

EPA wrong about new WOTUS rule



he EPA's new Waters of the U.S. rule is a giant step in the wrong direction.
Instead of making federal regulations more clear, the rule reinstates confusing standards that have already caused decades of uncertainty and litigation.

Most importantly, the rule gives the government sweeping authority over private lands and will require teams of lawyers and consultants for common and necessary farming activities.

We worked with the EPA's staff and leaders while they were drafting the rule, hoping our

input would make these regulations clear and fair, but I'm deeply disappointed in the outcome.

Farmers and ranchers share the goal of protecting our nation's waterways, but we deserve rules that don't require hiring experts to tell us if we can farm our land.

The Clean Water Act gives the government authority to regulate navigable waters – but the new rule reaches beyond.

The EPA doubled down by expanding the significant nexus test, which comes down to a

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The President's Desk

By Bryan Searle

President Idaho Farm Bureau Federation

Idaho's first Joint Water Seminar a success



first-of-its-kind Joint Water Seminar was held the morning of Dec. 6, just before the Idaho Farm Bureau Federation's annual meeting began.

About 160 people attended the event, including agricultural producers and other waster users, federal and state water managers, and others interested in ensuring Idaho has enough water long into the future.

With all the different water laws and agreements in place, water has been a battleground for decades and will continue to be into the future.

particularly as we navigate through a drought.

Many areas in Idaho are considered a desert and water is the lifeblood of this state, particularly for agriculture. No matter what part of this state or anywhere in the western U.S. that you live in, protecting our water is critical to survival.

Our state's vast system of reservoirs ensures there is enough water for farmers, ranchers, recreationists and wildlife during the hot, dry summer months.

With these amazing systems, we still rely on

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Inside Farm Bureau

By Zak Miller

CEO Idaho Farm Bureau Federation

Let's be the stimulators for positive change



In January, the American Farm Bureau Federation held its annual convention in San Juan, Puerto Rico. Farm Bureau is unique because it enjoys representation from farmers and ranchers in all 50 states and Puerto Rico.

The American Farm Bureau convention offers a very educational and enjoyable experience with talented and inspiring speakers and topics.

It is a showcase that includes several competitions for our talented young farmers and ranchers.

It is also an excellent opportunity to rub shoul-

ders with some of the best people in the world.

While attending this convention, many Farm Bureau members from Idaho took the opportunity to tour Puerto Rico and better understand the life and nature of the island.

One of the most interesting and exciting experiences I had on this trip was the opportunity to swim in La Parguera, one of a few bioluminescent bays worldwide.

This unique bay is one of the places where dinoflagellates (single-celled organisms) exist in

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Volume 23, Issue 1 **IFBF Officers**

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Printed by: Adams Publishing Group, Pocatello, ID

IDAHO FARM BUREAU QUARTERLY

USPS #022-899, is published quarterly by the IDAHO FARM BUREAU FEDERATION 275 Tierra Vista Drive, Pocatello, ID 83201.

POSTMASTER send changes of address to: IDAHO FARM BUREAU QUARTERLY P.O. Box 4848, Pocatello, ID 83205-4848 Periodicals postage paid at Pocatello, Idaho, and additional mailing offices. Subscription rate: \$4.00 per year included in Farm Bureau dues.

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COVER: The sale of organic food products, in the U.S. and in Idaho, has been growing rapidly for many years. See page 4 for a story about organic food production. (Illustration by Joel Benson)



Photo by Candace Cope

In 2022, hay moved into the No. 4 spot among Idaho agricultural commodities when it comes to total farm cash receipts. See page 26 for

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By Sean EllisIdaho Farm Bureau Federation

POCATELLO – The total sale of organic food products in the United States rose by 13 percent from 2019 to 2021, according to recently released USDA data.

Idaho ranked No. 7 in the nation in 2021 in total land in organic production but drought conditions in the state do seem to have impacted the growth of organic food production in Idaho, at least temporarily.

The U.S. Department of Agriculture's 2021 Organic Survey showed total sales of \$11.2 billion in organic food products in 2021, which was an increase of 13 percent or \$1.28 billion, compared with 2019.

The survey looked at all known U.S. farms and ranches with certified organic production in 2021, as well as those transitioning to organic production.

According to the survey, Idaho ranked as the No. 7 state in the nation when it comes to total land in organic production.

The survey showed there were 215,668 acres of land in organic production in Idaho in 2021, which was a 19 percent increase over the 2019 total.



Stock photos

The sale of organic food products is on the rise nationally and in Idaho.

California led the nation with 813,710 acres of land being used for organic production.

"It looks like (organic production) is definitely increasing," said Rebecca Frey, who manages the Idaho State Department of Agriculture's organic program.

However, she added, the drought conditions in the state the past two years do appear to have had an impact on the rate of growth of organic food production in Idaho.

"I think that the drought in Idaho has been a really big factor for a number of people ... seeking organic certification for their crops," she said. "I think

it will be picking up again once we get out of the drought."

Idaho ranked No. 10 in the nation in total organic sales in 2019 but dropped out of the top 10 in 2021.

ISDA certifies about 67 percent of the organic operations in Idaho and the ag department has certified 258 operations as of December 2022.

Frey said the bulk of Idaho's organic operations are located in southern Idaho but the number of people seeking certification in North Idaho has increased recently.

According to USDA data, milk is Idaho's main organic agricultural commodity in terms of total sales. The data show Idaho companies sold \$114 million worth of organic milk products in 2021.

That represented 3 percent of total milk sales in Idaho that year.

Idaho ranks No. 3 in the United States in total milk production and most of Idaho's milk is turned into cheese. ISDA certifies several cheese-making companies, as well as dairies that provide the organic milk.

Idaho Dairymen's Association Executive Director Rick Naerebout said the number of operations selling organic milk products in Idaho is shrinking because the margins aren't there, mainly because of rapidly rising feed costs.

What organic dairies are getting for their milk right now isn't covering what they are paying in the way of higher feed prices, he said.

"Producers are moving away from organic milk production," Naerebout said. "In this past year, I know of a couple dairies that flipped from organic to conventional production."

Hay ranked as Idaho's No. 2 organic ag commodity in 2021 with \$32 million in total sales,

up 45 percent from \$22 million in 2019.

A lot of that hay goes toward feeding milk cows as well as beef cattle.

USDA showed 68,076 acres of organic hay grown in Idaho in 2021, down 3 percent from 70,177 acres in 2019.

Organic barley is one of Idaho's fastest-growing organic categories.

According to USDA, \$12 million worth of organic barley from Idaho was sold in 2021, up 33 percent from \$9 million in 2019. Total organic barley acres in Idaho were listed at 30,911.

A total of \$9.5 million worth of organic wheat was sold in Idaho in 2021, up from \$8.6 million in 2019. USDA showed 27,221 acres of organic wheat were produced in Idaho in 2021, up 38 percent from 19,737 acres in 2019.

Idaho is the nation's No. 1 potato state, but, from a percentage standpoint, the state's farmers don't grow a lot of organic potatoes.

According to USDA, a total of \$5.4 million worth of organic spuds were sold in Idaho in 2021, a 56 percent decrease compared with 2019. USDA shows 1,507 acres of organic potatoes grown in Idaho in 2021, down 30 percent from 2,153 acres in 2019.

There were \$183 million worth of organic potatoes sold nationwide in 2021, up 18 percent from 2019, according to USDA.

According to the organic survey, 55 percent of organic farmers said regulatory issues were a top challenge, 35 percent named price issues as a major challenge, 39 percent named production problems, 24 percent named market access and 29 percent named management issues.

Potato industry leaders said the price of inputs needed to grow organic potatoes, compared with the prices being paid for organic spuds, isn't enough to convince many farmers to grow them, at least not in the Gem State.

"There's just not a lot of demand for them," said Travis Blacker, industry relations director for the Idaho Potato Commission. "You have to sell them for a pretty good price to cover the production costs and most farmers are not able to do that."

USDA shows \$6 million worth of organic dry beans from Idaho were sold in 2021, up substantially from \$1 million in 2019.



Idaho ranks No. 7 in the nation for total land in organic production.

There were 4,162 acres of dry beans grown in Idaho in 2021 compared with 667 acres in 2019.

According to USDA, Idaho farmers sold \$250,000 worth of organic onions in 2019, up from \$183,000 in 2019. There were 33 acres of organic onions grown in Idaho in 2021 vs. 41 acres in 2019.

While organic food production still represents a small percentage of total agricultural production in the U.S. and in Idaho, it is a fast-growing sector and an important one for many farmers and ranchers.

"You see more organic products in grocery stores all the time," said Tim Sommer, who owns Purple Sage Farms in Middleton and helped start Idaho's organic certification program.

Purple Sage Farms sells a wide variety of organic products, from specialty produce to culinary and medicinal herbs, leafy greens and flowers.

For Sommer, the organic market is crucial and it's been one that has seen increased demand for his farm's products.

"Our sales increased 20 percent this past year," he said.

According to the USDA's 2021 Organic Survey, the number of organic farms in the U.S. totaled 17,445 in 2021, up 5 percent from 2019.

In 2008, there were 10,903 organic farms in the U.S., according to USDA. That number has risen to 12,634 in 2014 to 14,217 in 2016 to 16,585 in 2019 and to 17,445 in

According to the survey, 28 percent of

organic farms plan to increase their level of organic production. A total of 1,558 organic farms have 196,923 additional acres being transitioned to organic production.

And 657 farms that are not currently certified organic have 62,069 acres of land being transitioned to organic production.

The survey showed 4.86 million acres of total land in organic production in the U.S. in 2021, down from 5.46 million acres in 2019.

The 2021 total includes 3.6 million acres of cropland, up from 3.5 million acres in 2019, and 1.27 million acres of pasture or rangeland, down from 1.97 million acres in 2019.

Of the total \$11.2 billion in organic product sales in 2021, \$6.2 billion was from crop sales, up 6 percent from \$5.8 billion in 2019, \$2.2 billion was from livestock and poultry sales, up 32 percent from \$1.66 billion in 2019, and \$2.86 billion was from the sales of livestock and poultry products, up 15 percent from \$2.48 billion in 2019.

In terms of total sales, milk was the top organic category in the U.S. in 2021 at \$1.6 billion, up 3 percent from 2019, followed by chickens (\$1.5 billion, up 35 percent), eggs (\$1.2 billion, up 38 percent), apples (\$629 million, up 32 percent), corn for grain (\$424 million, up 53 percent), strawberries (\$336 million, up 5 percent), cattle (\$316 million, up 8 percent), grapes (\$309 million, down 7 percent), lettuce (\$276 million, down 31 percent) and soybeans (\$242 million, up 122 percent). ■

DUVALL

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subjective determination of whether the federal government can regulate large areas of farmland miles from the nearest "navigable" water.

Unfortunately, government overreach and confusing water regulations on our farms aren't new.

In 2016, Eric Kelsey, an Illinois corn, soybean, and wheat farmer, bought a farm next to the one his great-grandfather had purchased generations earlier.

Eric used some of the land to build a home for his family and later wanted to make some improvements to land that wasn't farmable - a section that sat low and didn't drain well.

Eric thought he'd just make it official and put a pond in that spot.

He wanted to make sure he did everything right, so he reached out to the Natural Resources Conservation Service and the Army Corps of Engineers.

He was bounced back and

'Now we will use every tool in our toolbox to arrive at a rule with clear and commonsense parameters that allows Americans to manage their land without an army of lawyers.'

forth between them for two years, talking about what was allowed and what permits he would need. One day, he called a supervisor he knew in one of the offices who told him, "You don't even need a permit for that."

Two people, same office, two different answers. The government's own employees couldn't even understand the regulations.

So how can they expect the public to understand them? The new rule puts us right back into regulatory confusion.

Farmers across the country are taking proactive steps to protect water on and around our farms. The 2020 Navigable Waters Protection Rule clarified what lands and waters were regulated and what was not

The definitions were easy to understand and allowed farmers, ranchers, and other landowners to determine if they needed a federal permit to improve their land. But this new rule takes us backward.

This overreach could subject farming activities like moving dirt, plowing, or building fences to require a federal permit. That means more paperwork, more delays, and more lawyers.

Instead of being treated as partners in protecting our nation's water supply, the federal government wants to dictate what we can and can't do on our farms.

On farms across America, we've increased practices that reduce soil erosion and keep nutrients in our fields. We've increased the use of cover crops and placed over 140 million acres of land into voluntary conservation programs.

We've installed buffer strips to filter water coming off our fields and installed protective zones and terraces – all to protect water quality for our families and yours.

EPA held a slew of listening sessions about the rule, but then disregarded what they heard. Now we will use every tool in our toolbox to arrive at a rule with clear and commonsense parameters that allows Americans to manage their land without an army of lawyers.

Farmers – and all landowners – deserve better. ■

SEARLE

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the heavens above to bless us with the moisture we need to fill these reservoirs, as well as our aquifers.

This blessing of rain and snow, when they come in abundant measure, eases these battles for water, but it's also one we have little control over and that is why we need to be working together to find ways to protect everyone's water.

Idaho is a leading food producer in the United States and it doesn't take a genius to understand that if there's no water, there's no food.

Ensuring there is enough water for farmers and everyone else in the state into the future is a major concern for the state's water user community.

Making sure water users understand the major issues that involve Idaho's precious water resources should also be a major concern.

That was the main purpose of the water seminar, which was hosted jointly by Idaho Farm Bureau Federation, Idaho Water Users Association and Idaho Grain Producers Association.

During this meeting, presenters gave updates on the lower four Snake River Dams, which are critical for a large swath of Idaho agriculture and have been targeted for removal by some groups.

Without those dams, using efficient barges to send large amounts of Idaho agricultural commodities, particularly wheat, to West Coast ports for export becomes impossible.

Removal of those dams, which also produce an abundant supply of affordable electricity, would be a catastrophe not only for agriculture, but for the entire state.

During the seminar, presenters also provided background on the Nez Perce Water Agreement, a landmark water agreement reached in 2004 which settled the Nez Perce tribe's water rights claims in the Snake River basin.

The terms of the agreement were hashed out following years of negotiations between state, private, tribal and U.S. officials.

Idaho Farm Bureau Federation and its members were heavily involved in the debate surrounding the agreement.

There certainly was opposition to the

agreement, but it does provide some certainty on major Idaho water issues to all parties.

This 30-year agreement ends in 2034, and it's important for the state's water community to understand the history and basics of this agreement so it can make an informed decision on how to proceed when its term is up.

A roundtable of water exports discussed the agreement and answered questions during the Joint Water Seminar.

As water attorney John Simpson, one of the roundtable participants, told meeting attendees, it's important for people to understand the issue and why the agreement was reached "because 12 years will come fast and you'll have (a) decision to make."

I heard a lot of positive comments following the seminar and if I can sum them up in one sentence, it would be, "This type of seminar was long overdue and we should hold a lot more, all over the state."

I couldn't agree more and look forward to many more in the future. A big thanks to everyone who was involved in hosting this landmark water seminar and those who took the time to attend.

MILLER

Continued from page 2

large enough concentrations to produce visible light when stimulated.

I must admit that I was a bit skeptical that this experience would live up to its billing. I am happy to say it met my expectations and exceeded them. To see the water light up from my small human actions of swimming and splashing is another reason nature is truly awesome.

Nature is not only incredible, but it is also a fantastic teacher. As I contemplated my experience, I had a few observations about La Parguera and bioluminescence in general that I used to challenge myself.

Concentration: Dinoflagellates (I really like to feel smart using such a big word) exist throughout the world's oceans. The difference between all the ocean water and these unique bays is the concentration of organisms. They all react the same, but there needs to be enough together to be seen.

We have personal, family, community, state, country, and world goals. Are we concentrating our efforts with others of similar goals to make our results seen and, more importantly, relevant?

Environment: The concentration of the dinoflagellates is a natural phenomenon; however, to see what they do, one must still be where they are, and they can only be seen at night.

I had to go to the bay at the right time to see the dinoflagellates. When I want to see a change in outcomes or in myself, am I willing to do the work to place myself in the right environment to be successful?

Stimulation: Dinoflagellates only light up when they are stimulated. If one were to approach a bioluminescent bay on a still night, one would never know it was a special place. It was only when the water was stimulated that the dinoflagellates lit up.

It was exhilarating to see that the harder I splashed or kicked, the brighter the water around me.

Newton's third law very simply states that "for every action, there is a reaction." I did not make the dinoflagellates glow. It was my actions that caused them to glow.

Every result comes from stimulation.

Would I prefer to wait for something or someone to stimulate me into action? Or would I be better off if I embraced the opportunity to instigate stimulation for good?

May we all look for ways to improve, and please let us all seek to be the stimulators for positive change, whatever that may be in each of us. ■

Country Chuckles By Johnny Hawkins



"Our potato crop is really weird this year."

Idaho farmers and ranchers visit Puerto Rico to attend AFBF's annual convention: Island still recovering after hurricane

By Paige Nelson

For Idaho Farm Bureau Federation

On Sept. 20, 2017, Hurricane Maria, a Category 4 storm, devastated the entire Caribbean Island of Puerto Rico.

With winds more than 100 miles per hour and sheets of rain, Puerto Rico's power grid and much of its infrastructure didn't stand a chance.

It is estimated that 80% of the island's agriculture was destroyed.

Overall estimated losses amounted to \$90 billion, and Maria killed an estimated 2,900 people either as a direct result of the storm or during the subsequent suffering

> caused by lack of power, water and infrastructure for months

In the aftermath of Maria's devastation and with hope for the future, the American Farm Bureau Federation announced it would host its 104th annual convention on the island.

With less than five years to prepare for thousands of visitors, as well as get themselves and their businesses back on their feet, Puerto Ricans had their work cut out for them.

Justin Patten, vice president of operations for Idaho Farm Bureau Federation, shouldered the responsibility of planning the Idaho delegation's trip and stay in Puerto Rico during AFBF's 2023 annual convention, which was held Jan. 4-10.

Around 100 Idaho Farm Bureau Federation members attended the convention and

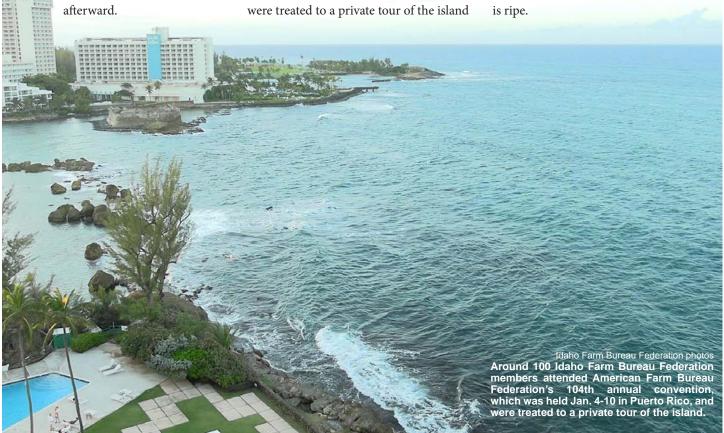
The first stop was Hacienda Muñoz, a specialty coffee plantation in San Lorenzo. In 2022, Hacienda was named the third best specialty coffee on the island.

The plantation operates on 30 acres and grows coffee, chocolate, lemons, pineapples and papayas. They are farm-to-cup and roast their coffee beans as they sell them.

Fernanda Pacheco, director of tourism, guided the tour.

As Fernanda Pacheco led the group around his coffee plantation, he explained the process of producing coffee. The growing season is from February through September and harvest takes place September through November.

Fruit from coffee trees turns red when it





Everything is picked by hand, so the trees are kept short for ease of picking. The beans' flavor is greatly influenced by the soil, so maintaining enough space between trees and rich soil is critical. According to Pacheco, 500 pounds of coffee grapes (the red fruit) makes 90 pounds of ground coffee.

Once picked, the grapes are put through a washing and brushing process to remove the outer hull. The coffee beans are then dried in the sun. In a place that rains every day, this can be tricky.

The drying tables are moved under shelter before each rainstorm to prevent mold growth.

Hacienda roasts its green coffee beans as it has demand for them. During the roasting

process, the beans lose an additional 20% of their weight.

Pacheco joked that he uses a flame thrower to roast his beans. One crack on the bean and it's done; two cracks and it's burned.

The next tour stop was across the island in Santa Isabel at Finca Don Manuel, a tropical fruit farm specializing in plantains, papayas, pineapples and pumpkins on 320 acres.

TOP: Idaho Farm Bureau Federation members are shown touring a coffee plantation Jan. 5 during American Farm Bureau Federation's 104th annual convention, which was held in Puerto Rico.

RIGHT: During American Farm Bureau Federation's 104th annual convention, which was held Jan. 4-10 in Puerto Rico, members of Idaho Farm Bureau Federation toured this coffee plantation.





This is a group photo of Idaho Farm Bureau Federation members who attended American Farm Bureau Federation's 104th annual convention, which was held Jan. 4-10 in Puerto Rico.

Fernando Manuel Machado, farm owner and Bernardo Benetti, chief operating officer, discussed the task of growing fruit as their captive audiences toured the farm in hay wagons pulled by New Holland tractors.

Machado maintains 13 employees and rotates his ground between the four crops. Interestingly, there are no seasons by which his crops grow, but rather time intervals. Pumpkins are simply used to clear pests and rest the ground between fruit crops.

For example, Field A is planted to:

- plantains harvest 12 months later,
- pumpkins harvest four months later,
- pineapples harvest 15 months later,
- pumpkins four months,
- papaya harvest 12 months later,
- pumpkins four months.

The farm's No. 1 crop is plantain, which in Puerto Rican cuisine is used similar to potatoes. To end the tour, Machado and Benetti treated their tour groups to fresh coconuts and an up-close view of one of the farm's 44 windmills.

To cap off the island tour, attendees

RIGHT: Idaho Farm Bureau Federation members look at coffee beans during a tour of a coffee plantation in Puerto Rico Jan. 5. They were there to attend American Farm Bureau Federation's 104th annual convention.

took a night swim in a bioluminescent bay located in Lajas, the southwestern corner of Puerto Rico.

Microscopic, single-celled organisms called dinoflagellates produce a glow-in-the-dark effect as a predatory defense response to movement in the water.

Seeing blue-green water light up around your hands and feet was the ultimate thrill.

During the rest of the conference, Idaho attendees were on their own to enjoy the island and attend the 104th annual con-

vention of the American Farm Bureau Federation.

A few highlights from the convention included an Excellence in Agriculture presentation by Chase and Lacey Neilson from Lost Rivers County Farm Bureau, Andrew Mickelsen from Bonneville County earning a spot in the top 10 Achiever Award competition, and Jaysa Fillmore competing in the sweet 16 round of the Discussion Meet.

Jason Fellows of Franklin County, a member of IFBF's board of directors and also a member of AFBF's Partners in Advocacy Leadership program, said that overall, the value of attending AFBF's annual convention comes in the form of relationships.

"The benefit is definitely the relationships we develop from people within our state and from other states," he said. "Relationships can build a foundation for other things in agriculture because we're all fighting some of the same things and knowing somebody that's going through something similar helps us to see a different viewpoint, and maybe that's all we needed was a different pair of eyes."

The 105th annual AFBF convention will be hosted in Salt Lake City in January 2024. ■

Paige Nelson is a farmer from Rigby and member of the Jefferson County Farm Bureau board of directors.



Researchers showing weed stress can be a good breeding tool

By John O'Connell University of Idaho

MOSCOW, Idaho – New University of Idaho research raises the possibility that exposing a crop cultivar to several generations of heavy weed pressure may be an effective way to breed more resilient varieties.

Albert Kwarteng, a doctoral student in the Department of Plant Sciences who is leading the study for his dissertation, and his advisor, UI Extension weed scientist Albert Adjesiwor, have been saving and replanting repeated generations of spring wheat seed derived from parent plants raised in a weedy environment.

Spring wheat plants in the experiment have adapted to the stress over time. The researchers anticipate the project will clarify some mechanisms plants use to cope with stress from weeds, thereby helping wheat breeders.

"In the insect world, if you expose plants to pests, subsequent generations are more tolerant to pests," Adjesiwor said. "This has been done in the entomology world for a while now. For weed science, we don't know what happens to the progeny if you expose wheat or dry beans or sugar beets to weeds for multiple generations."

Improved performance they've already noticed could be the result of a gene related to weed competition or a hormone produced by the wheat plants to aid in their self-defense.

It's most likely, however, according to the researchers, that the response is an epigenetic mechanism, meaning that over time and after generations of exposure to a common stressor, plants and animals can develop a "stress memory" to help themselves cope that isn't recorded in their DNA.

"We are saving the seed to know at what point are we seeing some of these changes," Adjesiwor said.



Photo by John O'Conne

Albert Kwarteng, a doctoral student in University of Idaho's Department of Plant Sciences, discusses a study he is leading for his dissertation about how weed pressure affects wheat cultivars, during a field day last summer at the UI Aberdeen Research and Extension Center.

Kwarteng has been conducting his experiment in a greenhouse setting to prevent external environmental factors from skewing the data. He started the research in 2021, planting spring wheat in pots.

Some pots were surrounded by kochia, which is a highly competitive annual broadleaf weed. Other control pots contained only spring wheat, with roughly the same density of plants in the wheat-only pots as in the pots with kochia surrounding wheat.

Kwarteng replicated the trial over four generations by saving and replanting the prior generations' seed. He plans to repeat the process once more, planting seed from every generation, along with a fifth generation of seed, to ensure consistent results.

Plant health suffered in the first two generations of spring wheat under the kochia pressure. Wheat plants yielded just one or two heads. The plants began to turn a corner by generation three, however, yielding three or four heads each, and they were averaging about five heads each by the fourth generation.

In late 2022, after finishing with his fifth generation of trials, Kwarteng hopes to analyze his wheat plants in a laboratory to determine if the changes were epigenetic, the result of a specific gene or caused by a plant hormone. He's now applying for grant funding toward that analysis.

Kwarteng has also evaluated wheat plants under pressure from another weed, Italian ryegrass. Wheat plant health has steadily declined with each subsequent generation of planting in the ryegrass trials.

Kwarteng hypothesizes the root structures of ryegrass and wheat may be too similar for the wheat plants to differentiate via an epigenetic response.

Kwarteng and Adjesiwor are in the first generation of additional trials assessing how canola responds to pressure from kochia and Italian ryegrass. ■

RFPAs CELEBRATE 10-YEAR ANNIVERSARY



hen black storm clouds gather on a hot summer night, Mountain Home rancher Charlie Lyons drives up to a high-point where he can watch for lightning strikes in the desert.

Fire retardent is dropped on a wildfire.

Life on the Range photo

"When there's lightning, we're all out, and I go right up there to the towers – one of my spots – to sit and watch," Lyons says.

Back in 2013, the Pony and Elk complex fires roared over the Mountain Home foothills and burned deep into Boise National Forest.

Ranchers lost more than 100 cattle to the twin blazes, cabins burned in Featherville, and 281,000 acres of BLM and Forest Service land were charred in a matter of days.

Speeding up initial attack and stopping wildfires from growing into huge destructive blazes was a major motivating force in leading Mountain Home ranchers to form the first Rangeland Fire Protection

Association in the state 11 years ago.

The idea was to allow ranchers to work together with the Bureau of Land Management – and sometimes rural fire departments – to squelch wildfires quickly when they're small.

New procedures were rapidly put in place. The BLM and Idaho Department of Lands provided training, start-up costs, firefighting equipment and radios so ranchers could respond quickly to wildfires in remote locations.

In 2013, state legislation was passed to formalize the creation of Rangeland Fire Protection Associations. Three new RFPAs were formed that same year – Owyhee RFPA, Saylor Creek RFPA and Three Creek RFPA.

Ranchers in the Three Creek area had experienced one of the largest wildfires in the nation in 2007 – the Murphy Complex Fire, which burned more than 652,000 acres.

And they watched the Soda Fire blow up to 280,000 acres in Owyhee County nearby.

Life on the Range

"If you look at almost every one of the RFPAs, almost every one of them started after a big fire," said Mike Guerry, a Three Creek cattle and sheep rancher.

Today, there are 10 RFPAs across Southern Idaho, covering 8.9 million acres of land. That includes 1.8 million acres of previously unprotected private rangeland.

With more RFPAs in place, it builds firefighting capacity.

Today, about 335 ranchers and RFPA members are fully trained and ready to fight fires across Southern Idaho.

With additional manpower and equipment, initial attack is often more rapid now.

"It's because we've been able to work with these guys with the BLM and the training they've been able to provide," Guerry says. "The friendships we've

developed and the partnerships we've developed, to be honest. Now today, when we go to a fire, we've pretty well got a plan in place on our way out there. How we're going to initialattack it."

Last year, Idaho ranchers, the Idaho Department of Lands and the BLM celebrated the success of the RFPA program on its 10-year anniversary.

"I think this has been a phenomenal program for the state of Idaho and all of our partners," says IDL Director Dustin Miller. "We rely on the ranching community to help us out. There are places that we just can't get to in a timely fashion. So, to have those ranchers out there, giving them the resources, giving them the training and the (personal protective equipment), it's been huge."

"The ranching community sees the value," Miller adds. "They're playing a role in managing these fires. They run cattle on these allotments. They don't want to see the forage burn up. It's important to them; it's important for their livelihood."

Reducing the damage to native shrub-steppe plant



Life on the Range photo

The creation of Rangeland Fire Protection Associations has allowed ranchers and other landowners to assist state and federal officials fight wildfires. Today, there are 10 RFPAs across Southern Idaho, covering 8.9 million acres of land.

communities in Southern Idaho is another important benefit. It's crucial to protect sage grouse and other wildlife species on Idaho's rangelands.

"I think these RFPAs play a crucial role in helping us protect the best of the best habitat and extinguish fires in sage grouse habitat and habitat that's important for other sagesteppe species," Miller says.

"The RFPA has been great.

It's huge to what we do. We're able to get equipment out there quickly and lots of it," says Chris Anthony, a fire management specialist for the BLM. "It's helped in multiple start situations where we've got fires - two or three out here, two or three in Burley, and that spreads us out pretty thin - to get RFPA resources out here, the dozers, the engines, and the overhead. It allows us to be really aggressive with the fire." For this story on the 10-year anniversary of RFPAs, the Life on the Range crew visited with three different RFPAs to see how things are working today and what the future holds.

Mountain Home RFPA

Lyons, the Mountain Home rancher, is pleased to see the growth of RFPAs statewide. "Yeah, I could see that it

LEFT: Rangeland Fire Protection Associations play a crucial role in protecting sage grouse habitat, working to detect and extinguish fires as soon as possible. Life on the Range photo

"Just because there was so much unprotected area, and such conflict between ranchers and the agencies. Once people saw a window, and these guys are reasonable men, trying to protect their range, and the BLM, and their firefighters, so once they saw an opportunity, yeah, I could see real growth."

had real potential," Lyons says.

After the Pony and Elk complex fires, the Mountain Home RFPA has been able to keep fires much smaller in recent years.

"It's been pretty seamless," Lyons says. "Our fires went from 100,000 acres average, to down to 6-7,000 acres now, sometimes less than that."

The Interstate 84 corridor from Mountain Home to Glenns Ferry used to be a major hot spot for vehicle fires. Through a partnership with the Idaho Transportation Department and BLM, the number of vehicle fires has declined.

"Taking care of the freeway,





Life on the Range photo

The Shoshone Basin south of Twin Falls has seen very few large fires recently, largely due to Rangeland Fire Protection Association members catching them while they are still small.

the No. 1 fire-starter in the U.S. between Glenns Ferry and Mtn Home, where they've been managing fuels in the freeway corridor, big deal," Lyons says. "And then the mindset, when a fire starts, and we all show up with a purpose and work together. Big deal there."

The Mountain Home RFPA was the first one to get established in Idaho. Each RFPA has to form a non-profit organization, recruit a board of directors, get trained by the BLM, and obtain a mix of fire engines, water trucks and more for initial attack.

The IDL helps RFPAs with start-up assistance and advice on where to apply for grant money for fire engines and

other essentials.

"The state is really important in this deal, too. The state is the glue that holds us together," Lyons says.

Sixteen ranchers serve on the board of directors for the Mountain Home RFPA. Their boundaries extend from Mountain Home to Hammett, covering 674,000 acres.

Ranchers contribute their own trucks, dozers and equipment, as needed.

The BLM and ranchers also create fire breaks to prevent fires from spreading from access roads and highways.

Lyons loves the Mountain Home RFPA's new heavy duty Army surplus truck for responding to fires.

"This machine was surplus, it used to go out into the desert, and pick up tanks or Bradley vehicles," Lyons says. "It's as sweet as can be, and now I pull the dozer for the ranch and fires, and it's sweet, you couldn't ask for anything more."

Lyons puts all of his radios, personal protective equipment, drip torches and other equipment in the truck so he can jump in and go at a moment's notice.

Shoshone Basin RFPA

The Shoshone Basin RFPA, located south of Twin Falls in Rogerson, covers a big swath of country - 488,000 acres of land.

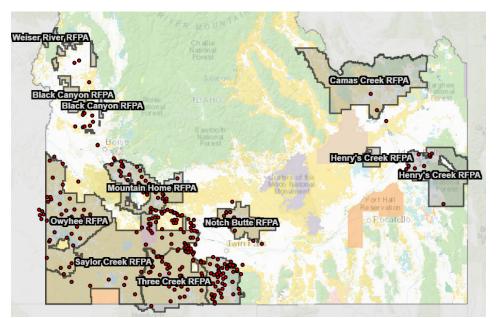
Lori Satterwhite grew up

on a ranch near Rogerson. She works for Simplot Land and Livestock as a range monitoring specialist. She heard about the Mountain Home RFPA starting up and looked into creating an organization in Rogerson.

"We started having some town hall meetings and had quite a show-up of local ranchers. A lot of interest. So yeah, I thought, we've got to do this," Satterwhite says.

The Shoshone Basin RFPA worked together with the Salmon Tract Rural Fire District to get organized quickly. Later, they formed a non-profit to become an official RFPA in 2015.

"We saw the need,"



Life on the Range photo

"They're a wildly important

tool for us. They all know the

landscape, where the water

sources are, where the cattle

are, historically where things

have worked, and where they

haven't; it's huge."

-Brad Sawyer, Fire Management

Officer, BLM

This is a map showing the location of the 10 Rangeland Fire Protection Associations that exist today across southern Idaho.

Satterwhite says. "We're trying to be proactive, just in case there may be a big fire. It could happen anytime. You look around and see all the fuel in the Shoshone Basin, we want to be ready just in case."

Many ranchers run cattle in Shoshone Basin on private or BLM range. The Shoshone Basin RFPA has 45 members. Twenty-five are red-carded, meaning they are current on firefighting training.

They have five fire engines and a water tender, all donated by fire agencies. A large white tank holds 10,000 gallons of water for fighting range fires. It's connected to a private well owned by the Pleasant Valley Grazing Association.

"We keep it filled all year long," Satterwhite says. "Any engine can fill up with it. BLM. Forest Service. Any contractor. All year long."

The Shoshone RFPA got a grant to cover the costs of the water tank. The agencies see the benefits of preventing large wildfires to benefit native habitat and wildlife, too.

"The reason why the Governor's Office of Species Conservation and the U.S. Fish and Wildlife Service wanted to fund this is because of sage grouse," Satterwhite says. "And wildlife. We have all kinds of animals out here. We want to protect them. It's their home."

The Shoshone RFPA recently received a

\$15,000 grant from Duke Energy, which is building a large solar farm near Rogerson.

The funds were used to purchase new radios for all of their fire engines and portable hand-held radios for their firefighters. Next, they will apply for a grant for a portable repeater to fill communication gaps in remote areas.

So far, the Shoshone Basin RFPA has been able to nip range fires in the bud.

"We've fought several fires over the last

several years, and this year, we've been very lucky, only had 4-5 fires this year," she says. "Yep, catch them when they're small. We've been very fortunate."

Brad Sawyer, fire management officer for the BLM in Twin Falls, says it's been

super helpful to have the Shoshone RFPA assisting with fires in the high desert.

"We've got a ton of ground – 3.8 million acres – in our dispatch area. We all can't be everywhere at once," he says.

For ranchers in the Shoshone Basin RFPA to work together with Salmon Tract and the BLM helps a lot, he says. "It's a great relationship," Sawyer says. "For the RFPA to partner with a fire department gives them more access to resources, personnel, and there's also the cooperation piece, right? The communication and cooperation, that's really what this is all about. That's the reason it's effective."

And for the Salmon Tract Fire District, the Shoshone Basin RFPA has added more volunteer firefighters to their force.

"It was a big benefit to both of us," says Rod Davis, fire chief for the Salmon Tract Rural Fire District. "It created a lot of cooperation and enhanced our personnel pool by a long way."

Three Creek RFPA

The Three Creek RFPA has an even larger chunk of country to cover – 1.5 million acres – in partnership with the Saylor Creek RFPA.

Formed in 2013, the Three Creek RFPA has about 50 rancher-members. Seven serve on the board of directors. Mike Guerry is the chairman.

Because of the remote areas and challenging road access, the two RFPAs pre-position firefighting equipment and big water tanks in strategic, remote locations prior to fire season.

"Our deal can be very challenging for the BLM or us, based on access. Just getting there in a timely fashion," Guerry

says.

One water tank holds 50,000 gallons of water, with an open top so helicopters can use it to fill water buckets.

"Classic example, one night we had 21 starts from Clover Creek to Richfield; that's probably a 50-mile girth," Guerry says.

"We had 4-5 helicopters loading from that 50,000 gallon open-top tank. That was a huge asset."

They also have added radio repeater towers in remote places to plug communications gaps.

"If we get on scene first, we attack



Photo by Jeff Lords

The creation of Rangeland Fire Protection Associations has allowed ranchers and other landowners to assist state and federal officials fight wildfires. One of the biggest benefits of these rancher-led RFPAs has been allowing ranchers to provide immediate initial attack on many wildfires.

the fire and try to pinch it off," he says.
"When they get on scene with us, we work together, until we've got control, and then Chris' crew tries to put out the fire, and we kind of work back and work the edges."

The winter training sessions with the BLM are very helpful, too, Guerry says.

"Chris has really focused the training to on-the-ground improvements we can make with our dozer operators, instead of just a generic training," he says. "And that's allowed our people to be better with their equipment, too."

Adds Anthony, "We put them through sand table exercises, mock fires, leadership exercises, communication, effective communication and what that looks like, and round those edges, make things a little smoother, so when we do get out there, if it's a real fire, we've already done it in the classroom and we can hit the ground running."

What's next?

Looking ahead to the future, Lyons recommends staying the course.

"Keep it simple guys," Lyons says.
"It's ranchers protecting rangeland and assisting the agencies to accomplish that. Nothing more."

For each RFPA organization to function well into the future, new rancher-members will need to join and step into leadership roles over time.

"Sometimes I think it's going to be hard to keep them going. Then, when I go to these meetings and I see these young people walk in, I think we're going to be good, we're going to be OK," Satterwhite says.

She talks to the younger ranchers to make them feel welcome. "I don't want to pressure them too hard. But I want to talk to them, I want to encourage them to keep coming."

Overall, it seems everyone is pleased with the RFPA program.

"They're a wildly important tool for us," Sawyer says. "They all know the landscape, where the water sources are, where the cattle are, historically where things have worked, and where they haven't; it's huge. For all of the people of Idaho, it's incredible. I can't imagine ever wanting to go back to where we were 10 years ago."

"RFPAs are playing a crucial role in managing and extinguishing fires in these ecosystems," says Miller, the IDL director. "Without it, we'd be seeing much bigger fires and fires burning longer in duration, so I really appreciate the work these guys are doing out there." ■

Steve Stuebner is the writer and producer of Life on the Range, a public education project sponsored by the Idaho Rangeland Resources Commission. See more at idrange.org.

Crossword Puzzle

Exercise & Fitness

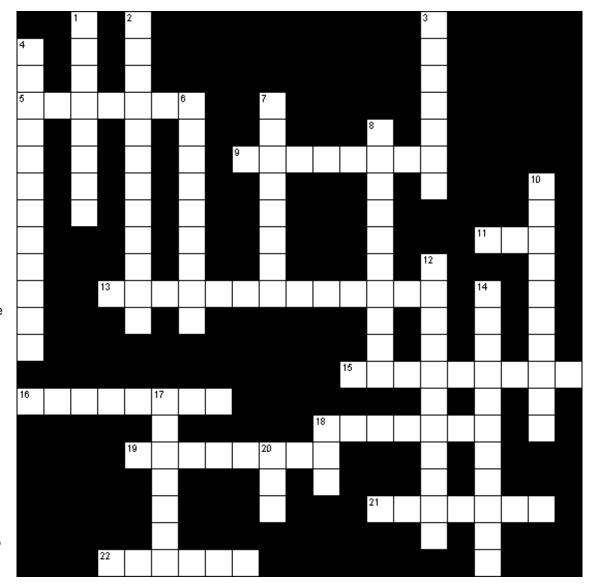
Answer key on page 41

Across

- 5. Low to moderate intensity exercise
- 9. A short bar with fixed or changeable weights
- 11. Provides energy and insulation to the body
- 13. A low-force, long stretch of a desired muscle
- 15. High intensity exercise when muscle burn occurs
- 16. The storage form of glucose found in the liver and muscles
- 18. Provides the exerciser to train in a safe and effective manner
- 19. The number of calories per minute that a physical activity expends
- 21. Made up of amino acids, builds and repairs body tissues
- 22. The potential to do work and activity

Down

- 1. A healthy activity
- 2. Nutrient that is the body's main source of energy
- 3. A straight or curved bar with weights
- 4. Bodyweight without body fat



- 6. Fat beneath the skin
- 7. An exercise performed by curling the midsection
- 8. One full movement of a motion
- 10. Chemical and physiological

- processes in the body that provides energy
- 12. A fatty substance found in the body but essential for the production of hormones
- 14. Carries fat through the body
- 17. A simple sugar, the body's main source of energy
- 18. The completion of a total number of repetitions
- 20. The muscles in the front of the stomach



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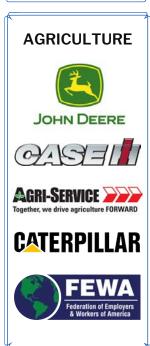




















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Bee best management practices

By Chris Schnepf University of Idaho

hen walking through a forest, it is natural to focus on trees.

But on closer inspection, many hundreds of species of shrubs, forbs, and other flowering plants grow within and around Idaho forests, especially early in forest succession – immediately after a stand-replacing fire or stand-regeneration harvest.

It should come as no surprise that a whole variety of insects and other pollinators have evolved to take advantage of this bounty of nectar and pollen.

Most of our native conifers are wind-pollinated, but most of these understory species are pollinated by bees and other insects.

There has been strong public interest in pollinators in recent years, so it may be a good time to talk about forest pollinators.

Farmers have always been interested in bees because some crops depend on them for pollination – so much so that farmers who grow bee-pollinated crops will pay to have those bees brought near their fields during pollination season.

Most agricultural uses of bees

to pollinate crops use one bee species, which we are all familiar with – European honeybees (*Apis mellifera*).

They are not native to North America, but they have become widely naturalized.

Honeybees are only part of the pollination picture, though. A whole host of other bees and other insects (and some vertebrate species, especially in tropical forests) pollinate forest plants.

There are more than 4,000 species of bees in North America, including over 700 species in Idaho. Most of these bees do not form complex interactive communities as honeybees do.

They work in isolation. You may find bunches of them where ideal habitat conditions are available, but they are not usually working together.

Bees and other pollinators are ultimately important for many

resources
that we value
from forests.
For example,
huckleberry flowers depend on a
variety of pollinators to set fruit.
Many of us treasure Idaho's

Many of us treasure Idaho's state fruit for its own sake, but their abundance, or lack thereof, also affects bears and other animals that like huckleberries as much or more than humans do!

Pollinators are also important to a host of other forest plants that aid forest function (e.g., the Many different insects pollinate forest plants. Photo by M. Schreiner (Bugwood.org) many shrubs and forbs, from lupines to *Ceanothus*, that fix nitrogen from the air that improve forest soils).

To the extent forests are mingled with agricultural lands, they can also provide habitat for pollinators that aid nearby agricultural crops.

There are a variety of potential best management practices to provide better habitat for pollinators and make their populations more resilient in the face of factors that threaten their viability.

On most of these, it is not about making dramatic changes to your forest management as it is tweaking things a bit to the extent you want to aid pollinators.

Many times, you do not need to plant seed or seedlings to establish food for forest pollinators – it is simply a matter of opening the understory to light – which happens after a timber harvest or tree-killing fire.

A variety of pollinator-friendly understory plants are wired to quickly populate recently disturbed forests. That being said, you can still aid the process by planting supplemental native forbs and shrubs that maximize the volume and diversity of flowers for pollinators, and extend the bloom season longer into the growing season (as feasible for the site).

Landings, skid trails, and burn piles from a harvest are natural areas to establish pollinator plants. They often receive light for a longer period of time than other parts of a unit, so they can sustain pollinator plants for a longer period of time.

Generally, native plants are better for native pollinators.

While grass seeding may be needed in some areas to reduce erosion, plants with more prominent flowers tend to be better for pollinators.

Creating larger clumps of flowering

Idaho's

Forest

plants of the same species preferred by pollinators ("food plots" for pollinating insects) is better than isolated individual plants, as the former creates a stronger signal for pollinators and reduces their travel time between flower patches.

Understory plants can compete aggressively

with trees you are trying to regenerate. Some vegetation control can be essential for successful reforestation, especially on dry sites. But you may be able to tweak these efforts to accommodate pollinators.

It is a common practice on industrial forestlands to use a broadcast herbicide treatment across an entire site to create a reduced-competition window of time for tree seedlings to establish.

But reducing competition in 3-4 foot spaces around each tree (spot spraying a herbicide rather than broadcasting it or removing competing vegetation mechanically with "scalps") is a good compromise.

Many bees make their homes in the soil (and in the pith of plant stems), so having some bare earth can help these insects build homes.

You can also leave some untreated areas ("skips"), particularly if there are already established young trees that have grown tall enough to escape any risk of mortality from competing vegetation and in spots where conifer regeneration is not as critical (e.g., rocky microsites where tree growth may not be robust).

The whole point of encouraging plants that benefit pollinators is their flowers, which provide nectar and pollen. It should be obvious but remember to avoid grazing or mowing those areas when the flowers are in bloom!

Many of the things we might ordinarily do to take care of forests coincidentally benefit pollinators. For example, if you need another reason to control noxious weeds, do it to help pollinators.

Many bees will use flowers of invasive species such as knapweed or starthistle; but when these plants take over large areas, they reduce understory plant diversity, and consequently the variety of bee and other pollinator species.

Water features on your property provide a resource during fires – pollinators will use them, too. Supporting healthy riparian areas may also extend flowering times.

In addition to benefiting soil moisture, mycorrhizal fungi, and wildlife, decaying coarse woody debris can also provide homes for pollinators.

Much has been written about the impacts of insecticide use on bee populations. Insecticides are rarely used in forest management, but we do use herbicides commonly, and some of them could affect bees depending on how they are used.

Where possible, avoiding times and spots when bees will be feeding (when plants are flowering) should reduce potential impacts.

If you would like to learn more about



Photo by Chris Schnepf Pollinators benefit plants important for forest growth such as Ceanothus, which fixes nitrogen.

forest pollinators, the following sources provide some great information, and served as reference material for this column. Many of these resources feature lists of forest plants that are heavily favored by pollinators:

- University of Idaho Extension has an excellent website on pollinator protection titled "Just bee-cause" (https:// www.uidaho.edu/extension/pollinator).
 If you click on the "Resources" button, you can get links to all kinds of information on pollinators.
- "Forest Bee Pollinators" is an excellent publication on forest pollinators written for family forest owners. It is available at https://woodlandfishandwildlife. com/wp-content/uploads/2020/06/ Forest-Bee-Pollinators.pdf
- Oregon State University Extension has assembled some good short videos on best management practices for forest bees, titled "Bees in the Woods," available at https://extension.oregonstate. edu/collection/bees-woods.

Chris Schnepf is an area extension educator in forestry for the University of Idaho in Bonner, Boundary, Kootenai and Benewah counties. He can be reached at cschnepf@uidaho.edu.



BOISE – Idaho is projected to have set a massive all-time record for total farm revenue in 2022. However, the state is also projected to have set a massive all-time record for total farm expenses last year.

When it comes to total farm cash receipts – this is the revenue that farmers and ranchers receive for their commodities – "We blew the socks off of almost every ag category in the state last year," University of Idaho Agricultural Economist Garth Taylor told Idaho lawmakers Jan. 5.

Taylor shared with legislators the highlights of the university's "The Financial Condition of Idaho Agriculture: 2022" report.

The report estimates that Idaho farmers and ranchers brought in \$11 billion in total farm cash receipts in 2022. That was 26 percent higher than the previous record of \$8.8 billion set in 2014 and 29 percent higher than the 2021 total of \$8.6 billion.

However, Idaho also set a record for total farm production expenses in 2022, in

virtually every category of expense.

According to the university's annual Financial Condition of Idaho Agriculture report, farm and ranch expenses in Idaho totaled \$8.9 billion in 2022, 20 percent higher than the 2021 total of \$7.5 billion, which was a record at the time.

Put simply, Idaho farmers and ranchers had \$1.4 billion in additional production expenses last year.

The cost of manufactured inputs, which include fertilizer, chemicals and fuel, were up an estimated 40 percent compared with 2021, while farm-origin inputs, which include feed, seed and replacement livestock purchases, were up 13 percent, according to the report.

The report projects a 17 percent increase in payments to stakeholders, a category that includes net rents and interest expense.

All other farm production costs, including property taxes and fees, labor and capital consumption, rose by 2-11 percent

compared with 2021.

According to the report, Idaho producers spent \$1.8 billion on feed last year, \$1 billion on fertilizer, \$417 million on pesticides, \$393 million for fuel, \$975 million for hired labor and \$567 million on interest expenses.

"Farm expenses were very high this past year," U of I Agricultural Economist Brett Wilder, one of the report's co-authors, along with Taylor, told Idaho Farm Bureau Federation. "That has been a worry, as you talk to folks in farm country. They are feeling the cost pinch."

"It was ridiculous," Kimberly hay and barley farmer Rick Brune said of the farm production cost increases in 2022. "A lot of things were 20-30 percent higher than normal."

Brune said he avoided growing corn last year because of significantly higher fertilizer costs.

New Plymouth farmer Galen Lee said the cost for a lot of fertilizer was two to three times higher last year and he added, "We've all seen what fuel prices have done. It's pretty crazy."

Aberdeen potato farmer Ritchey Toevs said all of his energy and transportation-related costs in 2022 were double what they were the previous year. His largest on-farm cost increase was a 150 percent rise in his operating interest, which went from about \$55 an acre in 2021 to \$138 an acre in 2022.

Twin Falls farmer Larry Hollifield said total farm cash receipt records will continue to happen just due to natural inflation. The thing that really matters, he added, is whether that revenue is enough to cover rising expenses.

"Yes, I received more for my commodities last year, but I also had to pay more to produce them," he said. "I didn't make any more money than normal last year."

Taylor presented the highlights of the Financial Condition of Idaho Agriculture report to members of the Idaho Legislature's Joint Legislative Economic Outlook and Revenue Assessment Committee.

This committee meets annually just before the legislature convenes, to set a revenue estimate for the state that legislators use to set budgets for the next fiscal year.

Fortunately for the state's collective agriculture industry, commodity price increases are expected to have outweighed farm production cost increases in 2022.

The report estimates Idaho net farm income totaled a record \$3 billion last year, eclipsing the previous record of \$2.6 billion set in 2020.

But Taylor cautioned legislators that net farm income is a volatile measurement and the



Photo by Ariane Smith

Cattle and calves ranked as Idaho's No. 2 farm commodity in 2022 when it comes to total farm-gate revenue.

state has over the past decade experienced huge swings up and down from one year to the next when it comes to net farm income.

"There's no other industry in the state of Idaho where the volatility is as great as it is in agriculture," he said.

The good news for the state's economy, he told Farm Bureau, is that farmers and ranchers spend about the same amount of money on farm inputs each year regardless of whether they had a good year or not.

That acts to help stabilize the state's overall economy, especially in rural areas that are heavily dependent on agriculture, he said.

The report shows that agriculture in Idaho accounts directly and indirectly for 1 in every 8 jobs in the state, 12.5

percent of the state's total gross domestic product, and 17 percent of Idaho's total economic output.

During his presentation to lawmakers, Taylor cautioned against blaming agricultural producers for any increases in food costs. Farmers and ranchers get, on average, about 8 cents of every food dollar spent in the United States, he said.

"It is not farm prices that push increases in food prices," he said. "It is transportation and other price increases that push them."

While the state's agricultural industry as a whole did experience a bump in collective net farm income last year because of much higher commodity prices, there is significant concern among farmers and ranchers about rising expenses,

said Wilder, a sheep rancher from Meridian.

"If those cost categories continue to climb and we have some normalization of ... commodity prices, we're in trouble," he said. "Ag is a margins game. If your margins get upside down, you're done."

When it comes to total farm cash receipts, many of Idaho's top agricultural commodities set records last year, according to the U of I report.

Dairy remained Idaho's top agricultural commodity when it comes to total farm cash receipts with a record \$4.2 billion in revenue in 2022, a 38 percent increase over 2021.

Cattle and calves brought in \$1.9 billion in farm cash receipts in 2022, 16 percent more than the 2021 total.

Potatoes remained Idaho's top crop with a record \$1.3 billion in total revenue in 2022, a 36 percent increase over 2021. That eclipsed the previous record of \$954 million set in 2019.

Hay bumped wheat to become the state's No. 4 agricultural commodity in terms of total revenue, as the state's hay growers brought in a record \$725 million in farm cash receipts last year, a 39 percent increase over 2021.

Idaho wheat farmers brought in a total of \$706 million last year, a 13 percent increase over 2021.

Sugar beets ranked as the state's No. 6 ag commodity in total revenue with a record \$385 million in farm cash receipts in 2022, a 7 percent increase over 2021.

Idaho barley growers brought in a record \$357 million in farm cash receipts last year, a 32 percent increase over 2021. ■

Chanel Tewalt takes over as director of Idaho ag department

By Sean Ellis

Idaho Farm Bureau Federation

BOISE – The new director of Idaho's agriculture department has an immense appreciation for the state's farming and ranching industry.

"Not only is Idaho one of the biggest ag states in the country, but we also produce some of the finest quality ag products in the world," Idaho State Department of Agriculture Director Chanel Tewalt told Idaho Farm Bureau Federation. "Globally, we are known for incredibly high quality ag commodities. Our producers are known for consistency and quality, as well as their work ethic, and people know that Idaho agriculture is a great place to do business."

Tewalt said she never ceases to be amazed at the state's farm and ranch industry.

"The sheer productivity and the innovation that comes from the state's ag industry, all the time, is astounding," she said. "We are known across the globe for producing some of the highest-quality commodities, whether it's potatoes or hay or beans or seed or cattle and dairy genetics. The list goes on and on

and on."

Idaho has almost 25,000 farms and ranches and is a national leader in many ag commodities,

> including potatoes, alfalfa hay, barley, peppermint oil, seed crops, dairy, hops and

> > food trout.
> >
> > According to a Univer-



Photo by Sean Ellis

Idaho's agriculture industry accounts directly and indirectly for one in every eight jobs in Idaho and almost 13 percent of the state's total gross domestic product, according to a University of Idaho study.

sity of Idaho study, the state's agriculture industry accounts directly and indirectly for one in every eight jobs in Idaho and almost 13 percent of the state's total gross domestic product.

Tewalt, who took over as director on Jan. 23, said she looks forward to promoting Idaho's agriculture industry every chance she gets.

"I want to highlight the incredible things this industry does," she said. "Highlighting the ag industry at every turn is something that I love doing and something that I want to do."

Tewalt took over as ISDA director after Celia Gould announced she was retiring. Gould, a cattle rancher from Buhl, served for 16 years as director, making her the longest-serving ISDA director ever.

She announced her retirement first in a letter to ISDA staff Jan. 5.

"Together we serve an industry that is second to none," she wrote. "Each of you have strengthened that industry by the jobs you do every day."

She told ISDA employees the agency is being left in good hands with Tewalt.

"I'm confident with your help, Chanel will take the agency to a whole new level," Gould wrote. "You can rest assured I'll be watching with pride."

Later that day, Gould informed the state's ag industry of her retirement.

"Our farmers and ranchers are absolute-

Chanel Tewa

ly the best and have made this job the honor of a lifetime," Gould wrote in a letter to Food Producers of Idaho. "As you know, (Tewalt) is beyond capable and we are lucky to have her step into this role."

In a news release announcing the change to the public, Gov. Brad Little, who appoints the ISDA director, thanked Gould for her service and assured people the department would remain in good hands with Tewalt taking over.

Little noted that the total value of Idaho's agricultural exports increased from \$1.2 billion to almost \$2.7 billion during Gould's time at ISDA.

He also noted she organized and went on several international trade missions, representing the state's agricultural industry.

"There are few people who understand every aspect of the Idaho agriculture industry like Celia Gould," said Little, a rancher and farmer. "It takes a special person to accomplish what she has as director. While she will be greatly missed, her retirement is well deserved. I trust the agency will be in excellent hands under Chanel Tewalt's leadership."

Gould previously served in the Idaho Legislature from 1996 to 2002.

Tewalt worked at ISDA for more than 15 years, served as the agency's chief operations officer and served as deputy director starting in 2021.

She was raised on a livestock farm in Klamath Falls, Ore., and she and her husband, Josh, own a livestock operation in Meridian.

Idaho Farm Bureau Federation CEO Zak Miller thanked Gould for her many years of service to the state's agricultural industry and applauded

"As an agency, it's not just about enforcing, it's also about making things practical and realistic for the community that we serve, understanding that we serve the most important industry in the state."

-Chanel Tewalt, Director, Idaho State Department of Agriculture

Little's appointment of Tewalt as her replacement.

"Celia has done a great job helping guide Idaho's farm and ranch industry through good as well as difficult times and Idaho agriculture has benefited from her leadership," he said. "At the same time, Farm Bureau has also worked closely with Tewalt during her time at the agency and we have no doubt she is more than qualified to lead the Idaho State Department of Agriculture forward."

Tewalt told IFBF she learned a lot from Gould.

"Celia is nothing short of an icon in the ag industry," Tewalt said. "Not just because of her time in the agency but also because she has always been involved in production agriculture as well and has been able to bring that critical and real-life voice to what we do here."

She said one of the greatest lessons she learned from Gould was balance and the importance of implementing ISDA programs in a consistent manner, while remaining flexible.

"Within code and rule, we are called to do a lot of things but you have to also implement all of those things with consistency and fairness and careful balance," she said. "You also have to know that the way you implement things today isn't necessarily always the way it will be implemented

forever. Statutes change, rules change, the practices of the industry change, so we have to be adaptable to that and know that our cues are taken from the industry and not the other way around."

Tewalt said she understands that the ag department serves the state's farming industry and not vice versa.

"As an agency, it's not just about enforcing, it's also about making things practical and realistic for the community that we serve, understanding that we serve the most important industry in the state," she said.

The Idaho State Department of Agriculture provides a wide variety of services to the state's farming and ranching industry and also has an important enforcement role to ensure the protection of consumers, as well as the ag industry.

The agency has about 225 full-time positions but also hires a lot of seasonal staff and peak employment can reach about 500 during harvest and inspection season.

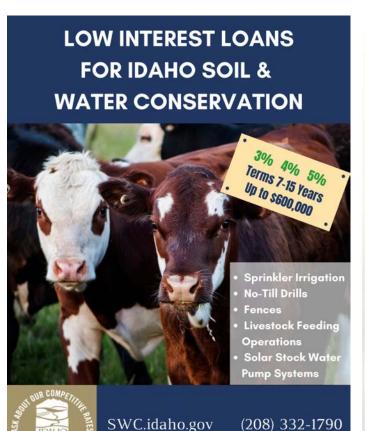
"What we pride ourselves in is doing that work diligently and fairly, but also quietly," Tewalt said. "It is not our job to make a splash. We do our job as quietly and consistently as we can."

Country Chuckles

By Johnny Hawkins



"The wind stopped suddenly, didn't it?"



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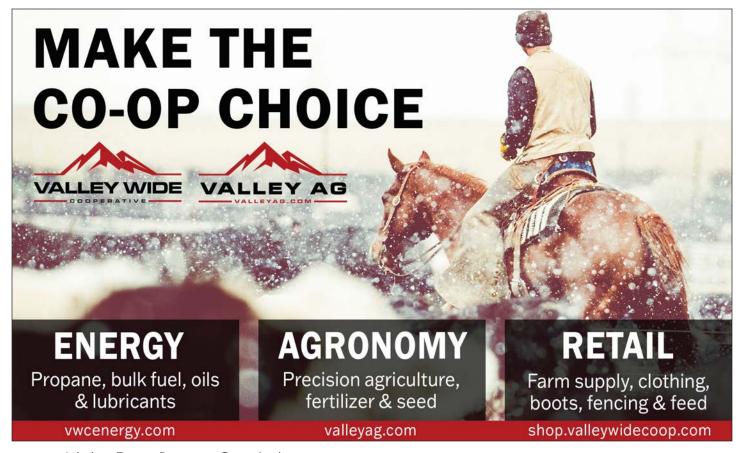
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Agricultural Profile



Photos by Alan Clark

Hay is the top crop in Jefferson County in terms of total acreage. According to the 2017 Census of Agriculture, 81,980 acres of hay were grown in the county during the 2017 census year.

Jefferson County is still a strong agricultural area

By Sean Ellis

Idaho Farm Bureau Federation

RIGBY – Like many other areas of the state, Jefferson County has experienced rapid growth in recent years.

So far, that growth, and the resulting loss of farmland, has been concentrated around the Rigby area, and Jefferson is still a solid agricultural county.

According to the 2017 Census of Agriculture, there were 750 farms in Jefferson County during the 2017 census year and 333,522 total land in farms. Farmers and ranchers brought in a total of \$295 million in farm-gate revenue that year, according

to the census.

"We're still a heavily agricultural county," said Jefferson County Farm Bureau President Alan Clark, who grows malt barley, alfalfa and wheat and has 500 beef cows near Menan.

A lot of farm ground around the Rigby area is being turned into subdivisions and houses, said Rigby farmer Scott Hancock, who also serves as county commissioner.

But there are some real rural areas of the county that are not being impacted by growth and there is some serious agricultural production taking place in Jefferson County, said Hancock.

"In our county's comprehensive plan, we

say that we are an ag county, no question about it," he said.

The Jefferson County Farm Bureau organization focuses a lot of attention on educating school children about the agriculture industry and its importance to the area. That includes hosting an annual Third Grade Ag Expo event at the county fairgrounds.

Every third-grade class in the county participated in the 2022 Ag Expo, Clark said. While Farm Bureau sponsored the event, it was planned and executed with the help of 50 FFA students from Jefferson County.

Supporting high school ag students is

another big focus of the local Farm Bureau organization, said Rigby farmer Holly Hancock, Scott Hancock's wife.

"We're big supporters of FFA, like a lot of the county Farm Bureaus are," she said.

In addition to continuing to support youth ag education, Clark said the Jefferson County Farm Bureau would like to expand its efforts into educating all the newcomers about the important role agriculture plays in the local economy and way of life.

"I think educating the youth is important but I would really like to see our county also push into teaching adults more about agriculture," he said. "We're getting a lot of people in here that aren't from farm country and I think we need to connect with those people to let them know what farming is."

"We're getting a lot of people moving here from out of state, so there are a lot of new people who need to be educated about agriculture," said Rigby farmer James Bazil.

It's critical that farmers and ranchers continue to find ways to educate people about why agriculture is important, Holly Hancock said.

"The generations now are too far removed from the farm," she said. "They have no clue where their food comes from, other than the store."

According to the 2017 ag census, hay is the county's top crop acreage-wise, with 81,980 acres grown in 2017, followed by wheat (43,318), barley (40,084), and potatoes (30,961).

Cattle and calves is also one of the county's top agricultural commodities and there were 84,789 cattle and calves in Jefferson County during the 2017



ABOVE: Jefferson County. shown here, is still a solid agricultural county despite rapid population growth centered around the Rigby area. Educating newcomers to the area about agriculture is a top focus of the Jefferson County Farm Bureau.

RIGHT: Third-graders learn about agriculture during last year's Third Grade Ag Expo, which is held annually at the Jefferson County fairgrounds and hosted by Jefferson County Farm Bureau.

census year.

Jefferson is one of the top hay-producing counties in Idaho, Bazil said.

"It's a really good area to grow hay," he said. "The Mud Lake area, in particular, is one of the best areas for growing hay in the state."

A lot of potato processing also occurs in Jefferson County and several spud processing plants are located there.

"We process a lot of potatoes



here in Jefferson County," Scott Hancock said. "They ship a lot of fresh as well as processed potatoes out of our county."

According to the ag census, 75 farms in Jefferson County were 1,000 acres or more in size in 2017, 50 farms were from 500-999 acres in size and

47 were from 180-499 acres in size.

On the other end of the scale, there were 203 farms from 1-9 acres in size, 247 between 10-49 acres in size and 12 between 50-179 acres in size.

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IDAHO FOUNDATION FFA





Curious Chevy Riley (10) meets a curious pig. Penny the sow is in the background.

Photo courtesy of Druids Dream Acres

By Kathy Gaudry

For Idaho Farm Bureau Federation

"They are the perfect pig for a small farm!" exclaims Amy Dunnavant of D & N Farm in Caldwell.

Amy and her husband, James, moved to the Caldwell area from Alaska, intending to have a small homestead.

They were looking for just the right animals to raise, and Amy's sister in Iowa suggested that they look at her pigs: Idaho Pasture Pigs. They were hooked, and over the past several years, have traveled over 12,000 miles to find breeding stock from different IPP blood lines.

"It's a matter of getting back to basics.

Sustainable farming with a great-tasting product," says Amy.

This is the story that is repeated over and over again: Everyone who has this breed of pig wanted a docile, family-friendly pig that is easy to maintain and produces good meat with a minimum of effort.

Already, these small farmers are seeing wide acceptance of the IPP as a custom-market pig.

Lauri Goettsche and her sister Inna of Starflight Acres in Nampa inherited the family farm. Traditionally, the family sold produce at the farmers market, but when the ladies started to rebuild the farm, they decided to raise pigs.

Laurie and Inna had strict requirements

for what they were looking to raise. Their pigs had to be friendly, a grazing animal, and healthy breeders with a better meatto-fat ratio.

They found all of these traits in the Idaho Pasture Pig.

Another family, Jason and Amandalyn Riley of Druids Dream Acres in Payette, chose IPPs, saying they loved the fact that even their 5-year-old, since he was 3, can go out with the pigs and play with the babies.

Many of the IPP farmers have raised large breed heritage hogs prior to discovering the Idaho Pasture Pigs. Feed was an issue for many of the breeders.

William and Audrianna Ludwig of the

Breed standards of the Idaho Pasture Pig are simple:

- Grazing animal
- · Friendly, calm, and curious disposition
- Medium size (sows 250-350 pounds, boars 350-450 pounds)
- · Multiple colors and patterns of coat
- Medium length upturned or dished snout for
- · Eyes well apart and symmetrical
- · Teeth set well in mouth with no over or under bite
- Wattles ok
- Ears set apart, with a preference for erect ears
- Shoulders well-developed but proportional to the
- Neck medium length
- Long and level back
- · Broad, long loin area
- · Deep and well-defined ribs
- Straight legs

Ludwig Ranch in Rathdrum, commented, "The cost of grain has gone through the roof. We chose the Idaho Pasture Pigs because we were able to feed less grain and allow them to graze, both of which cut our costs."

Care of these pigs is simple. As with all pigs, good fencing is critical to the operation. IPP farmers tend to use hard wire or field fencing with a single strand of hot wire 8" from the ground, or electric netting.

For "sacrifice pens" or



paddock, cattle or pig panels are popular, again with a single strand of hot wire.

Good pasture is required for these pigs, and they only need appropriate supplements of grain and minerals to maintain good health.

Rotational grazing works quite well with these pigs, allowing more use of smaller areas. Producers have also found that with the pigs grazing on pasture, there is not that strong pig smell which happens with other breeds.

Depending upon the area and climate, most farmers provide pasture in the summer and hay during the winter.

In summer, the pigs require plenty of water and shade even room to wallow. In the winter, they need to be able to get out of the elements.

Developed over a period of five to six years in Rigby, Idaho, by Shelly Farris Dixon, this new breed of pig came into its own in 2012.

Its breeding includes the best of Duroc, Berkshire, and KuneKune, creating a grazing pig with a great meat-to-fat ratio and simple feed requirements.

Some health-conscious consumers appreciate the high omega 3 content in the fat resulting from grazing. The meat is a bit darker and more flavorful.

Dave Cronauer of White Bison Farm in Wisconsin compared it to "eating pork at Grandma's years ago."

Jodi Cronauer, owner of the Idaho Pasture Pig Registry and White Bison Farm, commented, "This breed, being only 10 years old, has seen enormous

LEFT: Here is a clear view of the shortened, turned-up snout that is so perfect for grazing. Photo courtesy of White Bison Farms



Photo courtesy of D and N Farms Idaho Pasture Pigs have high omega 3 content due to grazing, and the meat is a bit darker and more flavorful.

acceptance by small farmers. There are approximately 5,000 registered IPPs throughout the nation with well over 100 registered IPPs within Idaho."

However, not all Idaho Pasture Pigs are registered, so experts suggest that the numbers are actually much higher.

Since the Idaho Pasture Pigs are so new, breeders recommend that prospective IPP buyers buy from a registered breeder and research the different blood lines to avoid inbreeding.

The Idaho Pasture Pig Registry has a feature which allows producers to enter registration tags of proposed breeders to see if the pigs are closely related.

Inbreeding is a possible problem since the breed numbers are still small, but the producers are working hard to create variety within their herds and awareness of blood lines.

What's not to like about the Idaho Pasture Pigs? William Ludwig laughs and says, "Their personalities are great. They are almost too friendly, and it's hard to get work done when they won't stop pestering you to be petted."



Eastern Idaho has become the nation's No. 1 production area for quinoa

Stock photo

Field trials aim to find special-needs herbicide labels for quinoa

By John O'Connell University of Idaho

MOSCOW, Idaho – Forthcoming field trials at the University of Idaho's Aberdeen Research and Extension Center could help provide the first herbicides to local farmers who raise quinoa, a niche crop that's

gaining a foothold in the state's eastern region.

Quinoa, a pseudo-cereal native to South America, has earned a reputation as a superfood for its health benefits. Prices and demand for the crop have been on the rise.

Eastern Idaho has become the nation's No. 1 production

area for quinoa, which fits well into sugar beet and potato rotations.

Without any herbicides labeled for use in quinoa, however, weeds can overrun fields, giving farmers second thoughts about planting it.

The U.S. Department of Agriculture's IR-4 Project, which

helps specialty crop growers address pest management concerns, has approved about \$24,000 for quinoa field trials in 2023.

"It's a pest problem without a solution," said Ronda Hirnyck, a UI Extension pesticide specialist who serves as the state's liaison to the IR-4 Project. "The weeds are terrible."

Pam Hutchinson, UI Extension potato cropping systems weed scientist, will conduct at least two of the trials in Aberdeen, with the goal of finding effective herbicides and getting special-needs labels approved for local use.

"I'm always interested in looking at crops that have the potential to be grown with potatoes," Hutchinson said. "The more crops we can get into a three-year rotation, anything like that helps break the cycle of diseases out there."

The effort to get special-needs labels approved for quinoa herbicides recently took a major step forward when the U.S. Environmental Protection Agency categorized the previously unclassified crop as a grain in September.

The EPA categorization, which is not based on physiology but rather on how quinoa metabolizes pesticides, eliminates the need for hundreds of thousands of dollars in chemical residue testing otherwise necessary to get pesticide tolerances registered with the U.S. Food and Drug Administration.

The categorization allows regulators to base residue decisions for specific chemicals on data already collected for other grains.

The trials should narrow down the list of potentially effective herbicides while also generating additional data of interest to chemical manufacturers.

"The chemical companies may still want at least a couple of studies," Hirnyck said. "They register the pesticide, ultimately, and they have to accept that liability."

Quinoa is a close relative of common lambsquarters, which is among the state's most prevalent weeds, and chemicals effective at controlling lambsquarters also tend to kill quinoa.

Hutchinson plans to evaluate 10 to 15 herbicides in this spring's trials. During small-scale quinoa herbicide trials Hutchinson previously conducted in Aberdeen, Devrinol, a pre-emergence herbicide labeled for turf grass and certain vegetables, nuts and small fruits, showed promise at eliminating lambsquarters without harming quinoa plants.

The herbicide Dual Magnum was another good candidate. Both chemicals will

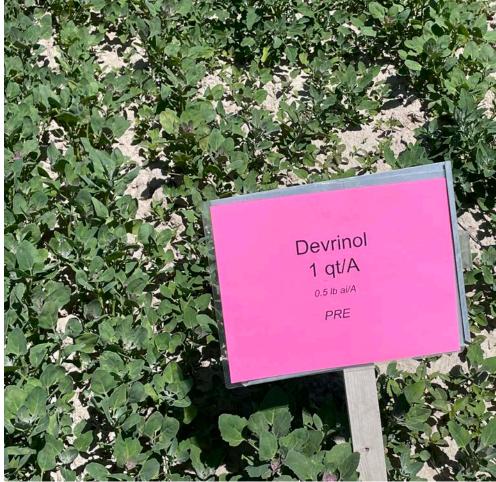


Photo by John O'Connell

This photo shows quinoa raised in Pamela Hutchinson's trials at the University of Idaho Aberdeen Research and Extension Center during the summer of 2022.

be included in Hutchinson's forthcoming trials.

UI Extension has also sought to help growers control weeds in quinoa without chemicals. Xi Liang, UI Extension specialist in cropping systems agronomy, evaluated intercropping with quinoa and varying row spacing from 2018 through 2021, measuring the effects of each scenario on weed density.

The buyer for the region's quinoa is Idaho Falls-based Teton Mills, which is the largest quinoa mill in the U.S.

It's owners, Pingree-based Wada Farms and Driggs seed potato farmers Wyatt and Nathan Penfold, collaborate with a similar-sized quinoa mill in Canada.

Teton Mills aims to contract for 3,000 acres of quinoa throughout eastern Idaho during the 2023 season.

Most of the quinoa is sold domestically, and grower returns are between barley and potatoes. The crop thrives on cooler,

high-altitude farmland. Plants can become sterile when high temperatures rise above 90 degrees during the flowering stage.

Wyatt Penfold explained the cost of cleaning quinoa is significant due to the high concentration of weed seeds that must be removed.

"Our plant isn't like any other plant out there that does any other grains. There's a whole lot of specialized equipment," he said.

The Penfolds have done small-scale quinoa trials on their farm for 15 years, testing agronomic practices and potential herbicides and sharing the information with Hutchinson.

Without herbicides available, Wyatt Penfold believes the best approach to raising quinoa is simply to plant it in fields without many weed seeds.

"As of right now we just try to plant it in our cleanest ground we have," Penfold said. "We follow potatoes or sugar beets." ■

Idaho's biggest 'foodie' market thriving in Boise

By Sean Ellis

Idaho Farm Bureau Federation

BOISE – Idaho's biggest "foodie" market is alive and well, 10 seasons after its vendors split from Idaho's largest farmers market and formed their own, food-centric market.

More than a decade ago, a few dozen farm and ranch vendors split from Capital City Public Market and formed their own market, known as the Boise Farmers Market.

The CCPM is by far Idaho's largest market in terms of foot traffic, attracting up to 15,000 people to downtown Boise each Saturday, so the split was a huge risk.

BFM vendors say that risk has turned into a big reward and now both markets are flourishing.

The Capital City Public Market includes a mix of artisans and farm booths, while the Boise Farmers Market is known as the foodie market and includes mostly farm vendors.

Both markets have their own niche and both are doing well, said Soraya Mazloomi, president of the BFM board of directors and a vendor at the market

"We are doing really well," she said.
"Every year that our market has been in business, I think everybody who has been here for awhile can report at least a 10 to 20 percent increase in sales year over year."

The CCPM is located in downtown Boise, while the BFM is located a few miles away in a large parking lot between Americana Boulevard, River Street and Shoreline Drive.

The BFM has 90 vendors and 60 percent are farmers and ranchers. Any vendor selling prepared food there has to use local ingredients and even artisans have to have a food-related theme in their products.



Photo by Sean Ellis

People shop at the Boise Farmers Market Aug. 13, 2022.

When people come to the Boise Farmers Market, they come specifically to buy food, said vendor Janie Burns, a member of the BFM board.

"Our market is a food source as opposed to a more recreational event like some farmers markets are, which is OK; there is room for that," Burns said. "But we are essentially a food and local food farmers market."

The market has gained a reputation as the main foodie market, Mazloomi said.

"People come here to buy food," she said. "The Boise Farmers market has specifically branded itself as a farmers market."

The market's customers are local-food

focused and they go there to shop and not just browse, said BFM Executive Director Tamara Cameron.

"We're an ag-focused market," she said. "We really exist to serve the farmers and customers who are focused on local food."

At the same time, there are still farm vendors at the Capital City Public Market and some vendors have booths at both markets, Cameron said.

She said if people come to the BFM looking for arts and crafts, market employees will direct them to the CCPM.

"There's obviously room for both markets in the city," she said. "The Capital City Public Market does a great job, too." ■

Counties with most cows have highest farmland rental rates

By Sean Ellis

Idaho Farm Bureau Federation

POCATELLO – USDA data shows that the Idaho counties with the most cows also have the highest average rental rates for cropland.

For example, there were 330,000 head of cattle and calves in Gooding County this year, according to USDA's National Agricultural Statistics Service. That ranked Gooding as the state's top county for total cows.

Gooding also ranks No. 1 this year in the average cost to rent farm ground, at \$390 an acre, according to NASS.

Most of the state's counties with the most cows and highest average ag land rental costs are in Idaho's Magic Valley area.

Robert Morrison, an independent ag land appraiser based in eastern Idaho, said it makes sense that the counties with the most cows also have the highest cash rent expenses for farm ground.

"Most of the cows are in the Magic Valley and you can raise more crops down there" because of the climate and ample irrigation, he said. "Those cows have to be fed. As a result, you have a lot of feed crops like corn silage and hay, as well as other very profitable crops like potatoes and sugar beets."

As a result, he added, "Most of your higher ag land rents are going to be down in that area of the state. There's no question the dairy people have really had an impact in that part of



Photo by Sean Ellis

Counties in Idaho that have the most cows also have the highest average rental rates for farm ground.

the world."

Morrison said the same factors – relatively temperate winters, good growing conditions and irrigation – that make southcentral Idaho a great place to grow crops also make it a great place to raise cows.

"When you're talking cows, cows don't like lots of cold weather; they don't put on a lot of weight when it's 20 below zero," he said. "In the Magic Valley, they don't get those long, extreme cold weather days like we do here in east Idaho."

Idaho Dairymen's Association Executive Director Rick Naerebout said "it's the climate and availability of forages" that makes southcentral Idaho a great area to raise cows.

Five of the top six counties in Idaho when it comes to average cash rent expense for cropland are located in the Magic Valley: Gooding, Cassia (\$356 an

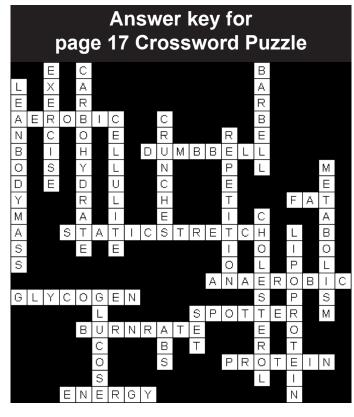
acre), Minidoka (\$331), Jerome (\$311) and Twin Falls (\$301).

The lone exception is Elmore

County (\$335), which is located in southwestern Idaho but borders Gooding and Twin Falls counties.

When it comes to total number of cows, Gooding ranks No. 1, followed by Cassia (295,000 cows), Jerome (275,000), Twin Falls (210,000) and Elmore (180,000).

Not surprisingly given those numbers, when it comes to total farm-gate revenue, Cassia (\$1 billion), Gooding (\$921 million), Twin Falls (\$749 million) and Jerome (\$733 million) are Idaho's top counties, according to U.S. Bureau of Economic Analysis data. ■



PICTURE PEACH CREAM PIE

INGREDIENTS

1 teaspoon plain gelatin

package of vanilla pudding

11/2 cups milk

2 egg yolks

1/3 cup heavy cream (whipped)

1/4 teaspoon almond flavoring

3 to 4 sliced peaches

DIRECTIONS:

Add plain gelatin to package vanilla pudding.

Prepare label directions, using 11/2 cups milk to

which eggs have been added and blended. Cool.

Fold in Whipped cream and flavoring. Place

peaches, brushed with lemon juice in baked 9-

inch pie shell. (Save some peaches for up top.)

Spoon

on filling; chill. Top with whipped cream and

peaches just before serving.







RECENT EPISODES

GOOD NUTRITION DOESN'T HAVE TO BE COMPLICATED

MILLIONS OF BOOKS ARE SOLD EVERY YEAR WITH ALL KINDS OF GLAMOROUS TIPS AND GIMMICKS TO GET PEOPLE TO THINK THE FOOD THEY EAT WILL GIVE THEM WHAT THEY WANT.

UNFORTUNATELY, MANY OF THESE FAD DIETS AREN'T SUSTAINABLE. SHERI GLAZIER IS A FARMER AND NUTRITIONIST KNOWN AS THE DIRT ROAD DIETICIAN. ON THIS PODCAST, SHE WALKS US THROUGH HOW PEOPLE CAN LIVE LIFE, NOT BE TOO EXTREME, AND USE BASIC PRINCIPLES OF NOURISHMENT TO HAVE GOOD HEALTH FOR THEMSELVES AND THEIR FAMILIES.

NEW EPISODES
EVERY OTHER
TUESDAY!

BETWEEN A ROCK AND AN EASIER PLACE

ASK ANY FARM KID FROM THE LAST 50 YEARS HOW MUCH THEY LIKED ROCK PICKING AND SEE THEIR REACTION. MOST WOULD SAY IT WAS PRETTY FUN FOR THE FIRST 15 MINUTES AND MISERABLE FOR THE REST. TODAY, FARMERS CAN'T AFFORD TO HAVE SIZEABLE ROCKS DAMAGE THEIR INCREASINGLY EXPENSIVE FARM EQUIPMENT IN THE FIELDS. AS WITH ALL ASPECTS OF AGRICULTURE, FARMS ARE LOOKING TO AUTOMATION. TREVOR THOMPSON, PRESIDENT OF TERRACLEAR TECHNOLOGIES, TAKES US THROUGH **DEVELOPING DRONE TECHNOLOGIES** THAT SEE ROCKS FROM THE SKY AND MACHINES THAT EXTRACT THEM FROM THE GROUND WITH MINIMAL DISRUPTION TO THE SOIL.

MEMBER DISCOUNTS

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Nothing warms the heart like member benefit savings!

DETAILS ALSO AVAILABLE AT IDAHOFBSTORE.COM

