

Energy needs to be part of SGMA conversation, new report says

As California plans for continued climate change, including the need to manage agricultural water use to comply with the Sustainable Groundwater Management Act (SGMA), a new report finds the intersection of energy with water and climate may not be getting as much attention as it deserves, especially in farm country.

“The Future of California’s Water-Energy-Climate Nexus,” from the Pacific Institute and Next 10, presents various scenarios for both urban and agricultural water and energy use. **The researchers found that while agricultural land uses more water, the energy currently needed for that use is less than the energy needed for urban water use.** The primary differences are in transport, potability and temperature. **Some urban parts of the state get their drinking water from far away, and that movement has energy costs.** Water for agricultural use is rarely treated to drinking water standards nor is it heated, two processes that are heavily energy-dependent and used in most urban and suburban contexts.



Micro irrigation, shown here for California almonds, relies on energy that in the future could come from a decarbonized electrical grid. (Image courtesy Almond Board of California)

“If you look across that whole managed water cycle, it’s the end use that’s the most energy intensive,” said Heather Cooley, research director at the Pacific Institute and one of the report’s authors. **“That’s what we’re doing in our homes, in our businesses. And a lot of that is heating water.”** The energy used for pressurization to irrigate fields, for example, is much less, relatively speaking. Ag use also doesn’t generate wastewater, which requires further energy use for treatment, she said.

In the report scenario with the most intense climate impact, **the researchers identified significant urban encroachment, which would take land out of agricultural production.** That means less overall water use but with greater energy needed for the water that is used. For urban users, as the energy grid becomes less carbon-dependent, Cooley said shifting water heaters from natural gas to electric will reduce

urban water energy use. Agricultural use will similarly benefit from a greener grid for its water's limited energy needs.

In a virtual presentation about the findings, Pacific Institute president emeritus Peter Gleick said, "as SGMA is implemented, I think it's inevitable, we're going to see some ag land come out of production and some agricultural water use reductions. I think it's possible to have a strong, healthy agricultural economy anyway."

The report relies on state data that estimates urban encroachment to calculate reductions in ag water use. Even though agricultural water use doesn't have the same energy impacts nor related greenhouse gas emission implications as urban use, Cooley said water management discussions in agricultural areas don't tend to even consider energy and emissions. The report could only incorporate data from the Central Valley in its rural/ag estimates because the state data the researchers relied upon didn't include the other 20% of California's ag lands.

Cooley said maintaining separate ag and urban water use projections ultimately is a disservice to managers working in both areas. She would like to see "some harmonized projections for urban and ag, because the urban suppliers may not be projecting that encroachment" that the ag scenarios count on. She told *Agri-Pulse* in an interview that long-range forecasting for each geography is dependent on the other.

Pumping groundwater consumes most of the energy needed for agricultural water use and the report finds that "has become increasingly energy-intensive as groundwater levels have fallen around the state." As SGMA is implemented, the authors recommend improving pump efficiency, allowing groundwater levels to rise and shifting pumping—and its associated energy use—to times when the electricity comes from renewable sources. Still, the authors caution that estimates of the climate impacts of ag water energy use remain difficult to calculate because of the range of uncertainties including temperature, precipitation and how much ag land will be removed from production. And acres could be temporarily fallowed for some time versus permanently removed from agriculture through development.

The report offers a caveat to its estimates for land that does stay in production: "these scenarios do not account for economic factors, such as crop values on domestic and international markets, federal and state agricultural policies, and other factors that affect farmers' land use choices."

While fewer acres in production would, in theory, reduce ag water energy use and therefore its carbon footprint, the authors caution that if pumps have to work harder to reach less accessible water, those climate gains could be reduced. Cooley would like energy use and its greenhouse gas emissions, which will change as the California grid is decarbonized, to be integrated into groundwater management and sustainability planning.

"We talk a lot about SGMA and some of the opportunities and challenges," Cooley said, "but we haven't really thought about it through an energy lens as much as we could or should."

New law legalizing hemp CBD products draws criticism and kudos

Gov. Gavin Newsom has signed [a bill legalizing hemp CBD products](#) in California, upsetting a coalition of farmers fiercely opposing the measure for temporarily banning smokable products in California but earning praise from other growers who have long sought a foot-hold in what the nation's largest intrastate market for CBD.

Assembly Bill 45 enacts a regulatory and consumer protection framework for the manufacture and sale of nonintoxicating hemp-derived products in food, beverages, dietary supplements, pet products and cosmetics. The legislative debate grew heated as the bill's author pushed back on her opponents, arguing their personal attacks and mischaracterizations had delayed progress on the measure.

"There are hemp CBD products that are on store shelves that are unregulated and untested," said Senator Ben Allen of Santa Monica, in advocating for the measure last month. "There are no consumer protection laws in current law providing assurances that these products are safe."



Image by [NickyPe](#) from [Pixabay](#).

The Food and Drug Administration has yet to enact regulations that would allow the use of cannabidiol in dietary supplements or foods marketed in interstate commerce. The agency has approved only one CBD product, a prescription drug product to treat certain types of seizures.

Allen praised Assemblymember Cecilia Aguiar-Curry of Winters, the bill's author, for leading the charge on the proposal for three years. He described the bill as the product of a hard-won compromise, "representing a vast improvement over California's regulatory status quo."

The California Hemp Coalition, on the other hand, called the bill a huge threat to the California industrial hemp industry and alleged Aguiar-Curry did not take farmers' concerns into account.

"AB 45 is a bill that needs to, in our opinion, go down in flames," said Wayne Richmond, president of the California Hemp Association, a group within the coalition. "For those of you who have been surviving on smokable hemp products, for example, this bans all of that. It ends your business."

Richmond was speaking to the CDFA Industrial Hemp Advisory Board during its August meeting. He and the coalition argued that the bill was the creation of out-of-state CBD corporations that wanted small farmers restricted from smokable hemp as an alternative to CBD and that it would put hundreds of businesses and thousands of Californians out of work.

Board members agreed and drafted a resolution against the measure, citing Richmond's concerns. Yet the bill actually stood outside of the board's purview, which advises the CDFA secretary. AB 45 did not intersect with CDFA regulations since it offered no changes to the food and agriculture code.

The bill was also opposed by the California Farm Bureau. Policy advocate Taylor Roschen raised concerns about provisions that apply the same limit on THC as for cannabis, despite hemp being a federally recognized agricultural commodity. Subsequent amendments did allow for regulatory flexibility in contaminant testing but did not include a farm bureau recommendation for a regulatory pathway for the sale of raw hemp flower in the state.

Aguiar-Curry removed a ban on the smokable flower but replaced it with a provision allowing for inhalable products to be manufactured for sale in other states while prohibiting sales in California.

According to the coalition, this creates a pathway for the Legislature to legalize the sales only if lawmakers pass a tax on inhalable products. The trade groups feared a new tax would set up an untenable political battle that no lawmaker would be eager to take on anytime soon. Allen called that argument inaccurate, but recognized that with this issue, “more deliberation, more hard work, more action by the Legislature is yet to come.” Aguiar-Curry has suggested she is working on bills to address this next year.

In opposing AB 45, the United Cannabis Business Association argued a ban on smokable hemp would shift \$1 billion in annual profits to the marijuana industry in the form of high-CBD cannabis sales. The California Cannabis Industry Association, on the other hand, praised the bill for leveling the playing field between cannabis and hemp.

National hemp proponents lauded the bill as well. Eric Steenstra, president of Vote Hemp, told *Agri-Pulse* the passage of AB 45 was “a pretty big deal” since California has the biggest hemp market in the U.S. and perhaps the world.

“I know not everybody was 100% happy but nobody ever gets everything they want, right?” said Steenstra.

The hemp growers angry about the exclusion of smokable hemp from the bill “acted like their entire business was only dependent on smokable hemp,” he said. Instead, “there’s a much bigger market out here in the long term” for body care, skin care and therapeutic products, as well as foods and beverages—though the bill prohibits the use of CBD in alcohol.

Although Vote Hemp had no problem specifically with smokable hemp, Steenstra said, “We weren’t going to let the entire bill not go through because the governor was refusing to budge” on smokable hemp.

The California Department of Public Health and the Department of Cannabis Control will now draft regulations for implementing the law. FDA has yet to enact regulations that would allow the use of cannabidiol in dietary supplements or foods, making the practice illegal.

Newsom has also signed Senate Bill 292, a companion measure to AB 45, which mirrors some of the language in federal law to make changes to the food and agriculture code for hemp. Richmond praised the measure for delineating “destruction” from “disposal” for crops that test over the THC limit.

“Just because it goes over 0.3%, it doesn’t mean somebody is growing marijuana,” he said. “We’ve seen too much knee-jerk reactionary law enforcement, which has really put the kibosh on this industry.”

He argued that was the reason for significant declines in registrations and acreage for hemp in California recently.

Crop insurance losses from water shortages continue to mount

California has now surpassed \$101 million in USDA crop insurance indemnities resulting from failure of irrigation supplies for thirsty crops. With three months left in the year, the payouts to growers who purchased policies could rival those of the last major drought.

Presenting to the State Board of Food and Agriculture last week, Jeff Yasui, who directs the Davis regional office for the USDA Risk Management Agency, provided an update on crop insurance losses as of September 2021, focused on both lack of irrigation water supplies and wildfires. Growers are not eligible for coverage if water is sold or reduced because of a regulatory requirement.

For perspective, crop insurance is available for almost all crops, livestock, dairy, poultry and apiculture in California through either specific policies covering about 62 of the state's 400 plus crops and livestock or Whole Farm Revenue Insurance. Almonds are the top commodity insured, with a liability of \$1.95 billion, followed by pistachios and rice. Fresno has the lead as the top county in the nation in terms of insurance liability.

In 2020, there were almost 33,000 policies sold in California with a liability of over \$12 billion and indemnities paid of almost \$747 million, according to USDA's Risk Management Agency. As of Oct. 11, 2021, there were over 33,000 policies sold with a liability of over \$11.6 billion and indemnities of \$242.5 million paid thus far.

Looking just at crop insurance (excluding livestock policies) in California in 2021, Yasui said there were 25,090 policies sold covering 13.2 million acres. The majority of the policies covered almonds (4,625 policies), followed by grapes (4,233), rice (1,389) and pistachios (716). Almonds are the top commodity insured in terms of liability at \$1.95 billion, followed by grapes at \$1.79 billion; pistachios (\$669.7 million); and rice (\$622.6 million). Fresno has the lead as the top county in the nation in terms of insurance liability.

Yasui said 99% of the crop losses due to lack of irrigation supplies were made for prevented planting and the majority of the indemnity payments, about \$70 million, went to rice growers. Another \$17 million were for ELS cotton and the remainder for potatoes and onions - primarily in the Klamath Basin. That marks a substantial change from the 2015 drought when ELS cotton acreage was much larger and accounted for slightly over \$87 million in indemnity payments.

Crop insurance companies also offer policies to cover lack of rainfall for Pasture Rangeland and Forage (PRF) and Apiculture. Yasui said PRF participation is up sharply in California, with indemnities based on rainfall shortages in an area during two-month intervals.

“That's certain to go up,” said Yasui about the level of indemnities. “It only represents about half of the year.”

Last year, insurers paid \$58.4 million to cover PRF losses in California.

The program also covers apiculture, with California being the top state in the nation with this type of insurance coverage.

"Ranchers, and apiculture producers too, are realizing that this program is paying pretty regularly because of the lack of rainfall," he added. The state is eighth in the nation for insured acreage, with Nevada being first.



The Pine Fire damages a ranch in Inyo County in July. (Photo: CalFire)

Ranchers in the Sacramento region, for example, have received payments every month for 2021. Lassen County ranchers have paid \$2.1 million into the program this year and received \$3.6 million back. Last year the agency paid \$5.5 million for insured PRF losses in the county.

Farmers are increasingly losing both crops and livestock due to wildfires and the impact has grown throughout 2020, Yasui noted. In 2014, one of the largest crop losses from wildfires covered 179 acres. In 2020, over 40,000 acres were impacted across 22 counties.

Wildfire damage, including crop destruction from smoke taint, can be covered, as well. These policies have been especially helpful for winegrape growers experiencing damage from smoke taint, but avocados and citrus have also been included. Last year, California had its single highest indemnity ever paid at \$234.7 million for wildfire losses—nearly all in grapes. The wildfire losses for grapes in 2020 surpassed the \$193 million in indemnity payments to pistachio growers in 2015 by nearly \$42 million.

According to USDA's NASS, there are 566,940 acres of harvested grapes in the state. In 2021, 439,317 acres were insured for a participation rate of 77%.

Yasui expects the participation rate for grapes to continue to rise now that fires have brought crop insurance to the forefront. The premium rate will grow next year in some counties affected by wildfire but decline in others, although it is capped at a 20% increase from year to year to prevent dramatic price swings. The agency is working with trade organizations to bump up participation for grape growers and those who might be eligible for other types of risk management programs.

"It doesn't matter if you're big or small, you can get crop insurance," Yasui emphasized.

Ag's climate funding at stake as Dems debate cuts to spending plan

More than \$90 billion in agriculture spending, including a 50% increase in conservation program funding, is at stake as congressional Democrats wrangle over how to pare back their \$3.5 trillion Build Back Better bill to woo critical moderate votes.

It's still not clear how much the package will have to be cut. Sen. Joe Manchin, D-W.Va., continues to insist that his top line is \$1.5 trillion. But Democratic leaders also have to determine how they cut the massive bill's various provisions. Do they cut everything across the board or instead discard some items in order to preserve their top priorities, such as climate policy?

House Speaker Nancy Pelosi, D-Calif., issued a statement Monday night that suggested the leadership plans to take the latter approach, which would bode well for preserving the agriculture spending, most of which is focused on addressing climate change.

“Overwhelmingly, the guidance I am receiving from members is to do fewer things well so that we can still have a transformative impact on families in the workplace and responsibly address the climate crisis: a Build Back Better



House Speaker Nancy Pelosi, D-Calif.

agenda for jobs and the planet For The Children!," Pelosi wrote to her Democratic colleagues.

On Tuesday morning, Pelosi said the party's spending priorities were still under discussion. Some Democrats "have written back to me and said, 'I want to do everything'," she said. But she made clear that the spending would have to be prioritized. "The fact is that if there are fewer dollars to spend, there are choices to be made," she said.

The international climate conference starts in Glasgow on Oct. 31, and without the Build Back Better bill's climate-related funding, President Joe Biden will have little to back up his pledge to halve U.S. greenhouse gas emissions by 2030. **At a pre-Glasgow conference last week in Italy, Pelosi portrayed the bill as proof that the United States is serious about addressing climate change.**

Farm groups are divided over the Democratic bill, which faces united Republican opposition. But in light of Pelosi's latest comments, the National Council of Farmer Cooperatives "has been reaching out to leadership urging that they keep the funding for expanded working lands conservation programs promoting climate-smart farming," NCFC spokesman Justin Darisse told *Agri-Pulse* on Tuesday.

"Lawmakers have quite often noted both agriculture's contributions to greenhouse gas emissions and the potential for agriculture to contribute to a reduction in carbon, so it would be unfortunate if that funding is not included in legislation meant to address climate change."

Ahead of Pelosi's latest comments, a lobbyist for another ag group told *Agri-Pulse* that climate policy appeared to be a priority for Democrats, "which is good for us."

But the lobbyist, who spoke on condition of anonymity, said it was difficult to nail down the potential funding for agriculture without an agreement on the bill's overall spending level. "I feel we're still in the shadowboxing phase and not in the endgame phase," he said.

The \$3.5 trillion plan's climate provisions include \$28 billion for conservation programs to go with the \$59 billion that USDA is already projected to spend under the 2018 farm bill. The bill contains another \$66 billion for agricultural research, renewable energy, rural development and forestry. The conservation funding includes a plan for paying farmers \$25 an acre for planting cover crops.

A separate, \$235 billion package of green energy tax incentives includes a \$33 billion extension through 2031 of the \$1-a-gallon tax credit for biodiesel and renewable diesel.

The Food and Agriculture Climate Alliance — a coalition of major farm groups, including NCFC, and some environmental organizations — hasn't taken a collective position on the Build Back Better plan, said Randy Russell, a lobbyist who represents the alliance.

There have been some informal discussions with Democrats about the conservation program spending, but **"FACA will not take a position on the package until we know all the specifics, both on the spending as well as tax provisions," Russell said.**

Still, Democratic leaders also are hearing from some individual FACA members and a who's who list of environmental groups.

Several FACA members, including the National Farmers Union, Environmental Defense Fund, The Nature Conservancy and Theodore Roosevelt Conservation Partnership, joined about 160 other national and state organizations in a letter to Democratic leaders last week in support of the \$28 billion in conservation spending.

Other groups that signed the letter included the National Sustainable Agriculture Coalition and National Association of Conservation Districts as well as the Environmental Working Group, National Audubon Society, National Wildlife Federation, Natural Resources Defense Council, Sierra Club, Union of Concerned Scientists and World Wildlife Fund.

“Hundreds of farm, food and conservation advocates, companies, and private citizens have weighed in with input during the budget reconciliation process, and they confirmed that the climate-smart agriculture provisions of the Build Back Better Budget will make a historic impact on conservation efforts,” the letter said.



House Ag Committee Chair David Scott, D-Ga.

Marcia DeLonge, a senior scientist at the Union of Concerned Scientists, said that the bill’s ag provisions represent “the greatest step in generations to transform our food and agriculture system to be more resilient, sustainable and equitable.”

USDA is currently having to respond to the “climate crisis with one hand tied behind its back. To effectively respond to the urgency of the climate crisis, we need action that reflects the scale of the challenge,” DeLonge said.

Democratic members of the House Ag Committee, led by Chairman David Scott, D-Ga., have sent a separate appeal to Democratic leaders in defense of the ag provisions.

“The provisions included in the agriculture portion of the Build Back Better Act will make transformative investments that will benefit agricultural producers and rural communities for years and decades to come,” the committee members say in their letter to party leaders.

Democratic leaders would like to have a bill ready before Oct. 31, when authority for federal highway funding is set to expire. Democratic leaders want to move the Build Back Better bill along with a separate, bipartisan infrastructure bill that includes a long-term extension of highway funding. Progressives have refused to support the infrastructure measure unless they are assured the larger package also will be enacted.

Supply chain woes hit US ag sector hard

Whether it's backlogs at ports delaying the arrival of containers from China, congestion at railroad hubs or slowdowns at American manufacturing plants, farmers and ranchers are seeing rising prices and mounting delays for machinery, spare parts, packaging material, inputs and other supplies they need to bring in their crops and market their commodities.

For corn and soybean farmers trying to bring in their harvest, a damaged tractor tire or broken-down combine can be disastrous as replacement times continue to lengthen and dealers scramble to obtain inventory.

“The supply chain is a mess,” said Kim Rominger, president and CEO of the Equipment Dealers Association. “It spans almost every industry right now, from appliances to automobiles to farm equipment and parts. Everything is under strain.”

Charlie and Kerissa Payne, who raise cattle, pigs, sheep and chickens, and ship meat to customers across the country, can’t get the material they need to send the pork chops, sausages and chicken wings that the Ohio-based Covey Rise Farms is famous for.

“We use a custom-made liner to ship out meat nationwide,” said Charlie Payne. “It’s an insulated liner that helps protect our meat as it traverses the United States. At one point in the spring, we were facing a five-to-six month backlog.”



Kim Rominger, Equipment Dealers Association

“The supply chain issues are affecting farmers and equipment dealers across the board, including sporadic delays for some parts and increased prices,” said Steve Ammerman, director of communications for the New York Farm Bureau. “This has been especially challenging during harvest. When a piece of equipment breaks down, farmers can’t afford to wait a week or two for a part that was typically available at their local dealer or overnighted to them. This can impact the quality of their crop and hurt their bottom line.”

Vernon Schmidt is an executive vice president at the Farm Equipment Manufacturers Association, which represents makers of plows, tillage equipment, sprayers, front loaders and other products. Those manufacturers depend on a steady flow of components made overseas and domestically, says

Schmidt, and they’re hurting.

“It’s a mess,” said Schmidt, who stressed that getting components from Asia — gearboxes, for example — not only takes much longer but has become much more expensive, which is also putting a strain on domestic suppliers.

American farm equipment manufacturers are now trying to get from U.S. sources what they can’t get from Asian suppliers, but that’s straining the system, says Schmidt.

Tim Burenga, vice president for purchasing and sales at Worksaver Inc., — a company in Litchfield, Illinois, that specializes in tractor attachments — says it now takes about a year to get the components from China his company needs to make seeders, power landscape rakes, stump grinders and hydraulic post drivers.

Beyond the extensive delays — more than six months longer for components and raw material to arrive at the port from China, another six to eight weeks to get the container onto a rail car and an additional two- to-three week delay to get the container on a truck and get it to the Litchfield factory — Burenga says the prices the company pays have more than tripled since last year.

And it’s a cost Worksaver has to pass along to farmers and ranchers.

“We’ve been doing it as a surcharge,” he said. “Because prices keep increasing, we’ve had to increase our surcharge three times this year.”

Most of what the company buys is domestically produced, he said, but it has to go overseas for some things like castings and forgings. Those, he said, must be purchased from China or India.

And dealers, who depend on getting parts and equipment in stock, are also in a bind, said Rominger.

“They may have combines on order that are getting pushed back because manufacturers can’t get the materials and component parts to finish assembly,” he said. “Repair parts are tight and that’s going to cause harvests to be a real strain on the farmers.”

Adding to the strain, he said, is that people are buying what they can — not necessarily what they need.

“People are trying to get extra just in case something breaks, especially during harvest,” Rominger said. “If you know things are going to be hard to get and if you can buy two, you’re going to buy two. That again puts additional strain on the supply chain.”

John Kuzmaul, a Kansas corn and wheat farmer, says when he got word from his local tire dealer that the tires he needs for his tractor and seeder were available, he snapped some up and was able to quickly sell his old ones. Now he says he’s waiting on a back-ordered fertilizer tank that he may or may not get this year.

The Biden administration says it’s hitting the supply chain woes head-on, and Transportation Secretary Pete Buttigieg says the recently formed Supply Chain Disruptions Task Force is addressing problems from congested U.S. ports to the shortage of truck drivers.



Transportation Secretary Pete Buttigieg

Pandemic disruptions at foreign ports, like recent COVID-19 outbreaks at the Port of Ningbo-Zhoushan and the Yantian International Containers Terminal in China, are beyond the reach of the task force, but there is also plenty of congestion at U.S. ports. Buttigieg, speaking on MSNBC’s Morning Joe last week, said the task force is hosting roundtables with U.S. port operators, port owners, labor unions and shippers.

Today, the Biden administration is meeting with business and labor leaders to announce that the Port of Los Angeles will “move towards” 24/7 operations at the Ports of Los Angeles and Long Beach – two ports that are the point of entry for 40% of containers to the U.S. The Port of Long Beach already expanded some hours in mid-September.

“Unlike leading ports around the world, U.S. ports have failed to realize the full possibility offered by operation on nights and weekends,” the White House noted.

And the White House recognized the impact of the supply chain failures on farm country by making Agriculture Secretary Tom Vilsack a co-chair.

USDA announced on Sept. 29 that it planned to dedicate \$500 million to address “increased transportation challenges, availability and cost of certain materials, and other near-term obstacles related to the marketing and distribution of certain commodities.”

But industry officials like Rominger and Schmidt say they don’t see a return to normal any time soon.

Rominger says he’s hopeful that equipment dealers will start to see more reliable supplies sometime in 2023.

In the meantime, Kuszmaul says: “When something becomes available — if you think you’re going to need it, you better buy it.”

Scientists urge zoonotic disease emphasis in pandemic prevention

Scientists who study the danger to humans and food production from zoonotic diseases, those that can jump from animals to humans, say there are ways to prevent the next global pandemic at a fraction of the cost of ending a massive outbreak.

Andy Dobson, an ecologist and evolutionary biologist at Princeton University, said it would take \$260 billion over 10 years to prevent the next pandemic. By comparison, the COVID-19 pandemic is now estimated to cost \$30 trillion to \$40 trillion, he said at the recent Charles Valentine Riley Memorial Lecture sponsored by the American Association for the Advancement of Science.

The money would go mostly to end the wild meat trade in China (\$19.4 billion) and reduce tropical deforestation by 40% in most regions (\$5.6 billion). The rest would be spent on early disease prevention and control, monitoring the wildlife trade, and reducing spillover disease in livestock.

“The bottom line is if we want to stop this from happening again, we have to put money into stopping the wildlife trade, we have to stop wildlife consumption, we have to stop destroying tropical forests,” Dobson said. “We’ve got to hire many, many vets as they’re the frontline troops.”

“We’re seeing newly emergent diseases all the time,” said James Roth, a professor of veterinary medicine and director of the Center for Food Security and Public Health at Iowa State University. “There’s a very impressive list of diseases that have caused problems in the last 40 years. And we’re likely to see a similar list in the next 40 years of human diseases that are zoonotic, that we aren’t aware of now.”

Dobson and Roth said that population growth naturally increases the risk of a pandemic. **“Essentially, lots of these emergencies are being driven by the size of the human**



James Roth, Iowa State

population,” Dobson said. “The bigger it gets, and the faster it reproduces, the more outbreaks we would expect.”

Roth, who also spoke at the lecture, points in particular to the zoonotic Nipah virus in Malaysia, which in 1999 forced the extermination of nearly half of that nation’s 2.4 million pigs. “Malaysia did not have a large number of pigs,” he said, noting its predominantly Muslim population, which does not eat pork.

By comparison, approximately 300 million pigs in China have died or been depopulated by African swine fever, which has most recently been found on the island of Hispaniola, home to Haiti and the Dominican Republic — “a very alarming event,” Roth said. “There’s a lot of concern that this virus has been very hard to stop.”

“There have been no new cases of Nipah in humans or swine in Malaysia since 1999,” Roth said. “However, almost every year there are a few cases in people in Bangladesh and India.”

Although transmission from fruit bats is believed to be the cause of those human cases, Roth said there also is some evidence of human-to-human transmission.

Roth said the habitat of the fruit bat species that carries the virus overlaps with a pig-heavy area of southeastern China.

“What if the Nipah virus emerged from fruit bats into this pig-dense region, spread exactly like it did in Malaysia very rapidly from pig to pig, or like African swine fever did in China, but is a zoonotic disease with a high case fatality rate?” Roth asked rhetorically. “It would be a very, very difficult situation to deal with. And we’ve known for 20 years that this is a threat.”

In a follow-up interview with *Agri-Pulse*, Roth called Nipah “a huge concern, if it would get into pigs and spread like African swine fever did.”

The U.S. government is paying more attention to the issue of zoonotic diseases. USDA’s Animal and Plant Health Inspection Service recently asked for comment on a proposed framework for surveillance for COVID-19 and other emerging zoonotic diseases through the American Rescue Plan enacted by Congress in March.

The National Association of State Departments of Agriculture said in its comments that it fully supports APHIS’ proposal for an “early warning system to alert public health partners to potentially prevent and limit the next zoonotic disease outbreak. NASDA supports a One Health mission of collaboration to accomplish the goal of safeguarding animal, public, and environmental health comprehensively.”

The Centers for Disease Control and Prevention says the “One Health plan” is a collaborative, multisectoral, and transdisciplinary approach — working at the local, regional, national, and global levels — with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment.”



Liz Wagstrom, NPPC

Industry also is working to prevent the entry of viruses into the United States. Liz Wagstrom, chief veterinarian for the National Pork Producers Council, said the group has put together a task force on feed mitigants to find ways to prevent viral transmission through feed.

Last month, a year-long study of the pork industry “found no major areas have been overlooked in efforts to prevent the introduction of African swine fever to the United States,” the Swine Health Information Center said. SHIC funded the study along with the pork checkoff.

Roth also points to “secure food supply plans” developed by USDA, industry, Iowa State University and others for pork, poultry, beef, dairy, sheep and wool. Those plans “provide guidance for livestock producers to voluntarily prepare before a foreign animal disease outbreak to limit exposure of their animals through enhanced biosecurity,” according to the plans' website.

Looming digitization trends bring fresh questions for producers, companies

Farmers and food companies are under pressure from their customers and federal officials to expand the use of digital tracking methods as a way to curb foodborne illness outbreaks and document that their products were grown sustainably. Farm groups, however, are concerned about the privacy of the data that is being generated.

Some such tracking is already occurring. Fruits or vegetables, for example, can be tracked by attaching a sophisticated bar code known as the global trade item number to packaging. This information could include the date of harvest or date of packaging, along with company information. Then, the product moves down the supply chain to a distributor or processor, a grocery store, and finally on to the consumer.

But Jennifer McEntire, senior vice president of food safety and technology at the United Fresh Produce Association, said the current system isn't perfect because the product doesn't get tracked at all points in the supply chain.

"The closer you get to consumers is where things are maybe not as well tracked and traced. It's where the volume and the movement is higher. The diversity of products being handled is higher," she told *Agri-Pulse*. McEntire said tracking models exist, but it's a matter of getting everyone along the supply chain to do their part.

Frank Yiannas, the Food and Drug Administration's deputy commissioner for food policy and response, has been promoting the digitalization idea over the last year by outlining the New Era of Smarter Food Safety blueprint rolled out in July 2020.

The blueprint highlights four pillars surrounding tech-enabled traceability, prevention and responding to an outbreak, business models and retail modernization, and food safety culture.

Speaking in September to the National Association of State Departments of Agriculture, **Yiannas said he firmly believes digitization of the food system will lead to a safer, more transparent, more resilient, and sustainable food system.**

He said digitization was critical throughout the pandemic.

“We created a tool called *21 Forward* where we digitally started tracking the assets of food production across the United States, tracking Covid transmission at the county level and seeing where there were food production facilities in what we called ‘rapid riser’ communities,” he noted.



Frank Yiannas, FDA

The goal of the program was to find where the greatest risks of disruptions could be along the supply chain as COVID-19 cases began rising across the country in 2020.

Yiannas said there has to be shared value where retailers, processors, and farmers can all benefit from using data to trace products from the farm to the final consumer.

“As a small farmer, if there’s a mango outbreak, the reality is we’re going to pull them all off the shelf and all mango suppliers are going to be guilty until proven innocent and so we’re all going to lose sales and damage consumer trust,” he said.

Currently, the processor gets accused of doing something wrong if the mangos spoil once they reach the grocery store shelf, Yiannas added. He noted digitization of time temperature monitoring of produce during transportation could solve shelf-life problems.

Mary Shelman, the head of consulting firm the Shelman Group who formerly led the Harvard Business School’s Agribusiness Program, said consumers want to know that sustainability is fundamental, supported, and demonstrated by proof of what companies are doing. She said a prime example is companies like Danone that are developing regenerative agriculture models focused on protecting soil health and animal welfare.

“It’s just not enough to tell a good story. You have to have the data and you have to have programs that you can show progress,” she said.

While the digitization of the food system could be beneficial, California Department of Food and Agriculture Secretary Karen Ross said the key is going to be comfort in data sharing. Some producers become concerned when they share data with other entities throughout the supply chain in fear it could be used against them in some way.

“When we look at what retailers collect, when we look at what processors collect, what we know packers collect and what we know farmers have, and I think the real critical answer to this is how do we create trust and structure for data sharing for the public good,” Ross told *Agri-Pulse*.

But she said there are benefits for companies who are trying to meet sustainability goals and tell a particular story of their brand names and where their product originated. Ross noted this includes programs such as those Cargill and others are employing to reduce their climate and water-use footprints.

On Sept. 16, Cargill announced it would be paying farmers for boosting soil health through environmental practices and carbon sequestration. Being able to gather data to show which

practices farmers are using on their operations can help show which ones may be working to reduce carbon emissions over time.

But Eric Deeble, policy director at the National Sustainable Agriculture Coalition, said big and small farmers must be able to have equal access to technologies that aggregate data.

“Right now, there is a tremendous amount of information that is generated from farms, but much of it is coming from big pieces of equipment operating on really big pieces of land,” he told *Agri-Pulse*.

On the vegetable production side, Deeble does see opportunities for small to mid-sized producers who could leverage the data to show where the product is grown.

He said being able to trace a bag of carrots back to a producer who has implemented climate mitigation strategies or conservation practices at their operations “might help them grow their business or be more profitable,” he said, referring to specific ethics a consumer may care about.

But Deeble said a digital tracking tool must be affordable for all producers.

“You can’t ask a small two-person operation to have a data analytics professional on staff in order to meet the requirements FDA may put forward,” he noted.

Other industry stakeholders see digital technology as a way to help improve product safety for consumers and say a tracking system should be universal for all specialty crops. In comments submitted to FDA earlier this year, the Western Growers Association, which represents produce farmers in California, Arizona, New Mexico, and Colorado, said that all produce should be traced.

“From a grower perspective, it is not practical or feasible to manage different recordkeeping systems for different crops. Consistent implementation of new recordkeeping requirements across the supply chain for all produce would be beneficial to all entities involved and would better protect public health,” the comments read.



Charles Hurburgh, Iowa State

Charles Hurburgh, a professor of agricultural engineering at Iowa State University, said the university has been working on grain traceability for the last three years, especially as more carbon credit markets surface in the agricultural sector.

The purchaser, who may be providing a carbon credit to the farmer for the grain, wants to know that the specific grain being bought is the same grain produced with a climate-smart or conservation practice associated with the carbon credit, not something different, Hurburgh told *Agri-Pulse*.

While noting GPS accuracy has gotten progressively better since its introduction in farm equipment across the country, Hurburgh said it’s hard to track the grain from an individual tank on a combine.

On one farm alone, corn might go from the combine into the grain bin, where it is blended with the production of other fields. Then, some of the grain is removed to be hauled to a grain elevator where the load is blended again with corn from different farms.

Hurburgh said the goal is to “try to improve the accuracy of the data that you pass from one place to another” and validate the steps with software and mathematical modeling to improve that process.

Knowing where exactly in the field the corn came from using GPS tracking could be beneficial to an ethanol plant if the data can be used to pinpoint which areas of the field produced corn that had a higher starch content since starch is a critical component needed for producing ethanol.

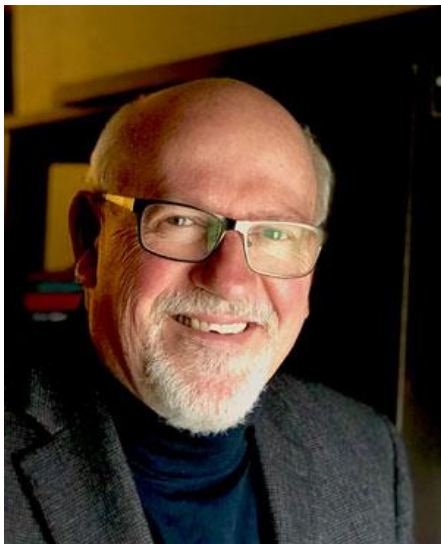
Hurburgh said the university is expected to open a new grain milling facility next fall to teach students how blockchain works in the grain industry.

Facebook restrictions frustrate livestock producers looking to sell products online

Policies preventing Facebook users from selling animals and animal products on the platform have presented a challenge to livestock producers looking for ways to market their products to consumers.

According to Facebook’s commerce policies, listings on the site “may not promote the buying and selling of animals or animal products.” Farmers who try may have trouble getting their posts past Facebook’s review process and, even if they do, their posts could still be taken down.

“Failure to comply may result in a variety of consequences, including, but not limited to, removal of listings and other content, rejection of product tags, or suspension or termination of access to any or all Facebook, Instagram, or WhatsApp commerce surfaces or features,” an [overview of Facebook’s commerce policies](#) states.



Rick McNary, Shop Kansas Farms

The prohibited items include medicines, medical devices, veterinary services, animal parts, products from animals intended for consumption and live animals including livestock and pets. Rick McNary — [who created a Facebook group, Shop Kansas Farms](#), to help connect farmers to consumers who were looking for food during the pandemic — said it has even applied to posts that have photos of eggs.

McNary said as the Facebook group developed, producers started to notice some of their posts selling animals or meat were being blocked. Right away, some of them thought it might be McNary not approving their posts as the group moderator, but he’d tell them it wasn’t. He said some of the posts didn’t even make it to him for the approval process.

“Some of them get really frustrated,” he said during the recent Ag Outlook Forum sponsored by the Agricultural Business Council of Kansas City and Agri-Pulse. “They’ve learned it’s not us.”

A Facebook spokesperson said all posts listed on the platform's Marketplace and Buy and Sell Groups must comply with the Community Standards and Commerce Policies and may not promote the buying or selling of animals.

“As we strive to protect the welfare of animals against illicit trades, we cannot always ensure their safety in a peer-to-peer transaction,” the spokesperson told *Agri-Pulse* in an email. “Outside of our commerce surfaces, we allow such sales if posted by brick-and-mortar entities, animal rehoming, and adoption agencies and shelters.”

The spokesperson said listings on the platform's Marketplace are put through an “extensive review” conducted by both people and technology.

Deborah Niemann, an Illinois producer who sells lamb, goat and pork meat, has been using Facebook since 2006. She said in a Facebook group centered around wool that she used to manage, people would complain about having their posts taken down.

However, she said most of these producers referred to the breed of sheep without stating “wool,” which made it sound like they were selling the sheep themselves. For example, producers selling wool from Shetland lambs would just say “I have Shetland for sale.”

“If you say ‘I have Shetland for sale’, the dumb bot thinks you're talking about a Shetland sheep, a Shetland pony, a Shetland cow, a Shetland sheepdog — you're talking about an animal, not wool,” she said. “Because ... normal people don't say that. That's the way fiber enthusiasts talk.”

Wes King, a senior policy specialist for the National Sustainable Agriculture Coalition, said he worries these policies will make it difficult for small producers, some of whom are struggling to access markets, to pursue direct-to-consumer options.

“The impact, to me, likely has a disparate negative impact on small farmers, direct-to-consumer farmers and small businesses in general,” King said.

However, Niemann said there are ways producers have been able to get past Facebook's algorithms, comparing them to Amelia Bedelia — a children's book character known for taking phrases extremely literally. For example, producers could say that they are “taking sheep to the locker,” and Facebook's algorithms likely wouldn't flag any of the keywords.

“The computer thinks that ‘locker’ is something that you have in a high school or a stadium or something,” she said. “The computer's not going to read that as you're trying to sell an animal.”

Niemann has noticed a lot of creative keywords producers use to skirt the rules. For instance, in a lot of sheep groups, she's noticed people posting about “lawn mowers” for sale. These “mowers” are actually sheep, but Facebook's detection technology doesn't understand that.



Wes King, NSAC

“It's about getting to know people and understanding that it is not at all personal, you're talking to Amelia Bedelia in a computer,” she said. “And you just have to use words that that computer's not going to view as an animal product or an animal.”

McNary also has noticed ways producers could get their posts past the algorithms. On the Shop Kansas Farms page rules, he told people in the group not to post photos of live animals. If producers had their posts taken down, he would tell them to try again, but remove the words “meat,” “beef,” and “sell.” He said after that, most of the posts went through.

Additionally, McNary has expanded beyond the Facebook group by creating a [website](#) for Shop Kansas Farms. He said this has helped give producers another avenue for finding consumers to buy their products.

“What we're looking for too, in the future, is figuring out ways to help farmers sell better,” McNary said.

King, the senior policy specialist at NSAC, said he'd like to see Facebook figure out a way producers can market their products while addressing the platform's concerns.

“I think it would be a good thing to see Facebook work with producers, work with people who are doing this kind of direct-to-consumer marketing to figure out what's a system that allows them to be the entrepreneurs they are, while also addressing whatever reasons or concerns that Facebook had to create the policy in the first place,” he said.

News Briefs:

As drought deepens, Cultivate California campaign ramps up. [Cultivate California](#), a public education campaign on farm water use, is reaching out to more Californians this year. The campaign, launched amid the last drought in 2014, is managed by the California Farm Water Coalition. Executive Director Mike Wade said that getting the message out early this year has served as an essential counterweight. “Californians continue to get inundated with negative messages about farming,” said Wade. “The Cultivate California program was designed to help bolster the natural support people have for agriculture and farms and to continue providing them with facts and information about the connection between their food and the water supply.” Several Farm Credit organizations support the campaign with \$100,000 in annual contributions. “Cultivate California is one of the most successful groups we have to educate people about the impacts the drought has on our food supply, and the need to improve our water storage to protect all of us in future droughts,” said Curt Hudnutt, president and CEO of American AgCredit. A critical touch point in the campaign this year has been the need for flexibility in water transfers to supply areas in greater need. For long-term response, the state should invest in facilities to capture and recharge groundwater, explained Wade.

Equipment sales trend higher in September. Tractor and combine sales had a strong month in September, posting year-over-year gains across many of the categories tracked by a monthly report maintained by the Association of Equipment Manufacturers. According to AEM data, sales of two-wheel-drive tractors with more than 100 horsepower jumped 23% year over year in September, continuing a year-to-date sales trend that's tracking 26.2% higher than 2020. Combine sales also shot up over the prior year; the month-to-month comparison showed a 34.6% increase in 2021, and year-to-date sales are 17.3% higher. “The continued growth in ag tractor and combine sales is good news for the ag equipment industry,” said Curt Blades, AEM's senior

vice president of agriculture services. “Year-to-date, every segment is up double-digits over last year, which was already a high-growth year. We look forward to these trends continuing through the rest of the year, and into the next.” The sales of four-wheel-drive tractors were the only segment to experience a September drop in the AEM report. The September 2021 sales came in a mere 1.3% lower year over year, but the year-to-date sales are still up 30.3% so far this year. Total year-to-date farm tractor sales are up 12.2% in 2021.

Minority-serving institutions among recipients of major NIFA sustainable ag grants. The federal government is investing \$146 million in sustainable agriculture research across the country. USDA’s National Institute of Food and Agriculture has announced 15 grants, most totaling \$10 million over five years, for projects that range from food systems resiliency for children’s health based at the University of Hawaii to creating scalable algae production to use as a cattle feed additive, a project based at Colby College in Maine. Other recipients include Ohio’s historically black land grant university, Central State, in partnership with a 1994 Tribal College and other land grant schools to research hemp as feedstock for aquaculture and the University of California, Merced, a Hispanic-serving institution. Joshua Viers, the lead principal investigator for UC Merced’s project, said the partnership with Utah State University, New Mexico State University, other UC campuses and additional partners will focus “mainly on securing a climate resilient water future” in the West. “Together we can lead the way with investments in science and research and climate-smart solutions that feed and nourish families, improve the profitability and resilience of producers, improve forest health while creating new income opportunities and building wealth that stays in rural communities,” Ag Secretary Tom Vilsack said in a statement. The five-year grants mark the third installment of the Sustainable Agricultural Systems program, which funds interdisciplinary research aimed at increasing sustainability in plant and animal production and improving human and environmental health. “It takes an inclusive systems approach to tackle these major issues,” NIFA Director Dr. Carrie Castille said in the statement. “We are excited to see impacts this research investment will generate for our nation to move us towards solutions that benefit all Americans.”

Farm Bureau, MANRRS sign MOU. The nation’s largest farm organization is joining forces with a group promoting agricultural opportunities for minority students with the hopes of increasing diversity in the sector. The American Farm Bureau Federation and the National Society for Minorities in Agriculture, Natural Resources and Related Sciences announced Monday that the two groups signed a memorandum of understanding “with the goal of increasing minority involvement in agriculture.” The MOU, the groups noted, “is expected to strengthen membership value for both organizations through collaboration on projects, including written content for each organization’s publications, providing leadership training and expertise, and cross-promoting programs and events.” Farm Bureau President Zippy Duvall said the organization was excited to partner with MANRRS, noting “we will need the brightest minds and new perspectives to continue meeting the growing demand for healthy, affordable food.” Duvall added both organizations “believe the partnership we’re forming today will benefit both of our organizations and all of agriculture.” For her part, Olga Bolden-Tiller, president of MANRRS, said the new partnership “will ensure that ALL of the voices of the agricultural community are heard as we work together to develop a well-trained workforce that not only identifies agricultural issues, but one that also addresses these challenges today and tomorrow, domestically and globally.” Both organizations are already part of similar MOUs with other entities. Farm Bureau has agreements on the books with 4-H and the National FFA Organization; MANRRS signed an MOU with National Farmers Union leadership in 2020 and Farm Credit has launched a scholarship program for the organization’s members.

Farm Hands West: Birdsong tapped to number two position at CDFA

Gov. **Gavin Newsom** has appointed **Christine Birdsong** to serve as undersecretary of the California Department of Food and Agriculture, the department's number two position. Birdsong fills the position vacated by Jenny Lester Moffitt, who was appointed by President Joe Biden to serve as the USDA undersecretary for marketing and regulatory programs. Birdsong previously worked as general counsel for the Sun Valley Rice Co. since 2016 and held a similar position for the National Cotton Council of America. She has also served as counsel for the U.S. House Ag Committee and CropLife America.



Christine Birdsong

Newsom has appointed **Bianca Sievers** to be deputy director for special initiatives at the Department of Water Resources and **E. Joaquin Esquivel** and **Karla Nemeth** to sit on the Western States Water Council. Sievers has been policy adviser to the director of the Department of Water Resources since 2018 and has held multiple positions at the Governor's Office of Business and Economic Development. Nemeth has been director at the Department of Water Resources since 2018 and before that was deputy secretary for water policy at the California Natural Resources Agency. Esquivel has been a member of the State Water Resources Control Board since 2017 and served as chair since 2019. Esquivel also served as the assistant secretary for federal water policy at the California Natural Resources Agency from 2015 to 2017.

The Governor has also selected **Katrina Leni-Konig** as the deputy public adviser for the California Energy Commission. Leni-Konig previously was an energy resources specialist III at the California Energy Commission since 2019.

Elizabeth Jonasson has joined Westlands Water District as the new public affairs representative. Jonasson most recently served as the strategy and communications officer for the Fresno Economic Opportunities Commission. Before that, she was an information officer for the California High-Speed Rail Authority.

Jim Morris has been brought on to Pear Bureau Northwest as the organization's marketing communications manager. Bringing over 12 years of experience in retailer and marketing experience, Morris previously worked at Keen Footwear as the retail marketing manager for the past three years.



Rod Snyder

Giddings Berries USA has hired **Neftaly Vargas** as the senior sales manager and **Adolfo Bucio** as the new operations manager. Vargas previously worked for Tanimura and Antle as an account manager and team lead. Bucio also previously worked for Tanimura and Antle as food safety assistant manager.

Rod Snyder has been picked to be the Environmental Protection Agency's new agriculture adviser. Snyder currently serves as the president of Field to Market: The Alliance for Sustainable Agriculture, a position he has held since March 2014. Snyder also has worked at the National Corn Growers Association and CropLife America.

Former Rep. **Xochitl Torres Small** has been confirmed by the Senate to become the Agriculture Department's undersecretary for rural development. Two USDA nominees are currently awaiting confirmation: Robert Bonnie, Biden's pick to head up the farm production and conservation mission area, and Homer Wilkes, the nominee for undersecretary of natural resources and environment.

The Biden administration on Tuesday announced its first appointments of state directors for the Agriculture Department's Farm Service Agency and Rural Development division. The appointments include offices in seven states, primarily in the Southeast.

Clayton Becker has been named president of the Farmers National Company. Bringing over 21 years of agriculture, seed, and crop protection experience, Becker most recently worked at Syngenta Seeds as a strategy project lead and commercial unit head.

Alltech Crop Science has tapped **Andrew Thomas** to lead the company as its new CEO. Thomas brings 30 years of experience to the position, most recently serving as the CEO of WISerg Corporation, a Seattle-based circular economy business that diverts waste streams to sustainable agricultural inputs. Before that, Thomas served in executive management roles for the plant breeding and seed company Nuseed.

Case IH has selected **Scott Harris** to lead the company as the new global president. Harris most recently served as vice president of Case IH's North America business. He succeeds **Brad Crews**, who will now serve as president of North America for CNH Industrial. **Kurt Coffey**, current global brand marketing manager and marketing communications leader for North America, will fill Harris' former role as vice president of North America, effective immediately.

The Pet Food Institute welcomed **Savonne Caughey** to its team as the new senior director of advocacy and government relations. Bringing over 20 years of experience in government relations and public affairs, Caughey previously served as the senior director of government affairs at the Pet Industry Joint Advisory Council. She has also served in numerous senior leadership roles at the American Heart Association, Herbalife International, Elanco Animal Health and USDA.

Jordan Crowe has joined the U.S. Grains Council as the new trade policy coordinator. Crowe previously worked at United Systems where he served as a clean energy consultant.

The Farm Credit Administration's Board has selected **Ashley Waldron** to serve as secretary. Waldron joined the FCA system 12 years ago and has served as an FCA examiner and also became a certified fraud examiner. For the past year and a half, Waldron has served as the Office of Examination's director of operations.

U.S. Wheat Associates picked **Joe Bippert** as the new assistant regional director for South Asia, effective Nov. 1. Bippert will work remotely until he and his family can relocate to USW's office in Manila, Philippines. Bippert has served as the program director with the Washington Grain Commission in Spokane, Wash., since January 2017.



Joe Bippert, U.S. Wheat Associates



Kyla Kaplan

Kyla Kaplan joined OFW Law as an associate attorney. Kaplan will be focused on regulatory issues related to OFW Law's FDA and USDA-regulated food clients and agriculture, medical products and government relations issues. Before joining the firm, Kaplan worked at Walmart under the food safety and health team, helping with labeling compliance. She also worked as a law clerk for Tyson Foods.

Farmers for Sustainable Food has added **Anne Moore** as the organization's sustainability communications manager. She joins FSF from CHS Inc., where she was the marketing communications director for in-country operations.

Former Wyoming state representative **Hans Hunt** is resigning from his position to become Sen. **Cynthia Lummis**', R-Wyo., agriculture policy adviser. He will handle the agriculture, food, foreign trade, and international finance portfolio. Hunt has served as a state representative since 2011.

James Lundquist has been promoted to legislative aide in Sen. **Lisa Murkowski**'s, R-Alaska., office, helping cover the lands and natural resources portfolio. Lundquist previously worked as a legislative correspondent for Murkowski and also worked as an intern on the Senate Energy and Natural Resources Committee.

Best regards,

Sara Wyant
Editor

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