IDAHO GRAIN

THE IDAHO GRAIN PRODUCERS ASSOCIATION MAGAZINE

SPRING 2013

Idaho State Wheat Growers Association
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VIEWS

BY CLARK HAMILTON, PRESIDENT

I HAVE the privilege of serving as the IGPA president this year. It's an honor to work with great people who come together to represent wheat and barley farmers. I consider this organization to be a valuable political voice both on a national and state level.

I grew up learning one of my Dad's favorite quotes from a blacksmith, "when the iron's hot, you strike it." In farming we learn the importance of this philosophy. IGPA along with the wheat and barley commissions have made some timely decisions that will benefit our industry.

I thought I would provide an overview below on the latest IGPA efforts on behalf of Idaho's wheat and barley farmers.

Endowments

Endowments simply mean "permanent investment." There has been a lot of talk within the Idaho grain industry about the importance of endowments. The Idaho Wheat and Barley Commissions have both decided to endow research and agronomy positions by investing increased grower dollars in the agriculture research and extension mission of the University of Idaho. These significant investments are meant to boost Idaho grain production by addressing the biggest needs and challenges of producers. The IGPA supports the decision and goals of our two Commissions.

The IGPA is working to create its own endowment. We are joining with the Idaho Wheat Commission to create an academic scholarship at BYU–Idaho for undergraduates majoring in a field related to production agriculture. Eastern Idaho is a major player in Idaho's grain industry and our industry needs to invest in our future scientists, engineers, and crop specialists.

State Legislature

The 2013 state legislative session is already in full swing and tackling some major issues impacting every citizen in Idaho. At the IGPA's February board of directors meeting in Boise, we heard from the folks engaged in the crux of some critical issues including personal property tax relief, implementation of a state-run health exchange program, and the use of 129,000-pound trucks to haul commodities and other goods.

Looking ahead

Already in this early year IGPA leaders have hit Washington, D.C., to meet with Idaho's congressional delegation, and to Boise twice for state legislative activities and to conduct IGPA business. By the time this magazine hits mailboxes, we will have completed two more national meetings for NAWG's annual convention and NBGA's winter board meeting. I look forward to seeing my fellow farmers and friends from across the country and I'm always humbled by the sacrifice and "call to duty" of these individuals who see the value in advocating for the livelihoods of us all.

Your involvement is critical

Along those lines, I hope that you as a producer make a point to see the bigger picture outside your property lines. If you do what I do and grumble about the cost of inputs, the volatility of prices, the burden of paperwork that dogs everything we do, then I challenge you to do something about it.

The IGPA needs to hear from you. Our organization has a 56-year legacy of farmers stepping up to protect and improve the industry. Please consider doing your part, large or small, to support the organizations like the IGPA whose mission is to be your voice in the hallways of Congress, the state legislature, and within countless meetings on issues impacting you.

I wish you all a profitable year with good timing in mind and a plea for good timing from Mother Nature as well! ■

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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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EDITOR'S NOTE

BY TRAVIS JONES,
EXECUTIVE DIRECTOR

A New Year Awaits

It has been awhile since our last magazine and much has happened and is happening with your Idaho Grain Producers Association.

You will find in this edition a review of the 2012 Tri-State Grain Growers Conference. From the surveys collected and tabulated, the Conference was a great success amongst growers, industry, sponsors and exhibitors. The IGPA officers and board of directors fully supports co-hosting the annual meeting with our partners in the Pacific Northwest.

The benefits are easy to pinpoint: increased capacity for top-tier speakers and programming, a quality venue for attendees, and an overall educational and fun experience for those we represent. As we work on the 2013 Conference slated for Nov. 14-16 at the historic Davenport Hotel in Spokane, Washington, the IGPA requests input from our growers to create an event that meets their needs and expectations.

After the Conference, the IGPA immediately switched its focus to Congress and the fate of a new Farm Bill in the shadow of the "fiscal cliff" situation facing our country. We joined our national affiliates, NAWG and the NBGA and other agriculture advocacy groups, in an exhaustive push to convince Congress to include a five-year Farm Bill in the debate.

At the end of the day (or wee hours of the New Year's Day, as it were), Congress avoided falling off the "cliff" by applying a cheap band-aid to our fiscal problems. A long-term Farm Bill could not be achieved amidst the congressional chaos, but instead an extension of the '08 bill that very few supported.

The IGPA's efforts to provide stability and financial security to Idaho grain farmers have begun anew. In January, members of the IGPA executive committee attended the NAWG winter board meeting in Washington, DC. We visited our congressional members and staff on the Hill and left with a continued sense that, by-and-large, our delegation supports passing a long-term Farm Bill.

Regardless of the Idaho delegation's support, our country's fiscal problems have hog-tied the House and Senate from passing legislation like the Farm Bill through general order. Most bills with any chance of moving are being thrust into major packages meant to backfill the federal deficit.

By the time you read this, Congress will have addressed another "fiscal cliff" more commonly called "sequestration," a fancy word for mandatory budget savings. We are now hearing that federal farm programs could get significantly hacked again, and we out in the countryside almost have to laugh with disbelief as we tear our hair out at the short-sightedness of our elected officials.

The IGPA returns to the Capitol in early March for the NGBA winter board meeting. We will continue to emphasize to our congressional leaders that farmers need the certainty that comes with a strong crop insurance program, a financially responsible and effective revenue program, and renewed investment in federally supported agricultural research.

With increased threats all around us, we in agriculture are truly approaching a crossroads — a paradigm shift. Whether we reach that threshold sooner or later is anyone's guess. A New Year awaits us just as a new grain crop will emerge from the winter season.

While you are hitting the field, the IGPA will continue working hard to ensure that the voice of the farmer is heard amongst the masses of those who do not understand the value of a domestic, safe, consistent and high quality source of food and fiber. ■

2012 Tri-State Grain Convention a Success

Beer Institute President Joe McLain (far left and Chief Economist Lester Jones (third from left) hosted a breakout session on the economics of the U.S. beer industry.

The IGPA Research and Risk Management committee was one of five conducting business on the first day of the Convention.

WITH the goal of educating farmers about the coming issues affecting their operations, the 2012 Tri-State Grain Grower Convention proved a success.

The annual meeting of Pacific Northwest grain growers and industry, held Nov. 12-14 at the Coeur d'Alene Resort, was a busy one as state associations conducted membership business while keynote speakers and the traditional dinner and auction night kept attendees entertained.

The convention commenced on Nov. 12 with a flurry of state membership business culminating with the IGPA annual membership dinner.

The IGPA officer team bid a gracious goodbye to Clark Kauffman of Filer, recently elected to the Idaho legislature. Clark rotated off the executive committee board after five years of leadership. Elected to fill Clark's District 3 position was Filer farmer Terry Kulik.

Recognition was given to four individuals who exhibited exceptional leadership, service and support to the IGPA and its activities. Receiving awards were:

Member of the Year: Ty Iverson, Bonners Ferry
Friend of the IGPA: Sen. Tim Corder (retired)
Achievement: Wayne Hurst, Burley
President's: Joseph Anderson, Genesee

A slew of controversial keynote speakers raised a few eyebrows amongst the large audience. Outspoken farm subsidy critic Ken Cook addressed hundreds of farmers from Idaho, Oregon and Washington. President and co-founder of the Environmental Working Group, Cook is widely recognized as one of the environmental community's most prominent and effective critics of U.S. agriculture and domestic farm policy.

Lewis County director Matt Mosman was the lucky winner of the annual John Deere tractor raffle.

Idaho Lieutenant Governor Brad Little gave a welcoming speech to open the 2012 Convention.

Then IGPA president "Genesee" Joseph Anderson said Cook's invitation to speak at the convention did not set well with some attendees.

"I've had farmers tell me they were surprised that we invited him, but I believe it was important to hear from those who criticize us, not just those who praise us," he said.

Several educational workshops gave growers a chance to focus on specific topics of interest. A heavily attended session addressed the impacts of increased coal shipments through the Pacific Northwest. A panel consisting of representatives and analysts of the Washington State Department of Transportation, BNSF Railway, coal interests and shippers provided their unique perspectives on the topic.

The convention's final day left growers with a lasting impression. A panel of experts spoke to the issue of biotechnology and genetically modified food labeling. Ken Cook, retired university professor Dr. Don Huber, Dr. Anastasia Bodnar and Dr. Michael Neff outlined their differing points of view about a highly controversial subject.

2012 President Genesee Joe Anderson (left) received the President's Award from successor Clark Hamilton.

Planning for next year's convention is already underway. The annual event will return to the historical Davenport Hotel in downtown Spokane, Washington, November 14-16, 2013.

For details when available, stay tuned to *www.idahograin.org* and IGPA's Facebook page. ■

Caribou County growers donated an impressive Heritage 27-gun safe to the annual auction. Pictured are Scott Brown, Sid Cellan and Jeff Godfrey.

Idaho State Department of Ag director Celia Gould took part in the IGPA's awards ceremony.

IGPA Vice President Robert Blair with former Idaho state Senator Tim Corder (right), the 2012 Friend of IGPA award winner.

Wayne Hurst (left) of Burley was awarded the prestigious Lifetime Achievement plaque for his long list of volunteerism.

Ty Iverson (right) was honored with the IGPA Member of the Year for his efforts on behalf of Boundary County growers.

National grain industry leaders spoke at the Convention, including US Grains Council chairman Don Fast (left) and NBGA president Scott Brown.

IGPA Leaders Visit Capitol Hill; Attend NAWG Winter Meeting

IGPA farmer leaders hit the Hill to speak on behalf of Idaho wheat and barley farmers.

MORE than 225 people including IGPA grain leaders gathered for the annual joint NAWG - US Wheat Associates winter business meetings held January 26-30 in Washington, DC.

The annual gathering, known as the Wheat Industry Winter Conference, included meetings of all of NAWG's and USW's standing committees, two joint committees, both Boards in a joint session and in separate sessions. The relatively new National Wheat Foundation Board of Directors also met.

As part of the conference business, IGPA officers "Genesee" Joseph Anderson and Robert Blair represented Idaho at the NAWG Board meeting. New resolutions were approved to address the challenges and priorities of the U.S. wheat industry.

Newly adopted policies were the following:

• NAWG encourages the USDA Risk Management Agency to allow producers the option of having enterprise units cross county and state lines.

• NAWG supports allowing irrigated, limited irrigation and non-irrigated wheat to be insurable within the same insurable unit to be classified as separate enterprise units.

• NAWG urges Congress to ensure that in the implementation of the U.S. Patriot Act, producer and custom harvesters retain their 150-mile exemption from their base of operations.

• NAWG supports the exemption of Commercial Driver's Licenses and gallon limitation requirements for custom harvesters and farm suppliers transporting input to and from the farm.

• NAWG encourages the federal Surface Transportation Board to provide for the mediation and arbitration of rail service and rate disputes.

• NAWG and U.S. Wheat Associates support the inclusion of the 'WTO-plus' SPS provisions in the Trans Pacific Partnership agreement, and we support making these provisions fully enforceable.

The NAWG Board also accepted a membership request from the Michigan Wheat Program in a special ceremony. Michigan's membership in NAWG marks the 22nd state affiliate of the national wheat grower group.

The IGPA delegation met with Senator Jim Risch as part of the NAWG meeting.

The location of the winter meetings is intended to give growers around the country an opportunity to visit staff and Members of Congress on Capitol Hill, and most wheat state association representatives took advantage of the opportunity to talk about farm bill, research, trade and environmental regulations.

The IGPA delegation visited each congressional office to discuss Idaho's specific policy priorities in the new Congress.

Wheat growers will next gather at the 2013 Commodity Classic, scheduled for Feb. 27 through March 3 in Kissimmee, Fla. NAWG's committees and Board meet at Classic, the Association's annual meeting. USW's next regular Board meeting will be in late June. ■

There's Strength in Numbers with the Census of Agriculture

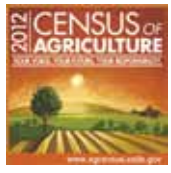
By Vince Matthews – Idaho Director, USDA National Agricultural Statistics Service

BEING counted in the Census of Agriculture is an opportunity that comes along only once every five years. In 2007, 88 percent of Idaho's farmers and ranchers responded to the Census of Agriculture to ensure their voices were heard. The U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) is challenging Idaho's agricultural community to come together and surpass this response rate for the 2012 Census of Agriculture.

There's strength in numbers and only those producers who respond to the Census can ensure that the numbers gathered help shape farm programs, boost rural services and grow the future of farming in Idaho. For example, published Census data is used by dozens of USDA programs that benefit farmers and ranchers in the state, including the Direct Loan Program, Guaranteed Loan Program, Conservation Reserve Program, Commodity Outlook Program, Commodity Market Analysis, and Extension funding.

NASS has already received over 17,000 completed Census forms in Idaho, a response rate of over 56 percent. The dedication and effort of the many farmers and ranchers who have responded is sincerely appreciated. For those who have not yet completed their form, there is good news – there is still time to be counted.

A second copy of the Census was recently mailed to those who have not yet responded. If you receive a Census form, please complete it as soon as possible. NASS will also begin telephone follow-up and personal visits to help collect responses. NASS is committed to ensuring that every farm and ranch in Idaho is counted to provide the most comprehensive data available for the future of the state's agricultural industry and rural communities.



Farmers can return their forms by mail or online by visiting a secure website, *www.agcensus.usda.gov*. Federal law requires all agricultural producers to participate in the Census and requires NASS to keep all individual information confidential. For more information about the Census, visit *www.agcensus.usda.gov* or call 1-888-4AG-STAT (1-888-424-7828).

Remember, with the Census of Agriculture there's strength in numbers. Help show how strong Idaho agriculture is by responding now. ■

Farm Bill Update

By Dale Thorenson

A One Year Extension

On New Year's Day, when the 112th Congress passed the American Taxpayer Relief Act of 2012 — a.k.a. the "fiscal cliff bill" — and included a one year extension of the 2008 farm bill, it marked the end of a two year futile struggle to pass a new five year farm bill. This was the first time a congress has failed to produce a new farm bill once the process started. All unfinished legislation dies with the end of a two-year congressional session, so the bills must start anew in the 113th Congress.

While most DC aggies were disappointed with the outcome, passage of the extension averted implementation of archaic permanent farm law provisions and re-authorized many needed programs such as the Market Access Program and Foreign Market Development that were on the brink of being shuttered. Probably the most amazing outcome though, considering the last two years' gnashing of teeth over the budget deficit, was that the extension did not cut spending. In fact, barring congressional action, Direct Payments for the 2013 crop will go out once again come October. Indeed, the Farm Service Agency will begin enrolling farmers in either the Direct and Counter-Cyclical Payment Program or the Average Crop Revenue Election Program on February 19.

The Baseline

But the preservation of the farm bill baseline spending for now does not mean agriculture is out of harm's way with regards to the budget knife. There will be several opportunities in the months ahead for congress to cut agriculture spending. The first indication of where the budget hawks might focus their attention came when the preliminary baseline score was released by the Congressional Budget Office on February 5. Overall, the cost (outlays) of the 2008 Farm Bill was forecast to decline by $16.4 billion for fiscal years 2014-2023. Commodity title spending increased some from last year at $64.3 billion, up only $1.3 billion (and the only major title to post an increase of any size). Crop insurance costs were actually forecast to decline by $6.3 billion to $84.6 billion; very welcome news as this reversed the title's trend of ever increasing costs since the writing of the 2008 farm bill when the CBO projected the program's cost at "just" $53 billion. Conservation was virtually unchanged at $63.95 billion, down $110 million. And Nutrition – accounting for 78% of total costs – declined by $11.6 billion to $760.5 billion.

Many Moving Parts of the Budget Battle

The fiscal cliff bill also delayed the January 1 implementation of the 2011 Budget Control Act's sequester to March 1. The delay adds significance to the Feb 19 sign-up for the 2013 crop year because having contracts for Direct Payments signed may shield them from being taken away by congressional action if legislation is passed containing alternative spending cuts to finesse the budget cutting rather than allowing across the board reductions. (DPs may still be reduced by 5-8% if the sequester goes forward) Although the farm bill's share of the sequester is estimated to be $7 billion over nine years, it is feared agriculture would bear a larger portion of the cuts if an alternative was passed, even to the point of complete elimination of the Direct Payments.

In fact, an amendment eliminating Direct Payments was drafted and offered in the House in early January as an offset for Hurricane Sandy relief. It wasn't adopted, but it does show how concise and brief the elimination language is. Include "Sections 1103 and 1303 of the Food, Conservation, and Energy Act of 2008 (7 U.S.C. 8713, 8753) are repealed" in any legislation and $33 billion in savings are achieved. And the Democratic leadership in the Senate has proposed an alternative to the sequester that also eliminates Direct Payments. Indeed, these payments are on the top of any list of proposed spending cuts that either side brings to the table.

The federal government was operating during the first month of this year through the use of "extraordinary measures" by the Treasury Department to prevent breaching the National Debt Limit. But at the end of January, Congress passed a law suspending the debt limit until May 18 and then increasing it to the amount borrowed through that time period. This takes the debt limit out of the negotiations over the budget in the coming months. Congress also included an incentive to get their work done, a suspension of their pay if a concurrent budget resolution isn't passed by April 15. To keep from violating the 27th amendment, the salaries will be held in escrow until a budget is passed or the last day the 113th Congress is in session, whichever comes first. So ultimately, Congress will get paid, even if they don't get their work done.

The President's FY 2014 budget is required to be delivered to Congress by February 4th, but it is expected to be delayed by several weeks due to the uncertainties created by the just passed fiscal cliff bill and the looming sequester. For agriculture, a look last year's proposal may be prophetic. It included $30.6 billion in net agriculture cuts over ten years ($30.0 billion from eliminating Direct Payments in future years beyond the current crop year, $7.6 billion from crop insurance, and $1.0 billion from capping CRP acreage at 30 million acres, less $8.0 billion from extending SURE through 2017 crops).

On the Congressional side of the FY 2014 budget battle, the removal of the debt limit from the budget negotiations has prompted the Republican House to indicate they plan on passing a budget that is balanced over ten years, which does not include any increase in revenues, only spending cuts. By comparison the House's FY 2013 Budget projected a $3.1 trillion deficit while including cuts of $181 billion from farm bill spending ($15.5 billion from commodity programs, $15.5 from crop insurance, $16 billion from conservation, and $134 billion from SNAP). The Democratic Senate has indicated they will be passing a budget this year, and that it will contain a combination of revenue increases and spending cuts. Reconciling these two versions of the FY2014 budget into one concurrent resolution is where the grand bargain on long term deficit reduction may take place which, as previous proposals indicate, would almost assuredly include significant cuts to agriculture spending.

While these FY 2014 budget negotiations are taking place, the March 1 sequester will be tripped barring Congressional action and then on March 27, the FY 2013 Continuing Resolution (CR) for annual discretionary spending will expire. Since Congress failed to finish last year's annual appropriation bills, the federal government has been operating on a CR since September 30, and will shut down unless the CR is extended. One line of thought is that the CR may be extended to April 15, matching it up with the date the FY 2014 Concurrent Budget Resolution is supposed to be finished.

The Path to Passage

Both the House and Senate Agriculture Committees have indicated they will delay marking up a new farm bill until after these budget negotiations are completed so that they know how much money is available to write the bills. While late February was initially mentioned in the press shortly after the fiscal cliff bill passed, the mark-up date is continually being pushed back. Word now is that late March into April is a more likely date to begin. But with all the aforementioned moving parts of the budget negotiations and potential for delay, mark-ups beginning in May to June might be a more realistic prediction.

One wouldn't think it possible, but the path to passage of a new five year farm bill in the coming months seems even more muddled than it was last year. And once again, the only sure thing is that the current extension expires on September 30. One positive note — beyond the lack of political advertisements! — is that unlike last year when the political campaign virtually crippled all progress on legislation by mid-year, Congress will be able to work the last three months of the year if a little more time is needed to get the job done. ■

Rattail Fescue:

A Threat to Conservation Tillage Winter Wheat Production Systems

By Traci Rauch and Donn Thill, University of Idaho

Background

Conservation tillage farming systems continue to expand in the Pacific Northwest for financial and environmental reasons, which include decreased soil erosion, decreased fuel consumption, more efficient use of time, improved soil health, and improved soil moisture retention. However, conservation tillage provides an ideal habitat for a weed new to dryland winter wheat cropping systems; rattail fescue.

Rattail fescue (Vulpia myuros), a winter annual grass introduced from Europe, is considered an invasive weedy species because it can establish quickly in disturbed areas and compete with native plants. It often is found along roadsides that serve as a seed reservoir to infest adjacent fields where conservation tillage is used. Rattail fescue can germinate in the fall, winter and spring, forms thick tufts, and flowers from May to July. Its growth pattern closely mimics winter wheat. Most rattail fescue seed germinates or deteriorates in the soil within 2 to 3 years. Rattail fescue residue breaks down slowly and can form thick mats of straw that make it difficult for other plants to establish, including seeded crop plants like winter wheat.

Rattail fescue previously was not a problem in conventional tillage winter wheat production systems because it was controlled with tillage. Conservation tillage systems, which substitute herbicides for most tillage operations, have created a seedbed environment suitable for successful establishment, growth and reproduction of rattail fescue. Herbicides, like glyphosate, are used in conservation tillage systems to control weeds that were formerly controlled with tillage. Rattail fescue is not effectively controlled with glyphosate at rates normally used to control other winter annual grass weeds.

Traci Rauch

Non-selective Herbicide Control in Winter Wheat

The most important herbicide used in conservation tillage winter wheat production systems to control weeds before planting is glyphosate, because it non-selectively controls a broad-spectrum of grass and broadleaf weeds, and does not injure crops planted soon after application. In fallow studies conducted at the University of Idaho, Oregon State University and Washington State University, a single application of glyphosate did not adequately control rattail fescue. Two sequential applications of glyphosate in the spring, applied at a higher than normal rate, were needed to control rattail fescue. Application timing also was critical to achieving good control. If glyphosate was applied too early, the rattail fescue leaf surface area was too small for adequate glyphosate coverage and uptake. If the application was too late, plants were too large to achieve effective control.

Selective Herbicide Control in Winter Wheat

Few selective herbicides are registered for rattail fescue control in winter wheat. One is Axiom, which is a packaged mixture of two herbicides; flufenacet (Group 15) and metribuzin (Group 5). Flufenacet inhibits very long chain fatty acid synthesis, and root and shoot cell division. Axiom is applied in the fall postplant and preemergence to the winter wheat crop and grass weeds. In field studies conducted by University of Idaho weed scientists from 2006 to 2011, Axiom controlled rattail fescue 90 to 96% in direct-seeded (a form of conservation tillage) winter wheat (pictures 1 and 2). University of Idaho research results also show that winter wheat can be injured if Axiom is applied to shallowly seeded and/or non-germinated seed. To avoid crop injury, it is very important to seed winter wheat at least 1 to 1.5 inches deep and to insure that

wheat seeds have germinated before applying Axiom.

Pyroxasulfone also is a Group 15 herbicide like the flufenacet that is contained in Axiom. It is most active when applied before weeds emerge because it inhibits very early seedling growth, but not seed germination. Pyroxasulfone was registered in corn in 2012 under the trade names of Zidua (alone), Fierce (pyroxasulfone plus Valor), and Anthem (pyroxasulfone plus Cadet); registration in winter wheat is pending for all three products and is expected in 2013. It controls some broadleaf and many grass weeds, including rattail fescue. In winter wheat studies conducted by University of Idaho weed scientists in 2010 and 2011, pyroxasulfone controlled rattail fescue 95% (pictures 1 and 3). UI research findings showed that pyroxasulfone combined with glyphosate and applied prior to direct seeding winter wheat controlled Italian ryegrass greater than 80% with less than 10% winter wheat injury. Applying pyroxasulfone with glyphosate will eliminate one herbicide application time, which will save wheat growers time and money. Like Axiom, pyroxasulfone can injure shallow-seeded winter wheat.

Currently there are no postemergence herbicides that effectively control rattail fescue in winter wheat. However, research at the University of Idaho has shown that some postemergence herbicides applied in the spring following a lower than normal application rate of Axiom or pyroxasulfone can effectively control rattail fescue. In a 2012 direct-seeded winter wheat study, rattail fescue was controlled 97 to 98% when a lower than normal rate of Axiom or pyroxasulfone was applied preemergence in the fall followed by Everest in the spring at the 3 tiller rattail fescue growth stage. Lower rates of Axiom and pyroxasulfone may reduce potential winter wheat injury.

Future Research

Relying only on herbicides for rattail fescue control is not a good management decision; especially if the herbicides have the same mode of action. Eventually, herbicide resistant biotypes of rattail fescue will be selected in a single mode of action, herbicide only, management scheme. Another management strategy may include the limited use of tillage along with herbicides. A long-term study was initiated at the University of Idaho in fall 2012 to determine if this strategy will work to control rattail fescue. The study examines the effect of tillage type (e.g., chisel plow versus heavy harrow versus no-tillage) and tillage duration (e.g., number of growing seasons ranging from zero to four), with and without herbicide treatment, on rattail fescue populations in a direct-seed winter wheat cropping system. The study was established at two locations near Moscow and Genesee, ID on the University of Idaho Research Farms and it will be conducted over the next five years. Our goal is to determine if a tillage break in a conservation tillage system will improve long-term rattail fescue control. ■

Export User Fee Increase Proposed Rule

THE United States Grain Standards Act (USGSA) directs the United States Department of Agriculture (USDA) to charge and collect reasonable fees to cover the estimated cost of official service. The fee structure, established in 2004, was based on projected average tonnage of grain inspected and or weighed. The fees collected are used to fund operating costs, which include personnel salaries and rent.

When the Grain Inspection, Packers and Stockyards Administration (GIPSA) established the rate at $0.052/MT, it was based on exporting 80 MMT of grain annually. The average rate of grain exports for the past nine years is 74.8 MMT, resulting in a revenue stream which has fallen short of GIPSA's goal, leaving the current fee structure unsustainable.

The Export User Fee Proposed Rule would allow all program fees to increase approximately 5% in FY 2013; 2% per annum thereafter through FY 2017. These fees would be applied to services performed at:

- Onsite Labs — contract and non-contract rates
- In an FGIS lab not at applicants facility

The fee would increase on all export grain, excluding land carriers to Canada & Mexico.

An advisory committee has requested that GIPSA implement cost control measures which include reducing program staffing levels, scheduling part time and intermittent employees during fluctuating work periods, reducing overtime paid to grain inspectors via work schedules favorable to bottom line and minimizing travel, equipment, and other administrative costs to immediate and/or emergency need.

GIPSA will also reduce its baseline projection from 80MMT of grain exported annually to around 63 MMT. The target baseline for 2014-2017 will increase to 65.0 MMT and the current rate of $0.052/MT will increase to $0.055/MT in FY 13 and $0.002 per annum thereafter.

The comment period closed on February 13, 2013. US Wheat Associates submitted comments on behalf of grain producers. ■

EXPORT USER FEE PROPOSED RULE

Fiscal Year	Revenue -3/	Obligations	Profit/Loss	Retained Earnings -1/	Million Metric Tons	Target Baseline -2/
2004	$27,823,437	$26,489,261	$ 1,334,176	$ (576,181)	76.3	80.0
2005	$28,871,631	$28,180,856	$ 690,775	$ 141,527	69.9	80.0
2006	$30,409,134	$28,831,441	$ 1,577,693	$ 2,316,588	75.3	80.0
2007	$31,408,894	$30,526,565	$ 882,329	$ 3,638,142	76.9	80.0
2008	$35,996,736	$33,447,549	$ 2,549,187	$ 6,330,532	81.4	80.0
2009	$31,192,780	$33,263,593	$(2,070,813)	$ 4,673,916	71.4	80.0
2010	$36,887,797	$35,474,405	$ 1,413,392	$ 6,527,766	77.7	80.0
2011	$37,652,241	$36,557,052	$ 1,095,189	$ 7,993,300	81.2	80.0
2012	$28,160,218	$34,285,325	$(6,125,108)	$ 1,868,192	63.9	80.0
2013 Estimated Current Fee Structure	$28,990,504	$35,117,277	$ (6,126,773)	$(4,258,581)	59.8 (projected)	59.8
2013 Estimated Proposed Fee Structure	$31,690,124	$35,117,277	$(3,427,153)	$(1,558,961)	59.8 (projected)	59.8

Source: GIPSA

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Collaboration Breeds Opportunity

What's in it for Idaho Wheat Growers?

LAST year the University of Idaho (UI) and Limagrain Cereal Seeds, LLC (LCS) entered into a partnership in wheat research to jointly develop and release wheat varieties. The Idaho Wheat Commission endorsed the concept and agreed to join the partnership by continuing funding of the university's Soft White Wheat breeding program in Moscow, ID. Growers across the region are now asking "What's in it for us?" It's far more than might be obvious at first glance. The collaboration will produce multiple benefits for regional growers.

A Proactive Response to Change

The University of Idaho was established in 1889 as part of the United States Land Grant University system. Historically, as part of their mission, Land Grant Universities provided leadership in plant breeding to improve yield, disease resistance, and adaptation to local environments. Commercial seed companies focused their efforts on taking the the publicly released genetic lines, truing them up, and selling pure uniform seed to growers for planting stock. Land Grant Universities were limited in their ability to release finished varieties and commercialize them. Thus, private seed companies began pouring profits back into research, particularly cultivar development and commercialization of new varieties. Unable to compete with private enterprise, many public breeding programs were shut down in the 1970's and 80's. Today, public wheat breeding programs across the nation are beginning to feel the competition from private industry. Idaho wheat growers may be wondering, "How can our university compete with the likes of Syngenta, Monsanto and Bayer?" and "What is this going to mean for us?"

In 2011, the University of Idaho needed a breeder for the Soft White Wheat program in Northern Idaho, but lacked the funds to recruit the talent to stay competitive with private breeding programs. Meanwhile, across the Atlantic, the French company Limagrain, was looking to enter the U.S. wheat market. Group Limagrain, one of the largest and most successful grower-owned plant breeding companies in the world, had just hired Dr. Jim Peterson, a wheat breeder from Oregon State University, as VP of Research for their newly formed US subsidiary, Limagrain Cereal Seeds, LLC. Dr. Peterson immediately recognized an opportunity for collaboration with UI on a joint breeding program. "I had a breeder with no program and the University of Idaho had a program without a breeder," he explained. The Administration in the UI College of Ag and Life Sciences (CALS) agreed a collaborative breeding venture with LCS could help keep the UI's wheat programs competitive and complementary with those of private industry. Following extensive negotiation, the accord moved forward. While this type of public-private partnership seemed radical to the PNW Wheat community, it was not unusual for a European company. "There is no equivalent to the publicly funded Land Grant University System in Europe. Universities are private institutions where the researchers have long worked collaboratively with private companies to advance plant breeding and cultivar development," noted Peterson.

Collaboration Breeds Opportunity

Group Limagrain was founded in the 1940's when French farmers were unable to get adequate seed to plant their crops. Some French farmers formed cooperatives to produce their own seed which led to breeding their own varieties. The formation of the Limagrain cooperative was all about farmers having access to the best seed available. Idaho growers want the same thing, remarked IWC Commissioner Joe Anderson. "Idaho growers don't care who developed it, they need access to the best genetics and the best varieties."

Limagrain brings a lot to the table. Imagine combining the excellent end-use quality and the local adaptation found in the UI genetics with the high yields and disease resistance available from one of the widest collections of advanced wheat germplasm in the world. Add in the application of modern biotechnologies, including molecular markers to assist in selection of desired traits, doubled-haploid technology to reduce development time, bioinformatics to better manage data, and things begin to happen. There is now immense potential for developing new wheat cultivars for Idaho and the PNW.

The University of Idaho contributes more than locally adapted genetics to the collaboration. Cropping systems knowledge specific to Idaho production is critical for successful adoption of new varieties by growers. The potential to change the wheat industry through superior varieties will only be realized if growers know the best management practices for those varieties. UI and LCS recognize the importance of having a multi-faceted team of people to develop management practices for new varieties.

Limagrain's contribution of wheat breeder

What does LCS bring to a relationship?

- International resources, technology
- Access to global germplasm base
- Molecular marker support
- DH and SSD production
- Access to Novel and GM traits
- Bioinformatics, statistics
- Legal support
- Marketing expertise, research

Growers gather to view the genetic diversity of LCS germplasm during the UI-LCS field day at UI's Parker Farm.

Jean-Bruno Beaufumé's time and support staff, and the continued financial support by the IWC of the UI breeding work, allowed a re-allocation of funds to fill positions critical to building a strong wheat research team. The university is currently seeking candidates for two cropping systems positions and two wheat research support scientists. "Growers can't afford to spend 3-5 years of trial and error to determine which varieties will work for them," added Donn Thill, CALS. Cropping systems work is the domain of the Land Grant University where interdisciplinary research, supported by extension trials, can provide a comprehensive how-to guide for each variety.

In just two growing seasons, the UI and LCS wheat breeding programs have quadrupled in size. "It's a numbers game and we just super-charged the UI breeding program." noted Beaufumé, at the recent UI-IWC Research Review meeting. The strategy is to exploit genetic variability by planting out as many genetic lines as feasible, and test in as many locations as possible. Breeders and technicians can quickly identify lines that have good adaptation over a wide range of environments. Promising lines go through extensive evaluations for yield, disease resistance and end-use quality before planting them for the next selection cycle. Peterson pointed out "We sort through tens of thousands of lines each year, which are quickly narrowed to a handful that have potential to be varieties, or parents of future varieties."

Commercialization of Wheat Varieties

The best varieties have no value if growers can't obtain seed to plant. Universities are institutions of higher learning and research. Private companies commercialize products for a return on their investment. Together they can make the best genetics widely available to all who want to buy them. Limagrain Cereal Seeds has a dedicated product manager who works with existing seed certification organizations to produce and certify seed stocks. Joint UI-LCS varieties will be exclusively commercialized by Limagrain and delivered through existing seed dealers by granting sublicenses. Joint varieties will bear the "Varsity Idaho" brand.

Jack Mangles assists Quality Lab Manager, Hayley Butler preparing samples for end-use quality testing at the LCS Wheat Quality Lab, Ft. Collins, CO

The value of public-private collaboration giving Idaho growers access to the best wheat genetics in the world, along with modern breeding technologies and efficient means to deliver varieties to the farm means money in the bank for growers. Idaho wheat growers will begin to realize value from their investments in genetic development. The aim is to produce and commercialize the genetics so they can be planted and increase overall farm profits.

Peterson explained, "We have the opportunity to commercialize UI-LCS varieties throughout the PNW. LCS can contribute by managing intellectual property rights, sub-licensing, marketing, promotion, and collection of royalties, which are shared with the University of Idaho. We will work closely with the UI Foundation Seed Program to get seed out the door and quickly into grower's hands. In the past, it seemed as if, when the university released a new variety, no one knew about it."

LCS is also interested in competing for rights to commercialize varieties solely owned by University of Idaho. For example the new soft white spring wheat, UI Stone, developed by Jianli Chen at the Aberdeen R & E Center. Many other opportunities will arise as the potential of the UI-LCS collaboration is realized.

Leadership in wheat breeding, access to new technology, improving markets and value-capture, leading to increased farm profitability — that's what is in this collaboration for Idaho wheat growers! ■

Study Says Idaho Agriculture Continues to be Profitable

IN a study conducted by the University of Idaho, Idaho agriculture broke cash receipt and net income records for the third consecutive year.

Cash receipts from sales of crops and livestock in 2012 are projected to be $7.72 billion, a 5% increase over 2011. Six of Idaho's major commodities (wheat, milk, cattle and calves, barley, dry beans and potatoes) set records for cash receipts.

Idaho's 2012 net farm income is projected to be $2.57 billion, 5% higher than in 2011, Total revenues are expected to increase by 7% to $8.70 billion, while expenses are projected to rise by 8% to $6.13 billion.

Revenues, expenses, net farm income, and cash receipts are calculated on a calendar-year basis, not a crop-year basis.

Wheat

Wheat was Idaho's second-largest crop by revenue in 2012. Revenues are expected to be $796 million, up 4% from 2011. Projected at 98 million bushels, 2012 production was down 16% from 2011. Wheat prices in 2012 climbed 8%, with the average price estimated to be $7.50 per bushel.

Barley

Idaho barley production in 2012 increased an estimated 16% from 2011 levels, and the average barley price is projected to be 24% higher, resulting in an estimated increase in barley revenues of 32% ($306 million) from 2011. The state's average yield is estimated to be 91 bushels per acre, down 2 bushels per acre from 2011.

Hurst Appointed to National Wheat Foundation Board

IDAHO wheat grower Wayne Hurst, was recently appointed to the newly formed National Wheat Foundation board (NWF). The Foundation is a 501(c) 3 non-profit organization located in Washington, D.C. governed by a nine-member Board of Directors and managed by staff of the National Association of Wheat Growers (NAWG).

The Foundation's Board of directors is seeking to aggressively expand the Foundation's outreach and partnerships with other national and state wheat organizations, individuals and allied corporate sponsors.

As a board member, Wayne will work on developing leadership training programs, wheat innovation coordination and education and management of the Wheat Growers Building on Capitol Hill.

Wayne and his family own and operate a diversified row crop and dairy farm located in Burley, Idaho. He has held several local, state, and national leadership positions in agriculture, currently serving as immediate Past President of NAWG.

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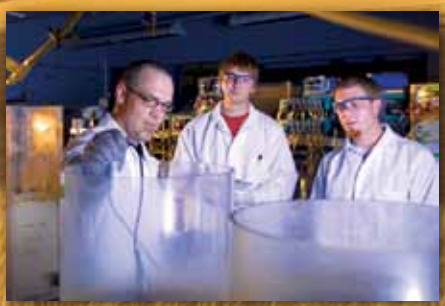

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Direct Seeding for Soil Health

Guest speaker Ray Archuleta, NRCS, North Carolina, engaging growers and wheat industry stakeholders in a demonstration of soil structure in a soil health presentation

Soil Health was the theme at the Direct Seed Workshop held in Idaho Falls, ID on March 7th. Three nationally recognized speakers presented their unique points of view on soil health. The Idaho Wheat Commission has organized and sponsored the workshop for six years, to inform growers about new ideas for direct seed production systems. The audience of growers was captivated and challenged by the information presented.

Each year, attendees look forward to local grower-speakers who share their real-life experiences with direct seeding. IWC Commissioner Gordon Gallup, of Swan Valley, shared his thoughts on "Getting Started." The economics made sense to Gallup. Employing subtle humor, Kevin Koester, a direct seed grower from Lava Hot Springs, spoke on "What I Learned in the School of Hard Knocks."

Elston Solberg, senior Agri-Coach with Agri-Trend in Saskatchewan, began the guest presentations. Solberg opened with a question, "How big is your tool box?" adding, "If I could only choose three tools for my farm they'd be a soil moisture probe, a shovel, and liquid fertilizer applicators for the seed drill." Moisture probes and shovels are inexpensive tools that every farmer should use regularly in every field, Solberg explained. A soil probe provides the first piece of information needed when calculating nutrient applications. "One inch of soil moisture translates to 3.8 bushels of wheat. Water means dollars in the bank," said Solberg.

Solberg urged farmers to "Think like a plant." Plants need water, light, and CO_2 to grow. They access water and nutrients through a large, healthy root system. "Focus on building the roots first." Active roots will build a big, healthy plant to capture maximum light and CO_2.

Organic materials are leaked from roots resulting in a significant carbon cost to the plants, but the carbon rich exudates feed soil microbes that fix nitrogen or in other ways make nutrients available to the plant. This delicate, mutually beneficial relationship can be harmed by too much chemical nitrogen in the wrong place. Liquid fertilizers laid down at seeding produce more feeding sites for the roots. "This can help overcome the effects of cold soil temperatures."

Solberg continued, "Once a good root system has been established, the focus shifts to building a large, healthy top on the plant." Green tissues are responsible for capturing the light and CO_2 needed for photosynthesis. Leaves use light energy to fix the carbon in CO_2 so the light energy can be stored as carbohydrates. Healthy plants are able to ward off pests and disease. He added, "Vigorous early plant development is critical where the growing season is constrained by cold temperature on both ends."

Solberg also encouraged growers to consider other nutrients, beyond N, P, and K. Chlorophyll, the molecule responsible for photosynthesis, is a carbon ring with a single magnesium (Mg) molecule held in the middle of the ring. Soils deficient in Mg will produce small, weak plants because of poor rates of photosynthesis.

Gordon Gallup with Elston Solberg measuring snow samples from a multi-species cover crop trial. Swan Valley, ID

In climates like Eastern Idaho, cover crops, stubble, and other residue help hold water on the fields in the form of snow. Solberg illustrated the issue with data gathered from Gordon Gallup's farm, where he sampled the snow levels in a strip trial of multi-species cover crops. The cover strip had 2.9" more moisture, in the form of snow, than the fallow strip. This moisture, Solberg posited, could increase yield up to 10 bushels per acre—an excellent rate of return on a $30/acre investment for seed of a multi-species cover crop. Growers, he said, should monitor each field throughout the season so they can make immediate adjustments to unexpected changes in soil moisture, temperature, and disease or pest pressure: "It's all about balancing the system for optimum yield."

Ray Archuleta, an itinerant soil health evangelist for the National Resource Conservation Service, challenged growers to consider the biology of plant-soil-microbe interactions in the root zone. Using hands-on demonstrations, he helped growers

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Guest speaker Elston Solberg listening to Hans Hayden as he explains how things work on his dryland farm in Arbon, ID

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understand the role soil particle size and soil pore space have on the capacity of soils to hold water, air and provide a desirable habitat for soil microbes. Grower assistants from the audience dropped clods of a well-structured soil and one of a fine-grained, compact soil, into tubes of water. The fine-grained dirt clod dissolved immediately. But the well-structured clod remained intact as water slowly filled the pore spaces and began to dissolve the organic glue holding the particles together. "Pore spaces are habitat for a veritable 'zoo' of bacteria, fungi, and worms feeding off of the plant root exudates and each other," explained Archuleta. These organisms secrete Glomalin, an organic glue that binds soil particles together forming a structure to hold pore spaces intact.

Tubes of water used for soil structure demonstration

IWC Host Commissioner Gordon Gallup swapping grower tales during a break

Unfortunately, conventional tillage practices disturb the soil, break apart the particle clumps, and collapse pore spaces, destroying the microbial habitat and disrupting the interconnected nutrient cycle between plant roots and soil microbes. "Don't burn the house down to warm a hot dog!" Archuleta exclaimed. "It takes one day of plowing to destroy what Mother Nature spent centuries building." Overcoming such damage takes time. Farmers moving from conventional till to no-till should expect to wait 4-6 years before seeing the benefits of the direct seeding/no-till practices on soil health.

Archuleta also suggested trying multi-species cover crops to add diversity to the plant root exudates, encouraging a more diverse population of soil microbes. Healthy soils retain moisture, require less chemical fertilizer, and have fewer pests and diseases, and support healthier plants, resulting in higher yields.

"Yes, but we aren't in Kansas anymore" replied Dr. Juliet Marshall, as she introduced the challenges of direct seeding in Eastern Idaho's dryland production areas. "We lack water, and when it comes it's at the wrong time. We lack warm soils, and pests like wireworm, nematodes and Barley mealy bug are increasing after years of continuous mono-culture cropping. Alternative crops for rotation are limited as are markets for those crops."

In spite of these challenges, Marshall noted growers have choices. "So, what do you have control over?" she asked, adding that farmers can influence the disease cycle through crop rotation and planting of resistant varieties. These actions promote crop and soil health. She also encouraged farmers to employ Best Management Practices (BMP) such as applying pre-plant P3, using certified seed and seed treatments, and managing soil moisture. Practices such as direct seeding, using multi-species cover crops, and managing soil residue to reduce erosion and retain moisture, lead to improved soil health and result in better crops.

Marshall also admitted the challenges involved in crop rotation: "Alfalfa, Camelina, Canola, Flax seed, Mustard, Peas, and lentils are possible rotation crops with wheat," she noted. "The problem is finding a market for those crops." Cover crops that aren't intended for harvest can be planted in rotation with wheat solely for the benefit of the soil and the next wheat crop. "But can you afford to lose a crop year?" Marshall wondered. "Maybe," she replied. Some common cover crop species are nitrogen fixing legumes and others are non-legumes that build up the soil in other ways. Concurring with the other speakers, Marshall pointed to enhanced soil quality, erosion control, improved fertility, weed suppression, and disease and pest control as benefits of cover crops. Will the value of these benefits compensate sufficiently for the lost crop year? Marshall's research is aimed at resolving this question.

Growers attending the 2013 Direct Seed Workshop gained new knowledge and got many ideas to take home. "That's a lot of information! I don't know how we can top this next year" remarked Gordon Gallup, a sentiment repeated by many other growers. The workshop was very well-attended, leading some growers to observe that, "Next year, we'll need a bigger room." And that, of course, is a factor under our control. ■

Jack Brown Assumes Wheat Variety Development Duties

UNIVERSITY of Idaho plant breeder Jack Brown will expand his efforts to develop valuable new wheat varieties for Idaho and Northwest farmers.

In his 20 years at the College of Agricultural and Live Science faculty, Brown's work has focused on canola, rapeseed and mustard varieties. His IdaGold mustard is used by some of the nation's largest mustard makers because of its superior qualities. Brown will continue to develop new oilseed varieties. With more than a dozen canola, rapeseed and mustard varieties available to growers, Brown is most identified with the oilseeds that turn thousands of acres across the Northwest golden each spring and summer.

"We are fortunate that we have a successful plant breeder on staff who has the diverse experience working with crops and with growers," said John Foltz, College of Agricultural and Life sciences interim dean at Moscow. With wheat and barley sales worth a projected $1.1 billion to Idaho growers last year, the college recognized development for northern Idaho and the Inland Northwest, Flotz said.

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Meet Doug Finkelnburg

North-Central Idaho's New Extension Educator

JANUARY 6, 2013 was Doug Finkelnburg's first day on the job as the Extension Educator for Nez Perce, Latah, Clearwater, Lewis and Idaho Counties. This is the first of five positions the College of Agriculture and Life Sciences (CALS) at the University of Idaho agreed to fill as part of its collaboration with Limagrain and the two endowments established last year by the Idaho Wheat Commission.

Many growers in N. Idaho have already become acquainted with Doug at Cereal Schools or through his work conducting variety trials of winter and spring cereals and grain-legumes for the UI-Extension variety testing program.

Finkelnburg also directed the day-to-day operation of the N. Idaho Soft White Wheat (SWW) breeding program for the 2011-2012 crop year. Until the Cereal Cropping System Agronomist position is filled in Moscow, Doug will be wearing several hats as he continues to conduct variety trials.

"I am very excited to continue expanding my working relationship with Idaho's grain growers as an Extension Educator," said Finkelnburg. "I have a long list of priorities I want to accomplish. One of my first goals is to produce a cereal and legume variety recommendation guide for North Idaho production systems. Looking ahead, we need to get to work developing strategies to address our soil acidity issues; both how to mitigate the current situation and how to remain profitable while doing so."

Doug's Extension responsibilities include working closely with the small grains cropping systems team in N. Idaho and conducting educational programming for growers at Cereal Schools and Field days, and working with state regulators to provide pesticide recertification or licensing.

"The Idaho Wheat Commission (IWC) is extremely pleased that Doug was chosen to fill the North-Central Idaho Extension position," said Blaine Jacobson, IWC Executive Director. "His experience with working with wheat growers and knowledge of agriculture research will enable him to hit the ground running."

An Idaho native raised in S. Idaho, Finkelnburg holds a BS in Environmental Science with an emphasis in Biological Sciences, and an MS in Environmental Science from the University of Idaho. His research focus was in soil chemistry. He has been working in the Variety Testing program since 2007 and has operated the variety program for the past five years.

About University of Idaho Extension

University of Idaho reaches Idahoans statewide through the land-grant mission of teaching, research, and extension. With a dozen research and extension centers plus offices in 42 Idaho counties and on 3 Indian reservations, University of Idaho Extension for a century has brought unbiased, locally relevant, research-based programs to help Idaho farmers stay globally competitive while also addressing local needs.

Idaho benefits when farmers and ranchers learn ways to increase productivity and ensure a safe, reliable food supply while reducing environmental impacts.

Contact Doug Finkelnburg
UI Nez Perce County Extension Office
1239 Idaho Street
Lewiston, Idaho 83501
(208) 799-3096
dougf@uidaho.edu

The University of Idaho College of Agricultural and Life Sciences maintains a statewide system of vital R & E Centers, home to research specific to Idaho's varied climates and regions. Listed are UI locations with grain specialties and contact information. ■

LOCATION	FACULTY
Aberdeen Research & Extension Center 1693 S 2700 W Aberdeen ID 83210-1749	Vacant 208-397-4181
Idaho Falls Research & Extension Center 1776 Science Center Drive, Suite 306 Idaho Falls ID 83402	Marshall, Juliet (jmarshall@uiaho.edu) 208-529-8376
	Patterson, Paul (pattersn@uidaho.edu) 208-529-8376
Kimberly Research & Extension Center 3806 N 3600 E Kimberly ID 83341-5076	Morishita, Don (don@uidaho.edu) 208-423-4691
	Neibling, Howard (hneiblin@uidaho.edu) 208-423-6679
Moscow Campus University of Idaho, PSES 875 Perimeter Drive MS 2339 Moscow ID 83844-2339	Bechinski, Edward (edb@uidaho.edu) 208-885-5972
	Mahler, Robert (bmahler@uidaho.edu) 208-885-7025
	Vacant
Southwest Idaho Research & Extension Center @ Parma 29603 U of I Lane Parma ID 83660	Barbour, James (jbarbour@uidaho.edu) 208-722-6701
	Vacant 208-722-6701
	Hafez, Saad (shafez@uidaho.edu) 208-722-6701
	Mohan, S. Krishna (kmohan@uidaho.edu) 208-722-6701
Twin Falls Research & Extension Center PO Box 1827, Twin Falls ID 83303 (mailing) 315 Falls Ave, Twin Falls ID 83301 (delivery)	Moore, Amber (amberm@uidaho.edu) 208-736-3629
Northern Idaho Nez Perce County Extension 1239 Idaho Street Lewiston, ID 83501	Finkelnburg, Doug - Area Extension Educator (dougf@uidaho.edu) 208-799-3096
Lewis County Extension 510 Oak St, Rm 6 Nezperce, ID 83543	Hart, Ken - Extension Educator (khart@uidaho.edu) 208-937-2311
Southern Idaho Blaine County Extension 302 First Ave South Hailey ID 83333	Hunter, Lauren - Extension Educator (lhunter@uidaho.edu) 208-788-5585
Canyon County Extension PO Box 1058 (501 Main Street) Caldwell ID 83606	Neufeld, Jerry – Extension Educator (jerryn@uidaho.edu) 208-459-6003
Cassia County Extension 1013 W 16th St Burley ID 83318	Packham, Joel – Extension Educator (jpackham@uidaho.edu) 208-878-9461
Elmore County Extension 535 East Jackson Mountain Home ID 83647	Seyedbagheri, Mir – Extension Educator (mirs@uidaho.edu) 208-587-2136, ext 509
Jerome County Extension 600 2nd Ave West Jerome ID 83338	Hines, Steve – Extension Educator (shines@uidaho.edu) 208-324-7578
Lincoln County Extension PO Box 608 (201 S Beverly St) Shoshone ID 83352	Falen, Christi – Extension Educator (cfalen@uidaho.edu) 208-886-2406
Eastern Idaho Bonneville County Extension 2925 Rollandet Idaho Falls ID 83402-4654	Jones, Wayne -Extension Educator (wjones@uidaho.edu) 208-529-1390
Butte County Extension PO Box 832, Memorial Bldg. (260 W Grand), Arco ID 83213-0832	Cheyney, Chad - Extension Educator (cchEyney@uidaho.edu) 208-527-8587
Caribou County Extension 53 East 1st South Soda Springs ID 83276-1480	Harrison, Steve -Extension Educator (steveh@uidaho.edu) 208-547-3205

AREAS OF EXPERTISE
Insect management in cereal-potato cropping systems.
Culture and management of cereals including production, disease management, and crop rotations.
Farm management, marketing, cost of production, FINPACK, enterprise budgets.
Weed management in cereals in southern Idaho.
Surface and sprinkler irrigation, irrigation equipment management, crop water use, and irrigation management impacts on surface and subsurface water quality.
Integrated pest management; insect management in northern Idaho cereal crops.
Soil fertility in northern Idaho cereal production systems.
Cereal variety trials, cereal cropping systems.
Insect management in southwest Idaho cereal production systems
Cereal crop management in southwestern Idaho.
Nematode management in cereal production systems.
Cereal diseases in southwestern Idaho.
Nutrient movement through soil, water, and plants; nutrient value of manure; managing nutrients in conventional and certified organic systems.
Dry land winter, spring, club and Clearfield wheat variety production in northern Idaho, conventional and direct seed systems, common cereal diseases, pesticide certification.
Soil fertility, weed identification and control, wheat enterprise analysis, pesticide certification.
Sustainable soil nutrient management, precision agriculture.
Cereal insect and disease management, irrigation.
Farm management, profitability of cereal production systems, weed management in wheat.
Nutrient management in cereal production systems, integrated pest management, cereal variety performance.
Nutrient recommendations, weed, insect, and disease identification and control, irrigation management.
Nutrient management in cereal production systems, nutrient value of compost.
Cereal insects and diseases.
Cereal agronomy, soil fertility, irrigation, and farm management.
Farm management, ag economics.

2012 Idaho Spring Barley Variety Performance

By Juliet Marshall, Extension Specialist, 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 2012 spring barley tests are summarized by district in Tables 1-3. 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 2 and for 6-row barley in Table 3. 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 2010, 2011, and 2012 are presented in Table 4 for all districts. These data represent results of 4-12 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 2012 trials; previous results can be found in the spring 1992 to 2012 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.

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/*.

Table 1. Dryland spring barley performance in Northern District at Bonners Ferry, Genesee, and Moscow, 2012.

	Yield				North Idaho Average				
Variety	Craigmont	Genesee	Moscow	Bonners Ferry	Yield	Test weight	Plant Height	Plumps	Thins
FEED	bu/A				bu/A	lb/bu	inches	%>6/64	%<5.5/64
Spaulding	98	92	106	134	108	55.5	30	90	2
Tetonia	97	105	96	126	106	54.1	30	86	3
Champion	95	95	103	126	105	54.9	31	91	2
Camas	88	92	99	132	103	54.6	32	92	2
Xena	96	91	103	120	102	54.2	30	90	2
Baronesse	92	94	101	120	102	53.8	29	90	2
Merideth	99	88	99	119	101	53.1	30	92	2
Lenetah	90	87	100	125	100	55.5	29	92	2
Millenium (six-row)	91	90	81	119	95	52.0	32	73	6
Aquila	93	76	93	112	93	53.9	35	91	2
Clearwater	88	83	88	95	88	61.1	32	72	6
MALT									
Copeland	96	88	96	125	101	53.2	33	92	2
AC-Metcalfe	97	87	90	114	97	54.5	32	90	3
Harrington	81	90	98	114	96	54.3	31	81	4
Tradition (six-row)	84	79	87	104	89	53.5	36	88	2
Average	93	89	97	120	100	54.7	2	6	2
LSD (0.05)	19	11	8	11	6	0.8	3	3	1

Tests and 2010-2012 Yield Summaries

Table 2. Irrigated Two-Row Spring Barley Performance in Eastern Districts at Rupert, Aberdeen, Idaho Falls, and Ashton, 2012.

	Yield				Irrigated Average						
	Rupert	Aberdeen	Idaho Falls	Ashton	Yield	Test Weight	Plant Height	Lodging	Plumps	Thins	Protein
Variety	bu/A				bu/A	lb/bu	inches	%	(% > 6/64)	%	%
FEED											
Baronesse	137	154	171	82	136	52	31	30	85	5	12.4
CDC Fibar*	79	108	114	54	89	57	34	52	76	7	16.1
CDC McGwire*	107	138	155	44	111	58	33	30	60	15	13.2
Champion	143	168	186	109	152	54	33	24	90	3	14.0
Clearwater*	95	117	141	89	110	58	33	43	65	13	15.3
Herald	132	155	167	66	130	49	35	29	77	9	13.8
Idagold II	136	170	162	96	141	51	29	6	83	5	13.8
Julie*	106	136	144	77	116	58	33	19	81	9	15.5
Lenetah	130	161	172	113	144	53	33	23	92	3	13.8
RWA 1758	142	153	169	84	137	53	30	28	87	5	13.1
Spaulding	137	182	191	98	152	54	32	8	87	5	13.3
Tetonia	128	153	167	91	135	52	31	43	80	9	13.5
Transit*	87	121	110	62	95	57	34	23	75	7	14.7
Xena	144	177	178	108	151	53	32	33	90	4	13.2
Average	121	152	158	81	120	54	32	26	80	7	14.3
LSD (α = .05)	21	20	16	33	11	1	2	18	6	3	1.4
MALT											
B1202	124	140	133	79	122	51	31	34	86	5	13.8
Conrad	138	145	144	68	127	52	30	30	91	3	13.9
Copeland	147	162	149	78	134	52	33	21	90	3	14.0
Genie	131	152	140	87	128	51	29	31	81	8	14.6
Harrington	108	119	103	72	101	51	33	48	75	10	14.6
Hockett	121	139	140	92	123	52	32	47	88	5	14.5
Meredith	-	129	150	78	123	50	31	35	83	6	14.6
Merit	122	128	147	59	114	51	32	25	83	7	14.2
Merit 57	124	125	155	85	122	50	33	40	79	8	14.4
Metcalfe	124	131	143	81	120	52	35	45	88	5	14.1
Moravian 115	136	148	118	76	122	49	27	49	82	6	14.0
Moravian 137	115	164	144	72	124	49	27	50	72	10	14.0
Moravian 143	150	175	149	72	137	49	29	23	89	3	14.6
Moravian 69	145	164	142	83	133	50	28	39	79	8	14.2
Pinnacle	140	170	154	89	138	54	33	9	96	1	13.6
Voyager	145	161	162	66	133	52	31	32	92	3	13.7
Xena (feed check)	149	159	168	92	142	53	32	23	91	3	13.4
Average	135	152	144	80	128	51	31	34	85	5	14.0
LSD (0.05)	19	20	19	31	11	1	2	16	9	4	1.0

* indicates hulless variety

Table 3. Irrigated Six-Row Spring Barley Performance in Eastern Districts at Rupert, Aberdeen, Ashton, and Idaho Falls, 2012.

	Yield				Average						
Variety	Rupert	Aberdeen	Idaho Falls	Ashton	Yield	Test Weight	Plant Height	Lodging	Plumps	Thins	Protein
FEED	bu/A				bu/A	lb/bu	inches	%	(% > 6/64)	%	%
Aquila	95	149	183	76	126	52	35	2	85	6	13.7
Goldeneye	118	145	211	108	146	51	35	18	84	6	13.5
Gustoe	92	140	152	74	114	46	25	47	61	16	13.3
Herald	132	145	197	69	136	49	35	21	80	8	11.2
Millennium	137	179	191	74	145	50	36	8	70	12	13.1
Steptoe	118	129	196	82	134	48	35	44	77	9	12.5
MALT											
Celebration	103	140	175	66	121	50	34	45	80	8	14.6
Legacy	116	143	181	84	131	50	36	43	81	7	13.3
Maja	109	129	178	68	121	49	34	49	64	16	12.7
Morex	109	127	166	67	117	49	36	51	70	12	13.8
Quest	120	114	181	74	122	50	36	38	80	7	14.1
Tradition	135	129	186	72	131	51	37	25	88	3	13.2
Average	119	142	186	76	131	50	35	32	78	9	13.2
LSD (0.05)	20	22	14	28	11	1	2	14	9	5	1.3

Table 4. Spring Barley Yield Average for 2010-2012 in Idaho.

	District	
	Northern	Eastern
Site/Years	**4**	**12**
2-ROW FEED		
Transit*		91
Clearwater*	81	100
Julie*		106
Baronesse	97	129
RWA 1758		129
Tetonia	102	130
Lenetah	100	130
Idagold II		131
Champion	104	136
Spaulding	102	138
Xena		140
Camas	101	
Average	98	124
LSD (α = .05)	4	5
2-ROW MALT		
B1202		113
Conrad		123
Copeland		121
Harrington	92	102
Hockett		113
Merit		110
Merit 57		117
AC-Metcalfe	93	
Moravian 115		117
Moravian 137		131
Moravian 69		124
Pinnacle		122
Average	93	120
LSD (0.05)		6
6-ROW FEED		
Aquila		
Millennium		133
Goldeneye		132
Herald		128
Steptoe		122
6-ROW MALT		
Legacy		120
Tradition	88	112
Celebration		109
Morex		102
Tradition		
Average	88	122
LSD (0.05)	4	5

2012 Idaho Spring Wheat Variety Performance

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

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 '2012 Idaho Spring Barley Variety Performance Tests and 2010-2012 Yield Summaries.' Agronomic performance data for spring wheat are summarized by state districts in Tables 1-3. Former Districts III and IV results, now part of the Southern and Eastern Districts, are presented for soft white spring wheat in Table 2 and for hard spring wheat in Table 3. 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 a plot 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 listings and are followed by a least significant difference (LSD) statistic at the 5% level. Average yield results from variety performance trials in 2010, 2011, and 2012 are presented in Table 4 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, 2012.

	Yield			Three Site Average				
Variety	Craigmont	Genesee	Bonners Ferry	Yield	Test Weight	Height	Grain Hardness	Grain Protein
SOFT WHITE	bu/A			bu/A	lbs/bu	inches	0-100	%
Alturas	71	81	90	81	61.2	32	20	11.2
Babe	55	72	93	73	61.5	33	21	11.1
Diva	64	79	86	76	62.0	34	26	11.0
JD	63	73	84	73	62.0	35	30	11.6
Nick	60	74	95	76	61.3	33	26	11.7
Penawawa	57	75	89	74	61.7	33	22	11.5
UI-Stone	64	81	81	75	61.4	33	17	10.8
WB-1035CL2	63	70	85	73	61.4	33	28	12.8
Whit	59	73	85	72	61.7	34	26	11.8
Average	61	77	89	76	40.9	22	21	11.5
LSD (0.05)	12	7	7	5	0.6	2	--	--
HARD RED								
Albany	48	82	97	76	60.9	33	76	13.2
AP-Bullseye	66	76	74	72	62.7	30	81	13.6
Buck Pronto	59	77	67	68	60.9	32	71	14.7
Cabernet	52	71	77	66	60.9	26	60	13.4
Glee	70	83	87	80	61.2	33	69	13.2
Jefferson	61	79	80	74	60.7	33	72	13.7
Kelse	55	78	72	69	61.2	35	69	14.5
Lolow	55	91	81	75	61.8	35	73	13.1
UI-Winchester	64	80	77	74	60.8	32	65	13.3
WB-Expresso	60	74	78	71	61.1	30	81	14.3
WB-Fuzion	66	67	86	73	61.1	35	73	14.1
WB-Hartlinew	70	91	91	84	60.3	33	61	13.2
WB-Volt	63	80	85	76	62.3	34	83	13.1
Average	61	79	80	74	61.3	33	72	13.6
LSD (0.05)	8	12	6	5	0.5	1	--	--

Table 2. Irrigated and Dryland Soft White Spring Wheat Performance in Eastern Districts at Rupert, Aberdeen, Idaho Falls, Ashton, and Soda Springs, 2012.

	Yield									
	Irrigated				Dryland		Average			
Variety	Rupert	Aberdeen	Idaho Falls	Ashton	Soda Springs	Irrigated Yield	Test Weight	Plant Height	Lodging	Protein
	bu/A					bu/A	lb/bu	inches	%	%
Alpowa	126	153	129	72	34	120	62	36	0	11.4
Alturas	107	147	116	64	31	109	61	33	0	11.0
Babe	128	157	122	62	36	117	63	34	0	11.1
Cataldo	95	132	103	60	29	97	61	32	0	11.6
JD*	104	126	107	59	37	99	62	37	12	12.1
Nick	105	141	109	58	34	103	62	32	0	11.5
Penawawa	111	140	105	58	29	103	61	34	0	11.8
UI Pettit	113	148	121	55	35	109	62	30	0	11.2
UI Stone	124	154	117	66	35	115	62	34	0	11.1
Whit	121	144	113	61	34	108	61	33	0	11.7
Average	114	145	116	62	34	109	62	33	1	11.4
LSD (0.05)	12	11	8	12	8	5	0	1	4	0.5

*club wheat

Tests and 2010-2012 Yield Summaries

Table 3. Irrigated and Dryland Hard Spring Wheat Performance in Eastern Districts at Rupert, Aberdeen, Ashton, Idaho Falls and Soda Springs, 2012.

	Yield						Average			
	Irrigated				Dryland					
Variety	Rupert	Aberdeen	Idaho Falls	Ashton	Soda Springs	Yield	Test Weight	Plant Height	Lodging	Protein
HARD RED	bu/A					bu/A	lb/bu	inches	%	%
Albany	113	132	108	61	-	103	62	33	2	13.0
Buck Pronto	102	130	102	58	-	98	61	32	0	15.5
Bullseye	122	130	103	61	-	104	63	29	0	14.5
Cabernet	115	124	101	55	24	99	62	27	0	13.8
Choteau	100	135	110	57	31	100	61	33	0	14.7
Glee	121	138	102	62	34	106	62	32	0	14.2
Jefferson	117	141	105	53	25	101	62	32	0	14.1
Kelse	115	133	115	54	32	104	62	33	0	14.5
UI Winchester	111	133	100	58	27	101	62	31	0	14.1
Volt	107	132	101	53	29	98	63	32	0	13.8
WB-Perla	79	109	91	55	-	83	60	27	0	14.7
WB-Rockland	106	114	97	49	-	91	62	26	0	15.4
Westbred 936	106	123	105	44	33	95	60	29	0	14.9
HARD WHITE										
Blanca Grande	107	135	110	63	30	104	63	29	0	13.7
Dayn	120	147	120	69	32	114	62	33	0	13.8
Klasic	99	141	110	44	28	98	62	25	0	14.0
Snow Crest	104	126	109	44	30	96	61	28	0	14.8
SY Capstone	109	129	102	59	28	100	61	28	0	14.1
WB-Idamax	108	125	102	58	-	98	61	29	0	14.3
WB-Paloma	98	127	102	68	25	99	62	29	0	14.9
DURUM WHEAT										
Alzada	111	151	109	57	-	107	62	30	0	14.4
Average	108	131	103	55	29	99	62	30	0	14.3
LSD (0.05)	11	10	9	13	9	5	1	1	1	0.6

Table 4. Spring Wheat Yield Average for 2010-2012 in Idaho.

	District		
	Northern	Eastern	Eastern (Dryland)
Site/Years	**3**	**12**	**3**
	Yield (bu/A)		
SOFT WHITE			
Alpowa	-	113	33
Alturas	71	112	43
Babe	72	114	36
Cataldo	-	101	42
Diva		-	-
JD*	76	101	42
Nick	65	107	39
Penawawa	65	104	38
UI Pettit	-	109	39
UI Stone	69	116	45
UI Whitmore	-	113	39
Whit	72	108	41
Average	70	109	40
LSD (0.05)	3	3	5

	District		
	Northern	Eastern	Eastern (Dryland)
Site/Years	**3**	**12**	**3**
	Yield (bu/A)		
HARD RED			
Bullseye	-	105	-
Cabernet	62	100	-
Choteau	-	103	29
Jefferson	69	103	33
Kelse	-	102	34
UI Winchester	69	102	31
Volt	-	101	27
WB-Fuzion	69		
WB-Rockland	-	87	-
Westbred 936	-	91	33

	District		
	Northern	Eastern	Eastern (Dryland)
Site/Years	**3**	**12**	**3**
	Yield (bu/A)		
HARD WHITE	67		
Klasic	-	95	34
Lolo	63		
Snow Crest	-	97	32
SY Capstone	-	102	-
WB-Hartline	76		
WB-Idamax	-	105	-
WB-Paloma	-	103	-
Blanca Grande	-	100	32
Durum			
Alzada	-	107	-
Average	69	100	32
LSD (0.05)	3	3	4

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