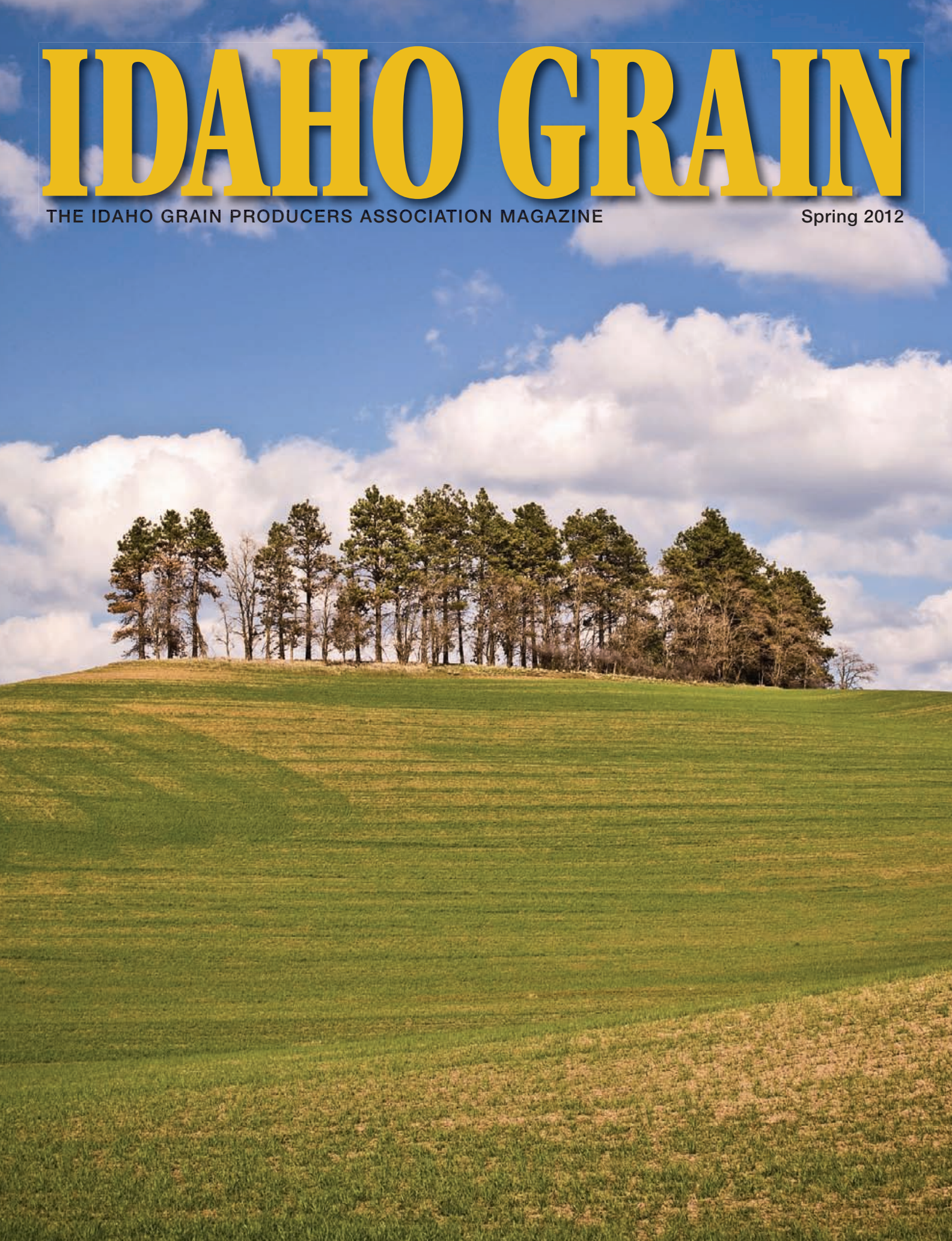
IDAHO GRAIN

THE IDAHO GRAIN PRODUCERS ASSOCIATION MAGAZINE

Spring 2012



Yield Leaders

Looking for a yield advantage? Bullseye and Cabernet wheat varieties have consistently proven themselves in trials across Idaho.

Bullseye

HRSW with High Yield Potential, Heavy Test Weight, Excellent Quality

- ❑ Yield average of 10+ bu/a over WB 936 in 3-year southeastern Idaho irrigated trials*
- ❑ High temperature adult plant resistance to stripe rust
- ❑ Hessian fly resistance
- ❑ Fusarium head scab tolerance
- ❑ Early to medium maturity
- ❑ Adapted for both irrigated & dryland production in Idaho

** Univ. of Idaho, 2011 Small Grains Report, Research Bulletin 180, January 2012, pg. 40*

Cabernet

Your Best DNS Choice for Maximizing Yield and Test Weight

- ❑ Excellent tillering
- ❑ Stripe rust tolerance
- ❑ Short to medium height
- ❑ Stiff straw
- ❑ Best suited to southeastern Idaho irrigated production

AgriPro®

To find out which AgriPro varieties are right for your area, call your AgriPro Associate or visit AgriPro.com.

syngenta®

™

VIEWS

BY JOSEPH ANDERSON, PRESIDENT

Welcome! Here's my first attempt at an article as your president. While I don't like to procrastinate, I seem to respond to deadlines better than suggestions.

Already one quarter of the way through my year as president, it has been both business-as-usual and exciting. IGPA has represented Idaho's grain growers at a variety of important events including: hearings to expand the dock at the Port of Lewiston, NAWG and National Barley Growers Association meetings, Idaho and American Farm Bureau conventions, and the annual University of Idaho Cereal Schools.

We have visited with staff and elected Members on Capitol Hill, officials within key federal regulatory agencies, and our State legislators. Many thanks to Travis and the rest of our executive team for their time and dedication accomplishing these tasks and representing IGPA issues and goals as directed by our 2012 resolution book.

The most exciting aspect so far this year has been helping the Idaho wheat industry move forward with plans to restore and build the research engine that will carry us into the future. The Idaho Wheat Commission, with encouragement and direction from growers (that's us), has moved forward with industry partnerships, endowments, and legislation to enable science to restore critical mass and momentum needed in the search for higher yielding varieties and agronomics, reducing overall cost of production and preparing to meet increasing dietary needs on the planet.

Senate Bill 1259 has passed the Senate Floor and also the House Ag Affairs Committee. By the time you read this, I hope it has passed the House and been signed by Governor Otter. This bill will provide additional dollars for research, marketing, and education. We continue to need public support for agriculture research, and we feel it is appropriate given the significant public benefits of the work. Idaho's grain industry is currently in a good position to help offset inflationary costs in both research and marketing. It has been twenty years since the assessment cap was moved to 2 cents per bushel. Similar efforts are underway for barley, and I hope to report success in my next article.

My suitcase is out and we are preparing for the NAWG annual meeting and convention this week at the Commodity Classic in Nashville, Tennessee. The National Association of Wheat Growers organization is in many ways a mirror image of the IGPA. Similarities include the Resolution Book, committee system, and diversity of representation. While IGPA has 22 organized counties with irrigated, dry land, and really dry land (fallow) production areas, NAWG membership is about 22 states with about as many different production or cropping zones.

Coming to consensus on agricultural policy is sometimes a challenge. Ideas on CRP or safety net mechanisms vary by region, but I enjoy the interactions and friendships developed from around the country. Most of the wheat states have completed the mourning process for Direct Payments, and recognize the need to move from the reliable, predictable, WTO-compliant policy of the past Farm Bill. Crop Insurance is widely accepted as a pretty fair safety net, but there are always ways to make it better and we look for ways to address both long periods of low price or production.

The coming months will be very busy, and as we move forward please don't hesitate to call me or any other officer or staff. We crave the input! ■

CONTENTS

Look for these symbols in headlines throughout the magazine to see at a glance whether an article pertains to wheat issues, barley issues, or both.

WHEAT BARLEY WHEAT & BARLEY

Published quarterly by
Idaho Grain Producers Association
821 W. State St. • Boise, Idaho 83702-5832
(208) 345-0706

Travis Jones Editor-in-Chief
Christie Bauscher Assistant Editor

Printing Production Coordinated by
Farm Progress Companies
255 38th Avenue, Suite P • St. Charles, IL 60174-5410
(630) 462-2272

For subscription corrections, please call Idaho Grain Producers Association: (208) 345-0706

Sharon Beaver **Production Manager**
Carol Locker **Graphic Design**
Printed in the USA.

EDITOR'S NOTE

BY TRAVIS JONES,
EXECUTIVE DIRECTOR

Moving Forward

The last several months since the Tri-State Grain Growers Convention in mid-November have been fast and furious for the IGPA. Reflecting back upon all the Association has done on behalf of Idaho's wheat and barley growers is akin to sucking water from a fire hose!

The return of a tri-state annual membership convention in November 2011 proved to be a big success. The three-day event in Spokane attracted over 400 farmers, keynote speakers, entertainers, sponsors, exhibitors, and industry. The ability to network and mingle with fellow farmers from the Pacific Northwest only underscored the importance and value of collaboration while playing a premium on the clout agriculture can have when we band together.

The IGPA board of directors (including myself) spent significant time ensuring that interesting, informative, and educational topics were offered, while providing an atmosphere that was fun and relaxing. Thanks to those of you who attended and contributed your valuable time and dollars to hopefully leave from it feeling informed, engaged, and excited about what you do for a living.

The staff and officers from Washington, Oregon, and Idaho are already hard at work on details for this year's convention slated for Nov. 12-14 at the Coeur d'Alene Resort in beautiful Coeur d'Alene, Idaho. So mark your calendar now and give me a call or e-mail if there are any ways we can improve or enhance on the program and the experience.

Since the convention, there's been little time for rest as President "Genesee" Joe Anderson mentions in his article. The IGPA officers and staff stormed Washington, DC for winter meetings of both NAWG and the NBGA. These back-to-back meetings were satisfying to me to see two Idaho farmers lead the respective national organizations onto Capitol Hill while also providing a voice for wheat and barley growers to a roundtable of leaders from other commodity groups like corn, soybeans, cotton and rice.

Commodity groups are continuing to push on Congress to devise a federal farm safety net that is effective, fair, fiscally responsible and publicly defendable. It's already been an arduous, frustrating, exhausting and unpredictable process. Even at this late date, I can only guess as to where this winding road will end up.

At this time, the U.S. Senate is taking the lead to get the Farm Bill legislative process going. Senate agriculture leaders believe they can get a bill to the House by late May. On the other hand, the House of Representatives is a whole different animal. And the fate of the 5-year bill becomes even more complicated due to presidential election year politics.

Whatever the case may be, I can say that the IGPA is leading in this debate and not following. I feel fortunate to work for a state composed of progressive producers in times like these where difficult decisions will have to be made. Whether you as a producer are enrolled in any federal farm safety net programs or not, you are impacted by the decisions that will be made. The IGPA is your voice and we hope you continue to see the value in that.

Outside of the Farm Bill, your state association has several other high priorities on track. We are excited with developments that could mean the addition of Blaine and Canyon counties to our statewide network. This would be a fantastic enhancement to the IGPA board of directors while enhancing the voice of Idaho's wheat and barley growers. It's great to see some proactive producers step forward.

We are also excited about the State Legislature's support-to-date for our two bills that will provide the Idaho Wheat and Barley Commissions with the resources to help growers help themselves long into the future. While not out of the woods yet, these two bills have strong support with our local leaders. I look forward to providing good news to you on their outcome.

I would normally say that the weather is starting to turn which means that it won't be long before farmers return to the fields. However the weather has already turned … or rather that it really never stopped being Fall! Only Mother Nature really gets it. Regardless, I am optimistic for another good year for Idaho producers. I look forward to hearing from you on anything and everything in the coming months. ■

IGPA ISSUES

IGPA Leaders Attend NAWG Meetings in WDC, Nashville

IGPA officers recently represented Idaho's farmers at two national wheat grower meetings in Washington, DC and Nashville, TN.

The National Association of Wheat Growers (NAWG) held its winter board meeting Jan. 26-28 in Washington, DC. IGPA president "Genesee" Joe Anderson and Secretary/Treasurer Robert Blair filled Idaho's two voting seats on the NAWG board of directors.

NAWG President Wayne Hurst (center) with IGPA leaders.

While in the nation's Capital, IGPA leaders joined forces with grower-leaders from sister states Washington and Oregon in meetings with key federal agencies and Members of Congress. The group discussed hot button issues facing Pacific Northwest farmers including EPA regulations, Farm Bill programs, and funding for agriculture research.

IGPA officers and members followed up the January meeting by traveling to Nashville, TN to attend the annual Commodity Classic conference held Mar. 1-3. The convention and trade show attracted over 5,000 corn, soybeans, grain sorghum and wheat farmers and agribusiness from across the country.

In conjunction with the Classic, NAWG held its annual meeting to approve of policy resolutions and action items along with a new slate of national officers. The Classic convention marked the formal end to the presidency of Burley, Idaho farmer Wayne Hurst. Hurst, also a past president of the IGPA, spent the majority of his presidency making numerous trips to Washington, DC and the around the country in an effort to craft a new federal Farm Bill that includes an effective safety net program for U.S. wheat farmers.

Hurst will continue his involvement for one more year as a past president of the national association.

Wheat/Barley Commission Legislation Moving Forward in Idaho Legislature

Legislation to provide additional resources and updated authority to Idaho's wheat and barley commissions is showing favorable support in the Idaho State Legislature.

Backed by the IGPA, Senate Bill 1259 (wheat) and Senate Bill 1304 (barley) would specifically allow both commissions the authority to set an assessment in a higher range than current law allows. SB 1259 would allow the Idaho Wheat Commission to set its annual assessment up to a 5¢ per bushel cap if deemed necessary. Similarly, SB 1304 provides the Idaho Barley Commission with new authority to set its assessment rate at no more than 4¢ per hundredweight.

The purpose of the legislation is to reverse a steady decline in resources to address the critical research needs of Idaho's wheat and barley growers. The two bills also provide a more stable foundation for the commissions marketing and risk management functions, which provide profitability and sustainability to Idaho's grain producers.

Both SB 1259 and 1304 are at different stages in the legislative process. As the policy arm of Idaho's grain producers, the IGPA continues to work with key legislators to ensure final passage of these two bills.

IGPA Past President Declares Candidacy for State Legislature

Kauffman

Filer farmer and former IGPA president Clark Kauffman recently announced his intentions to run for a seat in the Idaho State Legislature.

A U.S. Air Force Vietnam veteran, Kauffman will seek to fill the seat of retiring District 24 state representative Sharon Block. Under the newly redrawn Idaho legislative district map, Block's seat is to be merged with District 25.

Clark brings to the table a diverse and long track record of community and industry leadership experience. Along with five years of leadership with the IGPA, Clark has served as president in several statewide organizations including the Idaho Hay and Forage Association, and the Idaho Association of Highway Districts. In addition, former Idaho Governor Dirk Kempthorne appointed Kauffman to two terms on the Idaho Barley Commission, where he also served as chairman.

"I am humbled, honored, and excited to run for this position", said Kauffman. "I believe my experience with organizations like the IGPA will allow me to best represent the people and communities of District 25. Building consensus through common sense and transparency in government are two priorities that I will bring to the table. We all must carry our weight and be accountable to keep Idaho on the right track," added Kauffman.

Idaho's primary voting day is scheduled for Tuesday, May 15 with a November 6 general election date to follow.

2011 Tri-State Grain Growers Convention A Success

It was the return to a partnership that just makes sense, and one that farmers in the Pacific Northwest are happy to see.

The Tri-State Grain Growers Convention held November 14-16 at the historic Davenport Hotel in Spokane, Washington, marked a successful new partnership between Washington, Idaho, and Oregon wheat and barley farmers.

The three-day conference featured top-notch keynote speakers, entertainment, each state's annual business meetings and educational breakouts on the high priority topics facing producers today.

The Presidential Award was awarded to outgoing president Clark Kauffman (l) of Filer by successor Joseph Anderson.

"I was pleased with the turnout, the industry support, and the fantastic atmosphere for this year's convention", said IGPA President Clark Kauffman of Filer, Idaho. **"We in the Pacific Northwest have too much in common not to be doing this every year."**

Over four hundred participants attended the annual convention, including thirty-five trade show exhibitors, many industry sponsors, members of the media, and other affiliated

Friend of IGPA award winner Rep. Jim Patrick (l) receives award from President Kauffman.

Soda Springs barley farmer and NBGA president Scott Brown spoke to the priorities of U.S. barley producers.

Matt Gellings (front row, right), Clark Kauffman (front row, left), and Sid Cellan attend a meeting of the IGPA Public Relations Committee.

U. of Idaho wheat breeder Jianli Chen and small grains researcher Brad Brown.

Farmer and motivational speaker Jolene Brown entertained the audience.

representatives.

The convention kicked off with each state conducting their respective committee and board meetings which yielded new policy resolutions and officer teams moving into 2012. The Idaho Grain Producers Association annual meeting and banquet was heavily attended. Alongside approval of a slate of resolutions, a new IGPA officer team was installed composed of the following: President – Joseph Anderson (Genesee); Vice President – Clark Hamilton (Ririe), Secretary/Treasurer – Robert Blair (Leland); Executive Member – Sid Cellan (Soda Springs), and past president Clark Kauffman (Filer).

Agricultural advocate and nationally renowned motivational speaker Jolene Brown headlined the keynote speaker line-up, and professional variety comedian Frank Miles thrilled the crowd with his positive message and juggling skills. Breakout workshops featured a broad scope of expert presentations ranging from estate planning, to barge transportation, to pointers on using Quick Books to become better farm financial managers.

The IGPA utilized the convention to hold a special awards program to recognize the achievements and contributions of individuals in the grain industry. Honored by Idaho's wheat and barley farmers were IGPA "Members of the Year" Sid & Janet Cellan who were chosen for their dedication and volunteerism in support of the Caribou County Grain Growers.

The "Friend of the IGPA" award winner was given to State Representative Jim Patrick of Twin Falls. Rep. Patrick had shown outstanding leadership and support of key IGPA efforts including shepherding legislation to reinstate a field burning program and to provide adequate funding for grain research and extension programs through the Idaho Legislature.

continued on page 8

Receiving the "Achievement Award" was recently retired IGPA executive assistant Sue Megran. Megran of Meridian retired in May 2011 from eighteen years of fantastic service to the IGPA. Presented by incoming IGPA President Joseph Anderson, the "Presidential Award" was given to outgoing president Clark Kauffman of Filer.

The Tri-State Grain Growers Convention's success will parlay into this fall. The upcoming meeting is already scheduled for Nov. 12-14 at the newly remodeled Coeur d'Alene Resort in Coeur d'Alene, Idaho. Check for more details on the IGPA website at *www.idahograin.org.* ■

Retired IGPA staffer Sue Megran received the IGPA's Achievement Award for her outstanding service.

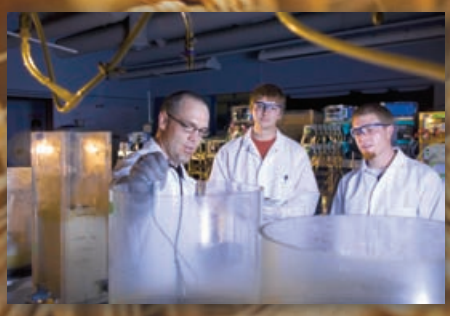

The Cellans were honored as Members of the Year.

Declo farmer and NAWG president Wayne Hurst provided an update on policy impacting U.S. wheat farmers.


Debbie and Clark Kauffman attending the IGPA annual meeting and banquet.


Sid Cellan (l) of Soda Springs was the lucky winner of the golden ticket rifle raffle presented by Christie Bauscher.

Let your yield help us grow!



Gifts of grain to the University of Idaho Foundation, Inc. help sustain and grow the programs and lives of students and faculty, while providing growers with significant tax benefits.

This simple method of gifting can directly benefit the lives of future students, our University and the quality of lives of all Idaho citizens.

When taking your grain to the elevator of your choice, secure the warehouse receipt and indicate that the grain should be gifted to the University of Idaho Foundation, Inc.

To be eligible:

- **You must be an active farm producer.**
- **You have to be a cash-basis taxpayer.**
- **The Foundation must sell your crop.**

For more information, please contact:
Pete Volk, Director
Office of Estate, Trust and Gift Planning
University of Idaho
Toll free: (866) 671-7041
or (208) 885-5760
Email: pvolk@uidaho.edu

University of Idaho

IGPA with Congressman Mike Simpson (R-ID) at NBGA Capitol Hill reception.

Barley Growers Host Successful Event on Capitol Hill

As part of its winter board meeting, the National Barley Growers Association hosted a wildly successful educational reception for Members of Congress, their staff and other agriculture industry leaders.

The idea of NBGA president and Soda Springs, Idaho farmer Scott Brown, the Jan. 30th event attracted over 550 people. The reception was co-sponsored by key malting barley industry partners including the Craft Brewers Association, Anheuser-Busch/InBev, MillerCoors, Schlafly Brewing, the American Malting Barley Association, the Beer Institute, InteGrow Malt LLC, Cargill Malt, and Malteurop.

Attendees mixed and mingled with barley growers and malting barley industry representatives while enjoying micro and macro brews and dining on healthy portions of barley-based dishes. The NBGA board received rave reviews from participants and is considering making the reception an annual occasion.

Congressional Farm Bill Timeline Speeds Up

The effort to reauthorize the 2008 Farm Bill before it expires on Sept. 30 is now in high gear, with the Senate Agriculture Committee moving up two previously-scheduled farm bill hearings, and the House Agriculture Committee announcing it will start a series of four field hearings throughout March and possibly into April.

Senate Chairwoman Debbie Stabenow (D-MI) announced in late February that scheduled hearings on nutrition and farm policy issues will be moved up in attempt to expedite Farm Bill legislation. House Chairman Frank Lucas (R-OK) announced Thursday that field hearings will be held in New York, Illinois, Arkansas and Kansas.

Wheat Farmers Testify on Conservation Programs

Two farmers with ties to the wheat industry testified on Tuesday, February 28 at a Senate Agriculture Committee hearing on conservation issues. Dean Stoskopf, a farmer near Hoisington, KS asked Members to keep conservation programs simple and local. He also spoke about the importance of emergency haying and grazing in the Conservation Reserve Program (CRP), as well as the benefits of the Environmental Quality Incentives Program (EQIP). Carl Mattson, who farms near Chester, MT, spoke about his and other local farmers' experiences with the Conservation Stewardship Program (CSP).

Surface Transportation Bill Still Delayed

The House version of pending surface transportation legislation hit another snag recently as Republican caucus members continue to balk at their leadership's plans for the measure. Floor consideration has been pushed back for a two-year extension of surface transportation law, which largely funds highway construction but also touches many other aspects of U.S. transportation infrastructure. Senators continue to debate their version of the bill, S. 1813. Reauthorization of the law has been delayed since 2009 for political and budgetary reasons.

Senate Ag Leaders Ask for Guidance on MF Global Tax Problems

Senate Agriculture Committee Chairwoman Debbie Stabenow (D-Mich.) and Ranking Member Pat Roberts (R-Kan.) have asked the Internal Revenue Service to provide guidance for former MF Global customers who may need to file their taxes with incomplete information. MF Global filed for bankruptcy on Oct. 31, 2011, with upwards of $1 billion in customer money unaccounted for. Stabenow and Roberts asked for consideration specifically of farmers and ranchers with money in limbo, many of whom will soon start spring fieldwork.

Lessons in Delivering Quality from Asian Customers

By Steve Mercer, USW Director of Communications

A U.S. Wheat Associates Board Team, which included Idaho Wheat Commissioner Bill Flory, Culdesac, Idaho completed a USW-sponsored supervisory visit to the USW West Coast Office Portland, OR, Japan, the Philippines, Hong Kong and the Guangdong Province of the People's Republic of China in February. USW Board Teams are intense, regional visits arranged per the organization's bylaws to give Board members and state wheat commissioners the chance to review the work of overseas USW offices, learn about the local market environments for milling wheat and thank milling and baking customers for their business.

Flory traveled with wheat farmers Steve Beedy of Limon, CO, Steve Classen of Clarkston, WA, and Steve Mercer, Director of Communications with USW. The team was most impressed by the competitive nature of flour milling, baking and wheat food production in what are three very different markets—and the importance of delivering high quality wheat at the best value possible.

"We saw some very competitive markets in these countries," said Bill Flory. "And providing consistent quality is of great importance here in Asia. If we don't, certainly our competitors will keep trying to fill these markets."

Flory said seeing USW representatives with customers demonstrated that the trust built over the years is very important, starting with excellent quality wheat coming off the farm, through the efficient, reliable grain handling system.

"The USW offices are strategically placed and experienced to help customers understand why prices for better quality may be higher and to help customers adjust their specifications to get the best value possible," he noted.

Flory sees China as a perfect example of why it will be increasingly important to maintain the quality and value of U.S. wheat export supplies into the future.

Far-Reaching Effort. **Idaho Wheat Commissioner Bill Flory (L) observed how wheat farmers in Idaho and across the United States are working to develop new customers for their wheat from as far away as China during a visit to the Sino-American Baking School (SABS) in Guangzhou, China. Recently, Flory, Colorado farmer Steve Beedy (center) and Washington farmer Steve Claassen (right) visited this technical school in southern China as part of a U.S. Wheat Associates Board Team trip to meet with buyers, flour millers, bakers and government officials in Japan, the Philippines, Hong Kong and China. USW was a founding sponsor of SABS in the early 1980's. In addition to vocational baking training at two campuses, SABS holds regular short course training sessions for bakery and cuisine students using flour made from U.S. wheat, as well as housing a wheat and flour quality laboratory sponsored by USW, where full-time and short course students have train in laboratory processing of wheat and flour samples to determine their value for bakery processing.**

"What a dynamic market. China wants to do business with us and work through the challenges in their own system," he said. "If we can continue to deliver the kind of quality they need into the future – from our wheat breeding industry all the way through our supply chain – at a good value, we will be competitive here and in all of the countries we visited in Asia."

Steve Claassen agrees.

"We all need to keep our eyes on the prize: the end user of our wheat," he concluded. "After this trip, I am going to emphasize to other growers, public and private breeders and our grain handlers the importance of quality to these people. It needs to be a continuing effort."

On behalf of our team, we want to thank all the wheat buyers, millers, bakers and wheat food processors we met on this trip. Their loyalty, hospitality and genuine enthusiasm for their work is a great incentive to farmers and USW to continue to do our best to help their organizations thrive. ◆

Changes in Wheat Industry Leads to New Endowments, New Partnerships

The Idaho Wheat Commission (IWC) announced on January 6, 2012 the establishment of two University of Idaho faculty research endowments in the amount of one million dollars each, with an initial investment of $500,000 and the intent of fully funding them over the next ten years. Also, on January 6, 2012, the IWC and the University of Idaho announced a new wheat breeding public-private partnership with Limagrain Cereal Seeds, one of the largest seed companies in the world.

The two new endowments and partnership are but part of a package of new investments into the wheat industry on behalf of Idaho wheat growers, as new technologies, along with new opportunities and threats emerge. New endowments, new public-private partnerships, expanded wheat grower investment, new work-study programs for undergraduates, and continued lobbying for restoration of public funds will all be part of the business plan to help Idaho wheat growers be more competitive.

Importance of Agricultural Research

"We are indeed in exciting times in terms of the pace at which technology is advancing for agriculture," said Joe Anderson, IWC commissioner from Potlatch, Idaho. "New tools are available to improve varieties, control pests, manage field work, market crops and do other things to make the Idaho wheat industry more efficient, competitive, and profitable."

However, along with discovery of new technologies comes the need for systems to adapt these technologies and education programs to local production. Enhancement of agricultural research and extension capabilities is imperative to accomplish these objectives.

State funding alone for agricultural research in Idaho has been reduced by $5.7 million in permanent cuts and another $5.3 million in one-time holdbacks.

The recent economic softness has lead to some serious cutbacks in public funding for agricultural research at most land grant institutions including at the College of Agriculture and Life Sciences (CALS) at the University of Idaho. CALS has faced significant budget reductions from both State and Federal appropriations, making it more difficult to meet the science and education needs of Idaho's wheat growers. State funding alone for agricultural research in Idaho has been reduced by $5.7 million in permanent cuts and another $5.3 million in one-time holdbacks. As a result, infrastructure and operating funds at CALS has deteriorated to critically low levels.

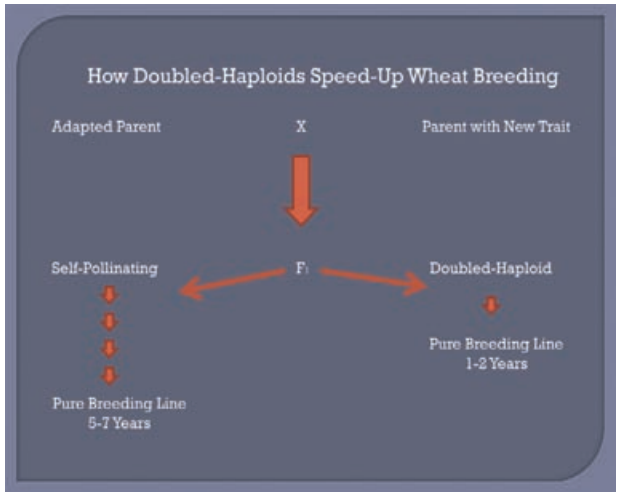
New Wheat Research Endowments at Aberdeen

The two new endowments will fund a wheat breeding and a wheat agronomist professorship, each located at the university's Aberdeen Research and Extension Center. "Some of this endowment will enhance salaries of faculty already conducting research, an effort to stay competitive, to keep these professionals in Idaho," said Donn Thill, Moscow, director of the university's Idaho Agricultural Experiment Station.

"Nationally, we're facing shortages of experienced people in agriculture with these skills," said Thill. "An important part of our job is training the next generation of crop scientists. These endowments will help Idaho's wheat industry."

New Private Seed Company Interest in Wheat Industry

In recent years, corn and soybeans have seen yields surge and acreage expand with the introduction of new technologies and genetic gain in the seed stock. Corn and soybean farmers have increased their profits from these crops. Much of the gain has been driven by private seed companies making investments in those crops.



Who is Limagrain Cereal Seeds?

Limagrain Cereal Seeds is the North American subsidiary of Limagrain Group. The farmer-owned company is the largest seed company in Europe and the largest cereal seed producer in the world. In the US, the company will focus on wheat research and the creation of new improved cultivars for US wheat growers.

Jean-Bruno Beaufumé has relocated to the PNW from France and he will collaborate with the University of Idaho Moscow breeding station to develop varieties of soft white winter wheat.


Beaufumé

L-R: Governor C.L. "Butch" Otter; Idaho Wheat Commissioner Joe Anderson; Jim Peterson, Lima Grain; UI CALS Dean John Hammel; Idaho Wheat Commission Chairman, Gordon Gallup; UI President Dr. M. Duane Nellis; Lt. Governor Brad Little

Those same private companies are now exploring the wheat industry to see if their technologies can be transferred to wheat seed. In the past two years, Syngenta, Monsanto, Limagrain, Bayer, Dow, BASF and others have acquired wheat seed companies or made investments in wheat research. Coming at a time when public investment in agriculture has been reduced and world demand for food is increasing, the IWC and CALS are carefully watching the changes and trying to protect the interests of Idaho wheat growers, particularly in keeping the future price of seed at competitive levels.

Limagrain Cereal Seeds has agreed to collaborate with the IWC and CALS on breeding new wheat varieties for Idaho and the Pacific Northwest. Both Limagrain and the CALS will contribute germplasm, technology, and expertise to more rapidly develop varieties with improved productivity and tolerance to diseases and stress. To support this effort, Limagrain is also funding a significant endowment for cropping systems research and graduate training at the University of Idaho.

"These partnerships clearly demonstrate the power of collaboration and the value that a land-grant institution like the University of Idaho can bring to our state's economy," said M. Duane Nellis, president of the University of Idaho.

Limagrain Cereal Seeds and the university will share grain germplasm, which will "greatly increase varietal options for Idaho and Pacific Northwest wheat growers," said John Hammel, Dean of the College of Agricultural and Life Sciences.

Positions To Be Added to CALS as a Result of Limagrain Partnership

- cereal cropping system agronomist in Moscow
- extension educator position in Nez Perce County
- wheat and barley cropping systems agronomist in Aberdeen
- plant nutritionist in Moscow
- entomologist in Aberdeen

Limagrain is also funding a significant endowment for cropping systems research and graduate training at the University of Idaho.

"This public-private partnership is a win for all of us," he said. "Today's economic realities make it increasingly important for industries benefiting from our research to increase their support. The endowments our partners are establishing today are ensuring the future as they will provide ongoing and perpetual research funding."

Developing new wheat varieties is not easy. It takes a dozen years to develop and test best new grain varieties.

"Future yield increases in wheat will be driven by research, said Gordon Gallup, IWC Chairman. "These past few years we have seen severe cuts to our research programs. Private breeders like Limagrain Cereal Seeds bringing new technology and new germplasm into the mix is

continued on page 14

going to give our public programs a significant boost. New technology will lead to greater yields and better profitability for wheat growers in Idaho and the Pacific Northwest. "

The IWC will examine opportunities with each of the private seed companies to find alliances where Idaho wheat growers might become more profitable.

Increased Investment by Idaho Growers Through Check-off Funding

Realizing that good wheat germplasm, good wheat agronomics, and good infrastructure makes the Idaho wheat industry a more attractive partner in potential public-private partnerships, the Idaho wheat commissioners have carefully examined how check-off dollars are being spent and whether it makes sense for Idaho growers to invest more.

Polls in 2009 and 2011 showed that Idaho growers favor increasing the check-off by a three to one margin.

In January 2012 Senate Bill 1259 was introduced into the Idaho Senate to increase the wheat assessment. It passed the Idaho Senate on Feb. 14th by a 31 to 4 vote, and the Idaho House on March 13th by a 52 to 13 vote. The IWC commissioners anticipate raising the check-off from $.02/bushel to $.03/bushel sometime in 2012. This will raise just under one million dollars for additional wheat research and CALS operating and infrastructure needs. SB1259 puts a cap on the wheat assessment at $.05/bushel, similar to the cap in neighboring western states.

With fewer public dollars being directed to agricultural programs, the increased assessment will help keep Idaho's wheat industry healthy and competitive. A study by USDA shows that each dollar spent on agricultural research return $10 worth of economic benefit to the grower, the food industry, and the economy, through more abundant and lower-cost commodities. (Fuglie, K.O. and P.W. Heisey, 2007, Economic Brief No. 10, USDA-ERS)

Work-Study Program for Undergraduates

There is a significant shortage of plant scientists in the U.S. and the average age is approaching sixty. More students must seek careers in plant science if the U.S. is to remain competitive. With new public-private partnerships coming together, the IWC plans to take a lead in setting up work-study programs for undergraduates in plant science. Undergraduate students would provide fifteen to twenty hours of work in a wheat research program and would spend part of the summer working with one of the private partners in that company's laboratories or field sites. Tuition help may be provided in exchange for maintaining a good academic grade average and obtaining a degree in plant science.

Restoration of Infrastructure and Operating Capital

Idaho wheat commissioners hope to help CALS and other key Idaho wheat researchers rebuild infrastructure through investments in equipment and facilities. These funds would be awarded on a competitive basis based on value to the Idaho wheat industry and ability to provide cutting edge technology to growers.

Encouraging Public Reinvestment in Agricultural Research

Although current economic realities dictate that users of programs, rather than the taxpayer at large, provide funding to keep them going, the IWC and Idaho Grain Producer's Association (IGPA) are active in educating lawmakers on the need to reinvest in agricultural research as soon as budgets permit as the entire state will benefit.

Agriculture is Idaho's largest industry, accounting for 20% of the state's economic base and 16% of employment. The stability and resiliency of agriculture in Idaho suggests that substantial upside economic growth can be realized through expanded investment in agricultural research and education. IGPA is lobbying for the protection and restoration of public funding as a critical building block to renew economic growth and employment in Idaho.

Worldwide Demand for Food Will Benefit Idaho Agriculture

Demand for food continues to expand with worldwide population growth. The increase in middle class families in Asia is a specific opportunity for agriculture in Idaho. The United Nations projects world population will increase by 50% and world demand for food will double by the year 2050. More than 85% of this growth is in Asian markets where it can be serviced economically by Idaho wheat exports through Lewiston and Portland.

Keeping Idaho growers on the cutting edge of agricultural science and technology is key to being efficient and in capturing emerging markets like China and India.

Putting public and private funding to work on behalf of Idaho's wheat farmers will help ensure the next generation who wants to continue in agriculture to do so. The new endowments, the collaboration with private seed companies and their technology, the rebuilding of infrastructure and wheat research facilities, and the development of young scientists in agriculture are all important steps needed to keep the industry healthy. ◆

Three Technologies That Will Change Wheat Breeding

- Marker-assisted selection where markers are used for selection of traits of interest
- Double haploid technology where a pure breeding line can be achieved in a shorter time frame, resulting in a variety being ready for release three or four years faster than the traditional process
- Seed chippers and similar technologies that determines genetics of seed without destroying seed itself

Shown here is a Monsanto seed chipper, based on patented technology.

Are kochia, wild buckwheat and mustards hiding in your field?

No matter how hard they try, there's no escaping the powerful weed control of new Starane® Flex herbicide from Dow AgroSciences. For use on spring wheat, Starane Flex controls even the toughest weeds. And with a short residual, it makes it easy to rotate to pulse crops and potatoes. Uncover higher yield potential at StaraneFlexHerbicide.com.

Science. Yield. Success.™ Dow AgroSciences

Low Falling Numbers in 2011 Harvested Wheat

By Juliet M. Marshall and Katherine O'Brien, University of Idaho, Aberdeen; Doug Engle, USDA-ARS, Pullman, WA; Pat Fuerst, Washington State University, Pullman; Mary Burrows, Montana State University, Bozeman

As we headed into the 2011 harvest last season, we were concerned about wheat yields and quality due to the unusually widespread and severe stripe rust epidemic. While it was a relief to see healthy grain and decent wheat yields where fungicides controlled the disease, some problems did occur. Undetected at harvest was hidden damage in some of the grain that was only revealed when the grain was subjected to the Falling Numbers Test, now an industry standard.

The Falling Numbers Test measures starch quality by determining the viscosity of a heated starch paste made from a flour and water mixture. Damaged starch makes a weaker paste, and the time required for a weighted plunger to fall through a tube filled with this paste is less than 300 seconds. Healthy, non-sprouted wheat should form a thicker paste, resulting in that same weighted plunger taking over 300 seconds to reach the bottom of the tube.

In the fall of 2011, grain of Brundage soft white winter wheat was being delivered to local elevators that, when tested, had lower than acceptable falling numbers (<300 seconds). The grain was outwardly healthy with no visible signs of sprout damage. Questions about the cause of the damage led to an investigation by University of Idaho, Oregon State, Washington State and Montana State University personnel collaborating with USDA-ARS scientists.

Previous research has shown that damage resulting in low Falling Numbers Test values can be caused by several factors including:

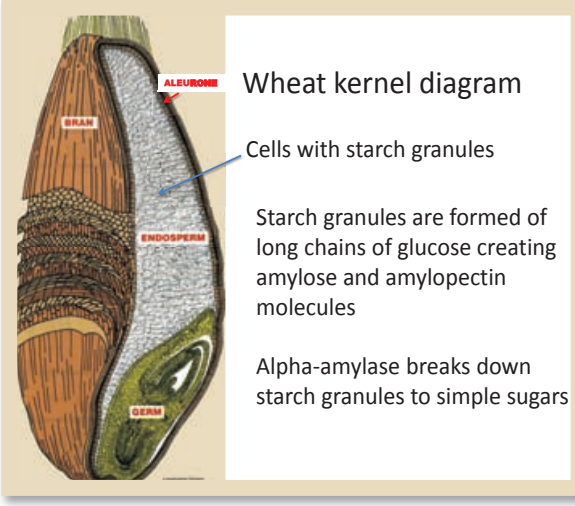
- Sprout damage — For wheat at a harvest ripe stage, any extended period of wet weather can cause pre-harvest sprouting.
- Nitrogen fertilization — Falling numbers test values increase with increasing N fertilization. Insufficient nitrogen may result in a lower falling numbers value.
- Temperature — low or high-temperature shocks in developing grain of certain varieties, especially 25-30 days after flowering, can result in kernel damage and expression of late maturity alpha-amylase (LMA). The enzyme degrades starch, converting it into sugar resulting in a low falling numbers test. This often occurs with the large daytime to nighttime temperature swings that can occur in upper-elevation environments.
- Fungicide treatments on certain wheat varieties may result in a lower falling numbers value.
- Fusarium head blight infections can result in lower falling numbers.
- Certain wheat varieties will have intrinsically lower falling numbers values depending upon the genetically determined proportion of waxy starch. Varieties such as Alturas soft white spring have a partial "waxy" endosperm, with higher proportions of the waxy starch amylopectin. This may result in a low falling numbers value.

What happened in 2011? Unfortunately, we cannot pinpoint one root cause of the 2011 falling numbers problem. With no rain in dryland areas in northern Montana production, falling number values were below 300 seconds in some of the grain produced there. Testing of fungicide-treated Yellowstone hard red winter wheat by Mary Burrows (MSU) indicated that falling number values decreased when this variety was treated with fungicides after flag leaf emergence. All other varieties showed no effect of fungicides on falling number values.

A late rain in southeast Idaho may have caused sprout damage in Brundage, a variety with very little seed dormancy. At Aberdeen, 0.26 inches of rain fell August 5th, five days prior to harvest. While this rain event was initially thought to be insufficient to cause sprout damage, additional testing will be necessary to confirm sprout damage or the presence of LMA. Data from 2006 and 2007 shows lower viscosity values among all winter wheat grown in Ririe versus Kimberly, and in those tests Brundage did not fall below the threshold value that would indicate LMA was a problem. Given this information, it is possible that the rain did cause sprout damage in Brundage. In one sample from Washington, the split kernel assay of alpha-amylase showed a much higher alpha amylase at the embryo end, which is considered diagnostic for sprout (even though no sprout was visible). Additional samples would need to be tested to determine whether the widespread low falling numbers were caused by sprout or LMA.

The cool temperatures in 2011 were also an issue, with temperature swings as high as 48-50°F between day and nighttime temperatures 25-30 days after flowering of the winter wheat in Idaho, and similar temperature swings occurred in Montana. Such temperature swings can cause damage to the aluerone layer of the seed, causing cell damage and the release of alpha-amylase. The enzyme causes a rapid degradation of starch when water is added to flour, also resulting in a low falling numbers value. This is known to be an issue in certain spring wheat varieties such as Blanca Grande (hard white) and Expresso (hard red).

The results of our investigations show multiple possible causes for the



Varieties to Reduce Risk for Low Falling Number from LMA		
SWS*	HWS*	HRS*
Alpowa	Klasic	Hank
Louise	Lolo	Jerome
	Snow Crest	Jefferson
	UI Lochsa	UI Winchester
		Vida

*Based on preliminary data from 2011 field trials conducted at the University of Idaho, Aberdeen Experiment Station, under irrigated and rain fed cropping systems, these varieties appear to be the least likely to be at risk for Low Falling Numbers due to Late Maturity Amylase (LMA).

falling numbers issues of last year. The primary factor in Washington and Idaho may well have been sprout damage. The secondary issue was temperature shock during grain fill, causing "late maturity alpha-amylase" release and low falling number values in susceptible varieties across many environments. The last and most minor factor was fungicide application on certain varieties, with Yellowstone hard red winter being the affected variety that showed up in our tests.

What can be done to reduce or eliminate such damage in the future? Some things cannot be controlled, such as the environmental conditions during grain fill or rain at crop maturity. Currently, we can start selecting varieties that are less likely to show LMA tendencies for high-elevation production. Spring wheat varieties that could have "inducible" LMA issues due to the environment would include the hard whites Blanca Grande, Blanca Royale, Klasic, Snow Crest, Otis, IDO377s, UI Lochsa and Lolo, hard reds Express, Expresso, WestBred 936, Choteau and Summit, and the soft whites UI Whitmore, and Challis. In most years, growing these varieties at lower elevation areas should not be an issue for low falling numbers. Soft white spring wheat with partial waxy endosperm such as Penawawa, Alturas, Cataldo, and Whit may have a somewhat lower falling number value simply due to genetics and should not be penalized for these lower values.

For more information about LFN, view Dr. Marshall's webinar at *www.idahowheat.org/media/webinars.aspx.* ◆

Evaluation of FHB Resistance in PNW Spring Wheat Lines

By Jainli Chen and Juliet M. Marshall, University of Idaho, Aberdeen; C.M. Wilson, editor, Idaho Wheat Commission

Several species of Fusarium have been linked to Fusarium Head Blight (FHB) but *F. culmorum* was the predominant Fusarium species causing FHB and crown and foot rot of wheat and barley in Southern Idaho and Europe. Both *F. culmorum* and *F. graminearum* produce trichothecene mycotoxins like deoxynivalenol (DON) that pose a significant public health hazard. Wheat materials from PNW have not been evaluated for FHB resistance. The University of Idaho Wheat Breeding and Genetics Program initiated a project in 2008 to evaluate and characterize FHB resistance in spring wheat. Resistance to FHB has been defined by three main types; Type I, resistance to initial infection, Type II, resistance to disease spread, and Type III, resistance to toxin (DON) accumulation in seed.

Fifty spring wheat lines including two known resistance sources of spring wheat, Sumai3 and W14, were evaluated in field and greenhouse experiments for these types of resistance to FHB. One field test was conducted in a field nursery, in collaboration with Dr. Charla Hollingsworth, at the Northwest Research & Outreach Center, Crookston, Minnesota in spring 2008 and another with Dr. William Grey, Montana State University, in Montana in 2009. A suspension of fungal spores of *F. gramiearum* was sprayed on the wheat to insure the fungus was present to cause FHB disease in the field plots. Ten spikes of each line were evaluated 21 days after inoculation. The percentage of infected spikelets was used as a measure of disease severity. DON (ppm) was tested after harvesting the grains from 2008 field experiment. In the three greenhouse (GH) experiments, conducted in Aberdeen, Idaho in 2010 and 2011, plants were inoculated with *F. culmorum* using a floret injection method. Disease severity for each line was calculated as a percentage of infected spikelets. Table 1 summarizes the overall performance of some of the commercial varieties evaluated in the field and GH experiments. The cut off for a resistant reaction, for each type of resistance is: DON content smaller than 2 ppm, disease severity less than 25% in field test and 26% in GH test. Out of the 50 lines evaluated Whitebird, IDO629, Otis, Lolo,

Fusarium Head Blight symptoms on wheat florets. Note the light tan color of florets damaged by FHB.

Misting mimics the field conditions of high humidity and warm temperatures necessary for infection of wheat by Fusarium species causing Fusarium Head Blight.

Table 1. Evaluation of FHB resistance spring wheat cultivars and advanced lines over three years

Genotype	Class	DON (ppm)	-------- Severity (%) --------	
		Field*	Field**	Greenhouse***
SUMAI3 ****	SRW	0.20	3.3	14.7
W14****	SRW	0.20	4.0	6.9
Whitebird	SWS	0.40	8.8	23.0
IDO629	SWS	1.50	12.0	24.7
Otis	HWS	0.35	13.3	17.0
Lolo	HWS	1.05	15.5	23.7
IDO599	SWS	0.75	16.8	16.1
IDO686	SWS	0.65	17.8	13.1
IDO668	SWS	0.35	19.5	25.5
IDO671	SWS	0.55	23.8	17.5
Lassik	HRS	2.00	24.4	20.0
Mean		0.80	15.3	19.4

* DON content was tested using the grain harvested from MSU field nursery in 2009.
** Mean disease severity of MT (2009) and MN (2008) field nurseries.
*** Mean disease severity of three GH experiments in 2010 in Aberdeen, ID.
**** Resistant check varieties.

IDO599, IDO686, IDO668, IDO671, and Lassik, expressed good resistance to FHB in the field and GH tests, but not equal to the resistance checks Sumai3 and W14. These lines also showed resistance to DON toxin accumulation in the seed. IDO599, IDO668, IDO686, and IDO671 are potential new releases of soft white spring wheat. Lassik is a hard red spring wheat cultivar released by University of California, Davis (UCD). Otis is a hard white spring wheat cultivar released by Washington State University (WSU). Lolo and Whitebird are two soft white spring wheat cultivars released by University of Idaho (UI).

FHB is one of the most destructive diseases of wheat and barley in warm humid growing areas around the world. Areas of Idaho may see FHB more frequently as growers increase the use of conservation tillage, use of corn in small grain rotations, and use of sprinkler irrigation. Conservation tillage, especially where corn is part of the rotation, can result in a build-up of FHB spores in the soil and crop stubble. Corn is an alternate host for the FHB fungus and tillage disrupts the habitat of the fungus reducing the presence of fungal spores. Sprinkler irrigation in these fields during warm temperatures at pollination provides the perfect environment for FHB infection to occur when the fungus is present. FHB infection can cause significant yield losses when infected kernels fail to fill properly resulting in light weight, shriveled grain. Grain infected with FHB can be rendered unsuitable for human consumption or animal feed when the Fusarium fungus deposits the vomitoxin, Deoxynivalenol (DON), in the infected seeds. Tests for DON toxins are sensitive to >5ppm and elevators will reject a load at this level of contamination. Historically, FHB has not been a serious problem for small grain production in Southeast Idaho, but in 2011, Fusarium Head Blight moved into the spotlight as loads of grain from the Idaho Falls area tested positive for DON toxin and were rejected. This study has identified resistant varieties and advanced lines that will moderate the effects of FNB disease in spring wheat throughout the Pacific Northwest. ◆

Patricia Dailey, Director of Programs, Retires from the Idaho Wheat Commission

AFTER 17 years of heading up Research Planning and Development for the Idaho Wheat Commission, Patricia Dailey decided last October it was time to pursue her passions for travel, golf, yard work, volunteering and spending more time with her husband, children and grandchildren.


Patricia Dailey

Patricia began her career in the Air Force, and then earned a Bachelor of Science degree in entomology. She then went on to earn masters degrees in both agronomy and agricultural economics. Her strong educational background and many years of experience in financial analysis served Idaho wheat growers well through the years.

Blaine Jacobson, executive director of the Idaho Wheat Commission, said Patricia constantly strove to do each project better than the one before. "Helping the wheat growers of Idaho have more profitable harvests was one of her goals," he said. "The wheat growers were fortunate to have her expertise and those of us who associated with her on a daily basis were privileged to have her as a positive, uplifting and productive co-worker."

Patricia used her analytical skills to conduct environmental, transportation and economic studies that affect the wheat industry. She had oversight of research projects with public and private institutions for varietal development, pest control, and quality improvement. Patricia also served as a liaison on local and national research topics.

Those who worked with Patricia through the years knew that whatever event, program, project or activity she undertook would be done to the highest level. Her positive, can-do-attitude, and her love for agriculture catapulted her to many areas of leadership within the wheat industry.

Idaho Wheat Commission Hires Director of Research Collaboration

The Idaho Wheat Commission (IWC) welcomes Cathy M. Wilson, PhD as Director of Research Collaboration. Wilson will provide oversight for research projects, including annual research review for varietal development, pest control, quality improvement, analyzing and evaluating funding requests and assessing their value. She will also serve as a liaison to partner with private and public institutes to help collaborate research efforts.


Cathy M. Wilson

"We are extremely pleased to have Cathy join the Wheat Commission," said Blaine Jacobson, IWC Executive Director. "Her knowledge of agricultural research and her experience working in the public and private sectors will enable us to bring value back to the Idaho wheat farmer through our funded research projects and through research alliances."

A native of Idaho's Magic Valley, Cathy holds a BS in Biology with an emphasis on Botany from Boise State University, and an MS in Plant Pathology from the University of Idaho. Cathy managed the Seed Pathology Lab at the U of I, for a short time following graduation. She completed a PhD in an interdisciplinary pilot program at New Mexico State University, between the departments of Plant Science, Biology and Chemistry, to achieve a degree in Plant Molecular Genetics.

Plant breeding became a career focus when she was hired by Asgrow Seed Company to work on breeding and pathology in processing tomatoes and onions. Cathy became the World Wide Project Leader for Processing Tomato. She released hybrid varieties with multiple disease resistance, yield and the excellent processing qualities demanded by the processing industry.

Dr. Wilson has 20 years of R&D experience in the international vegetable seed industry. She has functioned in the role of Station Manager, Plant Breeder and Seed Production Manager, traveling extensively in Europe, Mexico and Central and South America. Cathy worked closely with growers, processors, dealers, New Mexico State University and the extension service.

Cathy has been involved in numerous professional organizations dedicated to the advancement of plant breeding, genetics, and plant pathology. She is also an advocate for science education in local Boise high schools. In 2010, she was the engineering mentor for the Riverside International School Sim City Project team and is currently the parent mentor for the Timberline High School Life Sciences Club.

Cathy and her husband Daryl, have two children. They enjoy many outdoor activities in Boise, particularly riding bikes on the green belt and skiing at Bogus Basin.

2011 Idaho Spring Barley Variety Performance

By Juliet Marshall and Brad Brown, Extension Specialists, and Doug Finkelnburg, Extension Support Scientist, Department of Plant, Soil and Entomological Sciences, University of Idaho

Variety Testing

Spring varieties of wheat and barley are evaluated each year to provide performance information to help growers select superior varieties for their growing conditions. The tests are done using growers fields or experiment station locations 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. The number of entries is limited due to resource constraints. Individual plots were planted as 7 rows spaced 7" apart for 14' to 25' in length and replicated 3 or 4 times in a randomized complete block design. Plots in North Idaho that were direct seeded were 5 feet wide with five paired rows, three inches apart with ten inches from center to center of paired rows.

Information Summarization

Agronomic performance data for 2011 spring barley tests are summarized by district in Tables 1-4. The state is divided into the Northern, the Southern, and the Eastern Districts. Previous Districts III and IV have been included in the Southern and Eastern Districts, respectively, and results are presented for 2-row barley in Table 3 and for 6-row barley in Table 4. 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 48 lb/bu at 11% moisture. Lodging ratings are the percent of a plot area lodged. Plump percentage is based on cleaned grain retained on a 6/64" screen. Thin grain percentage is clean grain passing through a 5.5/64" screen. 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 2009, 2010, and 2011 are presented in Table 5 for all districts. These data represent results of 5-12 site/years and can be a good indication of long-term performance of a variety.

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 2011 trials; previous results can be found in the spring 1992 to 2011 issues of Idaho Grain Magazine. Average performance over locations and years more accurately indicates a variety's 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, latest varietal maturity, and / or performance of the surrounding crop in a grower's field, whether wheat or barley. Varietal performance may not reflect actual performance in your field when a specific variety is managed for optimal economic performance.

Reported small differences among varieties in yield and other characteristics are usually of little importance due to chance differences in tests. 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 9.5 in 10 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 1. Dryland spring barley performance in Northern District at Bonners Ferry, Genesee, and Moscow, 2011.

	Craigmont	Bonners Ferry	Genesee	Moscow	Average	Test Weight	Plant Height	Plumps	Thins
Variety			**bu/acre**			**lb/bu**	**inches**	**%>6/64**	**%<5.5/64**
■ 2-ROW BARLEY									
Champion	128	122	130	65	111	54.5	33	93	2
Camas	113	110	117	86	106	53.7	34	93	2
Conrad	107	133	114	66	105	52.7	33	94	1
Radiant	104	122	116	77	105	53.1	33	85	4
Lenetah	115	132	113	56	104	53.8	32	91	2
Tetonia	98	122	126	70	104	53.0	32	86	3
Spaulding	108	118	122	64	103	54.3	33	94	2
Bob	109	112	109	75	101	53.8	34	95	1
Merit	93	122	114	71	100	52.9	33	85	3
Baronesse	99	114	115	67	99	52.8	32	91	2
Harrington	97	114	97	74	96	52.9	34	86	3
AC Metcalfe	98	106	110	62	94	53.3	34	90	2
Copeland	92	113	104	66	94	51.9	35	90	3
Salute	99	94	107	64	91	52.8	32	96	1
01WA-13860.5	87	81	93	51	78	58.5	32	73	6
Clearwater*	80	0	97	47	56	59.0	32	74	6
2-ROW AVERAGE	**102**	**107**	**111**	**66**	**97**	**53.9**	**33**	**89**	**3**
■ 6-ROW BARLEY									
Aquila	110	114	104	72	100	52.6	36	91	2
Tradition	86	100	90	58	83	51.7	36	88	3
OVERALL AVERAGE	**101**	**107**	**110**	**66**	**96**	**53.7**	**33**	**89**	**3**
LSD (0.05)	13	19	14	19	8	0.6	1	--	--
CV (%)	9	11	9	20	--	--	--	--	--

* At Bonners Ferry, the variety Clearwater was selected exclusively for browse by deer.

Table 2. Irrigated spring barley performance in Southern District at Parma, 2011.

	Parma	Test Weight	Plant Height	Plant Lodging	Plumps	Thins
Variety	**bu/acre**	**lb/bu**	**inches**	**%**	**%>6/64**	**%<5.5/64**
■ 2-ROW BARLEY						
Idagold	116	51.9	31	0	97	1
Lenetah	115	54.5	39	3	98	0
Salute	112	52.6	43	5	97	1
Spaulding R579-1	125	53.9	41	0	97	1
Tetonia	121	53.9	39	8	95	1
AVERAGE	**114**	**54.8**	**38**	**3**	**96**	**1**
■ 6-ROW BARLEY						
Aquila	116	53.6	43	0	95	1
Goldeneye	127	52.8	43	0	96	1
Millennium	123	50.1	39	0	86	5
Nebula	103	51.4	28	0	97	1
AVERAGE	**120**	**51.5**	**39**	**0**	**94**	**2**
OVERALL AVERAGE	**117**	**53.2**	**40**	**1**	**95**	**1**
LSD (0.05)	13	0.3	3	6	4	1

Further Information

Information on variety characteristics can be found in Extension publication: "2006 Certified Seed Selection Guide for Spring Barley and Oats" (Progress Report 328) and "2006 Certified Seed Selection Guide for Spring Wheat" (Progress Report 327). Variety performance information for winter wheat and winter barley has been published in the fall issues of Idaho Grain. An excellent Extension Publication for barley producers is "Idaho Spring Barley Production Guide" (Bulletin No. 742) that was updated for 2003, (see the Idaho Ag Communications website at *http://www.cals.uidaho.edu/edcomm/catalog.asp* under "crops" and "cereals"). For spring wheat producers, "Irrigated Spring Wheat Production Guide for Southern Idaho" (Bulletin No. 697) can be ordered on the same website. In addition, all these publications are free through the University of Idaho Agriculture Publications (ph. 208-885-7982) or contact your county Extension Office. Additional Idaho small grain variety performance information is available on the web at *http://www.extension.uidaho.edu/cereals/*.

Tests and 2009-2011 Yield Summaries

Table 3. Irrigated Two-Row Spring Barley Performance in Eastern Districts at Rupert, Aberdeen, Idaho Falls, and Ashton, 2011.

	Yield										
	Irrigated				Irrigated Average						
	Rupert	Aber-deen	Idaho Falls	Ashton	Yield	Test Weight	Plant Height	Lodging	Plumps	Thins	Protein
Variety	bu/acre				bu/acre	lb/bu	inches	%	(% > 6/64)	%	%
■ FEED											
Baronesse	120	151	129	116	129	52.4	32	33	88	5	11.5
Camas	125	154	124	115	129	52.9	34	27	89	5	13.7
CDC Fibar *	74	104	79	79	84	56.1	37	63	77	8	15.1
CDC McGwire *	109	131	127	103	118	59.2	35	41	63	12	14.0
Champion	134	161	137	124	139	53.6	35	13	93	3	12.7
Clearwater *	94	111	99	99	101	57.6	35	30	76	8	13.9
Idagold II	107	150	137	101	124	49.9	29	20	75	9	12.2
Julie *	101	115	116	94	107	56.7	35	20	76	7	14.2
Lenetah	118	148	132	122	130	52.6	35	37	90	4	13.1
Primo	116	161	141	115	133	52.0	31	43	86	6	11.6
Spaulding	124	172	141	131	142	53.7	34	27	89	4	12.4
Tetonia	123	155	149	117	136	52.8	32	26	86	6	11.6
Transit *	88	114	102	79	96	56.2	36	21	78	6	14.5
Xena	133	162	155	141	148	52.8	35	27	91	4	11.8
■ MALT											
B1202	108	142	116	106	118	51.5	33	33	91	3	12.5
B3719	134	159	144	113	137	52.2	34	26	94	4	11.8
Conrad	113	148	137	124	131	52.3	34	35	92	4	12.2
Copeland	116	142	116	104	119	52.0	37	38	91	3	12.8
Harrington	102	129	107	101	110	51.2	34	56	79	8	13.0
Hockett	103	140	125	110	119	52.4	32	44	86	6	13.0
Merit	87	145	106	107	111	48.7	35	48	72	16	13.0
Merit 57	112	138	121	110	120	50.1	34	49	82	7	13.2
Metcalfe	95	142	119	111	117	52.0	36	47	87	7	13.4
Moravian 115	95	-	120	-	-	-	-	-	-	-	-
Moravian 137	102	-	130	-	-	-	-	-	-	-	-
Moravian 69	105	-	132	-	-	-	-	-	-	-	-
Pinnacle	107	155	143	112	129	53.5	37	8	95	2	13.2
Average	**108**	**139**	**124**	**107**	**119**	**53.7**	**35**	**34**	**83**	**7**	**13.0**
LSD (0.05)	21	18	14	16	8	0.9	1	12	8	5	1.2

* indicates hulless variety

Table 4. Irrigated Six-Row Spring Barley Performance in Eastern Districts at Rupert, Aberdeen, Ashton, and Idaho Falls, 2011.

	Yield										
	Irrigated				Irrigated Average						
	Rupert	Aber-deen	Idaho Falls	Ashton	Yield	Test Weight	Plant Height	Lodging	Plumps	Thins	Protein
Variety	bu/acre				bu/acre	lb/bu	inches	%	(% > 6/64)	%	%
■ FEED											
Creel	132	156	157	118	141	49.5	37	28	78	9	11.2
Goldeneye	146	167	133	139	146	51.8	38	24	87	5	12.9
Herald	119	151	146	119	134	49.4	38	18	86	5	12.2
Millennium	136	161	154	120	143	49.8	39	19	76	10	12.4
Steptoe	109	152	134	116	128	48.4	38	44	84	7	11.5
■ MALT											
Celebration	109	127	116	103	114	50.5	38	50	90	4	13.4
Lacey	137	142	126	115	130	51.9	39	26	93	2	13.0
Legacy	124	142	117	119	126	50.6	39	41	89	4	12.6
Morex	92	119	107	92	102	49.3	39	65	71	13	12.2
Tradition	113	142	105	118	119	51.1	39	39	90	3	12.6
Average	**123**	**148**	**135**	**119**	**131**	**50.2**	**38**	**32**	**85**	**6**	**12.3**
LSD (0.05)	18	18	15	19	9	0.9	2	17	6	3	0.8

Table 5. Spring Barley Yield Average for 2009-2011 in Idaho.

	District			
	Northern	Southern	Eastern	Eastern (Dryland)
Site/Years	**4**	**3**	**9**	**3**
	Yield bu/acre			
■ 2-ROW FEED				
Baronesse	85	-	129	31
Camas	88	-	120	36
Champion	93	-	129	-
Clearwater	-	-	98	28
Idagold	-	125	-	-
Idagold II	-	-	128	25
CDC McGwire*	-	-	-	29
Julie*	-	-	102	-
Lenetah	91	115	126	30
Primo	-	-	127	33
Radiant	90	-	-	-
Salute	82	-	-	-
Spaulding	-	-	133	32
Spaulding R579-1	88	132	-	-
Tetonia	91	136	127	33
Transit*	-	-	89	-
Xena	-	-	134	32
■ 2-ROW MALT				
AC Metcalfe	83	-	-	-
B1202	-	-	111	30
Conrad	90	-	122	32
Copeland	-	-	118	-
Harrington	81	-	103	34
Hockett	-	-	109	29
Merit	84	-	111	25
Metcalfe	-	-	-	36
Pinnacle	-	-	115	34
Radiant	90	-	-	-
Average	**87**	**127**	**118**	**31**
LSD (0.05)	4	9	5	6
■ 6-ROW FEED				
Aquila	-	121	-	-
Colter	-	-	114	30
Creel	-	-	123	35
Goldeneye	-	138	126	30
Herald	-	-	115	32
Millennium	-	127	124	30
Nebula	-	113	-	-
Steptoe	-	-	119	29
■ 6-ROW MALT	-	-	-	-
Celebration	-	-	103	-
Lacey	-	-	116	31
Legacy	-	-	110	29
Morex	-	-	104	31
Tradition	80	-	107	27
Average	**80**	**125**	**115**	**30**
LSD (0.05)	4	9	5	6

2011 Idaho Spring Wheat Variety Performance

By Juliet Marshall and Brad Brown, Extension Specialists, and Doug Finkelnburg, Extension Support Scientist, Department of Plant, Soil and Entomological Sciences, University of Idaho

Table 1. Dryland spring wheat performance in Northern District at Craigmont, Genesee, and Bonners Ferry, 2011.

Variety	Craigmont	Genesee	Bonners Ferry	Average	Grain Hardness	Test Weight	Plant Height	Protein
■ SOFT WHITE	bu/acre					lb/bu	inches	%
Penawawa	51	69	48	56	18	59.9	30	11.6
Alturas	65	80	63	69	19	60.9	32	10.9
Cataldo	66	68	55	63	17	59.9	33	11.4
Babe	71	73	56	67	16	60.2	34	10.8
Diva	82	76	92	83	24	60.7	36	11.0
Nick	50	67	50	56	21	59.8	32	11.3
Whit	65	75	76	72	21	61.1	32	11.0
Eden (club)	76	69	70	72	28	61.4	32	11.3
JD (club)	85	76	93	84	29	62.8	37	11.4
WB-1035CL2	51	63	60	58	22	59.9	31	12.3
Average Soft	**66**	**72**	**66**	**68**	**21**	**60.7**	**33**	**11.3**
LSD (0.05)	10	10	12	6	--	0.6	1	--
■ HARD RED								
Cabernet	63	65	45	58	48	60.3	27	12.5
Jefferson	64	79	54	65	68	59.7	33	12.9
Jerome	59	74	47	60	60	59.4	32	12.6
UI-Winchester	70	80	59	69	62	60.3	32	12.9
Expresso	74	72	82	76	77	60.9	30	14.3
WB-Fuzion	58	71	29	53	72	58.4	33	13.3
Hank	45	77	23	48	60	54.5	31	13.7
Jedd	40	77	18	45	83	56.3	29	13.9
Bullseye	57	81	56	64	76	61.2	29	12.9
Cerere	47	72	42	54	61	58.1	28	12.6
Kelse	60	78	55	64	66	60.2	34	14.1
Buck Pronto	78	72	64	71	67	60.7	34	13.5
Albany	50	80	49	60	71	59.7	31	12.6
IDO702	53	74	34	54	68	57.8	33	13.6
10FxInc1	57	71	53	60	76	60.6	34	12.8
Average	**58**	**75**	**47**	**60**	**68**	**59.2**	**31**	**13.2**
■ HARD WHITE								
WB-Hartline	73	85	64	74	55	58.7	34	13.0
Lolo	47	80	31	53	66	58.6	32	13.0
OR4201261	73	84	72	76	71	59.7	29	12.3
Average	**64**	**83**	**56**	**68**	**64**	**59.0**	**32**	**12.8**
Overall Average Hard	**59**	**76**	**49**	**61**	**67**	**59.2**	**31**	**13.1**
LSD (0.05)	7	7	10	4	--	0.6	1	--

IDAHO spring wheat varieties are evaluated each year to provide performance information to help growers select superior varieties for their conditions. Because of similarities among spring wheat and spring barley tests, details about spring wheat test design and interpretation of the information presented in this article can be found in the preceding article '2011 Idaho Spring Barley Variety Performance Tests and 2009-2011 Yield Summaries.' Agronomic performance data for spring wheat are summarized by state districts in Tables 1-4. Former Districts III and IV results, now part of the Southern and Eastern Districts, are presented for soft white spring wheat in Table 3 and for hard spring wheat in Table 4. Yield data are given for individual sites while other agronomic data are averaged over all the sites of each table. Bushel/Acre yield results are based on 60 lb/bu at 11% moisture. Lodging ratings are the percent of the plots that are lodged, and in some tables not reported due to minimal or no lodging. More detailed lodging information is available on the UI cereals website *http://www.extension.uidaho.edu/cereals/*. Average values are presented at the bottom of the listings and are followed by a least significant difference (LSD) statistic at the 5% level. Average yield results from variety performance trials in 2009, 2010, and 2011 are presented in Table 5 for all districts, with 3-12 site/years of data summarized for each districts.

Table 2. Irrigated spring wheat performance in Southern District at Parma, 2011.

Variety	Parma	Test Weight	Plant Height	Lodging	Protein
■ Soft White	bu/acre	lb/bu	inches	%	%
Alpowa	104	64.3	40	0	10.3
Alturas	110	61.6	39	0	10.4
Babe	103	62.5	39	5	10.3
Diva	100	61.8	41	0	10.2
JD	109	62.8	44	0	10.4
Jubilee	92	61.6	40	0	10.3
Penawawa	98	62.8	37	0	10.5
Pettit	95	60.5	35	0	10
Whit	95	61.7	39	0	10.4
Average	**104**	**62.2**	**39**	**0.7**	**10.3**
LSD (0.05)	9	1.4	2	5	0.6
■ Hard Red					
Albany	77	62.9	37	0.0	11
Buck Pronto	87	63.6	36	0.0	12.1
Cerere	78	62.3	35	0.0	10.5
Expresso	81	63.5	34	0.0	12.8
Jefferson	85	62.5	39	0.0	11
Jerome	83	62.5	36	0.0	11.2
Kelse	75	63.5	36	0.0	13.2
Rockland	78	63.3	33	0.0	12.7
Solano	86	63.8	33	0.0	12.4
Volt	89	64.5	37	0.0	11.4
Winchester	83	63.4	37	0.0	10.6
WPB 936	35	51.1	37	0.0	13.8
■ Hard White					
Lochsa	56	57.6	37	0.0	11.8
Lolo	74	62.9	39	0.0	11.1
Otis	90	63.8	35	0.0	11.1
WA8123	101	63.1	38	0.0	10.9
WB-Idamax	93	63.4	36	0.0	11.3
WB-Paloma	86	63.7	36	0.0	11.2
Average	**79**	**62.3**	**36**	**0**	**11.6**
LSD (0.05)	14	0.9	4	0	0.9

Tests and 2009-2011 Yield Summaries

Table 3. Irrigated and Dryland Soft White Spring Wheat Performance in Eastern Districts at Rupert, Aberdeen, Idaho Falls, Ashton, and Soda Springs, 2011.

	Yield									
	Irrigated				Dryland	Average				
Variety	Rupert	Aberdeen	Idaho Falls	Ashton	Soda Springs	Irrigated Yield	Test Weight	Plant Height	Lodging	Protein
	bu/acre					bu/acre	lb/bu	inches	%	%
Alpowa	94	138	139	95	36	113	58.2	38	1	10.6
Alturas	116	130	131	97	57	117	58.7	36	1	10.0
Babe	104	131	131	108	34	118	59.5	38	8	10.4
Cataldo	91	112	117	91	56	101	59.1	34	0	10.5
JD*	80	119	143	102	52	110	58.8	40	40	11.4
Nick	83	114	133	101	47	107	58.4	34	0	10.0
Penawawa	102	119	125	101	48	111	59.2	35	2	10.7
UI Pettit	88	130	130	95	41	108	58.4	30	0	9.9
IDO 671	111	129	132	101	48	117	59.3	36	1	9.8
Whit	91	133	129	98	52	110	58.9	34	5	10.7
Average	**101**	**127**	**133**	**100**	**50**	**114**	**58.9**	**36**	**5**	**10.4**
LSD (0.05)	11	---	12	15	9	7	0.7	1	9	0.6

*club wheat

Table 4. Irrigated and Dryland Hard Spring Wheat Performance in Eastern Districts at Rupert, Aberdeen, Ashton, Idaho Falls and Soda Springs, 2011.

	Yield									
	Irrigated				Dryland	Average				
Variety	Rupert	Aberdeen	Idaho Falls	Ashton	Soda Springs	Irrigated Yield	Test Weight	Plant Height	Lodging	Protein
HARD RED	bu/acre					bu/acre	lb/bu	inches	%	%
Albany	95	92	127	93	-	103	59.6	33	10	12.3
Buck Pronto	93	103	115	98	-	102	59.5	34	1	14.4
Bullseye	91	115	125	87	-	103	60.4	31	10	13.3
Cabernet	100	105	115	95	-	103	60.0	28	2	12.8
Cerere	83	133	130	91	32	106	55.5	33	0	11.4
Choteau	102	115	126	89	30	107	59.8	34	0	13.7
Iona	93	92	120	101	41	103	58.9	36	16	14.0
Jefferson	93	97	130	100	41	106	59.1	34	11	13.3
Jerome	89	110	137	103	36	110	58.1	33	0	12.8
Kelse	88	118	119	95	42	103	59.2	36	0	14.3
Malbec	97	121	126	96	-	108	60.5	30	0	13.3
UI Winchester	91	98	122	107	35	105	59.7	33	14	13.3
Volt	98	116	124	91	25	106	60.5	33	0	13.2
WB-Fuzion	87	100	125	90	30	101	59.5	36	0	14.0
WB-Rockland	89	85	98	76	-	87	59.5	27	0	14.0
WestBred 936	46	85	111	80	33	80	54.2	31	0	13.5
HARD WHITE										
Blanca Grande	95	97	112	84	35	97	61.5	29	0	12.7
Klasic	92	91	120	72	45	94	59.4	25	6	13.8
Lochsa	66	89	121	92	44	92	56.7	33	0	13.4
Lolo	73	94	141	108	45	106	57.9	36	6	12.1
Otis	99	116	142	101	44	114	58.6	39	1	12.2
Pristine	84	77	122	75	40	91	60.0	32	1	13.8
Snow Crest	95	80	114	91	36	97	59.7	28	0	13.2
SY Capstone	87	109	119	101	-	103	59.5	30	0	12.7
WB-Idamax	94	101	128	112	36	110	58.6	32	0	13.0
WB-Paloma	91	97	131	93	-	104	59.5	29	0	13.4
DURUM WHEAT										
Alzada	105	113	135	99	37	113	60.3	33	7	12.9
Kronos	106	123	144	93	38	115	60.1	30	0	13.3
Utopia	106	98	132	97	34	109	58.3	30	1	13.3
Average	**91**	**102**	**125**	**94**	**37**	**103**	**59.1**	**32**	**3**	**13.2**
LSD (0.05)	13	---	9	14	7	7	0.9	1	9	0.8

Table 5. Spring Wheat Yield Average for 2009-2011 in Idaho.

	District			
	Northern	Southern	Eastern	Eastern (Dryland)
Site/Years	**3**	**5**	**12**	**3**
Variety	Yield bu/acre			
SOFT WHITE				
Alpowa	-	-	113	48
Alturas	60	108	116	62
Babe	64	-	115	56
Cataldo	55	-	107	61
Diva	68	-	-	-
Eden (club)	61	-	-	-
JD (club)	68	-	-	-
Jubilee	-	109	-	-
Nick	53	-	110	55
Penawawa	55	103	107	58
UI Pettit	-	97	112	52
IDO 671	-	-	117	60
Whit	66	-	110	58
Average	**61**	**104**	**113**	**58**
LSD (0.05)	3	5	4	6
HARD RED				
Bullseye	-	-	109	-
Cabernet	52	-	103	-
Choteau	-	-	105	42
Hank	50	-	-	-
Iona	-	-	106	51
Jefferson	59	101	108	52
Jerome	54	102	111	53
Jedd	46	-	-	-
Kelse	55	-	101	47
Malbec	-	-	-	106
UI Winchester	58	100	105	48
WB-Fuzion	52	-	102	42
WB 936	-	85	96	47
HARD WHITE				
Blanca Grande	-	-	99	45
Klasic	-	-	96	44
Lochsa	-	89	104	52
Lolo	54	102	117	56
Otis	-	112	117	60
Pristine	-	-	100	48
Snow Crest	-	-	98	45
SY Capstone	-	-	103	-
WB-Idamax	-	-	109	50
WB-Paloma	-	-	106	-
Durum				
Alzada	-	-	106	-
Kronos	-	-	106	43
Utopia	-	-	106	43
Average	**53**	**98**	**105**	**48**
LSD (0.05)	3	4	3	5

Everything You Need to Go All Out

Extra versatility for your get-it-done attitude.

JOHN DEERE

Go all out with the new John Deere 9R/9RT Series Tractors. With up to 560 engine hp,* they've got the right power and performance to help you get every job done faster than ever. What's more, the refined PowerShift Transmission with Efficiency Manager™ will help you get it done with less diesel. Combine that with the advanced GPS and information-management technologies from John Deere, and you'll get it done better than ever – all while riding in the spacious and comfortable CommandView™ II Cab. And now you can get more jobs done with a high-horsepower track or four-wheel-drive tractor thanks to a wider selection of options, which include increased hitch-lift capacity and hydraulic flow, plus an available PTO on all models.

The new 9R Series Tractors with 360 to 560 engine hp* and 9RT Series Track Tractors with 460 to 560 engine hp.* These are the high-horsepower tractors built for your go-all-out-and-get-it-done attitude. See your John Deere dealer for details.

Nothing Runs Like A Deere.™

*Rated engine hp (ISO) per 97/68/EC.

JohnDeere.com/9R