

IDAHO GRAIN

THE IDAHO GRAIN PRODUCERS ASSOCIATION MAGAZINE Summer 2008

**Idaho State Wheat
Growers Association**

Idaho Grain Producers Association
821 West State Street, Boise, Idaho 83702-5832

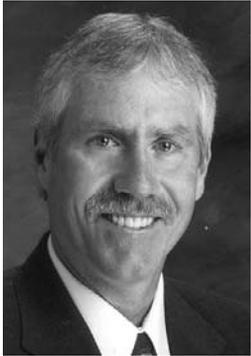
Address Service Requested

NON-PROFIT
U.S. POSTAGE PAID
ST. CLOUD, MN 56304
PERMIT 134

Views

BY MATT GELLINGS, IGPA PRESIDENT

President's Note



hh...it's finally spring. A fresh start, a new beginning. The smell of fresh dirt being turned over brings me back to my childhood days of hanging out with my dad and brothers who were plowing or planting grain. It's a wonderful time of year. Farmers are always the optimist, knowing 'this' will be the year.

Along with the coming of spring comes another year of risk. This new era of record setting grain prices combined with sky rocketing inputs, pushes risk higher for Idaho's farmers. I am hoping that most of Idaho's wheat and barley producers purchased some sort of crop insurance for this growing season. The value of the grain is so high you have to protect it. I had to laugh the other day when my neighbor said "in the past, we were insuring a Studebaker. Now we are insuring a Cadillac." Managing our risk now is more important than ever.

Along with the return of the robins, another sign of spring is the irrigation systems running just south of my farm. The winter wheat is in need of a drink. Having our snow pack where it is today should give us adequate water supplies for this growing season. I have seen more and more pivots and corner arms installed due to labor shortages as well as water conservation. Moving pipe at 50 years old sure convinced me to upgrade.

Not having a farm bill in place is still a huge concern for farmers. Congress has asked for several extensions of the current law. Now more than ever I see the value of my membership in IGPA. Misunderstanding the need for farm subsidies, some are calling for them to end. This is where the agriculture community circled the wagons. Our two national organizations, NAWG and NBGA, are in Washington, DC lobbying on behalf of our wheat and barley growers. Farmers are optimists but they deserve to know what programs are going to be there for their operation. Farmers make up less than 1% of the US population. Without a farm lobby, where would we be? IGPA is right there working for you to get the best possible outcome.

There won't be any burning this spring, but on March 7th, 2008, Governor Otter signed into law HB557 (The Idaho crop residue burning legislation). The IGPA will work with the federal EPA and state DEQ to expedite approval of the program under the Idaho State Implementation plan (SIP). I want to thank Dar Olberding, our IGPA lobbyist and Travis Jones, our Executive Director for all the hard work they have done to make field burning a reality by this fall.

Ah, spring time. It only comes once a year! A wise man once said "Do what you love and you will never work a day in your life."

CONTENTS

| | |
|---|----|
| Views | |
| Matt Gellings, IGPA President..... | 2 |
| Editor's Note | |
| Travis Jones..... | 3 |
| IGPA Issues | 4 |
| Supply, Demand and Biotechnology | 8 |
| Idaho Barley Commission: Celebrating 20 Years of Service to Idaho Barley Growers | 12 |
| Root-lesion Nematode Tolerance in Winter Wheat | 14 |
| Jim McDonald: Serving Idaho's Wheat Industry for Over Four Decades | 17 |
| Research Tours & Field Days | 19 |
| Physiological Leaf Spot (PLS) | 20 |
| Funding Shortages Reflected in Food Aid Program Awards | 20 |
| Differentiation of Physiological Leaf Spot (PLS) from Stripe Rust | 21 |
| Direct Seeding in Southern Idaho | 22 |
| Who Uses Our Wheat? | 23 |



WHEAT



BARLEY



WHEAT & BARLEY

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.

Published quarterly by

Idaho Grain Producers Association

821 W. State St. • Boise, Idaho 83702-5832
208.345.0706

Travis Jones Editor-in-Chief
Sue Megran Assistant Editor

Every effort is made to assure accuracy in articles published in Idaho Grain. However, the publishers assume no responsibility for losses sustained, allegedly resulting from following recommendations in this magazine. Send inquiries about articles or editorial content to the Idaho Grain Producers Association. The publisher will attempt to handle unsolicited articles with care, but the magazine assumes no responsibility for them. Materials will be returned only if accompanied by a self-addressed envelope with return postage. Address inquiries regarding editorial policy and writer guidelines to the editor.

Printing Production Coordinated by
Farm Progress Companies

191 South Gary Avenue • Carol Stream, IL 60188-2095
(630) 462-2272

Dale Hahn **Graphic Design**
Sharon Beaver **Production Manager**

For Advertising Information Call
Sandy Creighton **Advertising Sales**
Phone: (559) 433-9343

Printed in the USA.
Periodical postage paid at Salt Lake City, Utah
and additional mailing offices.

POSTMASTER: Send address changes to
Idaho Grain Producers Association

821 W. State St., Boise, ID 83702-5832
Change of address: Please send the old name and address as it appears on your label, as well as the new address to Idaho Grain Producers Association. Allow two months for change to become effective.



IDAHO GRAIN PRODUCERS ASSOCIATION

821 West State Street
Boise, Idaho 83702-5832
(208) 345-0706

e-mail: tjones@idahograin.org
e-mail: smegran@idahograin.org
<http://www.idahograin.org>

President *Matt Gellings*
Idaho Falls

Vice President *Eric Hasselstrom*
Winchester

Secretary/Treasurer *Scott Brown*
Member Soda Springs

Executive Board *Clark Kauffman*
Member Filer

Past President *Tim Dillin*
Porthill

Executive Director *Travis Jones*

Administrative *Sue Megran*
Assistant

IDAHO WHEAT COMMISSION

821 West State Street
Boise, Idaho 83702-5832
(208) 334-2353

Chairman *Gordon Gallup*
Ririe

Commissioner *Joe Anderson*
Potlatch

Commissioner *Mark Darrington*
Declo

Commissioner *Hans Hayden*
Arbon

Commissioner *Jim McDonald*
Grangeville

Executive Director *Blaine Jacobson*

Director, Program *Patricia Dailey*
Management
& Evaluation

Information & *Tereasa Waterman*
Education Manager

IDAHO BARLEY COMMISSION

821 West State Street
Boise, Idaho 83702-5832
(208) 334-2090

e-mail: kolson@idahobarley.org

Chairman *Evan Hayes*
American Falls

Commissioner *Ron Elkin*
Buhl

Commissioner *Don Mader*
Genesee

Industry *Steve Balster*
Representative Idaho Falls

Administrator *Kelly Olson*

Projects *Andi Woolf*
Coordinator

Editor's Note

BY TRAVIS JONES

Spring into Summer



It's a good thing that U.S. airline companies waited until recently to undergo major restructuring and reorganization. Over the past several months, your Idaho Grain Producers Association officers and members have accumulated a few thousand air miles representing the policy interests of Idaho's barley and wheat growers in Idaho and around the country.

Right here at home, the Idaho State Legislature recently concluded the second session of the fifty-ninth legislature. The session lasted a lengthy eighty-seven days, and numerous topics affecting growers were discussed and some acted upon. Our hired gun, Dar Olberding, earned his pay keeping track of issues ranging from creation of a new statewide field burning program, to increased truck registration fees, to providing full compensation to growers suffering wildlife damage to their crops.

With Dar busy on the home front, I made a mini-career of accompanying the IGPA's officer team to the annual national grower and research-focused conferences on the East Coast. The journey began in February as we attended the National Association of Wheat Growers (NAWG) spring meeting in Washington, DC to begin policy discussions identifying legislative goals and priorities for 2008-09.

Later that month, we returned to the Capitol City for the National Barley Growers Association (NBGA) legislative meeting to set priorities for Idaho's barley growers in collaboration with the brewing industry. A short hop over to Nashville found us at the annual "Commodity Classic" conference where nearly 5,000 wheat, soybeans, and corn growers, trade-show vendors, agriculture journalists, and agribusiness representatives all mingled to discuss national trends and issues facing the commodity industry.

The Idaho growers headed home from these three impressive events, but I re-routed myself back to Washington, DC. While there, I lended industry-level support to the University of Idaho, College of Agriculture and Life Sciences (UI-CALS) Dean Dr. John Hammel. We teamed up to advocate for continued federal research dollars supporting priority projects for Idaho's farmers and ranchers.

Last but not least, I caught one last springtime glimpse of the Capitol building during the national fly-in meeting with the Alliance for Rail Competition (ARC). Our four-member Idaho grower group fine-tuned a strategy to advance federal legislation addressing the railroad pricing and shortage issues faced by grain producers.

You will find a more detailed report on all of these meetings by turning the pages. During all of these meetings, we were able to meet and engage with national leaders, research experts, agribusiness, agriculture academics, and, just as importantly, other growers. While we may have grown travel-weary and certainly faced piles (or fields) of work undone, the knowledge and level of engagement we attained during this busy time was immeasurable.

Hopefully this quick three-month snapshot paints a picture of the work being done on the state and national arenas by the IGPA on your behalf as a member and/or affiliate. While all those air miles can eventually pay off with a vacation, the IGPA never rests in advocating for policies that keep your operations viable and free from unsolicited and unnecessary burden.

And the year has only just begun!





2008 State Legislative Roundup



By Darwin Olberding,
IGPA Lobbyist

The 59th Idaho Legislature adjourned their 2nd Regular Session on Wednesday, April 2 and it was nothing short of a wild and crazy ride.

While big ticket items such as drug treatment funding, statewide aquifer study funding,

personal property tax treatment, and an expanded grocery tax rebate were passed, many other important issues were avoided.

However, several pieces of legislation affecting Idaho grain producers and the agriculture industry were addressed throughout the 87-day session. Below is a taste of issues I and the IGPA addressed on your behalf throughout the legislative session.

Field Burning

On March 7, 2008, Governor Otter signed into law HB 557, the Idaho crop residue burning legislation. The bill repeals and replaces the Smoke Management and Crop Residue Disposal program previously administered by the Idaho State Department of Agriculture (ISDA).

The carefully negotiated statute transfers administration of the program to the Idaho Department of Environmental Quality (DEQ). The statewide program will require a \$2 per acre fee paid by farmers opting to burn their fields. The bill provides tighter ambient air quality standards during a burn, provides increased transparency on burn activities, and requires the DEQ to conduct strict air quality analyses when bluegrass burning outside tribal boundaries exceeds 20,000 acres.

Prior to passage of the legislation, the IGPA reached a negotiated agreement with stakeholders on new rules for the program. DEQ is currently taking comments on the

rules through May 2, 2008. Meanwhile the U.S. Environmental Protection Agency's Region 10 office will review the program and its compliance with the provisions of the federal Clean Air Act.

The IGPA will work with the EPA and DEQ to expedite approval of the program under the Idaho State Implementation Plan (SIP). With quick EPA approval, farmers could potentially resume field burning practices by fall 2008.

Idaho Barley Assessment Bill

HB 484, would have allowed the Idaho Barley Commission increased flexibility in setting the statewide annual barley assessment. HB 484 sought to provide the Commission increased flexibility in setting the rate within a range of 2¢ to 4¢ per hundredweight based on an ongoing annual review of production trends.

The measure passed the House on February 19, 2008, but Senate Agriculture Committee members tabled the legislation citing concerns raised by some producers. The bill was delayed for further consideration until the 2009 legislative session.

The IGPA actively supported HB 484 as important to the mission and work of the Idaho Barley Commission in creating new markets and products for barley producers, maintaining research to overcome production challenges, and educating growers on best management practices for maximum results.

Idaho's Water Supply

Two bills focusing on Idaho's ongoing water shortage challenges made significant progress.

HB 428, signed into law by Governor Otter on March 17, will provide \$20 million to conduct a statewide comprehensive aquifer planning and management study.

SB 1511 passed the Senate on March 20 and will provide \$10 million for water projects in fiscal year 2008. Funds will be used to purchase a private fish hatchery in the Magic Valley allowing procurement of additional water supplies to alleviate regional domestic and municipal water supply needs.

Transportation Funding

Although numerous attempts to raise dollars for Idaho's aging highway infrastructure were made, impasse was the only significant outcome.

\$134 million in targeted highway project bonding authority was approved. These funds are designated for specific high priority highway projects under former Governor Kempthorne's "Connecting Idaho" transportation plan, also known as GARVEE.

In addition, the Legislature approved legislation requiring an independent audit of the Idaho Transportation Board to ensure that the department is performing efficiently. The one-time audit will cost an estimated \$550,000.



Last-minute attempts between key lawmakers and Governor Otter to forge a comprehensive transportation funding package failed the Idaho House. The package sought to raise \$68 million through increased truck and automobile registration fees

and fuel taxes towards the estimated \$240 million highway infrastructure shortfall.

Over the coming months, the IGPA plans to engage with other transportation-minded industries to seek an equitable solution to this complex problem.

Wildlife Depredation

Most claims from Idaho farmers seeking compensation for wildlife damage to croplands in 2007 will not receive full funding. The Idaho Legislature refused to amend the Idaho Fish and Game budget to increase the annual

authorization limit of the department's wildlife depredation fund. A significant increase of claims for compensation under the program has been filed for 2007 crop damage.

The depredation program, established in 1995, provides \$406,000 annually for Idaho farmers and ranchers with verifiable crop damage from wildlife. Near the Legislature's target adjournment date, the IGPA learned that filed 2007 depredation claims exceeded the annual program authorization.

The IGPA met with key legislators and Governor Otter's staff to determine if a short-term solution was possible to fully compensate growers. While hasty efforts were ultimately not successful, the IGPA will work with the Fish and Game Advisory Committee towards a long-term solution.

Personal Property Taxes

A carefully negotiated tax break on personal property taxes for Idaho businesses was agreed to before adjournment. Last minute negotiations between the Idaho House and Senate produced an agreement to exempt

the first \$100,000 worth of business equipment from the annual tax.

The tax break is projected to provide relief to 88% of Idaho businesses and is estimated to cost the State \$17.8 million annually. The legislation will require the state to reimburse county governments that lose revenue under the tax cut. The tax relief, taking effect on January 1, 2009, will not apply if state revenues do not exceed 5% from the previous year.

Concerns that potential county tax base shortfalls would shift the burden onto real property owners were expressed in opposition to the bill. ♦

logen, Idaho, and Energy Independence: A Visit to Ottawa

By Matt Gellings, IGPA President

Who would have guessed that an eastern Canadian company might play a large role in advancing the energy independence of the U.S. with help from Idaho farmers?

As we are all well aware, the national buzz regarding renewable energy has escalated to a fever pitch. Every day a new press report laments the controversy of using crops for fuel instead of food. The controversy surrounding this topic has heightened given the present world food supply shortage and the related crisis documented in places like Egypt and Haiti.

Idaho grain producers stand to both avoid the "food versus fuel" debate entirely by potentially becoming a major supplier of renewable energy to a starving U.S. marketplace.

Most of you know or have heard about logen Corporation, who has partnered with Royal Dutch Shell to build the world's first commercial-scale cellulosic ethanol plant in southeast Idaho. Estimates project that the proposed plant would use more than 500,000 tons of wheat and barley straw annually from area farmers. It would ultimately produce 50-60 million gallons of cellulosic ethanol, and inject \$25 million into Idaho's rural economy – pretty significant in my view.

The IGPA, Idaho Wheat Commission, and the Idaho Barley Commission spent several

Save the Date...

Mark your calendar now and plan to attend

**THE 2008 PACIFIC NORTHWEST
GRAINS CONFERENCE
December 10-12, 2008**

COEUR D'ALENE RESORT
Coeur d'Alene Idaho

HIGHLIGHTS

- Barry Flinchbaugh
- Industry related Educational Workshops
- Interactive Exhibit Hall
- Christmas Cruise on the Lake

Idaho Grain Producers Association
Oregon Wheat Growers League

*Room Reservation
Information!*

Coeur d'Alene Resort

Coeur d'Alene Idaho
800-688-5253

"KEYS TO
SUCCESS" 2008

For more information contact:

Pacific Northwest Grains Conference

Idaho Grain Producers Association
821 West State St., Boise Idaho
83702-5832
208.345.0706 Fax: 208.334.2505
www.idahograin.org



hours carefully researching the project and consulting with area growers and economic development officials. The three organizations eventually joined forces with logen to secure federal assistance to finance the proposed \$300 million facility. Through creation and support of federal energy incentives, the Idaho Congressional delegation provided a massive boost to move plant construction closer to reality.

Recently, I got a first-hand look at this technology. On April 7, I joined Idaho Senator Larry Craig and key staff of Representative Mike Simpson on a tour of logen Corporation's Ottawa, Canada cellulosic ethanol demonstration plant. I came away impressed by the advanced operations of the facility, the viability of the technology, and the expertise behind it all.

Key to the experience was my opportunity to insert a farmer perspective into discussions with logen's leaders and our legislators. I expressed the opinion that Idaho's farmers are skeptical about the chances of this project becoming a reality, and the imperative of

good communication between logen and its contracted growers. Critical financial backing of the project from the U.S. Department of Energy has moved at a crawl. logen is admittedly tracking a Canadian energy incentive program that may beat the U.S. to the punch.

Just like our legislators, Idaho farmers are seeking some certainty that an investment of time, money, and commitment to this project will produce results. Bringing all the stakeholders together on logen's home turf was beneficial and, in my mind, clarified that an element of impatience is present amongst all parties. Everyone has the same goal in mind – utilizing what is typically considered a waste product to create added value and a significant and sustainable new market.

If we can ultimately accomplish our goal, we can help Idaho producers access a new revenue stream where a minimal one previously existed. A consistent and significant



Jeff Passmore – Executive Vice President, logen; Idaho Senator Larry Craig; Matt Gellings; Brian Foody – President & CEO, logen.

new income source will help to lower producer risk during volatile times in the international marketplace, much like today.

Although my trip to logen's cellulosic ethanol plant in eastern Canada was quick, I felt it very beneficial in reminding stakeholders and policymakers that all things are local. As the world deals with tight food supplies and increased energy demands, your local farmer cannot be overlooked. Idaho's grain producers will remain on the frontier of both these opportunities and challenges. ♦

IGPA Springs Into Action

With the pending new Farm Bill, the transportation crunch, escalating input costs, biotech, and several other critical issues affecting Idaho's grain growers, the IGPA had much to discuss at national conferences this spring.

The National Association of Wheat Grow-

ers (NAWG) spring meeting held February 3-6 in Washington, DC kicked off the year in a hurry. Sending six representatives to the four day conference, the IGPA participated in subcommittee and full board activity to initiate the development of new policy priorities for 2008.

Coupled with NAWG activities, the IGPA

met with the director of the USDA Natural Resources Conservation Service and former Idaho NRCS State Conservationist Rich Sims, who was working remotely at the USDA headquarters office. In addition, a good discussion with The Fertilizer Institute on climate

...continued on p. 8



IGPA leadership and Idaho Wheat Commissioner Joe Anderson met with Idaho Senator Mike Crapo during the NAWG Spring Meeting in Washington, DC.



Tom Christensen, Deputy Chief of Programs, USDA NRCS, Matt Gellings, Eric Hasselstrom, and Rich Sims, former State Conservationist, Idaho NRCS.

...continued from p. 6

change legislation and its affect on the production and availability of agriculture inputs was given by The Fertilizer Institute. Last but not least, the IGPA met with all four members of our Idaho congressional delegation.

In late February and early March, the IGPA split time between the National Barley Growers Association (NBGA) Washington, DC meeting and the "Commodity Classic" annual convention in Nashville, TN. The NBGA meeting included important discussion related to federal support for barley commodity and insurance programs alongside continuing research and trade priorities. The IGPA and the Idaho Barley Commission partnered to share these priorities with our Idaho delegation.



IGPA and the IWC present Idaho Senator Larry Craig with the NAWG "2007 Friend of Wheat Award" for his support of grain issues in Congress.

The 2008 Commodity Classic convention proved to be an outstanding event. Roughly five thousand corn, soybean, wheat producers and agribusiness converged in Nashville to discuss the opportunities and issues facing these major commodities in today's market. The IGPA heavily engaged in the adoption of policy priorities for NAWG and listened to experts discuss the current trend in markets, research, and production.

On the home front, the IGPA worked on several diverse state issues important to Idaho wheat and barley farmers. Legislative efforts ranged from increased transportation infrastructure funding, the impact of wildlife on crops, field burning, enhanced water supply, barley assessment legislation, among others. It was a very busy spring, but a very productive one as well. The IGPA looks forward to any and all input as the organization works on issues important to Idaho's grain producers. ♦

Supply, Demand and Biotechnology

By Tereasa Waterman

Biotech or Genetically Modified (GM) or Transgenic (TG) by definition is using modern biotechnology to insert DNA from one species into the DNA of another species for the purpose of: 1) Addressing agronomic issues limiting crop yield or quality. 2) Addressing processing or end product issues limiting productivity, quality or nutrition. 3) Production of nutraceuticals for human health (Golden Rice vitamin A).



Although prices for commodities are at an all time high, farmers have been experiencing drastic increases in fertilizer, pesticide, repair, fuel and labor costs. As a result, many farmers are looking toward industry and science to come up with new ways to help cut production costs and improve yields.

Biotech crops have emerged as a means to achieve these goals. In 2007, the global area planted to GM crops rose 12% to 282 million acres. GM corn saw an additional 25 million acres planted last year. GM crops were grown commercially in 23 countries, 12 of which are developing nations. U.S. farmers planted 142.5 million acres of biotech crops in 2007 delivering proven economic and environmental benefits.

Biotech wheat may have a bright future in addressing the shortage of wheat. The US wheat industry recognizes that advancements in biotechnology will deliver significant consumer and producer benefits. The wheat industry supports continued biotechnology research, and product and market development.

Mark Darrington, Idaho Wheat Commissioner from Declo, sits on the U.S. Wheat Associates and National Association of Wheat

Growers joint Biotech Committee. He believes biotech wheat can help soften the blow that Mother Nature can send by developing drought tolerant wheat and wheat that can resist fusarium head blight or "scab".

"The market has been sending signals for farmers to grow something other than wheat," said Darrington. "For years farmers were getting two and three dollars a bushel for wheat. Last year Mother Nature presented us with an untimely frost and a drought that wreaked havoc on the world wheat harvest. It forced the price up and this year we're seeing more acres planted to wheat. That's not going to last forever. There's got to be something coming down the pike that will inspire farmers to grow more wheat."

U.S. Wheat Associates, (the industry's export market development organization) has been actively discussing the eventual commercialization of biotechnology traits in wheat with overseas customers since 1996.

Technology providers have also been at work developing GM wheat. It typically takes 10-12 years to develop a new biotech trait from concept to commercialization, including 3-4 years in regulatory review at a cost of approximately \$100 million dollars to get a genetically modified trait from the lab into the farmer's field.

Something has to Change

Over the past 20 years world wheat production has increased by roughly 16% (world wheat harvested area decreased roughly by 6%) while world wheat usage has increased by 20%. Consumption has exceeded production seven out of the last ten years.

The dwindling supply of wheat in Egypt has led to high prices for bread which has resulted in violence and rioting. Rising food prices in Haiti have led to demonstrations, looting and clashes with police. Troops have been deployed in Pakistan and Thailand to prevent the

theft of food from fields and warehouses.

The cost of food has increased by approximately 40 percent since mid-2007 worldwide, partly due to rapid economic growth in China and India. Although this growth is helping lift millions of needy people out of poverty and given them access to better diets, it has also created higher demand for food.

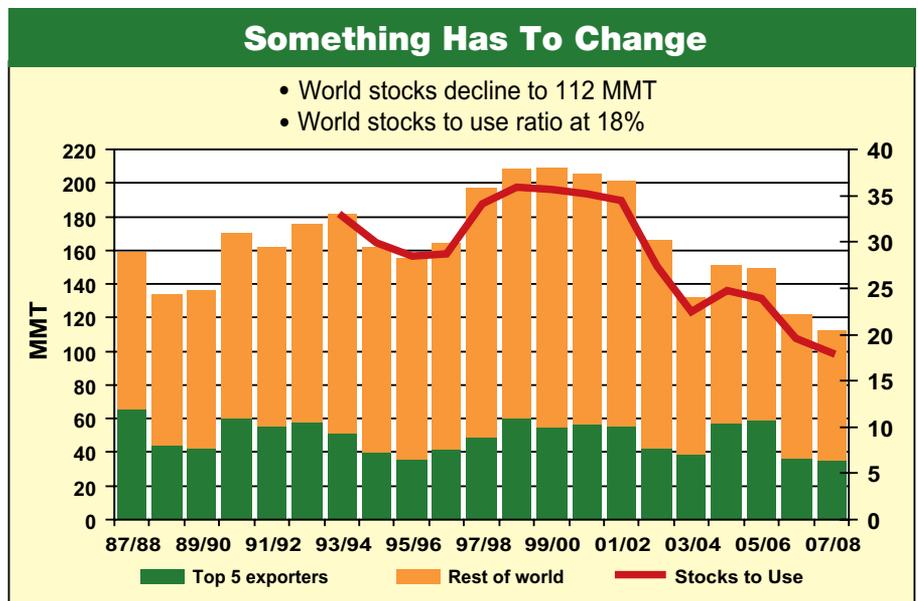
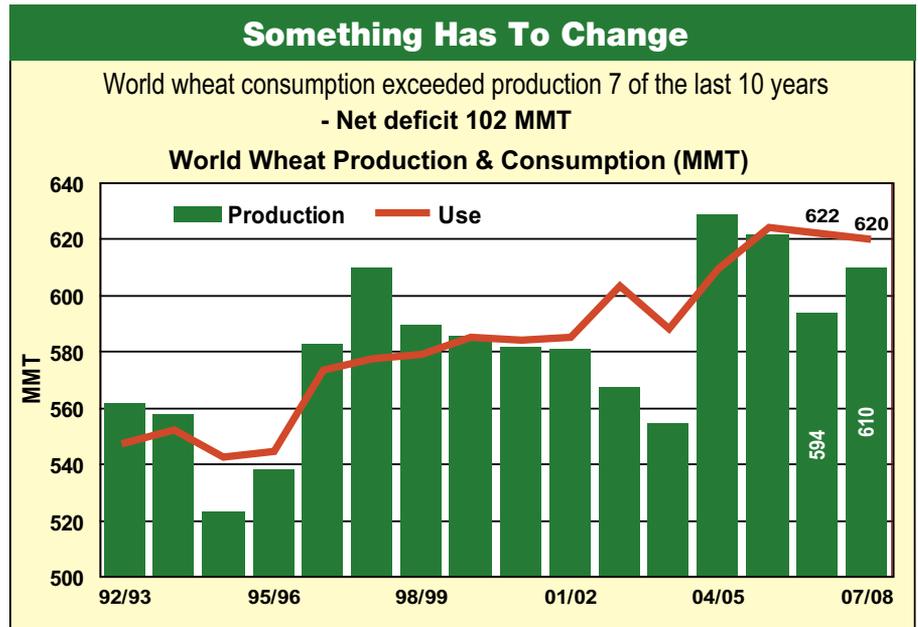
The decrease in world wheat supplies, coupled with fewer acres being planted, and an increase in food consumption and higher prices have received international attention. Recently the U.N. Secretary General Ban Ki-moon commented that the steeply rising price of food — “has developed into a real global crisis”. Ban urged leaders of the international community to sit down together to discuss how to improve economic distribution systems and promote the production of agricultural products.

Trade liberalization, which holds the promise of getting more food to more people, can be part of the solution. Free trade increases market opportunities, which is an incentive for additional production to help alleviate food shortages and high prices.

Biotech crops may also be part of the equation to help increase food production. After 12 years of successfully growing and marketing biotech crops, the economics have become so favorable that farmers in the Midwest have begun displacing wheat acres in favor of biotech corn, soybeans or canola.

Among the most valuable benefits of plant biotechnology have been reductions in pesticide use and soil erosion. It is estimated that planting biotech crops has reduced the “environmental footprint” by about 15.5 percent, as calculated using an established environmental index quotient (EIQ) which compares the potential impacts of pesticides applied in a conventional field to a field planted with a biotech crop.

Another advantage of genetically modified crops is the reduced need for tillage or plowing, allowing farmers to adopt conservation or no-till practices. In the United States, these practices and other conservation measures are reducing soil erosion by 1 billion tons and saving consumers \$3.5 bil-



Graphs courtesy of U.S. Wheat Associates

lion in water treatment costs annually.

Since 1996, the use of GM soybeans has been one of the largest contributors to reduced pesticide applications, accounting for cumulative reductions of 41,000 metric tons.

Biotech crops are also reducing the amount of herbicides being applied resulting in fewer trips being made through the fields. The recorded outcome has been an annual reduction of 46 million pounds of pesticides in the United States on four primary crops (corn, soybeans, canola and cotton).

“Farmers are in business to make money,” said Darrington. “When I make my planting decisions, I want to know what my risks and my rewards are. Biotech wheat, in theory,

may have the same economic rewards that corn, soybeans and canola have provided to farmers in the Mid-west. Biotechnology may be part of the solution in getting more acres planted back to wheat.”

Wheat producers are ready to meet the demand for a reliable and affordable supply of food and feed. The U.S. wheat industry is committed to working with the entire supply chain to ensure the commercialization of biotech wheat, which gives producers access to critical technology while giving our customers (domestic and overseas) the choices to purchase whatever type of wheat they need (see USW/NAWG Statement under Biotechnology at www.uswheat.org). ♦



IBC was created in 1988. Its mission is to **enhance the profitability of Idaho barley growers through research, market development, information and education.**

Strategic Priorities identified in IBC's 2005 Strategic Plan include:

- **Improve Productivity** – develop new barley varieties with improved performance; adopt best management practices; and create innovative uses for Idaho barley.
- **Enhance Profitability** – assist growers with marketing & risk management strategies; fine-tune production costs; expand markets; and foster competitive transportation.
- **Expand Partnerships** – Promote leadership in the Idaho grain industry; meet customer needs; and maintain effective communications with our stockholders.

Production / Funding Challenges —

Idaho barley crops in 2006 and 2007 were the two smallest in the past 30 years. As a result, the IBC expects to drawdown its reserves by at least \$150,000 in FY 2007 and 2008. **To address future funding challenges, the IBC will conduct a vote later in the fall on whether growers would support future legislation giving the board authority to set the assessment at a rate up to a maximum of \$.04/Cwt.**

A Look Back

GROWER SERVICES

We partner with the Idaho Grain Producers Association (IGPA) and National Barley Growers Association (NBGA) to address policy issues affecting your bottom-line. Some of these issues have included:

Federal farm safety net, crop insurance, taxes, water, energy, transportation, trade, pesticide registrations and environmental regulations.

Highlights...

- Two IBC board members, Craig Corbett and Evan Hayes, served as president of the National Barley Growers.
- Managed the business office of the National Barley Growers for six years (1992-93, 1995-96, 2006-07).
- Worked to restore the Malt Barley Crop Insurance in 1996 and was the first state to introduce Revenue Assurance coverage for barley. 64% of Idaho barley acreage was insured in 2007.
- Led efforts in 2008 to fix disparities between malt quality specifications in crop insurance and industry contracts.
- Secured more than \$80,000 in federal grants to support risk management education programs, including grower workshops, special newsletters and a computerized risk management learning tool

available on line at www.agsurvivor.com.

- Offered grain marketing and risk management training to more than 1,250 producers across the state since 2002.
- Published weekly Idaho Grain Market Report since 1995.
- Updated Idaho barley production costs for malting and brewing companies.
- Launched a barley pesticide action plan in 1996, resulting in 6 pesticide registrations, including Warrior insecticide in 2007.
- IGPA led the effort to restore field burning as a management tool in Idaho in 2008.
- IGPA led the fight to eliminate Idaho personal property tax in 2001.

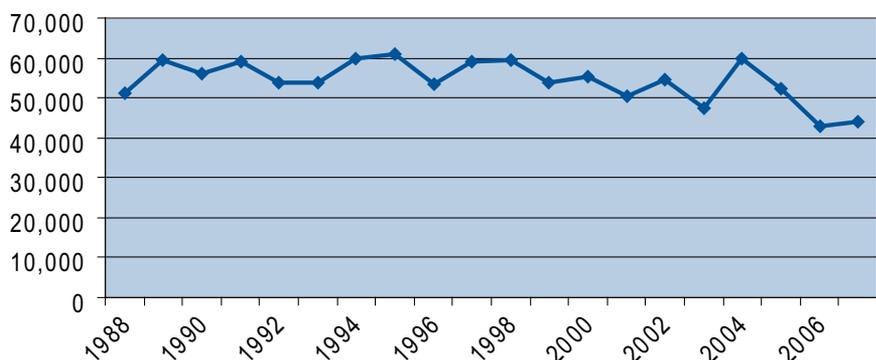
RESEARCH

We partner with USDA ARS and University of Idaho scientists to develop new barley varieties and tackle a wide range of production and economic challenges.

Highlights...

- Secured \$4.6 million in federal funding to construct the ARS Advanced Genetics Research Laboratory for barley, wheat and potatoes at Aberdeen, ID.
- Supported the release of several barley varieties, including Camas, Criton, Creel and most recent feed varieties Tetonia and Lenetah.
- Supported the release of North America's first winter malting barley – Charles – that has 35% yield gain over most spring varieties.
- Supported the release of the world's first low phytate barley varieties – Herald and Clearwater – which improve animal nutrition and reduce phosphorous waste.
- Conducted agronomic studies on irrigation efficiency, weed control, mealybug and foot rot control.
- Funded a joint venture with West-Bred LLC to expand seed production of new competitive food barleys with higher

ID Barley Production (000 bu)



of Service to Idaho Barley Growers

levels of beta-glucan fiber.

- Coordinated a project in 2006 to identify Best Management Practices to control rising fuel and fertilizer prices.

MARKET EXPANSION

We partner with our in-state malt and brewing companies, the National Barley Foods Council and US Grains Council to expand markets for Idaho barley. The US Grains Council is a non-profit trade association based in Washington, D.C. that works in more than 50 countries around the world to expand markets for U.S. barley, corn, sorghum and their co-products.

Highlights...

- Worked with the Idaho Governor on malt plant expansions in Idaho Falls, including a doubling of the Anheuser Busch plant and the new GModelo malt plant.



- Secured a FDA heart health claim in 2006 showing that barley beta-glucan fiber lowers cholesterol and reduces the risk of heart disease.

- Two IBC board members, Doug Scoville and Dan Mader, served as president of the National Barley Foods Council, a non-profit group that promotes barley food consumption.

- Facilitated the first U.S. food barley sales to Japan in 2007, all of it sourced from Idaho.

- Expanded U.S. feed barley sales to Japan by more than 200%, growing from 175,000 tonnes in 1997 to more than 540,000 tonnes this year.

- Conducted fish feeding trials in Hagerman, ID, and Vietnam to evaluate use of barley as a future fish ingredient.

- Funded a feasibility study of a fraction-

ation facility to separate barley protein and fiber components for high value human and fish feed markets with the remaining starch used for ethanol production. As a result, a state-of-the art plant has been targeted for construction in Ontario, OR.

- Received more than \$166,000 in USDA marketing funds to expand domestic food

1994 Governor's Award for Excellence in Export Marketing

barley marketing (2006-07), expand malting barley sales to Mexico (1995-2002) and create a branded Idaho Prime feed barley certification program (1994).

A Look Forward

IBC has launched several new market diversification initiatives to ensure our future competitiveness.

WINTER BARLEYS

We are seizing opportunities created by better genetics and changing climatic conditions to commercialize winter barleys that will be well adapted to our growing conditions.

With IBC funding, ARS barley breeders at Aberdeen, ID, and Oregon State Univ. barley breeders at Corvallis, OR, are speeding up the release time on new winter malting and food barleys.

Charles, a winter malting barley that was released in 2006 and now undergoing final brewing tests, has shown a 35% yield bump.

MALT BARLEY EXPORTS

The best markets for Idaho malting barley are still those offered by local malting and brewing companies who have been contracting in Idaho since 1969. But flat U.S. beer



IBC commissioner Ron Elkin, far left, speaks to Latin American brewers conference about Idaho malting barley advantages, Jan. 2008

demand means we must look overseas for future growth opportunities.

Highlights...

- Beer demand is growing at annual rates of 5-8% in Mexico, Colombia and other Latin American markets where Idaho barley will have logistical advantages.

- We are promoting new winter malting barley varieties to ensure better returns for Idaho growers.

FOOD BARLEYS

Barley's new heart health claim has captured the attention of U.S. and Asian consumers, leading to significant growth opportunities.

Highlights...

- Developing new varieties with higher beta-glucan fiber and improved yields.

- In 2008, Japan's leading food barley processor launched new innovative food products using high beta-glucan food barley grown in Idaho.

- Strong potential for future growth in the U.S., Japanese and Taiwanese markets.



"Barley for Cooking" product made from Idaho barley was introduced in Japanese market in 2008.

Root-lesion Nematode Tolerance in Winter Wheat

A Tri-State (Oregon, Washington, Idaho) Research Project

Richard W. Smiley, Professor of Plant Pathology, Oregon State University, Columbia Basin Agricultural Research Center, Pendleton and Moro, OR.



Root-lesion Nematodes Reduce Grain Yield

Root-lesion nematodes (*Pratylenchus neglectus* and *P. thornei*) can reduce grain yield and grain quality without causing visually distinct symptoms in the wheat crop. These microscopic parasitic worms were detected in 95% of 281 fields tested in 23 wheat-producing counties of Idaho, Oregon and Washington.

Populations were high enough to reduce grain yield in about 60% of the infested fields. The problem is complex for a number of reasons including the fact that 1) the lesion nematode population is composed of two different species, 2) identification of these species is difficult and expensive 3) there are no nematicides registered to control this pest on wheat or barley, and 4) research overseas

indicates each wheat variety may have a different level of tolerance to each species of lesion nematode.

The objective of this research project is to quantify tolerance levels for a broad selection of winter wheat varieties and advanced wheat breeding lines produced in Idaho, Oregon and Washington. By doing this as a Tri-State project duplication is avoided and grower dollars are leveraged.

Description

Root-lesion nematodes are tiny but complex animals that have bodies differentiated for feeding, digestion, locomotion and reproduction. They are transparent and eel-shaped. The body is about 1/64 inch (0.5 mm) long and has a diameter five times smaller than a human hair. They can't swim through water but can move through ultra-thin water films that cover soil particles at soil moisture contents above the wilting point for plants.



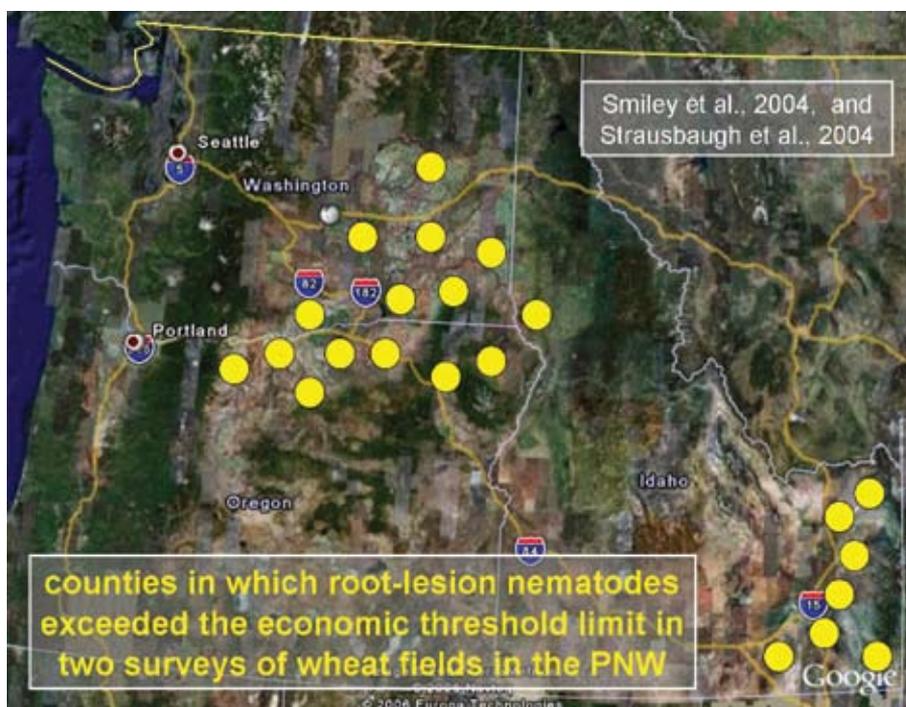
Microscopic view of hundreds of root-lesion nematodes (stained red) in the root cortex.

Root-lesion nematodes penetrate and feed on living root cells. Damaged roots become less efficient for extracting water and nutrients, and more susceptible to additional injury from root-infecting fungi.

The potential for crop damage is increased when plants are also stressed by drought, improper nitrogen or sulfur nutrition, poor soil structure, or root rot fungi. Symptoms of these factors are each easily confused with and may mask symptoms of damage by root-lesion nematodes, making it difficult to identify, demonstrate and control damage by the nematodes.

Variety Differences

Tolerant cereal varieties produce acceptable yields in the presence of higher nematode populations by having various mechanisms that compensate for infection. Differ-



ences in yields were seen in both spring and winter wheat varieties tested. Barley yields were higher than spring wheat in fields infested by this nematode, confirming observations that spring barley is generally more tolerant than spring wheat. Barley also suppresses the multiplication of *P. neglectus*, resulting in a lower nematode population following a barley crop.

The entries tested for field tolerance were also screened for resistance. Resistance is a measure of the ability of the nematode to multiply after it enters the root, and is studied in the greenhouse or growth chamber. Resistant varieties allow little or no multiplication of the nematode, leaving fewer nematodes and a reduced risk for future crops. Susceptible varieties allow expansive multiplication.

Resistance and tolerance mechanisms are genetically unrelated. A given variety can be tolerant and resistant, tolerant and susceptible, intolerant and resistant, or intolerant and susceptible. These traits are controlled by multiple genes, making it possible for a large group of varieties to exhibit a continuous range in levels of tolerance as well as resistance.

All PNW wheat varieties and breeding lines tested were found to be fully susceptible to both species of *Pratylenchus*. They all allowed expansive multiplication of these nematodes and, therefore, are likely to increase the risk for damage to subsequent plantings of intolerant crops and varieties.

Genetic Resistance

We began introducing genetic resistance into locally-adapted germplasm. The research team has crossed six resistant wheat lines with nine PNW varieties or lines; Louise, Otis, Alpowa, Stephens, Tubbs 06, Brundage 96, Goetze, ORSS1757, and ORH010085. Some crosses were made to pyramid resistance genes, in an attempt to provide protection against both species of lesion nematode, the cereal cyst nematode, and *Fusarium* crown rot (foot rot). Progeny of these crosses will be tested to select resistant adapted lines that



Response of ID377s to *P. thornei*. Nematicide treated plot is shown at right.

can be transferred to wheat breeding programs in each state.

In collaboration with USDA-ARS scientists at Pullman, we are also developing molecular markers to increase the efficiency of tracking these resistance genes in breeding programs, and DNA-based tests to increase the speed and accuracy for quantifying and identifying the presence of these nematodes in soil. We hope to transfer these new testing protocols to breeders and nematode diagnostic laboratories within two years.

Summary

We recognize and accept that some scientists and growers still question whether or not these microscopic parasites are really as important as shown in our research. After all, most of the grain crops seem to have a normal appearance and an acceptable yield.

However, it appears that lesion nematodes are causing significant but unseen economic damage to wheat in the PNW, and that crop rotation, soil testing, and improved varieties are needed to minimize these losses in production efficiency and profitability. Indications are that damage is higher in no-tilled fields than in fully tilled fields.

This is the first year of a 3-year study. ♦

Port of Lewiston Proposed Expansion

Container shipment of US wheat exports is one of the fastest growing segments of the US agricultural market. New opportunities around the world are opening up for wheat buyers and producers alike.

US Wheat Associates and the Idaho Wheat Commission have expressed strong support for the proposed expansion

of the Port of Lewiston's container dock. The proposed project would expand the Port's dock berthing area by 150-feet (currently 120-feet; expanded to 270-feet) and add dolphins for mooring barges. Currently, only one barge can be moored at the dock. The expansion will allow two barges to be moored and serviced.

The estimated project cost is over \$2 million. The Port, which serves growers in Idaho, Washington, Montana, the Dakotas and Wyoming, is seeking a Congressional Appropriation to assist in the development of the project.



IGPA IS HERE FOR YOU!

MISSION STATEMENT

To serve the grain producers of Idaho by representing their production interests at the county, state and federal levels in order to enhance their profitability and long term viability.

REGULAR MEMBERSHIP

- **REGULAR MEMBERSHIP: \$50**
This membership receives all the benefits listed in the "MEMBERSHIP BENEFITS" box.
- **ASSOCIATE MEMBERSHIP: \$50**
This is for those individuals and businesses related to and who service the GRAIN INDUSTRY. This membership will receive a special membership plaque and all the benefits of a regular membership.

GOLDEN GRAIN MEMBERSHIP

- **BONUS BUSHEL CLUB: \$100**
This membership receives a good quality lapel pin with the inscription "IGPA Bonus Bushel" PLUS all the benefits listed under "MEMBERSHIP BENEFITS."

- **BUSHEL BOOSTER CLUB: \$200**
This membership receives a good quality lapel pin with the inscription "IGPA Bushel Booster" PLUS all the benefits listed under "MEMBERSHIP BENEFITS."
- **GOLDEN BUSHEL CLUB: \$500**
This membership receives a good quality lapel pin with the inscription "IGPA Golden Bushel" PLUS all the benefits listed under "MEMBERSHIP BENEFITS."

LIFETIME MEMBERSHIP: \$1,000

The money from this membership will be placed in a trust with the IGPA using the interest it generates. This membership will receive all the benefits of a regular member, but will never be billed again.

80% of IGPA's membership dues are deductible as a business expense

Act now to keep IGPA working for you!

Return the bottom portion with your membership

MEMBERSHIP INVOICE

**IGPA IS YOUR VOICE
IN THE WHEAT AND BARLEY INDUSTRY**

*Please add my voice to the IGPA effort.
My dues payment is enclosed OR my credit card
information is completed.*

Name: _____

Farm / Company: _____

Address: _____

City: _____ ST: _____ Zip: _____

Phone: _____

E-Mail: _____

Please indicate type of membership

| | | | |
|--------------------------------|----------------------|----------------------------------|----------------|
| <input type="checkbox"/> \$50 | Regular Membership | <input type="checkbox"/> \$200 | Bushel Booster |
| <input type="checkbox"/> \$50 | Associate Membership | <input type="checkbox"/> \$500 | Golden Bushel |
| <input type="checkbox"/> \$100 | Bonus Bushel | <input type="checkbox"/> \$1,000 | Lifetime |

(See attached membership benefit information)

Additional Contribution...

IGPA AgPAC _____ IGPA Legal Defense _____

Please credit _____ County
(IGPA accepts MasterCard, Visa and American Express Cards)

Credit Card Number _____

Expiration Date _____

**PLEASE RETURN YOUR MEMBERSHIP TO:
IDAHO GRAIN PRODUCERS ASSOCIATION
821 West State Street, BOISE, IDAHO 83702-5832**

Jim McDonald: Serving Idaho's Wheat Industry for Over Four Decades

By Cindy Snyder



Business deals often come down to relationships. Idaho grain growers have been fortunate to have a master relationship builder working for them for over four decades.

Jim McDonald has served on U.S. Wheat Associates for 17 years, 6 years as a representative from the former Idaho State Wheat Growers and another 11 years representing the Idaho Wheat Commission. USWA helps promote wheat in 100 countries.

"Jim's our go-to guy when it comes to market development," said Joe Anderson, a grain producer from Potlatch and a fellow member of the IWC. "He's traveled extensively around the world. He does a good job of meeting people and making them feel comfortable."

But that knack for developing rapport with potential foreign buyers and institutional memory of what role U.S. Wheat plays in markets around the world will be retiring this summer. McDonald is leaving the Idaho Wheat Commission after serving as a commissioner for 11 years. By state statute, commissioners are limited to two, five-year terms, but McDonald was appointed to fill a vacancy after another commissioner died.

Boyd Schwieder, Idaho Falls, served on the IWC with McDonald for several years. He calls McDonald honest and full of integrity.

"Jim's the kind of person who doesn't need a lot of recognition," Schwieder said. "He simply goes about doing his work and his work is developing relationships."

For a state like Idaho, that's so dependent on the export market, having McDonald take the first step in making contact with potential buyers and then being willing to follow

up with those contacts has been critical. "He makes friends easily. That's part of developing those markets, making friends," Schwieder added.

And that ability to put people at ease has been tested domestically as well as abroad.

McDonald served as chairman of USWA during the very difficult merger talks between wheat organizations.

"As chairman, he kept the talks professional but still had a way of making people feel they had been heard," said Alan Tracy,

"Jim's our go-to guy when it comes to market development."



president of U.S. Wheat Associates. "His being in the chair helped carry us through that very difficult time."

Ask McDonald what stands out as the most memorable events over his involvement with IWC and USWA, and he mentions all the people he's met over the years: customers, buyers, other farmers.

He remembers traveling with other USWA directors when the subject of the Australian Wheat Board selling wheat to Iraq came up. He gave the okay to check into the situation, but was surprised later to learn just how dirty the dealings were. "It will probably do away with their wheat board, but it will be better for us in the U.S. as well as Australian farmers. We will all be on the same playing field."

McDonald grew up in Grangeville where he was an active 4-H member, serving as state 4-H president in 1954. He received his bachelor's degree in agronomy from the University of Idaho and served in the Army



"As chairman, he kept the talks professional but still had a way of making people feel they had been heard."

Reserve before returning to Grangeville to farm in 1960.

He and Beverly have been married for 50 years. Bev has accompanied Jim on trade missions to Southeast Asia, sitting along side him during the talks.

They have a son, Michael, who is taking over the family farm, and a daughter, Shari, as well as two granddaughters. The McDonalds farm 1,200 acres of cultivated ground plus pasture ground, which is rented out. They raise wheat and hay, plus a little barley and canola.

Over the years, McDonald has served as

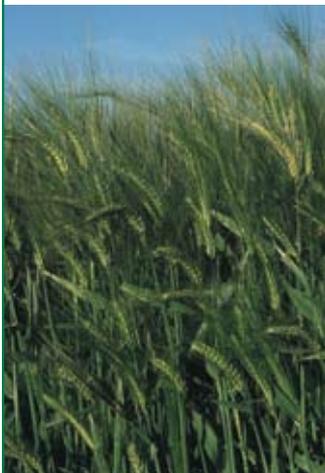
president of the Idaho County Wheat Growers Association, on the executive board of the Idaho State Wheat Growers, on the National Association of Wheat Growers Executive Board and as a member of the U.S. Wheat Board.

"Jim is always ready to contribute," Tracy said. "He has the highest of principles and the warmest heart."

And a sense of humor. When asked what the most rewarding part of his years of service to the wheat industry, McDonald replied, "The high price of wheat. I finally got it accomplished." ♦



**Primeland Cooperative congratulates
Jim McDonald
for his 11 years of service as commissioner
of the Idaho Wheat Commission.**



Office Locations:

Lewiston 800-456-8551

Craigmont 208-924-5515

Cottonwood 208-962-3802

Grangeville 208-983-0210

Kendrick 208-289-5961

Moscow 208-882-7581

Nezperce 208-937-2435

Grain Markets Line 800-544-6275

Final offer arbitration needed in rail competition legislation



A bill known as the Rail Competition and Service Act of 2008 – S.953 and H.R. 2125 – is inching closer to congressional consideration this year. This badly needed legislation will address rail rate and service challenges facing rail shippers, particularly those captive to a single railroad. The bill is strongly supported by the Alliance for Rail Competition (ARC) and our national and state grain producer organizations and has been cosponsored by Idaho Senators Larry Craig and Mike Crapo and Congressman Mike Simpson.

One key provision in this bill allows for the use of final offer arbitration or FOA to settle disputes that involve payment of money, or a rate to be charged and service to be provided. As the bill is currently written, FOA requirements would be limited to agricultural products, timber, paper and fertilizer.

Until now, monopoly railroads have wielded unlimited power against captive shippers. FOA will give shippers the first real opportunity to have honest and open negotiations with the railroads on rates and service. FOA requires each party to submit their final offer to an arbitrator who then must pick one of the offers as the settlement. There is no "splitting the baby." This simple process forces each party to put forth their most reasonable and defensible position or it simply won't pass the "smell test" by the arbitrator. Arbitration would be handled by an administrative law judge of the Surface Transportation Board, or arranged by the Board unless the parties agree on their own arbitrator from a list of neutral arbitrators maintained by the STB.

There are many advantages to FOA, including:

- Reasonable cost to settling disputes – the current STB rate relief process is long and expensive and heavily weighted towards the railroads
- Easy to understand and unbiased methodology
- Quick decision
- Levels the playing field for shippers.

A FOA settlement process has been used extensively by industry and government and has been proven to be an effective and fair tool for settling disputes where one party holds significant power over the other and great economic or social harm could result if there is not a settlement. As rail competition legislation moves forward, shippers need to demand that FOA be provided to settle agricultural rail disputes.



Research Tours & Field Days



From June to August there are many opportunities to rub elbows and share experiences with scientists, industry representatives and other wheat growers through research tours and field days.

See side-by-side comparisons of wheat and barley varieties in addition to the new-

est varieties available on the market – or will soon be available. Compare the various treatments to control pests and the impact of weather and fertility regimes. See how variety selection and management decisions can be combined to improve profit margins. Now is the time to get out your calendar and pencil in tours in your area.

The McGregor Company

For many years the McGregor Company, based out of Colfax, Washington, has provided information and services to grain growers in north Idaho and eastern Washington. A series of field days are scheduled for June highlighting research conducted.

“We have compiled over 25 years of research,” says Stephen Reinertsen, Director, Research & Technology Division. “Over 60% of our work is done in growers fields scattered throughout the region.”

Reinertsen and Bruce Palmer, Research Agronomist will provide information on variety trials of spring and winter wheat, including public varieties from neighboring states and private varieties from AgriPro and West-Bred LLC. Topics will include fertilizer and chemical recommendations along with seed treatment studies, and research on controlling pests like rattail fescue and broadleaf weed control. New technology and nutrient management trials will also be covered.

At the end of the day, says Reinertsen, “our goal is to look for ways that increase production practices to increase yields a few more bushels/acre.”

For details on McGregor Field Days contact Stephen Reinertsen, 509.397.4965.

WHEAT/BARLEY RESEARCH TOURS AND FIELD DAYS

| DATE | TOUR | Contact Information | |
|----------|-----------------------------|---------------------|--------------|
| June 12 | Weed Tour, Moscow | Donn Thill | 208.885.6214 |
| June 17 | Weed Tour, Kimberly | Don Morishita | 208.736.3616 |
| June 23 | Rockland | Stan Gortsema | 208.226.7621 |
| June 24 | Arbon Valley | Stan Gortsema | 208.226.7621 |
| June 24 | Clearwater Direct Seeders | Dennis Roe | 509.595.0943 |
| June 24 | AgriPro | John Moffatt | 509.245.3840 |
| June 26 | Palouse Direct Seed Systems | David Huggins | 509.335.3379 |
| June TBD | Tammany | Larry Smith | 208.799.3096 |
| July 1 | Prairie Conservation Tour | Ken Hart | 208.937.2311 |
| July 8 | Mini Cassia | Dale Baker | 208.436.7184 |
| July 10 | BYU | Greg Blaser | 208.496.2825 |
| July 15 | Idaho Falls | Matt Gellings | 208.524.4946 |
| July 16 | Aberdeen Twilight Tour | Katherine O'Brien | 208.397.4181 |
| July 18 | Preston | Stuart Parkinson | 208.852.1097 |
| July 24 | Kimberly Twilight Tour | Don Morishita | 208.736.3616 |
| July TBD | Parma | Brad Brown | 208.722.6701 |
| July TBD | Kendrick – Cavendish | | |
| | Rim Rock | Larry Smith | 208.799.3096 |
| August 8 | Soda Springs | Steve Harrison | 208.547.3205 |

Updates: <http://www.ag.uidaho.edu/scseidaho/>
<http://variety.wsu.edu/Updates/Fieldtours2008.pdf>



Physiological Leaf Spot (PLS)

By Juliet M. Windes, Cereals Agronomist and Pathologist, University of Idaho



In Southern Idaho, every once in a while, leaf spotting symptoms will appear in grains of “unknown” origin. Growers looking for solutions may ask a consultant or a plant pathologist for help. It may seem dismissive as we shrug our shoulders and walk away, mumbling something about physiological leaf spot (PLS), attribute it to plant variety or lunar phases of the moon, and offer little if any solution. Would fungicides help? Can a pathogen be isolated? How about reducing irrigation? Or increasing it? What about fertilizers, was there something deficient? Even now, there are a lot of questions about what really causes PLS and how to solve it.

In our area, PLS seems to occur most frequently in soft white winter wheat, but can occur in hard winter wheat, spring wheat, durum wheat and even in winter and spring barley. Small, chlorotic (yellow) leaf spots first appear in later crop growth stages, such as flag leaf emergence to boot. The spots enlarge and become necrotic. They may be circular to oblong in shape, with distinct margins, and appear on lower, older leaves, then advance to younger leaves. Premature ripening or dying of the flag leaves may occur, and severe symptoms will look alarming as the lesions coalesce, cover the entire leaves, and plants seem to burn up.

PLS is often found in grains of the Pacific Northwest, Intermountain West, Canada, and Europe. Causes have been attributed to a number of factors. The most conclusive research points a finger strongly at

chloride deficiency. Researchers at Montana State were able to reproduce symptoms in growth chambers in durum wheat under growth conditions of low chloride, and found that leaf spot severity was closely related to shoot chloride concentration. In the field when chloride levels went below 10 lbs/A, leaf spotting symptoms increased exponentially. Corrective effects on symptoms and grain yield appeared when chloride-containing fertilizers were applied to the soil.

PLS or chloride deficiency was particularly severe in 2006 in the

Burley and Magic Valley areas. Certain varieties had greater symptom development; those soft white winter varieties showing the greatest symptoms of chloride deficiency included (in decreasing order of severity) Masami, IDO 587, Beamer, Mel, Brundage, Tubbs 06 and Stephens. Those varieties showing the lowest severity included Mohler, Lambert, and Brundage 96. Low

levels were found in hard winter wheat and winter barley, and no symptoms were observed in the spring grains.

While chloride deficiency has been determined to be the main cause, additional environmental factors (such as high light intensity following a lengthy period of cloudy days) may play a role in exacerbating the symptoms. Best management practices include minimizing plant stress through appropriate fertility (including chloride based fertilizers like KCl) and irrigation, especially on sandier soils where the problem has been previously demonstrated. ♦

“The most conclusive research points a finger strongly at chloride deficiency.”

Funding Shortages Reflected in Food Aid Program Awards

High fuel and food prices and a shortage of food around the world translate to tight budgets for organizations that carry out food aid programs. USDA’s Food for Progress and McGovern-Dole Food for Education programs are no exception to the lack of resources organizations face to fund existing and new programs to feed an estimated 100 million more people who have gone hungry in the past six months due to a surge in food prices.

For fiscal year 2008 the Food for Progress program, which utilizes monetization of wheat and other commodities to generate funds for relief programs, will include 13 proposals totaling \$129 million, compared to 104 applications for \$1 billion worth of programming the Department received for the program. Contributing to the budget strain, only \$35 million of the expected \$40 million limit on transporting commodities to recipient countries will be available for 2009 programs due to committed transportation funds for 2008.

by Liz Jayankura Jones, USW Trade Policy Specialist

USDA received 67 proposals at \$1.8 billion for Food for Education school feeding programs but can only award 11 proposals for \$48 million total, including a United Nations World Food Program (WFP) project for U.S. wheat to Bangladesh.

Along with USDA’s low acceptance rate for its two food aid programs, WFP reported the organization’s funding gap increased to \$750 million from \$500 million last month. World Vision, a leading private voluntary organization involved in monetizing U.S. commodities, cannot afford to feed 1.5 million people of the 7.5 million that received aid last year. The President’s move to release wheat from the Bill Emerson Humanitarian Trust will generate much needed additional funds for relief programs, but organizations will need more resources to feed the growing number of hungry people.

USW continues to partner with other agri-

cultural groups and the Alliance for Food Aid, a group of private voluntary organizations, to advocate for \$600 million in supplemental funding for PL 480 Title II and \$100 million to replenish the Bill Emerson Humanitarian Trust. USW also continues to partner with private voluntary organizations that monetize wheat to ensure high prices do not deter administrators from continuing to choose wheat as the commodity of choice in food aid programs.

Food for Progress proposals are currently being accepted for 2009. In a change from previous years, USDA is currently soliciting proposals for Food for Education for 2009 as well as 2010. The deadline for submission is August 1, 2008 and awards for fiscal year 2009 for both programs are expected to be announced in December 2008. Organizations submitting proposals that include wheat monetization are encouraged to contact USW for letters of support and assistance on wheat specifications. ♦

Physiological Leaf Spot



Figure 1. Symptoms of physiological leaf spot (PLS).

Stripe Rust (Susceptible Reaction)



Figure 2. Susceptible reactions of wheat to stripe rust, showing yellow to orange-colored rust pustules containing and releasing powdery rust spores.

Stripe Rust (Resistant Reaction)



Figure 3. Resistant reactions of wheat to stripe rust, showing necrotic stripes without or with limited rust pustules.

Differentiation of Physiological Leaf Spot (PLS) from Stripe Rust

Xianming Chen*, Research Plant Pathologist, USDA – ARS



Physiological leaf spot (PLS) can occur in winter and spring wheat fields. At times PLS is mistaken for stripe rust. Because PLS and stripe rust are controlled by different methods,

it is important to distinguish PLS from stripe rust.

PLS is a complicated disorder and is sometimes used to describe problems of which the causes are not known. However, typically PLS is a physiological and genetic disorder that expresses spot symptoms on leaves in fields with a deficiency of chloride.

PLS symptoms start with tiny chlorotic (mosaic) spots, which can grow up to spots of a quarter inch in diameter. The early symptoms resemble those of the early infections of rust and some other pathogens. Early spots sometimes have a halo pattern, but mature spots usually have a distinct margin. PLS spots are usually round to oval in shape, but in severe situations, spots connect to each other, appearing to be irregular.

Strategies to manage PLS include growing tolerant varieties, rotation with other crops or fallow and the application of chloride. When the crop is growing, application of chloride is the only way to reduce PLS symptoms. Fungicides, such as Tilt, Quilt, Quadris, Headline, and Stratego, which control stripe rust and other fungal diseases, do not control PLS.

As shown in Figure 1, it is easy to differentiate PLS symptoms from the typical symptoms of stripe rust, (Figure 2).

It is also easy to differentiate PLS from resistant reactions of wheat to stripe rust. After the stem elongation stage, stripe rust produces white necrotic stripes without or with limited rust pustules as shown in Figure 3. Wheat crops showing resistant reactions to stripe rust usually do not need to be sprayed with fungicide while those showing susceptible reactions should be sprayed with a registered fungicide such as Tilt, Quilt, Quadris, Headline, or Stratego when stripe rust develops to 5-10% severity. Unlike PLS, stripe rust cannot be reduced by the application of chloride.

* IWC partially funds Xianming Chen's work to develop varieties resistant to Stripe Rust, Leaf Rust and Stem Rust in wheat. ♦

Direct Seeding in Southern Idaho



In March, the Idaho Wheat Commission sponsored a Direct Seed Workshop in Idaho Falls. Attendance was above expectations, showing the interest and need for more information on direct seeding geared to southern Idaho conditions.

"Our long term objective," says Gordon Gallup, IWC Chairman, "is to help interested growers expand direct seeding in both dryland and irrigated wheat fields. Our job at the Commission is to help growers maximize profitability. There are many ways to do that including direct seeding." Gallup has been using direct seed tillage on his farm in Swan Valley since 1985, with six years prior to that in minimum tillage. He grows wheat, barley and alfalfa.

The highlight was a panel of growers sharing personal experiences, followed by a Q&A session and group discussion. This was supplemented with extension and research presentations on specific agronomic issues.

Dr. Hans Kok, Extension Specialist Conservation Tillage at Washington State University and University of Idaho, provided an overview of the past 30 years of STEEP research in the Pacific Northwest. Although the research was focused in the northern part of the State, les-

sons learned can be helpful in establishing research projects in south Idaho.

Dr. Stephen Guy, Extension Crop Management Specialist, University of Idaho, talked about tillage comparison studies between No Till and Conventional Tillage. He focused on how different varieties reacted under different systems, N fertility considerations and pest dynamics. All things to consider as growers change tillage operations.

Equipment dealers from John Deere and Great Plains provided an overview of what they had available.

Grower Experiences

According to those in attendance the most valuable portion of the workshop was the opportunity for growers to interact with other direct seeders. This helps save time, money and energy. All of which are in short supply on the farm.

The four growers who shared their experiences were Brent Lott - Idaho Falls, Hans Hayden - Arbon Valley, Mitch Landon - Ririe, and Gordon Gallup - Swan Valley. Each talked about lessons learned, what had been successful and perhaps even more valuable, what hadn't worked or what they would have done differently.



Gilbert Hofmeister (L) discusses ideas on direct seeding with Mitch Landon (R) of Hamilton Farms in Ririe. Farming both irrigated and dryland in the Ririe and Swan Valley area, Hamilton Farms produces potatoes, wheat, barley and corn.

Hans Hayden has been direct seeding spring crops and part of his fall seeded crops in Arbon Valley for 30 years. "There is no formula for successful direct seeding," says Hayden. "One way does not fit all. Each field is different and when you factor in all the different elevations, soils, dryland, irrigated, it's hard to figure out what to do. Experience is the best teacher." Hayden discussed several equipment adjustments he experimented with to make the change in tillage.

"To improve my bottom line," says Hayden, "I have to do more with less. It's not



Brent Lott (R) of Idaho Falls, shares experiences learned from direct seeding in the Roberts - Blackfoot area. Brent grows irrigated wheat, barley, hay and corn.



Fertility management and equipment were major topics of interest and discussion.

just about using a different drill. There are a lot of different pieces to pull together to make it work.”

Next Steps

Results from a survey taken will be used to help set the agenda for next year’s Workshop. High on the list of topics includes information on varieties and fertility management. Growers preferred having a yearly workshop rather than meeting more frequently. Research on both irrigated and dryland direct seeding is needed.

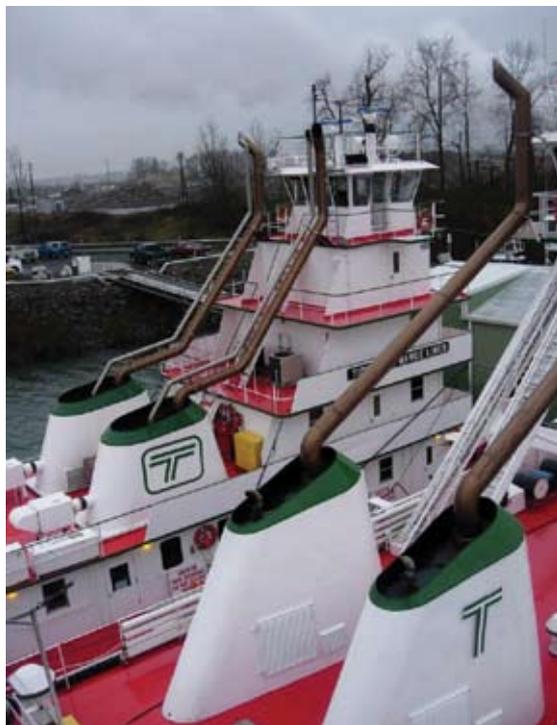
In response to comments from the Workshop, IWC is compiling a list of growers willing to share lessons learned and experiences gained. As names are added, it will provide a good resource for growers interested in direct seed. We welcome your thoughts and input on this topic.

If you wish to fill out a survey to help set research objectives, and/or be part of the grower network, please contact Patricia Dailey, 208.334.2353, pdailey@idahowheat.org. ♦

Tidewater Increases Fleet

Tidewater Barge Lines is purchasing 20 barges and two tugboats from Foss Maritime Company. Foss has decided to end its upriver operations. As a result, Tidewater will increase its presence upriver and Foss will no longer provide river barging of grain, wood products and containers. Foss will continue to be active in the Columbia River focusing on ship assistance, ocean towing and special projects.

Tidewater’s purchase of the vessels is expected to be finalized in early June. ♦



Who Uses Our Wheat?



Idaho is one of the few places in the world where all 5 classes of wheat are grown: soft white, hard red spring, hard red winter, hard white and durum. Each class is bred with different quality attributes that favor use in one product over another.

Once the wheat is harvested and sold it can go into markets and products here and abroad. Approximately 50% of our production is sent overseas, the other half finds its way into a number of domestic markets.

Flours made with a blend of wheats – including Idaho wheat – are used in a wide variety of finished products. Some are household names. Other products are only sold wholesale and are used in restaurants and grocery stores.

Shown here are just a few of the many U.S. products using Idaho wheat – something to think about at your next meal or when you go to the grocery store. ♦

