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yields good, 34**

Help for aspiring farmer-veterans



About 44% of those who serve in America's armed forces come from rural communities, an impressive number when you consider that only about 20% of our country's population lives in rural America.

Rural Americans enlist in large numbers for many reasons, but I believe they all share a devotion to service.

For some who want to continue serving their fellow Americans after they complete military service, feeding our nation, farming and ranching, is a great career choice.

Farm Bureau is ready and able to help them.

Through the Farm Bureau Patriot Project, Farm Bureau members are mentoring military veterans who want to get started in agriculture. The program was piloted in Arkansas and Texas in 2016 and is available as a program option to all state Farm Bureaus.

In addition to sharing a call to service, farmers and soldiers also share a strong work ethic, problem solving skills and determination to work through difficulties, persevere and get the job done.

See DUVALL, page 6

The President's Desk

By Bryan Searle

President Idaho Farm Bureau Federation

The work never ends



A farmer's work is never done. Farming is more than growing and harvesting a crop or producing livestock.

Now that harvest around the state is mostly complete, it's time to turn our attention to another, very important issue.

The 2021 Idaho Legislature will convene in early January and there will be a host of issues, legislation and proposed legislation that the state's agricultural industry will need to keep track of and weigh in on to ensure they don't harm agriculture.

Some proposed bills, if passed, would cause harm to the state's vast and important farming and ranching industry and they will need to be vigorously and collectively opposed. You may be called on to help do that.

Other proposed bills will help ensure the state's 25,000 farms and ranches enjoy a fair regulatory environment that allows them to flourish and innovate. Again, you may be asked to make sure your voices are heard on these bills.

See SEARLE, page 6

Inside Farm Bureau

By Zak Miller

CEO Idaho Farm Bureau Federation

At the table or on the menu?



Christmas and Thanksgiving feasts rank high for many people as one of the season's highlights, with a protein most often on display as the center of the meal.

Farm Bureau is supportive of any family's protein centerpiece, be it turkey, prime rib, ham, or even trout or chicken. To each their own as they celebrate these great days, but please let it be real protein.

During the holidays, public service announcements should warn families of the sadness that comes from fake meat or vegetarian meals but

that is perhaps a topic for further exploration at a later date.

How lucky we are in Idaho to have the best potatoes in the world and it would feel wrong not to mention our spuds in connection to holiday meals as well as the pies, rolls, and butter that our state's wheat and dairy industries produce.

There are far too many commodities grown in Idaho that are part of holiday meals to mention so it is best to end with, we can grow quite a feast in Idaho.

See MILLER, page 6

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Photo by Sean Ellis

Wheat is harvested in a southwestern Idaho field in this Idaho Farm Bureau file photo. According to USDA, the total value of Idaho ag exports in 2019 was \$2.26 billion, up 9 percent over 2018. Idaho wheat exports were up 18 percent last year while dairy exports rose 13 percent.

Idaho ag export value rose 9 percent in 2019

By Sean Ellis

Idaho Farm Bureau Federation

POCATELLO — The total value of Idaho farm product exports last year increased 9 percent compared with the previous year, while U.S. wide, the value of ag exports decreased 2 percent.

According to USDA data released Oct. 26, Idaho exported a total of \$2.26 billion worth of agricultural products to other nations in 2019, up from \$2.08 billion in 2018.

The 2019 total was the second-highest ag export value ever for Idaho, just behind the record total of \$2.29 billion in 2013.

The total value of U.S. agricultural exports last year was \$136 billion, down from \$139 billion in 2018. The record for U.S. ag exports of \$150 billion was set in 2014.

See EXPORTS, page 7

Photo by Michaela Andrus

COVER: This photo of Scout Mountain near Pocatello was taken Nov. 15. See page 37 for a story on projections of a wet winter in Southern Idaho.



Photo by Sean Ellis

Michael Parrella, dean of University of Idaho's College of Agricultural and Life Sciences, second from left, speaks with farm industry leaders in February 2019 about a \$7 million plan to modernize the university's Parma ag research center.

Renovation of Parma research station moving forward

By Sean Ellis

Idaho Farm Bureau Federation

PARMA – The planned \$7 million renovation of University of Idaho's agricultural research station in Parma is still on track, with plans to begin construction next year.

"Fundraising for the project has not stopped," said Carly Schoepflin, director of communications and strategic initiatives for UT's College of Agricultural and Life Sciences. "We're still progressing on the same timeline for the project. Everything is staying the course."

The Parma Agricultural Research and Extension center in southwestern Idaho conducts a wide array of research on multiple crops, including beans, potatoes, onions, hops, mint, tree fruit, wine and table grapes, grains and seed crops.

The facilities there are more than 50 years old and badly in need of upgrading, said Michael Parrella, the dean of CALS, which oversees the Parma ag research station and seven others throughout Idaho.

The modernized facility would include new graduate student housing, updated laboratories and equipment, new green-

houses and four new positions: an Extension fruit and viticulture specialist, a weed scientist, an irrigation and soil scientist and a scientist that specializes in pollination.

That would bring the total number of research faculty at the Parma center to 10 and they would study everything from bugs to weeds to water and soil.

The work done there would benefit farmers in every part of the state, not just producers in southwest Idaho, Parrella said.

"This investment in Parma benefits not



Photo by Sean Ellis

This is an artist's rendering of a \$7 million plan by University of Idaho's College of Agricultural and Life Sciences to modernize the university's Parma ag research center. The planned renovation is moving forward and the project could be completed in 2022.

just the growers regionally but it benefits agricultural production statewide," he said.

The university earlier this year received permission from the Idaho State Board of Education to move forward with the design phase of the project. The next step is requesting \$3 million from the legislature during the 2021 session, which begins in January.

If lawmakers agree to provide the full \$3 million that supporters of the project are seeking from the state, then the plan is to start construction with a goal to have it completed by 2023, Schoepflin said.

The plan for the project is to raise \$3 million from private industry, including farm commissions and individual farmers, as well as agribusinesses, and \$3 million from the state.

The university will put \$1 million toward the project, in addition to the \$1.5 million it already allocates to the research center annually.

Private industry and farm commissions have donated \$2.85 million toward the project so far. That includes \$850,000 from eight different farm commissions, \$300,000 from farmers and other individuals and \$1.7 million from ag-related corporations, co-ops and foundations.

The Idaho Barley Commission has pledged \$25,000 toward the project because the barley industry "recognizes the importance of updating the center to

attract and retain outstanding scientists who do work that will benefit growers ... throughout the entire state," said IBC Executive Director Laura Wilder.

She said the commission provides funding to several researchers around the state who work collaboratively with researchers at the Parma center on projects important to barley growers.

"The commission's investment in the Parma center is a big step in providing services to our growers far into the future," Wilder said. "The barley commission recognizes the (university's) vision for updating that research and extension center, which will be a hub for projects that will impact growers in every part of the state."

Bob Simerly, an industry agronomist, said the donations from private industry and agricultural groups will show lawmakers how important the project is to the state's farming community.

"Industry is supporting it; that says a lot to the legislature," he said. "Those dollars are like votes."

Simerly said the renovated researcher center "will provide a generation of world-class research facilities and scientists who will work to support agriculture in Idaho."

Researchers in Parma will study a lot of issues important to all farmers, including crop diseases and insects, weeds and irrigation efficiency, Parrella said.

"All of these things will provide a broad

benefit to more than just the growers around Parma," he said.

Parrella officially unveiled the Parma renovation plan in February 2019 during a meeting of the Treasure Valley Ag Coalition, which was formed in 2009 to save the Parma center when it was slated for closure.

After the project was discussed during the meeting, TVAC members voted unanimously to rename the group, Idaho Agriculture Research and Extension Coalition. The name was chosen to reflect that the research that will occur at the rebuilt Parma station will benefit all sectors of Idaho's farming community.

Parrella said the project represents a major investment in the state's agricultural industry.

"We're looking at a long-term investment in the future of Idaho agriculture," he said. "We're proud of agriculture in the state and it's critical to the state's economy."

He also said Parma is just the first step in CALS' plan to renovate all of the college's research and extension centers around the state.

"The plan is to start in Parma but then move on and invest in all of these research and extension centers," he said. "That sort of investment in these R and E centers is what it's going to take to move them forward." ■

DUVALL

Continued from page 2

Those skills are critical on the battlefield and in the farm field.

Just as anyone entering the military has a lot to learn, veterans who are getting started in agriculture can benefit from the mentorship of experienced farmers and ranchers.

As one Patriot Project participant, Da-

mon Helton of Arkansas, said, you have to learn about things like input costs, margins and managing employees, in addition to raising crops and animals.

These mentorships, together with financial and risk management support in the most recent farm bill, and the resources available from the Farmer Veteran Coalition, which Farm Bureau is proud to

support, help veterans make the transition from military professional to agricultural professional.

Thank you to the Farm Bureau organizations that helped us deploy the Patriot Project. It is our hope that we can continue to help and develop these new farmers and ranchers as they are needed to feed our nation and world. ■

SEARLE

Continued from page 2

Not long ago as I was talking with a Farm Bureau president from another state, I asked them how they were surviving the many controversial things going on in their state? Their reply was, “Well if we could pick up our farm and family and move it, we would have moved to Idaho months ago. Tough year in an ignorant state.”

Many of us involved in Idaho’s agricultural industry have heard from producers in other states where government and the regulatory environment are not exactly friendly or conducive toward agricultural production. Farmers and ranchers in those states face a seemingly unending set of rules and regulations that make life difficult.

Many of them would love to pack up and move to Idaho. Many others who are not involved in agriculture have done just that and Idaho has grown rapidly in recent years and is among the nation’s fastest-growing states in percentage terms.

Along with that large influx of people from other states comes change and pressure. To ensure Idaho remains a favorable place to live and farm and raise a family, it’s up to all of us to stay engaged in the issues and make sure our voices are heard.

If we don’t get and stay involved, we could end up becoming one of those other states.

I strongly encourage every farmer and rancher in the state to make sure you are educated about the various issues that will

pop up during the next legislative session, and I also encourage you to get involved and be engaged in these discussions.

USDA data shows that gross domestic product from Idaho’s farming industry grew 210 percent from 1997 to 2019. That is extraordinary growth and something to be celebrated. See page 25 for a story on that.

But for Idaho’s farming GDP to remain strong and continue to grow and for agriculture to remain the top sector of the state’s economy, we must remain vigilant and that means being involved.

In order to remain who and what we are in Idaho and not become another failed state, our work must never be done and we must continue to ensure our voices are heard, collectively and individually. ■

MILLER

Continued from page 2

Perhaps during these feasts, we should also consider just how lucky we are to be the ones sitting at the table and not displayed on the table.

While that may seem a dreadful way to view such a celebration, it is important that we as producers also consider the lesson of a feast.

The turkey, beef, pork, potato, wheat, etc., serve our needs nutritionally, and we served them over the year by nurturing, protecting and cultivating them.

In other words, these crops were not at the table when their future was being discussed so they ended up on the menu.

In political parlance, the phrase “at the table or on the menu” has the same mean-

ing as this lesson about our meals does.

There is no doubt that our political landscapes have changed; this often happens in a democracy. Will we sit idly by and allow our way of life and livelihood to be done away with? Or will we choose to work to ensure our best production practices continue to be understood and respected?

It is a cliché to say “now more than ever” because it is always now more than ever that we need to defend the practices that allow us to be successful and sustainable. There are many individuals and groups with good intentions and flawed understandings that are setting the table with plans of changing what we do.

If we do not choose to sit with them at the table – indeed, that can’t be any worse

than sitting at the table with some of our relatives that visit during the holidays – they will put us on the menu and cause us to say “how” and “why” were such terrible actions allowed.

At our local, state, and national levels, there are tables continually being set for discussions that can affect all of us. These are county commission meetings, planning and zoning meetings, forest and BLM collaboratives, community actions, climate roundtables, sustainable agriculture discussions, and the list goes on and on.

I hope that each of us chooses to sit at the “tables.” I am confident that we will stay off the menu as long as we continue to come back to the table. The meal may not always be the best, but it is better than the alternative. ■

EXPORTS

Continued from page 3

The USDA data shows that after decreasing in 2014 and 2015, Idaho farm export value has now increased for four straight years, from 2016-2019. 4

Laura Johnson, who manages the Idaho State Department of Agriculture's marketing division, said she was not surprised by the increase in Idaho ag export value last year.

"There was strong economic growth in a lot of key markets around the world last year," she said.

Idaho farm economists said the reason that Idaho ag export value increased significantly last year while the U.S. total shrunk is that the main type of ag commodities produced in Idaho differs significantly from the main types produced nationwide.

The decrease in U.S. agricultural exports last year was led by corn, with corn exports decreasing by \$4.8 billion at the national level, said Doug Robison, the Idaho president of Northwest Farm Credit Services.

Corn accounted for only 1.3 percent of Idaho's total farm cash receipts last year, compared to 14 percent at the national level, he said.

"The trade war and China's targeted tariffs on several U.S. crops drove the overall decrease in exports nationally," Robison said.

"The U.S.-Mexico-Canada trade agreement was also voted on by Congress in 2019 (and) relations and trade with Canada and Mexico strengthened in the lead-up to the vote in late 2019," he added.

The USMCA deal was important to Idaho because Canada and Mexico are the top two markets for Idaho ag exports.

At the same time, a lot of the main crops grown around the United States such as corn and soybeans were hurt by the China tariffs in 2019. Idaho is not a major player in either crop.

According to USDA, Idaho dairy export value totaled \$418 million in 2019, a 9 percent increase over 2018. That made dairy the state's top agricultural export last year.

Wheat was No. 2 and Idaho's total wheat export value last year was \$348 million, up 18 percent from 2018.

Idaho exports of both fresh and processed vegetables were up 10 percent in 2019 and both those categories include potatoes, as well as peas, lentils, chickpeas and onions.

The total value of Idaho cattle and veal exports last year was \$212 million, down slightly from \$215 million in 2018.

"The export of wheat, potato and dairy products remaining strong is an important driver for the increase in the total value of Idaho ag exports (last year)," University of Idaho agricultural Economist Rita Du told Idaho Farm Bureau Federation.

Du said that Idaho processed potato exports to Mexico bounced back last year after that nation ended its 20 percent retaliatory tariff on frozen French fries from the U.S.

She also said U.S. and Idaho wheat export growth in 2019 can mainly be explained by reduced competition from some of

the United States' main competitors.

According to an online explanation by USDA's Foreign Agricultural Service, "In 2019, the value of U.S. wheat exports to the world reached \$6.2 billion, up 15 percent from the prior year as a result of reduced competition from Australia, Canada and Russia."

Du said that dairy export value growth last year was "mainly driven by the worldwide price increase of dairy products."

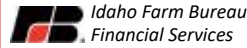
According to the USDA report, Idaho's plant product exports totaled \$1.53 billion last year, up 10 percent from \$1.39 billion in 2018. Idaho's livestock product exports totaled \$726 million last year, up 5 percent from \$689 million in 2018.

The USDA data is released annually and the 2020 ag export report won't be released until next October.

According to a separate export value report based on U.S. Census Bureau data that is released quarterly, the total value of Idaho's agricultural exports in 2020 increased by 6 percent during the first six months of the year compared with the same period in 2019.

The USDA annual report captures more export data than the Census Bureau report but the Census Bureau report is more timely because it is released quarterly.

However, both reports do track closely as far as percentage increases or decreases are concerned. ■

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Organics At A Quick Glance

Source: USDA 2019 Organic Survey

\$206,000,000
sales

181,000
acres



16,585
farms



5.5 million
acres



\$9.9 billion
sales



Between 2016 and 2019, sales of certified organic food products in the United States increased by 31 percent, to \$9.9 billion. Idaho ranked in the top 10 states last year in total organic sales and acres.

Organic food sales increased 31 percent from 2016-2019

By Sean Ellis

Idaho Farm Bureau Federation

POCATELLO – Sales of certified organic food products in the United States increased by 31 percent, to \$9.9 billion, from 2016-2019, according to recently released USDA data.

The number of certified organic operations in the U.S. rose by 17 percent, to 16,585, during that time, and land used for organic production increased by 9 percent, to 5.5 million acres.

Idaho recorded \$206 million in total organic sales last year, ranking the state No. 10 in the nation in that category. Idaho also ranked No. 10 in total certified organic acres with 181,000.

The data comes from USDA's National Agricultural Statistics Service's 2019 organic survey, which was a follow-up to the 2017 Census of Agriculture, which sought to count every farm and ranch operation in the country.

Considering Idaho's relatively small population, "It is impressive that Idaho is ranked where we are," said Randy Welk, the director of NASS' Idaho field office.

The growth in organic food production in Idaho has also increased rapidly the past three years, according to Gwen Ayres, who manages the Idaho State Department of Agriculture's organic program.

ISDA certifies about 70 percent of the state's organic operations and because growth in organic production was increasingly so rapidly, the department had to temporarily limit the number of operations it certified in late 2017.

"ISDA's organic program has seen continual growth over the past several years," Ayres said. "Similar to national data, we have seen growth in all sectors – crops, livestock, and handling – and in locations all across the state."

According to ISDA data, there were 70 organic operations certified by the department in southcentral Idaho last year, 67 in southwest Idaho, 37 in east Idaho, 34 in central Idaho, 33 in southeast Idaho and 21 in north Idaho.

According to NASS, California produced 36 percent of the total value of organic agricultural products – \$3.6 billion – sold in 2019, more than four times the

value of any other state.

Washington ranked second at \$886 million, followed by Pennsylvania (\$742 million), Oregon (\$454 million), Texas (\$424 million), North Carolina (\$370 million), New York (\$298 million), Wisconsin (\$269 million), Michigan (\$231 million) and Idaho.

California also led the nation in total certified organic acres, at 965,000, followed by Alaska (number withheld to avoid disclosing data for individual operations), Montana (356,000), New York (323,000), Wisconsin (251,000), Texas (246,000), Nebraska (232,000), Vermont (203,000), Oregon (196,000) and Idaho.

The top organic commodity in the U.S. in 2019 was milk with \$1.6 billion worth of sales, up 14 percent from 2016, followed by broiler chickens (\$1.1 billion, up 49 percent), eggs (\$887 million, up 9 percent), apples (\$475 million, up 45 percent) and lettuce (\$400 million, up 44 percent).

Milk is Idaho's top farm commodity in terms of total farm-gate receipts.

Idaho Dairymen's Association Executive Director Rick Naerebout said Idaho

“There are a lot of young people who really appreciate organic food. I wonder if it’s younger, post-college people who are driving some of those sales. We have this whole food culture that is really phenomenal.”

— Beth Rasgorshek, Nampa farmer

has a few pretty sizable organic milk producers but the state’s organic milk production has gone up and down the last three years.

Some dairies that converted to organic production exited the market when prices decreased as a result of oversupply, he said, while some returned to conventional milk production.

“It’s kind of ebbed and flowed the last three years,” Naerebout said.

Sales of organic cattle products in the United States increased 26 percent from 2016-2019, to \$293 million. Beef cattle ranks second in Idaho, behind milk, in total farm-cash receipts.

Sales of organic potatoes in the U.S. increased 3 percent from 2016-2019, to \$155 million. Potatoes are Idaho’s top crop in terms of total farm receipts.

While Idaho producers about a third of the nation’s total potato supply, the state does not produce a lot of organic spuds, said Idaho Potato Commission CEO Frank Muir.

“We do not have a large organic industry here in Idaho for potatoes,” he said.

While the IPC would gladly support anyone who wants to grow organic potatoes in Idaho, the commission does not have a specific focus on organic spuds, Muir said.

Nampa farmer Beth Rasgorshek, who

sells organic seed, suspects the recent large increase in organic food sales is being driven at least in part by the younger crowd.

“There are a lot of young people who really appreciate organic food,” she said. “I wonder if it’s younger, post-college people who are driving some of those sales. We have this whole food culture that is really phenomenal.”

While organic food product sales have increased significantly in recent years, they still represent a small portion of total agricultural production in the United States.

For example, the \$9.9 billion in total organic sales in 2019 reported by NASS represents 2.7 percent of total farm-cash receipts in the country that year.

Idaho’s \$206 million in organic sales in 2019 represent 2.5 percent of the state’s total \$8.2 billion in farm-cash receipts last year.

According to the 2019 NASS organic survey, sales of organic food products in the U.S. have tripled since 2008.

The NASS survey found that large organic farms – those with annual sales of \$500,000 or more – accounted for 17 percent of total organic acres in the U.S. in 2019 but more than 80 percent of sales.

The smallest organic farms – those with sales under \$10,000 – accounted for

11 percent of all organic farms but 0.1 percent of total sales.

NASS reported that \$2 billion worth of organic food products were sold directly to retail markets, institutions and food hubs in 2019.

Another \$300 million in organic food products were sold directly to consumers at farmers markets, road-side stands or stores, U-pick operations, on-farm stands and stores, community supported agriculture farms and through online markets.

Value-added products such as jam, wine, cheese and meat accounted for \$727 million in organic sales in 2019.

Forty-four percent of existing organic producers said they plan to maintain their current level of organic production over the next five years, 29 percent plan to increase their organic production, 20 percent are unsure of their future intentions, 4 percent plan to decrease production, 2 percent plan to discontinue organic production and 2 percent plan to discontinue all agricultural production.

Current certified organic farms reported an additional 255,060 acres currently transitioning to organic production and other farms that are not currently certified organic reported a total of 60,611 acres transitioning to organic production. ■



Photos by Jessica Machado

Initial soil sampling work is already being conducted as part of the University of Idaho's Idaho Center for Agriculture, Food and the Environment, which will include a 2,000-cow research dairy.

U of I's \$45 million CAFE project is underway

By Sean Ellis

Idaho Farm Bureau Federation

POCATELLO – After nearly 15 years of being discussed, put on hold and then discussed again, the Idaho Center for Agriculture, Food and the Environment is actually happening.

“Things are moving forward. It's pretty exciting,” said Michael Parrella, dean of the University of Idaho's College of Agri-

cultural and Life Sciences, which is overseeing the \$45 million CAFE project.

Initial soil sampling work is already being conducted on the land that will house a 2,000-cow dairy that will make CAFE the largest research dairy in the nation.

Researchers have collected more than 800 soil samples at the dairy site and the information obtained from those samples about soil structure and microbial content will be used as an important

environmental baseline.

In addition to the 640-acre dairy site, the CAFE project will include an associated demonstration farm. Together, researchers will study both to address the connection between plant and animal agriculture.

Parrella said the dairy and associated crop research work will allow scientists to better integrate animal and plant agriculture.



The University of Idaho's Idaho Center for Agriculture, Food and the Environment's 2,000-cow research dairy will be located at this site in Rupert.

“It will be a unique connection of research between animal and plant agriculture that doesn't happen anywhere else in the United States for the most part,” he said. “That interaction between the dairy industry and plant agriculture is ripe for research and very few people have a site where you can do both of those things.”

The Idaho Dairymen's Association provided \$2 million toward the purchase of the 640-acre dairy site near Rupert, while the university provided \$2.5 million and the Whitesides family, which owned the land, donated 100 acres.

The plan is to have the dairy part of the project completed in 2023 and to begin milking cows there in the same year.

CAFE researchers will conduct cutting-edge research related to the state's dairy industry, including dairy-related research on lagoons, nutrient management and surface and ground water contamination, and they will also conduct research on virtually every aspect of the state's agricultural industry, from water use efficiency to soil health and fertility, crop rotations, forage cropping and agronomy, animal genetic improvement, labor management, precision agriculture and food science and manufacturing.

Idaho is the No. 3 state in the nation in milk production and the dairy industry ranks No. 1 in the state in total farm



Initial soil sampling work is already being conducted as part of the University of Idaho's Idaho Center for Agriculture, Food and the Environment, which will include a 2,000-cow research dairy. Some of the soil samples are shown in this picture.

cash receipts. A third of Idaho's total farm cash receipts come from the dairy industry.

IDA Executive Director Rick Naerebout said the research that will be conducted at the dairy that will focus on nutrient management and environmental sustainability is what is most exciting to Idaho's dairy industry.

“Our environmental sustainability is our

primary focus with our investment in the research dairy,” Naerebout said. “We want to make sure our industry continues to advance in that regard and we want to see Idaho be a leader on that front.”

He said consumers are wanting to know “more and more about where their food comes from and they want to know it's being produced in a sustainable way.

See CAFE, page 16



Potato industry bouncing back from COVID challenges

By Sean Ellis

Idaho Farm Bureau Federation

POCATELLO – Idaho’s iconic potato industry suffered through a major scare due to the restrictions and shutdowns imposed because of the coronavirus pandemic.

But major efforts by the industry that were coordinated by the state and national groups that represent it have helped potato producers weather that storm. And one major silver lining of the challenge is that U.S. consumers have learned how important spuds are.

That was one of the main messages during the Idaho Potato Commission’s annual, “The Big Idaho Potato Harvest Meeting,” which was held virtually Nov. 12.

During the first few months of 2020, Idaho and U.S. potato farmers were receiving prices for their spuds that were well above normal, state and national potato industry leaders told people who participated in the Zoom meeting.

Then the COVID-19 restrictions and shutdowns hit and, boom, that good fortune came to a quick halt.

“The potato industry ... was generally having a strong year and then March happened and the shutdown threatened the livelihood of farmers in Idaho and across the nation,” said Kam Quarles, CEO of the National Potato Council.

About 60 percent of the nation’s potato production goes to the foodservice industry and those channels were virtually eliminated almost overnight, causing a major backlog of spuds.

“The backlog of potatoes was so big it could fill the U.S. Capitol 14 times over,” Quarles said.

With 60 percent of potato growers’ market shut down, “The potato industry was facing severe harm,” said IPC President and CEO Frank Muir.

At the same time, retail sales of potatoes and potato products soared. That led the state and national potato industry to pivot from their normal programs and undertake a major effort to rapidly shift potatoes from foodservice channels to retail outlets, Muir said.

That resulted in a huge amount of potatoes being shifted to grocery stores and other retail outlets, where consumers were quickly scooping them up.

With so many people buying up large amounts of potatoes to cook at home, the IPC began a major effort to educate consumers on how to store and cook those spuds, Muir said.

An IPC social media campaign has helped educate consumers “how to make Idaho potatoes part of their everyday meals ... all three meals,” Muir said. “We (also) reinforced to consumers the value and essential nature of potatoes to their family meals.”

One of the bright spots of the reaction to the pandemic is that “consumers have learned how to cook at home again,” he added. “We see that trend continuing.”

Demand has remained strong at the retail level and the foodservice industry is bouncing back quicker than people had anticipated, Muir said.

“We are seeing a recovery,” he said.

Fortunately, despite the coronavirus-related restrictions and other challenges posed by the pandemic, “demand (for potatoes) is still very strong,” said Potatoes USA President and CEO Blair Richardson.

He said there has been a 15 percent increase so far this year in retail sales of potatoes and spuds account for 22.4 percent of all vegetables sold at grocery stores this year, ranking them No. 1 in that category.

The pandemic forced more people to cook food in their own homes, Richardson said, and Potatoes USA has increased its social media efforts to “build a broad and dynamic conversation about potatoes....”

“This has been a turbulent year,” he added. “However, it has shown people how important our industry is to the country and the world.”

Early during the coronavirus shutdown, “toilet paper, hand sanitizer and potatoes were all out of stock,” Muir said. “When push comes to shove, potatoes are a (must-have) item that consumers have to have at home.”

State and national potato industry leaders, assisted by Idaho’s congressional delegation, also pushed for relief from USDA for potato farmers impacted by the COVID-related shutdowns, industry leaders said.

Those efforts helped result in potatoes being included in USDA’s bonus buy program of surplus commodities as well as in USDA’s food box program. In addition, more than \$119 million has been provided so far to potato farmers through the federal Coronavirus Food Assistance Program.

Richardson said the clear steps the nation’s potato industry took during the COVID-19 crisis has put it on a path to recovery.

“Hopefully, the actions we took can be applied to (other) challenges in the future,” he added. ■



Ag department awards \$1.8 million in specialty crop grants

By Sean Ellis

Idaho Farm Bureau Federation

POCATELLO – Interest in the Idaho State Department of Agriculture’s annual specialty crop grant program was up considerably this year compared with last year.

ISDA has announced it will award a total of \$1.8 million this year to 17 different projects that aim to benefit specialty crop growers in Idaho.

The money will be used to promote, market and conduct research for the state’s potato, dry bean, wine grape, onion, cherry, apple, hops and nursery industries.

ISDA awards money each year through its specialty crop block grant program, which is funded by the U.S. Department of Agriculture.

The program is designed to solely benefit specialty crops, which include vegetables, fruits, tree nuts, dried fruits, nursery and horticulture crops.

ISDA received a total of 29 applications for its specialty crop block grant program this year, more than double the 15 applications it received last year. Combined, this year’s applications sought a total of \$3.7 million, much more than the \$2 million in total funding sought last year.

ISDA funded 13 total projects last year.

Since the program was created in 2009, ISDA has awarded a total of \$14.7 million to 150 projects designed to benefit



Idaho Farm Bureau Federation photo

The Idaho State Department of Agriculture will award \$1.8 million in specialty crop grants this year to 17 different projects that aim to benefit specialty crop growers in Idaho.

specialty crop farmers in Idaho.

“We are grateful for the many years we have been able to facilitate this unique funding program,” said ISDA Director Celia Gould. “This year it is perhaps even more important. Specialty crop growers across Idaho have faced significant challenges, and we hope these strategic investments in the industry will pay dividends for years to come.”

The grants have helped some of the state’s specialty crop industries, such as Idaho’s wine grape industry, to fund a lot of promotion, marketing and research projects that they otherwise could not afford to do.

“We rely so heavily on these grants to help us with our ongoing efforts to market and promote Idaho wine,” said Idaho Wine Commission Executive Director Moya Shatz-Dolsby.

The wine commission this year will receive a \$191,000 grant to promote Idaho wine and improve its perception. This year’s grant is sorely needed since the Idaho wine industry’s premiere promotional event – Savor Idaho – was canceled this year due to the coronavirus outbreak.

“We are so grateful and thankful to receive a grant this year,” Shatz-Dolsby said.

The Idaho Bean Commission has also received several specialty crop grants over the years that have helped it fund projects it otherwise could not afford to fund given the commission’s \$200,000 a year budget, said IBC Administrator Andi Woolf-Weibye.

The bean commission this year will receive a \$90,000 grant that will help fund a project that seeks to develop rapid molecular diagnostic tests that could help dry bean farmers quickly respond to disease outbreaks in their crops.

The project will develop tests for certain bacterial diseases of beans that can cause massive yield losses in severe outbreaks.

“Depending on the time of year, it currently can take a considerable amount of time to test for these pathogens,” Woolf-Weibye said. “Being able to quickly respond to crop disease outbreaks is super important for growers and this

project has the potential to help prevent crop losses associated with certain bacterial diseases of beans.”

The College of Idaho was awarded a \$87,000 grant to collect and identify non-honeybee pollinators in southwest Idaho. The college will work in conjunction with Caldwell vineyard owner Ron Bitner, who is also a bee biologist.

Bitner said there are roughly 500 non-honeybee pollinators in Idaho and these largely unknown pollinators could great assist some specialty crops with pollination.

“This project will help farmers understand they’ve got free pollination all around them,” Bitner said.

Northwest Nazarene University will receive a \$132,000 grant to help the university’s Robotics Vision Lab in its effort to develop a fruit harvesting robot prototype known as OrBot (Orchard Robot).

According to the grant application, “The goal is to develop a technology that will support fruit growers during harvesting, especially with growing labor shortages and increasing labor cost.”

Boise State University will receive a \$107,000 grant for a project that will measure E. coli in irrigation canals in an effort to help Idaho specialty crop growers comply with FDA’s Produce Safety Rule.

The Idaho Apple Commission was awarded a \$150,000 grant to help fund a project led by University of Idaho’s pomology program to study the feasibility of converting tall apple tree orchards into short, high-density orchards in which the top of the trees can be reached from the ground level without the use of a ladder.

The apple commission was also awarded a \$65,000 grant to build awareness and demand for Idaho apples through media and retail promotions.

The Idaho Cherry Commission will receive a \$22,000 grant to increase sales of Idaho cherries through in-store promotions and the use of social media.

The Idaho-Eastern Oregon Onion Committee was awarded a \$134,000 grant to help fund a project with the University of Idaho and Oregon State University that seeks to develop integrated disease management strategies for

pink root disease in onions.

The Idaho-Eastern Oregon area is the nation’s largest big bulb onion producing region and pink root is the most devastating disease of onions in the Treasure Valley area. It is present in 85 percent of onion fields there and capable of causing yield losses of up to 50 percent.

The onion committee was also awarded a \$112,000 grant to increase awareness and sales of Idaho-Eastern Oregon onions in international and domestic markets.

The Idaho Hop Growers Association will receive a \$40,000 grant for a two-year project designed to create awareness of Idaho hops through summer tours, social media and newsletters.

Idaho ranks No. 2 in hop production in the United States.

ISDA will award the Idaho Nursery and Landscape Association a \$135,000 grant to help fund a project in conjunction with the University of Idaho that seeks to develop new and superior water-conserving native plant products for the state’s landscape nursery industry. The project will also help with the propagation and commercialization of these new-generation native plant products.

ISDA’s Idaho Preferred program will receive a \$164,000 grant to market Idaho specialty crops through the use of advertising, social media, public relations and retail promotions.

The University of Idaho will receive a \$139,000 grant to develop sophisticated disease surveillance methods to safeguard potato soil health in Idaho. Potatoes are the No. 1 crop in Idaho in terms of total farm-gate receipts and Idaho is the nation’s top potato-producing state.

According to the application for that grant, pathogens harmful to potatoes are a constant threat to spuds and the management of soil-borne diseases can account for more than 10 percent of potato farmers’ production costs.

The Idaho Potato Commission was awarded a \$130,000 grant to help establish retail sampling programs in the United Kingdom. The programs are designed to increase dehydrated potato exports to the U.K.

According to the application for that

grant, “Sampling and other marketing programs and activities will be developed to increase consumer awareness of the dehydrated products coming from Idaho ... The dehydrated product coming out of Idaho is very different from the local dehydrated flakes produced in the U.K. It is the IPC’s belief that through sampling events, we can change consumers’ perception of dehydrated mashed potatoes and increase consumption of Idaho products.”

Idaho State University was awarded a \$98,000 grant to conduct field trials for an automated early season potato virus Y (PVY) detection system. ISU researchers will use unmanned aircraft systems equipped with a specialized sensor to detect and map individual PVY infected plants. The ultimate goal is to develop a low-cost solution for growers to rapidly detect and mitigate for PVY.

The Snake River Seed Cooperative was awarded a \$10,000 grant to help fund a project designed to increase the economic return of specialty crop seed production by acquiring upgraded tools for seed cleaning and germination testing. The SRSC is a group of 34 farmers that produce local seeds that are put in garden packets and sold at retail nurseries around the state. Most of the seeds are sold to backyard gardeners while some are purchased by small-scale farmers.

That project, according to the grant application, seeks to enable those producers “to continue to meet the growing demand for sustainably grown and regionally adapted seed.” ■

CAFE

Continued from page 11

We think the research that will be done there will help us continue to meet those consumer expectations.”

More money still has to be raised to complete the project but a substantial amount has already been raised.

Idaho lawmakers in 2017 provided \$10 million in state funds for CAFE and said they would favorably consider providing another \$5 million as the project progresses.

USDA in July announced it has provided a \$10 million research grant for CAFE. That money will be used by 21 faculty in agriculture and engineering to evaluate the use of bio-products from dairy waste streams to provide economic opportunities for the state’s dairy industry.

“There may be a time when the water and the nutrients from dairies will be worth as much as the milk they produce,” CALS Associate Dean for Research Mark McGuire said in a news release announcing the USDA grant.

That USDA-funded project will seek to create useful bio-products from dairy manure that can be sold for use in crop production or value-added products such as plastics.

Also in July, Anheuser-Busch announced it will contribute \$200,000 toward the research that will be conducted at the demonstration farm, including research on water use efficiency, soil health, crop rotations and cover crops.

Anheuser-Busch gets about 50 percent of the malt it uses for beer production from Idaho, which is the nation’s top barley-producing state.

Idaho Farm Bureau Federation will contribute a total of \$100,000 over five years toward the CAFE project.

IFBF President Bryan Searle, a farmer from Shelley, said Farm Bureau members are impressed with the university’s vision for CAFE.

In a letter of support for the project, Searle said that CAFE “will enhance a national and international reputation that will reflect the size, quality and importance of the industry it represents and strengthen Idaho’s position on the map as a center for agricultural and food innovation and technology.”

He also said IFBF “recognizes the impact CAFE will have across our entire agricultural industry and the value that will provide to our members and all Idaho producers.”

The dairy will have a robotic milking parlor and the ability to process manure into value-added material.

The CAFE project will include a food processing pilot plant that will be located on the College of Southern Idaho campus in Twin Falls, and an outreach and education center that will be located on a parcel of land at the crossroads where Interstate 84 and Highway 93 meet near Twin Falls.

The outreach and education center will conduct agricultural advocacy and teach Idahoans where their food comes from. Searle said that is an exciting component of CAFE because “that’s what Farm Bureau is all about: advocating for agriculture.” ■

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Photo by Sean Ellis

State officials, agricultural industry leaders and economic development officials help officially break ground for a new \$13 million barley production facility Sept. 17 in Jerome.

Scoular's new barley facility could grow significantly

By Sean Ellis

Idaho Farm Bureau Federation

JEROME – Scoular Co.'s new \$13 million barley facility will initially process roughly 4 percent of the state's total barley production but that number could increase significantly in the coming years if demand

for the product produced there surges as expected.

During a Sept. 17 groundbreaking ceremony for the new facility, company officials said demand for the barley protein concentrate the plant will produce for the aquaculture and pet food industries is expected to increase substantially.

Scoular CEO Paul Maass said the company has "big visions to be able to expand and grow (the facility's production)."

The 12,000-15,000-square-foot facility is expected to begin manufacturing in May.

The new operation is a partnership between Scoular, a global grain, feed and food ingredient company based out of

Omaha, Neb., and Montana Microbial Products, which is based in Montana and developed the technology to create a barley protein concentrate that is a plant-based alternative protein used in aquaculture feed and pet food.

Idaho is one of the national leaders in aquaculture production and leads the nation in trout produced for food.

MMP Co-owner Bob Kearns said demand for the barley protein concentrate the facility will produce “is going to grow dramatically over the next five to 10 years and this plant provides the foundation for Scoular to continue to grow and produce product for that marketplace. This positions them to be a unique player in the protein ingredient business.”

“I’m really excited about where we are now,” he added. “I’m more excited about the future.”

A high-energy liquid feed supplement for cattle feeders will also be produced during the manufacturing process.

A fact sheet handed out during the groundbreaking ceremony said Scoular chose Jerome to build the facility because it “is central to Idaho’s world-renowned aquaculture, beef and dairy industries, as well as the state’s premier barley economy.”

Idaho barley industry leaders said the new facility is a big win for the state’s barley farmers and they were excited to hear that Scoular plans to expand production at the facility in the future.

“It’s a great development and I think this is just the beginning. It should grow from here, we hope,” said Blackfoot farmer Allen Young, the newest member of the Idaho Barley Commission.

Idaho leads the United States in barley production and Idaho farmers produce about one-third of the nation’s total barley crop. Most of the barley produced here is grown for malt for the beer-brewing industry, while the rest is grown for human food or animal feed.

Idaho growers produced 55 million bushels of barley last year off of 520,000 acres.

Scoular’s new facility is expected to add 10,000 to 12,000 new barley acres in Idaho over the next three years, company officials said.

“It’s a huge win for Idaho barley be-



Photo by Sean Ellis

Gov. Brad Little speaks at the groundbreaking for a new \$13 million barley production facility in Jerome Sept. 17.

cause these are new barley acres that won’t compete with malt acres,” said IBC Administrator Laura Wilder. “The protein concentrate industry is really growing and this could be a big boon for this area.”

Using barley in aquaculture and pet feed is an idea that the barley commission has researched, supported and encouraged for many years, and the early research into using barley for that purpose that the commission funded helped pave the way for the Scoular facility, Wilder said.

Former IBC Administrator Kelly Olson, who immediately preceded Wilder, said it’s a great example of how research funded by grower dollars can pay off in the long term.

“The Idaho Barley Commission stepped up early in the game as the technology was emerging to help fund fish feeding trials on a small scale,” Olson said following the groundbreaking ceremony.

She said the idea was a foreign concept at the time but the initial investment by the industry in the trials paid off big in the end.

Because Idaho is a long way from most of the major markets that the state’s agricultural products are shipped to, it always benefits farmers and ranchers

when value can be added to those products before they leave the state, said Gov. Brad Little, a rancher and farmer from Emmett.

The new Scoular facility is a great example of that, he said.

“This is just the kind of thing we need in Idaho,” Little said. “We’re going to give our farmers better margins ... I’m very pleased with this.”

Idaho State Department of Agriculture Director Celia Gould said Scoular’s decision to locate the facility in Idaho was a vote of confidence in Idaho farmers.

“Scoular (has) operations all around the world and they could have looked anywhere in the world and they chose Jerome, Idaho,” said Gould, who owns a ranch in Buhl. “I have to think one of the reasons for that (is the) fabulous producers we have here.”

She also told Scoular officials that they couldn’t have found a better home and assured them state officials and Idaho’s producers would do whatever they could to help the project succeed.

“We appreciate you for having trust and confidence in us and we’re not going to let you down,” Gould said. ■

Idaho Farm Bureau

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Photo by Chris Schnepf

Structure from standing or fallen dead trees can be left in any silvicultural treatment to feed structural diversity.

Variable density silviculture thinning

By **Chris Schnepf**
University of Idaho

In my last column, I introduced variable retention harvesting as a silvicultural system. Within any silvicultural system, a variety of intermediate treatments can be made. Examples include precommercial thinning, com-

mercial thinning, pruning, and fertilization.

Here, another intermediate treatment is discussed: variable density (VD) thinning.

Thinning can be used to meet many forest management objectives, but one of the benefits most commonly cited is reducing the number of trees competing for limited resour-

ces, particularly soil moisture and nutrients.

Thinning is often done to achieve relatively even tree spacing, to distribute the thinning benefit evenly throughout a stand. For example, it is common to pre-commercially thin a stand of sapling trees to leave about 15 feet between trees.

In the last 20 years, there has



been a lot of discussion about whether even tree spacing is desirable for all forest management objectives. For example, some wildlife species benefit from more structural variety within a stand. Variable-sized tree clumps and gaps also breakup canopy bulk density, which reduces crown fire initiation and spread.

Variable density thinning west of the Cascades is being used on public forests to accelerate young, even-aged stands' development to more diverse structural old-growth conditions.

On drier Inland Northwest sites, it can also be used as a continuous regeneration method. In that application, it could be called "the variable density selection silvicultural system. Others call similar efforts "free selection."

Dry site applications work to keep the canopy cover less than 50%, which is significantly less than a fully stocked stand. This more open canopy condition is less vulnerable to wildfires, which is their greatest threat there.

There are many ways of accomplishing VD thinning. On dry sites, some managers systematically leave variable sized tree clumps (1 to 5 or 6 trees), where there is little if any thinning, and canopy gaps (1 to 5 or 6 crown diameters), where trees are removed, typically followed by slash pile burning.

The goal is a shifting mosaic of tree clumps and gaps through time, continuous recruitment of new growing stock, and continuously reduced fire risk.

If you are interested in VD thinning, here are factors to consider:

Increased risk from insects and disease?

Dry site VD thinning efforts use pre-commercial thinning and prescribed fire to minimize shade-tolerant regeneration, which would otherwise be a concern with this approach on all but the driest pine sites.

Typically, shade-tolerant species (e.g., grand fir and Douglas-fir) have more issues with root diseases and defoliating insects than pines or larch. Multi-storied forests with more grand fir and Douglas-fir are also more susceptible to defoliators (e.g. spruce budworm), with



Photo by John Marshall

Drier forest types in Idaho had frequent surface fires.

larvae in overstory trees dropping to understory trees.

The issue of scale

The degree of structural diversity that is natural to forests depends on forest types, their fire regimes, and the scale (stands, larger multi-stand neighborhoods, entire large watersheds, etc.).

In dry forests, stand replacing fires were uncommon, and a fine scale mosaic of clumped and gapped trees was maintained by frequent (every 3-25 years) surface fires.

In cold, high elevation forests, fires commonly replaced stands every 75-150 years, resulting in a coarser-grained patchwork of even-aged forests (e.g., lodgepole pine) and meadows.

On moist mixed-conifer forests in northern Idaho, mixed-severity fires were the norm. A given fire might have burned through the understory in some places but went into the crowns in others. Larger clumps and gaps were the result.

Resulting tree-killed patches could be small or quite large (e.g., over 100 acres). Variable density thinning focuses management at the stand scale – build-

ing more structural complexity and open canopy conditions into forests where frequent fire is expected.

Wildlife management efforts also emphasize varied forest structural conditions and successional states at larger landscape scales, and the latter may be the more important focus on Idaho's non-frequent fire moist forests.

A coarse grained harvest pattern can be accomplished in these forests to create conditions that at worst will experience moderate severity fires. This patterning would encourage small to large gap clearing.

On family forests, some of this develops organically by virtue of different sized parcels owned by forest owners with varied management objectives and practices.

Variable density precommercial thinning?

Much of the focus on variable density thinning has been on commercial thinning (removing some trees large enough to take to a mill).

But some forms of VD thinning can also be useful in other contexts. For example, on moist forest types "day-

lighting” around sapling larch, ignoring western white pine, and leaving everything else a little thick can be a part of a strategy to reducing western white pine mortality from blister rust.

On these sites, this approach could also be a useful short-term compromise to provide some of the thicket habitat used by some species of wildlife (e.g., snowshoe hares and everything that eats them).

Conclusion

If a forest owner aspires to more old-growth forest structures, variable density thinning is a useful tool to get there. On drier sites, VD thinning can also be used as a silvicultural system (and should perhaps be called such, instead of thinning, which is technically an intermediate treatment) and to reduce fire risks.

But in all the discussion about stand heterogeneity versus stand homogeneity and scale, it is important not to lose sight of the elephant in the room – many Inland Northwest forests are much denser and more often composed of shade-tolerant species than was typical in the past.

That puts them at high risk of intense fires, root disease mortality and defoliating insect outbreaks. The leading objective on most of Idaho’s private forests is to get them to a more sustainable condition, with climate and wildfire resilient species mixes and stand densities.

Variable density thinning is not a one and done treatment. If Idaho forest owners are going to apply VD thinning, it will be important to continually monitor species composition, and take action if abundant shade-tolerant trees are regenerating.

Public managers deal with this by applying prescribed fire, but more often by precommercial thinning and pile burning. It is similar for most private landowners, but prescribed fire will rarely be an option.

There are also aesthetic considerations. These treatments keep forests more open than most of these sites are currently, which some would happily accept, to the extent it reduces fire risk and improves vistas. Ultimately, how forest practices look shortly after treatment is



Photo by John Marshall

Variable density thinning on dry forest types opens up stands and maintains them by fire and thinning as needed.

less important than how they function in the long-term.

Note also that most of this discussion has focused on live trees. Advocates for more forest structural diversity also emphasize the value of dead trees (snags and down logs) to biological diversity.

Landowners can manage for more snags and coarse wood on the forest floor in any forest, including traditionally thinned or regenerated stands, as long as they treat slash hazards in accordance with Idaho forest practice laws.

For more information on this, see the extension publication cited below.

Discussions of VD thinning can be technical and abstract – some even question whether traditional silvicultural terms such as “stand” are appropriate in the context of VD silviculture. If you would like to learn more about variable density thinning, start with the references below.

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.

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Idaho farm GDP has grown 210 percent since 1997

By Sean Ellis

Idaho Farm Bureau Federation

POCATELLO – USDA data shows that farmers and ranchers are the main driver behind the significant growth in the state's overall agricultural sector over the past few decades.

Idaho's food processing industry is doing well but farmers and ranchers themselves are driving the growth in agricultural gross domestic product in Idaho.

Gross domestic product, the total value of all goods and services produced, is the broadest measure of growth in an economy.

According to USDA's Bureau of Economic Analysis, the state's farm GDP grew by 210 percent from 1997-2019. During the same time, food processing GDP in Idaho grew by 20 percent.

"Twenty percent growth for the food processing industry is a great number," said University of Idaho Agricultural Economist Ben Eborn, who calculated those numbers from BEA data. "But that 210 percent GDP growth for the farming sector is unreal. That's pretty amazing."

GDP growth in the state's overall agricultural sector is mostly generated by what UI Agricultural Economist Garth Taylor likes to call "Grandma and grandpa on a tractor."

"A lot of people say it's the food processing sector that is driving growth in Idaho's agricultural industry," Taylor said. "No, it's the farmer."

Eborn also calculated that farm GDP in Washington state grew by 130 percent from 1997-2019 and it grew by 70 percent in Oregon during that time. Food processing GDP in both those states grew by about 25 percent during that time.

"It's stodgy old grandma and grandpa on a tractor that is (driving agricultural GDP growth) in all three of those states," Taylor said.

He said a main takeaway from the data



Photo by Sean Ellis

The rapid growth in Idaho's dairy industry is the main reason that Idaho's farm gross domestic product has grown 210 percent since 1997.

is that food processing GDP is growing at about the same rate in all three states but Idaho's farming GDP is growing much faster than it is in Washington and Oregon.

The main reason for that, Taylor said, is the rapid growth of Idaho's dairy industry, which is the top sector of the state's agricultural industry in terms of farm cash receipts, which is the revenue a farmer or rancher receives for their commodity.

As an example of how much the state's dairy industry has grown over the past two decades, the total value of milk production in Idaho in 1997 was \$639 million. Last year that total was \$2.9 billion.

"The reason for much of that (farm GDP) growth in Idaho is a four-letter word: Milk," Taylor said. "It's the growth of the dairy industry in the state that's pushing that.

Technology is allowing dairy producers to get more milk out of their cows."

Eborn said expansion of the dairy industry and increases in technology that have made farmers and ranchers more efficient over the years is what is pushing the GDP growth in the state's farming sector.


"We have added 367,000 milk cows since 1997 – a 137 percent increase – and they are a lot more productive than they were 20-30 years ago," he said. "And it's the same thing with each of the crops we produce here. We get more yield per acre from every crop. Every crop is becoming more productive and efficient."

Whether it's the state's iconic potato crop or some other ag commodity, "The adoption of technologies provides more value-added for less input and that is really what GDP is measuring," Taylor said. ■



Submitted photo

The AVR has helped the Aberdeen-Springfield Canal Co. in southeast Idaho rid its system of a troublesome weed, flowering rush.



East Idaho company's invention improving flows in area canals

By John O'Connell

Intermountain Farm and Ranch

ABERDEEN — For several decades, flowering rush remained a problem with no clear solution for the managers of the Aberdeen-Springfield Canal Co.

The aquatic weed, which first surfaced in the canal system in the 1960s, didn't respond to chemical controls; the company's mechanical control method of dredging the canal floor with a heavy chain only spread the weed to new areas.

At long last, the company's general manager, Steve Howser, said he has his flowering rush problem well under control, thanks to an invention developed in Chester, a small town located 6 miles northeast of St. Anthony.

The Aquatic Vegetation Rake, sold by Bill Fuchs with Maximized Water Management LLC, is now starting to make a splash with canal company managers from throughout the country.

Made to fit on an excavator, the AVR is a large rake with stainless steel rods forming a basket equipped with 12-inch steel teeth. It pulls aquatic vegetation up by the roots and allows water to drain quickly from the basket, leaving only vegetation inside.

"It's a huge success story," Howser said. "I can't say enough about how much money and time this implement has saved me over the years."

About 14 years ago, Howser hired Fuchs to remove soil from his canal beneath low bridges. After finishing, Fuchs asked Howser if there was anything else he could do to help. Howser challenged him to come up with a way to control his flowering rush.

The next year, Fuchs returned with a prototype of the AVR, demonstrating its effectiveness by ridding some of Howser's lateral canals of the weed. Howser jumped at the chance to buy a unit, and he later purchased a second AVR.

He sometimes helps smaller irrigation companies remove weeds. Howser also uses the AVR to rid his canal of trash and debris before he opens the gates to let in water at the start of the irrigation season.

"It saves me hundreds of man-hours every year. It

returns our flow immediately," Howser said.

Fuchs makes the devices, which are fabricated in Paul, in 8-, 10- and 12-foot sizes. He started working to develop the first unit in 2008. As the manager of a small Southeast Idaho canal with a limited budget, called Silkey Canal, Fuchs was the first to test the AVR in the field.

"I was disappointed in how we were cleaning and removing our aquatic vegetation and that we were disrupting the water flow," Fuchs said.

Fuchs has sold about 20 AVRS throughout the country, including to irrigators in Florida, South Carolina, New Mexico, Arizona and Montana.

He said other canal companies have tried making attachments for their excavators to clean their canals but have struggled with designs that were either too fragile, ineffective at uprooting vegetation or scooped out too much water along with the weeds and debris.

Fuchs said he did an AVR demonstration for some smaller canal companies in Firth and the innovation is starting to gain traction.

"It's simple and effective. It's one of those things that they wish they'd have thought of it," Fuchs said.

Fuchs said there are many other uses for the AVR beyond cleaning irrigation canals. An Oregon timber company, for example, uses it to clean debris from its log flume, and a Hawaii wildlife management area has applied for a grant to use AVRs to remove bulrush and water lettuce.

Fuchs has had three different engineering firms make modifications to the AVR and continues to make tweaks to improve its performance. He said it's easy to maintain and the teeth are simple to replace.

Unit costs range from \$12,000 to \$30,000, depending on size and features. Customers quickly recoup the investment, he said.

Fuchs said the device is also environmentally friendly, as it keeps pesticides out of waterways, and he is marketing it as the "green solution."

"Big canal companies ... can spend hundreds of thousands on herbicides every year," Howser said. ■



Photos by Bill Schaefer

Chad Taylor, Idaho Department of Lands resource specialist, sprays some yellow starthistle with an herbicide on private grazing land in Bingham County on Oct. 20.

Weed managers seek to stop spread of yellow starthistle

By Bill Schaefer

For Idaho Farm Bureau Federation

The discovery of yellow starthistle on private land in Bingham County has alarmed state land managers and county weed superintendents in the region about its potential to spread throughout eastern Idaho.

Yellow starthistle is identified as a

noxious weed by the Idaho State Department of Agriculture and it is on the ISDA's statewide containment list for terrestrial plants.

Besides having the potential to severely harm grazing land, the weed can be toxic to horses, causing 'nervous chewing disease,' in which an afflicted horse cannot chew or digest food, causing the horse to die from starvation. Horses with

the affliction are often euthanized.

The weed is common in western Idaho, particularly in Idaho County. There are an estimated 86,222 acres of it in Idaho County, according to Connie Jensen-Blyth, the county's weed control superintendent.

Jensen-Blyth said that yellow starthistle has been a serious issue in Idaho County since the 1950s.



The USDA's National Invasive Species Information Center states that the weed was first identified in eastern Idaho in 2011 on private grazing land east of Basalt.

Chad Taylor, senior lands resource specialist for grazing, agriculture and conservation for the Idaho Department of Lands, expressed concern about the weed's potential impact should it spread from its current location on private land to the IDL's public grazing lands.

"I think one of the bigger concerns for livestock ... is that yellow starthistle when it establishes really well will destroy pastures," he said. "Essentially it will become a monoculture in a pasture or range land, then you lose that forage that you need for grazing."

He estimated the current infestation in Bingham County was between 400-500 acres.

Taylor also serves as chairman for the Upper Snake River Cooperative Weed Management Association. The Upper Snake River CWMA is composed of all of Bingham County, most of Bonneville County and all of Jefferson County south of State Highway 33, and the weed



The spines of yellow starthistle. TOP: A flowering yellow starthistle.

management associations are working together to manage invasive weeds.

Jeremy Varley, section manager for the ISDA's noxious weed program, said the department allocated \$15,000 this year to the Upper Snake River CWMA for application of an herbicide to try and control the spread of yellow starthistle this fall.

"It's a fall germinator. It'll put its seed down and then it will develop rosettes in the fall," Taylor said, describing the weed.

The weed is currently located in hilly terrain with limited accessibility requiring aerial application as well as ground spraying.

"We're going to spray that and hope-



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“We’re hoping to keep it contained to where it’s at and not (let it) spread over the mountain range. Once you get up over that mountain range you start getting into our better grazing land. From a public land perspective it’s just a problem that we don’t want to have.”

— Chad Taylor, senior lands resource specialist for grazing, agriculture and conservation for the Idaho Department of Lands

fully kill those roeseates,” he said. “The chemical that we’re using, Milestone, it persists in the soil long enough that it should have a pre-emergent effect on that seed. So, hopefully we don’t see the same amount of bolting on the plant next spring.”

Taylor said that the IDL’s largest continuous block of prime grazing areas – Bone, Brockman, Long Valley and Sawmill – are in close proximity to the infestation.

“We’re hoping to keep it contained to where it’s at and not (let it) spread over the mountain range,” Taylor said. “Once you get up over that mountain range you start getting into our better grazing land. From a public land perspective it’s just a problem that we don’t want to have.”

Jefferson County weed control superintendent Mitch Whitmill said that yellow starthistle is very aggressive, spreads rapidly and is easily moved by livestock.

He said the invasive weed opens up the opportunity for other invasive plants such as cheatgrass, medusa head and other types of annuals that can weaken the native stands of grasses, thereby jeopardizing the carrying capacity of Idaho’s prime grazing lands for the cattle industry.

“Currently it’s not anywhere else in our eastern Idaho region so ... we’re trying to contain it in that area up there and gradually reduce the size of the infestation if possible,” Whitmill said.

However, he added, it’s also going to take a buy-in from livestock producers to keep their equipment clean of yellow starthistle when moving cattle to different grazing lands.

“We have livestock producers that are in that area that have land in other locations throughout our region here all up through the valley and they move their livestock from that area up to different grazing areas from different times of the year,” Whitmill said, “and (it’s) going to be crucial that we work with them and make them understand that we have got to be sure we are not moving this to other locations.” ■

Studying the past to help understand the markets

Last month we visited about hedging your commodities as the markets had strengthened a great deal, thus giving you an opportunity to lock in the futures at levels that could give you an opportunity to contract your commodities at profitable levels next year.

This is due largely to the brisk level of exports this marketing year. It is important that we continue to look out into the deferred months for our opportunities. Being a full year out into the future at times is a very good position to have in place. Always keep in mind we aren't trying to guess the top of the market but rather manage our price risk in the market.

At the time I wrote this article, the Chicago Dec. 21 wheat futures were still trading slightly higher than they were the first half of October. Producers who trade soft white wheat into the Portland market are still seeing opportunities to either sell futures using their own trading account or contracting some of their 2021 production using hedge-to-arrive contracts.

Both of these strategies work well but neither one is perfect. You need to analyze both strategies and then determine the one that works best for you.

The November World Agricultural Supply and Demand Estimates report reduced wheat stocks in the U.S. as well as the world. This has the potential to



keep wheat prices at current levels into the next crop year.

However, let's keep our head screwed on straight and not get caught up in thinking the markets have nowhere to go but higher.

As we move into the spring months, the wheat crop at times has

a history of being better than projected in the winter months. Let's also not forget last spring and the reduction in demand that was unforeseen. Ending stocks for corn in both markets was also reduced in the latest report.

The demand for soft white in the export market has been very good so far this marketing year. Bushels have been considerably higher than the previous marketing year.

However, it looks as though Australia is going to harvest a very large crop due to very good growing conditions this year. They have been in drought conditions over the past few years and have not been a big player in the export market. The good crop this year could put pressure on this market as farmers in Australia harvest and contract their crop.

Total red meat and poultry production was raised over the October report. The WASDE report showed increases in beef, pork and poultry production.

The export number was increased as demand for beef in the world increas-

es. Cattle futures have increased over the past few months and have reached levels that have producers looking at hedging their 2021 calf crop.

At this time, we are seeing Sept. 21 feeder cattle trading at \$147, which many are saying is a profitable level. This is \$8 higher than we traded the third week in October. March feeder cattle are now at \$139, which is \$14 higher than that same time frame in October.

The feeder cattle market is a great market to hedge production with futures as it isn't always possible to contract your calves that far out into the future.

The futures in grain and cattle are now at levels that many were hoping to see during the spring months. In the grain markets we have reached good levels in the futures markets but we have seen the local basis for wheat weaken as well as the delivery months move from nearby to the deferred months.

The local markets – both Portland and southeast Idaho – will continue to change, giving you opportunities to market at profitable levels. The challenge for you is to be able to change and adjust with these changing opportunities.

By studying and using the lessons learned in the past we all will be able to use and understand the markets as we keep looking and moving forward in your operations.

Clark Johnston is a grain marketing specialist and owner of JC Management Co. of Ogden, Utah. He can be reached at clark@jcmanagement.net. ■



Photo by Sean Ellis

A 10-state potato research project is looking at how to improve soil health.

Multi-state potato research project looks at improving soil health

By John O'Connell

Intermountain Farm and Ranch

RUPERT — It's called the kitchen sink treatment among the scientists involved in a four-year, 10-state research project analyzing how to replenish depleted soils in potato rotations.

Essentially, the researchers throw "everything but the kitchen sink" into improving soil health in their plots — fertilizing with composted dairy manure and planting a crop as "green manure"

between rotation crops. Green manure maintains living roots to limit erosion and to "leak" additional nutrients, before being plowed into the earth to further boost organic matter.

The research project — heading into its second season in major potato production states, including Idaho — is evaluating more than a dozen treatments in two- and three-year potato rotations. The goal is to determine which treatments are best at boosting soil health, what makes them work and whether or

not they're cost-effective.

"You hear a lot of people talk about the need to improve our soils, and I believe that's true — I don't know any grower who doesn't want to improve their soils — but in the end it's got to pay for itself," said Jeff Miller, who is maintaining trial plots for the project at Rupert-based Miller Research.

The project is funded with an \$8 million Specialty Crop Research Initiative grant, offered through the USDA's National Institute for Food and Agriculture.

“You hear a lot of people talk about the need to improve our soils, and I believe that’s true — I don’t know any grower who doesn’t want to improve their soils — but in the end it’s got to pay for itself,”

— Jeff Miller, who is maintaining trial plots for the project at Rupert-based Miller Research

It includes 24 research collaborators from Idaho, Washington, Oregon, Montana, Colorado, North Dakota, Minnesota, Wisconsin, Michigan and Maine.

“A lot of growers are doing green manure and seeing tangible benefits. Is it microbes of the soil or a change in the physical properties of soil? Those are questions we hope to answer,” Miller said.

University of Idaho Extension researcher Mike Thornton heads the research in Idaho. UI Extension plant pathologist Brenda Schroeder, UI agricultural economists Chris McIntosh and Alex Maas and several others are also involved.

Miller explained his plots will be planted both with and without soil fumigation, which is highly effective at wiping out soil pests but also eliminates beneficial soil life.

Organic matter is a good indicator of soil health, and some of Idaho’s sandy fields have a paltry 1 percent organic matter. However, Miller believes Idaho’s ideal growing environment goes a long way toward offsetting soil-health deficiencies.

“With the tools available, (Idaho farmers) are able to raise really good crops on

soil that would be considered marginal,” Miller said. “We grow the highest yields with some of the highest quality potatoes in soils that have some of the lowest organic matter in the nation.”

Miller said specific soil-health treatments may also come with barriers preventing some growers from adopting them, such as high fertilizer costs or scarcity of water to irrigate extra cover crops, which are crops planted solely for soil-health benefits.

University of Minnesota soil scientist Carl Rosen is spearheading the grant.

“In a lot of our production systems we talk about chemical inputs, fertilizer and some of the physical properties of soils, but we often neglect what’s going on in the biology of the soil,” Rosen said. “We’re really looking at how to improve the biology so we have better nutrient cycling and better disease suppression.”

Rosen said soil samples from trial plots involved in the project will be sent to his university, where the microbiome and DNA will be measured using new laboratory techniques. There will also be conventional soil testing of clay, organic matter, nitrogen in a protein form, PH and carbon dioxide respiration, which

provides evidence of microbial activity.

Rosen said some of the plots that aren’t fumigated will receive bio-fumigation treatments. For example, mustard will be planted in some plots as a cover crop for its biocidal properties. Other treatments will evaluate using mustard in combination with reduced fumigation.

To add “real-world” data, samples will also be evaluated from up to four farm fields per state, covering a variety of different soil-health practices. For example, Rosen said one participating farmer in Minnesota will provide samples from a field in which he’s never raised spuds for comparison against soil in a long-time potato field.

Agricultural economists will conduct a cost-benefit analysis of treatments. There’s also an outreach component: Materials will be developed specific to the Pacific Northwest and the Midwest and East to educate growers about findings.

The research will evaluate production of Russet Burbanks and Russet Norkotahs.

“There are some key principles to improving soil health, and they don’t necessarily match up with the way we produce potatoes,” Rosen said. ■

Idaho beet growers harvest No. 2 yielding crop on record

By John O'Connell

Intermountain Farm and Ranch

Idaho's sugar beet farmers recently finished harvesting their second highest yielding crop on record.

The average percentage of sugar within beets was also the second best ever.

Because the No. 1 yielding crop and the crop that set the record for highest percentage of sugar occurred during different years, industry officials say it's possible that this year's crop will yield the most finished sugar in history.

"A lot of that depends on how well (beets) store and making sure the factories run without any breakdowns," said Brad Griff, executive director of the Idaho Sugarbeet Growers Association. "There is still another part of the equation which is what happens between now and when they finish extracting all of the sugar. We'll have those numbers in the spring."

Amalgamated Sugar Co. produces sugar from sugar beets grown by more than 700 members of its parent cooperative, Snake River Sugar Co.

Sugar beets for the company are grown on about 180,000 acres, most of which are in Idaho, but the company's grower base also extends into parts of Oregon and Washington.

Idaho farmers harvested 40.56 tons of beets per acre on average this fall. The harvest record was set in 2016, when the state's farmers averaged 41.42 tons per acre, Griff said.

"We've only gotten above 40 tons three times in history," Griff said. "We've been in the 39s several times but anything above 40 is an exceptional crop. We're pretty happy with that number."

The beets contained 18.41 percent sugar on average. The record for sugar content



Sugar beets are added to a beet pile in East Idaho in this Idaho Farm Bureau Federation file photo. Average yields for Idaho sugar beet farmers were the second-highest ever recorded this year and average sugar content was also the second highest ever recorded.

was set in the fall of 2018, when Idaho beet farmers averaged 18.48 percent sugar.

"The (percentage of sugar) just trended up there in the last few weeks," Griff said.

Griff said harvest conditions were ideal. The temperature wasn't too warm, but it was warm enough that the beets could be easily pulled out of the ground.

To minimize the potential for beets rotting in piles, Griff explained that the company implemented a policy a couple of years ago requiring growers to stop harvesting for the day whenever beet

temperatures exceed 55 degrees for three consecutive loads.

"I don't think there were a lot of shut-downs this year," Griff said.

He said USDA's sugar program effectively manages the national supply and ensures a stable sugar market.

"We anticipate a very solid beet payment," Griff said. "I think growers are looking forward to potentially offsetting some of the experiences they had early on with milk and some of the commodities that are less stable." ■

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Models predict wet winter in Southern Idaho

By John O'Connell

Intermountain Farm and Ranch

Coming off a strong water year, Aberdeen-Springfield Canal Co. General Manager Steve Howser is encouraged by weather models showing the region is likely in store for another wet winter.

State water officials discussed the favorable winter outlook Nov. 5-6 during the annual fall meeting of the Idaho Water Supply Committee, conducted remotely via Zoom.

The experts said the emergence of a La Nina weather pattern, marked by cooler ocean temperatures near the equator, should result in average or better snowpack this winter throughout Southern Idaho.

They also predicted a snowy forecast starting on Nov. 13 that will mark the beginning of a "significant pattern change" with wetter-than-normal weather that should persist throughout the next three months.

"Only a small portion of Idaho is categorized in drought," said Idaho Department of Water Resources Hydrologist David Hoeckema, referring to central Blaine County. "The rest of Idaho is on the verge of drought. With this La Nina coming in, that should really help."

Erin Whorton, with USDA's Natural Resources Conservation Service, added, "I'm feeling optimistic about our upcoming water year with the La Nina winter."

Aberdeen-Springfield Canal Co. started the past irrigation season with ample storage in Upper Snake River reservoirs thanks to another wet winter.

Heavy rainfall in June allowed Howser and other area irrigators to decrease their diversions, thereby keeping reservoirs full into the peak irrigation period.

Despite a turn toward drier weather for the remainder of the summer, Howser finished off the water year with about 95,000 acre-feet of carryover in the reservoirs. An



Idaho Farm Bureau Federation file photo

Forecast models are predicting a wet winter and good snowpack in southern Idaho.

acre-foot is the volume needed to cover an acre of land with a foot of water.

Howser said his current carryover is equal to more than 40 percent of his full storage volume.

"Any time I can get 25 percent of our total storage in carryover I'm a pretty happy guy," Howser said. "That status of the reservoirs and the prediction of a normal snowpack sets us up for a normal water year next year with no worries."

Howser said if he were to start the irrigation season with full reservoir storage and normal natural flows in the Upper Snake River Basin, he would be well positioned to endure two consecutive short water years.

Morgan Colonel, head snow maker at Pebble Creek Ski Area in Inkom, is also encouraged by the outlook for a wet winter.

"We're hoping for cold and wet and that's what we've been hearing from everybody I've been talking with," Colonel said.

A cloud seeding program led by Idaho Power that also involves state irrigators

further bolstered the snowpack for the water year that ended Oct. 1. Cloud seeding entails emitting a silver iodide vapor from ground-based generators or aircraft to create more water droplets in the clouds during snowstorms.

The program resulted in 11.2 percent more snow in the Payette Basin, 12 percent more snow in the Boise Basin, 10 percent more snow in the Wood River Basin, 5.7 percent more snow in the Snake River Henry's Fork and 8.2 percent more snow in the Upper Snake River Basin, according to program estimates.

In addition to aircraft, the local program utilizes 17 remote stations in the Payette, 15 remote stations in the Boise and Big Wood basins, 25 remote stations and 25 manual stations in the Upper Snake, officials said.

Officials said most of the state had a good water year during 2020, aside from the Big Wood, Little Wood and Big Lost drainages, where irrigators had to cope with reduced streamflow runoff and irrigation supplies. ■

Pollinator paradise:

Pingree couple opens butterfly house

By John O'Connell

Intermountain Farm and Ranch

PINGREE — Karen and Randy Reed got out of the commercial herb business after a mischievous raccoon chewed a wire and killed power to cooling fans inside of their greenhouse.

Much of their crop baked in the heat on that 100-degree day in August of 2018, so they shifted their full attention to a bold new business concept they'd launched a month earlier — selling time in a tranquil, butterfly paradise.

The Pingree couple had converted one of their greenhouse bays into a botanical garden supporting several types of butterflies, charging admission for guests to enjoy the peaceful setting.

Butterfly Haven has since evolved into a destination attraction for travelers, tour groups and school field trips from far and wide. Located at 1462 W. 200 S., near their home in rural Pingree, it's open from 10 a.m. to 5 p.m. on Monday through Saturday and from 11 a.m. to 4 p.m. on Sunday.

At the start of this season, they opened a second bay, growing their botanical garden to 8,000 square feet of public space. They've planted trees and nectar plants to support up to 28 different species of U.S. butterflies —



Photo courtesy of Karen and Randy Reed.
Karen and Randy Reed stand within their butterfly house and botanical garden in Pingree. It is known as the Butterfly Haven.

including in the caterpillar phase — and have upwards of 1,500 butterflies fluttering inside at a time, in addition to six species of birds.

“My profession used to be that I grew food for people, and now I grow food for butterflies,” Randy said.

The Reeds have a track record of ignoring skepticism about their business plans and allowing their passions to guide their decisions. In 1987, they decided to open a greenhouse to raise hot house tomatoes.

They had to use their own finances, unable to get a loan from bankers who assured them the business plan wasn't viable.

They sold tomatoes for 18 years, until Canada started adding lots of greenhouses and they could no longer compete. They chose to diversify into organic culinary herbs: Karen explained herbs have a short shelf life, making local sources more important.

They went on to supply several grocery stores with more than 20 varieties of herbs.

Their herb sales grew steadily throughout 25 years. In the initial years, fresh herbs weren't commonly used in Southeast Idaho, so Karen had to do demonstrations in stores to educate potential customers.

They lost a major retailer and the rising cost of audits began cutting into their bottom line, however, and the Reeds wanted to switch to a seasonal business that wouldn't require them to work year-round in their retirement.

Most of the nation's other butterfly houses are associated with a zoo or botanical garden. The Reeds are among the few private operators in the business.

“It's scary and we had a lot of people telling us, ‘You're crazy. It ain't going to work.’ ... We just did it in faith that they'd come,” Randy said.

Randy has long been passionate about botany, beekeeping and lepidopterology (the study of butterflies and moths), and he and his wife had been wanting to apply his skillset toward opening a butterfly house for more than 15 years when they finally took the gamble.

Randy recalls how his father could never pass a milkweed patch without stopping to look for caterpillars.

“My dad would always bring caterpillars

home to us and we'd raise them in a canning bottle,” Randy said. “I always turned them loose but never wanted to.”

While most other butterfly houses feature exotic and vibrant tropical species, the Butterfly Haven keeps only butterflies native to the U.S., such as giant swallowtail, painted lady, white peacock, viceroy and malachite.

Visitors can see all stages in the life cycle of the caterpillars and butterflies native to Idaho. They purchase the other species from butterfly farmers in the spring, raising butterflies throughout the season in three flight houses that are not accessible to the public.

“In our world, butterflies are diminishing, so people don't get to see the butterflies like they used to,” Randy said.

Adult butterflies live just two to three weeks. They can enter hibernation, known as diapause, as butterflies, caterpillars, eggs or chrysalises.

They find people come both to view the botanical garden and the butterflies.

“It's a magical experience,” Karen said.

They've created retaining walls to hold soil and they irrigate with pop-up sprinklers. They made a pair of small waterfalls and also have water streaming from an old-fashioned hand pump.

Randy, who has maintained a nursery of trees for the past 30 years, raises all of his own plants for the botanical garden.

“You have to have an awful lot of plants and healthy plants to have healthy caterpillars,” Karen said.

Signs throughout the exhibit educate visitors about the species of caterpillars and butterflies and the importance of pollinators, as well as threats to their existence.

Karen explained three-fourths of the world's flowering plants would not exist if not for pollinators.

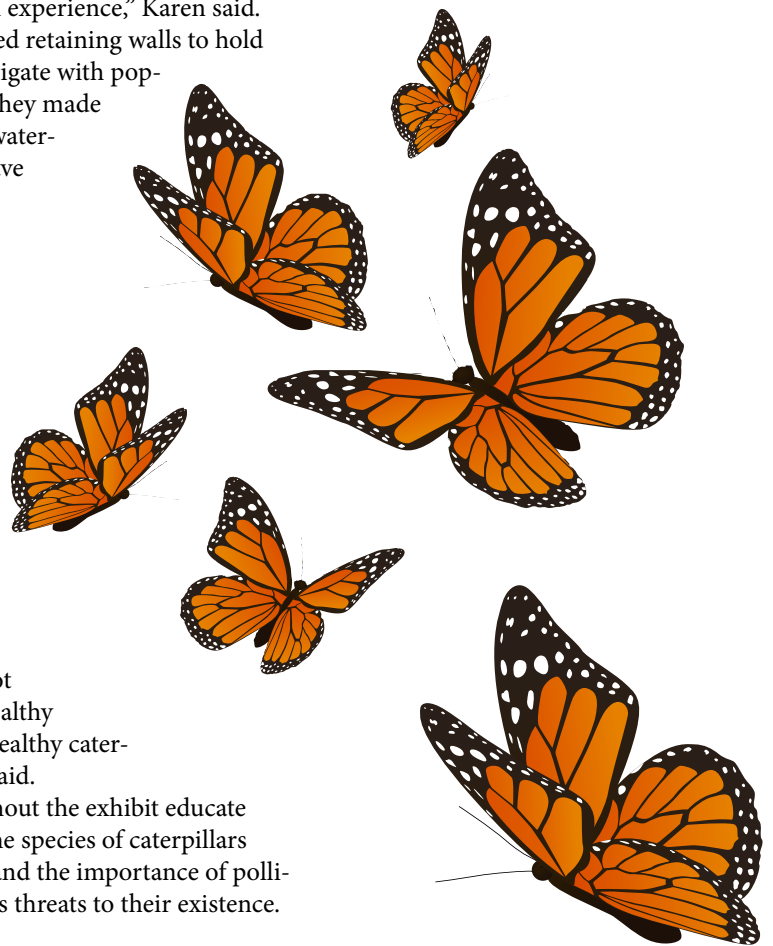
Industrial gasses, the loss of milkweed due to modern agriculture's conversion away from flood irrigation, spraying along railroad tracks and herbicide use have contributed to the decline of pollinators, Karen said.

“They are disappearing. People don't realize how important pollinators really are in our world,” she said.

Admission, not counting tax, is \$10 for adults, \$9 for senior citizens, \$8 for children ages 3 to 12 and free for children under 2.

The COVID-19 pandemic delayed their opening date by about a week and they believe business has been off a bit this season. They note there is ample room inside for guests to maintain a safe distance from one another.

“We still have room to grow and I think it will grow,” Karen said. ■



MEMBER DISCOUNTS

PAGES 20 & 21

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New benefits added quarterly

Companies such as hotel, rental cars, movie theaters, and theme parks offer discounts and packages to Idaho Farm Bureau members. In recent years, more small town businesses have also started offering discounts. See pages 20-21

Details also available at idahofbstore.com

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