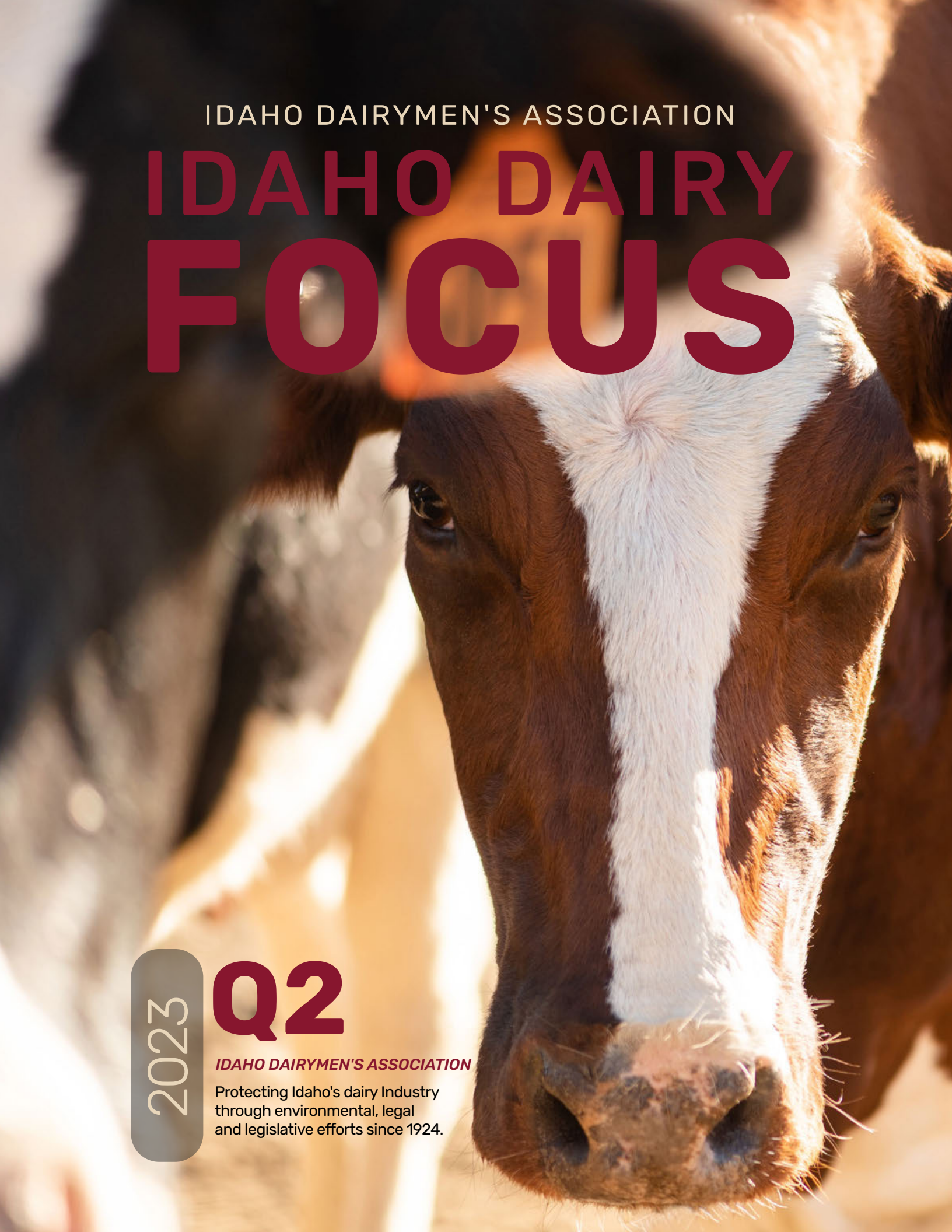

IDAHO DAIRYMEN'S ASSOCIATION

IDAHO DAIRY FOCUS

2023

Q2

IDAHO DAIRYMEN'S ASSOCIATION

Protecting Idaho's dairy Industry
through environmental, legal
and legislative efforts since 1924.

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The Mid-Year Update from Washington, D.C.

IDAHO DAIRYMEN'S ASSOCIATION

Charlie Garrison

Summer 2023 has arrived in Washington, D.C. with unusually mild weather, although the city did not escape the haze of wildfire smoke from Canada that drifted to the mid-Atlantic region during the week of June 5th. That was the same week that a small group of Republicans, disgruntled by the deal to raise the debt ceiling negotiated by House Speaker Kevin McCarthy (R-CA) and President Biden, brought floor proceedings on the floor of the U.S. House of Representatives to a halt. They did that by refusing to vote for legislation to head off attempts at making gas stoves illegal, even though that is a bill that all Republicans, including members of this group, support. All had been worked out by the time Members of Congress returned to town the following Monday so it's back to the business of legislation until the recess for the July 4th Independence Day holiday begins.

In the debt ceiling deal that was completed in May, there was a change to the Supplemental Nutrition Assistance Program (SNAP), formerly known as Food Stamps. SNAP is a big part of the Farm Bill. So big, in fact, that it is nearly three-quarters of total Farm Bill spending. The debt ceiling agreement signed into law by President Biden raises the age limit for able bodied adults without dependents to receive long-term SNAP benefits from 49 to 54. New restrictions on SNAP were shaping up to be a difficult part of the Farm Bill negotiations, and may still be, but the change in the debt ceiling agreement might make the process a little smoother.

It's Time for a New Farm Bill

The current Farm Bill, signed into law in 2018, expires on September 30th. The current federal budget deficit and a divided government will make for lively debate over a new Farm Bill with many House Republicans wanting less spending on farm safety nets and nutrition assistance. The U.S. Senate, with Democrats in the majority, is expected to try to hold the line at current spending levels. Senator Debbie Stabenow (D-MI), who chairs the Agriculture Committee, has said she doesn't expect there will be additional money for the new Farm Bill compared to the current one. House Agriculture Committee Chairman Glenn 'GT' Thompson (R-PA) has said he would like to be able to devote more funding to the farm safety net for new and beginning farmers.

The dairy producer economic safety net, the Dairy Margin Coverage (DMC) program, is not much of a factor for the average Idaho operation due to the 5,000,000-pound production history cap. It looks likely at this point that attempts to raise the cap and to allow production history updates will be part of the debate over the Dairy Subtitle for the new Farm Bill. In fact, separate legislation has been introduced recently that would address those two issues. If there is momentum for changes to the DMC, they will most likely be done as part of the Farm Bill.

Conservation Title programs will spark debate as supporters of both the Environmental Quality Incentives Program (EQIP) and the Conservation Security Program (CSP) seek more funding for those perennially over-subscribed initiatives. And it remains to be seen what climate-related programs for farmers and ranchers might make it into a Farm Bill for the first time.

Trade promotion programs in the Farm Bill clearly have the potential to benefit Idaho dairy producers. It will be important to maintain funding for the Market Access Program and the Foreign Market Development Program in this time of tight budgets and divided government.

Chairman Thompson maintains that he intends to get the Farm Bill done on time and with bipartisan support. That is a challenging task with just about 90 days left on the calendar before the current one expires and the Congress away from Washington, D.C. for the month-long summer state and district work period during August.

Dairy Product Labeling

The "Dairy PRIDE Act" has been introduced in both the Senate and the House of Representatives. Idaho Senator Jim Risch is the lead Republican on the Senate bill and Senator Mike Crapo is a cosponsor. Idaho Representatives Mike Simpson and Russ Fulcher are both cosponsors of the House bill.

IDA has filed comments with the FDA asking that the agency not move forward with draft guidance issued earlier this year. That draft guidance allows product manufacturers to use standardized dairy terms, for example "milk," "cheese" and "yogurt," on their labels. It calls for voluntary statements on labels if there are substantial nutritional differences between the plant-based alternative and the real dairy milk product. IDA has also worked with our fellow state dairy groups in the Western States Dairy Producers Association to file comments in opposition to the draft guidance.

School Milk

The Whole Milk for Health Kids Act advanced in the House Education and Workforce Committee earlier this month. That bill would allow schools to offer whole and 2% white and flavored milks which have been absent from school feeding programs since 2010. IDA will work with the delegation members to encourage their support should legislation make it to the floor of either or both the U.S. Senate and the U.S. House of Representatives.

The "Innovative FEED Act"

There is tremendous interest in the U.S. dairy industry in the potential for feed additives to reduce enteric methane emissions from cattle. Currently, though, the FDA evaluates those products using their animal drug approval protocols. Treating those products as food additives instead of new animal drugs would speed up the approval process. Language to do that was successfully included in legislation passed by the U.S. Senate's Health, Education, Labor and Pensions (HELP) committee earlier this month.

Charile Garrison

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Dairy Administrative Rules

IDAHO DAIRYMEN'S ASSOCIATION

Bob Naerebout

With the end of the 2023 legislative session the season of negotiating administrative rules associated with Idaho's statutes begins.

There were not any bills this session that triggered the need for negotiated rulemaking. However, the Governor's executive order on Zero-Based Regulation, also known as the Red Tape Reduction Act, requires the administrative rules to be reviewed and renegotiated every 8 years to reduce regulatory burden and redundancy.

This year the Idaho State Department of Agriculture (ISDA) reviewed and made changes to two dairy rules. To-date each Rule has had two meetings.

The rules and the proposed changes can be found at the ISDA Website. **https://agri.idaho.gov/main/**. Then click on "Laws and Rules", then click on "Current Years Rule Making."

IDAPA 02.04.14 - Rules Governing Dairy By-Product

There were a couple of additions to the rule:

- The addition of dammer-diking to the best management practices list for the Idaho Phosphorous Site Index nutrient management standard, and
- Language to provide guidance on adding new management practices to the Idaho Phosphorus Site Index.

IDAPA 02.04.30 - Rules Governing Environmental and Nutrient Management

There were no significant changes besides removing redundant language and other unnecessary text to meet the intent of the Red Tape Reduction Act.

Bob Naerebout

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Landmark Decision Issued by SCOTUS Relating to Waters of the U.S.

SAWTOOTH LAW OFFICES, PLLC

David P. Claiborne & Taylor Skramstad Walgamott

The Supreme Court of the United States released a decision on May 25, 2023 defining, and limiting, the Environmental Protection Agency's power to regulate water through the Clean Water Act. The case - Sackett v. Environmental Protection Agency – is actually an Idaho case, having originated in Bonner County when Michael and Chantell Sackett began construction for their new home near Priest Lake. Almost 16 years later, SCOTUS delivered a victory for the Sackett's, and in turn a victory for regulated agriculture and the dairy industry.

The relief to agriculture from the Sackett decision comes after the Biden administration on January 18, 2023 redefined the definition of "waters of the United States", or WOTUS, pursuant to the Clean Water Act. The Biden rule would use two standards to determine if the EPA could regulate certain waters. The first was the "relatively permanent standard" which determined if waters that were connected to WOTUS by either being relatively permanent, standing or continuously flowing, in which case they would be subject to regulation. The second standard was the "significant nexus" standard which determined if the water significantly affected the chemical, physical, or biological integrity of a federal water, in which case it would be regulated. "Significant nexus" waters could in theory be totally disconnected from regulated federal waters. The Biden rule also considered many more types of water to be included as WOTUS, leaving a lot of ambiguity and delegating extensive power to the EPA.

In Sackett SCOTUS narrowed these definitions considerably, reigning in the power the EPA had to regulate certain types of waters. The "relatively permanent" standard was found to be correct, and was narrowed to **waters that form a geographical feature such as streams, oceans, rivers, and lakes.**

The EPA argued that "waters" included wetlands because of the presence of water. SCOTUS acknowledged that some wetlands that were adjacent to "relatively permanent" waters could be considered as waters of the United States. However, the EPA's argument that all wetlands are included because they have the "presence of water" was too expansive, principally because it could include ponds or even puddles. As a result, the Court overruled **the "significant nexus" test in favor of a more narrowed test.**

The new WOTUS test created by the court in Sackett to determine whether wetland can be regulated requires a **continuous surface connection with the larger body of water** such that it is difficult to determine where the water ends and the wetland begins.

Specifically for the Sacketts, before this new test, the EPA considered that the Sackett's land had wetlands that were adjacent to an unnamed tributary on the other side of a thirty-foot road. This tributary then fed into a non-navigable creek, which then fed into Priest Lake, which is a body of water that is covered by the Clean Water Act. Therefore, the EPA considered the wetlands on the Sackett's land had a significant nexus to a traditional navigable waters and were subject to their regulation. SCOTUS found, after overruling the "significant nexus" test and adopting the "continuous surface connection" test, that the wetlands on the Sackett's property were distinguishable from any waters that were covered by the Clean Water Act and therefore not subject to EPA regulation.

This case can be considered a sign of relief for regulated agriculture. It clearly narrows the scope of the EPA's power to regulate private lands by preventing EPA from overstepping its authority under the Clean Water Act and restricting private property owners from developing their land, especially if they simply near a navigable water and not connected to it by surface flows. The overruling of the "significant nexus" test will now allow more ease in determining if one's water features on their property are federally regulated without increased fear of being heavily fined or facing criminal charges from the EPA.

The primary question remaining after this decision is the status of Biden's rule. Likely, it will have to be rewritten because of its large reliance on the "significant nexus" test. It is important to keep in mind, however, that limiting federal regulation of wetlands does not extend to the states. The states have a broader power to impose individual regulations on wetlands, and as we see fewer wetlands under federal regulation, we may see an increase of state regulation of those lands. Thankfully, Idaho has a history of working with stakeholders to develop regulations that are reasonable, but only where necessary.

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Livestock Risk Protection Policies Surge in Idaho

PAYNEWEST INSURANCE

Jaime Cortes &
Tyson Baker

Dairy producers live in a world of fluctuating markets. Finding solutions that help weather the volatility in commodities can save you dollars and put your operation on steadier ground.

At PayneWest Insurance, we're seeing an increasing number of dairy producers utilize Livestock Risk Protection (LRP) as an important risk management tool. Similar to how Dairy Revenue Protection provides a safety net for declines in revenue, LRP provides a defense against declining livestock prices.

With LRP, producers can lock in a minimum price when they market their cattle. If the actual market price of the livestock is lower than the insured coverage price, policyholders are paid an indemnity at the end of the coverage period. Given the recent changes in the program, LRP is becoming a more attractive product to owners of feeder cattle, fed cattle and swine.

In 2020, the USDA increased LRP's premium subsidy percentages from 20% to today's 35 – 55% range, based on the coverage level selected. In the 2023 crop year, the USDA moved the previous upfront premium payment to be consistent with other crop insurance policies, making the premium owed at the end of the coverage period.

A growing number of livestock owners in Idaho are signing LRP policies. From 2020 to near the end of the June 30, 2023 crop year, the number of LRP polices in use for Idaho feeder cattle jumped from 46 to 232, covering 2,264 head to 42,072. In the latest full crop year of 2022, 190 LRP policies for feeder cattle were sold in Idaho with $805,124 paid in indemnities at a loss ratio of 74% and a favorable farmer paid loss ratio of 115%.

Policies can be purchased daily and can be customized by the number of head (from one to 25,000 head), insurance period length and coverage level. A Specific Coverage Endorsement (SCE) is also determined for feeder cattle type and weight.

The insurance period for feeder and fed cattle is 13, 17, 21, 26, 30, 34, 39, 43, 47 or 52 weeks. The USDA advises producers to select the period closest to the time the cattle will be marketed or reach the desired weight. Coverage levels from 70 – 100% are available. Subsidy rates are 35% for coverage between 95 – 100%, 40% f or coverage between 90 – 94.99%, 45% for coverage between 85 – 89.99%, 50% for coverage between 80 – 84.99% and 55% for coverage between 70 – 79.99%.

LRP Example Scenario

Let's say a producer expects to market 250 head of 10 cwt feeder cattle (weight 2 SCE) in 26 weeks. They select an LRP coverage price of $241.45. The coverage price is calculated at 250 head x 10 cwt x $241.45 = $603,625.

At the end of 26 weeks, the actual ending value is $236.80. The actual ending value calculation is 250 head x 10 cwt x $236.80 = $592,000. The loss payment would be $603,625 - $592,000 = $11,625 (dependent on coverage level selected).

In this scenario and in many actual scenarios, LRP is coming through for livestock owners allowing them to steady the storm of market volatility.

Tyson Baker and Jaime Cortes of PayneWest Insurance's Agribusiness unit work with dairies across the Northwest on risk management strategies. Contact Tyson at 509.853.4206, and contact Jaime at 509.955.1305.

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Tyson Baker

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PayneWest INSURANCE

CAFO Improvement Fund

IDA CONSULTING SERVICES

Tanya Hibler &
Megan Satterwhite

We are excited to announce the application period for the second round of the CAFO Improvement Fund. Once again, the legislature appropriated $5 million dollars to the CAFO Improvement Fund for environmental improvements to soil, air, and water quality with an emphasis on manure and nutrient management. The number of applicants, in addition to the projects awarded last funding cycle clearly demonstrated the interest and environmental benefits of on-farm grant funding programs.

The CAFO Improvement Fund is a 60/40 cost share program, with a $1M cap per owner/partnership for the 2023 funding period. Cost share dollars can come from in-kind labor and/or equipment, NRCS grant funds, or equivalent program. Funds will be distributed by reimbursement of receipts following project completion. Previous awardees are encouraged to apply; however, priority will be given to new owner/partnership applications and owner/partnership applications that were not awarded in the previous funding cycle. Please note that if you applied last year and did not receive funding you must re-apply for the 2023 funding cycle.

The CAFO Improvement Fund Committee learned a great deal from last years' experience and has been working to revise and improve the grant funding process.

The 60-day application period opens July 1st, 2023 and closes August 30th, 2023. The grant criteria, application, and guidance document can be found at the link below.

https://www.deq.idaho.gov/water-quality/grants-and-loans/confined-animal-feeding-operations-improvement-subgrants-in-idaho/

A webinar will be hosted on July 18th, 2023 at 11:00 am to discuss the application requirements/process and to help answer any questions. The committee hopes producers will take the opportunity to review application materials prior to the webinar and come prepared with questions or challenges. A link to the webinar can be found here. IDA will also email members a link prior to the webinar.

Successful applications must clearly demonstrate how the proposed project improves upon the current management and operations of the facility and enhances manure management and nutrient utilization. Keep in mind projects should be beyond state regulatory requirements.

Projects Funded in 2022

- DariTech Biolynk water recycling system
- Screw presses
- Centrifuge
- DariTech DT 360 presses
- Sloped screens
- Separation building
- New lagoon construction
- Reverse Osmosis System
- Plumbing additional acreage for lagoon water application
- Advanced distillation

Please reach out to Rick, Tanya, or Megan if you have questions regarding projects and the application process.

Tanya Hibler
tanya@idahodairymens.org

Megan Satterwhite
megan@idahodairymens.org

THE REAL IMPACT OF INFLATION ON DAIRY:

It's Not Just a Loss of Purchasing Power

EVER.AG

Colin Kadis &
Collin Aardema

One of the oldest maxims in market analysis is "high prices bring low prices, and low prices bring high prices." Let's be clear: As much as we can point to expensive feed, elevated labor costs, overall inflation, and generally higher costs of production, 2022 was one of the most profitable years in recent memory for many dairy producers. But what comes after? April, May, and June milk checks offer the answer: We are near some of the lowest margins on record.

We've been here before – US milk prices spiked in 2007, reaching record highs and continuing at elevated levels into 2008 before crashing in 2009 and sparking a large round of farm bankruptcies. This time around, however, producers are facing even higher inflation.

But what does higher inflation (and resulting higher interest rates) mean for the dairy industry?

In the commercial cheese world, the cost to keep block and barrel cheese in storage has risen significantly. As increased inflation pushes costs of capital higher (the minimum return a company must obtain to turn a profit), the decision to spend money on storing cheese becomes much more difficult.

Given that many pandemic supply chain problems have cleared up, we are also seeing a shift in the appetite of cheese buyers to purchase and store product. In fact, many have preferred to slow down their purchasing and burn through more of their existing inventory, putting them on track to return to pre-pandemic levels when "just in time" supply chains functioned more effectively. This puts additional pressure on cheese prices as buyers decrease their demand and willingness to store excess.

"2022 was one of the most profitable years in recent memory for many dairy producers.

Inflation also has demand-side implications, with many consumers forced to cut back in some areas. For the past several months, grocery store dollar sales growth has trailed food-away-from-home inflation, indicating that there's less volume leaving stores. Restaurant sales growth has trailed inflation for the past two months.

Things are arguably worse in Europe, with food inflation approaching 20% year-over-year at the recent peak. Consumers are slowing down purchases. That's likely one reason why cheese prices in the EU dropped to extremely low levels, facilitating exports and crating headwinds for US marketers.

Due to current softness in cheese markets, buyers may be asking, "How badly do we want to avoid putting cheese in storage?" This, in turn, brings us right back to inflation – "How high has inflation pushed the price to store excess cheese?"

Back on farm, many dairymen have chosen to keep feed purchases more hand-to-mouth, preferring not to utilize operating lines of credit and the higher interest.

Ultimately, high inflation has brought high inflation, which has increased storage costs, impacting dairy product and feed prices and sending signals to keep less inventory on hand. Similarly, heifer inventories have decreased, and we hear evidence that dairy heifer calves are currently incredibly cheap, at less than $100 per calf in many cases.

Looking forward, if/when cheese inventories decrease, supply or demand shocks could throw the market out of balance. The ability to handle volatility – whether with futures and options, or on balance sheets – is likely to be key to future success. Give us a call if you'd like to learn more about the solutions available to weather the uncertainty.

The risk of loss trading commodity futures and options can be substantial. Investors should carefully consider the inherent risks in light of their financial condition. The information contained herein has been obtained from sources to be reliable, however, no independent verification has been made. The information contained herein is strictly the opinion of its author and not necessarily of Ever.Ag and is intended to be a solicitation. Past performance is not indicative of future results.

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Ever.Ag

Should I Find a Needle in a Haystack?

IDA CONSULTING SERVICES

Ellissa Clark

A popular idiom suggests that finding a needle in a haystack is extremely difficult; in fact, it's almost impossible. If a person were to accomplish this feat, he or she would be considered very lucky. Nevertheless, from a farm safety standpoint, attempting to find a missing needle probably isn't the best idea.

Seemingly small and simple actions can have larger consequences than one would expect. Getting the appropriate amount of sleep each night can decrease the chance of serious health problems like heart disease and diabetes. Flossing your teeth daily reduces the risk of developing cavities and gum disease. Likewise, properly handling needles on the farm can prevent serious injuries and infections.

Since avoiding needles on a dairy is impossible, it's crucial to train employees how to handle them. The following recommendations can help you and your employees avoid needle stick injuries.

1 Slow down

2 Properly restrain animals before giving an injection

3 Avoid recapping needles

If you must recap a needle, use the **one-handed scooping technique**. This technique involves setting the cap on a hard surface and then picking it up by reinserting the tip of the needle into the cap. Once the sharp point is in the cap, use your other hand to secure the cap.

4 Never put needles in your pockets

5 Never hold needles or caps in your mouth

6 Do not try to straighten bent needles

7 Dispose of needles in a specific sharps container

While being careful can help prevent injuries, it won't completely guarantee that accidents will not happen. When a needle stick injury occurs, dairy workers should immediately wash the affected area with soap and water. Seeking medical attention from a healthcare provider is also recommended.

Please reach out if you have questions about keeping employees who handle needles on the farm safe.

Ellissa Clark

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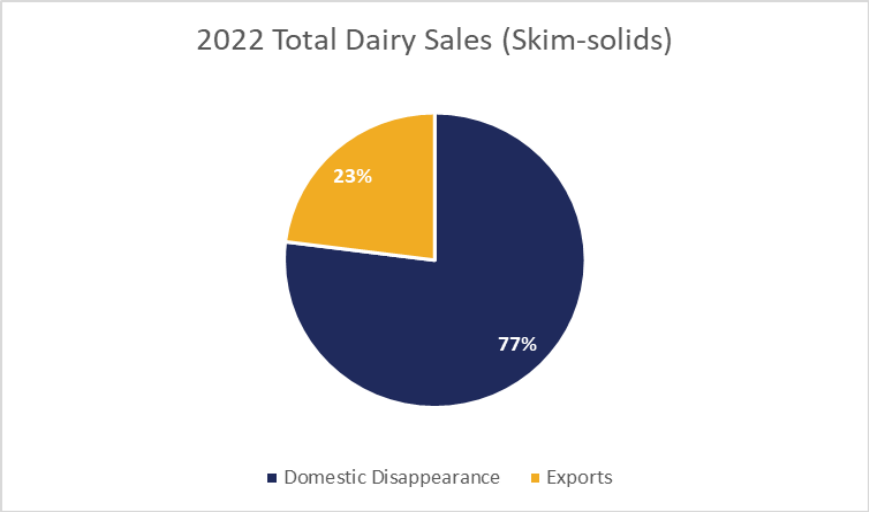
The Lifeblood of the Dairy Industry, Where is Our Milk Flowing?

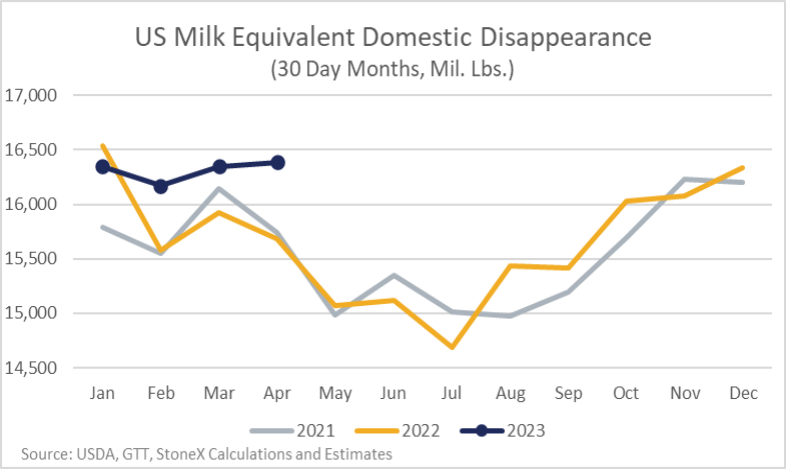
STONE X

Dustin Winston

The milk produced by dairy cows at the farm level is where the dairy industry begins. Essentially the milk is like the blood of the dairy industry. Just like in anatomy, we know that blood has to flow somewhere. In the dairy industry milk flow creates the ability for things like cheese and ice cream to be made and those products need to be sold.

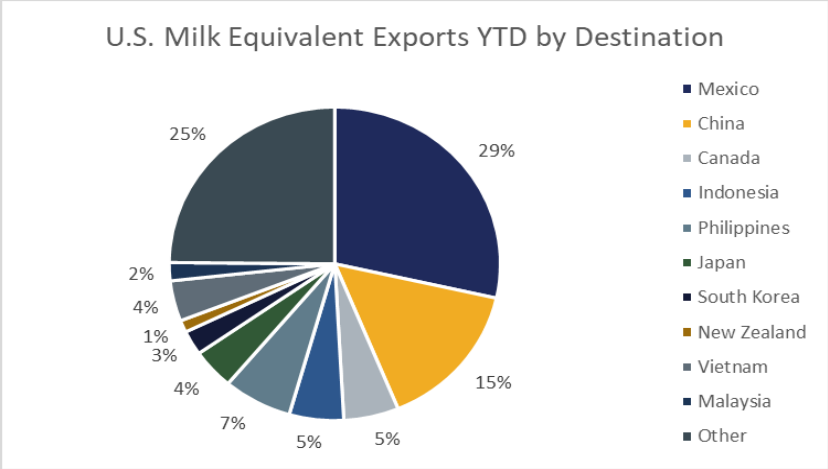
According to the USDA, the U.S. domestic sales as a percentage of total dairy sales accounts for roughly three quarters of the volume of dairy sales while exports accounts for the other quarter of the product flow in the industry. We know demand is one half of the price equation, so with that in mind what does the demand side look like?

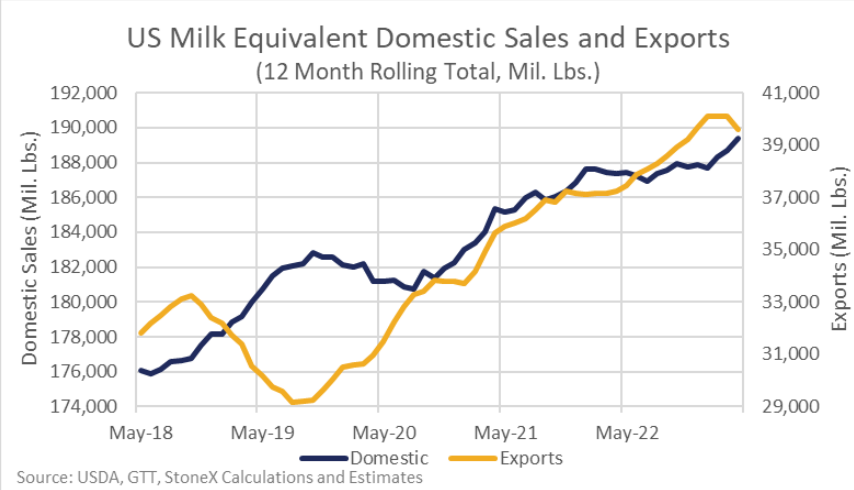




Domestically on a milk equivalent basis sales have been strong. Looking at a total milk equivalent basis doesn't show the whole picture though. Domestically, demand is mixed across products with sales of butter and nonfat exceeding year-ago levels while cheese and whey sales are weaker in comparison. Part of the reason that domestic sales have been so good overall is the value that U.S. buyers have been able to take advantage of recently. Strong supply levels have outweighed demand, leading to low prices in the market.

On the export side of the market, sales have been declining since the beginning of the year. On a year-to-date basis only Mexico and China imports have increased from last year while all of the other countries in the top 10 importers have decreased from last year through April.





Demand at these levels would normally be a strong sign for the market. However, supply and stock levels are extremely heavy which is outweighing the strong demand levels at the moment.

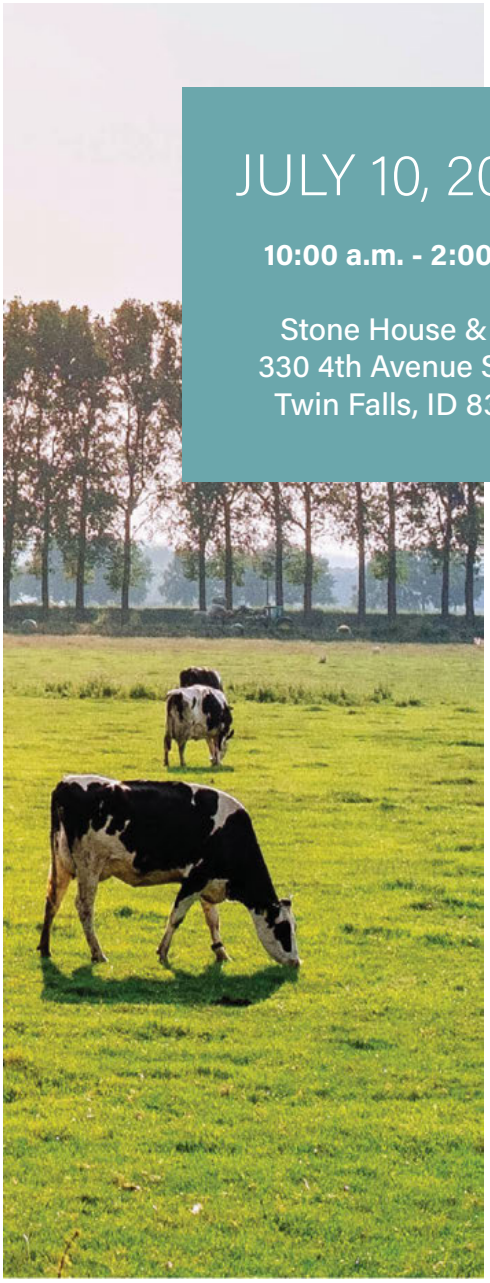
It is important that we frequently take a look at factors like these, impacting prices and see what the future may hold. If you want a greater idea for what the future holds and what impact that may have for prices we invite you to join us for our FREE Dairy Outlook next month, co-hosted with the Idaho Dairymen's Association. At this event we will be speaking about the dairy markets, where they have been, and where we expect they may be going. We will also be covering how to manage the risks of those expectations.

Dustin Winston

dustin.winston@stonex.com

StoneX®

DAIRY MARKET OUTLOOK



JULY 10, 2023

10:00 a.m. - 2:00 p.m.

Stone House & Co.
330 4th Avenue South
Twin Falls, ID 83301

JULY 11, 2023

10:00 a.m. - 2:00 p.m.

Belle Event Center
120 13th Ave S
Nampa, ID 83651

StoneX Financial's FCM Division and the Idaho Dairymen's Association (IDA) are hosting two Dairy Market Outlooks designed to provide dairy professionals with the risk management tools and strategies needed to make smart decisions

Key Takeaways

- **Hear an update from the Idaho Dairymen's Association**
- **Get an outlook on the US and global dairy markets and insight on what is impacting US prices**
- **Learn what's impacting the feed prices**
- **Discover which risk management tools could benefit you most based on where the market may be headed**
- **Register now for the date and location that work best for you!**

Things to Think about When Building a New Milk Barn or Expanding Your Milk Systems

AGPROFESSIONALS

Chad TeVelde

There are several milking options from robots to manual take off machines, with many different cow control styles, from a flat barn to side openers, to rotary platforms. It is a lot to take into consideration, especially when someone is trying to sell you their system. I have assisted many dairymen with this process, and it is unique for each facility. Many questions come into play to help understand your needs. It always helps to define the problem.

Why do we need a change?

- Out of date equipment or inefficient equipment?
- Expanding and existing barn cannot handle the additional cows?
- Brand new facility?

What is your management style?

- Like to keep things simple?
- Like to implement new technologies and track their success or nonsuccess?
- Very hands on, want a lot of information and technology to make decisions?

What is the fiscally responsible commitment that can be made to the new or expanding milk barn?

- Can you handle some additional capital investment to reduce labor costs or increase cow management/health?
- Do you want hands on interaction with your milkers and cow in the milk barn to make cow health decisions, removing the need for the electronic sort of ID? Do things manually?
- Do you want to manage cows in the milk barn to remove the need to lock up cows in the corral or free stall?
- Do you want to sort cows in the milk barn to not need to lock up cows as long in the pens, or the need to sort in a transfer lane?

Finally, you need to decide some simple operational questions.

- How many times per day do you want to milk? Three times all cows? Two times all cows? Fresh cows four times? Or some mix of that?
- Do you want to be able to expand again easily in the future?
- How do you want to handle hospital cows?

Selecting a Milk Barn Type

The information in this section is from general experience. Every situation can be very different.

Typical Herringbone, Parallel, or Parabone with a Milker's Pit

This barn is a staple of the 80s and 90s. It is very economical, allows for expansion, and can milk cows efficiently. Good cow interaction with milkers occurs and it does not require any cow sort or technology to operate efficiently. Usually, this is the best choice for less than 2000 milk cows, and it is also expandable if some extra space is left on the cow deck

Rotary Milking Barns

Rotary milking barns consist of a platform that rotates the cows while milkers stand stationary. Milkers do have to move some, but mostly stay in the same place. Rotaries have become much more common with the increasing size of dairies. This is due to the efficiencies increasing when you get to the 2500 cow size. At this size you would need four to five milkers for most any barn style, but with a rotary you can milk more cows per man. So, with an 80-100 stall rotary, you can potentially milk six turns per hour with five milkers rotating. You hang machines quickly, so those spots need to rotate to give the milkers a break. This can provide numbers up in the 120 cows per hour per man or more if you keep your prep minimal. You are not going to see much of the cow on the rotary – so milker interaction should not be expected. However, rotaries work very well with sort gates and sort systems. All the cows come out in one exit lane allowing you to handle them in one location. Just remember how fast they will be exiting. 100 stall rotaries may have cows exiting in less than 6 seconds. If you stop the flow, they will build up quickly. So, everything should be automated with bypass options. Rotary barns are a little more costly than traditional pit barns, depending on options. There is also a usable life of the platform that will eventually run out and need to be replaced. Expansion of a rotary is not possible either, so you have the size you have, unless you replace the deck.

Robot Milking System

The last option we will discuss is the robot milking system. More and more installations are happening as we are writing this article and I can say the technology is much improved over what was being used in the early 2000s. The positives of the robot milking systems are pretty evident – you do not need any humans to milk, you do not have to worry about cow abuse in the barn, and there is less stress on the cows. Some of the negatives are – you are reliant on technology to milk your cows, it is difficult to remodel a facility to introduce robot milker systems, humans do not interact and evaluate cows, and they can be expensive on a per cow basis. Most systems are being installed in a minimum of 600-800 cow increments, so they can be utilized on smaller dairies. Where I really see these systems working well, is when the robot milking herd is not the only herd of cows. Some cows take very well to the robot milking system and others do not. It works as a very nice hands-off unit to milk the healthiest and best temperament cows, with the other cows milking through a more traditional style barn.

The following is an example of how this can be applied to an existing milking operation. The AGPRO dairy milks 2400 cows and is maxing out their existing milk barn. I have paid off my cow loan and I am looking to expand. I do not really want to build another dairy, maybe I just build a new 800 cow robot cross-vent just off the side of my existing milk barn. I can utilize some of the same equipment, or at least have back up equipment for the robots. I then place all my 2nd and 3rd lactation cows in the cross-vent. If they come out for a bad foot, or mastitis, I keep them out. This seems to be a nice blending of existing methods with robot technology.

Please contact AGPROfessionals at 970-535-9318 or email info@agpros.com if you ever have any questions about building a new milk barn or expanding your milking system.

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The Things Your Crop Consultant Won't Tell You About Nitrogen

IDA CONSULTING SERVICES **Tanya Hilber**

When writing nutrient management plans, I get to see a wide array of farming practices, crop consultant recommendations, and soil samples results. Despite the spread of numbers there is one thing that remains constant. Soil chemistry is complex. It's sometimes confusing, and with just a soil sample, it is hard to understand what is going on under the surface. In my mind, I imagine the soil and underlying chemistry as a big black box. We can use soil samples to poke a pin hole in the box and get a tiny glimpse inside. The black box isn't static and is constantly changing. There are so many factors that influence what's going on inside that black box. Soil type, soil temperature, soil moisture, manure history, microbial activity, and nutrient interaction all impact activity in the black box. Each time we take a soil sample on the same field and in a consistent manner, it provides another opportunity to look inside. Tracking the long history of nutrient inputs pokes additional holes and adds to the knowledge of what is going inside that box.

Nitrogen is complex and at times unpredictable. Research conducted by Dr. David Tarkalson working at the USDA-ARS location in Kimberly, ID demonstrated even in non-manured soils, 53% of Sugarbeet research field sites did not respond to commercial nitrogen application despite the application of recommended amounts. 100% of the corn silage fields that were evaluated showed no response to commercial nitrogen.[1] Further research is needed to fully explore why this is, but perhaps it does show we have soils that naturally have a lot of available nitrogen.

In another ongoing study, Dr. Tarkalson is researching the effects of one very large application of manure and the impacts on crop response. That study is now 4 years old, and the field has yet to show a response to nitrogen applications.[1]

Research conducted by Dr. Earl Creech and his colleagues in Utah evaluated corn response to nitrogen fertilizer in the year following alfalfa. At 25 sites across the state of Utah, corn showed no response to commercial nitrogen applications following the termination of an alfalfa stand.[2] The study concluded that nitrogen is not required for a corn crop following alfalfa for minimum of one year.

Available science tells us fields with a history of a single manure application will respond differently than those with no history of manure application. Fields with a history of consistent manure application respond much differently than a one-time application or no application. Manure application is cumulative over time and is the ultimate time released nutrient source unlike commercial fertilizer which is typically considered singular and short lasting. Manure should be credited towards your available nutrients, especially nitrogen, every year even if you have skipped an application or two.

Nitrogen makes up the organic solids of manure. Nitrogen mineralization is the process of organic nitrogen converting to plant available nitrogen in the soil. Nitrogen mineralization rates are influenced by soil temperature and soil moisture. The heating of soils increases microbial activity which breaks down those organic solids, in turn releasing more nitrogen. Most soil samples will report how much nitrogen was available at the time of sampling. This number will change throughout the growing season as the soil warms up and once again cools off.

When determining how much commercial nitrogen fertilizer to apply consultants typically base recommendations on a soil sample taken in early spring when soils are cold. Additionally, nitrogen from manure application is often not credited toward each field's nutrient requirements. Don't get me wrong, not all crop consultants are created equal and yours might being doing an excellent job by crediting your manure nutrients. However, the nitrogen recommendations I usually see, more often than not, are grossly overestimating nitrogen requirements for the growing season. **In my unpopular opinion, dairymen are paying for more nitrogen fertilizer than they might need.**

When presenting this information to dairymen the statement is almost immediately met with a big fat BUT. It sounds like "But, my neighbor's fields are greener" or "But, if I don't apply commercial N I will lose yield", or "But, my advisor told me I needed it". All points are valid. However, do we actually know why your neighbor's fields are greener? Do we actually know yields will go down? Do we truly know the values your consultant used to come up with their nutrient recommendation? We might think, but do we know? My point is I don't know, but I do know how we can start figuring it out.

We can do the math. A place to start might just be accounting for manure nutrients accurately. If we have manure samples in combination with application rates and field history, we can estimate nutrient availability. It is also important to track soil analysis trends on each of your fields. This means taking samples at the same time every year and analyzing them at the same lab.

Math can get increasingly complicated with repeated applications; however, Megan and I are here to help. Even if you don't work with us on your NMP we are always willing to come and assist in anyway we can. Call us up and we will do the math with you and your consultant.

In the meantime, I dare you to start with business as usual except tell your field man to leave one pass without fertilizer. If you chemigate, skip chemigation on your smallest field. Compare and contrast the difference. You can also scale back. Instead of placing all of your nitrogen fertilizer up front, start with half. Then follow up with another soil sample at growth stage V5 testing for nitrogen (This is commonly referred to the PNST soil test). The soil will have had the time to warm up and additional nitrogen fertilizer may not be needed. In one year, there is potential to cut your nitrogen costs in half.

Experimenting with your own fields is the quickest way to gather information about the conditions you work with. You might find each field has a different response. They could also all be similar. Yet, I guarantee you will never know if you don't try it.

References

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2. **Shaffer, B., Cardon, G., & Creech, E., et.al (2019, July 25). Revisiting past recommendations for alfalfa nitrogen crediting for corn silage following alfalfa in Utah. Crops & Soils, July-August 2019, 20–22.**

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U OF I-LED LARGEST U.S. RESEARCH DAIRY:

Massive Excavation Effort Laying Groundwork

UNIVERSITY OF IDAHO

John O'Connell

RUPERT, Idaho — The future site of the nation's largest research dairy is placed among hilly cropland with topsoil varying from just 4 inches thick to several feet deep.

On May 4, construction crews began flattening those rolling hills – 640 acres that will serve as the site of the dairy and an adjoining demonstration farm for studying interactions between dairy production and water and soil health. The monumental excavation project is an essential step in laying the groundwork for the University of Idaho-led Idaho Center for Agriculture, Food and the Environment (Idaho CAFE), improving the experimental farm fields in the process.

Crews manning dump trucks, scrapers, bulldozers and excavators have been steadily working to temporarily remove the topsoil from the cropland. Material underlying the topsoil – mostly fist-sized rocks interspersed with larger boulders – is being hauled a short distance to the dairy site for use as fill, enabling workers to raise the footprints of the forthcoming cattle yard and milking barn by 8 feet and 6 feet respectively.

The topsoil will be evenly redistributed in a 1-foot blanket throughout the demonstration farm once the necessary volume of fill has been relocated. The project will entail moving 145,000 cubic yards of earth in all.

"We are running into big boulders and we're also running into lava rock. We have excavators with a chipping hammer and a blaster when we have an excess of that lava rock," said Christopher Rae, assistant project manager with the general contractor, Boise-based McAlvain Construction. "We are still on schedule."

Idaho CAFE will house a state-of-the-art milking parlor in Rupert with cutting-edge robotic-milking technology, accommodating a 2,000-head dairy herd. Together, the dairy and the adjacent farm will be a living laboratory, designed to easily plug and play new technologies at industry scale, with an emphasis on conditions in the arid West.

Construction of a tunnel that will pass beneath the milking barn carousel, providing access to maintenance personnel, is underway. Workers began pouring cement for the tunnel's foundation and footings on June 12. Within the next couple of months, they'll begin pouring footings for the main milking parlor, with plans to start erecting the building in March of 2024. They'll also begin work on underground utilities, including plumbing and electrical work.

Rae anticipates construction of site drainage facilities will start in mid-July. Rotary equipment should be installed in the milking barn by July of 2024, with the project's first phase scheduled for completion by January of 2025.

Design for the project's second phase should be completed in December, with the bid process occurring from February through March of 2024. Phase two will include manure handling facilities and lagoons, maternity barn, feed area, an office building and structures to provide shade and wind protection for cows in a dry lot with several pens for research purposes. A third phase entailing construction of a cross-ventilated barn capable of housing between 800 and 1,200 cows is also under consideration.

Idaho CAFE research projects will delve into a broad array of topics such as sustainability, animal health and productivity, green energy production, energy conservation, nutrient and wastewater management, odor and emissions control, precision agriculture and technology, soil health, value-added products and water use. Such research is critical as dairies seek to adjust operations to a changing climate while meeting terms of the U.S. Dairy Net Zero Initiative, which seeks to make sustainable practices and technologies more affordable and accessible.

To date, industry has contributed nearly $9 million toward the project. In September 2022, the Idaho Board of Land Commissioners awarded $23.25 million from the sale of U of I College of Agricultural and Life Sciences (CALS) endowment land in Caldwell that was no longer being used for experimental farming to support Idaho CAFE. The state legislature approved $10 million toward the project in 2018.

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FARM Program Opens Nominations for Annual FARM Excellence Awards

NATIONAL MILK PRODUCERS FEDERATION

Rachel Ravencraft

The National Dairy Farmers Assuring Responsible Management (FARM) Program Excellence Awards are back for the third year. The prestigious awards recognize farms and evaluators who demonstrate excellence in their engagement with the FARM Program.

Awards are presented in four categories: Animal Care & Antibiotic Stewardship, Environmental Stewardship, Workforce Development and FARM Evaluator.

"We are so proud of the farms that participate in our program areas and our dedicated evaluators, and we believe it is important to publicly recognize the people that make the FARM Program so successful," Emily Yeiser Stepp, executive director of the FARM Program, said. "These awards are given to dairies and evaluators who exemplify on-farm social responsibility principles every day and each year I am blown away by the outpouring of support for the nominees from their peers."

Farms or FARM evaluators can be nominated by fellow dairy farmers, members of their communities, extension, cooperative or processor staff, veterinarians, themselves or others. Nominations are open until 11:59 p.m. PDT Aug. 1 and should be submitted using the **online form** on the FARM website.

Nominated farms must have a current FARM Program evaluation in the respective category area and must be in good standing with the program. Evaluators who are nominated must be FARM Program certified in any of the program areas as of June 1, 2023. The awards are judged by a committee of FARM Farmer Advisory Council members and other subject matter experts.

Winners in each category will receive a hotel room and travel for two individuals to attend the Dairy Joint Annual Meeting Nov. 13-15 in Orlando, Florida, where the winners will be celebrated during a luncheon. Visit **the FARM Excellence Awards page** for more details.

> *We believe it is important to publicly recognize the people that make the FARM Program so successful.*
>
> *- Emily Yeiser Stepp*

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Upcoming Events

July 1st - August 30th

60 Day - Application Period for CAFO Improvement Fund

July 10th

Dairy Market Outlook - Twin Falls, ID

July 11th

Dairy Market Outlook - Nampa, ID

July 18th

10:00 AM - Informational Webinar for CAFO Improvement Fund

July 26th - 27th

IDA/Dairy West Board Meeting - Salt Lake City, UT

August 9th - 11th

IMPA Conference - Sun Valley, ID