

## Why are cost-efficient tools for preventing wildfires being ignored?

The deadliest fire in state history destroyed the town of Paradise and blanketed the capitol in smoke for three weeks. The governor and state legislators responded with several bills aimed at slowing these natural disasters, speeding up the response and dedicating more funds to the fight.

**The steep cost of fighting these fires has raised new interests in prevention strategies—including forest thinning and other forms of vegetation management—and has renewed old conflicts over the use of herbicides, one of the most cost-effective tools in the kit.**

Also worried about the fires to come are researchers. The challenge is steep: California's [Forest Carbon Plan](#) calls on increasing the amount of vegetation treated to at least 35,000 acres per year, beginning next year. Another [study](#) commissioned by the state projects the average amount of area burned by wildfires to increase by 77 percent by the end of the century.



The U.S. Forest Service supported fire suppression efforts at many California locations last fall. Photo: USDA

**“The crisis of our time is wildfires in California,” said Sen. Bill Dodd, D-Napa, in an [interview](#) with *Agri-Pulse*. “That has really become the majority of my legislative life since the North Bay fires.”**

Dodd now has three wildfire bills up for vote. Among those is an ordinance requiring local governments to enforce defensible spaces around structures, which would require landowners to be more diligent with managing vegetation.

The California legislature has also appropriated \$200 million for fighting fires to the Department of Forestry and Fire Protection (Cal Fire) from the Greenhouse Gas Reduction Fund, doubling the amount the department received last year. In the first year of the fund, Cal Fire received \$42 million. Per Sen. Dodd's SB 901 bill last fall to improve forest health, Cal Fire is also receiving \$1 billion over the next five years from the fund. The governor's proposed budget would also provide Cal Fire with \$254 million for resource management for a number of activities, which includes vegetation management.

**Last year, Cal Fire spent nearly \$1 billion fighting wildfires, well above its budget at the time and more than 75 percent above its budget five years earlier.** The bulk of that funding has predominantly gone to fire suppression over prevention, according to Lawrence McQuillan of the non-partisan Independent Institute's Center on Entrepreneurial Innovation. Cal Fire is asking for new tanker aircraft this year and more boots on the ground when fires break out and in deployment throughout the state during critical fire conditions.

Much has been debated about forest thinning and the associated costs, while the role pesticides play in prevention has been diminishing, despite the potential cost saved if those chemicals are used more strategically.

**“Everything is reactionary and not prevention,” said Travis Bean, a cooperative extension weed specialist at UC Riverside, who researches the wildfire threat from plants.**

In grasslands throughout the state, ecosystems have been entirely replaced by invasive species that are fire prone, like mustard grasses and medusa head. As these plants promote more fire, they also move into the recent burn areas and promulgate their species. They grow along roadsides, presenting a gateway for fire to reach the pockets of native species. On steep slopes after burns, invasive plants with shallow roots take over, leading to slides when the first rains fall. Without that soil, it is impossible for the native plants to return.

The most cost-effective way to tackle a problem on such a massive scale is through a selective broad-spectrum herbicide. Yet no statewide program exists for this and no agencies track the extent of herbicide use in fire prevention, as the Department of Pesticide Regulation does for agriculture.

The state funding that does go to prevention tends to be for educating the public on “fire wise communities,” which involves encouraging private landowners and local agencies to create safe spaces of 100 yards from buildings, said Bean.

More often, vegetation management is in response to an active fire and involves bull dozing fire lines across landscapes to create dead spaces. **Bean said applying herbicides ahead of time to create firebreaks would be “orders of magnitude less expensive” and less damaging to the ecosystem.** Ripping up vegetation leaves a lasting scar on the landscape for decades, he said.

“And it would also be a pathway to further invasion by invasive species that are one of the leading causes of these fires,” he said.

Ignitions nearly always start along roadsides and utility corridors, whether from a car, a cigarette or an electrical wire. This accessibility allows for more targeted herbicide use as well. Larger swaths can be sprayed from a vehicle or more selectively from a backpack sprayer to protect key species or scenic views. Scaling up, costs go down as more acreage is treated with herbicide, while costs rise as more labor-intensive strategies are deployed.

“If you’re going to go big, you might as well go home,” said Bean. “The problem is so widespread if we’re tackling it piecemeal.”

Despite the demand, it is hard for a company to make a profit from producing an herbicide specifically targeting these invasive species, given the decades long process for research and development.

“We just have a super limited menu of herbicides, compared to agriculture,” Bean said.

This leaves land managers with glyphosate, the most effective tool for selectively killing these grasses without impacting livestock or wildlife. With other herbicides, the potential for collateral damage is higher as the herbicide is more mobile and can move downhill or through soil easily. Bean cautions that glyphosate is not the solution for all weed problems and that every tool for preventing fires should also be considered.

Yet he is finding that local jurisdictions are increasingly removing it from the menu, including irrigation districts, where glyphosate would be the most effective against riparian plants.

“When you talk about nonchemical, you’re really limiting yourself to small areas at extreme costs,” he said, adding that machinery can’t easily reach steep areas either.

In a recent study, public health researchers have also questioned the health risks of pesticides when they burn and contribute to the air contamination during these fires.

### **A steep cost for alternatives**

Cal Fire does not use herbicides, according to a spokesperson. Vegetation management is preformed through mechanical thinning. The 31 million acres that Cal Fire oversees is primarily private property and the responsibility of the landowners.

Cal Fire and federal agencies do fund local Fire Safe Councils, which provide grants to local community groups for prevention efforts like vegetation management. These projects usually involve mastication, in which large excavators with a grinding head chew up entire trees into wood chips. The approach requires routine maintenance, since brush can grow back within a year.

**“The cheapest, quickest, most efficient way to do it is to come in and use an herbicide to knock all of that regrowth back,”** said Scott Oneto, a UC farm advisor for counties along the foothills of the Central Sierra Nevada.

He said the third management tool is contract grazers. **In a flip from tradition, ranchers are paid to graze their livestock in these areas. Brad Fowler, who runs The Goat Works, said in the last five years his business has shifted from weed abatement to mostly fire hazard reduction. And business is doing well.**

“Private land managers and a fair number of public agencies, municipalities and utilities are using us fairly extensively,” he said.

Fowler described it as a logistics business that involves animals. He transports a whole ranch infrastructure – fencing, water, shelter, corrals – to every site. His goats take care of “anything from ground level to six feet up,” while thicker brush and trees require mechanical tools. The goats can consume much of the vegetation, trample more down and work in steep areas that are treacherous for humans and machines.

Regardless of the options for tools, Scott Oneto acknowledged his challenge is largely with private landowners.

**“The majority don’t do a whole lot of vegetation management in general,” he said. “A lot of people have the mindset that nature will take care of itself.”**

This has led to such a fuel buildup across the foothills that often the only solution left is mastication. Herbicides can play a secondary role with tackling regrowth later, he said.

The grasslands pose a threat of a different sort. California’s wet winter has led to a lot of excitement for growers. For Travis Bean, however, the greenery is an omen:

“As a weed scientist, when I see this, I say: ‘A big, big fire season is coming.’”

## **Five questions for State Senator and Climate Scientist Bill Quirk**

Science is key to agriculture, but often missing from the legislative discussions impacting the industry. As a scientist, Sen. Bill Quirk, D-Hayward, understands the challenge of describing complex research in a way that policymakers can quickly grasp.

Before retiring into a political career at the capitol, Quirk was a climate scientist at NASA and Lawrence Livermore National Laboratory and taught at Columbia, Caltech and UC Davis. He is recognized for having influenced the Comprehensive Nuclear Test Ban Treaty and helping to find a solution for Rocky Flats as the facility threatened to spread plutonium oxide over Denver. Quirk currently chairs the Environmental Safety and Toxic Materials Committee.

Quirk spoke with *Agri-Pulse* about the politics of science, agriculture’s role in mitigating climate change



California Sen. Bill Quirk

and the challenges of working with the industry. The conversation has been edited for brevity.

### **1. How does your background as a scientist help as a lawmaker?**

I find what the background does, first of all, is it gives you the ability to read a scientific paper in which you're not the expert. My expertise is in astrophysics and nuclear weapons design. That doesn't come up too often in legislation. But it's also a great training over the years for trying to hone in on what the key question is that you have to ask. I'm good at trying to get through the maze of people's minds to what is the key question.

I was also our country's expert on foreign nuclear weapons programs. So, I was doing intelligence analysis. They teach you a way of describing what you have learned in a simple way. They want you to explain your conclusion, the *what* and the *why*, in one sentence. Then do it in a paragraph. Then do it in a whole paper. Because chances are, most decisionmakers just read the first sentence.

So, the training as an intelligence analyst, the training as a scientist, learning how to sell your ideas—that was very much what I was doing as a nuclear weapons designer.

### **2. Why did you decide to get into politics?**

I've always been involved in politics. Politics is just how we manage to get our way through life. Everybody does politics every day. Whether it's getting along with your spouse or your boss or the organization you work in, you're doing politics every day...

But I've done it my whole life. While I was at Lawrence Lab, there was a deadlock in the negotiations for the Comprehensive Nuclear Test Ban Treaty. And I was among those who was doing nuclear testing. Anyway, I figured out a way around the deadlock. I briefed DOE on a Tuesday and a Wednesday. They briefed the White House over the weekend. We changed our position on a Monday and signed treaty by the next Saturday...

In politics, what you try to do is develop a consensus. The happiest thing you could ever say when you're on the floor asking for a vote on your bill is: "All opposition has been dropped." You do try to reach a consensus.

### **3. Tell us about your work in climate modeling.**

Oh sure. I worked on NASA's first climate model and I wrote some of the key papers early on. In particular, one was showing that the biosphere had a feedback onto the atmosphere. We were looking at drought and overgrazing. What we showed was if you overgrazed a region and got rid of all of the plants, then you didn't get evapotranspiration into the atmosphere. So, by overgrazing, you made things drier. The whole idea was that we were trying to explain that there was a feedback... It's fairly complex, but what we were seeing is that certain clouds would disappear as it gets warmer over time and you could get what's called a spike. Right now, things are rising quickly, but they could absolutely spike in 50 or 100 years.

When we looked at things in the 70s, we way overestimated how much carbon dioxide would go into the atmosphere. Even so, we way underestimated the effects. The problem is much worse

than we ever thought it would be. And everything we keep doing shows that over time things are going to get worse still. And we have idiots who won't believe it.

The ag industry can be a positive force. The industry can actually sequester carbon, particularly with minimal till.

#### **4. Do you think ag and the state should do more to mitigate and adapt to climate change?**

With mitigate, it's one of the few places it can be done, to absorb carbon out of the atmosphere. They've tried carbon sequestration from power plants. It's very expensive. This you can do by changing the type of farming you do, particularly for rangelands. I think it's well worth doing and have incentives for.

#### **5. What other messages do you have for the ag community?**

Well it's certainly the ag community that's going to suffer most from greenhouse warming. First of all, pests that would ordinarily have died in cold winters don't anymore. It warms up the nights more than the days, so you don't get the frosts that can kill pests. Also, with forest fires, one of the reasons they've become more catastrophic is that we don't get dew at night the way we used to. When there was dew, we put the fire to bed. Without that, firefighters cannot contain the fire as easily.

And of course, it changes the crops you can grow. And heat stress is certainly a major issue. I would say agriculture suffers the most, but on the other hand, has the greatest potential, if we could change worldwide farming practices to actually sequester carbon and slow down the process...

I was on the Ag Committee for five years, because I have great interest in it. It's the bedrock of the California economy... Myself, Dr. Pan and the Republicans, in my opinion, were able to stop some very bad bills that were based upon bad science. In particular, we stopped lessening the criteria for safety of milk. People from smaller farms wanted a weaker criteria on unpasteurized milk and we just did not feel it was appropriate.

#### **Perdue signals flexibility on SNAP, defends agency moves**

Agriculture Secretary Sonny Perdue suggested to lawmakers his department could soften the definition of able-bodied adults who are subject to food stamp work requirements, but he declined to budge from his plan to relocate two research agencies out of the nation's capital.

Perdue, appearing before the House Agriculture Appropriations Subcommittee on Tuesday, also expressed concern that a spate of lawsuits against Monsanto Co. could force farmers to stop using glyphosate herbicide.



Bishop (left) and Perdue (right) greet each other before Tuesday's hearing.

**“I’m hoping the appeals court will see through this.** It would be literally devastating to our productivity capacity worldwide” if glyphosate could no longer be used by farmers, Perdue said.

The comment came in response to questioning by Rep. Andy Harris, a Maryland Republican who said he is worried “that the use of Roundup could disappear” because of multimillion-dollar jury verdicts against chemical’s maker, Monsanto, now a unit of Bayer.

As for the food stamp issue, Perdue didn’t back away from his plan to make it harder for states to get waivers from work requirements in the Supplemental Nutrition Assistance Program. But he did signal to Rep. Barbara Lee, D-Calif., some flexibility for defining what it means to be classified as able-bodied.

Able-bodied dependents without children at home who receive SNAP benefits are generally required to work or be in an approved training program for at least 20 hours a week. Unless USDA grants a waiver from the state or area where those SNAP recipients live, they are allowed to be out of work for only three months of every three years. A proposed rule would largely limit waivers to areas with unemployment rates of at least 7 percent.

Critics have argued that many SNAP recipients who are classified as able-bodied often have undiagnosed mental illnesses or physical disabilities or chronic illnesses that make it hard for them to hold a job. “It’s mean-spirited, I think it’s wrong,” Lee said of the USDA proposal to tighten the waiver rules. “People need this program desperately.”

Perdue told her that the definition of able-bodied “may need some fine-tuning.” He didn’t say how it might be revised.



Rep. Barbara Lee, D-Calif. (Photo: Joy Philippi)

Lee went on to say that the USDA proposal would force some SNAP recipients to choose between paying their medical bills or buying food. Perdue responded, “I wouldn’t consider them able-bodied. We’ll have to define that.”

The chairman of the subcommittee, Georgia Democrat Sanford Bishop, pressed Perdue on why he was moving forward with the plans to move the Economic Research Service and National Institute of Food and Agriculture out of the national capital region in the face of broad, bipartisan opposition from former USDA officials and leading scientists and economists.

Bishop also took issue with Perdue’s previous argument that moving the agencies away from Washington would put them closer to their “stakeholders.” “Farmers and ranchers may be informed by ERS reports, but they are not direct recipients or users of ERS products,” Bishop said. ERS and NIFA “are not regulatory or farm program agencies.”

Bishop also pressed Perdue on why the department had not released a cost-benefit analysis of the plan and was simultaneously asking Congress for more than \$300 million to renovate the USDA's South Building on Independence Avenue in Washington and the George Washington Carver Center in suburban Maryland. Those buildings would have plenty of room for ERS and NIFA, Bishop said.

Perdue said the department was waiting to do the analysis until it knew what the relocation sites would be. He suggested that the former USDA officials who had criticized the relocation plan were out of touch.

**“Some of the experts you talk about were around USDA before the internet was developed,” Perdue said.**

Harris, whose rural district is east of Washington on Maryland's Eastern Shore, defended the relocation plan on the basis that it could benefit a rural area that is chosen for the new site. "Moving parts of the government into rural areas provides a stabilizing effect" to those locations, Harris said.

However, the agencies wouldn't necessarily be moved to a rural location: The sites still under consideration include some major metropolitan areas, including St. Louis and Kansas City.

President Donald Trump's budget proposed spending \$25 million to pay for the relocation, but Perdue told reporters after the hearing that it wasn't clear whether USDA would need additional funding to pay for the moves. That would depend, he said, on the proposal from the winning sites, suggesting they might cover the costs.

## **US hurdles further complicate USMCA ratification**

The renegotiated North American trade pact is popular in the U.S., Mexico and Canada, but the Trump administration and U.S. lawmakers are making ratification increasingly difficult with complications that threaten to derail the process.

When Jesús Seade, Mexico's top North American negotiator, met with reporters last week, it was clear he'd been hoping for a calm discussion about progress and optimism in implementing the U.S.-Mexico-Canada Agreement, or USMCA. South of the border, they call it the Mexico United States Canada Treaty, or T-MEC for short.

What Seade got instead were frantic questions about newly threatened auto tariffs and demands to reopen negotiations on labor and pharmaceutical issues.

Shortly before Seade's press conference, President Donald Trump lobbed a new threat to hit Mexico with a 25 percent tariff on cars and car parts if it did not stop the flow of migrants and illegal drugs to the U.S.



President Donald Trump



**“We’re going to give them a one-year warning and if the drugs don’t stop or largely stop, we’re going to put tariffs on Mexico and products, particularly cars,” Trump said Thursday.**  
“And if that doesn’t stop the drugs, we close the border.”

Seade stressed Mexico is trying to keep all of these issues — immigration, narcotics trafficking, and U.S. tariffs — separate from the work to ratify the USMCA, but that’s proving to be difficult.

**“What I want to underline is that we want to cooperate,” Seade said.**

### **Tariffs (and more tariffs) threaten USMCA**

Trump has not unleashed the auto tariffs yet, but he is still unwilling to lift his Section 232 tariffs on steel and aluminum from Mexico and Canada, and that is becoming a major impediment to USMCA ratification.

**“From the Mexican point of view, I can tell you we will never dream of completing the USMCA ... if that problem has not been resolved,”** Seade said about the steel and aluminum tariffs.

And that’s what staunch pro-USMCA lawmakers like Sen. Chuck Grassley, R-Iowa, are worried about.

“We need to focus on creating opportunities instead of erecting barriers,” Grassley said in a Senate floor speech Monday. Mexico has threatened to revise its retaliatory tariffs on the U.S. (Now they are on pork, cheese, potatoes and apples), and that’s exactly what Canada is doing, Canadian Ambassador David MacNaughton told reporters Monday at a meeting of the North American Agricultural Journalists.

**“We will be refreshing the list shortly,” he said, “though that will be more out of sorrow than out of anger.”**

Now Canada’s retaliatory tariffs that impact the U.S. ag sector are on value-added products like ketchup and yogurt, but the unknown new mix of products and commodities is already concerning ag groups and farm state senators. Grassley, who has been vocal publicly about his insistence that Trump lift the metals tariffs on Canada and Mexico, beseeched Canada not to penalize Iowa’s ag exports.

**“I’d like to see a resolution with Canada and Mexico on steel and aluminum tariffs,”** Grassley said. “I urge President Trump to lift the 232 tariffs so we can forge ahead with United States-Mexico-Canada Agreement and eliminate the uncertainty in the North American market.”

But Trump’s new insistence that he is willing to hit Mexico with automobile tariffs has introduced a new level of uncertainty. Even as the Trump administration presses Congress to ratify USMCA, the president is threatening to act against a USMCA agreement that would largely exempt Mexico from the car and car part tariffs.

“This will supersede USMCA,” Trump said Friday when asked about the automobile tariff exemptions. “USMCA is a great deal and it’s very good for Mexico, but this will supersede USMCA.”

That makes no sense, but the threat is presents to USMCA and future trade pacts is even more significant, said Joe Glauber, a senior research fellow at the International Food Policy Research Institute, former chief agriculture negotiator for the U.S. Trade Representative and former USDA chief economist, told *Agri-Pulse*.

**“If you’re going to rip up agreements as soon as they’re made, you wonder why anybody would want to do a deal with you,” Glauber said.**

### **Concerns over Mexico’s labor reform**

Mexico’s legislature is on track this month to approve broad labor reforms that the country agreed to during USMCA negotiations and that will be key for many U.S. lawmakers weighing their support for the trade pact.

“The expectation is that it will be done this month, in April,” said Seade, who met with freshman House Democrats as well as the Hispanic Caucus last week to reassure them that Mexico’s labor standards will improve significantly. **“I’m really convinced, from the Mexican point of view ... the main part of the agreement is the labor chapter. It is very far reaching and ... I’m not uncomfortable with the attention to that.”**

Mexico’s apparent enthusiasm under newly elected President Andrés Manuel López Obrador is welcome to lawmakers like Rep. Jesús “Chuy” García, D-Ill., but he and others are also seeking some method of making sure Mexico truly enacts new legislation.

**“I am encouraged by the Mexican government’s intention to move forward with labor reforms and wage increases for Mexican workers,”** Garcia told *Agri-Pulse*. “We can and should insist that Mexican workers are able to join unions and participate freely in collective bargaining agreements, and we must be sure that Mexico’s new labor standards are enforceable.”

That’s a position also held by House Speaker Nancy Pelosi.

“I’m hopeful that we can get a trade agreement, but it has to be one that really works,” the California Democrat told reporters Thursday. **“I want to see ... enforcement language.”**

Mexico’s history of low wages and lack of meaningful unions to protect workers’ rights are blamed for U.S. companies moving production facilities south of the border. That’s why provisions in USMCA that require Mexico to, among other things, scrap government-supported unions and allow workers to vote on their own representation.



House Speaker Nancy Pelosi

Enforcement is vitally important, Chairman of the House Ways and Means Committee Richard Neal told U.S. Trade Representative Robert Lighthizer in a letter dated Tuesday, because many lawmakers remember empty pledges to improve labor and environment standards in the original North American Free Trade Agreement.

“NAFTA is blamed for the further loss of American manufacturing jobs, especially to Mexico where wages remain unfairly low even today,” Neal wrote. **“NAFTA became a four-letter word in many communities and those scars are still deeply felt.”**

Sens. Ron Wyden, D-Ore., and Sherrod Brown, D-Ohio, are two lawmakers who are trying to address enforcement concerns. Together, they have developed legislation that would allow U.S. and Mexican government officials to audit and inspect factories that are suspected of breaking the new labor laws that are expected to be approved this month.

**“Updating NAFTA will only help American workers if the deal can be enforced,”** Wyden said in a statement provided to *Agri-Pulse*. “Senator Brown and I have a plan to help Mexico live up to its commitments when it comes to higher labor standards.”

But Democrats have more concerns than just labor standards. A growing number are also opposed to a USMCA provision under which Mexico and Canada agree to extend their patents for biologic pharmaceutical drugs to 10 years. That, some Democrats say, will drive up prescription drug prices.

Neal warned Lighthizer Tuesday that he and the Trump administration will be hearing much more on these concerns in the coming days.

**“You should not be surprised by the concerns,”** Neal says. “Strong labor standards. Strong environmental standards. Mechanisms inside the agreement to ensure that those provisions (and other provisions) are enforceable and will make a difference. Terms that are favorable to Americans’ access to affordable health care and preserve Congress’s space to make future policy changes.”

## **New federal report takes 'cautious' approach to effects of glyphosate**

A new federal report on glyphosate’s toxicological effects likely will play a role in the ongoing debate — both in the court of public opinion and in courts of law — over the safety of the principal ingredient in Roundup.

The “toxicological profile” of glyphosate by the Agency for Toxic Substances and Disease Registry (ATSDR), part of the Centers for Disease Control and Prevention, summarizes studies on the herbicide’s effects and recommends areas for further research.

**But the part of the report that most people will probably turn to first, given the heated debate over Roundup’s carcinogenicity, starts on page 53: Section 2.19-Cancer.**

The conclusion of the health agency is open to interpretation. The profile said “most studies found no association between exposure to glyphosate-based products and risk of cancer,” but “a

possible association between exposure to glyphosate and risk of non-Hodgkin’s lymphoma could not be ruled out, based on conflicting results.”

Bayer spokeswoman Christi Dixon said, "We welcome another scientific perspective on what’s the most studied substance of its kind, glyphosate. Our experts have not had the opportunity to fully review the ATSDR profile in full detail, but we support constructive dialogue and the scientific rigor that’s inherent in the U.S. regulatory process.”

The company will participate in the public comment period, submitting “many of the same studies you see on our [transparency platform](#),” Dixon said. On Monday, Bayer released 107 studies Monsanto had submitted to the European Food Safety Authority as part of the authorization process in Europe.

Dixon added, “We continue to have full confidence in the safe use of glyphosate and believe that the extensive body of science, 40 years of real-world experience and the conclusions of regulators, including the U.S. EPA, European Food Safety Authority (EFSA), European Chemicals Agency (ECHA), German BfR, and Australian, Canadian, Korean, New Zealand and Japanese regulatory authorities, as well as the Joint FAO/WHO Meeting on Pesticide Residues (JMPR), confirm that glyphosate-based products are safe when used as directed and that glyphosate is not carcinogenic.”

Charles Benbrook, an ag economist who has quantified glyphosate use worldwide and believes there’s enough evidence to show that exposure to glyphosate-based herbicides — especially at high levels — increases the risk of NHL and other cancers, says ATSDR “does a good job dancing around” the carcinogenicity question, but ultimately does not agree with EPA’s determination last year that it is “not likely” to cause cancer.

Benbrook, who runs Benbrook Consulting in Troy, Ore., has testified for plaintiffs who are suing Monsanto (now owned by Bayer) in state and federal court in California, claiming exposure to Roundup was a substantial factor in causing their NHL. He is due to testify this week in the latest of those trials, *Pilliod v. Monsanto*, involving a husband and wife.



Charles Benbrook

“ATSDR is extremely cautious,” he says. “Is ATSDR closer to IARC or EPA? They’re in between — they certainly did not support EPA’s final evaluation.”

Benbrook was referring to the International Agency for Research on Cancer, which concluded in 2015 that glyphosate is “probably carcinogenic to humans.” In December 2017, however, EPA found that glyphosate is “not likely” to cause cancer in humans.

But there are some significant differences between the two documents. EPA said “oral exposure is considered the primary route of concern for glyphosate,” while ATSDR said “dermal contact appears to be the major route of exposure to glyphosate for people involved in its application.” The report also said for the general population, “the main routes of exposure to glyphosate ... result from the ingestion of foods with residues of glyphosate and foods made from these crops,

as well as dermal, ocular, or inhalation exposure from application of herbicides containing glyphosate.”

The plaintiffs in the cases in California thus far have been a groundskeeper for a school district and a homeowner who used Roundup extensively on his property for more than 20 years. Dewayne Johnson won \$289 million from a jury in state court before the judge knocked the award down to \$78 million. The other plaintiff, Edwin Hardeman, won about \$80 million from a six-person federal jury. Bayer is appealing the first verdict and is likely to appeal the second.

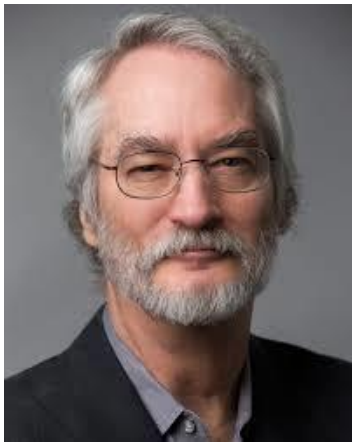
Benbrook says the ATSDR profile shows that people at greatest risk from glyphosate exposure are those who apply it directly, using a hand wand, backpack sprayer, or all-terrain vehicle, for example.

**“It’s a completely different exposure scenario” than you would find on a farm, where the applicator is enclosed in a cab, Benbrook said. “Most people are getting their most significant exposure at home” through application, not diet, Benbrook said.**

But Val Giddings, a senior fellow at the Information Technology and Innovation Foundation who has written extensively about this topic, described Benbrook’s comments as “speculative” and cited a Journal of the National Cancer Institute report showing glyphosate was not statistically significantly associated with cancer in a study of more than 50,000 applicators.

“I am not aware of any general data on glyphosate exposure of different populations that support Benbrook’s comments about exposure,” Giddings added. “Farmers come into orders of magnitude greater contact with glyphosate than citizens.”

**And he pointed out that any "concerns" about exposure to glyphosate at any level “must start with a consideration of its toxicity, which data show is less than that of table salt, baking soda, ibuprofen, coffee, to say nothing of wine or beer.”**



Val Giddings, ITIF

Eliza Dunn, a medical doctor in toxicology at Bayer Crop Science, spent three hours deconstructing complex public health studies related to glyphosate and answering a broad range of questions from concerned ag leaders. Bayer, which now owns Monsanto, hosted the discussion at its West Sacramento facility this week.

**On the Monsanto lawsuit:** She described non-Hodgkin’s lymphoma (NHL) as “about 30 to 60 different kinds of extraordinarily rare types of cancer.” She said cancers caused from exposure involve a clear cause and effect seen over and over again and none of the NHL subgroups have shown that type of association.

In civil cases like this, convincing a jury over the empathy for a cancer victim is difficult. The jury would have to “sit through hours and hours and hours” of epidemiological and toxicological testimony, said Dunn, adding that a criminal case would be more thorough.

Another difference in the EPA and ATSDR documents: EPA says “dermal penetration has ... been shown to be relatively low for human skin (<1%) indicating dermal exposure will only contribute slightly to a systemic biological dose.” ATSDR says “available dermal studies indicate that only 3-4 percent of dermally applied glyphosate enters the blood.”

ATSDR made several recommendations for further research:

- “Studies should be designed to evaluate respiratory effects in animals exposed to glyphosate by inhalation.”
- “Additional studies should be designed ... to determine whether glyphosate or other ingredients in glyphosate formulations are involved in developmental effects on male reproductive organs.
- “Human and animal studies should be designed to evaluate airborne exposure levels and possible health effects from inhalation exposure. Additional animal studies should be designed to assess the toxic effects of exposure to a variety of glyphosate formulations and individual components suspected to be toxic.”
- “Studies are needed to investigate human intake of glyphosate via food and water, such as total diet studies.”
- “Monitoring of children’s exposure to glyphosate would be useful, in combination with children’s health and susceptibility information, to assess the potential risk for deleterious effects.”

## **Labeling, production schism splitting organic industry**

Advocates for America’s organic farming and foods sector described a mix of regulatory and marketing battles when addressing the annual meeting of the North American Agricultural Journalists on Monday.

**“There’s always diverse opinions in organic, and it drives debate, and I think that’s really healthy,”** said Laura Batcha, executive director of the Organic Trade Association, which represents the spectrum of organic farmers and other operations, big and small.

U.S. organic sales zipped past \$50 billion in retail sales in 2017 (the latest estimate), according OTA, but speakers described an agricultural sector under siege.

**Dave Chapman, a Vermont organic farmer, declared “there is a hostile takeover going on.”** He heads the recently organized [Real Organic Project](#), with its plans to offer a new add-on label to USDA Organic label, imposing stricter standards than required and imposed for USDA’s label.

The 1990 law initiating the USDA’s program “is still a good law, but it’s not being followed very well,” he says. **“The hydroponic invasion (certifying hydroponic crop production as organic) is one big example of that, and the CAFO (concentrated animal feeding operations) is another big example,”** he says.

Chapman and Steve Etko, policy director for the National Organic Coalition, represent traditional producers and operations that want to retain bedrock organic standards. Said Chapman: “The

basic belief of organic farming is that a healthy soil produces a healthy crop, which produces healthy animals and healthy people.”

So, Etka explains, “to be certified for organic crops, a farm must have an organic system planned and must ... foster soil fertility, primarily through management of organic content in the soil. **Organic standards also require operations to enhance natural resources and biodiversity.**”

Those concepts form the roots of most organic farmers’ opposition to certifying hydroponic or aquaponics crops as organic. What’s more, USDA ruled in favor of certification of such production systems even though no specific standards have been written for them, and Etka says, “production systems that do not have clear standards should not be certified.”

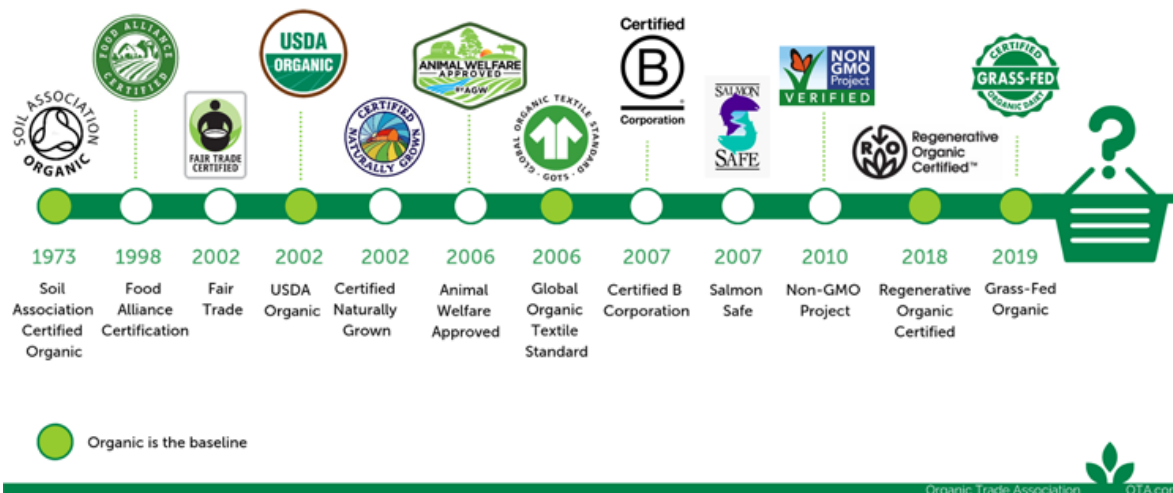
In fact, opposition is high throughout the organic sector to both certification of hydroponic crops and USDA’s 2018 termination of new animal welfare standards that were approved at the end of the Obama administration.

Chapman complains “an organic consumer expects an organic egg was laid by a chicken who runs around in a pasture,” but notes estimates by a recent director of USDA’s organic program that **“75 percent of the eggs that are now being certified would be decertified if the animal welfare reform had been implemented by the Trump administration. But it was not.”**

On the other hand, Lee Frankel, executive director of the Coalition for Sustainable Organics, representing hydroponic and container operations, points to an ongoing “debate about how much do we keep evolving away from the original technical definitions” as organic production evolves to accommodate urban farming, for example, or producers who must use water-saving systems in arid regions.

Besides, he says, “you ask most customers why they buy organic and they’ll say because it’s free of GMOs; it’s free of pesticides,” and he hopes producers in diverse kinds of organic operations will “try not to disparage each other too much.”

Batcha pointed out that USDA had allowed a decade ago for certification of containerized crop in limited types of production, though it never developed standards. Still, she argues for traditional organic advocates to not get too bound up in production details such as containers.



**“When the definition becomes all or nothing, the debate becomes about that rather than about what’s happening on the farm altogether, and I don’t think that does a (positive) service to organic production,” she said.** Ditto, Batcha says, for size of organic operations.

“Whether big or small, the companies support a regulatory framework that (includes) strict standards,” she insists. An organic farmer herself, she said she recently, for example, visited a “California farm of 40,000 acres of certified organic production” and observed the farmer practiced robust crop rotations, cover cropping and other organic tenets.

Rather, she believes, the chief conflict is **“really not so much within organic, but it is between organic and this administration’s extreme anti-regulatory posture ... (which is) holding back development of standards to the point of ... real fracturing within the sector.”**



Laura Batcha, OTA

Chapman, meanwhile, says the erosion of USDA organic standards began before the Trump administration and noted that all members of USDA’s National Organic Standards Board, which recommended allowance for hydroponic and aquaponic certification in 2017, were appointed during the Obama administration.

On the other hand, while Chapman says, “I don’t think we are going to be able to reform the National Organic Program” during the current administration, Batcha encourages organic operators to keep trying. She pointed out that OTA is suing USDA over its termination of the animal

welfare standard. “We think we can ... force them to release those final regulations.” She notes, too, that the 2018 farm bill forces the administration to complete a regulation against fraud in organic imports.

**Etka agrees with Batcha that the organic program “should be about continuous improvement.”** The plethora of add-on labels that have surfaced in the past decade or so, reflects, in part, “how a government label can be slow in keeping up with evolving consumer expectations,” he says.

## **News Briefs:**

**Central Valley Meat will acquire Harris Ranch Beef.** The Central Valley Meat Holding Company announced yesterday that it will acquire Harris Ranch Beef Holding Company, which includes Harris Feeding Company and Harris Ranch Beef Company. Under the agreement, Harris Ranch Beef Company and Central Valley Meat Company will operate independently, with both companies fully retaining their brands. Together, they will increase their capacity and provide customers with access to one of the most diverse and comprehensive ranges of products in market. “We have known and respected John Harris and Harris Ranch Beef for decades, and I am pleased to have this once-in-a-lifetime opportunity to continue the business’ family-owned legacy and pursue its tremendous potential for growth here in the Central Valley,” said CEO Brian Coelho. “While Central Valley Meat Company and Harris Ranch Beef will continue to



operate independently, I expect both businesses and their respective customers to benefit from the companies' shared knowledge, extensive resources and expanded product offering." Both are Central Valley, California-based, family-owned businesses, and together they will become the 7th largest beef packer and processing company in the U.S. None of Harris Farms' other entities are impacted by the transaction. Harris Farms' Hospitality Division, including the Harris Ranch Inn and Restaurant, Farms Division, Horse Division, and River Ranch will remain fully owned by Harris Farms. Chairman Dave Wood will remain with Harris Farms as its President. "The Central Valley has long served as the home of some of the finest beef sold around the world. Today's announcement cements a future for two family-owned beef operations to continue to thrive," said owner John Harris. "Brian has a proven track record of growing businesses, and under his leadership Harris Ranch Beef can continue its long and storied legacy."

**FAPRI forecast shows slightly tougher year for farm economy.** The latest forecast from the University of Missouri's Food and Agriculture Policy Research Institute projects farm earnings will be lower this year than what USDA economists are expecting. FAPRI projects net cash income, a measure of cash flow, will fall to just under \$90 billion, well under the \$95.7 billion forecast by USDA's Economic Research Service. Net cash income last year is estimated to have been \$91.4 billion. The FAPRI forecast projects lower receipts from both crops and livestock this year. Crop receipts are estimated at \$198.8 billion, about \$3 billion below the USDA estimate of \$201.7 billion. Livestock receipts are forecast at \$176.3 billion compared to \$179.9 billion for USDA. FAPRI estimates net farm income — a broader measure that includes non-cash expenses, including capital consumption, and is considered to be a longer-term measure of farm viability — at \$68.6 billion this year, just under the USDA estimate of \$69.4 billion. Both numbers are an increase from last year's estimate of \$63.1 billion. Both measures of farm earnings are well below the average for 2000 through 2017 of \$90.0 billion for net farm income and \$108.0 billion for net cash income. USDA and FAPRI both estimate that the farmers' debt-to-asset ratio will rise from 13.5 percent last year to 13.9 percent in 2019. The FAPRI economists said they assumed that the retaliatory tariffs on U.S. farm products that were imposed by China and other countries in 2018 would stay in place through 2019.

**SFPA seeks certainty on carbon pricing as part of climate policy.** A new climate policy priority document from the Sustainable Food Policy Alliance seeks certainty on a carbon pricing system, but stops short of endorsing any one approach. In a document obtained by *Agri-Pulse*, the SFPA — a coalition of Danone North America, Mars, Nestlé USA, and Unilever United States — call for an "ambitious carbon pricing system that sends a clear signal to the marketplace" for reducing Greenhouse Gas emissions across all sectors of the economy. Such a system, the alliance says, should "be transparent in how prices are set, equitable in how revenue is appropriated to mitigate costs on the most vulnerable communities, and built to ensure our global competitiveness." The document also calls for the inclusion of agriculture in the development of climate change mitigation policies. Such strategies should, they say, "consider how to leverage resources and technical assistance for the myriad of landowners who are already contributing vital solutions," but does not reference specific policies already in existence or call for the creation of new programs. The document, less than two pages in length, is meant to outline goals for broad climate legislation or a piecemeal approach.

## Farm Hands on the Potomac...

**Joe Stone** and **David Webster** are set to take on new agricultural supply chain and animal nutrition leadership roles for Cargill. Stone currently serves as enterprise leader for Cargill animal nutrition and will move up to lead the company's global agricultural supply chain. He began his career in Cargill's grain and oilseeds business in 1985. He then moved to the company's world trading unit in Geneva, Switzerland in 2001. Webster will assume the Cargill animal nutrition leadership role vacated by Stone. Webster joined Cargill in 1992, working in production, sales, purchasing and finance before becoming a leader in Cargill premix business with the acquisition of Provimi. The new promotions come after **GJ van den Akker** announced his decision to retire after leading Cargill's agricultural supply chain for the past 30 years. The leadership changes will be effective on June 1.

Beck Ag tapped **Richard Bettison** as the company's new CEO. Bettison started in the position Monday. He comes to Beck Ag from Syngenta where he served as head of commercial insight. Before that, he served as president and CEO of AGDATA, LP. He succeeds **Stephanie Liska**, who sought to scale back her role at Beck Ag due to increasing family farming obligations. Liska will remain on the Beck Ag Board and will serve as adviser to Bettison to help with the transition of responsibilities.

The National Potato Council will add two to its executive team. Current vice president of public policy and communications, **Kam Quarles**, has been tapped to serve as the new CEO. **Mike Wenkel** will step into the new role of COO from previously serving as the executive director of the Michigan Potato Industry Commission.

The ingredient and recipe meal kit service, Blue Apron, appoints a new CEO. **Linda Findley Kozlowski**, a former Etsy Inc. executive, will take over as CEO from **Brad Dickerson**, who has submitted his resignation. Co-founder and chief technology officer, **Ilia Papas**, will also be leaving to pursue other opportunities.

Past commissioner of the Food and Drug Administration **Scott Gottlieb** will return to the American Enterprise Institute (AEI) and focus on lowering drug prices. In an interview with the Washington Post, Gottlieb announced he plans to spend a half-dozen days a month in Washington as a resident fellow at AEI, the position he held before joining FDA, but is also exploring other opportunities besides the think tank.

**Ben Laine** joined Rabo AgriFinance as a dairy analyst on the company's RaboResearch team. Laine has been hired to collect insights on the U.S. dairy market and conduct an in-depth analysis regarding the successes or failures of the U.S. dairy industry while also examining what influences business strategies for dairy farms. Before Rabo AgriFinance, he served as a senior economist at CoBank covering the dairy industry.



Richard Bettison, Beck Ag

House Agriculture Committee Chairman **Collin Peterson** added **Isabel Rosa** and **Grayson Haynes** to the committee's majority staff. Rosa joins the committee as senior counsel. She previously worked as an agricultural policy analyst with the Congressional Research Service, and before that served as legal counsel for USDA's office of the general counsel. Haynes joins as the new staff assistant and is a recent graduate of the University of Delaware with a degree in environmental studies. Haynes interned with the government relations department for Ducks Unlimited.

The House Natural Resources Chair **Raul Grijalva**, D-Ariz., named senior and professional staff to join the committee. **David Watkins** will serve as staff director for the committee with **Sarah Lim** as chief counsel, **Luis Urbina** as deputy chief counsel, **Steve Feldgus** and **Chris Kaumo** as deputy staff directors, **Nancy Locke** as chief clerk, **Vic Edgerton** as director of investigations, and **Chris Espinosa** as director of public engagement. **Adam Sarvana** will serve as communications director and **Monica Sanchez** as deputy communications director. For a list of additional subcommittee staff, click [here](#).

**Steve Chartan** is stepping in as the new chief of staff for Sen. **Ted Cruz**, R-Texas. He previously served as deputy chief of staff and succeeds **Prerak Shah**. **Arielle Mueller** is joining Sen. **Mitt Romney**'s, R-Utah, staff as the new press secretary. She comes from the office of Sen. **Marco Rubio**, R-Fla.

**Nandini Narayan** is being brought on to the staff for Rep. **TJ Cox**, D-Calif., as the new scheduler and legislative aid. Among other things, she'll focus on science and technology, small business, and national security. She previously worked for Rep. **Ro Khanna**, D-Calif.

The National 4-H Council elected **Lisa Safarian** with Bayer and **Kay Reitzenstein** with Nutrien Ag Solutions to its board of trustees. Safarian currently serves as president of the North American commercial performance of Crop Science, a division of Bayer and Reitzenstein serves as CFO for Nutrien Ag Solutions.

**Best Regards,**

**Sara Wyant**

**Editor**

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