acre. The "chop and plant method" produced 20 bushels per acre compared to planting their own seeds in a row, which netted 30 bushels per acre. Using all the recommended practices and modern seed, the plots yielded 52 bushels per acre.

By winter 2023, the program had grown to include eight groups, or a total of 240 farmers.

About 80% of the farmers in the program changed their practices and followed TUF's recommendations. Of those with higher yields now, between 90% and 100% of them could afford the tuition for their kids to go to school.

"It's exciting to see the changes," Nathalie Schmidt said. "We want to uplift the farmers there. We want to empower them."

Farmers still working by hand could produce five times what they could before. However, some said the old, lower-yielding corn tasted better roasted than the new higher-yielding variety, Schmidt said.

The farmers there are producing so much now that storage is an issue. They store the grain in their small homes. One farmer said he hoped he produced so much corn that he would have to sleep outside.

"Tens of thousands of farmers need help. We are starting in a little district and working from there," Nathalie Schmidt said. "What little they have, and they are still joyful."

Future projects could include corn storage or eventually equipment and facilities for milling grain or making flour. The next focus is on teaching children how to raise food.

To raise money for such projects, the second annual TUF Harvest Hands Up fundraiser is planned for 2 p.m. Sept. 14, at the Schmidts' farm in Ottawa.

For food and euchre tournament tickets go online, bit.ly/tufsrccf, or email the Schmidts at TUF.farmers@ gmail.com.

Schmidt hopes some farmers and colleagues from Uganda can attend the event this year and tour Illinois farms and agribusinesses while in the country.

Schmidt estimates they spend about \$500 per farmer over three years with the on-farm demonstration training, seed, fertilizer, storage bags and tarps.

"This has literally transformed their lives," he added.

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With a little help from their friends at Transforming Ugandan Farmers, founded by an Ottawa couple, Ugandan farmers are learning ways to grow better crops. (Photo courtesy of Joe Schmidt)

COMMERCIAL - BONDS - HEALTH

#### Time traveling with soil: Researching Illinois' centennial soil archive

By ERIN M. HENKEL FarmWeek

A soil sample from 1861 in Perry County was collected as part of the Illinois Geological Survey and provided researchers with information about Illinois geology, landscape and mineral resources. In 1899, researchers started mapping soil types to 3-foot depth and characterizing the distinct soil layers.

The archive of the soil samples was kept in a dark pole-barn near the Morrow plots on the University of Illinois Urbana-Champaign campus until Andrew Margenot and his team of about 40 research personnel discovered the barn's soils and started recovering and curating the soil archives.

Margenot is an Illinois Extension specialist and associate professor in the Department of Crop Sciences and has been working in conjunction with the Illinois Farm Bureau and Illinois Nutrient Research and Education Council, to resample the locations to identify how soils have changed over time in Illinois.

"We can learn a lot about what has changed over time and that can go as far back as 120 years or so," Margenot said. "That's important because we don't really know how soils changed more than a couple of decades ago, in general, and over a



A jar containing a soil sample collected in 1946 from Henderson County. The sample is one of the samples in the Illinois Soil Archive.

small area like typically one field trial. To do this over a state and going back over 100 years is a huge deal."

Margenot said the project builds on the lifetimes of researchers and soil scientists who have gone into the effort of collecting soil samples. He said because the soil samples were kept with details such as location, year and day of collection, researchers today can resample the soils and see how the soils have changed over a longer period than most soil archives that span only a few decades.

He also said while there might be "simplicity" in terms of crop rotation in the state, biochemistry and how water, soils and air interact are complex. "Soils change at a rate that we cannot see as individual humans and it is called generational blindness," Margenot said. "But if you took your great-grandfather and showed him soil now, he would be able to see things that you think are normal. To be able to measure these changes, you have to be able to go back in time."

He said until scientists invent a time machine, the bestway to "go back in time" is by using the archive built by previous researchers. He also said due to the size of Illinois, the collection of samples is especially unique.

"The state of Illinois is the size of some entire countries in Europe and to understand soil changes you have to look at it on a large spatial scale," he said. "This archive is one of the oldest in the world, but it's also unlike the other ones in the world — it's the largest by orders of magnitude. That's really important."

Margenot asked farmers and landowners to look at the map of locations needing to be resampled and see if they know the landowner. They would need access to the land to collect six to 12 cores, 1.5 inches in diameter, to 3-foot depth and would provide the farmer with a read-out of soil information at the field level. Any information at field level is protected and anonymized.

"There's very basic ques-

tions we can answer on fertility that have direct implications for economic use of fertilizer inputs," Margenot said. "Can we improve the recommendations and how to apply depending on your soil type? I think we can."

He said understanding the changes in the soil over time could also help farmers understand micronutrient needs such as zinc or boron.

Another benefit for farmers is understanding their

soil's potential for carbon sequestration as they navigate the carbon credit markets and determine whether they should enter into a carbon agreement.

Margenot said IFB "has been a great partner," helping the team to work with landowners and farmers.

"They've been supportive of putting us out in front of farmer crowds and they have also been supporting policy communication that

I think is essential for this project," he said.

Margenot said IFB is helping connect the research team with policymakers at the state and federal level to explain the importance of soil changes and phosphorus losses.

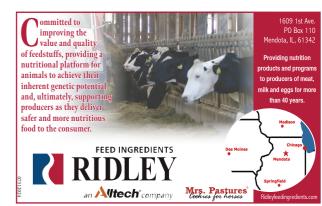
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Andrew Margenot is an Illinois Extension specialist who has been working with the Illinois Farm Bureau and Illinois Nutrient Research and Education Council to recover and curate soil archives to identify how soils have changed statewide over time. (Photo provided by Andrew Margenot)









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# USDA launches new Bobwhite Conservation Pilot in Illinois, enhancing opportunities for producers and wildlife

CHAMPAIGN — The U.S. Department of Agriculture (USDA) announced the launch of a new Working Lands for Wildlife (WLFW) conservation effort - the Northern Bobwhite Pilot Project, which offers agricultural producers and landowners the tools to conserve wildlife habitat for northern bobwhite quail by improving East-Central grasslands while achieving other critical conservation benefits, including sequestering carbon and improving water quality and soil health.

"The USDA has a long track record of fostering and supporting the vital relationship between agriculture and conservation, and the new Northern Bobwhite Pilot Project helps our producers be good stewards of their lands and boost wildlife populations at the same time," said Tammy Willis, NRCS State Conservationist in Illinois. "These efforts demonstrate the power of USDA's Farm Bill conservation programs to conserve wildlife habitat, protect clean water and address climate change in partnership with farmers, ranchers, forest owners and conservation organizations across the country."

The Northern Bobwhite Pilot Project, offered by the Natural Resources Conservation Service (NRCS) through Working Lands for Wildlife, provided dedicated funding of \$13 million -- for fiscal year 2024 -- in new assistance through the Environmental Quality Incentives Program. This is for producers to help the bobwhite and other game and non-game species by managing their working

lands for early successional habitat while meeting their lands natural resource and production goals.

This new pilot includes funding to support producers in Alabama, Arkansas, Florida, Georgia, Illinois, Iowa, Kansas, Minnesota, Mississippi, Missouri, Nebraska, Ohio, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

NRCS accepts applications year-round for EQIP. Interested producers in Illinois should contact or visit their local USDA Service Center to enroll. Find your local service center at https://www.nrcs.usda.gov/conservation-basics/conservation-by-state/illinois#contact to start.

The Northern Bobwhite Pilot Project supports the 5-year, 7-million-acre goal of the Working Lands for Wildlife Northern Bobwhite, Grasslands and Savannas Framework for Conservation Action unveiled in 2022 by USDA. Recently, NRCS expanded the Climate-Smart Agriculture and Forestry Mitigation Activities that qualify for funding through the Inflation Reduction Act. Those funds will also be critical to Working Lands for Wildlife's success in reaching its

long-term goals.

The Northern Bobwhite Pilot Project advances US-DA's efforts in climate-smart agriculture with almost 20 climate-smart practices being deployed voluntarily on private lands, including field borders, brush management, tillage management, prescribed burning, prescribed grazing, forest stand improvement and herbaceous weed treatment. More than 17 conservation practices that support climate smart mitigation are included in the Northern Bobwhite Pilot Project.

#### New 'Bobscapes' App

NRCS and Quail Forever are also supporting northern bobwhite conservation with a new "Bobscapes" mobile app for citizen science reporting that will help researchers better understand population dynamics and help managers direct resources for habitat work where those investments will be most effective in recovering the species. Additionally, for those interested, the app will connect landowners to technical experts who can make habitat recommendations and share information on voluntary cost share programs. Bobscapes reporting adheres to protection of personally identifiable infor-



mation for citizens and for bobwhite locations. Lastly, the data provided will assist wildlife biologists in creating a national habitat network of "Bobwhite landscapes" necessary to ensure this species persists for future generations.

#### **More Information**

Producers and landowners interested in the Northern Bobwhite Pilot Project should contact NRCS at their local USDA Service

Center to sign up now.

USDA touches the lives of all Americans each day in so many positive ways. Under the Biden-Harris administration, USDA is transforming America's food system with a greater focus on more resilient local and regional food production, fairer markets for all producers, ensuring access to safe, healthy and nutritious food in all communities, building new markets and streams of

income for farmers and producers using climate smart food and forestry practices, making historic investments in infrastructure and clean energy capabilities in rural America, and committing to equity across the Department by removing systemic barriers and building a workforce more representative of America. To learn more, visit nrcs.usda.gov/conservation-by-state/illinois.





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## FARMER'S REPORT

#### Farm Progress introducing new Women in the Field program at 2024 Farm Progress Show



BOONE, Iowa – Farm Progress is excited to launch a new program, Women in the Field, at its 2024 events. This initiative aims to recognize the contributions of women in agriculture, increase female representation across the Farm Progress brands and foster long-lasting relationships that align with the future of the agriculture industry.

"We believe that empowering women in agriculture is essential for the industry's growth. The Women in the Field program celebrates their contributions and provides a platform for meaningful conversations. We look forward to growing this program in the future," said Emily Mauermann, Farm Progress director of marketing and product development.

The 2024 Farm Progress Show, one of the largest outdoor farm events in the U.S., is the inaugural site of the Women in the Field program. This year's stage content is in partnership with Case IH. The 2024 Farm Progress Show will be held Aug. 27-29 in Boone, Iowa.

The current speaker lineup includes Discover Ag podcasters Tara Vander Dussen and Natalie Kovarik; Three Farm Daughters owners Mollie Ficocello, Annie Gorder, and Grace Lunski; CNH agronomists Dr. Alison Bryan and Lily Cobo; influencer and farmer

Mary Pat Sass; influencer and beef producer Jena Ochsner; blogger and Midwest Farm Wives podcaster Kylie Epperson; influencer and beef producer Emily Matzke; and Farm Progress Prairie Farmer editor Holly Spangler.

Visit the Women in the Field stage, located on the Case IH lot #113, at 10 a.m. and 1 p.m. daily during the Farm Progress Show to learn from these accomplished women, celebrate their contributions and engage in meaningful conversations about the future of agriculture.

For more information about the Farm Progress Show and to purchase advanced tickets, visit Farm-ProgressShow.com.

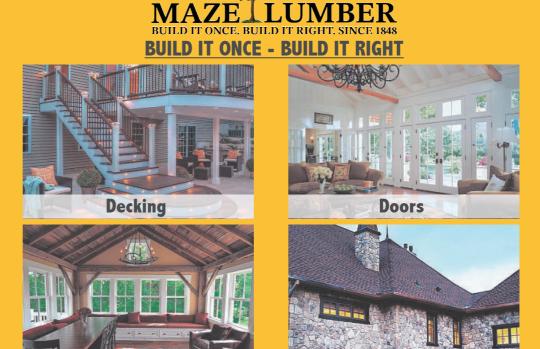
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As part of Informa Markets, Farm Progress is the largest, most diversified agriculture information business in North America. Through a robust network of live events, digital products, data, marketing services, broadcasting and local and national publications, Farm Progress enables the nation's most economically significant farmers, growers and ranchers to connect and do business. It serves 80% of the 2 million farms and ranches in the U.S., and an estimated 85% of the nation's annual agricultural gross domestic product. Visit our website at Farm-Progress.com.



The 2024 Farm Progress Show will take place Aug. 27-29 in Boone, Iowa.

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