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U.S. push for fertilizer independence gains momentum as rocky supply chains take toll

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When it comes to fertilizer, the U.S. has gone from George Washington experimenting with compost and animal manure at his Mount Vernon estate to heavy reliance on volatile global supply chains.

The latter has led to surprise price spikes and scarcity shocks for a product crucial to feeding an exploding world population and America's food security. Crop nutrients can account for more than 40% of total operating costs for corn and wheat farmers.

In the last five years alone, a pandemic, U.S. sanctions on key producer Belarus and war in Europe on top of natural gas outages have led to disruptive market swings and soaring prices. Most recently, President Donald Trump's tariffs have triggered a jump in the cost of phosphate, which along with potash and nitrogen make up the trio of essential fertilizers.

“All of the sudden it became very unappealing to move some of those international supplies into the country whereas they (importers) normally would try to benefit from the high price, the downside of the tariff outweigh the benefits," said Hunter Swisher, founder and chief executive officer at Phospholutions.

The company says its patented technology makes phosphorus fertilizers more efficient, less expensive and better for the environment.


Hunter Swisher (Penn State Univ. photo)

Michigan Potash & Salt Co. won support from both the Trump and former Biden administrations to move forward with its goal of mining 800,000 tons a year of potash. In Washington, Sens. Joni Ernst, an Iowa Republican, and Elissa Slotkin, a Michigan Democrat, are jointly calling to “bring phosphate production home."

Hiro Iwanaga, co-founder and CEO of Talusag, seeks to build 80 low-cost, carbon-free and locally accessible ammonia facilities across the Corn Belt over the next couple years after success in sub-Saharan Africa.

For potash and phosphate, the effort is part of an increasingly urgent goal of weening the U.S. off its dependence on foreign markets for minerals needed to feed and fuel the country. In the case of ammonia, the aim is to break many farmers’ dependency on unpredictable price swings and domestic supply chains sometimes hundreds or even thousands of miles away from a grower’s crops.

Trump's tariffs intensified a U.S. push to put phosphate on its list of critical minerals, which the Trump administration did last week for the first time. Mosaic Co., a top producer based in Florida, praised the move as essential to U.S. economic stability and national security.

Phosphate imports account for almost 30% of America's supply, from countries including Saudi Arabia and Jordan. Meanwhile, domestic resources are drying up as demand is set to rise even further.

"Although globally we have hundreds of years, in the U.S., we have less than a few decades of these reserves left and they are dwindling quite quickly," Swisher said. "We are hitting lower quality rock faster than we expected."

Swisher said he'd like to see more discussion around phosphate as a crucial mineral focus on innovation and technology solutions in addition to the Trump administration's push to streamline permitting for new production. "I'd caution policymakers on the fact that opening new mines and extracting resources faster just continues to accelerate how quickly this problem will present itself to us," he said.

Replacing Canada's potash behemoth

Back in 2022, when the Russia-Ukraine war broke out and sent nitrogen fertilizer prices to record highs, the Biden administration began an effort to expand U.S. production of crop nutrients.

The sting of high fertilizer costs for farmers has prompted USDA and the Department of Justice to look at market concentration issues as only a handful of nations and companies make up the bulk of all major fertilizer production. In September, Sens. Chuck Grassley, R-Iowa, and Tammy Baldwin, D-Wis., reintroduced legislation calling for a study on fertilizer prices.

“While we cannot directly influence prices, we can bolster domestic supply to help mitigate geopolitical risks for our American farmers," Fertilizer Institute CEO Corey Rosenbusch said last month at a Senate Judiciary Committee hearing chaired by Grassley.

Corey Rosenbusch (LinkedIn photo)

Of the three main fertilizers, the U.S. is most dependent on other countries for potash, which refers to minerals and chemicals that contain potassium needed for plants.

Ted Pagano, recently dubbed the “Potash Prince” by Forbes magazine, has $1.3 billion in federal funds to start developing what he says is the biggest U.S. potash reserve, which sits in northern Michigan with an estimated 150-year lifespan.

The Michigan Potash & Salt facility aims to use geothermal energy to create high-grade potash and food-grade salt.

"We have access to one of the tightest globally contested commodities when it is needed more and populations are rising." Pagano said. "The Michigan deposit can change generations to come. It provides a long-term solution to help farmers face challenges when those input prices are high."

Michigan Potash & Salt seeks to produce 10% of the U.S.'s potash needs by 2028 and potentially on a path that could lead to as much as 40% over time.

Today, nearly all the roughly 90% in potash supplies shipped to the U.S. each year come from Canada. Trade tensions between the two nations have caused concern this year that Trump might place tariffs on Canadian fertilizer. Saskatchewan, which has the world’s largest potash reserves, accounts for more than one-third of global potash production.

Treasury Secretary Scott Bessent said last week “a price must be paid” for a Canadian TV commercial critical of Trump's trade policies. While the warning may not end up translating to tariffs on Canadian fertilizer, the mere threat underscores the unpredictability of a market on which American farmers are so extremely reliant.

Brazil, the world's top soybean grower and an increasingly important corn producer, also is highly dependent on other countries to meet its fertilizer needs. After the tumultuous market disruptions of the last several years, Brazil set a target to slash its need for foreign crop nutrients.

Startup Brazil Potash is hoping to play a big part in that goal by developing what it says could become the world's second-largest potash mine, after North America.

Potash is becoming even more crucial for farming as it helps plants deal with stress, such as wild temperature swings that are becoming more noticeable or other shifts in climate like more frequent droughts and flooding, Brazil Potash CEO Matt Simpson said.

"Potash also makes food firmer and taste better," he said. "What helps make a banana be nice and ripe and firm is potassium, and what helps makes a tomato firm and not mushy."

Startup eyes 'Must-have' nitrogen

Meanwhile, nitrogen contained in ammonia is largely considered a "must have" nutrient for growing major crops like corn, wheat and all sorts of fruits and vegetables. While the U.S. has reduced nitrogen fertilizer imports from around 20% in 2000 to between 6%-13% since 2020, it's highly vulnerable to global market disruptions.

"The volatility makes it very difficult for farmers to plan, make investments and hire people," said Iwanaga of Talus, a U.S.-based startup that seeks to bring farmers locally made, carbon-neutral ammonia at a fixed price that the company claims lowers growers' costs by more than half.


Hiro Iwanaga (Talusag photo)

Green ammonia is produced from the hydrogen in water and nitrogen that's in the air, using renewable energy. Anhydrous ammonia is produced from natural gas.

Although anhydrous can be less costly to produce, green ammonia has little or no shipping cost if it's produced near farms. The 45V clean hydrogen tax credit also has helped lower the production cost as well, although it ends after 2027, under the Republican budget law enacted this year.

“Talus locally produces green ammonia in places where we are cost competitive or cheaper than imports. In Iowa and across the corn belt," Iwanaga said.

Talus, along with farm co-operative Landus, earlier this year began running in Iowa North America’s first commercial green ammonia production with its modular systems.

Talus' first deployment of its technology was at a nut farm in Kenya. In the U.S., the company seeks to rapidly install its systems in key parts of the farm belt, especially in places like South Dakota that are lacking access to major fertilizer distribution systems.

"Farmers in South Dakota pay $100 to $150 more per ton for ammonia as farmers in Iowa just because of the logistics," Iwanaga said. "It has similar dynamics as a land-locked country in sub-Saharan Africa."

Canada looks to grow its massive potash production through automation

Published on November 12, 2025 | Authors: Philip Brasher

A boring machine operator prepares to begin grinding potash ore in one of Nutrien's Saskatchewan mines. The company is in the process of automating all of the machines to increase efficiency and improve safety. (Agri-Pulse photo)

U.S. policymakers and entrepreneurs can look north to Canada for some lessons as they work to expand domestic fertilizer production to reduce input costs and farmers' reliance on imports.

Beneath the prairies of Saskatchewan are the world's largest potash deposits, critical to supplying the potassium that crops need to grow properly.

"You can drill a hole, really, anywhere in southern Saskatchewan, and you're likely going to hit potash," said Zoe Belanger, who is general foreman for mine operations at a mine east of Saskatoon operated by Nutrien, one of the world's largest fertilizer manufacturers and the dominant producer of Canadian potash along with Mosaic.

"It might not be the grade that you want, and it might not have the system around that is favorable for mining, but it's present."

Saskatchewan's biggest competition in the potash market is Belarus, and there are also deposits in China, South America and Australia, she said.

Potash ore is composed of roughly two-thirds sodium chloride, or salt, and one-third potassium chloride. At the Allan, Saskatchewan, mine where Belanger works, giant rotating sets of bits on boring machines the size of trucks grind up the ore, a kilometer, or about 3,000 feet, below the surface.

The ore is taken to the surface to go through a process that essentially washes the salt away, leaving the reddish potassium chloride in a granular or powdered form that farmers will apply to farms as far away as China and Brazil.

Potash ore (Nutrien photo)

During a recent mine tour for U.S. agricultural journalists, Nutrien officials said they want to increase production even as they work to reduce costs and improve safety in the mines by automating the boring machines.

At the Allan mine, Nutrien wants to increase production from 3.2 million to 3.5 million tons a year while eventually automating all of its boring machines. Miners will be able to operate the machines from 150 to 300 feet away from the boring face, the most dangerous area to be because of the rock's instability. In turn, automated boring machines can run continuously since the operators don’t have to stop for breaks.

Mining jobs pay well – the average miner makes about $130,000 a year, according to supervisors – making the operations attractive to young farmers as well as local farm kids who are looking for more secure jobs outside of agriculture.

Curtis Ferguson, an environmental engineer at the Allan mine, also grows about 500 acres of wheat, canola and red lentils nearby. “I’m almost on harvest, but I had to come into work today. This job pays a little more," he told the reporters.

Belanger feels the potash mines have "a huge impact on being able to feed the growing population, and for our farmers to produce the best that they can from their fields."

Zoe Belanger (Agri-Pulse photo)

"I grew up on a farm here in Saskatchewan, so seeing it [the potash] all the way through to them using it is awesome to see."

Company officials say that cutting production costs and increasing efficiency to stay competitive means trimming contract employment and automation. The company relies on contractors for such jobs as maintaining the underground roads between boring sites. (The Allan mine is so vast it can take an hour to get from the elevator shaft to the farthest boring site, and the mine is always expanding to maintain production.)

The Allan mine has been in operation for 56 years and has reserves for at least 50 more. There's also room for expansion.

Miners typically work a 12-hour shift and may only get two to three hours of cutting out of that because of the time needed for safety and pre-operational checks, traveling to and from the boring site and in performing other tasks. "So, you can fill that gap with automation," said Les Frehlich, the Allan mine's general manager.

About 50% to 60% of the boring in the mine is currently automated. The goal is 100%.

"We've really pushed it this last year to really encourage our operators to use [automation] as much as we can. It's been a slow, slow climb up, but now, yeah, [we're] still aiming for 100%, and I think we'll get there."

Cattle futures shift amid policy uncertainty

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Cattle graze on grass at the Tuckahoe Plantation, in the Goochland County, Virginia, area. (USDA photo)

Lingering uncertainty about the Trump administration's beef sector plans and prospects for reopening the border to Mexican cattle have fueled volatility in cattle prices without lowering beef prices in the grocery store.

Cattle futures prices fell in the days after President Donald Trump publicly expressed dissatisfaction with high beef prices and suggested importing more Argentine beef into the U.S. , although prices rebounded some as of Monday.

Trump first raised the prospect of increased Argentine imports on Oct. 19 and, later that week, defended the idea on his Truth Social platform after pushback from major beef industry groups.

Economists say retail beef prices aren't likely to decrease anytime soon due to persistent low inventory and high demand. While some economists believe herd expansion could begin as early as next year, they have not seen firm indications yet and once the process begins, it will take years for the animals to fully develop.

December live cattle future prices on the Chicago Mercantile Exchange dropped significantly from mid-October going from 243.650 cents per pound on Oct. 16 to 221.350 on Nov. 7, according to CME data. They have since risen some, reaching 228.550 cents on Monday.

December feeder cattle also saw large declines that have since rebounded some. Feeder cattle closing prices went from 372.675 cents on Oct. 20 to 326.400 on Nov. 7 before rising to 335.65 on Monday.

Derrell Peel (Oklahoma State photo)

Oklahoma State University economist Derrell Peel told *Agri-Pulse* last week, when futures prices were still falling, that he expected the drops to be short-lived, but added that "when the futures market changes," the impact can also spill into cash markets. USDA Agricultural Marketing Service data indicates the free on-board price for live cattle has fluctuated in some markets in recent weeks, as have prices for dressed delivered cattle.

"We've got the president saying things directly about high cattle and beef prices, so that … spooks the market," Peel said, adding that he believes the impact will be short-term, given that supply and demand generally has not changed.

American Farm Bureau Federation economist Bernt Nelson said recent drops in futures prices have "hit the cash market pretty hard." While he said the effects have been "a little bit variable" throughout the country, he added that fed cattle sales have generally been $5 to $6 per hundredweight lower across the board.

"There are a lot of cattle that head to market this time of year and so for cash prices to fall right now, it's really not a good time for that to happen for a lot of our guys," he said.

Colorado cattle producer Steve Nein said when he sold some calves at an auction a few weeks ago, prices were down. He estimates he received around $100 a head less than he would have if he'd sold before prices dropped.

"I lost some money," he said.

Rich Nelson, chief strategist at the agricultural market research firm Allendale, told *Agri-Pulse* that three stories have been shaping futures traders' actions in recent weeks: Trump's comments about importing additional Argentine beef, uncertainty surrounding when screwworm restrictions limiting cross-border movements of Mexican cattle will be lifted, and requests by Brazil's president to drop tariffs on Brazilian products.

"This market has been in a relentless rally trying to find a price, an artificially high price, to encourage producers to begin expansion," he said. "If these three stories do come to fruition, then we are not going to restart this expansion discussion and we'll still be at a relatively low U.S. beef supply level for the next four years, easily."

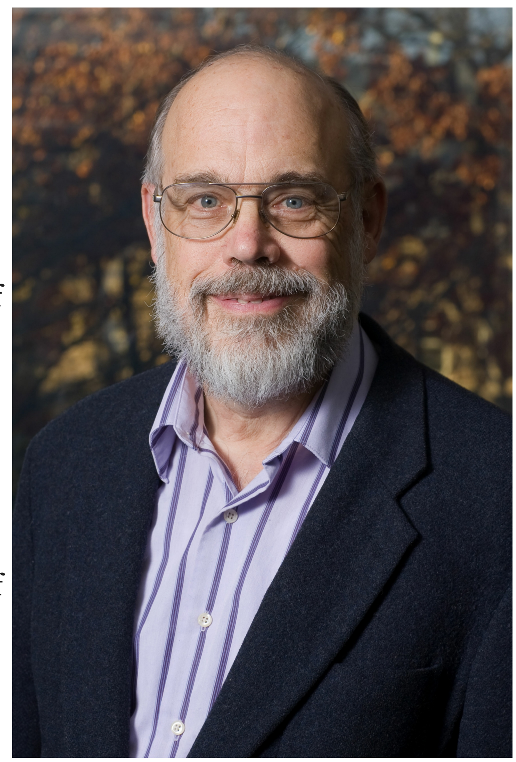
On futures, Bernt Nelson with AFBF said Monday that while prices had risen some, they may once again fall in the future amid ongoing volatility, in part fueled by tight supplies.

“This demonstrates just how volatile these markets are, which is not uncommon when we’re seeing tighter supplies of a commodity like this,” he said.

On Friday, Trump ordered an investigation into major U.S. meatpackers , citing his frustration with cattle prices falling even as beef prices have not. In a Truth Social Post, he said: “While Cattle Prices have dropped substantially, the price of Boxed Beef has gone up — Therefore, you know that something is “fishy.” We will get to the bottom of it very quickly. If there is criminality, those people responsible will pay a steep price!”

In a statement, Julie Anna Potts, the president and CEO of the Meat Institute, which represents the meatpacking industry, pointed to tight cattle supplies and strong demand as the source of high beef costs for consumers. She said packers have been "operating at a loss" for more than a year.

"The beef industry is heavily regulated, and market transactions are transparent," Potts said. "The government’s own data from USDA confirms that the beef packing sector is experiencing catastrophic losses and experts predict this will continue into 2026."



Peter Carstensen (University of Wisconsin)

On Monday, Tyson Foods reported a $94 million loss in adjusted operating income from its beef segment in the fourth quarter of fiscal 2025 and projected an adjusted operating loss of between $600 million and $400 million from beef in FY26.

University of Wisconsin law school professor Peter Carstensen believes Trump's claims against the meatpackers are an effort to divert attention away from ranchers' frustrations over the prospect of importing Argentine beef. However, he said "there are some real potential questions" that can be raised about meatpacking practices, though he added that proving claims like price fixing in court can be challenging.

"There are potential antitrust cases that can be made, I think, involving some of the practices of the meatpackers," he said. "The problem is going to be fitting what you can show as the conduct into one of the antitrust legal buckets... I just don't know how likely they are to do that.

Elimination of GHG reporting program would imperil tax credits, EPA told

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Gevo ethanol plant in Richardton, North Dakota. (Gevo photo)

Carbon capture advocates are objecting to an EPA proposal to scrap a greenhouse gas reporting requirement for dozens of industrial sectors, arguing that energy tax credits would be negatively affected.

“The potential wholesale rescission of the [Greenhouse Gas Reporting Program (GHGRP)] threatens to destabilize the fuels market, disrupt ongoing and planned projects, and ultimately undercut the significant investments that are helping to revive America's energy dominance,” Wayne Garrett, general manager of Chief Ethanol Fuels in Hastings, Nebraska, said in comments submitted to the agency.

EPA’s September proposal would eliminate reporting requirements for 46 industrial sources of greenhouse gases, including carbon capture, storage and utilization (CCUS), ammonia and lime manufacturing and phosphoric acid production.

The agency said in the proposal there is no statutory requirement to collect GHG emissions information for sectors other than the petroleum and natural gas source category, which are subject to the Waste Emissions Charge in the 2022 Inflation Reduction Act. That law imposed an annual charge on methane emissions from large emitters in the oil and natural gas sector, but delayed implementation until 2034.

EPA specifically asked for comments on the elimination of reporting requirements for four categories: suppliers of carbon dioxide, geologic sequestration of carbon dioxide, injection of carbon dioxide and geologic sequestration of carbon dioxide with enhanced oil recovery.

But ethanol producers say if finalized, the proposal could wreak havoc with carbon capture projects that can significantly lower ethanol's carbon intensity. Also, it would be more difficult to make use of the $85-per-ton 45Q tax credit in the IRA for permanently stored CO_2.

If the reporting program is repealed, "most investors and lenders would cease deploying capital into new CCUS projects until a replacement reporting mechanism is established," American Carbon Alliance CEO Tom Buis said in comments. "Without certainty on how to measure, report, and verify emissions reductions under section 45Q, the CCUS industry will be paralyzed, jeopardizing the administration's energy dominance priorities."

Wayne Garrett (RFA photo)

Many companies involved in CCUS that are seeking the sequestration tax credit under 45Q, in addition to those pursuing the clean hydrogen production tax credit under section 45V, "currently rely heavily on the GHGRP's reporting mechanisms to provide verifiable evidence of the amount of CO2 they have successfully sequestered or prevented from being emitted through their projects," Buis said.

Summit Carbon Solutions, which has been struggling for years to persuade landowners to allow use of their land for a planned 2,500-mile carbon dioxide pipeline, is an ACA member. The company's efforts have stalled, in large part because South Dakota approved a law prohibiting use of eminent domain for carbon dioxide pipelines.

Chief Ethanol Fuels' Garrett said use of Section 45Z, a tax credit for low-carbon transportation fuels, also could be imperiled.

The Treasury Department and IRS haven't finalized rules clarifying the 45Z requirements for monitoring, reporting and verifying CI reductions attributable to carbon capture and sequestration, he said. However, "we believe it is likely the agencies will adopt an approach that is similar to the approach required for both 45Q and the section 45V clean hydrogen production tax credit (i.e., in cases where CCS is employed by the clean hydrogen producer)."

The GHGRP "is a well-established and accepted reporting mechanism within the carbon management industry that, if eliminated, would leave taxpayers unable to claim 45Q," Christian Flinn, public policy manager at the Carbon Capture Coalition, said at a public hearing last month.

Flinn cited 19 "commercial-scale facilities with the capacity to capture more than 21 million metric tons of CO2 per year" and said 45Q "has spurred over $77 billion in investments across announced and operating projects."

Savings from elimination of requirement questioned

EPA said eliminating the reporting requirements would save industries $303 million per year through 2033. But commenters who objected to the proposal said those savings aren't substantial, given that more than 8,000 facilities participate in the program.

The law firm White & Case said compliance costs are about $50 million for industries other than petroleum and natural gas. "When that figure is spread across all of the companies required to report, the total annual cost of the program appears to be fairly modest for most of the regulated industries," the firm's analysis says.

In addition, Flinn said EPA's own estimate shows that compliance costs are "negligible compared to the scale of industry investment."

"It is already standard practice for facilities that capture, sell, and store CO2 to measure the volume of CO2 in question thanks to widely available, cost-effective equipment installed at these facilities," he said. "Therefore, for large and small companies engaged in the CO2 supply chain, reporting this information requires minimal additional effort."

In addition to the carbon capture implications, the proposal has fertilizer manufacturers concerned.

Some members of The Fertilizer Institute take advantage of both 45Q and 45V tax credits; the latter apply to hydrogen. "Without an adequate replacement methodology in place by Treasury/IRS to meet its statutory obligations, The group's members may be unable to demonstrate the ability to qualify for these tax credits," Tom Lynch, TFI senior vice president of government affairs, said in comments.

Tom Lynch (TFI photo)

TFI recommended EPA keep some of the industrial sources in the reporting program on a voluntary basis for at least a year to allow the Treasury Department and Internal Revenue Service to put an alternative reporting system in place.

"A short-term voluntary GHGRP would provide near-term certainty to operators of active projects seeking to claim credits, allow industry time to agree upon a suitable replacement methodology and give Treasury/IRS further time to develop effective guidance replacing the GHGRP for future tax years," Lynch said in comments.

TFI also encouraged EPA to work with the Commerce Department, U.S. Trade Representative, Treasury and industry "to ensure that a framework is provided to support the export of low-carbon products. Currently, the GHGRP – and the U.S. Department of Energy's Greenhouse gases, Regulated Emissions, and Energy use in Technologies (GREET) model on which it relies – "aids in the ability of U.S. exports of energy and other low-carbon manufacturing exports to key allies by providing a well-respected path for exporters to document emissions."

The North Dakota Ethanol Producers Association also strongly opposes getting rid of the GHGRP for carbon capture.

"The proposed changes would create significant uncertainty for ongoing and future carbon capture and storage (CCS) projects that are essential to the ethanol industry's success and to advance national decarbonization goals," the group said in a letter. Signatories include association officers from Guardian Energy Hankinson, Harvestone Low Carbon Partners, Tharaldson Ethanol Plant, Gevo North Dakota and BI Biorefinery.

The repository for the carbon dioxide from Summit's proposed pipeline, which has 57 ethanol plants signed up, is in North Dakota.

"Repealing these requirements would invalidate approved [monitoring, reporting and verification] plans, discourage new investment, and diminish ethanol's role as a low-carbon, homegrown fuel under the Renewable Fuel Standard and emerging clean fuel markets," they said.

Chief Ethanol Fuels' Garrett said, "the lower CI resulting from CCS helps ethanol remain highly competitive in U.S. and global markets where carbon reduction is required or rewarded, often opening significant new revenue streams for ethanol producers." He urged EPA to retain a voluntary reporting program.

Smallholder farmers are back at the forefront of global development

Published on November 12, 2025 | Authors: Oliver Ward

An African rice and cattle farm (photo by Focal Foto/Flickr)

The World Bank is doubling down on agriculture's potential as a global development vehicle in hopes that greater investments in smallhold farms will boost jobs, prosperity and food security in emerging economies.

Analysts see the move as a return to tried-and-tested development methods after several decades of agriculture playing a smaller role in global development.

A smallhold farm is a small-scale farm typically ranging from less than two and a half acres to around 25 acres.

"Agriculture has always been central to development," World Bank President Ajay Banga said during the bank's annual meetings in Washington last month. "The challenge is, how do you make it a driver of jobs? How do you make it a driver of income and how do you get to food security at scale?"

At the meeting, Banga launched the bank's latest development initiative, known as AgriConnect – an effort to implement his pledge to double the bank's annual investment in agribusiness to $9 billion by 2030. The initiative will see the bank partner with the Inter-American Development Bank, African Development Bank, the International Fund for Agricultural Development (IFAD) and private companies like Bayer to boost productivity and incomes and protect farmers from exploitation.

AgriConnect, Banga said, will help address the gulf between the 1.2 billion young people set to reach working age across developing economies in the next decade and the 400 million jobs set to be created.

The effort will feature three pillars of focus, Banga added: improving infrastructure, policy adjustments and mobilizing private capital to magnify the bank's investments.

Several industry heavy hitters are backing the initiative. Last month's Washington event featured Alphabet and Google President Ruth Porat and Bayer CEO Bill Anderson. Bayer signed a memorandum of understanding to boost its regional processing capacity of climate-resilient seeds, develop crop insurance options and offer skills training.


Ajay Banga speaks at an event in Washington last month launching AgriConnect (World Bank photo)

Analysts say the effort to move smallholder farmers back to the center of international development represents a return to form that holds promise for global development, as long as the initiative avoids several pitfalls.

A back-to-basics approach

The Green Revolution of the 1960s and 1970s saw many developing economies adopt new plant breeding techniques from internationally funded agricultural research centers, spurring an increase in global standards of living.

The economic benefits spread far beyond agriculture. Research from Douglas Gollin, a development economics professor at Tufts University, and others finds that a10% increase in the adoption of high-yield crop varieties led to 10-15% gains in per capita GDP.

“The Green Revolution, in many ways, was the original effort at smallholder-agriculture-based economic development for both poverty reduction and to stimulate the structural transformation of low-income agrarian economies,” said Chris Barrett, a professor of applied economics and management at Cornell University.

In Barrett’s telling, the global development community has shifted its focus from smallholder farmers in the intervening decades.

Food prices fell substantially and the share of the malnourished global population plummeted. This progress, Barrett said in an interview with *Agri-Pulse,* led to complacency from international bodies.

“Governments just stopped making an effort to stimulate agricultural development in the global south,” Barrett said – instead, focusing on manufacturing industries and institution building.

“The World Bank is returning to prioritizing domestic agricultural productionmarkets,” Barrett added. “That is a recipe that has worked well in the past,”

Gollin, the Tufts University professor, told *Agri-Pulse* that the initiative also goes beyond previous efforts focused on smallhold farmers with a new focus on “commercialization.”

In his Washington presentation, Banga said that AgriConnect seeks to give farmers tools to turn yield and production growth "into a business that produces higher incomes for smallholder farmers and more opportunity across entire economies." Put differently, he wants farmers to be able to scale.

This breaks with past efforts, Gollin said. Previous initiatives sought to address food security by supporting local farmers to meet local needs. A new focus on scale and commercialization among smallhold farmers, he added, is more "capital intensive" and advances a line of thinking that acknowledges the role trade can play in supporting development and food security.


Douglas Gollin (Tufts University photo)

Avoiding pitfalls

Colin Christensen is the global policy director at One Acre Fund – a social enterprise that supplies farmers in East Africa with financing and training to increase yields and profits. He pointed out there are vast potential upsides to a fresh initiative to support smallholder farmers in the region.

Some 50 million families in sub-Saharan Africa work on smallhold farms, which provide 80% of the continent's food, according to [One Acre Fund's website.]

A focus on job creation is also long overdue, Christensen argued. He noted that efforts to raise profits for smallholder farmers in recent decades have approached the issue as a poverty-tackling measure, rather than a developmental goal.

He said he's seeing signs of development assistance "getting back to basics in a way that could be really catalytic."

But Christensen said the latest initiative from international organizations should avoid some of the pitfalls that have plagued other development efforts.

"How they do this is really going to matter," Christensen said.

Whenever multiple large institutions are involved in an initiative, Christensen said, bureaucratic inefficiencies can proliferate, he argued. Will the organizations come up with "innovative, cost-efficient ways of delivering value to farmers?" he asked, "or do all of these big institutions just sort of get in each other's way [and] eat up a lot of costs."

Another industry source working on the African continent granted anonymity to speak frankly about the new initiative said the program's success will also depend on whether there is sustained buy-in from the institutions involved.

"What you really want to build is ... ventures on the ground," the source said. "Those big institutions can struggle to do that."

Investing in short-term projects that might have to shutter when budgeting priorities in Washington or Rome shift won't deliver the certainty needed on a sufficient timeline to provide lasting growth, they added.

The World Bank did not respond to a request for comment.

A spokesperson for IFAD, one of the organizations working with the bank on AgriConnect's implementation, told *Agri-Pulse* in an email that initiative planning has "just begun," and that details are limited.

The group has pledged to lift the livelihoods of at least 70 million smallholder farmers by 2030.

"It is about achieving true transformative impact in the rural and fragile areas where poverty and hunger are most acute but where the returns to society are greatest," the spokesperson said.

A rising tide lifts all boats

The World Bank initiative comes as the U.S. has frozen or withdrawn funding for agricultural research on boosting global crop yields. Freezing Feed the Future funding has left U.S. support for the Consultative Group on International Agricultural Research – a network of agricultural research institutions – in limbo; meanwhile, most U.S. labs remain closed while the State Department weighs their future.

"The termination of Feed the Future programming has left a real gap," said Gollin.

Barrett says U.S. farmers and policymakers have a stake in lifting foreign agricultural producers out of poverty and boosting incomes.

"The U.S. food economy, the growth for commodities comes from increasing demand for food in the Global South, in the places where populations and incomes are growing," Barrett said.

The Green Revolution of the 1960s and 1970s, he said, saw South Korea emerge as a major buyer of U.S. ag commodities and food products, having previously relied on U.S. aid. Agricultural economies that see improved living standards and incomes, Barrett said, will increase food imports. Accordingly, he said, American farmers have a stake in any effort to support smallholder farmers in developing economies.

South Korea could represent “the future of quite a few countries in Africa, Latin American, Asia,” Barrett said, “so long as their populations can go through this structural transformation.”

Winegrape growers brace for long recovery after ‘brutal year’

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California winegrape growers are calling this year’s harvest a breaking point for the industry — a year of exceptional fruit quality overshadowed by severe financial strain, widespread unharvested acreage, mounting vineyard removals, and a market saturated with bulk wine imports. Growers across every growing region said they are entering 2026 bruised but hopeful that forced supply reductions and new industry tools may help restore balance — though the path remains uncertain and uneven.

“Growers face contract uncertainty, weather challenges, rejections — both in the field and at the test stand — and, ultimately, a whole lot of fruit that was left on the vine to rot,” said Natalie Collins, president of the California Association of Winegrape Growers, in a postharvest briefing with reporters.

Collins added that since the market downturn accelerated last fall, 38,000 acres of vineyards have been removed and more are underway, creating an economic ripple that impacts trucking companies, nurseries, equipment providers, labs and local tax bases.

Growers on the CAWG board described the season as the most difficult in three decades. Some operations turned to personal savings. Some exited vineyards entirely. Others shifted permanently to almonds, walnuts or row crops.

The industry is racing to rebuild demand, secure fairer trade conditions and adopt new tools to improve transparency and planning and avoid repeating the cycle as other wine-producing countries encroach on California’s market share.

The smallest crush since the ’90s

Jeff Bitter, president of Allied Grape Growers, said that while the industry anticipated a challenging season, few expected this scale of disruption.

“It was a pretty painful harvest for most growers, particularly those who did not have a contract,” said Bitter. “We saw difficulty even at the highest end of the market, with regard to market activity, lack of buyers, grapes being left unpurchased, unharvested. It really was a statewide phenomenon.”

Wineries asked to take a year off from purchases, renegotiate terms or cut tonnage. In some cases, he said they told growers: "I don't know how I'm going to pay for these grapes." And even where contracts held, buyers frequently declined to take the full volume. Smaller buyers, squeezed by consolidation and slow sales, were the first to retreat. The result was that growers across the state saw fruit hang through October and into November.

While the California Department of Food and Agriculture will not deliver the official estimate until February, Bitter estimates the crush is likely to come in at less than 2.5 million tons, making it the smallest since 1996. For growers accustomed to 3.2 to 3.4 million tons in a typical year, the sudden drop signals a forced shock to the system.

Yet Bitter hoped the reduction may finally help unwind the industry's "inventory bubble."

"We certainly did not crush anywhere near what we produced," he said, before striking a note of optimism. "We did not add inventory to the system. We reduced inventory overall by having such a short crush."

His assessment was that the industry may emerge from this contraction better positioned, if sales stabilize and if buyers return to normal purchasing behavior. But, he cautioned, "it really is going to be a question of whether or not the pricing is economically sustainable."

Across regions, growers echoed the pain along with the silver linings in fruit quality.

Central Coast: "The grape market was and is incredibly challenging this year," said Gregg Hibbits, who chairs the board and runs the investment firm Grapevine Capital Partners in San Luis Obispo. Hibbits estimated 20-30% of the grapes on the Central Coast would go unharvested and relayed accounts of spot buying "at incredibly distressed pricing," despite strong wine quality.

Lodi and interior: "2025 was easily the worst conditions for winegrapes in our area in my lifetime and likely for the career of my father as well," said Aaron Lange, who manages vineyard operations at LangeTwins Family Winery and Vineyards in Acampo. Lange reported leaving 15% of his family's crop unpicked and saw "zero buyer activity" until late in the season, even for their prized chardonnay. "The best-case scenario for many of us was selling our crop at far below sustainable pricing and, very ironically, to wineries which require sustainable certification for the fruit."

*Natalie Collins, CAWG (Agri-Pulse photo/*Fred Greaves

North Coast: "This was a tough year," said Cameron Mauritson, vineyard manager at Mauritson Farms in

Healdsburg, adding that even premium retailers wavered. “Many buyers are just not buying what they need. Even if they think they need it, they seem hesitant to want to pull the trigger.”

Napa Valley : Johnnie White, co-owner of Piña Vineyard Management in St. Helena, described “very good yields — the large crop kept getting bigger” and exceptional quality but significant late-season deterioration after rain. “Many grapes left hanging on the vine began to deteriorate and mold,” triggering insurance claims, which were critical for the valley this year.

Despite the hardships, growers reported unusually balanced, high-quality fruit, with some saying flavor development outpaced sugar accumulation, a sign of potential stylistic finesse for vintage wines. But for growers, quality alone does not pay labor, fuel, regulatory compliance or land costs.

Historic vineyard removals, long-term replanting bets and a new acreage map

In response to oversupply and prolonged losses, growers have accelerated vineyard removals, particularly in regions competing directly with low-priced imports and bulk blends.

Lange said Lodi removed about 9% of the standing acreage this year and expects another 5,000 to 8,000 acres to come out next year, depending on financing and market signals.

Hibbits said the Central Coast will also cut acreage and hold off on planting.

“I don't think we're going to plant anything,” he said. “That’s pretty surprising on a portfolio our size.”

Mauritson said the North Coast is seeing removals as well as replanting by experienced operations betting on the long game.

“They're old pros. These are family growers that have been around for a long time. They know their craft,” he said. “They're feeling there's light at the end of the tunnel.”

White framed replanting as a strategic reset and an opportunity to remove virus-compromised blocks and reestablish quality for future contracts.

To guide these decisions, CAWG has launched a first-of-its-kind vineyard mapping platform using advanced remote sensing, artificial intelligence and on-the-ground field verification to capture block-level detail across the state. The analysis identified 477,475 standing acres and 38,134 acres removed between October 2024 and August 2025, establishing what Collins described in a statement as “a shared, credible foundation for regional benchmarking, market planning and informed policy” and “a reliable baseline to understand change, promote transparency and plan responsibly for the future.”

The tool allows growers and the industry to evaluate both active acreage and abandoned blocks — a key challenge in prior datasets — and compare removals and plantings by county, viticulture areas and crush districts.

“This mapping gives us a new level of spatial accuracy, showing what’s actually planted and where,” said Collins.

CAWG and Land IQ are hosting webinars to help the industry interpret the data and integrate it into long-term planning and policy decisions.

Jeff Bitter (Allied Grape Growers photo)

Competition, trade pressure and consumer preferences

“We can't forget the serious import issue we have here in California,” said Lange. “Bulk wine is coming from other countries around the world and really substituting purchases of wine grapes in 2024 and 2025 to the tune of hundreds of thousands of tons each year.”

Bitter said bulk imports rose 17% through July, despite abundant California supply.

“There's too much imported bulk coming in, given the amount of wine we have in tank domestically,” he said, criticizing a duty drawback program and trade policy that “made it favorable for domestic wineries to create relationships with foreign suppliers.”

Growers stressed the need to strengthen the California brand and emphasize regional identities for Sonoma, Napa and Lodi that reinforce quality and support local sourcing.

To help address the demand challenge, the Wine Institute has launched the Share Wine Co-Lab, a digital hub designed to “help the wine community connect with a new generation of wine consumers.” The platform includes messaging tools, consumer insights and best practices for engaging younger drinkers as part of a broader effort to reverse declining consumption trends and compete with spirits, beer and ready-to-drink beverages.

The initiative encourages wineries to experiment with new formats, storytelling and engagement strategies and to collaborate rather than compete in reaching emerging audiences.

Fragile optimism and the policy fights ahead

Collins urged growers to continue engaging policymakers.

“It really takes grassroots, on-the-ground communication to get these points across,” she said.

The growers emphasized resilience and community and a belief that California’s wine industry will endure through structural change.

“We grow an amazing product here,” said Morten. “I am optimistic for 2026. But I'm also concerned that this is going to play out differently for different regions of the state.”

Despite the volatility, most expressed cautious hope that 2025 marked the bottom of the downturn and that the industry is now positioned to climb back toward balance.

As White put it: “If you're not optimistic as a farmer, then you shouldn't be farming.”

Cornell agrees to $60 million settlement to restore federal research funding

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Cornell University in Ithaca, New York. (Flickr Photo)

Cornell University has agreed to pay the federal government $30 million and invest another $30 million in agricultural research to restore its federal research funding in a settlement with the Trump administration.

Cornell, among a handful of other universities, agreed to a settlement after being accused by the Trump administration of various violations including allowing male athletes to compete in women's sports, failing to address campus antisemitism, and implementing diversity, equity and inclusion practices.

Following the settlement, Cornell will immediately have $250 million in frozen federal research funding restored. However, Cornell must meet certain conditions in order to maintain its funding. One of these conditions includes investing $30 million over a three-year period "in research programs that will directly benefit U.S. farmers through lower costs of production and enhanced efficiency," according to the agreement.

"As the land-grant university for New York state and a global pioneer in agricultural research and invitation, Cornell is proud to lead efforts in supporting American farmers," said Michael Kotlikoff, president of Cornell University.

Kotlikoff also added that "Cornell's agreement to these terms is not an admission of wrongdoing".

Kemin Industries unveils new plant growth technology

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Kemin Industries, a global ingredient manufacturer, announced its new plant growth product Valena FLOW, a foliar nutrition solution designed to enhance nutrient uptake, improve disease resistance and boost yields.

Applied at the start of the growing season once the plant has true leaves, the solution's beta-glucan molecules are recognized by pattern recognition receptors on plant tissues that activate and promote nutrient uptake, root growth, biomass and yield.

"We've tested Valena FLOW across a wide range of crops, regions, and growing conditions, and the results speak for themselves," said Bridget Hatfield, technical services manager at Kemin Crop Technologies. The product works on crops, including berries, tomatoes, peppers, leafy greens, citrus, tree fruits, nuts, hops and greenhouse ornamentals.

Valena FLOW follows the success of Kemin Crop Technologies' original dry Valena product, which was developed to improve soil for plant growth.

"We're excited to bring this innovation to the nutritional agriculture market and help growers achieve more resilient, productive plants," said Emily Fuerst, research and development director at Kemin Crop Technologies.

Cultivar STL announces new Core Facilities Access Fund

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St. Louis, Missouri. (USDA Photo)

Agtech initiative Cultivar STL, which aims to boost the agricultural technology sector in St. Louis by connecting with international businesses, has launched a new Core Facilities Access Fund.

The fund will focus on connecting agtech ecosystems in St. Louis and Latin America. It provides selected startups from Latin America with $2,000 to $20,000 to access the Danforth Center, a non-profit research institute dedicated to improving human and environmental health through plant science. Startups can use the center's facilities to advance research, test technologies, and build industry connections.

“The idea behind the fund is to build a pipeline of companies by giving them access to one of our biggest assets in the region,” said Isabel Acevedo, manager of technology-based economic development at BioSTL. The Danforth Center includes a plant growth facility, phenotyping, bioanalytical chemistry, data science, advanced bio-imaging and plant transformation.

The fund recently awarded its first two startups. Argentina’s APOLO Biotech, which uses RNA-based technology to prime plant’s immune systems, and Innovaciones Circulares of Costa Rica, which develops small-scale reactors to recover fertilizer from swine farms.

Stephanie Regagnon, executive director of The Yield Lab Institute, said she hopes the fund will support additional startups in the future. The Yield Lab Institute is a non-profit think tank that supports global innovation in agricultural and food systems.

Farm Hands on the Potomac: Leslie gets top position at S2G Investments, Magro chairs CropLife International

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Grant Leslie has been named government and policy operating partner at S2G Investments. In her new role, Leslie will support the growth of S2G's portfolio companies by addressing regulatory issues and engaging with government programs. She joins S2G after nearly 15 years at FGS Global, where she served as global head of the food team. Leslie was a senior adviser to then-Agriculture Secretary Tom Vilsack during the Obama administration, following a decade of working in the Senate on issues including the farm bill, nutrition programs, renewable energy, rural development and agricultural trade.

CropLife International has appointed Corteva CEO **Chuck Magro** chairman of the group's board of directors. Before joining Corteva, Magro served as president and CEO of Nutrien, following his tenure as president and CEO of Agrium, a global company that produced and distributed fertilizers, crop nutrients and crop protection products. Agrium merged with the Potash Corp. of Saskatchewan in 2018 to form Nutrien. Magro succeeds **Livio Tedeschi**, president of BASF Agricultural Solutions.

Alison Foster was promoted to manager of government affairs and operations for the National Council of Farmer Cooperatives. Foster served as coordinator of government affairs and communications at NCFC for three years following her role as a membership services associate at the Education Finance Council.

Michael Ahmed was appointed president and CEO of United Dairy Farmers Inc. He was previously chief operating officer at The Gorilla Glue Co. and earlier held roles at Tyson Foods, AdvancedPierre Foods and Procter & Gamble. Ahmed succeeds **Brad Lindner**, who is retiring after 27 years leading the organization. UDF celebrated its 85th anniversary this year.

Grant Leslie (Linkedin Photo)

Ken Fisher is leaving AmericanHort after 10 years as the organization's president and CEO. During his tenure, Fisher strengthened AmericanHort's role as a national advocate for horticulture. Earlier, he held leadership roles with Lone Star Funds, Elmer's Products, POET and the Coleman Company. He will remain in his role until the end of May 2026.

Tucker Stewart, who as an aide to Sen. Roger Marshall, R-Kan. wrote a steamy novella that raised some eyebrows when reported in September, has a new job at USDA. He is no longer a deputy assistant secretary for congressional relations and "is now working on USDA's lawfare portfolio," according to a spokesperson.

The National Milk Producers Federation has appointed **Brian Rexing** as its 15th chairman. A fourth-generation farmer, Rexing is a member of the Dairy Farmers of America cooperative and serves on its executive committee. He is also the vice president of Evansville Young Dairymen and received the Indiana Dairy Producer of the Year award in 2021. Rexing and his wife own and operate New Generation Dairy in Indiana. He succeeds **Randy Mooney,** who served as NMPF's chairman for the past 17 years. Mooney will continue to work for the organization on its executive committee.

Chris Cooper is now CEO and board director of XCF Global, a company specializing in the decarbonization of the aviation industry, effective Nov. 7. He has more than 25 years of experience in the global energy industry, having served as president of Neste U.S., where he led strategic initiatives for renewable fuel producers such as sustainable aviation fuel. He also served as head of renewables trading at BGN, a leading energy and commodities trading company, and held leadership roles at Phillips 66 and Chevron. Cooper succeeds **Mihir Dange**, who served as the company's CEO and board chair. Current XCF board member **Wray Thorn** will take over as interim board chair.

Ashley Higgins has been named government affairs director for ClearPath, an entrepreneurial, strategic nonprofit that develops policy solutions for clean energy and industrial innovation. She previously worked in the Senate as deputy legislative director and energy policy adviser for Sen. Dave McCormick, R-Pa.

The Bipartisan Policy Center hired **Kathryn Kline Tyndall** as associate director for energy. She will focus on load growth, state utility regulation and advanced energy technologies. Tyndall held leadership roles at the National Association of Regulatory Utility Commissioners and the National Regulatory Research Institute, and served as an economic development and small business fellow for then-Rep. John Lewis, D-Ga. **Marcel Akhame**, **Daniel Hoenig** and **Adam Cowie-Haskell** also join BPC as senior policy analysts; **Nora Teagan** is a new project assistant for the energy program.

Two promotions have been made in the U.S. Chamber of Commerce, with **Jessica Boulanger** moving up to senior vice president and head of communications and public affairs, and **Courtney Felts** being named senior vice president and head of marketing and messaging strategy. Prior to joining the chamber in 2023, Boulanger served as head of executive communications at Amazon. Felts has worked for the chamber for 14 years and most recently served as senior vice president of executive communications.

Michael Essington will join the House Energy and Commerce Subcommittee on Communications and Technology as chief counsel. Earlier, Essington served as a senior manager of government affairs at EchoStar Corp.

Marshall Faith (Scoular Photo)

Matthew Perin was promoted to vice president of government relations and regulatory affairs at Kroger. He's been with the company for nearly nine years, recently as head of government relations and regulatory affairs. Earlier, he worked for Bayer and the House Ag Committee.

The Kentucky Corn Growers Association hired **Camryn Manipn** as communications director. She previously worked for Kentucky Farm Bureau and at Gardens of Babylon Landscapes.

Marshall Faith, founder and chairman emeritus of Scoular, a global agribusiness providing supply chain solutions for grain, food and feed ingredients, died in late October at the age of 96. He served as the company's CEO for 23 years and as chairman for 25 years.