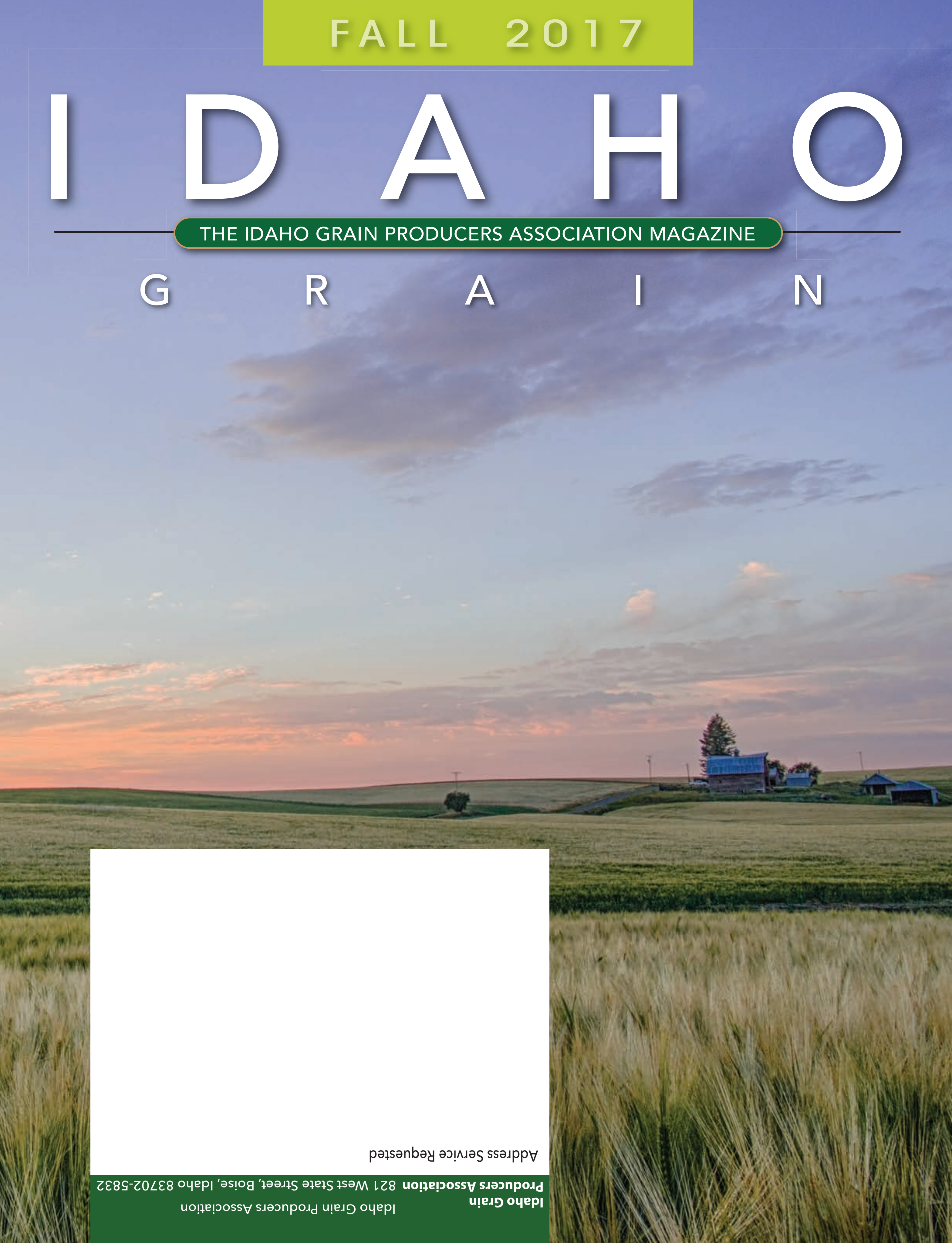
FALL 2017

IDAHO GRAIN

THE IDAHO GRAIN PRODUCERS ASSOCIATION MAGAZINE



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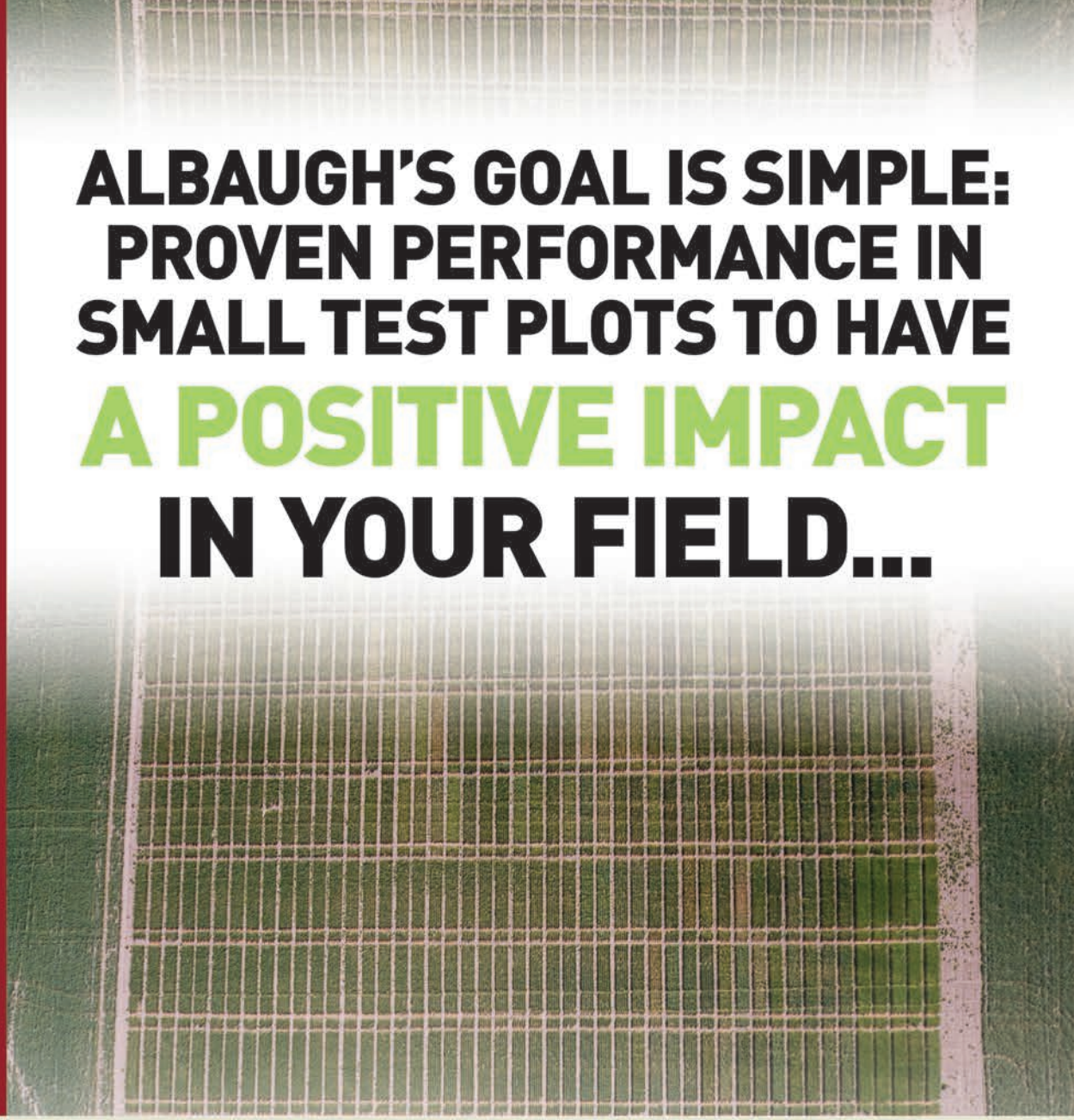

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VIEWS

BY JOE ANDERSON
PRESIDENT

I am in a truck. I am covering for one of my drivers. She needed a new phone. I am the "pinch driver." The crop this year isn't the greatest, too much water in low areas and less than lackluster performance of herbicides on annual rye grass. But it gives me some time to reflect. We are hearing that falling numbers across the state are good. It didn't rain at harvest (at least not yet). And we did not have wide variation in temperatures between day and night (or did we?). And we may not have had factors X, Y, and Z kick in. However, we all remember one, two, or three years ago when we were hard pressed to find a falling number (FN) above 300. Last spring I shared with you some of my thoughts on the falling number issue. I summarized at that time that the true fix was going to have to be genetic. I still believe that to be so, but it may take a while. The IWC is funding a number of very basic, but very exciting and promising science programs to try to address this critical issue.

Not everyone is convinced that science will answer all the issues. And that may be. There are some questions that need to be addressed that are not scientific in nature. They may be economic or maybe even cultural. Comments I have been hearing from growers are questioning the highly publicized notion that low FN wheat cannot be blended with high FN wheat without great risk to the whole sample and resultant loss of flour quality. We have been told that one kernel in 2,500 can cause a sample to test low in FN.

In North Idaho and Eastern Washington, we see ground piles from last year disappearing. We have not been hearing that millers, either foreign or domestic, are getting wheat that has low FN. Have the FN improved with storage? Is outside storage better than inside? Or is last year's wheat being blended with high FN wheat from the current year? These questions lead us to ask still other questions.

Last year in North Idaho and Eastern Washington low FN were the result, primarily, of late maturity alpha amylase (LMA) and perhaps other unknown factors and not pre-harvest sprout (PHS). Contrarily, in 2014, low FN in South Idaho were the result of rain at harvest, hence PHS. Could it be that all low FN are not equal? Could it be that a low FN in and of itself does not truly indicate reduced flour quality? Could it be that blending low with high may not be so risky, depending on the cause of low FN?

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VIEWS

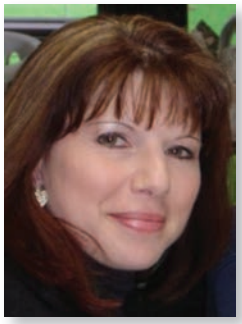
We can probably all agree that if wheat sprouts it ain't good. We may not like it but we can understand that when the kernel gets wet it thinks it needs to germinate, alpha amylase is formed which causes conversion of starch to sugar and results in a flour that won't stick together; sponge cake sags. And we can think through this to understand that a product that needs starch may not turn out so well if it gets sugar instead.

The late maturity alpha amylase syndrome is a truly different phenomenon. There is evidence the starch may not be degraded, and hence, there may be little loss of flour quality. We might conclude then that low FN that result from LMA syndrome may not really indicate a flour that won't perform well to make the desired product.

And it may more easily lend itself to blending with high FN wheat with little risk of degrading the whole sample. As we learn more from the science as to what happens to the starch under various scenarios, what role proteins may play, and what happens or does not happen to flour functionality, we may like even less how the falling number test is used. But like it or not, the Perten Hagberg Falling Number test will continue to be used in the trade. The only real solution is genetic such that it renders the falling number test irrelevant.

Perhaps we need to appoint a Special Counsel.

GUEST EDITORIAL



BY TEMPLE KINYON

Harvest

I squirm around in the black leather seat, searching for just the right position where my back and hips don't ache. My day started at 7:00 am, and my forty-something body isn't used to sitting in a grain truck seat, racing back and forth all day between field and grain elevator. The digital clock on the dashboard reads 6:54 pm, but it's the dead of summer in Idaho, and the heat continues to hang in the air. A small trickle of sweat meanders its way down my neck and I lean back to stop it, my shirt absorbing it and making a tiny wet spot on my collar. Ick. I rub from side to side in the seat, trying to itch away the irritating prickle on my back created by a light layer of wheat dust that always finds its way onto my skin, even under my shirt and in my socks.

I look down distastefully at my thick, cotton socks and bulky tennis shoes and realize my toes are sweaty soggy inside. I hate wearing tennis shoes and socks in the heat of summer, but Dad frowns on flip-flops. This is his office, and his required dress code is for safety—damn comfort, coolness, and fashion. He's right, though. I remember as a kid, every time I scooted out across a stubble field wearing flip flops and shorts, my shins received the brunt of the freshly cut stalks of wheat or barley, their sharp edges digging into my skin and leaving thin bloody streaks trickling in vertical lines. As an adult, I know better to tempt fate. Yes, I've become practical.

Finally, a soft breeze with a slight coolness to it wafts through the open windows of my truck and I breathe it in. The thick smell of the season causes thousands of images of harvests past to flicker through my brain. There's nothing like the smell of fresh-cut grain. There's a touch of dust, a dash of chaff, and a pinch of dried grass. It's a unique mixture and one I've never smelled anywhere else but in the grain fields. Small pockets of fresher air sneak in my truck cab occasionally, and I breathe deep again, knowing it's full of nothing but natural pollutants.

My brother, Cody, is cutting on the distant hillside, slowly and methodically making his way through the tall stands of wheat. The combine leaves behind wide ribbons of alternating light and dark reflecting the back and forth of his chosen pattern for this particular field. He disappears behind the swell of the hill. I suddenly feel alone with Cody out of sight. We're miles away from

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the main road, the nearest house at least three hills to the east. It's noticeably quiet. But then, the buzz of a yellow jacket bouncing around low to the ground begins to fill the air. Pieces of stubble make subtle pops and cracks, finally drying completely now that the head bursting with wheat berries is gone, sliced off clean by the big red combine's razor-sharp sickles.

I feel tired, but it's a good tired. It's hard work tired. It's satisfying tired, being part of something important, something bigger than me, the wheat offering meals to families across the nation and world. There's also a tinge of nostalgia mixed with that tired. I miss my childhood riding in the truck with my mom and watching my dad do exactly what my brother is doing right now.

My stomach growls in hunger, which I find ironic nestled in the rolling hills of wheat, barley, peas, and lentils–the foods of the planet. But, because it's getting late and all I had was a sandwich and some fruit in my lunch box, I'm anxious for Cody to come back around.

I'm waiting for him to fill his bulk tank and dump to finish filling my truck so I can drive it back to Mom and Dad's, maneuver it carefully in the shed, and head in for dinner and bed. The loaded truck will be ready to dump first thing in the morning at the grain elevator, just like I did today and will continue to do every day until every last kernel is scooped out of the 3200 acres of fields and the crop is buttoned up for another year.

Slowly, the comforting whir of the combine increases in volume as Cody navigates back into view. The shadows are long, and darkness begins to settle, first in the low draws, then inching up the hills until dusk covers the entire landscape. The sky is a beautiful combination of periwinkle, navy, and purple tinged with pink and orange.

Cody begins his journey back to my truck. He's full. The combine's external lights flick on to illuminate his way as a growing sliver of a harvest moon shows itself behind him, ready to rise and offer a light of its own. This is my favorite time of year. This is harvest.

About the author:

Temple Kinyon may live in Las Vegas, NV, but after growing up on a wheat farm in Idaho (she's the daughter of "Potlatch" Joe & Pam Anderson), she knows you can't take the Idaho out of the girl. When she's not freelance writing for local magazines, working on her dad's memoirs, or tinkering on her first book, Temple enjoys adventuring with her husband, Chad, and ferociously funny bulldog, Pippa.

Visit her at: templekinyon.com

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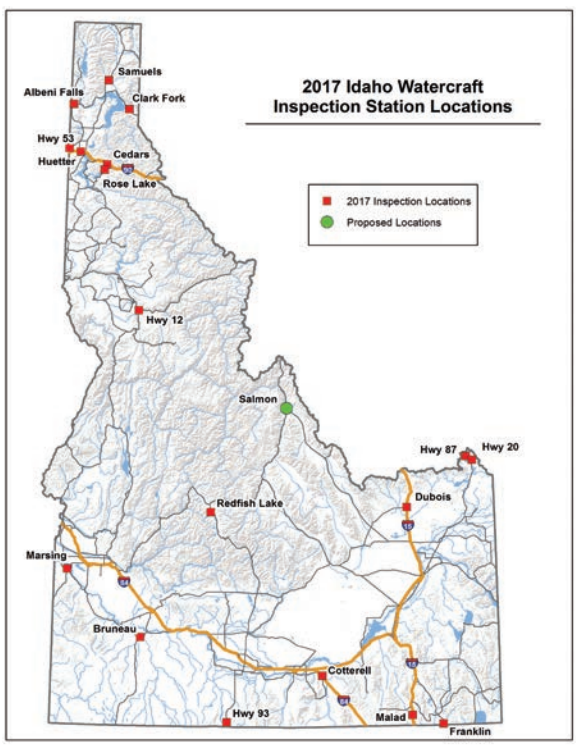
Update: Invasive Mussels

BY IDAHO STATE DEPARTMENT OF AGRICULTURE

Since 2009, Idaho has been a regional leader in the fight against the spread of aquatic invasive species such as quagga and zebra mussels. Where states in the Great Lakes and Lower Colorado River regions have spent millions annually to mitigate heavy infestations, Idaho has instead invested in the prevention of spread to our lakes and rivers. Prevention is important to stakeholders across industry, recreation, and the environment. Invasive mussels attach to irrigation diversion and power generation infrastructure, decreasing efficiency and increasing maintenance costs. They would out-compete native species for food and habitat, further challenging those very species for which Idaho has already invested so many resources. The threat of these mussels to Idaho agriculture is real.

In 2008, the Idaho Legislature approved the Idaho Invasive Species Act, which provided authority and direction to the Idaho State Department of Agriculture (ISDA) to work across local, state, and federal government agencies as well as with private industry stakeholders to prevent the spread of invasive species.



In 2009, the Legislature approved the primary funding mechanism for program activities in the form of the Idaho Invasive Species Fund sticker on watercraft. ISDA then built a program around the $1.4 million annual budget provided through the sticker.

Inspection stations are located on routes of travel entering the state, ensuring that watercraft which have visited infested waterbodies are identified and decontaminated before entering Idaho's waters. Inspection stations collect valuable data on where boats have been and their next destination, but inspections also provide opportunities for inspectors to do a detailed examination of all watercraft surfaces and live wells to ensure that they are "Clean, Drain, Dry." Watercraft also are offered a voluntary hot wash at stations to ensure that they are not carrying any invasive species or noxious weeds. If they are found to be carrying quagga or zebra mussels, watercraft are put under a regulatory Hold Order and decontaminated through a rigorous protocol.

ISDA has performed nearly 600,000 inspections since 2009, identifying over 150 watercraft carrying quagga or zebra mussels. In 2017 alone, ISDA has facilitated over 70,000 inspections at 19 inspection stations across the state. Also, this year, inspectors found 27 fouled watercraft and hot washed over 3,300 watercraft to ensure they were clean before entering Idaho waters. It is important to note that only one or two boats a year are carrying viable, or live, mussels requiring a Hold Order. All other fouled watercraft have dead mussels.

Prevention isn't just about inspection. Every year, ISDA pulls and analyzes over 900 water samples from waterbodies across the state. These samples ensure that infestations are found early and that Idaho's lakes and rivers are still free of invasive species infestations.

Monitoring efforts also include structure inspections, substrate samples, and shoreline surveys as waterbodies are dewatered at the end of the season.

Continued on next page

Since the program's beginnings, cooperation amongst government agencies, private water users, and other stakeholders has been a hallmark of Idaho's program. That cooperation starts with the Idaho Invasive Species Council, which operates under Executive Order and includes a cross-section of representatives from across the spectrum of stakeholders. Cooperation also includes formal and informal agreements for watercraft inspection, monitoring and survey, outreach, and law enforcement support.

Funding for program activities has increased to match the growing need to protect from the spread of invasive species. The Idaho Legislature provided a substantial increase of state funds in 2017, including an additional $3.1 million from the state General Fund for watercraft inspection and a new trooper with the Idaho State Police to support nighttime inspection activities at the Cotterell Port of Entry on I-84. In addition, ISDA is also one of four states receiving part of a $4 million grant from the U.S. Army Corps of Engineers to support inspection efforts. These additional investments have resulted in new stations, extended hours, and the first station in Idaho to run 24 hours/day. Implementing these additional stations and hours would not be possible without the new and continued partnerships with local law enforcement and the Idaho State Police, both of which ensure safety and compliance around the stations.

Idaho's program was visionary when it began in 2009, and it remains a leader in prevention efforts to protect Idaho and the Pacific Northwest.

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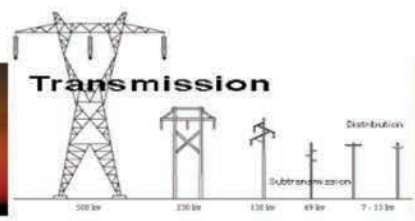

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Building a Prosperous Idaho for Our Kids and Grandkids

BY LT. GOVERNOR BRAD LITTLE

I am incredibly optimistic about Idaho and its future.

We've come a long way since the bottom fell out of our economy in 2009 and we had to cut spending by 30-percent, rather than raising taxes at the worst possible time. These tough decisions have paid off. Idaho is now one of the fastest-growing states in America. We lead the nation in income and employment growth. We continue to rank as one of the best places for starting a small business.

But there is still a lot of work to do. We must leverage this positive momentum to ensure all parts of Idaho are experiencing this incredible growth.

As a farmer and rancher, I understand Idaho agriculture and the challenges that come with making a living off the land. My wife, Teresa, and I are from Emmett. We've seen the immense changes that have occurred in our community. I remember when the Boise Cascade mill closed more than 15 years ago, putting my friends and neighbors out of work.

Our traditional industries continue to integrate more advanced technology, becoming more efficient and requiring more skills. In this new era of driverless tractors and robots milking cows, one of my biggest concerns is the continual loss of jobs in rural Idaho.

Both of my sons left Idaho after being educated in Idaho schools. Fortunately, they chose to return and raise their families close to home. I want this same opportunity for all Idahoans to remain or return home.

As your Governor, I will look at economic development and policy with one important goal in mind— How Idaho can retain its high quality of life and continued economic growth, while creating opportunities for our kids and grandkids to remain in or return to their home state.

Accomplishing this goal requires work on many different fronts. One of my favorite sayings from my days in agriculture politics is "change is inevitable, adaptation and survival are optional". As the agricultural and other traditional industries become more efficient, we must focus on growing and diversifying rural communities, and leveraging our existing advantages to grow jobs and incomes across Idaho.

We have many examples of both existing large and small businesses expanding and growing because of their access to Idaho commodities. All of these add value and profit to our existing farm products, and provide jobs for rural Idahoans. Continued on next page

Almost two years ago, I spoke at the opening of the new Fabri-Kal plant in Burley, which uses Idaho wheat to produce biodegradable, to-go containers for Chobani. In my family's hometown, Woodgrain Millwork, a family-owned wood products company, purchased the old Boise Cascade mill and is investing in a new, state-of-the-art sawmill. Both of these companies provide great careers and incomes, enabling our citizens to raise their families and plan for retirement.

Idaho has seen many successes in the areas of food processing and adding value to our existing commodities, but we must seek out more opportunities to turn commodities into more valuable products for export, nationally and internationally.

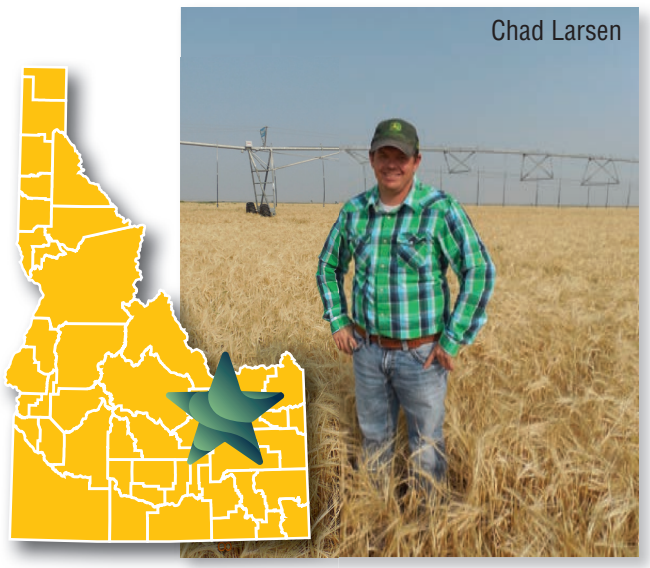
For example, with 50-percent of Idaho's wheat exported internationally, we must urge the Trump administration to continue to open and expand international markets for our products. I have joined Governor Otter on past trade missions and, as Idaho's Governor, I will continue these state-level efforts to build successful trade relationships around the world.

As your Governor, I pledge that my door will always be open (as it is today) to your ideas and concerns.

Last month, I chaired a meeting with the Canadian Agriculture Minister, the Idaho Departments of Agriculture and Commerce, and agriculture industry representatives, including the Idaho Grain Producers Association.

The main topic was bilateral trade and the impending renegotiation of the North American Free Trade Agreement (NAFTA). Nearly 50-percent of our agriculture products are exported to Mexico or Canada, so these efforts are incredibly important to our agricultural sector and economic outlook.

My grandfather began ranching in Idaho in the 1890s. Today our youngest son, David, carries on that tradition, managing our family's diversified cattle and farming operations in Gem County. Teresa and I have great hopes for our seventh-generation Idahoan grandchildren. I am committed as ever to ensuring the Idaho agricultural sector is strong and growing.



Chad farms 4,000 acres of wheat, barley, alfalfa, potatoes and organic alfalfa and wheat near Hamer.

Chad Larsen

How and when did you get into farming?

My dad's been farming his whole life, and I grew up on the farm. I would always come out on weekends and when there was no school and work with him and be with him. I grew up in Salem, and the farm was out in Monteview, Hamer, Dubois, about 40 miles from Salem, near Rexburg. Dad raised potatoes, grain and hay.

When was your operation established?

I graduated from Sugar-Salem High School in 1999, and I came out and started working for my Uncle Blaine on the farm in 2000. Then I had the opportunity to lease ground from him and started buying ground from him.

I started in 2004, first leasing 1,500 acres, all alfalfa, and have expanded ever since. The next year, I was roughly 2,000 acres leased, and I've bought 300 to 400 acres per year since 2005. When we've had a good year, I've expanded. I bought the ground I'm farming now from my Uncle Blaine, 4,000 acres.

Tell us about your wife and family.

My wife, Jessica, grew up in Rigby on a farm. Her dad farmed part time and had a job at INL (Idaho National Laboratory) and went full time farming after he retired. My banker introduced us (Chad and Jessica). He is good friends with my father-in-law, and he set us up. We met in 2008, dated for six months and got married.

She has a teaching degree but hasn't taught in a few years. She's a homemaker, raising the family, and she helps on the farm. We have five children -- Kennidy 19; twins Landen and Braeden, 15; Kade, 7; and Olivia, 6. We've been blessed that she's been able to stay home and raise the family.

How do you market your production?

The barley goes to Anheuser-Busch's local malting plant, and the conventional wheat goes to a local elevator. On my conventional alfalfa, I usually market it through our hay terminal in Dubois. Dad has Larsen Farms Hay Terminal in Dubois where he presses the alfalfa and ships it all over – China, Florida, New York. I open market my spuds to warehouses. The organic wheat goes to Montana Milling, and I sell the organic alfalfa to organic dairies.

Is there anything unique about your operation?

I am sole proprietor because I was able to have the opportunity to start young and had help from my dad and uncle. I'm a young farmer who's able to own the farm. We have 15 employees all together, seven full time, and most have been with us since the beginning. We are dedicated to them; we could not be here without them.

Continued on next page

The Larsen Family

What conservation practices do you employ?

I've been putting different sprinkler packages on my pivots to use less water. I've used LESA and different nozzles to try to be more efficient with water and electricity. And I've planted crested wheat for wildlife.

What are the biggest challenges in your operation?

This year, it's commodity prices. And input costs. Fuel and fertilizer prices haven't changed much from when commodities prices were good. Water is also a challenge; we've been cut back anywhere from 15 to 20 percent this year. Being as efficient as we can is always a challenge in some ways.

What are the guiding tenets of your operation?

Communication is key and keeping our employees happy and able. Keeping an open communication line with our bankers is also important so at the end of the day, we make a profit. We're always trying to improve the quality of our crops, because that's what the consumer is looking for.

Why do you farm?

I love farming. I love being outdoors. I love planting crops and watching them grow and the challenge that it brings. Every day is different; it's never the same thing.

What brings you satisfaction?

Providing a good, quality crop for the consumer. Raising my children and having them work on the farm with me.

What are your hobbies and what do you do for fun?

My teenage boys are getting me into hunting, so I've started that. I love going to football games, high school and BYU, and basketball games. My boys are good ball players in high school, so I love watching them play, and I love spending time with my family.

What challenges face the U.S. grain industry?

Keeping supply and demand in balance. And there's always some issue like gluten, which is starting to be a big deal. Grain producers have always got to be thinking outside of the box to bring new things to the consumer.

How important is international trade?

Where half of the wheat produced in Idaho and the Pacific Northwest is exported, exports are very important to keep supply and demand where it needs to be.

How do you see the future of the U.S. grain industry?

I think it's promising. I'm optimistic, but I think we have to have good quality so we can keep avenues open, whether that's export or here in the states.

What would be a perfect day?

Spending time with the family -- going to ball games, looking at the operation and how much we've improved it, bringing in a quality crop. At the end of the day, just having our employees happy and spending time with the family.

Chad recently traveled with IGPA leaders to Minneapolis, Minnesota to attend the National Barley Association's summer board meeting as part of their Barley Industry Leaders of Tomorrow program.

Is it important for growers to be involved in industry groups?

It is very important; it's our voice. We've got to have a voice for the commodities we grow. If it's not us, it's going to be someone else. It's also important for watching trends and having a feel for what's going on in the world.

How was your experience at the National Barley Grower's Association summer board meeting?

It was a great experience and very interesting to understand how other regions grow the grain. I was invited to attend, and I was very fortunate to have the privilege of attending. It was very interesting to understand the different challenges growers have in other states and what they are faced with.

How important is IGPA's mentorship programs?

It's very important for both up-and-coming and established growers. The leaders we have now are great, but we need to get more people involved to carry on the work.

Fish and Game Update:
New laws allow more money for depredation claims, prevention and add flexibility

BY ROGER PHILLIPS - PUBLIC INFORMATION SPECIALIST

With House Bill 230, Idaho legislators instituted a new fee for hunters, trappers and an-glers that will provide up to $1 million annually for wildlife depredation prevention and compensation for farmers and ranchers. The new law took effect May 1, and also modified existing laws to provide Idaho Fish and Game with more flexibility for handling damage claims.

"These changes will allow the program to better reflect current agricultural practices, as well as streamline several aspects of the program," Fish and Game Director Virgil Moore said. "At the same time, we hope it supports cooperation between landowners, hunters and Fish and Game to minimize the impacts of wildlife while allowing the department to maintain abundant and valuable big game herds."

The bill added a $5 fee per resident and $10 nonresident for the first hunting, fishing, or trapping license a person buys each year. Of the money received, the first $500,000 will go to an account for wildlife depredation compensation, and the next $500,000 will add to existing funds that pay for depredation prevention. The fee will also provide up to $1 million for sportsmen access programs.

Other changes to the depredation compensation laws include:

- The hunter-access requirement for eligibility to file a depredation claim was modified. Previously, landowners had to allow reasonable hunting access during the prior season in order to file a claim. New changes allow a landowner to file a claim if they allow hunting to address ongoing depredations, or where hunting is not a feasible tool to prevent it, such as in areas where hunting is unsafe or impractical.
- A landowner must still notify Fish and Game within 72 hours of discovery of damage, but the timeframe in which they must provide Fish and Game a formal notification of a depredation was changed from 10 to 20 days, and it can be filed electronically as well as written. Previously, all claims had to be written.
- The period Fish and Game is held liable for damages prior to initial notification was extended from 10 to 20 days. Now, Fish and Game is responsible for damages that are proven to have occurred 20 days prior to initial notification by the landowner. Fish and Game may also extend the period up to 30 days under special circumstances.
- The law increased money available to compensate for wildlife damage and specifically doubled the amount of money to pay for damage to forage. It also increased the amount that could accumulate in the compensation payment account from $750,000 to $2.5 million. If more money accrues, the "overage" can only be used for depredation prevention.
- The amount of damage that must occur to file a depredation claim was lowered from $1,000 to $750, and the deductible was lowered from $1,000 to $750.
- Fish and Game's director may provide written authorization for the possession of animals taken with depredation kill permits. Previously, animals killed with those permits had to be turned over to state.
- Claims can now be submitted within the first 60 days of a new fiscal year if the claim occurred within the last 60 days of the previous fiscal year.

For more information, people can contact their landowner Sportsmen Coordinator at their local regional Fish and Game office.

Regional Offices	
Panhandle: (208) 769-1414	Clearwater: (208) 799-5010
Southwest: (208) 465-8465	McCall: (208) 634-8137
Magic Valley: (208) 324-4359	Southeast: (208) 232-4703
Upper Snake: (208) 525-7290	Salmon: (208) 756-2271

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Testing for Falling Numbers in Idaho Wheat

As the 2016 grain harvest unfolded, grade tickets with low Falling Number (FN) Test results piled up. Daily reports of low FN test results spread across North Idaho and Eastern Washington.

For many growers results were below 250 seconds, the point below which the industry can't use the grain for flour and it is sold at even deeper discounts to the feed markets. The phone rang constantly in the Idaho Wheat Commission's Boise Office. "Do you know what is happening?" "What can be done about it?" "Growers can't survive this." "It's my best crop ever, then this!"

Grower calls elevator about his Falling Number test results:

"Dang! A 295 falling number. That is a 5 cent discount on a $3.45 per bushel price! I can't afford to grow wheat!" bemoaned Will.

But Will was one of the lucky wheat producers in north Idaho's Nez Perce County, last August.

He still had a market for his wheat.

With world markets awash in high quality wheat and bare bones prices, there were few places to go with low falling number wheat. Usually low FN grain is confined to small local areas or a few varieties with less FN stability, but in 2016 it was a widespread problem in northern Idaho, affecting a lot of wheat. Even the grain consolidators couldn't just blend it away.

Desperate growers attending an Idaho Farm Bureau grower information meeting in Greencreek, ID, asked questions about variability in the Hageberg Falling Numbers test, the lack of consistency and repeatability between labs, and variation between how discounts are applied by the elevators. A panel of experts on these issues answered many questions but did little to relieve grower's angst.

Unhappy wheat growers attend the Farm Bureau's Greencreek Grower Information meeting on the falling numbers crisis in September 2016

In grower circles, the Hageberg Falling Number test (Official test for viscosity) is considered notoriously inconsistent when conducted improperly. Simple actions like scraping down the sample tube, calibration of the instruments for barometric pressure, knowing the boiling temp of the water, or how the grain sample is pulled and ground, even the quality of the water used, affect the FN test results. While variations are not statistically large, their impact is great. Grain buyers draw a line at 300 seconds; FN results below that point have price discounts applied. "At a cent per second below the target level, the discounts add up, especially on $4.00 wheat," one producer pointed out. "It is one thing when the discount is on $7.00 wheat and another when it's on $4.00 wheat."

Growers wanted to know how Idaho's grain testing service labs were set up and how they compared to other FGIS labs. Most of Idaho's wheat is tested for FN in one of two labs, depending upon its destination market.

Idaho Grain Inspection Service

Idaho Grain Inspection Service (IGIS), located in Pocatello, ID, near the rail and truck routes to Ogden, Utah, grades grain produced south of the Salmon river and flowing east or south to domestic markets. It is a designated Federal Grain Inspection lab, operated as a collaboration between the Idaho State Department of Agriculture and the federal Grain Inspection, Packers and Stockyard Administration (GIPSA). The lab is authorized by GIPSA to provide official grain testing services, including FN testing, on their behalf. Like all designated partner labs, IGIS operates under the uniform, official U.S. grain standards and procedures.

IGIS technicians are state employees, but are trained and monitored by the Federal Grain Inspection

Continued on next page

Service (FGIS), ensuring they carefully follow testing procedures. As a designated facility, the lab participates in a monthly FGIS Check Sample program to verify their test results are consistently within allowed tolerances. Employees also attend an annual week-long refresher course at the FGIS location in Kansas City, MO.

Jim Simpson, Chief Inspector at IGIS, explained the importance of following all the procedures in the FGIS Directive 9180.38 (5/2013), particularly those related to how the test sample is pulled from the main load of grain. "We've been doing this for a long time, one thing we've learned is to take the time and carefully follow the sampling procedure laid out in the FIGS directive. How a truck, bin, or rail car is sampled can make a big difference in how representative the sample, and therefore the test result, is of the whole lot of grain".

Simpson's team understands the strain a wide-spread low FN issue puts on the grain chain. They understand the important role FN testing has in minimizing the impact of a crisis on mills and bakers. Simpson described how month-long rains in August 2016, hit just at the peak of harvest in southern Idaho. Most of the wheat crop from that point on had very low falling numbers due to rain-damaged grain. "It was a disaster that just kept getting worse every day. The lab was overwhelmed. Once it was out we had an FN problem, we were testing every load crossing the border." This experience prompted the lab to improve capacity and efficiency, including purchasing three new FN machines. "Now, we have a lot more capacity to run FN tests," Simpson concluded.

Lewis Clark Terminal

At one time, Idaho had two FGIS designated labs, one at the Port of Lewiston in North Idaho, testing for grain flowing west to the export market, and the one in Pocatello, ID. In January 2011, the FGIS designated lab at the Port of Lewiston was closed. FGIS couldn't find a qualified private partner to take over the lab when the current private partner retired. It was a huge risk barging grain to the Port of Portland without a grading ticket to assure protein, test weight, moisture, and falling number met buyer's specifications. Elevators and producers began to look for options.

Lewis Clark Terminal (LCT), now jointly owned by CHS Primeland, Pacific Northwest Farmers Co-op, and Uniontown Co-op, was persuaded to establish an in-house quality lab at their facility in the Port of Lewiston. Grain from 40 county elevators, across 17,000 square miles of the Palouse and Camas Prairie, flows into LCT. Each load of grain coming into the barge loading facility is sampled and graded following the procedures defined in the FGIS Directive 9180.38 (5/2013).

Jack Trautman, LCT Quality Lab Manager, explained, "We are not a GIPSA Designated lab, but we try to follow their procedures as closely as possible." Mr. Trautman worked for FGIS in Jamestown, ND, for 24 years before setting up the LCT quality testing lab. "What is important for our customers is that our falling numbers, test weights, or proteins match what the FGIS lab at the Port of Portland gets when the grain is tested there. I regularly send check samples to the FGIS lab for testing to see how close we are to their numbers.

Melanie, the extension agent calls Will:

"Hey, Will, been thinking about your problem. You might get it retested. At cereal school, I heard there could be a 30 seconds variation on those tests. Have'em send the sample over to the Idaho Grain Inspection Lab in Pocatello.

"That's a ways to go, why not one of the local elevators?" Will asked.

"The Pocatello lab is a Designated Federal Grain Inspection lab" Mel responded.

"So?" Will grumped, still upset about the discount he took on a good crop of wheat.

"They're an official testing lab and are closely monitored by FGIS. You might get a higher test result the second time around," Mel offered.

Will said sarcastically, "Yah, I might get an even lower test result too."

"I suppose that's true and as a rule the elevator will take the second test result," Mel conceded.

"Who made that rule anyway?" Will quipped.

It's our own check sample program. We keep pretty close to them even with the difference in elevation," Trautman explained.

Trautman also emphasized how important proper training is when running FN tests. LCT technician, Jesse Cervantes, attended the Falling Numbers Technical School offered this spring at the Wheat Marketing Center in Portland. Cervantes offered "It was time and money well spent. I learned how to troubleshoot problems with equipment and confirmed our procedures are correct. We're doing a good job here."

LCT is committed to training personnel and helping producers understand how testing is done, what it means, and why it is so important to buyers. "We encourage producers to make an appointment. We'll walk them through the whole process and explain things as we go. We want our customers to be confident in our test results," said Mr. Trautman.

Wheat growers in Idaho may have hoped for a foolproof new test to replace the Hageberg FN test, but it is here to stay for a while longer. GIPSA and FGIS are in the process of revising the FN directive to improve the consistency and reliability of the current test. Idaho's labs are investing in training technicians and increasing capacity to run FN test. "Both of Idaho's main FN testing labs are working hard to provide consistent, repeatable Falling Number test results to Idaho's wheat industry," commented Cathy Wilson, IWC Director of Research Collaboration.

"Harvest 2017 is turning out to be pretty good, with no Falling Numbers issues. But low FN is a problem that doesn't away for long. Idaho's wheat industry needs to keep the pressure on researchers and GIPSA to find solutions to the low FN issue. Growers need real answers to reducing FN losses."

Jesse Cervantes, Lewis and Clark Terminal technician, runs an FN tst during the Falling Number Technical school at the Wheat Marketing Center in Portland, OR

Columbia Grain Focuses on Success

Columbia Grain Inc. was formed nearly 40 years ago with an ambitious vision in mind – to create a superior source of western grain to serve domestic and export markets.

In the years since, it has turned that vision into reality.

The goal has always been to develop an advanced grain-trading organization, not only in the storage and shipping of grain but also in the quality and reliability of its products, expertise and customer service.

Today, CGI is one of the highest volume wheat exporters in the Columbia River District and the largest handler and exporter of pulses in the U.S.

"CGI currently serves end-users not only throughout the United States but in over 70 countries worldwide," said Randy Olstad, CGI vice president and general manager for the PNW region.

Such accomplishments demand innovation and investment, and CGI has not been a stranger to either. It's invested in both technology and facilities to provide better customer service.

In addition to acquiring more than 45 grain handling facilities across Washington, Idaho, Montana, North Dakota and Minnesota over the years, CGI also initiated an expansion at the Port of Portland in 1978 and has updated its export facility there twice since its construction in 1976.

The company operates through two high-capacity export elevators at West Coast ports with its ownership in Pacificor. It owns two barge-loading facilities on the Snake-Columbia River system, and has seven pulse processing facilities and four seed processing facilities across its growing areas.

An industry leader in delivering quality grains, pulses and oilseeds in the U.S. and around the world, the company has made the technology and facility upgrades needed to compete in such a diverse and wide-ranging market environment.

All told, the company has 1.2 million metric tons of total storage capacity, and continues to invest in infrastructure, Olstad said.

Most recently, the company invested in its processing facilities for pulses and completed a joint venture with Montana Specialty Mills to build a state-of-the-art crush plant in Great Falls for oilseed processing.

Idaho operations

Here in Idaho, CGI has nine locations and almost 6 million bushels of licensed capacity.

"CGI has an established footprint here covering the most productive dryland and growing acres in northern Idaho and supports farmers producing not only wheat but also peas, lentils, garbanzo beans and canola," Olstad said.

Going forward, CGI is focused on taking care of the needs of growers to gain them the most returns from their land.

"The key to this is diversification, and northern Idaho is well suited for this," he said.

Crops such as peas, lentils, chick peas, canola, malt barley and hard red and soft white wheat are all viable crops for the region that add diversity to growers' operations, he said.

For example, canola from the PNW is expected to help supply the new crush plant and refinery under

construction at Great Falls, Mont., as part of the recently completed joint venture between CGI and Montana Specialty Mills.

The more diverse the grower is, the less he's susceptible to market risks – as opposed to having all his eggs in one basket. Not only is it more economically sustainable, it's also more environmentally sustainable, he said.

"It's better on the land and more profitable for the grower. We help producers identify best management practices, and diverse rotations are very important in that. That's why we support multiple grains and legumes," he said.

In the mix of crop rotations, supply levels change year to year and CGI is there to help producers identify trends to take advantage of the opportunities.

"Wheat seed treated with zinc will be available to CGI growers this year"

"Our goal is to keep our producers profitable. If they're profitable, we'll have a long-lasting business with them," he said.

That also means being prepared to receive the mix of commodities and volumes producers are growing, which changes every year.

"We try to be innovative enough to handle that efficiently and profitably," he said.

In the grain arena, with combines getting bigger, that means looking at ways to unload trucks faster and provide additional storage.

In a crop like peas, it means having the proper storage facility – such as wood bins -- available to maintain the integrity of the product before processing. Concrete is more abrasive than wood, and concrete silos are taller than wood bins, which would result in a steeper drop and more potential for damage.

"With our seed program, we have a pretty good idea of supply and adjust storage needs for handling additional commodities. We are always looking at places to increase efficiencies," he said.

Speaking of seed

CGI has three certified seed processing plants and has invested in all of them in the past few years, and a newly built plant will be operational this fall.

"We've definitely expanded on that program. It's extremely important for our producers and for us," Olstad said.

CGI grows its own seed in southern Idaho and eastern Washington, conditions and treats it and sells it to its producers.

"We work closely with seed companies on what's going to be the next best varieties. We look to see what's going to be the best out there and promote it to growers," he said.

The company also pays attention to the latest research in seed treatments and puts those treatments to the test before releasing them to growers.

For example, research has shown that zinc is significantly deficient across the entire PNW and it provides benefits to all of the crops grown in the area. Zinc is most valuable to the plant at the seedling stage and therefore is most efficiently supplied as a seed treatment, he said.

"Research through some of our partners in the area has proven the value of added zinc in the form of seed treatment," he said.

Wheat seed treated with zinc will be available to CGI growers this year, he said.

Seed that produces crops with improved quality and yield and reduced disease is what CGI strives to provide for its producers, and the resulting high-quality product is what it strives to provide for its customers, he said.

Continued on next page

Wheat is a prime example. High-quality milling wheat is critical for selling the grain to Pacific Rim customers. CGI promotes seed that will produce high-quality milling wheat at the highest possible yields to support growers' success.

U.S. wheat is a high-dollar product, bringing a premium for growers, and CGI wants to continue the trend of making it better, he said.

U.S. Wheat Associates and the Wheat Marketing Center -- which do a "tremendous job" promoting U.S. wheat -- set grades and standards, he said.

"We take that into consideration in what we sell to our growers because we don't want to lower the bar," he said.

CGI is a partner with growers in the goal of producing high-quality milling grain in the PNW.

"They're raising grain for a specific customer, and if we can match needs and supply, they should be able to command a quality price. We communicate that to the grower," he said.

Grower support

In addition to providing quality seed and agronomic support, CGI gives producers access to customers all over the world and helps them develop marketing plans to align their production with opportunities.

"We contact growers on a daily basis and help with marketing plans and marketing. We want them to be in the top 80 percent of pricing," Olstad said.

CGI's many sub-terminals keep the company in direct contact with producers and dealers to constantly monitor crop conditions and keep CGI merchandisers in Portland aware of production and quality forecasts. Together with the infrastructure to get product to market and knowledgeable staff, CGI is able to help producers get top dollar for their commodities.

Every operation is a little different, with a different breakeven point. CGI offers many hedging tools to fit the situation and works with growers to maximize their profits, he said.

"We break it all down across multiple commodities and spreadsheets," he said.

Each grower is different, and each commodity is different with different costs structures. CGI factors in world supplies and helps guide growers through all the factors to help them put together a viable marketing plan, he said.

"We wouldn't be here without them. The more you can work together and help each other, the more we'll both be successful," he said.

About Columbia Grain

Owner: Marubeni, a Japanese trade company
Employees: 280 total, 61 in PNW, 13 in Idaho
Headquarters: Portland, Ore.

Regional offices: Clarkston, Wash.; Great Falls, Mont.; Minneapolis, Minn.
Export Elevators (in partnership with Pacificor): Columbia Export Terminal, Port of Portland, and Kalama Export Terminal, Port of Kalama

Grain Elevators (non shuttle):
Idaho -- Big Butte, Cottonwood, Craigmont, Fenn, Grangeville, Nezperce and Russell Ridge
Montana -- Belgrade, Choteau, Conrad, Conrad (joint venture), Cut Bank, Fort Benton, Gildford, Great Falls, Havre, Meriwether, Three Forks, Whitetail & Wolf Point
Minnesota -- Shelly
North Dakota –Crete and Berthold (joint venture)
Canada -- Winkler, Manitoba
Grain Elevators (shuttle loaders):
Montana -- Carter, Harlem, Rudyard, Sweet Grass, Chester, Plentywood and Kasa Point
North Dakota -- Arvilla, Crystal, Oakes and Valley City

Pulse Processing:
Montana – Tiber, Chinook and Plentywood
North Dakota -- Ross, Walhalla and Merrifield
Washington – Wilma
Seed Processing: Grangeville and Nezperce, Idaho; Pullman, Wash.; Chester, Mont.
Barge Loaders: Central Ferry and Wilma, Wash.
Oil Crushing: Great Falls, Mont. (joint venture)
Agronomy Operations: Climax, Minnesota.; Larimore and Cummings, N.D.

Bulk Products:
Wheat -- northern spring, dark northern spring, hard red winter, soft white, club, western white, hard white and durum
Other -- corn, soybeans, feed barley, flax, malting barley, oats, yellow peas, lentils and canola

Bag/Bulk Products:
Dry edible beans -- garbanzo, pinto, black, red kidney, great northern and navy

Peas -- whole green, whole yellow, green/yellow split, Austrian winter

Lentils – brewers, crimson, laird, richlea, small brown, decorticated, pardina, estons and whole red
Other – rapeseed

Source: Columbia Grain, Inc.

Idaho Wheat Commission Sets FY18 Budget

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The Idaho Wheat Commission's fiscal year 2018 budget is down slightly from fiscal 2017 and provides $210,000 in funding for five projects aimed at helping growers solve the low falling number issue.

The IWC's five-member commission set the fiscal 2018 budget at $3.18 million, down 6 percent from the $3.38 million budgeted for the current fiscal year.

The 2018 budget includes $1.43 million for various research projects and it includes, for the first time, a significant amount of money for low falling number research.

Falling number tests measure wheat quality and growers get discounted for test results below 300.

IWC Executive Director Blaine Jacobson said the smaller budget this year is due to the commission having paid its final installment toward two $1 million University of Idaho research endowments.

Accounting for that, the budget actually increased $100,000 and most of that additional money went toward research, he said.

"Research is very vital to our industry," said IWC Commissioner Jerry Brown, a Southeast Idaho grower. "The only way we're going to be competitive in the world market is by spending some money on research."

The budget includes $213,271 for five new projects dealing with low falling numbers.

LFN problems in East Idaho in 2014 were caused by pre-harvest sprouting due to heavy rains and LFN issues in North Idaho last year were caused by late-maturity amylase.

"Both of those result in (LFN) and we've got projects that are addressing both of those," Jacobson said. "Hopefully, we can make some significant progress on this issue ... and get some solutions put together."

There's a lot the industry doesn't know or understand about LFN, Brown said.

"Low falling number is getting to be a real issue, especially if you're impacted by it," he said. "It can be very painful to people if it happens to you. That's an area ... we are going to continue to put some emphasis on down the road."

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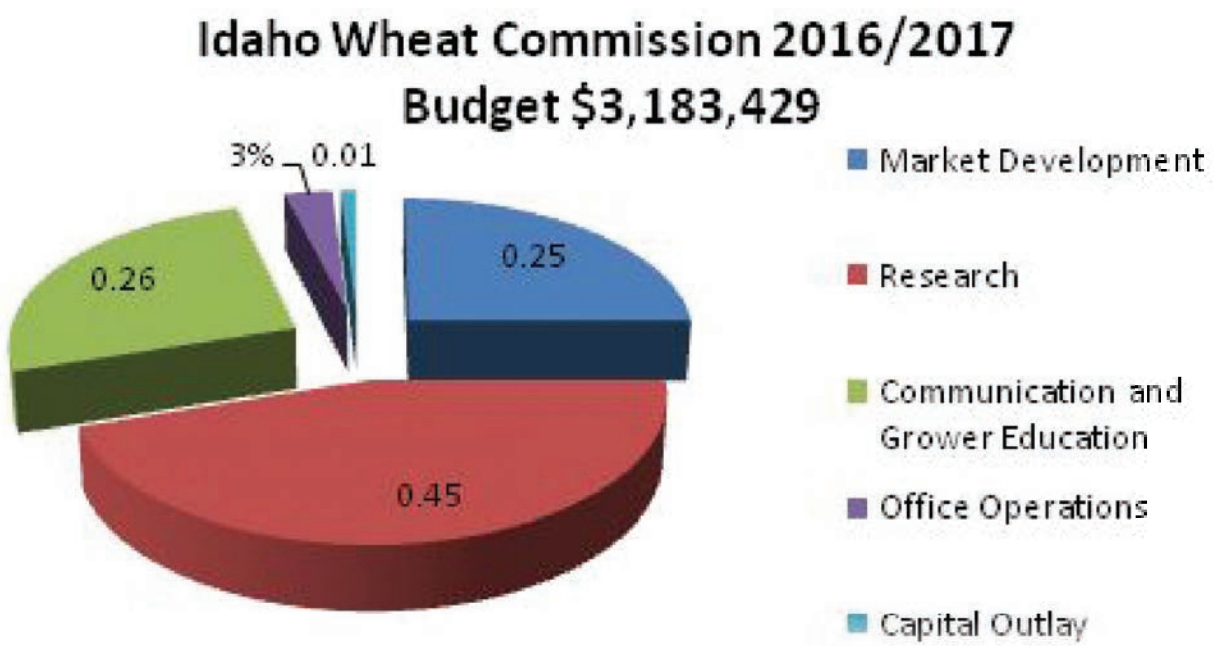

More research dollars were directed toward pest management projects this year, including $48,000 for a new wireworm control project.

The new budget includes $805,501 for market development projects.

That includes $25,000 to send sample containers of soft white wheat to millers in Peru as part of a cooperative project between Idaho, Oregon and Washington to encourage Latin American millers to blend in soft white wheat with hard red wheat when making tortillas.

More money was budgeted this year to host international trade teams because the commission is expecting five and maybe six teams to visit the state this year, up from three or four during an average year.

Commissioners approved $833,000 for projects and programs listed under grower communication and education, including $20,000 for a digital marketing specialist to revamp the commission's website and Facebook pages, produce video clips and develop digital platforms such as Twitter.

The budget includes $36,000 to help UI's Moscow breeding station purchase a new head row planter and $37,500 to help researchers in Aberdeen purchase a GPS-controlled auto pilot so their planting and harvesting can be more precise, Jacobson said.

Clark Hamilton Elected to Lead the Idaho Wheat Commission

Idaho Wheat Commissioners elected Clark Hamilton to serve as chairman during their budget meeting held in June.

Bill Flory was elected vice-chairman.

Clark operates a diverse 6,000 acre family farm in the Bonneville County area primarily producing wheat, barley, potatoes, alfalfa and peas. Over thirty years ago, he joined his father and other family members in running the operation.

Hamilton holds a bachelor's degree in plant science and a minor in biology from Utah State University.

"Genesee" Joe Anderson Re-Appointed to Idaho Wheat Commission

Governor C.L. "Butch" Otter recently announced his re-appointment of "Genesee" Joe Anderson, to the Idaho Wheat Commission (IWC).

Joe will continue to represent the wheat producers of district one, which includes Boundary, Bonner, Kootenai, Benewah, Latah, and Shoshone counties.

Anderson has been operating the family farm with his brother Jay since 1983. The Anderson brothers farm about 4400 acres owned and rented land in Latah and Nez Perce counties.

They raise winter wheat, spring wheat and barley, pulse and oilseed crops.

Idaho Wheat Loses Friend and Advocate

University of Idaho assistant professor of nutrition Samantha Ramsay was killed July 30th when she was struck by lightening while climbing in the Swiss Alps. Dr. Ramsay presented to wheat growers during the 2017 Cereal Schools in Lewiston and Greencreek, and was scheduled to be on the agenda at Burley, Pocatello, and Idaho Falls Cereal Schools in 2018.

In her Lewiston and Greencreek presentations, Dr. Ramsay pointed out that whole grains, including wheat, are packed with essential nutrients and vitamins needed for good health, especially in children and pregnant women. She noted that while only 1 percent or 2 percent of the population is allergic to wheat, the percentage of the population claiming to be gluten-intolerant is approaching 30%.

She said that many people are "self-diagnosing as a method to manage weight," and this can be dangerous to one's health because it puts a person at risk of poor nutrition.

When asked whether wheat products contribute to weight gain, Dr. Ramsay responded by saying that "It is a huge fallacy. The real challenge with weight is excess calories."

"Her ability to engage an audience and speak articulately and persuasively about the health benefits of wheat was outstanding. It is a big loss for the industry."

Dr. Ramsay said she is asked frequently if genetically engineered products are safe to eat. She said she trusts the abundant research that has been conducted showing GMO's safe to eat and that it is an "advancement in technology" that allows enough food to be produced to meet worldwide demand.

Several years ago Dr. Ramsay conducted research showing that whole grain products made from hard white wheat is preferred over whole grain products from hard red wheat, and that if children are offered whole grain products enough they will begin to prefer them.

"Samantha's wheat preference research was very good," said Blaine Jacobson, IWC Executive Director, "But her ability to engage an audience and speak articulately and persuasively about the health benefits of wheat was outstanding. It is a big loss for the industry."

Samantha Ramsay had taught classes at the University of Idaho since 2010. A memorial service was held in Moscow on August 19.

Lewiston — Ambassador to the World

Idaho wheat growers hosted four successful trade team visits this summer with wheat buyers from Taiwan, Chile, China and Vietnam visiting Idaho.

Many teams who visit Idaho remain under the radar, but consider these statistics: In the last three years, Lewiston area wheat growers have hosted 48 wheat buyers from eleven countries, and those countries represent 35% of the world's population. The wheat fields around Lewiston grow a soft white winter wheat that cannot be grown anyplace else in the world. The quality and consistency of Idaho's annual crop is what attracts wheat buyers here.

Taiwan milling executives see opportunity in visit to the Pacific Northwest

By Amanda J. Spoo, USW Communications Specialist

From research labs to the field to the grain elevator, each stage of the supply chain contributes to the overall quality and reliability of U.S. wheat. But in the Pacific Northwest, the major link between quality U.S. wheat and the world market is the Columbia Snake River System. When trade teams from overseas visit the United States to learn more about the U.S. wheat market, learning how the river system supports exports is a key part of their experience.

U.S. wheat growers welcomed a trade team of four milling executives from Taiwan that spent a lot of time along the river system from June 11 to 18. U.S. Wheat Associates (USW) collaborated with the Idaho Wheat Commission (IWC), Oregon Wheat Commission (OWC), and the Washington Grain Commission (WGC) to organize and host this trade team.

"On average, Taiwan is the sixth largest market for U.S. wheat. The millers on this team were interested in exploring additional options for purchasing U.S. wheat," said Boyuan Chen, USW Country Director in the Taipei Office. "Our schedule focused on the export system and sourcing practices, as well as programs for wheat breeding and quality assurance."

The team began its trip in Portland, OR, meeting with the USW West Coast Office and OWC for briefings on supply and demand, and crop conditions for hard red winter (HRW), soft white (SW) and hard white (HW) wheat.

Idaho Wheat Commissioner Bill Flory hosted the Taiwan Flour Millers at his farm in Winchester.

They continued their overview of the supply chain with tours of multiple port elevators and meetings with the USDA Federal Grain Inspection Service (FGIS) and the Wheat Marketing Center (WMC).

Next, the team traveled to Idaho and Washington where the two state wheat commissions worked together to focus on the team's interests. This included a visit to the USDA-ARS Western Wheat Quality Laboratory, and participation in a county field day where the team saw wheat breeding and quality improvement programs in the new wheat varieties across the test plots. The team also learned more about the value of the river system and how the 465-mile river highway is an essential lifeline that provides farmers from as far inland as the Midwest access to the global market.

"Trade teams that visit this area of the Pacific Northwest have the unique opportunity to see two land grant universities, many wheat related facilities and the river system all in close proximity," said Blaine Jacobsen, IWC Executive Director. "This is rich farmland where farmers are utilizing the latest technology to plant and care for the wheat that will move down river and on to family tables across Taiwan and all of Asia."

Always a highlight for visiting customers, the team also had the opportunity to visit with Washington and Idaho wheat growers.

"It's a wonderful opportunity for wheat growers to rub shoulders with their customers, and it's a great opportunity for buyers to learn more about the crop and the supply chain in the state of Idaho," said Bill Flory, Idaho wheat farmer and commissioner.

Chilean wheat buyers want more Idaho wheat

Asian buyers have long appreciated the qualities of soft white wheat from the Pacific Northwest. Building on that success, the Idaho, Oregon and Washington wheat commissions have been collaborating on ways to export more soft wheat to other markets in the world, particularly the growing markets of Latin America. Three years ago, the three states engaged the services of a well-respected milling consultant to visit mills throughout Latin America and show them how soft white wheat blended with hard red winter results in better quality flour tortillas and other products.

These efforts are beginning to come to fruition. Following a visit to Idaho and Washington during the month of June by four executives from major wheat-purchasing and flour-milling companies in Chile, one executive said, "We expect to increase our purchases in the PNW . People who are now buying in other origins indicated that they are going to look to Idaho/ Washington as an alternative."

Idaho wheat commissioner, Ned Moon, who helped host the team, said the tour by four Chilean millers was a "great success." It solidified relationships with two of the largest mills in Chile, who said they will be increasing their wheat purchases from the PNW moving forward.

It also sparked interest in Idaho wheat by a group called the "G9," a group of nine smaller millers in Chile who join together to purchase a larger quantity of wheat and get shipping efficiencies they otherwise could not. The G9 group does not currently buy PNW wheat, but they were impressed with our quality and the ability of the supply chain to meet an exact specification. "Hopefully, the visit by G9 will result in business as well," he said. The team had great questions and wanted to know everything about the wheat quality, the varieties and milling quality, Moon said. They were reassured about our ability to deliver a consistent supply. The wheat buyers visited farms, quality labs and river transportation facilities. They were able to see the entire process to understand growers focus on quality and how that quality is protected through the supply chain.

Chilean Trade Team at Lewis and Clark Terminal in Lewiston, Idaho

The visit by Chilean milling executives, sponsored by the Idaho Wheat Commission through grower check-off funds in collaboration with U.S. Wheat Associates, included stops at farms near Genesee and visits to CHS Primeland and Lewis and Clark terminal. The executives noted with interest the efficiencies of shipping wheat by barge to Portland for export.

Chile offers much opportunity for Idaho wheat, importing 850,000 metric tons annually. In 2016, the U.S. was the top supplier of those imports -- shipping 397,000 metric tons and capturing 46.5 percent of the market.

Chile is a sophisticated wheat food market, where bakers demand specific flour quality for a wide variety of products – which the domestic mills find difficult to deliver. The country has 72 mills, with a milling capacity of 2.9 million metric tons. Fierce competition among bakeries has forced the mills to invest in increasing product variety.

"We've always sent a lot of wheat to Asia, but now we're making inroads into South America also," Jacobson said. Hosting teams are important because customers want to come to Idaho to look at the crop and meet the growers, he said. Lewiston particularly presents itself well because of the river and the elevators situated to make use of it.

Idaho Wheat Growers Host Chinese Contracting for Value Team

Idaho wheat growers hosted a Chinese wheat team in Lewiston, Idaho June 25-28. The team was sponsored by U.S. Wheat Associates, working on behalf of Idaho wheat growers. Team members were part of a selected group of top Chinese buyers to participate in a Contracting For Wheat Value (CFWV) workshop hosted by Portland, Oregon based Wheat Marketing Center (WMC).

While in Lewiston, the team toured Lewis/Clark Terminal and Columbia Grain and visited Idaho wheat grower and Commissioner Bill Flory's farm in Winchester, Idaho. The team learned about cropping systems and wheat quality during their farm tour. "Our goal was to showcase Idaho's wheat production, and the care taken by farmers to deliver a safe healthy product using environmentally sustainable production practices," said Flory.

Continued on next page

Randy Olstad provided a tour of Columbia Grain to the visiting China team

Last year, China was the fourth largest buyer of U.S. wheat. They were the second largest market for Hard Red Spring wheat, second only to the Philippines and ahead of Japan. While China is self-sufficient in wheat production, its milling companies are buying U.S. wheat because of the high quality and superior functional protein. China is also buying Soft White wheat grown in northern Idaho, using it in the production of high quality Western Style sponge cakes and cookies.

Last year, China purchased 233,700 MT (8,586,138 bushels) of Soft White wheat, making it the tenth largest market. As more Chinese consumers enter the middle-class, they are demanding a wider variety of Western Style foods creating demand for superior quality wheat. The Contracting For Wheat Value workshop helped these buyers identify wheat quality and realize the full economic value.

Idaho Wheat Growers Welcome Vietnam Wheat Buying Team to Lewiston

Idaho wheat growers and industry representatives welcomed a team comprised of high level executives of the major wheat purchasing and flour producing operations of Wilmar International and its operations in Singapore, Vietnam and Indonesia.

The Vietnam team traveled to Lewiston, Idaho August 12-14, 2017. During their time in Lewiston, the team toured Lewis and Clark Terminal, and PNW Farmers Coop. Idaho wheat grower and Idaho Wheat Commissioner "Genesee" Joe Anderson provided a farm tour, and hosted a grower dinner for the team in Genesee.

This team represents experienced buyers who are directly responsible for procurement, importing and milling wheat for their operations in Vietnam and Indonesia. The procurement management based in Singapore, procures wheat for Wilmar's subsidiary mills in Malaysia, Vietnam, Indonesia and China. Milling operations are expanding into Myanmar as well.

"We enjoyed our discussions with these managers that helped to build knowledge about the U.S. wheat marketing system and the benefits of U.S. wheat," said Idaho Wheat Commissioner "Genesee" Joe Anderson. "We tried to provide this team with a better understanding of the quality wheat we grow in Idaho and the U.S., and gave them information about our marketing system so they can have the confidence in the US market to provide for their wheat requirements."

The team members represent Wilmar's buying division in Singapore, the head of Wilmar's flour milling operations in Indonesia, and the head of Wilmar's flour milling operations in Vietnam, as well as the head of quality control, quality assurance and R&D for Wilmar's flour milling operations in Vietnam.

Wilmar International Limited, founded in 1991 and headquartered in Singapore, is today Asia's leading agribusiness group. Wilmar is ranked amongst the largest listed companies by market capitalization on the Singapore Exchange.

Wilmar's flour milling operations in Asia are estimated to utilize approximately 5 MMT of wheat annually, with approximately 2 MMT required for operations in the ASEAN (Association of South East Asian Nations) Area of countries, which includes operations Malaysia, Vietnam and Indonesia. Other operations in East Asia are located across China.

Vietnam operations include two mills with a total daily milling capacity of 1,550 MT, while Indonesia's operations have a total daily milling capacity of 3,000 MT across two milling sites. Expectations are both countries' milling capacities will expand further in the next three to four years.

Vietnam Team members helped bring in the harvest at "Genesee" Joe Anderson's farm

2015-2016 Idaho Winter Variety Performance Tests and 2014-2016 Yield Summaries

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Variety Testing

Idaho winter wheat varieties are evaluated each year to provide performance information to help growers select superior varieties for their growing conditions. The tests are conducted using farmer fields or university experiment stations, and the varieties are grown under conditions typical for crop production in the area.

Varieties are included in these tests based on their potential adaptation in an area and commercial use of a variety. Every attempt is made to include most varieties available to producers, although the number of entries is limited due to resource constraints.

Individual plots were planted as 7 rows spaced 7" apart or 5 rows spaced 10" apart for 14' to 25' in length and replicated 3 or 4 times in a randomized complete block design. Agronomic performance being reported is from 2016 data, summarized by state districts in Tables 1-6, and sorted alphabetically by variety name. Northern District results are presented in Table 1 and Western Idaho results are in Tables 2 and 3. Southern and Eastern Districts results are presented for irrigated trials in Table 4, and for dryland trials in Tables 5 and 6.

Information Summarization

Yield data are reported for individual sites while other agronomic data are averaged over all sites of each table. Bushel/acre yield results are based on 60 lbs/bu at 11% moisture. Lodging ratings are the percent of a plot area lodged, and in some tables not reported due to no or minimal lodging. Average values are presented at the bottom of listings and are followed by a least significant difference (LSD) statistic at the 5% level. Average yield data from variety performance trials in 2014, 2015, and 2016 are presented in Table 7 for all districts. These data represent results of 7-17 site/years and can be a good indication of long-term performance of a variety.

More detailed lodging information is available on the URL for UI cereals website http://www.uidaho.edu/extension/cereals/.

Information Interpretation

Average past performance of a variety is the best indicator available to predict future performance potential. Variety performance can vary from location to location and year to year. The results reported in this article are for 2016 trials; previous results can be found in the 1992 to 2016 issues of Idaho Grain Magazine or at the UI cereals website. Average performance over locations and years more accurately indicates a varieties' relative performance. Try to evaluate as much information as you can prior to selecting varieties. Yield is a primary characteristic used to select varieties, but disease resistance, maturity, lodging tendency, and quality characteristics such as test weight and plumpness are also important variety selection considerations. Also consider that plots are managed according to the average expected yield, the latest varietal maturity, and / or performance of the surrounding crop in a grower's field, and whether it was wheat or barley. Varietal performance may not reflect actual performance in your field when a specific variety is managed for optimal economic performance.

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Table 1. Dryland Winter Wheat Variety Performance in the Northern District near Bonners Ferry, Genesee, Moscow, Nezperce, Tammany and Tensed, 2015-2016

	Seed Yield						Average				
Variety	Bonners Ferry	Genesee	Moscow	Nezperce	Tammany	Tensed	Yield	Test Weight	Plant Height	Protein	Lodging
Soft White Winter		bu/acre					bu/A	lb/bu	Inches	%	%
Bobtail*	--	141	134	120	152	158	140*	58.9	38	9.7	0.0
Brundage 96*	--	116	114	108	140	127	121*	60.4	37	10.7	0.0
Bruneau	138	127	117	119	146	149	132	61.4	41	10.4	1.3
Coda (club)	112	105	100	106	125	123	112	61.6	41	11.1	5.4
Jasper	122	141	131	123	140	142	133	60.6	40	10.4	0.0
LCS Artdeco	134	130	120	113	159	155	133	59.6	35	10.2	0.0
LCS Biancor*	--	124	110	96	149	142	126*	60.2	33	10.2	0.0
LCS Drive	108	124	111	96	147	133	120	59.7	32	10.7	0.0
Madsen	125	120	116	104	130	133	121	61.1	38	11.0	0.0
Norwest Duet	129	126	125	128	150	146	134	61.5	44	10.4	0.0
Puma	112	120	109	110	135	139	120	60.5	41	10.6	0.0
Stephens	115	114	113	108	137	134	120	60.5	38	10.9	0.0
SY 107	119	122	106	99	145	131	121	60.5	37	10.5	0.0
SY Ovation	122	109	111	104	146	149	122	60.9	38	10.6	0.0
UI Castle CL+	127	124	117	109	136	132	124	61.4	39	10.7	0.0
UI Magic CL+	108	119	114	96	142	139	119	61.7	36	11.1	0.0
UI Palouse CL+	107	116	117	103	132	130	117	60.0	36	11.0	0.0
UI Sparrow	136	141	129	118	136	143	134	59.4	42	10.0	0.0
UI/WSU Huffman	136	124	112	113	136	147	128	61.2	40	10.7	0.0
WB-1529	119	100	105	104	146	134	117	62.2	37	11.1	0.0
WB-1604	116	114	114	99	147	133	120	61.2	36	11.0	0.0
WB-456	113	113	112	91	136	131	115	62.3	37	11.6	0.0
WB-528	130	120	113	115	147	136	126	61.7	39	10.8	0.0
WB-Junction	127	120	116	114	146	142	127	61.5	38	10.6	0.0
WB1376 CLP	111	105	95	94	127	116	108	63.1	38	12.1	0.0
Trial Average	123	120	114	108	141	138	124	61.1	38	10.8	0.3
LSD (0.05)	19	8	9	10	8	13	5	0.4	0.8	0.3	1.5
Hard Winter											
Keldin	91	116	114	101	150	137	118	62.0	39	11.5	0.0
LCS Colonia	110	121	129	113	138	153	126	59.4	36	11.3	0.0
LCS Jet	117	134	136	118	144	157	134	61.2	37	11.6	0.0
Norwest 553	103	114	108	111	135	137	118	62.1	34	12.1	0.0
UI Silver (w)	98	106	120	106	119	130	113	60.3	41	11.6	37.9
WB-Arrowhead	87	117	116	108	132	125	114	61.2	42	11.9	0.4
Whetstone	79	101	101	95	131	125	104	62.0	38	12.5	0.0
Trial Average	96	113	112	105	135	133	115	61.3	38	11.9	3.3
LSD (0.05)	12	7	7	7	9	12	5	0.4	1	0.2	3.0

*Bonners Ferry not included in averages for these varieties
(W) = Hard white

Table 2. Irrigated Soft White Winter Wheat Variety Performance at Parma 2016

Variety	Yield Average	Test Weight	Heading date	Height	Lodging	Protein
	bu/acre	lb/bu		(in)	%	(%)
Bobtail	141	57.1	5/9	38	45	11.1
Goetze	123	54.1	5/9	40	16	12.0
Jasper	145	59.2	5/2	42	15	10.6
Kaseberg	140	57.8	5/17	39	21	10.1
Ladd	140	57.4	5/9	39	1	11.5
LCS Artdeco	158	56.9	5/9	39	1	10.3
LCS Biancor	142	57.8	5/17	34	0	10.9
Legion	127	57.6	5/9	43	63	10.5
Mary	118	57.0	5/9	39	51	11.5
Puma	122	58.8	5/9	44	71	10.9
Rosalyn	146	58.7	5/9	40	28	10.6
Skiles	127	58.1	5/9	39	30	12.0
Stephens	95	56.2	5/9	39	48	11.2
SY Ovation	156	59.7	5/9	43	4	10.7
UI/WSU Huffman	133	58.9	5/17	43	8	10.7
WB Trifecta	138	59.6	5/17	41	18	11.0
Average	131	57.7	5/10	41	30	11.2
LSD (α = .05)	17	1.8	--	2	39	0.9

Table 3. Irrigated Hard Red & White Winter Wheat Variety Performance Parma 2016

Variety	Yield Average	Test Weight	Heading date	Height	Lodging	Protein
	bu/acre	lb/bu		(in)	%	(%)
Bobtail	144	58.3	5/9	38	5	9.8
Keldin	156	62.3	5/9	41	0	10.1
LCS Aymeric	167	58.0	5/9	34	0	9.7
LCS Azimut	155	58.1	5/9	34	0	10.7
LCS Colonia	145	58.7	5/23	38	0	10.6
LCS Evina	148	61.6	6/2	46	0	11.4
LCS Jet	168	61.0	5/9	40	0	10.5
Norwest 553	157	60.9	5/9	38	0	10.6
SY Clearstone CL2	138	61.2	5/9	45	50	10.6
UI Silver (W)	141	61.5	6/2	43	90	10.2
WB Arrowhead	154	62.1	5/9	44	3	10.9
Whetstone	143	61.9	5/9	42	3	11.2
Average	148	60.7	5/14	40	6	10.8
LSD (α = .05)	14	0.9	--	2	15	0.9

Table 4. Irrigated Winter Wheat Variety Performance in Eastern & Southern Districts at Kimberly, Rupert, Aberdeen 2015-2016

Variety	Kimberly	Rupert	Aberdeen	Average	Test Weight	Spring Stand	Heading date	Height	Lodging	Protein
Soft White Winter	bu/acre				lb/bu	(%)		(in)	%	(%)
Bobtail	137	92	143	124	57.3	97	5/25	37	25	9.7
Brundage	123	89	54	89	57.9	97	5/20	39	6	10.1
Bruneau	149	87	125	120	58.9	96	5/27	39	27	9.5
Jasper	156	84	147	129	58.3	97	5/25	40	15	9.7
LCS Artdeco	136	102	137	125	58.2	98	5/20	37	12	9.0
LCS Biancor	128	102	146	125	58.5	98	5/23	34	12	9.1
LCS Drive	149	106	173	143	57.8	99	5/19	35	0	9.1
Madsen	131	80	105	105	58.4	98	5/28	39	24	9.8
Norwest Duet	141	86	147	125	59.4	98	5/27	43	23	9.8
Norwest Tandem	141	91	151	127	59.0	99	5/23	38	7	9.9
Stephens	137	80	112	110	58.0	98	5/23	38	21	10.3
SY Assure	149	96	160	136	60.7	98	5/18	37	19	9.7
SY Ovation	147	103	155	135	59.2	99	5/23	38	18	9.4
UI Castle CL+	128	86	136	117	59.5	98	5/27	39	28	10.0
UI Magic CL+	128	93	114	112	59.4	97	5/22	37	14	9.2
UI Palouse CL+	134	85	123	114	58.4	97	5/25	38	10	10.5
UI Sparrow	153	78	125	118	57.1	98	5/29	42	28	10.4
UI/WSU Huffman	138	80	129	116	57.7	95	5/27	39	24	9.9
WB 456	142	91	135	123	61.4	98	5/19	38	13	10.1
WB-528	151	99	135	128	59.9	99	5/21	38	22	9.5
WB1376CLP	138	90	135	121	62.1	98	5/22	40	0	10.2
WB1529	145	104	135	128	61.6	98	5/22	38	17	9.8
WB1783	147	94	185	142	62.0	98	5/24	40	8	9.6
Average	141	90	137	123	59.2	98	5/23	38	18	9.8
LSD (α = .05)	23	9	19	10	0.8	1.6	1.1	1.8	10.1	0.9
Hard Red and White (W) Winter										
Colter	153	92	99	114	58.0	97	5/25	42	33	13.0
Garland	147	74	57	93	55.5	97	5/27	30	4	14.0
Greenville	159	84	110	118	57.5	99	5/23	34	2	12.6
Judee	161	70	116	115	59.4	98	5/23	40	34	14.4
Keldin	162	103	102	123	60.8	98	5/22	38	26	12.2
LCS Colonia	147	87	113	116	56.6	95	5/27	38	23	13.6
LCS Jet	169	100	165	145	59.3	97	5/22	37	10	12.3
Loma	166	89	114	123	59.0	95	5/26	38	32	13.5
Manning	143	74	97	104	58.0	97	5/23	42	49	13.3
Northern	158	76	107	114	57.8	97	5/28	41	27	13.3
Norwest 553	162	94	150	136	60.2	98	5/22	36	4	13.4
SY Clearstone CL2	145	80	102	109	59.0	92	5/24	43	28	13.2
UI Silver (W)	160	79	86	108	58.5	97	5/25	42	32	13.3
Utah 100	163	70	107	113	56.2	95	5/28	47	12	13.2
Warhorse	140	63	114	106	59.6	97	5/24	40	24	14.9
WB3768 (W)	155	75	104	111	59.2	93	5/28	45	23	13.2
Whetstone	169	90	107	122	59.9	97	5/19	42	22	13.4
Yellowstone	166	88	109	121	59.4	97	5/25	43	22	13.3
Average	157	84	113	118	59.0	97	5/23	39	23	13.3
LSD (α = .05)	15	11	13	8	1.1	5.6	1.2	1.6	12.4	1.0

Reported small differences among varieties in yield and other characteristics are usually of little importance due to chance differences that occur in the tests due to environment or other factors. Utilize the LSD statistic to determine the true difference between varieties. If differences between varieties are greater than the 5% LSD value, the varieties are considered "significantly different." This means that there is a 95% chance that the reported difference between varieties is a true difference and not due to other experimental factors or chance variation. If no significant differences are determined for a trial, n.s. is used in place of the LSD.

Table 5. Dryland Winter Variety Performance in Southern Idaho 2016

	Ririe	Soda	Average	Test Weight	Spring Stand	Heading Date	Height	Protein
	bu/acre			lb/bu	(%)		(in)	(%)
Soft White Winter Wheat								
Bobtail	41	92	63	55.1	96	6/13	26	9.7
Bruneau	41	92	63	58.2	96	6/12	29	9.8
Eltan	42	---	---	59.0	100	6/10	25	8.6
Jasper	51	99	72	55.7	97	6/11	29	10.3
Madsen	39	90	61	58.5	97	6/13	28	10.6
Norwest Tandem	45	91	65	58.3	97	6/10	28	9.9
Otto	50	---	---	59.0	100	6/12	26	9.4
Stephens	45	79	56	56.8	96	6/9	27	11.2
SY Ovation	55	---	---	60.4	100	6/5	27	11.0
UI Castle CL+	45	92	65	58.4	98	6/12	28	10.2
UI Magic CL+	42	88	62	58.5	96	6/9	27	10.6
UI Palouse CL+	44	80	59	57.4	97	6/11	27	11.4
UI Sparrow	46	92	66	57.0	96	6/14	31	9.0
UI/WSU Huffman	45	88	63	56.7	96	6/13	28	10.4
WB1376CLP	43	90	63	61.6	96	6/9	30	11.6
WB1783	50	---	---	61.8	100	6/5	25	10.2
Average	44	93	58	58.6	98	6/10	27	10.2
LSD (α = .05)	8	15	8	0.9	1	1	2	1.6

Table 6. Dryland Hard Winter Wheat Variety Performance in Southern Idaho 2016

	Rockland	Ririe	Soda Springs	Average*	Test Weight	Spring Stand	Heading Date	Height	Protein
	bu/acre				lb/bu	(%)		(in)	(%)
Hard Winter Wheat									
Bearpaw	21	32	---	27	62.0	95	6/1	25	11.7
Colter	49	42	92	58	59.9	95	6/7	30	11.1
Curlew	47	48	---	47	62.5	99	6/2	32	10.8
Deloris	33	42	---	38	62.7	99	6/4	30	10.9
Eltan (SWW check)	33	42	---	38	60.1	97	6/7	27	9.6
Garland	31	37	64	42	59.5	95	6/8	22	11.2
Golden Spike (W)	42	46	---	44	61.5	98	6/2	29	10.7
Greenville	43	39	80	49	60.3	97	6/6	24	10.0
Judee	43	41	85	54	62.1	97	6/4	30	12.1
Judee/Garland	38	39	---	39	62.3	98	6/1	27	12.0
Juniper	50	43	---	47	62.3	99	6/3	37	12.1
Keldin	48	51	103	64	62.4	96	6/4	32	10.0
LCS Colonia	33	39	97	53	58.1	97	6/8	28	11.4
LCS Jet	61	48	---	55	59.3	99	5/31	25	10.3
Loma	39	39	92	53	61.2	96	6/8	28	11.1
Lucin-CL	33	41	---	37	62.5	98	6/4	31	12.4
Manning	47	41	86	55	61.4	97	6/6	32	10.8
Northern	45	45	79	54	60.2	96	6/8	28	11.9
Norwest 553	55	39	100	61	61.2	96	6/4	27	10.8
Promontory	48	43	---	46	63.2	96	6/1	30	11.6
SY Clearstone CL2	47	49	97	61	61.3	97	6/5	33	10.6
UI Silver (W)	54	47	91	61	62.0	97	6/7	30	10.2
UI SRG	52	45	---	49	61.5	99	6/3	33	11.0
UICF Grace (W)	50	41	---	46	60.5	98	5/28	38	10.9
Utah 100	56	43	84	59	60.3	98	6/8	34	10.7
Warhorse	41	36	98	55	61.7	98	6/6	29	11.9
WB3768 (W)	47	46	89	58	61.6	97	6/9	33	10.5
Yellowstone	48	46	101	62	61.3	96	6/6	32	11.1
Average	43	42	91	51	61.3	97	6/4	30	11.2
LSD (α = .05)	6	7	13	5	0.6	2	1	1	2.2

*Averages are across two or three locations.
(W) = white

Further Information

Variety performance information for winter wheat and winter barley has been published in the fall issues of Idaho Grain Magazine and on the University of Idaho Cereals website: http://www.uidaho.edu/extension/cereals/. Additional information is available on the University of Idaho catalog website: http://www.cals.uidaho.edu/edcomm/catalog.asp. In addition, publications are free through the University of Idaho Agriculture Publications (ph. 208-885-7982) or contact your county Extension Office.

Table 7. 2014-2016 Winter Wheat Variety Average Yield Perforamance

	Northern District	Southern/Eastern District	
	Rainfed	Irrigated	Dryland
Site/years	17	9	4 soft, 8 Hard
	Yield (bu/A)		
Soft White Winter			
Bobtail*	104	143	64
Brundage	-	123	31
Brundage 96*	97	-	-
Bruneau	107	137	60
Eltan	-	-	51
LCS Artdeco	107	138	-
LCS Biancor	-	140	-
LCS Drive	102	143	-
Madsen	96	127	57
Otto	-	-	57
Puma	102	-	-
Stephens	98	129	55
SY Ovation	-	146	66
UI Sparrow	104	139	64
UI/WSU Huffman	103	134	52
WB 456	-	130	-
WB-1529	98	138	-
WB-1604	97	-	-
WB-528	-	140	-
WB-Junction	106	-	-
WB1376CLP	91	-	-
Average	101	136	54
LSD (α =.05)	3	6	5
Hard Red and White (W) Winter			
Bearpaw	-	-	38
Curlew	-	-	51
Deloris	-	-	45
Garland	-	118	42
Golden Spike (W)	-	-	45
Greenville	-	133	46
Judee	-	124	50
Juniper	-	-	48
Keldin	104	138	-
LCS Colonia	103	133	49
LCS Jet*	113	152	-
Lucin-CL	-	-	46
Manning	-	121	50
Norwest 553	94	140	46
Promontory	-	-	46
SY Clearstone CL2	-	-	56
UI Silver (w)	91	-	56
UI SRG	-	-	47
UICF Grace (W)	-	-	44
Utah 100	-	125	51
WB-Arrowhead	97	-	-
WB3768 (W)	-	130	52
Whetstone	-	133	40
Yellowstone	-	135	54
Average	100	132	48
LSD (α =.05)	3	5	3

*Only 15 or 16 site years in Northern Idaho

2016-17 Idaho Barley Commission in Review

2016/17 offered many challenges and opportunities for the Idaho barley industry. We started the year with a cut in malting contract prices and volumes due to excessive inventories. Fortunately our desirable location to processing plants and excellent growing conditions meant that Idaho producers took smaller cuts than producers in neighboring states.

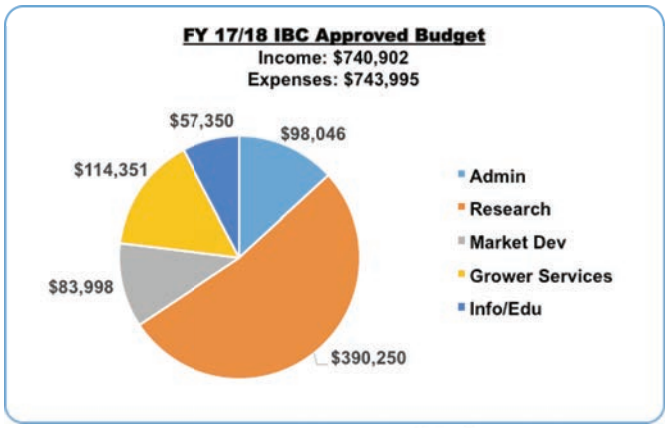
Many producers faced unanticipated costs and tricky harvest logistics when required to store last year's crop well beyond the end of the normal marketing year due to the clogged supply pipeline. Producers met these challenges with tenacity and ingenuity – hallmarks of the strong character of our excellent barley producers across the state.

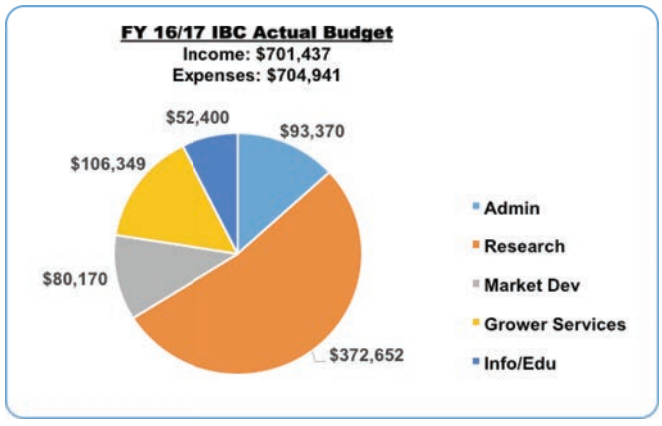
The Idaho barley industry has been resilient In the face of these curveballs. This year we estimate that Idaho will produce at least 35 percent of the total U.S. barley crop.

Looking down the road we see many promising opportunities for Idaho barley, with the expansion of the Great Western Malting Co.'s processing plant in Pocatello and expansion of food barley acres in both northern and southern Idaho.

The IBC board is currently engaged in an in-depth strategic assessment of future research and marketing investments that will continue to build on this exciting momentum. Our board is governed by three producers and one industry representative. Pat Purdy, District 2 Commissioner is currently serving as Chairman and in his 6th and final year on the board.

Wes Hubbard, District 1 producer from Bonners Ferry is in his 2nd year on the board and is currently serving as Vice Chairman. The other two board members were recently reappointed to serve a second term - Scott Brown, District 3 Commissioner from Soda Springs and Tim Pella, industry representative and Anheuser Busch facilities manager in Idaho Falls.





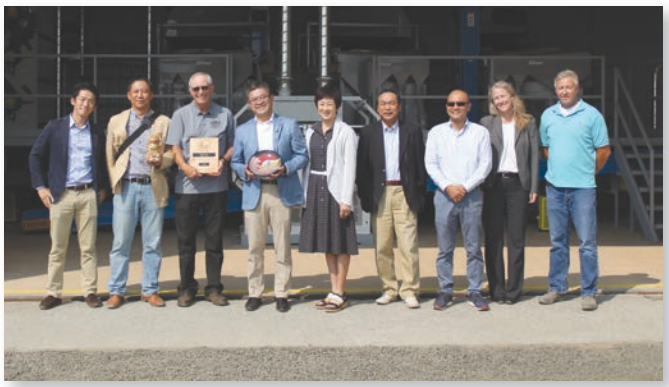
Idaho Barley Targets Craft Brewers and Food Manufacturers

IBC worked closely with key industry partners this year to increase Idaho grown barley malt sales to the craft beer manufacturers across the Western U.S. and Mexico. In an entirely different marketing channel, we have partnered with McKay Seed, PNW Farmers Cooperative and Thresher to expand food barley sales to Asian food manufacturers. Both marketing campaigns are paying dividends.

For the third consecutive year, IBC hosted a **Craft Brewer Barley Short Course** in eastern Idaho. We are the **#1 barley producing state**, with a very large base of two-row malting barley production desired by craft brewers. Eastern Idaho is home to three highly efficient malt processing facilities: Great Western Malting Company's newly expanded plant in Pocatello and two malt plants operated by Anheuser Busch in Idaho Falls. It is important to note that our two largest buyers of Idaho malting barley – Anheuser Busch and MillerCoors – are actively engaged in craft brewing. In fact, MillerCoors' Blue Moon brand is one of the top selling craft beers in America.

Food barley on the rise…After several years of modest growth in north Idaho, we have seen a five-fold increase in food barley production across the state in 2017. While most of the commercial production remains in north Idaho because of strong industry partners based in this region, we see exciting opportunities to expand food barley production to southern and eastern Idaho.

Dan and Laura McKay were joined by their family at the celebration of their new food barley cleaning and storage facility in Tensed, ID



Dan McKay was presented the 2017 Idaho Barley Industry Service Award during the dedication of his new food barley cleaning elevator in Tensed. Japanese food barley customers attended the August 23 open house, along with representatives of the Idaho Barley Commission (Vice Chairman Wes Hubbard is featured far right). McKay Seed made this investment in a new Idaho food barley elevator as part of their regional strategy to increase food barley acres for the Japanese and domestic markets.

Barley offers many advantages in the human diet; chief among these are:

- Highest fiber content of any grain.
- Weight control.
- Reduced cholesterol and risk of hearth disease.
- Improved gut health (prebiotic) and lower risk of colon cancer.
- Low glycemic content suitable for Type 2 diabetes diet.

In partnership with McKay Seed and Highland Specialty Grains, IBC is launching a major food barley marketing campaign this year, targeting school meals and other major food service markets, food manufacturers and health professionals. We will be rolling out this new marketing campaign in fall 2017. We anticipate food barley acres will continue to expand next year.

UI Agronomy Research Keeps Barley Competitive

Now on the job two years, Dr. Christopher W. Rogers, the Endowed Barley Research Agronomist and soil fertility scientist based in Aberdeen, continues to expand his barley research program to help growers optimize inputs and maximize economic returns. Chris is currently supervising a graduate student who began in Spring 2017 who is investigating fertilizer nitrogen recovery using stable isotope tracers. Additionally, UI-CALS has provided support for a post-doctoral fellow who will begin in Winter 2017 to support publication and dissemination of research from the Barley Agronomy program.

The following is a progress report from Dr. Chris Rogers:

• Evaluating soil test methods for determining N fertilizer recommendations tailored to specific malting barley varieties:

Study findings are currently being finalized for publication.

• Determining N partitioning and fertilizer N use efficiency using enriched isotope tracers:

Initial results from the 2016 growing season indicated that irrigated malt barley had high fertilizer nitrogen recovery under recommended management practices. When fertilizer was incorporated via tillage fertilizer N recovery was nearly 60 percent; however, when fertilizer was surface applied recovery was reduced to 45 percent. Recovery from the 1st foot of soil was 16 percent, the 2nd foot 3 percent, and the 3rd foot only 1 percent, indicating minimal leaching within the soil profile. These results indicate a high nitrogen use efficiency in both the plant and the top soil depth.

• Evaluating variety and N management strategies to enhance spring and winter barley malting barley performance (supported by the Brewers Association):

This project is a robust and long-term evaluation of variety by nitrogen responses to optimize yields and proteins suitable for the craft brewing industry. The study has a large focus on winter malting barley varieties that may become more widely adapted to meet regional craft brewer needs. Variety selection has narrowed in on modern varieties specifically bred for the craft industry and as well as several historical varieties. The 2016-2017 evaluation year was difficult for our winter nursery as extensive snow cover exceeding two feet for extended period of times, and extensive freeze thaw cycles damaged our crop. However, winter barley, despite looking poor early in the year, can be fairly resilient and we were able to salvage a portion of the study.

• Optimizing N fertility recommendations and final irrigation scheduling (supported by MillerCoors):

We have completed our final year of this study and will be working to publish our results shortly. The first two years were quite consistent in terms of response and we are hopeful the third year will provide consistent data. In collaboration with Dr. Howard Neibling, we have published a new extension bulletin **(http://www.cals.uidaho.edu/edComm/pdf/BUL/BUL912.pdf)** to provide valuable information to Idaho growers. This bulletin provides detailed information related to water usage, soil factors, final irrigation timing, as well as economic analysis from studies conducted in Idaho. This bulletin also provides detailed information on the often asked question, What is Soft Dough?

• Evaluating the effects of irrigation management and variety selection on malt barley yield and quality:

We are evaluating malt barley response under three irrigation regimes (100, 75, and 50% ET) using both traditional and new craft brew lines of interest to the craft industry. Specific lines were selected in cooperation with Dr. Gonghse Hu, USDA-ARS Barley Breeder, based on preliminary drought stress trials. Dr. Hu's program has specifically been investigating lines that retain low protein and optimal malting quality under drought stressed conditions. The study will be continued in upcoming growing seasons and will provide valuable information to growers on commercial variety response to drought stress as well as novel information on breeding lines in the USDA-ARS program. These results can also be used by barley breeding programs for guidance on varietal yield and quality response when making selections for specific industry needs.

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