

Farm Futures

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Survival of the efficient

Don Sharp is no longer drowning in regulatory paperwork. Since daughter Rachael Sharp added artificial intelligence to their management toolbox, tasks that once took days to complete — like mandatory water usage reports — now take minutes. The Sharps use ChatGPT Pro to calculate precise pesticide orders, track seed and materials, and manage complex regulatory documents. With close management and critical review, AI is the highway to healthy farms and farm families, Rachael said. For family farms tight on time and margins, this efficiency isn't luxury. It's survival, allowing farmers to spend less time on paperwork and more time on what matters. See Page FF2. PAM CARAWAY



AI transforms farm management: Southern family's journey from overwhelmed to efficient

BY PAM CARAWAY
pam.caraway@farmprogress.com

Rachael Sharp never planned to return to her family's South Carolina farm after law school. But a personal setback brought her home in 2012. That's when she discovered her father, Don C. Sharp III, was drowning in paperwork while trying to manage both office duties and field operations.

Today, the Sharps are among a growing number of farm families who use artificial intelligence to manage an ever-increasing regulatory burden and operational complexity that threatens to push less tech-savvy farmers out of business.

In this year of squeezed margins, Rachael was quick to note the money they're saving. "We don't order extra chemicals anymore," she said.

Then she explained how she uses the generative AI tool ChatGPT to calculate her pesticide needs. "We don't have two pallets worth \$20,000 sitting in the shed at the end of the year while we worry that it will go bad if it freezes," she said. "We can order just the amount we need because it tells me to the tenth how much I need to order."

FROM DAYS TO MINUTES

The transformation extends far beyond ordering chemicals. Rachael uses AI to file mandatory water usage reports for South Carolina's Department of Health and Environmental Control — a project that used to take two to three days to finish.

"I have to report on every well and surface water pool on our farm, and it is mandatory or else you don't get to pull water for the year," she said. "You get docked if you're late. It's a big deal."

Her process now involves uploading the blank application and providing the data. She uses ChatGPT to fill in the forms. She, of course, reviews all completed reports and noted that the AI tool sometimes places information in wrong spots. "That's not a big deal," she said. "I can fix that."

What's more important, she said, is the technology gets the numbers right and anticipates needs she hadn't considered.

For instance, Rachael recalled, it noted



Don C. Sharp III started using ChatGPT on the farm when daughter Rachael came back home to Allendale, S.C. Though he prefers to leave the AI-heavy tasks to her, he does have some ideas about new uses for the technology. PHOTOS BY PAM CARAWAY

a caveat that needed to be explained — and then offered to write the addendum. "I was like: 'Yes, do that.' It thinks about things you would have never thought about doing," she said.

THE DIGITAL GENERATIONAL DIVIDE

Rachael isn't only concerned about the family farm and Sharp & Sharp Certified Seed. She's worried about the 75-year-old farmers without tech-savvy family members to help navigate increasingly complex digital requirements.

"I hate seeing those guys who are good and hardworking, honest people get left out because they don't have a tech-savvy person," she said. "Some of the best farmers in our county, in our area, they kind of get left behind. And it's not fair."

When state regulators introduced that water reporting system a few years ago, Rachael helped farmers her father knew — people she'd never met — simply because they couldn't navigate the technology. "Government regulators don't think things through all the time, and farmers don't have time to figure this stuff out," she said.

Sitting beside her, her father noted that he's one of those people. "This farm wouldn't be here without her," Don said.

The Sharps use generative AI for tasks ranging from calculating herbicide

control duration to creating maps for contract sprayers and burning permits. Rachael uploads South Carolina Department of Agriculture requirements and soil analyses from Clemson University, and the system generates required documentation with proper formatting and guaranteed analysis.

AI, she said, "is a nice tool. Could we live without it? Yes. But do I want to? Not really."

Don, who admitted he mainly uses the technology for simple tasks like looking up phone numbers, is concerned about the danger of such a powerful



Rachael Sharp looks over guides for making equipment adjustments under various harvest conditions. She used ChatGPT Pro to create the resource. She loaded the information and then used the AI tool to organize it for the farm's employees to easily understand.

tool. Yet he also sees potential for more sophisticated applications. He envisions AI-monitored satellites that could alert farmers to equipment problems in real time — like telling a sprayer operator about temperature inversions or warning when the wrong herbicide is loaded for a particular field. He'd really like to see soil sampling capability.

"AI has got to figure out a way to take some of the labor out of farming," Don said.

NAVIGATING RISKS AND RULES

Both Sharps acknowledge AI's limitations and dangers. Rachael pointed to the Massachusetts attorney who used AI in court and received incorrect information. She also recalled an experience when she appeared on Oprah Winfrey's podcast.

The podcast guests were shown a test where AI was given access to 40,000 company emails, including a few notes on plans to shut down the system. As a result, the system identified a planted message about an executive's affair and generated a blackmail message threatening to expose that executive if they moved forward with the shutdown plans.

"That's thinking," Rachael said. "How does it know to manipulate? I mean, that's blackmail. There has to be some rules and regulations out there. If it's a free-for-all, that's not good."

Despite these concerns, Rachael believes the technology's benefits outweigh its risks when properly managed. The key, she said, is understanding that output quality depends on input quality.

"Give it a weird prompt, you're going to get something really weird," she warned. "Trash in, trash out. The more data you give it, the better stuff you're going to get out of it."

Given the benefits, however, Rachael encourages farmers to try AI. Rather than avoiding the technology entirely, she advises farmers to "start small."

"I feel like a lot of people just won't try it, and I tell people all the time, you don't have to do something real complicated with it. Do something easy and try it out," she said.

Her vision for AI in agriculture focuses

Continued on Page 4

PAID ADVERTORIAL

Breaking the mold and improving with CLAAS

CLAAS



Fifth-generation Nebraska farmer Jason Richters says his farm is a way of life, allowing him to raise his family in a wonderful place and teach them a strong work ethic. That drives him to constantly improve his fifth-generation corn and soybean operation.

"I'm competitive, so finding better ways to do things drives me each day," says Richters. "Curiosity leads me to look at new technology, practices and equipment."

So, when a salesman from Nebraska Harvest Center suggested a side-by-side demonstration of the CLAAS LEXION 8600 combine compared to the competitor combine Richters was running at the time, that curiosity led him to agree.

"I saw reduced grain loss from the LEXION, and from there I evaluated other factors, such as costs and productivity."

"I knew it was the right decision. I had some anxiety running a new brand after 20 years, and there was a learning curve. But it's a better threshing and separation system that has made my operation better and changed my perceptions about CLAAS."

Between the success of his LEXION combine and his growing confidence in the support and service from Nebraska Harvest Center and the CLAAS dealer network, Richters was becoming a CLAAS fan. When it was time for a new tractor, Richters felt it was worth learning more about CLAAS offerings.

"I purchased a CLAAS AXION 930 TERRA TRAC tractor, and really enjoyed the smooth ride, power and performance," says Richters.

The performance of his LEXION combine and AXION tractor and the service he received reinforced Richters decision to go with CLAAS equipment. And thanks to the consistent CLAAS interior across machines, adding a tractor to his combine operation was an easy, natural step—not the big leap it might seem.

"I would encourage farmers to be open-minded and have courage to try new things," says Richters. "If you grow up with a certain brand your family ran, it can be hard to break the mold, but when I did it made my operation better. If you're willing to be uncomfortable and try something new you can learn and improve."

Scan this QR code to learn more about how CLAAS equipment can make your operation more efficient.



Continued from Page 2

on reducing regulatory burden rather than replacing human judgment. She hopes manufacturing companies and government agencies will synthesize their programs to accommodate AI systems to benefit farmers.

"Why not try to make it easier, work with AI?" she asked.

For the Sharps, AI is now essential to managing a modern farm operation — not by replacing farming expertise, but by handling the mounting administrative burden that threatens to overwhelm family operations. In an industry where margins are tight and time is precious, that efficiency may determine which farms survive the next generation.

And for Rachael, who is expecting her first child, the time saved on the farm goes back to her family.

"At the end of the day, farmers don't have to go into the office for two or three hours — or half the night," she said. "We can go home and be human."

What can generative AI do for you?

BY BEN POTTER

ben.potter@farmprogress.com

FIGHT. FLIGHT. FREEZE.

When it comes to generative AI, the typical "fight or flight" responses don't really apply. But the ever-increasing number of options may prompt you to freeze rather than getting started.

From Claude to ChatGPT, Copilot, Deepseek, Grok, Gemini and many more, these generative artificial intelligence technologies all promise to become game-changers in your day-to-day activities. They probably won't revolutionize your operation, but they could still prove to be useful tools on your farm.

GETTING STARTED

When you're ready to dip your toes into the generative AI waters, the good news is you don't need to fuss over which program in particular to use, according



Don't let a deluge of choices stop you from using artificial intelligence in your farming operation. DA-KUK/GETTY IMAGES

to Yuri Kovalchuk, CEO of Qaltivate.

"All of them work," he said. "They have very good foundational knowledge of how agriculture works."

Looking at three popular subscription-based generative AI programs,

here's what tends to do best at certain tasks, according to the Substack newsletter Artificial Corner:

- Following instructions: Claude Pro
- Audio and video analysis: Gemini Pro
- Casual use: ChatGPT Plus
- Search and browsing: all three
- Image and video generation: ChatGPT Plus and Gemini Pro
- Coding: Claude Pro
- Daily limits: Gemini Pro (300-plus prompts allowed per day)

How you use the program will drive good outcomes, Kovalchuk added.

"Creating good prompts is 60% to 70% of your success," he said. "The better prompts you create, the more definitive results you'll get."

And because many of these programs offer free versions, it doesn't hurt to check them against each other.

"One trick is to use one program to ask a question and then ask a second

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10 ways to use AI right now

One good prompt deserves another. With generative AI, it's all about brainstorming and exploring what these technologies have to offer. Here are a handful of ideas to get you headed in the right direction:

- 1. Generate scouting task lists for agronomists to help them focus on the highest-risk or highest-value fields.
- 2. Establish benchmarking reports for your fields to guide improvements.
- 3. Create predictive maintenance schedules for your farm equipment.
- 4. Formulate operator training instructions for farm machinery to speed up the onboarding process for your employees.
- 5. Generate farm financial forecasts that test your budget through different scenarios.
- 6. Create pricing strategy scenarios to better manage your margins.
- 7. Automate daily task plans for your team to save time and avoid delays.
- 8. Generate harvest timing recommendations.
- 9. Plan strategically with a multiyear farm development road map.
- 10. Generate animal welfare improvement plans for your livestock.

program to review those results," Kovalchuk said. "That's another way to double-check the output. Sometimes these programs generate nice-looking material, but it doesn't align with reality." Janice Person, founder and CEO of Grounded Communications, agreed that

pushing back against the results will help keep the tech in check. "Chatbots don't do that crucial thinking unless you're going back and forth and asking those critical questions," she said. For example, if you were to ask ChatGPT about purchasing a new

combine, it will assume that's the outcome you want. Therefore, you may want to ask follow-up questions about maintaining existing equipment to see what other advice it may offer. Another important thing to consider is whether to use free services or pay for more premium features. Premium tiers provide a variety of storage options and a larger cap on the number of prompts you can use. More importantly, paying folds in a layer of privacy. "Farmers need to think about the fact that what they input is not confidential if they're not paying for it," Person said. "There are free accounts everywhere, and you can do a lot for free, but that information is then fed into data banks where others may know that information about you. If you pay for a service, you should have more expectation of privacy." As the adage goes, "If you're not paying for the product, you are the product." One more relevant point: If you plan on asking generative AI the same

question often over time — for example, brainstorming ways to diversify your income on a semiannual basis — think about how you can store both the prompts and the results. It doesn't have to be overly complicated, either. Person does a copy-and-paste of her favorite prompts into a spreadsheet so she can reference them later.

WILL THE BUBBLE BURST? Generative AI is not without its detractors. Some tech journalists such as Ed Zitron are well known for their lengthy diatribes about how the technology simply is not sustainable in the long term due to how much it costs to operate. Kovalchuk is a bit more confident that AI has some staying power in some capacity, however. "Whether the AI bubble pops or not, I think the tech is going to stick around, so it's better to start using it and benefit from it," he said. "It will never substitute farmers or agronomists, but the ones who use AI might substitute the ones who don't."



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Will ag companies build overseas?

BY ANDY CASTILLO
andrew.castillo@farmprogress.com

FARM EQUIPMENT PRICES, both new and used, keep climbing despite plummeting demand — a paradox that is squeezing farmers already reluctant to spend amid a pressured farm economy.

The main culprit? Tariffs that have cost manufacturers billions and fundamentally reshaped the ag machinery market.

In its latest report for May, the Association of Equipment Manufacturers documented a 56% decline in U.S. combine sales, while tractor sales dropped 21%.

"If you look at a number of these [machinery] companies, there's no question that they're hurting over the last few years with sales and everything because farmers are reluctant to spend," said Joseph W. Glauber, former chief economist at USDA.

It's been one year since President

Donald Trump's Liberation Day, when he announced a baseline 10% import tax on all countries while doubling Section 232 steel tariffs from 25% to 50%. Manufacturers have absorbed some of those added costs while passing others on to farmers.

In its latest earnings call, CNH Industrial reported that ag machinery-related tariffs have cost the company \$120 million. Caterpillar expects to spend more than \$2 billion on tariffs this year.

With farmers facing increasing input costs amid an unpredictable commodity market, further aggravated by trade disputes, rising equipment prices seem untenable. In response, the Trump administration recently reduced its 25% tariff on imported farm equipment to 15%. Manufacturers that source 85% of steel domestically qualify for a 10% rate.

But that's a difficult mark to hit. Today's farm equipment is constructed

via a globalized capitalistic system. No single country does everything, which makes it difficult for companies to source enough domestically.

"If you make it more expensive to do business in the United States, to manufacture in the United States, then you could actually have a counterproductive result, where the incentive is for companies to produce elsewhere so they can get raw materials and get the parts more affordably," said Bryan Riley, director of the National Taxpayers Union's Free Trade Initiative.

Claas, for example, moved production of its Lexion 8000 Series combine from Omaha, Neb., to Germany last fall, citing high import costs.

Experts say reducing tariffs on farm machinery is a positive step toward a healthier manufacturing environment — and lower equipment costs.

"I don't think the story is done yet in



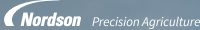
Since President Donald Trump started a tariff war in 2025, ag equipment prices are up, buying is down, and manufacturers foresee more off-shore production. DANIEL BALAKOV/GETTY IMAGES

terms of where the final tariffs will be on farm machinery," Glauber said.

Perhaps not. But not everyone has the luxury of waiting to find out if they're further reduced because machinery investments can't always be planned. Old machines can only be pushed so far.

For those who need to buy now, it might be as good a time as ever. Used equipment prices are stabilizing, if not softening somewhat. The Trump administration's 10% tariff cut — good through the end of next year — will assuredly provide a little more breathing room within tight financial margins.







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Timing, patience and compliance more valuable than quick wins

Dr. Kohl's Commentary

OPINION

BY DAVE KOHL



EVEN THOSE OF us who spend time at the front of the room need to sit in the audience now and then. My annual trek to Omaha, Neb., to attend the AGR

Partners Food & Agribusiness Roundtable in conjunction with the Berkshire Hathaway Annual Shareholders Meeting is one of my most valued professional development commitments.

Both conferences offer many nuggets of advice for business and life.

My good friend, the late Danny Klinefelter of Texas A&M University, used to say, "Timing is everything," especially when it came to buying land.

Warren Buffett, former CEO of Berkshire Hathaway, echoed that sentiment in an interview with Becky Quick of CNBC. Buffett said you must pick the right opportunities at the right price and align them with operational excellence, along with consumer and societal trends that fit within your core values.

During his 60-year investment horizon from 1965 to 2025, Buffett said this perfect timing only occurred five times. The lesson: Pick your spots, maintain capital and liquidity, and invest in businesses with strong, proactive management.

Buffett's point is that in today's world, more people and investors have adopted the casino mentality vs. the church mentality of character and discipline.

With the acceleration of artificial intelligence in investing and everyday life, short-run gains are crowding out the disciplined, incremental approach that builds real wealth over the long run. We see it in sports gambling and day trading, both of which can be addictive, with real physical and mental health consequences.

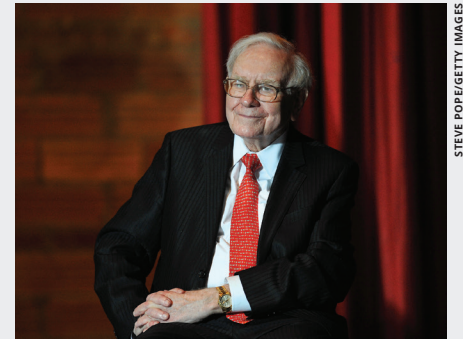
We see the same thing in commodity marketing, with individuals seeking the home run rather than the base hits that keep you in the game. This is occurring in the red-hot beef market, where producers are beating themselves up for leaving money on the table.

Buffett also had a pointed take on

Former Berkshire Hathaway CEO Warren Buffett said you must pick the right opportunities at the right price and align them with operational excellence, along with consumer and societal trends that fit your core values.

regulation. He said that more businesses and people spend time, energy and money attempting to circumvent regulations rather than simply complying with them. Yes, rules and laws can quickly stifle innovation and entrepreneurship, but that balance is often needed.

Kohl is professor emeritus in ag and applied economics at Virginia Tech. He is president of AgriVisions LLC, a consulting business to global agricultural organizations. Look for his blog, "Dr. Kohl's Commentary," at Farm Futures.com.



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This Business of Farming

OPINION

BY PAM CARAWAY
pam.caraway@farmprogress.com



YOU'D THINK everyone in farm country would be for E15, the 15% blended ethanol fuel that helps boost corn demand. Believe it or not, you'd be wrong.

While the U.S. EPA recently issued temporary emergency waivers to allow nationwide E15 sales through the 2026 summer driving season, a permanent legislative fix remains stalled in the Senate, despite the House of Representatives passing a bipartisan bill

to legalize the fuel blend year-round. I asked a fellow closer to the debate in Washington, D.C., about the arguments against E15. As expected, food vs. fuel came up. Another answer surprised me even more: If we're going to all electric, why do we need to dedicate any more resources or build additional infrastructure to support any alternative fuel? Well, I don't think "all electric" should be a goal for our country. Instead, let's create a deep bench of farmer-grown fuel sources — everything from pasture-based solar panels to biodiesel to sustainable aviation fuel. Alternative fuels have been a proven winner for rural communities. Just look

at communities adjacent to ethanol plants. They're thriving. We can do the same with sustainable aviation fuel and biodiesel manufacturing. Rural communities benefit from increasing revenue streams related to crop production. Those economic opportunities help farmers, rural residents and our communities. Jobs increase. Schools thrive. And churches proliferate. Embracing a wide variety of approaches is essential for reliable energy and our national security. Much like how the diverse practices of different farms create a healthier, more resilient ecosystem, so too can fuel choice give us the energy independence our country needs.



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EDITORIAL

Executive Editor Pam Caraway
850-758-8700, pam.caraway@farmprogress.com
X: [@pamelajocaraway](https://twitter.com/pamelajocaraway)
Senior Editor Ben Potter
ben.potter@farmprogress.com
Senior Editor, Commodity Markets
Bruce Blythe, bruce.blythe@farmprogress.com
Farm Policy Editor Joshua Baethge
joshua.baethge@farmprogress.com
Equipment and Tech Editor Andy Castillo
andrew.castillo@farmprogress.com
Editor Emeritus Bryce Knorr
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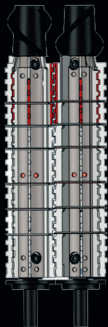
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