

FARMER'S REPORT

West Brooklyn woman among ISA Soy Envoys selected for 2023 growing season

BLOOMINGTON-The Illinois Soybean Association (ISA) has named its ILSoyAdvisor Soy Envoy class for the 2023 growing season

The Soy Envoys commit to a one-year term to contribute actionable information, advice and in-season updates via the ILSoyAdvisor blog to support Illinois soybean farmers in their goals of increasing yields and profits while minimizing environmental impact.

"ISA is excited to welcome seven new Soy Envoys for this year's program that runs the entire growing season, April through October or the end of harvest," said Outreach Agronomist, Stephanie Porter. "ISA Soy Envoys work in fields with farmers daily. Our program is a networking opportunity to learn from other agronomic professionals and share soybean knowledge and information with not only each other but also farmers statewide."

The Soy Envoys will write blogs, provide in-field video updates, and share actionable soybean insight on social media. Follow the Soy Envoys on Twitter, Facebook and ILSoyAdvi-

sor.com

Funded by the Illinois Soybean checkoff program, the ILSoyAdvisor Soy Envoy program has expanded to include agronomy experts from across the state, including crop consultants, industry professionals, and a research student who will be providing local recommendations throughout the season to Illinois farmers.

The 2023 Soy Envoys are:

- Crystal Williams of West Brooklyn - Pioneer Seed - CORTEVA Agriscience, Field Agronomist, CCA-Specializes in fertility and weed management, field scouting, and product positioning.
- Karen Corrigan of Goodfield - McGillicuddy Corrigan Agronomics, Co-Owner, CCA, Heartland Community College, Adjunct Instructor – Specializes in weeds, herbicides and pest management.
- Kelly Robertson of Benton - Precision Crop Services LLC, Owner, Lead Agronomist, CCA - Specializes in field observation,



precision management, VR seeding and soil fertility. Robertson also scouts beans for seed production and troubleshoots agronomic issues.

- Kris Ehler of Champaign Ehler Brothers Co., Sales Agronomist/ President, CCA Focuses on early planting, seed treatments, high yield strategies, planting populations and in-season management.
- •Leonardo Rocha of Carbondale Southern Illinois University, Post-Doctoral Researcher Specializes in plant pathology topics, focusing on SCN management

practices. Rocha also wants to write research summaries on the projects developed at SIU,

which are sponsored by the ISA checkoff program.

- Matt Herman of Mt. Carmel-Burrus Seed Company, Account Manager (DSM), CCA Focuses on high-management corn and soybean production, soil fertility, and seed selection. Herman is constantly testing and trying to learn new things to improve the grower's ROI.
- Michael Hicks of Ursa - Ursa Farmers Coop, Sales Manager - Specializes in

helping producers reach the next level. Hicks works closely with Benson Hill farmers growing specialty beans while focusing on utilizing cover crops and management to maximize return on every acre.

The Illinois Soybean Association (ISA) checkoff and membership programs represent more than 43,000 soybean farmers in Illinois. The checkoff funds market development, soybean production and government relations efforts, while the membership program, Illinois Soybean Growers (ISG) and the Illinois Soybean Growers PAC actively advocates for positive and impactful legislation for farmers at local, state and national levels. ISA upholds the interests of Illinois soybean farmers through promotion, advocacy, research and education with the vision of becoming a trusted partner of Illinois soybean farmers to ensure their profitability now and for future generations.

Carbon & Data Guidebook available through ISA

BLOOMINGTON – Farmers now have access to a new, go-to resource housing good data management practices thanks to a project funded by the Illinois Soybean Association (ISA) checkoff program.

The Carbon & Data Guidebook, which can be accessed on ILSoyAdvisor.com, covers the basics of emerging carbon and ecosystem programs, their farm data needs, and how farmers can better position their farm operations for any program or precision ag initiative.

The importance of good data management is being accentuated due to the plethora of carbon and ecosystem programs becoming available in recent years. It's becoming critical that famers take a harder look at how they are collecting, managing, and storing

their farm data - whether or not they are pursuing a carbon or conservation program.

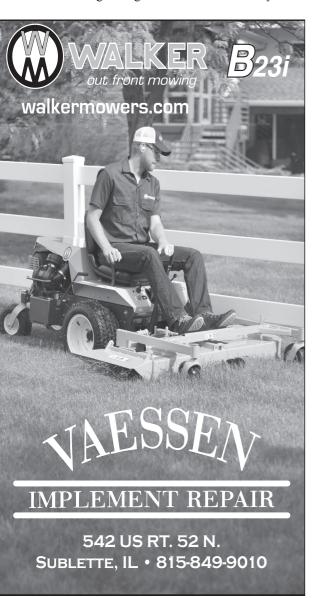
"The Carbon & Data Guidebook is a resource growers can utilize to help organize their data for sale, whether it's to a carbon program or for other value-add situations requiring data. The Guidebook contains advice on file types, digital tools, and the types of practice data needed to enter a carbon or ecosystem service market," says Megan Miller, ISA Agronomy Programs Manager.

"Looking at the future, these ecosystem service markets are among the first opportunities growers have to sell their practice data. Getting your data in order now will allow you to take advantage of future opportunities."

To view the Guidebook, visit https://

www.ilsoyadvisor.com/carbon-da-ta-guidebook/.

The Illinois Soybean Association (ISA) checkoff and membership programs represent more than 43,000 soybean farmers in Illinois. The checkoff funds market development and utilization efforts while the membership program supports the government relations interests of Illinois soybean farmers at the local, state, and national level, through the Illinois Soybean Growers (ISG). ISA upholds the interests of Illinois soybean producers through promotion, advocacy, and education with the vision of becoming a market leader in sustainable soybean production and profitability. For more information, visit the website www. ilsoy.org and www.ilsoygrowers.com.



USDA offers grants to help socially disadvantaged ag producers and business owners in rural areas

WASHINGTON, D.C. – U.S. Department of Agriculture (USDA) is accepting applications for grants to support technical assistance for socially disadvantaged agricultural producers and rural business owners.

USDA is making available up to \$3 million in Fiscal Year 2023 through the Socially Disadvantaged Groups Grant Program. The maximum amount an individual applicant may receive is \$175,000.

The Department is making the Socially Disadvantaged Groups Grants available to organizations that will provide any technical assistance for the development of cooperatives or the formation of new cooperatives. Technical assistance includes leadership training, and developing feasibility studies, business plans and/or strategic plans. The grants are not provided directly to businesses or individuals.

USDA defines a socially disadvantaged group as one whose members have been subjected to racial, ethnic or gender prejudice because of their identity as a member of that group without regard to their individual qualities. Applicants may be based in any area, but the groups they serve must be located in an eligible rural area.

The Department is offering priority points to projects that advance key priorities under the Biden-Harris Administration to create more and better market opportunities and improved infrastructure, advance equity and combat climate change. These extra points will increase the likelihood of funding for projects seeking to address these critical challenges in rural America.

Electronic applications will be accepted via Grants. gov until 4:30 p.m. local time on May 16, 2023.

For additional information, see page 16404 of the March 17, 2023, Federal Register.

Contact your local USDA Rural Development State Office to discuss potential projects and ask questions about the application process. You may also visit https://www.rd.usda.gov/il or call (217) 352-3536.

If you'd like to subscribe to USDA Rural Development updates in Illinois, visit our GovDelivery subscriber page and follow @RD Illinois on Twitter.

Ukrainian farmers challenged as war enters second year

By DAN GRANT

FarmWeek

Crop production in Ukraine is expected to take a big hit this year, despite farmers' best efforts, as the Russian invasion enters its second year.

Myloka Solskyi, Ukraine minister of agrarian policy and food, discussed his country's situation via a video chat during USDA's 99th Annual Ag Outlook Forum.

"We're losing people," he said during an impassioned speech. "Cultivated area has decreased about 25%. A considerable amount of our land is polluted with explosives."

Ukrainian farmers face not only the physical challenges of war to plant their crops, but also worsening supply chain issues and tightening margins.

"We face serious energy supply problems. Russia is shelling critical supply infrastructure (including crop storage and loading facilities)," Solskyi said. "Some farmers have become unprofitable. Our ag sector is losing its potential."

Gordie Siebring, an American farming in Ukraine, will mark 30 years in ag there next month. He previously operated a dairy in Iowa.

He also foresees major issues for Ukrainian farmers this season as the war



Myloka Solskyi, Ukraine minister of agrarian policy & food

drags on.

"As we look to spring, many farmers say they can't afford to put on fertilizer this year," Siebring told the RFD Radio Network. "I just met with my Pioneer salesman, and he projects corn plantings will be down at least half of what they would have been."

Joe Glauber, senior research fellow at the International Food Policy Research Institute and former USDA chief economist, estimates wheat plantings in Ukraine are down 35-40%. He looks for similar cuts in corn production this season.

"I think this year in a sense will be more critical to its impact on Ukraine and global markets," Glauber said during the Ag Outlook Forum. "We've seen this hit three crops now—the 2021 crop that wasn't able to be exported, the 2022 crop had all sorts of problems and the

2023 crop is being impacted by very low returns."

The war and other crop production issues, including drought in the western U.S. and Argentina, trimmed world crop stocks to the lowest level since 2007/08 for wheat and 2012/13 for corn.

"We can't really afford drought in any other major producing region of the world this year, or we'll be back to where we were (with short supplies and higher prices)," Glauber said.

The U.S. continues to support Ukraine, and farmers there still plan to produce and export what they can this year. Most exports from Ukraine are being shipped via land instead of ports that are blocked by Russian forces, which adds more than \$100 per ton to transportation costs.

"The world recognizes Ukraine is important to food security," Solskyi said. "We're doing everything possible to ensure the world doesn't suffer from famine."

Russia officially invaded Ukraine just over a year ago, on Feb. 24, 2022. And Siebring still struggles to believe what he's seen since then.

"The first thing that comes to mind is the true shock the invasion actually occurred," Siebring said. "The war has been so bloody and brutal, in the 21st century I just really didn't see something like that happening."

Siebring appreciates the support from his fellow Americans. But he doesn't foresee an end to the conflict any time soon.

"We were very encouraged to see (President) Biden make the trip here," he said. "But I don't see Russia giving up."

Ukraine was the world's sixth-largest producer of corn and seventh-largest producer of wheat prior to the war. The top five producers of corn worldwide are the U.S. (31%), China (25%), Brazil (11%), the European Union (5%) and Argentina (5%), according to Greg Johnson, grain originator at Total Grain Marketing in Champaign.

(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.)





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THE FARMER'S REPORT

Selma Sims: 'I want others to know they can lead'

By ALI PRESTON **FarmWeek**

her mom.

Selma Sims didn't sleep in on the weekends when she was young. She didn't want to miss breakfast with

"It was a whole thing about getting to go to a restaurant to eat breakfast on a Saturday morning because my mom was off work," she said. "Just being able to read through the menu to see what the different things were."

That's when her interest in food began. And it evolved over the years as she looked for a career where she could make a difference.

When she moved from Rogers Park to the South Side of Chicago in 2010, she first noticed a difference in nutrition and food access. Students would come to the after-school program with Takis and peppermint sticks for snacks.

"All of that's delicious. I love it," she said. "But it's the nutritional density of those foods that's one of the reasons they were lethargic 30 to 45 minutes after they came to after school."

A scientist at heart, Sims went "down a rabbit hole"

researching food inequity. At the same time, she was preparing to transfer to Iowa State University. Those two experiences led her to agriculture. "I know a lot of people chose agriculture because they want to fix a problem," she noted. Sims wanted to combine her love of research and recreation with her newfound problem of food deserts in her home city. With help from her academic adviser, she decided on an agronomy degree with a minor in horticulture. What she would do with that, she didn't know. But she knew she wanted a career that would make an impact.

She found one.

As CEO and head grower at Gardeneers, Chicago's only custom full-service school gardens program, Sims teaches youth where their food comes from and how to grow it. That same food feeds students and community members within a 1-mile radius of each garden. But one of the most impactful aspects of Sims' role comes in the form of representation.

"I think in agriculture, especially when it comes



Selma Sims observes a group of AmeriCorps volunteers preparing a dish. The volunteers practice their skills before taking the cooking lessons into Chicago Public School classrooms. (Photo by Scott Anderson)

to modern American agriculture, there aren't many people that look like me doing this work," she said.

It was an issue she first noticed while attending ISU, where she was one of six people of color in the agronomy department. "I felt like a drop of dye in a bowl full of water. And it's like, how am I supposed to

get help?" she recalled after attending an agronomy club meeting with more than 100 members.

Thankfully, she got involved in many organizations that supported her career path.

"MANRRS (Minorities in Agriculture Natural Resources and Related Sciences) was one of those

organizations that let me know, 'Well, you can do this," she said. Sims remains involved in MAN-RRS today, in addition to serving as president of Advocates of Urban Agriculture and a member of Lt. Gov. Juliana Stratton's Agricultural Equity and Food Insecurity Council.

Asked what it means to

be a female leader in ag, she said it means everything. "I want others to know they can lead."

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Ag transportation costs ease, but issues linger

By DAN GRANT

FarmWeek

The farm sector shouldn't see quite as many transportation-related challenges this year compared to 2022, according to industry experts at the Grain and Feed Association of Illinois' (GFAI) 130th annual convention in Peoria.

Barge freight rates eased in recent months from historic highs last fall. And trucking rates were down about 8% as of Feb. 21 compared to last year.

"One thing that's improved year over year is transportation," Eric Wuthrich, manager of Farmers Grain Co. in Roseville, told FarmWeek after being elected GFAI president at the event.

"Last year it seemed freight was awfully hard to come by," he noted. "It seems to have improved somewhat, especially for trucking."

And that's particularly important for facilities such as Farmers Grain that don't sit on a river or rail line and therefore rely on trucks to move all products.

"One of the main challenges now is interest rates," said Wuthrich, who has spent 15 years in the grain industry and the past seven serving on the GFAI board. "We buy a lot of grain for December and January. There's a big difference between borrowing \$20 million at 3% interest or borrowing \$20 million at 7%."

Higher interest rates not only cut into grain handling margins but could also slow expansion or upgrade projects at elevators and other facilities.

"Capital will play into a lot of decisions (in the grain industry), including expansion and capital projects," the GFAI president said.

Jake Brodbeck, vice president of ARTCo barge line, a subsidiary of Archer Daniels Midland, believes shipping rates in the trucking industry possibly eased in recent months due to slightly lower fuel prices and an easing of the driver shortage.

The situation is similar in the barge industry, although labor shortages mostly occurred at individual ports but not as much for longhaul crews for that mode of transportation.

"I think barge freight will remain firm the next couple years," Brodbeck said. "But I don't think it will be a repeat of the fourth quarter 2022, unless we get another crazy weather event. We had a perfect storm last year of low water, harvest demand and a shrinking fleet size."

Drought-induced low water levels on the Mississippi River last harvest caused barge operators to reduce payloads by 25% to 50% and idle much of the fleet.

But barge transportation is still one of the most efficient for grain and other ag products. A barge can move a ton of cargo more than 800 miles on just a single gallon of fuel, Brodbeck noted.

"The most important thing to keep in mind is the incredible advantage we have because of the waterway system (which contains about 25,000 navigable miles in the U.S.)," he said.

A challenge for the transportation sector moving ahead is the high cost of building new barges and train cars. The cost of building new train cars increased about 20% in recent years.

Meanwhile, the high cost of steel not only remains prohibitive to build new barges, but it's also an incentive to scrap them. A scrapped barge currently is worth nearly \$100,000 compared to just \$30,000 in previous years.

"Interest rates are high and the cost of capital is strong," Ken Eriksen, senior vice president of Agri Supply Chain, IHS Market Agribusiness, told the RFD Radio Network at the convention. "People are unwilling at these levels to invest in something, especially when you look at the cost of steel.

"While it peaked and has come back down, there's still a lot of (steel) inventory priced high that companies are going to have to work through."

The current U.S. barge fleet consists of about 12,000 covered hoppers, 5,000 open hoppers and about 4,000 tanks. A barge typically has a lifespan of about 30 years and the av-



Barge transportation remains one of the most efficient modes for grain and other ag products. And during the past few months, freight rates have dropped from record highs. (Photo by Catrina Rawson of Illinois Farm Bureau)

erage age of the current fleet is about 20 years, meaning more are close to retirement, Brodbeck said.

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THE FARMER'S REPORT



Farmland values continue upward rise

BLOOMINGTON – Prices being paid for Illinois farmland continue their upward curve, a trend that applies to all classes of farmland across the entire state. This is according to the information released at the 2023 Illinois Farmland Values Conference sponsored by the Illinois Society of Professional Farm Managers and Rural Appraisers.

According to Luke Worrell, AFM, ALC, Worrell Land Services, Jackson-ville, overall chair of the event, "2022 continued to see a sharp rise in land values. While certain pockets of Illinois experienced more strength than others, in general, Illinois land was up across the board. Across all of the regions that have "Class A" Excellent acreage, we saw an increase of 16 percent. "Class B" Good farmland was up 17 percent, "Class C" Average up 7 percent, "Class D" Fair up 7 percent and recreational land was up 17 percent on average."

He told those at the conference, "If you factor in 2021 results, Class A land across Illinois saw an increase of over 45 percent during a 24-month time span. While premium acreage always carries the flag, lesser quality acreage saw increases in excess of 25 percent and in some instances over 40 percent over the same time period. Mixed use and recreational properties have seen a strong increase as well with this year's study showing an increase of 14 percent in 2022 alone."

"With the benefit of hindsight, we are able to look back and see something of a perfect storm that led us here," he continued. "Reduced transactions in 2020, historically low interest rates, strong demand, increased commodity markets and overall fear in other economic sectors all played a role in the groundswell. In many parts of Illinois, we saw a huge number of transactions throughout the first few months of 2022.

In my own area, if you wanted to know what the record price was, you only had to look up how the latest auction performed.

"We have seen several things change that could impact our next steps," Worrell stated. "Interest rates have literally more than doubled since last year and that is bound to have an effect. The early months of 2023 have provided more erratic sales than what we have become accustomed to.

Additionally, Worrell said there doesn't seem to be nearly the number of transactions taking place or farms being advertised early this spring. It remains to be seen if this is the first step of a "leveling off," "a small softening" or a mere "breather."

"Whatever might develop, there is a definitive different feeling to the overall market. That isn't to say we expect a drastic correction; we do not anticipate the market to plummet downward. In fact, 70 percent of survey respondents foresee either a level market or slight decrease. Only 1 percent of respondents expect a decrease greater than 10 percent."

How Sales Are Happening

The report, compiled by members of the Society, indicate that 24 percent of parcels were sold by private treaty, 58 percent by public action, 13 percent by multi-parcel auction, and 5 percent by sealed bid. Public auctions have increased.

An article in the 2023 Illinois Land Values and Lease Trends Report, distributed at the conference and authored by Gary Schnitkey, Ph.D. University of Illinois, points to farmers accounting for 60 percent of the purchasers, with 58 percent being local farmers and 2 percent being relocating farmers. Individual investors who would not farm the land were the next largest group, accounting for 27 percent of the

buyers. Local investors accounted for 15 percent of the buyers and non-local investors accounted for 12 percent. Institutions accounted for 8% percent of buyers. Survey respondents indicated that 58 percent of farmland buyers required debt financing.

Cash Rents Are Higher, Too

Schnitkey reports that average cash rent levels increased substantially from 2022 to 2023 for all land productivity classes with the higher quality land experiencing the greatest absolute increase. For Excellent productivity farmland, the \$412 per acre cash rent for 2023 was \$43 higher than the \$369 per acre cash rent in 2022. Cash rents for Good quality land increased by \$31 per acre from \$322 in 2022 to \$353 per acre in 2023. Average quality farmland increased from \$275 per acre in 2022 to \$285 per acre in 2023, an increase of \$10 per acre. Fair quality farmland increased \$8 from \$215 per acre in 2022 to \$223 per acre in 2023.

Overall Expectations on Rents

Overall, farm managers were asked their expectations of 2024 cash rent level:

- 0% percent expect 2024 cash rents to increase over 2023 levels,
- 36 percent expect 2024 cash rents to be the same as in 2023, and
- 36 percent expect 2024 cash rents to decrease from 2023 levels.

Most farm managers expect the agricultural economy in 2023 to remain the same (45 percent) or decline (48 percent) from 2022 levels. Seven percent expect the agricultural economy to be better.

Copies of the presentation are available for review at www.ispfmra. org. The actual Farmland Values and Lease Trends Report is available for hard-copy order at the site as well. Cost is \$20 per single issue.

GROWMARK offers 55 scholarships to students

BLOOMINGTON—GROWMARK, Inc. announces a revamped scholarship program for 2023. The GROWMARK Foundation will provide 55 scholarships of \$2,000 each to students pursuing agriculture and business-related degrees or certificates at colleges, universities, and technical schools in the United States and Ontario, Canada.

"GROWMARK and the FS member cooperatives are strong supporters of youth leadership education and this is one more way we can contribute to the future of agriculture," says Amy Bradford, GROWMARK corporate communications manager and GROWMARK Foundation manager.

At the time of application, students must be high school seniors or the equivalent of and enrolled in a university, community college, or technical school for fall 2023, or continuing students enrolled in good standing at a university, community college, or technical school. Scholarships will be scored by a committee comprised of industry professionals outside of the GROWMARK System.

The 2023 GROWMARK Foundation Scholarship Application may be found at https://form.jotform.com/230585564689169. The application deadline is May 12, 2023.

Over the last year, GROWMARK has contributed almost \$1 million to community initiatives through its charitable organization, The GROWMARK Foundation. These funds have supported more than \$200,000 in scholarships, \$400,000 in matching funding to ag initiatives across North America, and more than \$70,000 to Ag in the Classroom programs.

About GROWMARK

GROWMARK is an agricultural cooperative serving almost 400,000 customers across North America, providing agronomy, energy, facility engineering and construction, and logistics products and services, as well as grain marketing and risk management services. Headquartered in Bloomington, Ill., GROWMARK owns the FS trademark, which is used by member cooperatives. More information is available at growmark.com.

About the GROWMARK Foundation

The GROWMARK Foundation was formally incorporated in 2005 and supports 501(c)(3) not-for-profit charitable organizations. The Foundation is focused on programs and activities which support: the vitality of the industry of agriculture; agriculture education and consumer understanding of agriculture's contributions to society and the economy; agricultural leadership development; and education about the benefits of the cooperative way of doing business. The GROWMARK System has been involved in a variety of philanthropic efforts, including youth and young leader education and development and scholarships, for decades.

Illinois again takes top spot in pumpkin production

By ZETA CROSS

The Center Square contributor

SPRINGFIELD – Illinois continues to be the top pumpkin-producing state.

It's been many years since any other pumpkin growing state has beaten Illinois in pumpkin production. Raghela Scavuzzo, executive director of Illinois Specialty Growers, said Illinois produced 651.9 million pounds of pumpkins in 2021, 39% of all the pumpkins produced in the U.S.

"Illinois has been No. 1 in pumpkin production for many, many years, and we are very proud of that," Scavuzzo told The Center Square.

Decades of experience and dedicated research keep Illinois on top, she said.

In 2021, Illinois harvested many more pumpkins than its closest competitor Indiana. Indiana is the second largest pumpkin-producing state, clocking in with 181 million pounds. California, Texas and Michigan round out the top five biggest pumpkin-growing states.

"Illinois soil is just prime for pumpkin production. We grow beautiful pumpkins year after year," she said.

Nearly 18,000 acres of pumpkins were planted in Illinois last year. Compare that to sweet corn, which accounted for 6,500 acres. Ninety-seven percent of the pumpkins went to processors.

In the 1920s, Illinois established its pumpkin processing industry. Nestle

Libby has a huge pumpkin-processing plant in Morton, the town that bills itself the Pumpkin Capital of the world. Seneca Foods has a large pumpkin-processing plant in Princeville.

The top 10 pumpkin-producing counties in Illinois are Tazewell, Kankakee, Mason, Logan, Will, Marshall, Kane, Pike, Carroll and Woodford.

Most people don't know that pumpkins are a fruit, not a vegetable. People have been growing and eating pumpkins for 10,000 years. In colonial times, settlers cut the tops off the pumpkins, then they filled them with milk and honey and spices and roasted them in fire ashes. That is thought to be the origin of pumpkin pie.

A niche business in Illinois is growing gigantic pumpkins. Seeds for the mammoth 1,000 pound-plus prize winners start at \$35 dollars and sell for as much as \$1,000. Last year, Henry Bartimus of Dewitt raised a 1,673-pound pumpkin to win the prize at the Heap Giant Pumpkin weigh off in Minooka.



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How microsatellites could change the way you farm

The world's first satellite totally focused on agriculture launched in early 2023, number one in what will be a "constellation" of seven satellites surveying production fields and forestry lands from space. A global accomplishment to be sure, but what does it mean for Illinois soybean farms?

David Du Toit, head of the business advisory council for Dragonfly Aerospace, says each satellite should be in space for six years, collecting data according to target missions defined from the ground. Among the possible impacts data extracted from the satellite images could: reduce CO2 emissions, eliminate pesticide and fertilizer overuse, reduce food waste and mitigate the upcoming global food crisis.

"The hope is that the satellite will enable farmers to be more efficient in farming," he says. "The insight we will gain out of the satellite compared to the small carbon footprint of the satellite is huge."

Introducing the EOS Sat-1

According to Du Toit, these "micro sats" or "cube sats" have made it possible for commercial companies to launch satellites, where just a decade ago, only governments could afford to go into space. What Dragonfly Aerospace has essentially done is "ride share" with Space X, along with more than 100 other satellites, to get into orbit. Once their satellite, EOS Sat-1, was launched, Dragonfly Aerospace took over the controls and began commissioning the unit, quickly confirming the satellite was sending signals to the ground.

EOS Sat-1 will use two high-performance electro-optical cameras with 11 spectral bands, which are different frequency bands. These DragonEye imagers have 1.4m spatial resolution and 22 km swath. In this case, says Du Toit, their client, EOS Data Analytics, who specified the specific 11 bands they were interested in for the mission.

In turn, EOS's end user clients will use the information procured.

Information can be extracted from each of those different spectral bands, Du Toit explains, such as the health of crops or managing inputs like fertilizer, water or insecticides. Critical decisions, because while all of those inputs are undeniably necessary for crops, overusing them can have a critical impact on the bottom line.

Companies like Dragonfly Aerospace, which are part of what Du Toit calls "the new space industry," have the ability to pivot quickly as to what and where they monitor, due to not only the advanced technology but the manageable costs of the equipment. Once EOS Sat-1 completes this mission, a new mission can be defined.

The speed with which this technology can deliver information is also a huge factor, Du Toit says. "It is near real-time data." They are limited only by the satellite's proximity to a ground station for a link, and Dragonfly has already arranged for several of those, with more to come. Once the data is sent, Dragonfly says they'll go from data acquisition to insights delivery in three to 16 hours.

The Relationship Between Satellites and Ag Drones

When asked whether satellites could replace drones for ag monitoring, Du Toit reports he views them as complementary. While satellites cover a very large area, drones would need to fly many times to cover the ground EOS Sat-1 could cover, and they can do it without labor from the farmer. If farms could receive crop health information daily and use it to do more regular crop forecasting, Du Toit believes significant benefits could be realized. He envisions it being available through a subscription service, perhaps with government or other subsidies available to help farmers with adoption.



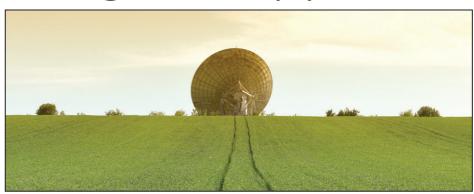
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