

# IDAHO GRAIN

THE IDAHO GRAIN PRODUCERS ASSOCIATION MAGAZINE

Spring 2010



**Idaho grain leaders  
take priorities  
to Congress**

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# Becoming Part of the Heard!



**G**reetings from Soda Springs. It's an honor to serve as your Idaho Grain Producers Association President. As I think about our future, I wonder what challenges will face us as farmers, not only in the next 12 months but in the coming years. During the last couple of years, we have had to deal with issues directly affecting our farming operations like the field residue burning issue, the continuing battle over climate change legislation and before that, the 2008 Farm Bill. I find it interesting that it would have been hard to tackle any one of these complex and complicated issues alone, yet as an organized group of farmers through organizations like the Idaho Grain Producers Association (IGPA), the National

Association of Wheat Growers and the National Barley Growers Association, we were able to address them in a very proficient manner.

With that thought in mind, I am sometimes amazed that we as farmers are satisfied in sitting back and letting things happen around us, satisfied to live and exist silently in our own little world, allowing the world to change and evolve around us. Some of you have heard my passionate plea to get involved and help make a difference in our future as a farming community. I have often talked about the day when the first Farm Bill was written and passed by Congress back in 1939. According to the census at that time, about 25 percent of the population was involved in agriculture and claimed to make their livelihood raising the food and fiber to feed and clothe not only our fellow citizens, but much of a hungry world. 25 percent...what a powerful voting bloc!

Amazingly enough, when the results of the 2007 census were published, less than 2 percent of the population earned a living by claiming to be farmers and ranchers. So in less than one generation, we went from a powerful coalition and voice, to a minority; now allowing our urban cousins, whose food and fiber by the way comes from stores and shopping centers not from farms, the ability to control and legislate the way we operate. These decisions are not only affecting our proven abilities to succeed, but are impacting our profitability and bottom line. Putting those census statistics in a possibly easier and more visual light, imagine driving to Disneyland with the family back in 1939. On average, one car out of every four cars that you passed while traveling would be fellow farmers. Now take that same Disneyland trip today. Sadly, you will go by an average of more than fifty cars before passing one of our own! Count them, fifty, you will be amazed at the distance between cars. So when it comes to critical issues and concerns involving your farming operation, are you going to rely on the 21st car, the 36th car, or maybe the 49th car to help you and influence and sway policy for the good of agriculture? I'm not counting on it for my operation and I hope that you won't either!

So what's my point? Get involved! Tell our story! Be vocal! Join and be active in your community and in your county grain organization. Join and be an active member of the Idaho Grain Producers Association. Attend and participate in farm meetings and your annual IGPA convention. Write your State Legislators and your Congressmen. Help direct and develop farm policy. Don't just silently sit there hoping that the 21st. or the 36th or the 49th car will represent your wishes because I promise you, they won't. In fact, if the truth were known, they are out there pushing and pulling as hard as they can, arguing against your farm programs, complaining about the smoke from your field burning and cramming climate legislation and new EPA regulations down your throat, making your life more difficult and your operation less profitable.

Don't let it happen! It's time to speak up. It's time to become part of the Heard! ✱

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*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**

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## Great Expectations

What's arguably even more shocking than the New Orleans Saints winning their first Super Bowl ever? How about the U.S. team winning a record cache of medals in the 2010 Winter Olympics? It's the news that this month Congress plans to begin proceedings on new federal farm legislation. Yes, it's true!

Maybe that is not as shocking as you had anticipated. But if you're reading this magazine and article, I will assume you are somehow linked to the grain industry. And if your livelihood and future involves agriculture, you might want to keep reading.

In a January speech at the National Association of Wheat Growers winter board meeting in Washington, DC, U.S. House Agriculture Committee Chairman Collin Peterson announced his intention to kick start hearings in March and April to begin shaping a new Farm Bill. Upon hearing his words, a knife could have sliced through the sudden tension in that meeting room.

You might be thinking why there is already talk of a new Farm Bill when we are not even half way through the life of the 2008 bill? And why should care about this development? Chairman Peterson's explanation was simple and straightforward.

The Farm Bill is under unprecedented pressure. Pressure to change, to modernize, and to reflect a more progressive approach to what agriculture should be in the 21st century. The bill is under pressure financially as Congress and the government continues their battle to address our economic woes while plugging the holes that keep taking on more unsustainable national debt.

Finally, the Farm Bill is also enduring a "popularity" trend. Countless new and persuasive non-traditional activists want funds diverted away from production agriculture and into areas like nutrition, conservation, and renewable energy. These folks have gained traction with an increasingly urban Congress and federal government.

Why should you care? Funds authorized in the 2008 Farm Bill allocated 16 percent to production agriculture. Over 70 percent went to food programs and entitlements such as food stamps, nutrition, and the national school lunch program. The remaining dollars were spread out amongst forestry, energy, rural community programs and others. Thus, less than 20 percent of the 2008 Farm Bill is about farming!

So flash forward to present day. The USDA has yet to fully implement several programs of the 2008 bill, yet Congress is already ratcheting up the rhetoric for a 2012 version. Chairman Peterson's message to our group in that dim hotel room was production agriculture cannot expect a "business as usual" approach to this next Farm Bill. Farmers must work together and think outside the box if they wish to maintain support for a safety net. Agriculture must find new and innovative ways to achieve financial stability and security while educating decision makers and the general public that taxpayer investment in the industry is necessary.

His words could not be more poignant. While farmers wrestle formulating a defensible farm policy, many other threats loom. Environmental regulation, funding reductions in federal crop insurance programs, and a disinvestment in publicly-funded agriculture research are just a few current challenges.

No matter how you farm, what you farm, or where you farm, you will feel an impact. The IGPA heard Chairman Peterson's speech in that hotel room, but we were not shocked. Our group of dynamic farmer-leaders understands that farming is not done in bubble, and must be innovative, efficient, and engaged to be sustainable.

If you witnessed the unprecedented success of our 2012 Winter Olympic athletes, it was obvious their success was not achieved by doing the "same ol' same ol'" of competitions past. They knew that if they got ahead of the game, they would win. If they chose to play it safe, they would lose to other countries finding new ways to bring home the gold.

Today's threats and challenges faced by agricultural production are clear and present. The IGPA needs your input and active participation to affect the impact on Idaho's grain industry. If you engage, we win. If you don't, we all lose. I hope you choose to be a part of our team. ✱



# We have just one thing to say to

*our neighbors, concerned citizens,  
business people, public officials,  
environmental groups, farmers,  
land owners, ranchers, non-profit  
organizations, and residents*

# Thank you.

Everyone who submitted comments to the U.S. Bureau of Land Management for Monsanto's Blackfoot Bridge Mine Environmental Impact Statement played a valuable role. We look forward to working with the BLM to review all comments – whether they make a statement of support or point out an area of concern – to ensure the Blackfoot Bridge Mine in southeast Idaho meets our goal of becoming one of the world's most environmentally advanced mines.

All of the employees of Monsanto in Idaho – your friends, neighbors and associates – are grateful that you cared enough to take time to participate in this important process.

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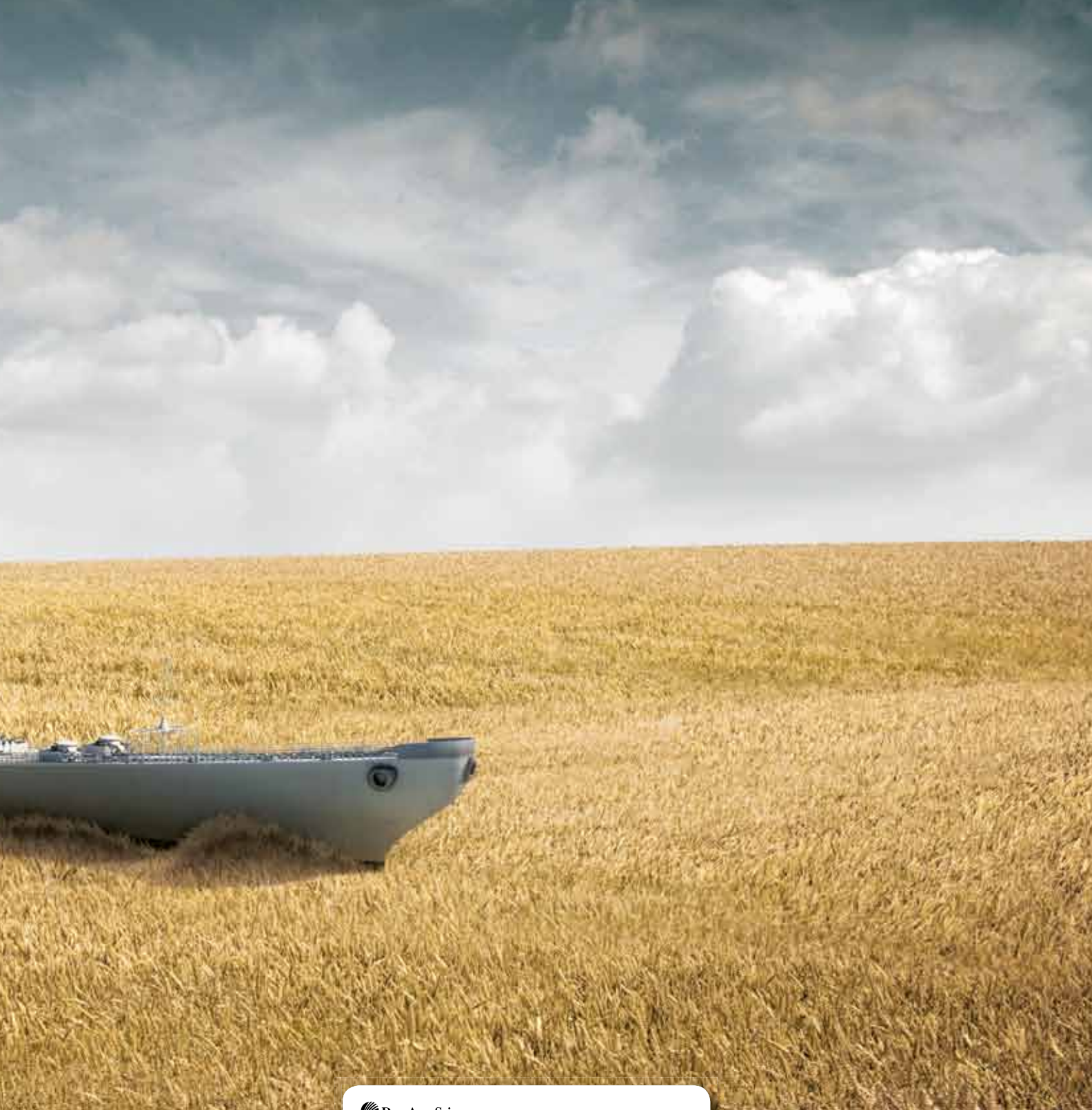




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## Columbia Snake River System extended lock closure

The federal government is making a significant investment in the future of the Columbia Snake River System (CSRS). FY2009, FY2010 and American Recovery and Reinvestment Act (ARRA) appropriated funds will allow the U.S. Army Corps of Engineers to ensure continued operations and long-term reliability on the Columbia Snake River System (CSRS). To make necessary major maintenance repairs to the system, the Corps has planned a 14-week extended lock closure to begin December 10, 2010.

During this closure, The Dalles, John Day and Lower Monumental (LoMo) will each receive new downstream lock gates. The locks at McNary and Lower Granite dams are slated to close February 6, 2011 to allow for five weeks of maintenance repairs, and Ice Harbor is scheduled to close February 13, 2011 for a four week maintenance outage. All other navigation locks on the CSRS are scheduled for the standard two week closure in March 2011.

Extended lock closures of this kind are very unusual, but are necessary to maintain the integrity of the transportation system. Infrastructure investments and maintenance repairs being made during this outage will have long term benefits for the entire Northwest. The CSRS is poised for tremendous growth over the next fifteen years. It is fully functional now and, with this targeted maintenance funding, it will remain in service to handle the growth in the coming years.

The CSRS is a vital transportation link for the states of Idaho, Montana, Oregon and Washington. The economies of these four states rely heavily on the commerce that flows up and down this system. The CSRS is the #1 U.S. wheat export gateway, #1 U.S. barley export gateway, #1 West Coast paper and forest products export gateway, #1 in West Coast mineral bulk exports, and #1 in West Coast auto imports. The deep draft channel supports 40 million tons of cargo each year, valued at \$17 billion. The inland system supports 10 million tons of cargo, valued at \$1.5-2 billion annually. Overall trade on the system, and throughout the Pacific Northwest, is expected to



John Day dam on the Columbia River – picture courtesy of the U.S. Army Corp of Engineers

increase significantly in the future.

The Pacific Northwest Waterways Association (PNWA) is working closely with the Corps and navigation stakeholders to minimize impacts on river users during this outage. PNWA advocates for federal policies and funding in support of regional economic development. They represent multiple industries in the public and private sectors in Oregon, Washington, Idaho, and California. Members include public ports, navigation, transportation, international trade, tourism, agriculture, forest products, energy and local government interests. PNWA continues to work to assure the continued reliability of navigation in the Northwest. For more information on the extended lock closure, as well as additional navigation and environmental issues affecting the Northwest, log onto [www.pnwa.net](http://www.pnwa.net).

## Kansas Policy Specialist Named New NAWG CEO, January 8, 2010

Dana Peterson, a longtime policy staffer at Kansas Wheat, will be the next chief executive officer of the National Association of Wheat Growers.

Peterson accepted the position this week after an extensive search process undertaken by a committee including NAWG's officer corps and three leaders from NAWG's affiliated state associations. The final staffing decision was recommended by the executive Board made up of NAWG's officers and producers representing NAWG's member-states.



"We are absolutely delighted to be bringing one of our dynamic state staffers to the national office," said Karl Scronce, NAWG president and acting chief executive. "Dana is great to work with and showed confidence and poise throughout the interview process. She has ideas and enthusiasm that we need in



**Peterson**

Washington to help NAWG grow and the wheat industry thrive in a very competitive policy and production environment."

As a policy and membership specialist at Kansas Wheat since 2001, Peterson has been intimately involved in key issues on the national and state levels for nearly a decade. Her experience includes participation in the last two farm bill debates; the push to increase research funding and give wheat producers access to biotechnology; and the industry's look at new

uses and expanded markets for wheat and wheat byproducts, including cellulosic ethanol.

During her time at Kansas Wheat, Peterson also spent significant time managing federal and state grants for producer risk management education and participating in the budgeting process for a recent \$4 million award from the Kansas Bioscience Authority.

"I am thrilled to be coming to NAWG after a fantastic run at

Kansas Wheat, where I learned more than I could have imagined about wheat farming and wheat farmers," Peterson said. "I am cognizant of the realities of the wheat industry and looking forward to getting in the weeds, literally and figuratively, to tackle the issues facing our crop. Wheat is a big part of my life, and I am dedicated to seeing this industry succeed."

Kansas is frequently the top-producing wheat state and is known as the country's breadbasket in popular imagination and among Members of Congress. Kansas Wheat, which operates under a cooperative agreement between the Kansas Association of Wheat Growers and the Kansas Wheat Commission, is one of NAWG's larger affiliated state associations by budget and staffing.

"Dana has been an excellent asset for Kansas Wheat over the past nine years. We will miss her leadership and passion for wheat grower's advocacy here at the state level, but are very excited to gain her leadership at the national level," said Justin Gilpin, chief executive officer of Kansas Wheat.

Peterson is a double graduate of Kansas State University, having obtained bachelor's and master's degrees in agricultural economics there. She grew up on a farm first homesteaded by her family in 1871, where two of her four brothers are now the seventh-generation producing wheat, grain sorghum and cattle.

More biographical information and a headshot of Peterson are available at <http://www.wheatworld.org/about-us/contact-us/dana-peterson/>.

## Magic Valley, Caribou County Farmers Win Annual Grain Raffles

**C**aribou County grain farmers and a Magic Valley farm couple came up big winners of the Idaho Grain Producers Association (IGPA) annual raffle in late 2009.

As part of the IGPA annual awards luncheon held during the Oregon-Idaho Grains Grain Conference, December 1-3, 2009 in Coeur d'Alene, Idaho, Debbie Kauffman of Filer, Idaho was the lucky name on the ticket stub drawn from a bin of hundreds of other hopefuls. Debbie's husband Clark serves as IGPA Vice President.



Crop Protection Services representative Marlon Jenkins (l) presents Soda Springs grain grower Scott Brown and Caribou County IGPA state director Jeff Godfrey (r) with a chemical certificate.

The lucky ticket entitles the Kauffmans to 50 hours free use of a 4000, 5000, 6000, 7000, 8000 or 8000T TEN series John Deere tractor from their local John Deere equipment dealer.

Although the Kauffmans won the tractor raffle outright, Caribou County grain producers claimed a prize. For purchasing the highest volume of tractor raffle tickets of any county in the state, Caribou County growers netted a certificate worth \$500 in chemicals donated by Crop Protection Services (CPS) of Bancroft, Idaho.

The Caribou County growers in turn raffled off the CPS certificate amongst themselves. Local grower and current IGPA President Scott Brown of Soda Springs emerged the winner.

Proceeds from the annual tractor raffle sponsored by John Deere supplements the work of the IGPA in representing wheat and barley producers' interests in political activities and in support of agriculture-friendly elected officials.

The IGPA looks forward to the 2010 raffle and encourages any and all producers to try their hand!

**About the cover: Idaho grain leaders take priorities to Congress. Shown (from left to right) are Eric Hasselstrom, Joseph Anderson, Joe Anderson, Matt Gellings, Scott Brown, Clark Kauffman, Clark Hamilton, Wayne Hurst**

## 2009 Oregon-Idaho Grains Conference a Hit

**I**daho Grain Producers Association (IGPA) co-hosted with the Oregon Wheat Growers League the 2009 “Oregon-Idaho Grains Conference” December 1-3 at the Coeur d’Alene Resort in Coeur d’Alene, Idaho.

Nearly three hundred participants attended the annual conference which featured two days of keynote speakers, educational workshops, a trade show of agribusinesses, awards program and the annual dinner and fundraising auction.

Idaho EPA Administrator James Werntz and Oregon National Guard Adjutant General Fred Rees each keynoted general sessions discussing everything from leadership, to environmental challenges, to the wars in Iraq and Afghanistan. Nationally renowned cowboy poet and comedian Baxter Black entertained the crowd with foibles of everyday cowboy and farmer life.

The Conference featured 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 University of Idaho Lewis County extension educator Ken Hart, University of Idaho Nez Perce County cereal agronomist Larry Smith, Magic Valley agriculture reporter Cindy Snyder, and former farmer and grain leader Evan Hayes of Soda Springs.

Hart, Associate Professor for the University of Idaho Lewis County extension office, received the IGPA’s “*Outstanding Extension Educator*” award for his long-time service and volunteerism with Lewis and Idaho County grain producers.

Receiving the “*Outstanding Extension Educator/Lifetime Achievement*” award was Larry Smith of Nez Perce County. Smith, a 29-year cereal agronomist for the University of Idaho extension system, recently retired with an exemplary record of support and dedication to grain producers in the North-Central Idaho area.

Snyder, an agriculture reporter for the Magic Valley Times-News and Capital Press, was honored with the “*Outstanding Agriculture Journalist*” honoring her commitment to accurately and effectively relaying the story and activities of Idaho wheat and barley farmers.

The “*Lifetime Achievement*” award was presented to Evan Hayes. Now retired from his Soda Springs-based wheat and barley farm, Evan’s service to Idaho’s grain industry has spanned over 20 years, including posts as president of the IGPA and National Barley Growers Association, and state director for Caribou County grain growers.

Additionally, the IGPA formally installed its 2010



**Evan Hayes (l) of Soda Springs receives “Lifetime Achievement” award**



**Larry Smith (r), UI cereal agronomist, Nez Perce County**



**Ken Hart (r), UI Extension Specialist, Lewis County**

executive officer team. The elected officers include President Scott Brown (Soda Springs), vice president Clark Kauffman (Filer), Secretary-Treasurer Joseph Anderson (Genesee), past President Eric Hasselstrom (Winchester), and executive member Clark Hamilton (Ririe).

The annual bi-state convention will be held December 1-3, 2010 at the Doubletree Lloyd Center hotel in Portland, Oregon. ♦



Oregon National Guard Major General Fred Rees



Cindy Snyder of Ag Weekly



(l to r) OWGL President Jeff Newton, Baxter Black, IGPA 2009 President Eric Hasselstrom, IGPA Executive Director Travis Jones

# Biotech Wheat Pipeline



The possibility of biotech wheat continues to be a major topic of discussion in international and local wheat circles. At this point there are no biotech wheats and likely will not be for another 8-10 years.

Why all the interest in biotech wheat in the U.S. and around the world?

“In the U.S. wheat production returns are being eclipsed by biotech corn and soybeans and wheat production continues to decline,” says John Oades, US

Wheat Associates. “Wheat grower leaders are looking for solutions that will help keep wheat viable as a production alternative. Both biotech and conventionally grown wheat can provide solutions.”

## Declining Wheat Acres

Over the last 25 years U.S. harvested wheat acres have declined roughly 20%, while harvested soybean acres have increased roughly 30%. For that same time wheat yields have increased about 16%, while corn yields increased around 28%. As a result, soybeans and corn production continue to push westward and northward from traditional mid-west production areas into what was previously “wheat country”. Notably, both corn and soybean gains are being driven in large part by trait advantages made available through biotechnology.

“Biotechnology has risen both in the level of attention and acceptance as a direct result of the 2007 world wheat shortage,” says Oades. “Research on biotech wheat appears to be underway in all major wheat exporting nations, along with importing countries such as Egypt and largely wheat self sufficient nations such as China and India. The primary interest has to do with feeding people as world population continues to grow.”

As with all breeding work, it will take many years to develop biotech traits and make them available in locally adapted germplasm. The US wheat industry supports conventionally bred and biotech wheats. There is a place for both. The important thing is to find a way to keep them segregated.

## Traits of Interest

A lot of media attention has been focused on Roundup Ready crops, where a herbicide can be sprayed on plants that will kill the weeds but not hurt the crop plant. Currently, Roundup ready wheat is not on the drawing board.



The wheat biotech pipeline is really under construction. There is nothing in the pipeline right now. Entities involved are still in the discussion and decision phase and have reached the point where tech providers have decided that this is a technology that makes economic sense for them to pursue.

Discussions are underway about what traits would be the most beneficial. Recently the Joint Biotech Committee representing both US Wheat Associates and National Association of Wheat Growers compiled a list of traits of interest to growers at this point. Among those cited were:

- Drought tolerance
- Improved yield
- Disease tolerance (especially fusarium)
- Nitrogen use efficiency (NUE)
- Cold/freeze tolerance
- Nutritional improvements
- Protein quality & quantity
- Flavor and color improvements
- Herbicide tolerance
- Insect resistance

At this point options are open on what will be the first products through the line.

“The availability of varieties with a wide range of traits produced both



**Golden Rice: The Philippines-based International Rice Institute (IRRI) is preparing to release the GM rice known as Golden Rice for commercial cultivation in India by 2013.**

**This biofortified crop has been genetically modified to enhance its nutritional value, specifically to combat Vitamin A deficiency which can lower immune systems and cause night blindness.**

**Golden Rice contains beneficial amounts of beta-carotene, which is used by the human body to make vitamin A. It contains genes from maize and other sources that together produce beta-carotene.**

**It is being bred into local rice varieties in the Philippines, Bangladesh, India, Indonesia, and Vietnam. Golden Rice will be available after it has been authorized by national agencies**

through conventional and biotech methods means more choice in the market place,” says Mark Darrington, Chairman of the Joint Biotech Committee. “This will allow farmers to select products with traits that best suit their

needs and meet buyers’ demands.”

Work on the wheat biotech pipeline continues. As connections are made and the line strengthened, traits helpful to consumers and growers alike will start moving down the line. ♦

## Wheat Trait Research – Nitrogen Use Efficient Wheat.

Arcadia Biosciences, Inc., an agricultural technology company based in Davis, Calif, and Vilmorin, the world’s fourth-largest seed company, recently announced they’ll work together to develop and commercialize nitrogen use efficient (NUE) wheat.

The companies said they hope to produce high yielding wheat that could require about half the amount of nitrogen fertilizer as conventional crops. Wheat is one of the heaviest users of nitrogen fertilizer with 20 million tons applied annually, accounting for approximately 20 percent of total global nitrogen fertilizer use.

## Global Status of Commercialized Biotech/GM Crops: 2009

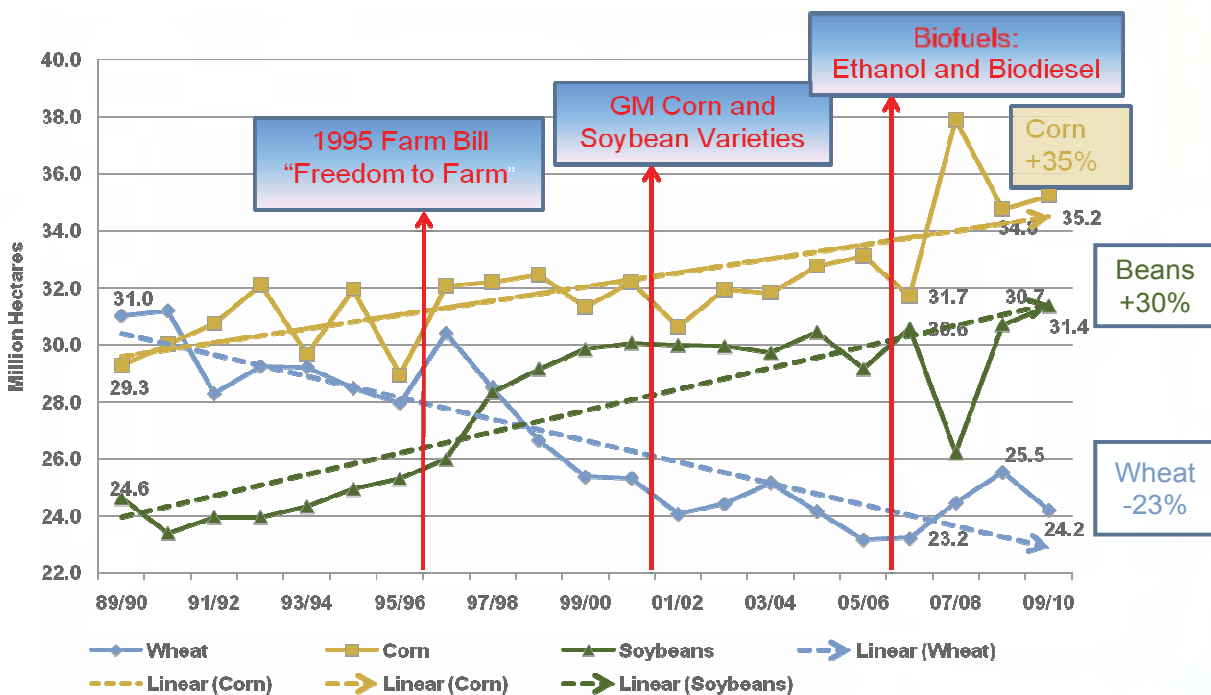
After a dozen years of commercialization, the global adoption of biotech crops continues to rise with new countries realizing the benefits, according to the International Service for the Acquisition of Agri-biotech Applications (ISAAA).

In 2009, biotech crop area grew seven percent or by 9 million hectares (22.23 million acres) to reach 134 million hectares (330 million acres).

View updated information and a map of biotech crop countries:

<http://www.isaaa.org/resources/publications/briefs/41/pptslides/default.asp>

## U.S. Crop Planted Area Comparison



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# Wheat Assessment Advisory Update



Thank you to all wheat growers who submitted ballots as part of the advisory poll conducted in October, November, and December. The vote tally indicated wheat growers in Idaho support continuing to invest in the future growth of the wheat industry in the state. Notwithstanding the positive ballot results, the Idaho Wheat Commission (IWC) board of directors decided to recommend that Idaho Grain Producers Association (IGPA) not propose changes to the IWC enabling legislation this year. Moving something forward in the 2011 session remains a possibility.

During the summer of 2009 Idaho elevators provided names and mailing addresses of wheat growers who had paid wheat tax in the past year. Approximately 4500 ballots were mailed in early October to pre-qualified wheat growers.

Knowing some elevator lists may be incomplete, or with some growers being in a rotation crop other than wheat, “mop-up” arrangements were also made to reach those who did not receive a pre-qualified ballot. Ballot boxes with blank ballots were displayed at a number of elevators in November and December. Ballot boxes and ballots were also provided at fall grower meetings and at the Farm Bureau Winter Meeting. In addition, the Idaho Grain magazine and Idaho Wheat Newsletter invited growers who had not received a ballot and wanted to vote, to call the IWC office and request a blank

**When the votes were tallied it showed that a penny increase in the wheat tax (Question #1) was favored by wheat growers by a two to one margin.**



ballot. A validation process was set-up to ensure that each ballot received through the “mop-up” activities was not a duplicate ballot and that it was being submitted out by a bona fide grower who had paid wheat tax in the last three years. As it turned out, our worries about losing the integrity of the vote through the blank “mop-up” ballots were overblown. Nearly all of the growers wanting to cast a vote did so with the pre-qualified ballot. Fewer than a dozen ballots were received as part of the mop-up activities.

When the votes were tallied it showed that a penny increase in the wheat tax (Question #1) was favored by wheat growers by a two to one margin. The same question, when weighted by production, was favored 76% to 24%. The results on whether or not to approve an assessment range up to a nickel (Question #2) was mixed. The vote split fairly equally between those in favor and those opposed. The same question, when weighted by production, was favored 55% to 45%.

The IWC commissioners reviewed voting results during their December meeting. By a 3 to 1 vote, the commissioners passed a motion to recommend to IGPA that they not proceed to the legislature this year. Part of the reasoning in not proceeding was to keep discussion of IWC finances separate from what will be a difficult budget session for the state legislature. Further, it is hoped that wheat prices will strengthen before an increase is taken. ♦

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## New study Shows 23-to-One Return on Producer Wheat Export Promotion



The money Idaho wheat producers invest in U.S. Wheat Associates’ export market development effort is putting money directly back onto their bottom line. That is the principal conclusion of a new economic analysis of wheat export promotion conducted by Dr. Harry M. Kaiser, of Cornell University.



Idaho check-off dollars help fund U.S. Wheat Associates (USW) market development programs which in turn aids in developing and maintaining overseas markets. Approximately 50% of Idaho’s wheat is destined for export each year. U.S. Wheat Associates is the industry’s export market development organization working in more than 100 countries



on behalf of America's wheat producers.

U.S. wheat producers invested an average of about \$10 million per year to promote their products overseas between 2000 and 2007, and for every one of those dollars they received \$23 back in increased net revenue.

USW commissioned the study with funding from the USDA/Foreign Agricultural Service (FAS) Market Access Program. Dr. Harry M. Kaiser, the Gellert Family Professor of Applied Economics and Management at Cornell and director of the Cornell Commodity Promotion Research Program (CCPRP), designed and conducted the research using established methods he and the CCPRP team developed.

The study showed that U.S. wheat export promotion had a large and beneficial impact for producers and the economy that far exceeded its cost. Dr. Kaiser's econometric models demonstrated that every dollar wheat producers and USDA invested in export promotion returned an average gross revenue of \$115 to the entire U.S. wheat supply chain, that is a total of \$1.15 billion per year returned to the U.S. economy.

"That's money in the bank for Idaho wheat producers and Idaho's wheat industry" said Joe Anderson, Idaho Wheat Commission Chairman. "The study demonstrates the importance of having an organization out there solely dedicated to developing and maintaining markets for the wheat we grow here in Idaho"

On average, Idaho growers produce approximately 93 million bushels of wheat each year, about half of that production is sent to countries like Japan, the Philippines, Korea, Yemen and Indonesia, netting about \$300 million for Idaho's wheat industry.

U.S. wheat producers share equally in net revenue even though individual state wheat commissions contribute different amounts. That's because USW uses export promotion funds to represent all six classes of wheat grown in the U.S., except for some designated projects.

USW will use additional results from the study to help plan and manage its future activities. The organization has posted full study results on its Web site, [www.uswheat.org](http://www.uswheat.org) ♦

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# U.S. Wheat Production to Fall

by Chad Weigand, USW Market Analyst



USDA held its annual Agricultural Outlook Forum Feb. 18-19 in Arlington, VA. The theme of the Forum was "Sustainable Agriculture: The Key to Health and Prosperity" and incorporated sessions discussing conservation, climate change, and nutrition into this year's program. The Forum also included the traditional sessions covering economic and commodity outlooks.

Max Fisher, USDA's Farm Service Agency Economist, presented the Grain and Oilseeds outlook and announced the preliminary 2010/11 U.S. wheat planted area estimate at 53.8 million acres, which is a 9 percent decrease from last year. Winter wheat acreage, as announced in USDA's Jan. 12 Winter Wheat Seedings report, is the lowest since 1913/14 at 37.1 million acres. USDA expects a slight increase in spring wheat plantings, offsetting reduced winter wheat acres in the Northern Plains. USDA forecasts harvested acres to fall to their lowest point since 1970/71, to 45.7 million acres.



Reduced acres and a lower projected average yield of 42.6 bushels per acre will significantly reduce U.S. production in 2010/11. Projected output currently stands at 52.9 MMT, down from 60.3 MMT in 2009/10 and well below

the 5-year average of 58.1 MMT. Despite the reduced production, U.S. supplies will increase to an estimated 83.0 MMT, which would be a 10-year high. USDA forecasts beginning stocks at 26.7 MMT, the highest since 1988/89 and a 49 percent increase over last year.

Both domestic consumption and exports are expected to increase in 2010/11, by 5 percent and 3 percent, respectively. This will help reduce the U.S. wheat surplus, but 2010/11 ending stocks, projected at 25.6 MMT, would be the second highest level in the past 10 years.

The issue of growing supplies highlights a significant advantage for the United States over other exporting countries: the ability to store large amounts of wheat. Farm storage capacity allows U.S. producers to hold approximately a year's worth of wheat. Heading into the new marketing year, not only will U.S. production be down, but global production will fall as well. The United States remains the world's most reliable supplier and once again stands ready to meet growing global demand. ♦

## Idaho Wheat Commission – Keeping you informed



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Idaho Wheat Newsletter

## Dinner on the Farm



Idaho farmwife, Gayle Anderson put her culinary talents to work to teach non-farmers about agriculture. Last year, Gayle began the “Dinner on the Farm” series where she and wheat farmer/husband Joe Anderson invite a small group of “city folk” to their home for dinner. The event allows non-farmers a chance to learn about where their food comes from. There is no charge to attend these by invitation only dinners.

Joe and Gayle farm with brother, Jay Anderson and his wife, Lisa. Together the family partnership farms 4,150 acres in Genesee, Idaho. They grow winter wheat, spring wheat, garbanzo beans and occasionally raise barley, mustard or lentils.

When guests arrive on the farm, they are greeted by the Andersons and one other farm couple and then head out to the field to explore farm machinery and ride in the combine. The dinner menu highlights food grown on the Anderson farm. Conversation focuses on learning/sharing about farming. Questions range from day to day operations to GMO’s (genetically modified organisms).

“I want to put a face to the farm,” said Gayle Anderson. “We’re not a huge corporation, we’re a family farm. I want to get the message out that farmers are good stewards of the land who work diligently to provide the safest and best quality food available. As we invite people into our home who don’t have a farm background, we hope we can

demonstrate to them that we care for our land and our resources.”

Gayle has also begun a blog entitled, “A Glorious Life of an Idaho Farmwife”, ([www.idahofarmwife.net](http://www.idahofarmwife.net)) where she shares about farm life, daily activities, and some of her favorite recipes. She hopes that other farmers in Idaho will see the importance of getting accurate information out about farming to the non-farm population. The “Dinner on the Farm” series has created a forum where city people can see firsthand how their food is grown and meet the people who grow it.

The Andersons will continue to host the farm dinners on a yearly basis and currently have a waiting list for the 2010 dinner series. This event can easily be replicated and the Andersons are willing to share their experiences as well as offer helpful tips, recipes and any other information needed. For further information, please contact Gayle at [idahofarmwife@gmail.com](mailto:idahofarmwife@gmail.com) or call her at 208-285-1501. ♦



(Top) Gayle Anderson waits for her dinner guests to arrive. (Left) The Anderson’s dinner menu incorporates food grown on their farm. (Above) Joe Anderson (IGPA Sec/Treasurer) and a dinner guest look at farm equipment.



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# Increasing Profit Margins

## Hard Wheat: Managing Nitrogen for Protein

by Juliet Windes, Cereals Agronomist and Pathologist, University of Idaho



Grain protein is an important quality factor that influences the marketability of all wheat market classes, particularly HRS, HRW and Hard White.

Where does protein come from? When should you cut off adding more nitrogen? When can nitrogen make a difference? Why is it so difficult to manage protein?

### Where Does Protein Come From?

Whether it's a fragrant slice of freshly baked bread or a delicious pasta entrée, the quality of wheat flour is due in large part to the work of hundreds of different proteins that perform specialized tasks inside the wheat kernel. The accumulated distribution of those proteins determine total content as well as protein quality, and is mainly influenced by the genetics of the variety (16%), the year grown (18%), where and how the wheat is grown (58%). (See the chart "Where Does Protein Come From?" on page 24.)

Grain buyers focus on protein levels and that impacts a grower's bottom line. Millers and bakers equate protein levels (content) with the protein quality they desire in end products. However, it is important to realize that all protein is not created equal. Some varieties have excellent protein quality even if the overall grain protein content is relatively low.

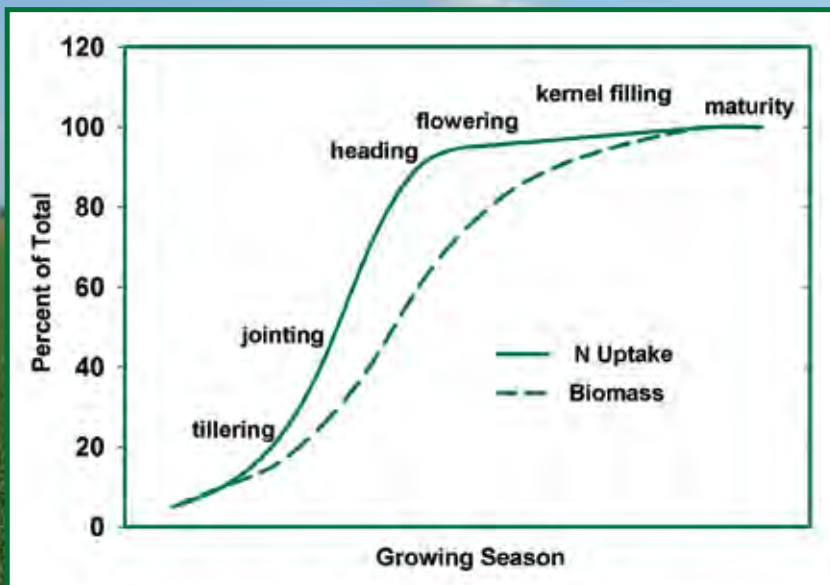
Understanding the issues related to wheat protein is critical

if producers are to avoid or minimize low protein discounts and maximize their economic returns. Providing adequate available N is the most important management factor for producing high protein hard wheat, especially in high rainfall or irrigated production.

Since we can't foresee how much precipitation will occur in the coming crop year, most growers apply N fertilizer based on personal experience, historical yields and soil test N. Last year (2009) was a case study in how mother nature can make a mess of even the most highly managed production practices. Excess rainfall in May and June likely pushed nitrogen down past the rooting zone. When soil moisture is plentiful, plant roots can stay in the upper two feet of soil, missing the nitrogen below the rooting zone.

### When is the best time to apply Nitrogen?

Early N fertilization should be optimized for expected yield. Consider soil test results, organic matter and N levels in irrigation water to determine in-season availability. Add enough fertilizer N to bring total available N to 3.0 to 3.3 pounds of N per bushel for high protein hard red wheat, or 2.7 to 3.3 pounds of N per bushel for hard white wheat. Most of the N used by wheat is taken up after tillering and before flowering (see chart).



**Protein content** refers to the percent of protein in the grain regardless of the type or nature of the protein. It is highly influenced by the growing environment and forms the basis for pricing hard wheat.

**Protein quality** is mostly under genetic control. Variety has more of an influence on end use quality.

Different wheat varieties grown in the same location may have the same protein content but very different protein quality.

Nitrogen applied after vegetative growth is used primarily to increase protein. The protein increase from late N is little affected by N sources, wheat variety, or planting dates. Adding nitrogen at flowering has little to no effect on yield, but can increase grain protein content under favorable conditions. The best time to apply N for protein is at head emergence through flowering. N moves to the developing kernel during grain fill. Conditions that affect the plant's ability to store N up to flowering, or that affect photosynthesis during grain fill, affect grain protein at harvest.

**If grain has headed out, is it too late to add N to increase protein?**

No, nitrogen at anthesis (flowering) up to the initiation of grain fill will be utilized in the development of grain protein. After that, additional N applications will not be as effective in increasing grain protein. During heading, water deficits limit the plants ability to take N from the soil after anthesis, and will "increase grain protein" on a percentage basis only because those water shortages stress the developing kernel and reduce yield by reducing the accumulation of carbohydrates.

The N required for acceptable protein may exceed that needed to maximize yield by 0.4 pounds N per bushel. Protein response lags behind yield with yield receiving the initial benefit. If available N levels have met the plant's yield requirements additional N will be used to increase protein content.

**Should N be applied all at one time?**

Applying all the fertilizer N required in irrigated situations, for both maximum yield and acceptable protein during vegetative growth (prior to the initiation of stem elongation) can cause excessive vegetative growth and actually reduce yield. If possible, it is more efficient to split nitrogen application to 60% of the total needed for yield preplant and 40% of that total at tilling. Additional nitrogen (30-50 lbs/A) to meet protein needs should be applied as close to anthesis as possible.

**Does cutting off irrigation early increase protein levels?**

Cutting off irrigations early typically reduces yield and test weight far more than increases protein levels. Stressing wheat during late grain fill and sacrificing yield should not be necessary to produce hard wheat with acceptable protein. Excess irrigation in wheat will lower grain protein. Producing irrigated hard red spring wheat with 14% protein is always a challenge, particularly for furrow irrigated fields, or when we have unexpectedly high spring moisture and cool temperatures during the growing season.

**What is the best way to determine protein levels before harvest?**

Sampling for nitrogen in flag tissue at anthesis can be a useful indicator of grain protein. Many labs offer tissue analysis. Randomly sample about 100 flag leaves throughout the field, place in a paper bag (NOT PLASTIC!), and allow to dry prior to shipping. The lab will grind the tissue and test for the level of nitrogen in the flag leaves. Flag leaf N at 4.2% or higher should be adequate to achieve about 14% grain protein.

**What micronutrients affect protein levels?**

Sulfur is an important component of grain protein and is required for optimum functionality of bread protein. The sulfur requirement is approximately one-tenth of nitrogen requirement, and it is recommended to apply 1 lb of sulfur for every 10 lbs of N.

**Why does protein fall off so quickly when it rains during harvest?**

The initiation of sprouting that occurs when it rains on mature grain includes the activation of enzymes that begins the breakdown of starches and proteins that feed the growing seedling. Once sprout is activated, the quantity and quality of protein decreases.

**Summary**

Nitrogen fertilizer is a major production expense for wheat growers and increasing accuracy in application timing and methodology is important to help reduce input costs and maximize economic return.

For a more detailed discussion of N management issues related to hard wheat protein you can access online the cooperative extension publication PNW578, "Nitrogen Management for Hard Wheat Protein Enhancement" at <http://info.ag.uidaho.edu/pdf/PNW/PNW0587.pdf>. ♦

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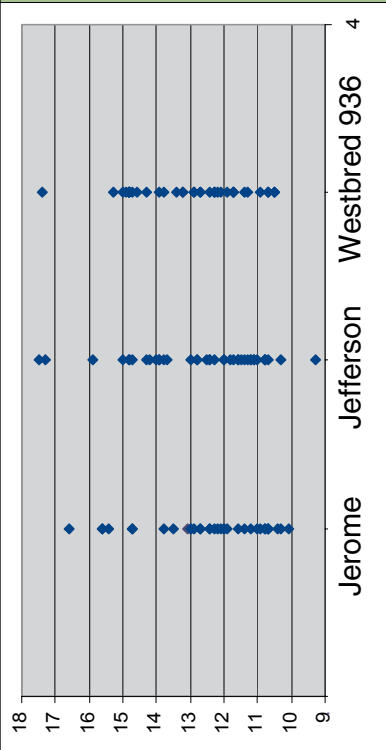
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# Where Does Protein Come From?

Range in flour protein for three hard red spring wheats in field trials grown in southern Idaho. All three cultivars have the potential to produce both high and low protein depending on location and field management. Each point is a single trial, from a single field.



## Where Does Protein Come From?

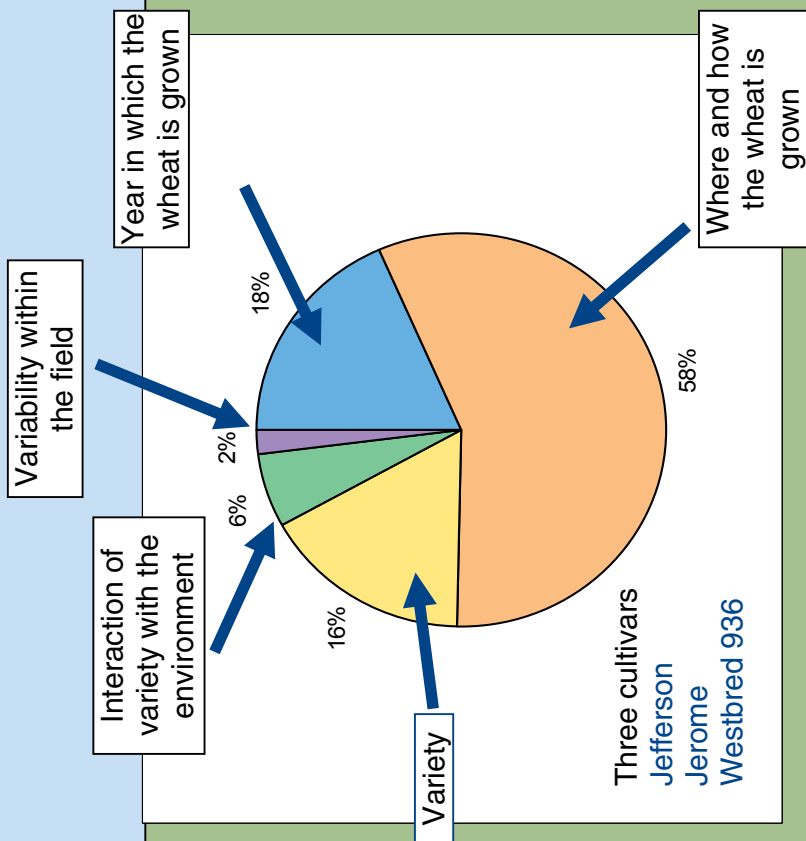
Fertilization and other management practices become very important with modern cultivars that can respond to inputs to produce both high yield and high protein percent. Insufficient or poorly timed nitrogen fertilization will produce high yield with low grain protein levels.

Soil tests are important tools for managing protein. Splitting the application of nitrogen improves the efficiency of nitrogen at raising protein levels. Testing flag leaf nitrogen at boot can predict how much nitrogen fertilizer is needed at the top dress to achieve target protein levels.

Adding nitrogen after flowering has a poor efficiency in improving protein levels. Also, cutting-off irrigations early typically reduces yield and test weight far more than increasing protein levels.

## Analysis of flour protein from 35 different field trials grown in southern Idaho, 2002 and 2003.

Pie chart shows the relative importance of individual factors in determining the final protein concentration. How and where the wheat is grown is by far the most important determinant of protein.



Data provided by E. Souza, B. Brown and J. Windes, University of Idaho.



# Building Better Wheats for Growers – New Varieties



Several new UI wheat variety releases offer growers the opportunity to improve efficiency and crop value. In the months ahead, as you review variety performance information, drive by test plots or attend summer field days, check out these varieties in your area for agronomic traits and pest and disease resistance.

## **UICF Brundage: Soft White Winter**

UICF Brundage is a non-transgenic, herbicide resistant, soft white wheat cultivar with the same agronomic and quality characteristics as Brundage and Brundage 96. This imazamox resistant line can be used in areas with hard to control grassy weeds, such as jointed goat grass, as part of a control management program in fields where either Brundage or Brundage 96 is grown.

## **Bruneau: Soft White Winter**

The three B's - Bruneau, Bitterroot and Brundage, have similar quality characteristics. Bruneau has greater yield potential in northern Idaho and eastern Washing-

ton. With its good stripe rust resistance, adaption to high rain fed and irrigated growing conditions it makes a good companion planting with Brundage.

## **UICF Grace (IDO651): Hard White Winter**

UICF Grace is the first hard white Clearfield winter wheat in Idaho. Clearfield wheats allow growers to use the herbicide imazamox with little or no damage to the crop. UICF Grace has excellent end use quality, high temperature adult plant (HTAP) resistance to stripe rust and moderate resistance to dwarf bunt and good yield performance.

UICF Grace is tall and due to its height it may have a lodging problem when grown under irrigated conditions. Adaptation to Idaho's intermediate and low rainfed regions is best.

## **UI Silver (IDO658): Hard White Winter**

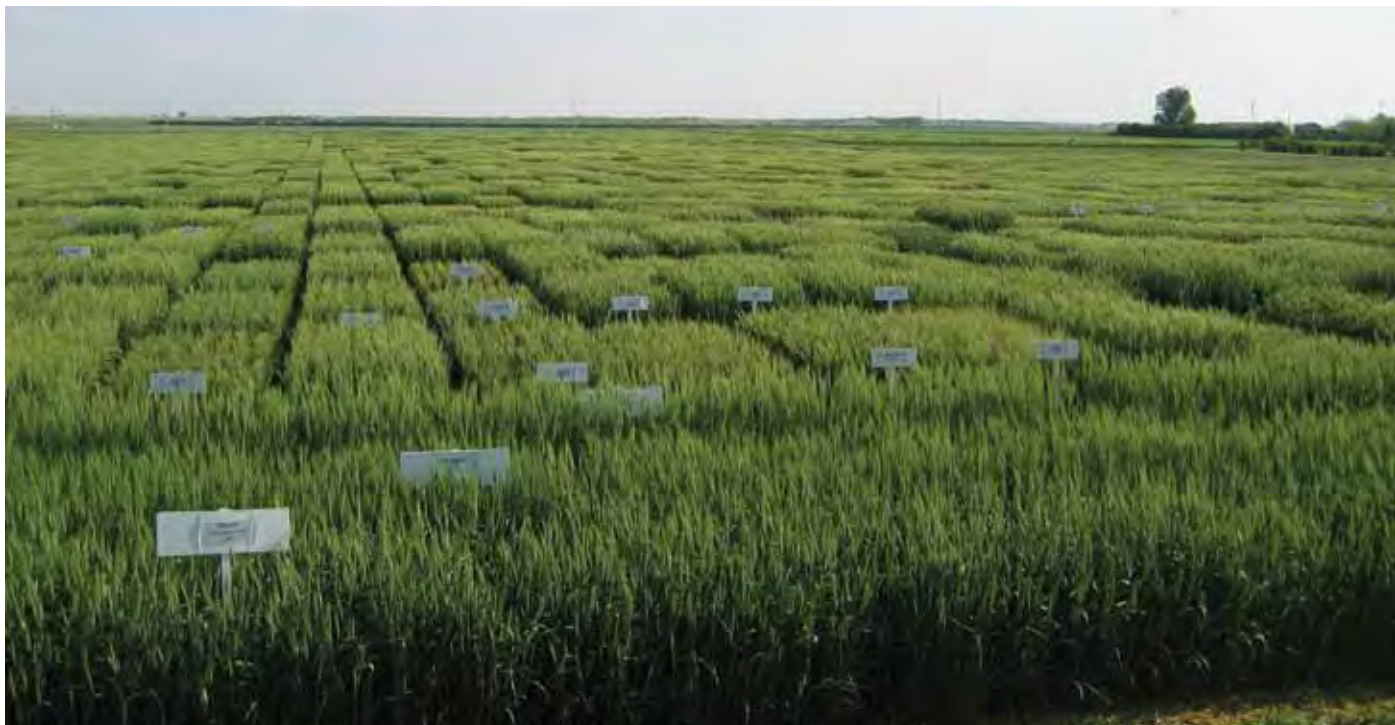
UI Silver has resistance to stripe rust, stem rust and dwarf bunt, excellent end use quality for bread, buns, and Asian

noodles, and consistent good yield potential in both rainfed and irrigated production. It is one of only a handful of US wheat varieties that carry the SrTm<sup>p</sup> gene, conveying resistance to a globally threatening race of stem rust called TTKS. It is also resistant to fusarium head blight.

The shorter stature of Silver allows it to be grown under irrigation however, it is susceptible to bacterial leaf blight and so is better adapted to dryland conditions in intermountain west.

## **Winchester: Hard Red Spring**

UI Winchester can be grown in both irrigated and rainfed conditions but is better adapted to the rainfed production systems of the intermountain west. It has a combination of adult plant resistance to stripe rust, excellent resistance to Hessian fly, good yield and desirable bread end use quality. It has fast coleoptile growth and can be planted late and is tolerant to moisture and heat stress. Maturity is the same or earlier than Jefferson, Jerome and WB936 in rainfed trials. ♦





# 2009 Idaho Spring Barley Variety Performance Tests and 2007-2009 Yield Summaries

By Juliet Windes and Brad Brown, Extension Specialists, Doug Finkelnburg, Extension Support Scientist, and Robert Zemetra, UI Wheat breeder, 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 grower's 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.

## Information Summarization

Agronomic performance data for 2009 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 10% level.

Average yield data from variety performance trials in 2007, 2008, and 2009 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

**Table 1. Dryland spring barley performance in Northern District at Bonners Ferry, Genesee, and Moscow, 2009.**

Variety	Bonners			Average	Test Weight lb/bu	Plant Height Inches	Plumps %>6/64	Thins %<5.5/64
	Ferry	Genesee	Moscow					
<b>2-Row Barley</b>	bu/acre							
Baronesse	40	82	78	67	48.5	28	96	1
Bear (hullless)	39	66	69	58	53.5	30	61	7
Camas	44	75	75	65	49.9	29	94	1
Champion	46	86	83	72	50.2	29	95	1
Conrad	42	83	82	69	49.1	28	96	1
Harrington	34	76	79	63	49.7	29	89	2
Lenetah	62	77	79	73	50.0	28	95	1
Merit	50	68	82	67	47.1	30	94	1
AC Metcalfe	43	67	86	66	49.5	31	97	1
Salute	48	75	78	67	49.4	29	98	0
Spaulding	49	74	74	66	51.0	29	94	1
Tetonia	56	84	78	73	50.4	27	94	1
Radiant	46	88	84	73	49.7	28	94	1
<b>2-Row Average</b>	47	77	79	68	49.8	29	92	1
<b>6-Row Barley</b>								
Steptoe	40	70	78	63	46.6	28	97	1
Tradition	35	72	88	65	48.8	32	95	1
<b>6-Row Average</b>	38	71	83	64	47.7	30	96	1
<b>Overall Average</b>	45	77	80	67	49.5	29	93	1
<b>LSD (0.10)</b>	12	8	14	6	0.8	1	>1	>1
<b>CV (%)</b>	22	9	14	---	---	---	---	---

**Table 2. Irrigated spring barley performance in Southern District at Parma, 2009.**

Variety	Parma	Test Weight	Plant Height	Plant Lodging	Thins
<b>2-Row Barley</b>	bu/acre	lb/bu	inches	%	%
Champion	100	55	33.5	0	5
Idagold	126	52.2	28.4	0	7.2
Lenetah	99	54.2	35.2	0	4.2
Merlin	107	60.9	25.4	0	5.3
Spaulding R579-1	136	54.5	35	0	5.3
Tetonia	141	53.4	34.9	0	8.4
<b>Average</b>	118	55	32.1	0	5.9
<b>6-Row Barley</b>					
Aquila	122	52.6	38	0	9.5
BG006	112	48	23.2	0	9.6
Goldeneye	148	52.8	37.5	0	9
Millennium	130	49.7	35.2	0	15.3
Nebula	123	46.2	26.9	0	8.7
<b>Average</b>	127	49.9	32.2	0	10.4
<b>Overall Average</b>	122	52.7	32.1	0	7.9
<b>LSD (0.10)</b>	16	0.9	2.6	0	3

**Table 3. Irrigated Two-Row Spring Barley Performance in Eastern Districts at Rupert, Aberdeen, Idaho Falls, and Ashton, 2009.**

Variety	Yield				Irrigated Average						
	Irrigated				Yield	Test Weight	Plant Height	Lodging	Plumps	Thins	Protein
	Rupert	Aberdeen	Idaho Falls	Ashton							
<b>Feed</b>											
Baronesse	162	134	146	123	137	53.9	31	8	97	3	9.0
Boulder	137	130	129	96	123	55.1	32	14	98	2	9.5
Burton	135	127	140	96	123	53.7	34	6	97	3	9.7
Calgary	151	132	146	101	131	54.4	29	0	98	2	9.5
Camas	127	121	137	105	120	53.8	34	12	97	3	10.4
CDC Bold	130	134	137	99	125	52.9	33	8	97	3	9.7
CDC McGwire*	106	118	137	92	113	61.3	33	7	88	12	10.4
Champion	148	143	138	105	132	54.0	32	10	97	3	9.5
Clearwater*	110	111	113	80	102	55.0	32	23	92	8	11.4
Haxby	123	121	130	92	114	54.6	33	10	98	2	9.5
Hayes	101	109	126	92	107	51.1	34	8	92	8	9.6
Idagold II	133	137	128	102	133	53.0	25	0	97	3	9.7
Lenetah	150	137	145	110	133	54.0	33	33	98	2	9.7
Primo	144	132	135	119	133	53.2	30	13	96	4	8.9
Radiant	134	127	138	113	128	53.6	33	18	94	6	9.0
Spaulding	151	140	144	118	137	55.0	34	3	98	2	9.5
Tetonia	145	138	139	98	128	53.4	33	12	94	6	9.4
Valier	121	118	125	98	113	53.7	33	14	97	3	10.0
Xena	149	140	141	104	134	53.4	33	20	95	5	9.5
<b>Malt</b>											
AC Metcalfe	112	117	129	93	114	53.4	35	18	97	3	10.1
B1202	111	116	125	88	110	52.3	33	15	97	3	10.2
CDC Stratus	113	124	115	93	108	52.9	33	9	98	2	10.3
Conrad	134	130	134	104	126	53.1	32	13	98	2	10.2
Copeland	134	122	134	103	123	53.6	37	14	98	2	10.2
Craft	118	119	130	96	112	54.1	35	9	97	3	10.4
Geraldine	125	135	132	99	123	53.4	32	10	95	5	9.0
Harrington	112	105	109	93	103	52.4	34	37	93	7	10.3
Hockett	103	124	120	99	111	53.6	32	28	97	3	9.8
Merit	108	124	130	103	117	51.1	34	12	94	6	9.4
Merit 16	114	112	127	103	114	52.1	32	11	94	6	9.6
Moravian 69	143	---	---	---	---	---	---	---	---	---	---
Pinnacle	124	129	143	85	119	54.0	36	1	99	1	9.5
<b>Average</b>	129	126	133	100	121	53.8	33	13	96	4	9.8
<b>LSD (0.05)</b>	22	16	12	18	9	2.0	1	13	---	3	0.8

\* indicates hullless variety

**Table 4. Irrigated Six-Row Spring Barley Performance in Eastern Districts at Rupert, Aberdeen, Ashton, and Idaho Falls, 2009.**

Variety	Yield				Irrigated Average						
	Irrigated				Yield	Test Weight	Plant Height	Lodging	Plumps	Thins	Protein
	Rupert	Aberdeen	Idaho Falls	Ashton							
<b>Feed</b>											
Aquila	115	124	124	85	112	52.4	37	4	95	5	9.6
Colter	127	131	130	88	119	50.7	36	2	93	7	8.0
Creel	129	131	134	96	123	51.2	37	12	92	8	8.2
Goldeneye	117	117	143	105	121	51.7	36	16	93	7	9.7
Herald	128	124	117	96	116	49.4	38	3	94	6	8.7
Millennium	129	140	133	90	123	50.5	37	5	91	9	9.4
Steptoe	120	124	134	102	120	49.3	35	20	95	5	8.5
<b>Malt</b>											
Celebration	81	105	108	76	93	51.6	36	21	97	3	11.3
Lacey	93	116	120	78	102	52.7	37	15	97	3	10.3
Legacy	85	119	124	94	106	51.8	38	30	95	6	10.0
Morex	99	117	120	103	110	51.0	37	32	90	10	10.2
Tradition	74	115	128	79	99	52.5	39	2	98	2	10.3
<b>Average</b>	110	122	129	92	114	51.3	37	13	94	6	9.5
<b>LSD (0.05)</b>	20	11	11	20	8	0.5	2	11	---	3	0.7

**Table 5. Spring Barley Yield Average for 2007-2009 in Idaho.**

Site/Years	District		
	Northern	Southern	Southern/Eastern
	11	5	12
<b>2-Row Feed</b>	bu/acre		
Baronesse	69	---	136
Bear*	61	---	---
Boulder	---	---	132
Burton	---	---	133
Calgary	---	---	141
Camas	66	---	130
CDC Bold	---	---	136
CDC McGwire	---	---	115
Champion	72	---	144
Clearwater	---	---	109
Haxby	---	---	125
Hays	---	---	111
Idagold	---	140	---
Idagold II	---	---	135
Lenetah	73	---	137
Merlin	---	127	---
Primo	---	---	136
Radiant	72	---	131
Salute	67	---	---
Spaulding	68	---	141
Tetonia	73	---	133
Valier	---	---	123
Xena	---	---	142
<b>2-Row Malt</b>			
AC Metcalfe	65	---	114
B1202	---	---	118
CDC Stratus	---	---	116
Conrad	66	---	125
Craft	---	---	119
Geraldine	---	---	125
Harrington	62	---	111
Hockett	---	---	120
Merit	63	---	118
Merit 16	---	---	124
Pinnacle	---	---	124
Average	66	134	127
<b>6-Row Feed</b>			
Aquila	---	133	130
BG 006	---	123	---
Colter	---	---	129
Creel	---	---	127
Goldeneye	---	143	135
Herald	---	---	127
Millennium	---	147	140
Nebula	---	141	---
Steptoe	64	---	128
<b>6-Row Malt</b>			
Lacey	---	---	116
Legacy	---	---	119
Morex	---	---	111
Tradition	63	---	114
<b>Average</b>	64	144	125

\* indicates hullless variety

and year to year. The results reported in this article are for 2009 trials; previous results can be found in the spring 1992 to 2009 issues of Idaho Grain Magazine. Average performance over locations and years more accurately indicates varieties' relative performance. Try to evaluate as much information as you can when 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 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 it be 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 10% LSD value, the varieties are considered "significantly different." This means that there is a 9 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.

### **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 742) that was updated for 2003, and for spring wheat producers there is "Irrigated Spring Wheat Production Guide for Southern Idaho" (Bulletin 697). Both of these publications are available on the web (see the Idaho Ag Communications website at <http://info.ag.uidaho.edu/591/catalog/crops.html> and look for this publication as a pdf file under "Other Cereals Publications"). 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.cals.uidaho.edu/cereals/>. ♦





# 2009 Idaho Spring Wheat Variety Performance Tests and 2007-2009 Yield Summaries

Idaho spring wheat varieties are evaluated each year to provide performance information to help grower's 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 '2009 Idaho Spring Barley Variety Performance Tests and 2007-2009 Yield Summaries.' Agronomic performance data for spring wheat are summarized by state districts in Tables 1-4. Former Districts III and IV results, now 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. Tables include quality ratings of varieties categorized as Quality Plus wheat varieties (Q+), Acceptable Quality of wheat (AQ) and "Limited Markets" wheat (LM) as defined by the Idaho Wheat Commission ([www.idahowheat.org](http://www.idahowheat.org)). Q+ varieties are of excellent quality, and usually above average milling and baking characteristics. AQ varieties are acceptable, but considered average in milling and baking characteristics. LM varieties should be grown only if the buyer is confirmed before planting. Bushel/Acre yield results are based on 60 lb/bu at 11% moisture. Lodging ratings are the percent of a plot are lodged, and in some tables not reported due to minimal lodging. More detailed lodging information is available on the UI cereals website <http://www.cals.uidaho.edu/cereals/>. Average values are presented at the bottom of listings and are followed by a least significant difference (LSD) statistic at the 10% level. Average yield results from variety performance trials in 2007, 2008, and 2009 are presented in Table 5 for all districts, with 3-12 site/years of data summarized for each districts. ♦

**Table 1. Dryland spring wheat performance in Northern District at Craigmont, Genesee, and Bonners Ferry, 2009.**

Variety	Quality Rating	Craigmont	Genesee	Bonners Ferry	Average	Test Weight*	Plant Height
<b>Soft White</b>							
Whit		70	65	34	56	58.9	28
Louise	Q+	69	59	21	50	58.8	28
Penawawa	LM	61	55	15	44	58.5	26
Cataldo	AQ	60	57	19	45	57.5	25
Eden	Q+	59	51	20	44	60.4	25
Alturas	Q+	59	54	25	46	58.0	26
Nick	Q+	50	55	12	39	59.4	26
<b>Average</b>		63	58	21	48	59	27
<b>Hard White</b>							
Lolo	AQ	65	57	19	47	57.5	28
Otis	AQ	61	55	24	47	60.4	30
Lochsa	Q+	51	55	16	41	58.8	26
<b>Average</b>		59	56	20	45	59	28
<b>Hard Red</b>							
Cabernet		52	45	10	36	59.0	24
Bullseye		50	57	17	41	60.5	24
Jedd		56	49	16	40	59.5	26
Hank	AQ	59	59	21	46	58.0	28
Jefferson	Q+	59	57	16	44	59.5	26
Jerome	Q+	57	50	18	41	59.5	26
Kelse		59	51	13	41	59.6	28
Tara 2002	Q+	52	51	12	38	59.3	27
<b>Average</b>		56	52	15	41	59	26
<b>Overall Average</b>		57	56	18	44	59.1	27
<b>LSD (0.10)</b>		8	6	4	2	0.3	1

\* Test weights from Genesee and Craigmont only.

**Table 2. Irrigated spring wheat performance in Southern District at Parma, Weiser, and Kuna, 2009.**

Variety	Quality Rating	Parma	Weiser	Kuna	Average
<b>Soft White</b>					
Alturas	Q+	105	122	103	110
Jubilee	Q+	111	121	113	115
Nick	Q+	106	124	102	111
Penawawa	LM	104	114	104	108
Waxy Penawawa	LM	88	113	109	104
Pettit	Q+	77	124	94	98
<b>Average</b>		100	120	104	108
<b>LSD (0.10)</b>		9	8	6	4
<b>Hard Red</b>					
Dannyboy		93			
Jefferson	Q+	102	113	100	105
Jerome	Q+	112	115	85	104
Winchester	AQ	105	114	89	103
WPB 936	Q+	91	120	79	97
<b>Hard White</b>					
Lochsa	Q+	99	106	87	97
Lolo	AQ	106	120	107	111
Otis	AQ	112	130	112	118
<b>Average</b>		103	117	94	105
<b>LSD (0.10)</b>		7	13	7	4

## 2009 Idaho Spring Wheat Variety Performance Tests and 2007-2009 Yield Summaries

**Table 3. Irrigated and Dryland Soft White Spring Wheat Performance in Eastern Districts at Rupert, Aberdeen, Idaho Falls, Ashton, and Soda Springs, 2009.**

Variety	Quality Rating	Yield					Yield bu/acre	Irrigated Test Weight lb/bu	Average Plant Height inches	Protein %
		Irrigated		Dryland		Soda Springs				
		Rupert	Aberdeen	Idaho Falls	Ashton					
Alpowa	LM	113	131	130	100	80	119	61.6	38	8.9
Alturas	Q+	126	124	131	96	89	119	61.1	35	8.5
Cataldo	AQ	107	125	120	102	88	114	61.1	34	9.3
Challis		122	128	129	100	95	120	61.0	37	8.8
Nick	Q+	111	120	126	94	83	113	61.8	35	9.2
Penawawa	LM	121	124	117	89	89	113	62.3	36	8.8
Skookum		121	131	134	94	77	120	60.1	37	9.2
Treasure	Q+	119	136	149	104	91	127	60.0	36	8.9
UI Pettit	Q+	125	123	130	94	75	118	61.3	32	9.2
Waxy Penawawa	LM	120	117	121	94	74	113	61.3	34	9.5
Whit	Q+	114	126	130	85	86	114	61.9	36	9.0
<b>Average</b>		120	128	129	98	87	119	61.3	36	9.0
<b>LSD (0.05)</b>		9	12	10	18	13	6	0.4	1	0.5

**Table 4. Irrigated and Dryland Hard Spring Wheat Performance in Eastern Districts at Rupert, Aberdeen, Ashton, Idaho Falls and Soda Springs, 2009.**

Variety	Quality Rating	Yield					Yield bu/acre	Irrigated Test Weight lb/bu	Average Plant Height inches	Protein %
		Irrigated		Dryland		Soda Springs				
		Rupert	Aberdeen	Idaho Falls	Ashton					
<b>Hard Red</b>										
Buck Pronto		101	120	122	78	76	105	62.5	35	11.8
Bullseye		115	128	121	93	77	114	64.3	33	10.9
Cabernet		102	121	114	90	73	107	62.9	30	11.1
Choteau		105	124	117	81	69	107	62.4	36	12.2
Iona	AQ	115	119	126	90	77	113	63.1	40	11.8
Jefferson	Q+	104	128	131	91	80	114	62.8	36	10.8
Jerome	Q+	125	127	125	92	82	117	62.3	35	11.0
Kelse		105	115	115	77	70	102	62.1	36	12.2
Summit		104	112	116	93	69	106	61.2	29	11.0
Tara 2002		89	111	132	89	77	105	61.8	39	11.1
UI Winchester	AQ	99	121	122	90	76	108	62.4	34	11.4
WestBred 936	Q+	106	115	126	84	74	108	61.5	33	11.6
<b>Hard White</b>										
Blanca Grande	AQ	99	115	117	74	69	101	63.3	30	12.1
Idaho 377s	AQ	126	137	139	112	83	129	63.1	37	11.1
Klasic	Q+	106	116	102	76	57	100	63.1	28	11.2
Lochsa	AQ	113	128	130	89	82	115	61.5	36	11.9
Lolo	AQ	126	133	151	99	88	125	62.4	38	11.2
Otis	AQ	124	140	141	102	93	127	62.8	41	10.9
Pristine	AQ	105	114	123	79	71	105	63.0	36	12.2
Snow Crest	Q+	98	112	111	74	67	99	62.8	31	12.2
WB-Paloma		104	119	118	85	84	106	63.4	31	11.7
<b>Durum</b>										
Alzada		106	120	114	85	---	106	62.7	35	9.2
AP1526		108	125	111	86	61	108	62.8	40	9.5
Kronos		106	104	111	82	64	101	61.7	30	9.7
Matt		109	108	103	78	60	99	62.3	33	9.1
Utopia		105	108	109	97	64	105	61.1	31	9.2
<b>Average</b>		107	120	121	87	74	108	62.5	34	11.2
<b>LSD (0.05)</b>		10	10	11	12	11	5	0.4	1	0.6

**Table 5. Spring Wheat Yield Average for 2007-2009 in Idaho.**

Site/Years	Quality Rating	District			
		Northern	Southern	Eastern (Irrigated)	Eastern (Dryland)
		9	12	3	
Variety		Yield (bu/acre)			
<b>Soft white</b>					
Alpowa	LM	40	---	117	39
Alturas	Q+	---	117	120	44
Babe		42	---	---	---
Cataldo	AQ	38	---	113	48
Challis		---	---	117	44
Eden	Q+	41	---	---	---
Jubilee	Q+	---	115	---	---
Louise	Q+	43	---	---	---
Nick	Q+	40	116	113	
Penawawa	LM	39	112	113	45
Skookum		---	---	117	50
Treasure	Q+	---	---	119	48
UI Pettit	Q+	---	114	119	41
Waxy Penawawa		---	---	113	38
Whit		47	---	111	47
<b>Average</b>		41	115	116	45
<b>LSD (0.10)</b>		---	4	4	5
<b>Hard Red</b>					
Buckpronto		---	---	105	40
Cabernet		36	---	110	---
Choteau		---	---	107	41
Hank		41	---	---	---
Iona		---	---	110	36
Jefferson	Q+	41	105	110	42
Jerome	Q+	38	110	113	40
Kelse		38	---	---	---
Summit		---	---	106	35
Tara 2002	Q+	36	---	102	38
WB 936	Q+	---	105	105	38
Winchester	AQ	37	103	---	39
<b>Hard White</b>					
Blanca Grande	AQ	---	---	103	41
Idaho 377s	AQ	---	---	119	36
Klasic	Q+	---	---	99	38
Lochsa	AQ	37	108	110	41
Lolo	AQ	41	113	120	45
Otis	AQ	42	115	117	42
Pristine	AQ	---	---	105	36
Snow Crest	Q+	---	---	100	37
<b>Durum</b>					
Alzada		---	---	105	---
AP1526		---	---	104	34
Kronos		---	---	104	32
Matt		---	---	101	30
Utopia		---	---	99	30
<b>Average</b>		39	108	107	38
<b>LSD (0.10)</b>		---	4	4	6

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## 2-Year Summary Spring Wheat Data

University of Idaho Conducted by Juliet Windes

### Ashton, Idaho Irrigated

Variety	Yield/Bu	Test Wt.	Protein (%)
<b>Bullseye</b>	<b>91.6</b>	<b>63.4</b>	<b>11.4</b>
<b>Cabernet</b>	<b>93.8</b>	<b>63.1</b>	<b>11.7</b>
Jefferson	88.2	62.2	11.9
WB936	81.1	61.8	11.6

### Idaho Falls, Idaho Irrigated

Variety	Yield/Bu	Test Wt.	Protein (%)
<b>Bullseye</b>	<b>131.1</b>	<b>64.6</b>	<b>11.8</b>
<b>Cabernet</b>	<b>118.6</b>	<b>63.5</b>	<b>11.4</b>
Jefferson	128.6	62.4	11.4
WB936	129.3	61.9	12.4

### Aberdeen, Idaho Irrigated

Variety	Yield/Bu	Test Wt.	Protein (%)
<b>Bullseye</b>	<b>120.7</b>	<b>63.3</b>	<b>13.3</b>
<b>Cabernet</b>	<b>111.4</b>	<b>61.9</b>	<b>12.9</b>
Jefferson	111.0	62.2	12.8
WB936	107.3	61.1	13.7

### Rupert, Idaho Irrigated

Variety	Yield/Bu	Test Wt.	Protein (%)
<b>Bullseye</b>	<b>126.1</b>	<b>64.7</b>	<b>11.0</b>
<b>Cabernet</b>	<b>116.7</b>	<b>62.7</b>	<b>11.4</b>
Jefferson	121.3	62.6	11.5
WB936	114.0	62.2	12.0



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