



Idaho wheat farmers visited Pepperidge Farm on June 13 to see their wheat being turned into Goldfish snack crackers and to learn what varieties of soft white wheat is preferred and how business can be improved for both grower and baker.

Goldfish: From Preston to the Moon in Three Days

bout half of Idaho's wheat goes to domestic millers and much of it ends up in popular breakfast cereals and other well-known brand names. One of the largest users of wheat from Idaho is Pepperidge Farm and their Goldfish brand snack cracker.

Using flour made with 100% soft white wheat from Idaho, Pepperidge Farm produces Goldfish snack crackers and Pepperidge Farm cookies at a plant a few miles south of Preston. Goldfish produced at their Richmond facility are shipped to sixteen western states. Two production lines operate 24 hours a day, seven days a week providing a non-stop torrent of cheese-flavored treats.

The deluge is jaw-dropping. One production line turns out 300 million individual Goldfish each hour. If the Goldfish produced at the Richmond facility were placed head to fin, the





Pepperidge Farm also uses soft white wheat from Idaho to produce cookies and cakes at their Richmond facility.

output in one hour would reach from Preston to London. Three days production would stretch from Preston to the moon.

The crackers come in several flavors, and since

1997, have small imprints of an eye and a smile. The mascot for Goldfish snack crackers is a sunglass-wearing fish by

the name of Finn. Besides the original Goldfish snack crackers, there are Flavor-Blasted Goldfish, multi-colored Goldfish (known as Goldfish Colors), Baby Goldfish (which are smaller than normal), and Giant Goldfish (which are bigger than normal) and Goldfish bread.

Pepperidge Farm says the appeal of Goldfish is multi-faceted. Whole grains are an important part of a balanced diet and Goldfish crackers are a tasty way to get whole grains. Kids love the small goldfish shape of the snack. Pepperidge Farm also says that the natural cheddar and other natural ingredients and being baked rather than fried and low cholesterol are part of the appeal.

The sales and popularity of Goldfish snack crackers have increased to the point in recent years that nearly 5% of Idaho's annual wheat harvest goes to Pepperidge Farm. In a win for Idaho wheat farmers, Pepperidge Farm has recently made a decision to double their plant's output of Goldfish by 2013. Then it will only take a day and a half to get to the moon!





Idaho Commodity and Seed Producers Can Be Paid for Every Sale

By Dave Ogden, Idaho Warehouse Control Program Manager

ommodity (grain and related) and seed producers: You can be paid for every qualified sale of your crops made to a licensed buyer if a failure to pay were to occur. How? By



In order to be eligible for payment, an Idaho producer must sell commodity or seed that is produced in Idaho, sell to an Idaho licensed warehouse, commodity dealer, or seed buyer, and retain proof of delivery and sale, usually scale tickets and settlement sheet. The settlement sheet should show indemnity fund assessments were withheld from the settlement. If a producer qualifies and the licensed buyer does not pay for the

purchase, then the producer can file a claim with the Commodity (CIF) or Seed (SIF) Indemnity Fund for payment of up to 90% of the value of the crop sold.

The Idaho Warehouse Control Program licenses and regulates bonded warehouses, commodity dealers and seed buyers that buy from Idaho producers. We also administer the Idaho Commodity Indemnity Fund (CIF) and Idaho Seed Indemnity Fund (SIF). The purpose of this program is to make sure Idaho commodity and seed producers get paid for every qualified sale made to licensed buyers if a business failure occurs. (Sorry, sales to unlicensed buyers are at your own risk.) Many out of state buyers are also licensed in Idaho.

Why are licensed buyers a better option than unlicensed buyers? Because they must:

■ Have a bond of up to \$500,000 (how much is not as important as the process to get it)

- Provide audited or reviewed financial statements prepared by a professional accountant
- Provide peril insurance for crops in storage, or received but not yet paid for
- Permit state examiners to review their books, contracts, and settlements at any time
- Be solvent and have adequate capital to operate at all times, and
- Collect assessments from contract settlements to provide indemnity fund protection for the producer.

Every requirement to obtain and retain a buyer's license helps insure the buyer is a reliable, reputable, creditworthy trading partner for producers. The indemnity funds provide a safety net for times when the best of intentions and skills are not adequate, and a buyer can't pay producers. Producers can be paid 90% of their crop value within 2 years of delivery for every commodity and seed crop defined in the Bonded Warehouse,

Before you sell

Get comfortable with the 4 Cs of credit for the buyer: Character, Capacity, Capital, Collateral.

■ Idaho Licensed? (All 4 Cs addressed)

No license, no sale, no excuses! To verify a buyer license, call Idaho Warehouse Control 208-332-8660 or go to the website at http://www.agri.state.id.us/Categories/Warehouse/indexWarehouse.php

■ Contract?

Written? All elements included such as price, delivery, payment, etc? Do you understand and agree with all the terms? Do you have to wait for the buyer to get paid by a third party before you get paid?

■ Credit checks? (Any of the 4 Cs you can't get comfortable with may be a problem.)

Did you talk to at least 3 references that got paid for similar size and type of sales?

Did you talk to the buyer's lender and confirm a line of credit or other ability to pay?

What do other producers say and know about this buyer? Are there negative rumors or reports about this buyer? What does the buyer's competition say about them? What does your lender know about this buyer? Do the buyer's credentials check out such as Better Business Bureau, associations, certifications, affiliations.

Did you request a financial statement that shows enough net worth or net assets (collateral) to cover your sale if you don't get paid?

Is this the first year for this type of crop or is the market for it

Is this the first year for this type of crop or is the market for i speculative?

Is the buyer a new business or a successor to a previous business?

■ Internet? (Don't want to miss anything obvious here, not with your crop on the line.)

Is the buyer's website businesslike or amateurish?

Search the Secretary of State's website http://www.sos.idaho.gov/.

Is the business registered? How long? Any related businesses? Any history of numerous business entities for owners, officers, or registered agent?

What is the nature of any UCC commercial or Ag liens on file? Search court record web site: https://www.idcourts.us/repository/start.dowebsite.

Google the company and the individual you are dealing with. You may be surprised at what you find.

Check any social or business contact websites like LinkedIn, Facebook, etc. for the buyer company, its owners, officers, or the individual with which you are dealing.

Commodity Dealer, and Seed Buyer laws.

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■ Selling Out of State

There are licensed commodity dealers and seed buyers in Utah, Washington, and Oregon. Washington also has warehouses available to Idaho producers through a cooperative licensing agreement. We make every effort to license out of state entities buying from Idaho producers, so that producers can be protected by the indemnity funds. Licensed out of state buyers participate in Idaho's producer programs, collecting assessments for the indemnity funds and the commodity commissions. Assessments support marketing and research programs necessary to preserve and develop profitable, high quality Idaho crops. There is no protection from failure to pay if a producer sells to an unlicensed out of state business.

■ How do you feel?

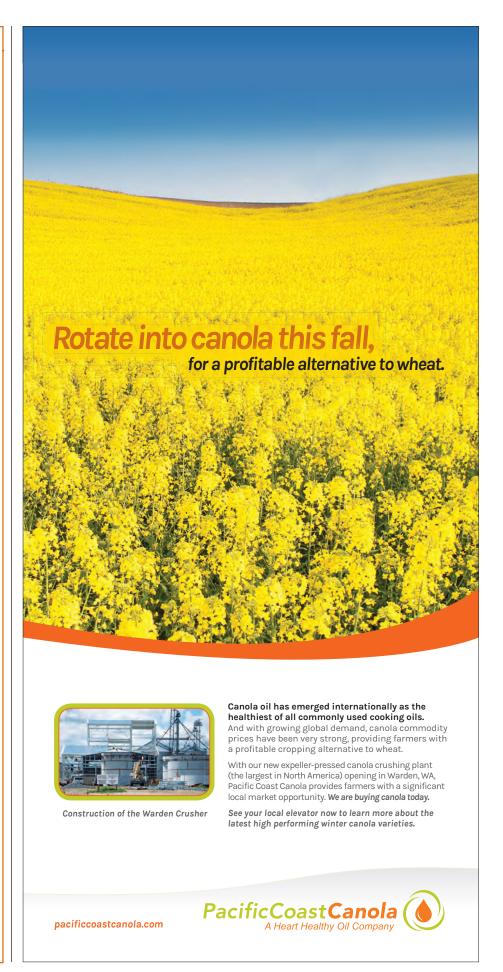
Unsure, pressured to sign or agree, tired and don't want to make the credit checks, afraid you will miss the best price, think it will probably be okay, feeling nagged or talked into a deal, just want to get it over with? These feelings are indicators that you may not be comfortable with a buyer, or you are not in the right frame of mind to make a decision. Postpone a decision until after you have done some checking and got a good night's rest.

Rarely is there a last chance to sell. A sale at a lower price with less risk and worry that you get paid for is always better than a sale at a higher price when you don't get paid.

■ Last word

In the last four years we know of four failures to pay producers. An average of one per year. There were two in state and two out of state. One was licensed and the producers were protected for the most part by the SIF. Another is still paying obligations. The Idaho Warehouse Control Program worked out a plan with another buyer to get producers paid. One is in litigation and payment to producers is uncertain.

If you sell to licensed buyers you will get paid. Why wouldn't you want to eliminate the risk of non-payment?



Idaho Wheat Commission Annual Report

■ TECHNOLOGY SHAKES UP WHEAT INDUSTRY

A rapidly changing wheat industry, driven by advances in technology and a growing world market for wheat, is the reason Idaho Wheat Commissioners have decided to increase the assessment for the first time in over five years.

Marker-assisted selection of breeding traits, double-haploid technology, and technologies that determine genetics of the seed without destroying the seed, such as the seed chipper, will all have a profound effect on the industry. Private companies are bringing these technologies into wheat and they are looking for states with a healthy wheat industry to partner up with. After years of suffering through public research budget cuts Idaho wheat officials have determined to do what is necessary to keep the wheat industry in Idaho healthy and viable for public-private partnerships and the most current technology.

During the 2012 legislative session the Idaho Senate and House approved a new ceiling for the wheat assessment. At the

IWC Commissioners
approved a
\$.015/bushel
increase effective
July 1, 2012

June Idaho Wheat Commission budget meeting the commissioners approved a \$.015/bushel increase effective July 1, 2012. Most of the increase is earmarked for wheat research. Proposals on how to best utilize the additional funding will be accepted by the commission and reviewed before being funded.

The commission created a budget line titled "Equipment and Infrastructure" to replace aging equipment and rebuild systems lost during the years of public ag funding cuts. The 2012 funding level for this account is \$500,000. Projects and requests for funding will be prioritized and reviewed in public commission meetings before disbursement.

In addition to the \$500,000 set aside for infrastructure and equipment replacement, the following new expenditures were approved as part of the FY '13 budget:

Cookie/cracker line at Wheat Marketing Center (funded jointly with Oregon and Washington)	\$90,000
Growth chamber at Aberdeen Wheat Breeding Station	\$50,000
Dwarf bunt seeder in cooperation with Utah State University	\$22,000
Establishment of ag scholarship at BYU-Idaho (joins similar program already in place at University of Idaho)	\$25,000
Joint PNW research programs with Oregon and Washington (first effort focused on solution to low-falling number wheat is already happening)	\$25,000
Additional funding of Aberdeen wheat-breeding and cereal agronomy endowments	\$150,000
Idaho participation in hard red winter and hard red spring crop quality surveys	\$6,000
Idaho participation in Wheat Industry Biotech Council	\$5,000

IDAHO WHEAT COMMISSION FY2013 APPROVED BUDGET \$3,164,255 2% 4% 18% Market Development 23% Research Information & Education Office **Operations** Capital Outlay 53% 2012 2013 **CATEGORY Approved Approved** MARKET DEVELOPMENT 497,258 571,761 270,500 FOREIGN MARKET DEVELOPMENT 294,000 **INCLUDES ALL USW PROJECTS &** TRADE TEAMS DOMESTIC MARKET DEVELOPMENT 10,000 10,000 TRANSPORTATION 22,400 22,400 **ADDITIONAL PROJECTS** 97,320 139,870 SALARY/TRAVEL/EXPENSES 97,038 105,491 RESEARCH 1,007,929 1,671,605 VARIETY DEVELOPMENT - U of I 389,114 446,086 PEST MANAGEMENT - U of I 113,941 94,429 PRODUCTION PRACTICES/TECH 48,955 51,141 TRANSFER - U of I **CAPITAL OUTLAY** 222,000 72,000 **ENDOWMENTS** 150,000 ADDITIONAL PROJECTS 100.452 712,375 SALARY/TRAVEL/EXPENSES 133,467 145,574 **INFORMATION & EDUCATION** 618.913 716.006 PRODUCER INFO & EDUCATION 452,500 540,700 **CONSUMER INFO & EDUCATION** 41,270 48,100 SALARY/TRAVEL/EXPENSES 125,143 127,206 **OFFICE OPERATIONS** 76,279 76,383 **OFFICE OVERHEAD** 34,200 36,300 42,079 40,083 SALARY/TRAVEL/EXPENSES **CAPITAL OUTLAY** 7,000 128,500 TOTAL BUDGET 2,207,379 3,164,255

Idaho Wheat Commission Annual Report

■ MARKET DEVELOPMENT OVERVIEW

Idaho wheat goes to both domestic and export customers. Domestic customers include some of the most famous brand names in America. Export customers are located in more than 30 countries. The Idaho Wheat Commission (IWC) designates a portion of its budget each year toward helping develop domestic and export customers and markets.

• Growing Domestic Markets

General Mills is Idaho's largest domestic market, taking approximately 25% of Idaho's crop each year. Soft White Wheat from Idaho goes into Wheaties and Wheat Chex breakfast cereals and is sold throughout the U.S.

In addition to buying Idaho wheat for their own brands, General Mills supplies other large national customers with identity preserved wheat for a designated product and purpose. Pepperidge Farm's Goldfish brand snack crackers is another large user of Idaho wheat (see story page 13).

About 40% of Idaho wheat sold domestically goes into retail products found on grocery shelves. About 60% of Idaho wheat staying domestic goes into pizza dough, tortillas, and pastries in foodservice channels.

• Expanding Export Markets

Idaho joins with other wheat-growing states to fund U.S. Wheat Associates, an export development organization taking American wheat into more than 100 countries. In addition to funds from American wheat farmers, U.S. Wheat Associates qualifies for cost-share funding from USDA's Foreign Agricultural Service.

Idaho's six largest export markets during the 2011/12 marketing year are shown below:

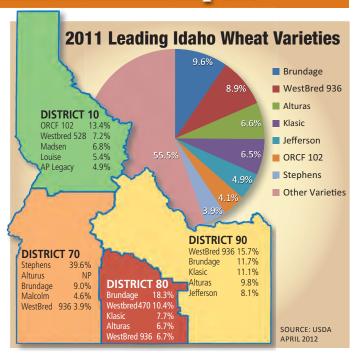
Top Six Importers from the Pacific Coast ('000 bushels)

	Total	HRW	HRS	SW	Other
Japan	129,576.8	35,508.7	51,269.0	42,775.0	24.1
Korea	79,579.8	8,807.6	14,510.7	56,261.5	0.0
Philippines	75,629.3	1,832.3	43,611.5	30,182.3	3.2
Indonesia	32,963.1	4,965.0	17,111.8	10,886.3	0.0
Taiwan	32,339.7	8,656.7	18,857.1	4,742.9	83.0
Guatemala	21,928.9	9,597.2	5,619.4	6,188.9	523.4

Another large part of Idaho's market development budget goes to the Wheat Marketing Center in Portland to help develop and market products made with wheat that are suited for foreign buyers. Idaho recently joined with Oregon and Washington to invest in a new cookie-cracker line at the Wheat Marketing Center in order to develop products specifically for Asia.

• Hard White Wheat

Idaho ranks first nationally in production of Hard White Wheat with more than 10 million bushels of Hard White Wheat harvested in 2011. It is the predominant class of wheat in spring plantings in eastern and southern Idaho and is mostly grown under contact for national users. Hard White Wheat from Idaho is shipped to California, Utah, Arizona, Colorado, Iowa, Mexico and several other milling locations.



■ INFORMATION & EDUCATION

Grower education services include a number of programs including; Cereal Schools; Wheat Quality Workshops, PNW Tour; Domestic Education Tour; Direct Seed Workshop; Webinars; Idaho Grain Magazine; Idaho Wheat Newsletter and Bread in a Bag just to name a few.

The IWC is committed to ensure Idaho wheat growers have a voice in both state and federal policy issues through its support of the Idaho Grain Producers Association (IGPA) and the National Association of Wheat Growers. These two organizations help advocate for positive government policies for Idaho wheat growers.

2012 Idaho Grain Producers Association Highlights:

- IGPA in partnership with the IWC, is developing a mentor program to develop and sustain new statewide leaders. The program will connect experienced Idaho grain leaders with prospective new and young farmers to expose them to provide them with a broader understanding and exposure of their industry.
- IGPA has begun discussions with BYU-Idaho to kick-start a new academic scholarship for undergraduates seeking a degree in a field related to production agriculture. The goal of the scholarship will be to provide an incentive to students that will engage their skills and interest in Idaho's grain industry.
- The IGPA is collaborating with the Pacific Northwest partner states of Washington and Oregon to cohost the Tri-State Grain Growers Convention. Slated of Nov. 12-14 at the Coeur d'Alene Resort, the Convention will feature nationally renowned speakers, experts and entertainment to provide growers with a fun, family friendly and education event. For more information and to register, visit http://www.wawg.org/convention.html.
- IGPA is pushing for passage through Congress of a new Farm Bill that provides Idaho wheat and barley farmers with a fiscally responsible, strong safety net for price and production challenges.

Idaho Wheat Commission Annual Report

■ RESEARCH

Idaho's wheat industry has seen many changes in the last two years. One significant development is the investment large companies such as BASF, Bayer, Dow, Limagrain, Monsanto, Syngenta and others have made in wheat research and variety development. Many of these companies have partnered with existing private or public wheat breeding programs. The aim of these partnerships is to make measurable advances in yield, disease packages, and end-use quality by connecting advanced biotechnology applications with regionally adapted germplasm. The IWC has developed a strategic plan to respond to industry changes in ways that will keep Idaho growers involved guiding the future of wheat in Idaho agriculture.

• Public/Private Collaborations.

The IWC has strengthened its partnership with the University of Idaho College of Agriculture and Life Sciences (CALS) and is actively seeking to foster public-private collaborations, as well. IWC has made two endowments to CALS in support of wheat researchers at the Aberdeen R & E Center. In partnership with the State of Idaho and University of Idaho, IWC will support efforts to rebuild the infrastructure at the agricultural R & E centers. IWC funded a research plot combine for the Aberdeen wheat program and has solicited a list of capital requests from CALS, for consideration over the next 5 years. IWC will support workstudy programs that match undergraduate students with private companies, giving the

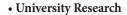


Jean-Bruno Beaufume', Limagrain's SW wheat breeder, casting the vision for varieties coming out of the UI-Limagrain joint breeding efforts in the PNW. (pictured: Blaine Jacobson, IWC Executive Officer; Jim Peterson, LCS VP Research; Joseph Anderson, IGPA President)

students valuable hands-on experience in Idaho's wheat industry.

IWC's continued funding of soft white (SW) wheat breeding research at UI, helped secure the public-private collaboration between the University of Idaho and Limagrain Cereal Seeds (LCS). The joint SW wheat breeding program was unveiled on July 9th at a field day in Moscow, ID. Growers saw wheat lines

from all of the wheat growing regions in Europe, representing some of the genetic variation LCS brings to the table. Nearly 800 crosses were made this spring between select LCS lines and UI lines. The varieties resulting from these crosses will be jointly owned by UI and LCS and marketed under the LCS Varsity Idaho brand. This non-exclusive collaboration brings together the expertise, resources and locations of both parties to develop superior SW varieties and make them available to PNW wheat growers.



A new research proposal by Dr. Jianli Chen to study Late Maturity Alpha-amylase (LMA) in PNW varieties was funded for 2012-2013. The focus is on expression of LMA and how it might contribute to the low falling number issues when there is no evidence of pre-harvest sprout damage. Idaho growers continue to support UI service-oriented projects such as the Aberdeen Wheat Quality Lab, Herssian fly screening, and regional variety trials. These projects provide critical screening data to the wheat breeders in the PNW. The IWC supported the regional dwarf bunt screening nursery, a joint effort between Utah State University and UI, with funding for a seeder to be used specifically in the dwarf bunt nursery.

Field Days

On July 20th, the IWC and UI Extension co-hosted a Direct Seed Field Day at Commissioner Gordon Gallup's farm. The field day focused on a four-year study comparing tillage practices and crop rotation in larger strip trials. Growers engaged in a



lively discussion on the benefits and challenges of adding a multi-species cover crop to the crop rotation. The conversation will continue at the IWC sponsored Direct Seed Workshop, March 7, 2013 in Idaho Falls. Featured speaker Ray Archuleta of the National Resource Conservation Service will explore the benefits and challenges of multi-species cover crops in more detail. Mark your calendars now.

Brad Brown, UI Small Grains Extension, praised the variety Bruneau at the Parma Field day, suggesting it could replace Stephens. Brown also noted the value of both early and late planted variety trials. Choosing a variety that is known to perform well with later planting dates is critical for success.

• Variety Survey

Field days gave growers an opportunity to participate in the Idaho Wheat Variety Survey. Previously, the survey was done through the Idaho Agricultural Statistical Service. This year the IWC conducted the survey in-house. Variety surveys provide necessary data to all stakeholders in Idaho's wheat industry. The variety survey report ranks the top twenty varieties grown in Idaho, reports variety usage by district, and provides an opportunity for feedback to the IWC from growers. If you have not participated in the survey, visit http://www. surveygizmo.com/s3/936709/03f30707f352. Preliminary survey results, suggest the wheat varieties with the most acres planted in 2011-2012, were OCRF 102 and Brundage, with WB 456 a distant third. WB 456 was followed closely by the standards Madsen, Stephens, and Jefferson.



2010-2011 Idaho Winter Wheat Variety Performance Tests and 2009-2011 Yield Summaries

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

Variety Testing

Idaho winter wheat varieties are evaluated each year to provide performance information to help growers select superior varieties for their growing conditions. The tests are conducted using farmer fields or university experiment stations, and the varieties are grown under conditions typical for crop production in the area. Varieties are included in these tests based on their potential adaptation in an area and commercial use of a variety. The number of entries is limited due to resource constraints. Individual plots were planted as 7 rows spaced 7" apart or 5 rows spaced 10" apart for 14' to 25' in length and replicated 3 or 4 times in a randomized complete block design. Agronomic performance data for winter wheat are summarized by state districts in Tables 1-6. Northern District results are presented in Table 1 and Western Idaho results are in Table 2, 3 and 4. Southern and Eastern Districts results are presented for soft white winter wheat in Table 5 and for hard winter wheat in Table 6.

Information Summarization

Yield data are reported for individual sites while other agronomic data are averaged over all sites of each table. Bushel/acre yield results are based on 60 lbs/bu at 11% moisture. Lodging ratings are the percent of a plot area lodged, and in some tables not reported due to minimal lodging. Average values are presented at the bottom of listings and are followed by a least

Table 1. Dryland Winter Wheat Variety Performance in the Northern District near Lewiston, Genesee, Moscow, Bonners Ferry, Craigmont and Tensed, 2010-2011.

Variety or	Seed Yield							- Test Weight
Selection	Lewiston	Genesee	Moscow	B. Ferry	Craigmont	Tensed	Average	Average lb/bu
					-bu/A			
Soft White Wheat								
Bitterroot	131	132	111	128	96	120	120	61.3
Brundage 96	121	137	91	99	92	125	111	60.3
UICF-Brundage	125	132	103	104	91	126	114	60.1
Bruneau	139	144	121	117	91	139	125	61.5
Lambert	108	143	87	90	81		102	60.3
UICF-Lambert	116	136	87	93	93	116	107	60.0
ID 00-475-2DH	120	138	101	101	88	125	112	61.7
98-16702A	136	139	107	117	88	125	119	62.2
Skiles	130	136	106	115	81	131	117	61.9
Madsen	138	131	112	114	89	137	120	60.9
Simon	123	142	94	97	91	122	112	60.4
Tubbs 06	122	131	87	74	87	112	102	58.6
ORCF-102	132	139	93	87	98	127	113	60.4
AP Legacy	78	138	55	59	90	83	84	56.1
AP Badger	119	133	96	94	90	131	110	59.0
Xerpha	121	127	107	102	88	116	110	62.2
IDO 658	111	131	110	95	81	121	108	63.0
WB 523	141	135	113	110	87	129	119	62.3
BZ-6W02-616	139	143	102	114	96	135	122	62.4
WB 1066CL	119	143	102	105	83	117	112	63.4
WB 528	137	145	107	116	96	132	122	62.3
IDO 663	135	137	98	94	91	117	112	61.2
Mary	135	143	106	96	88		114	60.8
Cara (Club)	146	151	106	122	87	138	125	60.9
Chuckar (Club)	139	138	110	107	90	135	120	60.5
Average SWW	126	138	101	102	89	124	113	60.9
Hard Winter Whe	at							
IDO 835	102	136	81	81	88		97	61.8
IDO 660	107	127	88	90	81	122	102	62.3
IDO 651	61	105	89	97	85	99	89	61.9
Boundary	109	140	89	90	89	116	105	61.5
Norwest 533	137	135	102	107	78	122	113	62.4
WB-Rimrock	105	161	79	88	95	112	107	61.2
Esperia	118	134	77	77	73	97	96	62.2
UI SRG	122	125	116	109	89	132	115	62.2
Average HWW	108	133	90	92	85	114	104	61.9
Overall Average	122	137	98	100	88	122	111	61.4
LSD (0.05)	10	17	8	14	14	15	5	0.3

significant difference (LSD) statistic at the 5% level.

Average yield data from variety performance trials in 2009, 2010, and 2011 are presented in Table 7 for all districts. These data represent results of 6-16 site/years and can be a good indication of long-term performance of a variety.

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 2009, 2010, and 2011 are presented in Table 7 for all districts, with 6-16 site/years of data summarized for each district.

Information Interpretation

Average past performance of a variety is the best indicator available to predict future performance potential. Variety performance can vary from location to location and year to year. The results reported in this article are for 2011 trials; previous results can be found in the 1992 to 2011 issues of Idaho Grain Magazine. Average performance over locations and years more accurately indicates varieties' relative performance. Try to evaluate as much information as you can 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 it be wheat or barley. Varietal

performance may not reflect actual performance in your field when a specific variety is managed for optimal economic performance.

Reported small differences among varieties in yield and other characteristics are usually of little importance due to chance differences in tests. Utilize the LSD statistic to determine the true difference between varieties. If differences between varieties are greater than the 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

Variety performance information for winter wheat and winter barley has been published in the fall issues of Idaho Grain Magazine, and on the University of Idaho Cereals website: http://www.extension.uidaho.edu/cereals/. Additional information is available on the University of Idaho catalog website: http://www.cals.uidaho.edu/edcomm/catalog.asp

(Look for publications as pdf files under "Other Cereals Publications"). In addition, publications are free through the University of Idaho Agriculture Publications (ph. 208-885-7982) or contact your county Extension Office.

Table 2. Irrigated Soft White Winter Wheat Variety Performance at Parma, 2010-2011.

	Yi	eld			
Entra	Plantii	ng Date	Protein	Test Wt.	Unight
Entry	10-6-10	11-17-10	Proteili	iesi wi.	Height
	bı	u/A	%	lb/bu	in
Soft White					
AP 700 CL	129	115	10	61	38
AP Legacy	61	66	11	55	39
AP Legion	151	128	9	59	42
AP Salute	127	107	10	60	42
Bitterroot	137	108	9	60	41
Bruneau	154	124	9	62	41
UICF Brundage	116	88	10	58	36
UICF Lambert	99	83	11	58	42
Goetze	100	83	11	57	35
ID0663	129	109	10	60	38
ID98-19010A	50	45	11	53	33
Mary	135	103	10	59	38
ORCF102	113	91	10	60	38
Skiles	131	115	10	62	37
Stephens	123	103	10	59	37
Tubbs 06	82	77	10	57	39
WA8092	143	110	10	61	39
WB 456	134		10	64	41
WB 528	124		9	61	40
Average	116	99	10	59	34
LSD (0.05)	12	13	12	1	2



lvory Average

LSD (0.05)

81

12

12

1

62

1

42

2011 Idaho Winter Wheat Variety Performance Tests and 2009-2011 Yield Summaries

Table 3. Irrigated Hard Winter Wheat Variety Performance at Parma, 2010-2011.

	Yi	eld				
Entry	Planti	ng Date	Protein	Tool W/I	Unight	Lodaina
	10-6-10	11-17-10	Proteili	Test Wt.	Height	Lodging
Variety	b	u/A	%	lb/bu	in	%
Hard Reds						
Esperia	130	85	12	63	36	0
Hoff	116	94	10	63	42	0
ID0621	105	98	11	61	39	0
Moreland	154	97	11	63	37	0
Norwest 553	150	95	10	62	35	0
SRG	143	105	11	63	50	7
WB936*	19	26	13	50	32	0
Hard Whites						
ID0660	134	88	11	64	41	0
lvory	90	83	11	58	42	0
NuHorizon	102	96	11	61	37	0
UI Grace	111	100	11	62	53	5
LHS	90	78	10	62	40	0
UI Silver	134	105	10	62	44	16
Average	119	88	11	61	40	2
LSD (0.05)	12	13	1	1	2	3
* hard red spring	g wheat					

Table 4.	Dryland Winter Wheat Performance in
Southwe	stern Idaho 2010-2011

	2011 Yield	Protein	Test Wt	Height
Variety	bu/A	%	lb/bu	in
Soft White Winter				
Eltan	94	11	59	36
Goetze	63	12	55	33
Hubbard	72	11	58	40
ID0587	70	12	57	35
ID0620	96	11	59	36
ID0655	101	11	62	42
ID-D-05	42	13	54	35
Malcolm	61	12	56	36
ORCF-102	73	11	59	37
Simon	72	12	58	36
Stephens	73	12	57	35
Tubbs	52	12	53	36
Tubbs06	55	12	55	39
WB528	81	11	60	37
Average	72	12	57	37
LSD (0.05)	13	1	2	2
Hard Red Winter				
Boundary	61	11	60	32
Buchanan	95	11	62	45
Finley	89	12	65	45
Hoff	78	12	63	48
ID0653	94	13	64	43
Juniper	83	12	64	52
Moreland	85	12	61	35
Promontory	87	11	66	40
Utah 100	96	12	62	44
Hard White Winter				
Darwin	86	12	64	45
Gary	68	11	60	42
ID0660	73	12	63	35
Ivory	63	11	59	38

Table 5. Irrigated Winter Wheat Variety Performance in Eastern and Southern Districts at Kimberly, Rupert, Aberdeen, 2010-2011.

	Kimberly	Rupert	Aberdeen Plots twice sprayed	Aberdeen Plots un- sprayed	Avg	Test Wt	Spring Stand	Heading Date	Height	Lodging
Variety			bu/acre			lb/bu	(%)	Julian	(in)	%
Soft White										
Agripro Legion	128	108	155	129	125	53	97	169	38	41
Agripro Salute	139	94	164	130	130	54	87	169	38	9
AP Badger	137	93	130	107	118	54	98	169	32	0
AP Legacy	109	99	151	52	113	54	97	171	38	5
Bitterroot	131	109	169	122	133	56	87	172	37	19
Brundage	105	98	146	44	111	54	98	166	34	0
Brundage 96	124	100	160	123	122	55	97	168	35	0
Bruneau	149	98	158	128	131	57	96	170	36	8
Coda (Club)	125	100	128	130	116	56	95	172	38	46
Goetze	123	92	157	80	120	55	82	166	32	0
Lambert	126	90	148	75	116	55	93	167	39	1
Madsen	128	97	152	141	120	55	95	171	35	5
ORCF-101	120	102	146	126	120	54	86	170	35	0
ORCF-102	126	116	149	105	127	55	98	170	37	9
Simon	142	99	169	120	130	57	98	169	37	2
Skiles	134	90	169	155	127	56	87	170	34	1
Stephens	130	106	156	131	126	54	97	171	37	31
SY Ovation	156	95	179	154	136	56	98	168	36	5
UICF Brundage	110	109	151	105	118	54	96	169	32	0
UICF Lambert	133	107	147	98	125	55	95	168	38	2
WB 456	135	93	156	141	122	57	97	165	33	4
WB 528	132	97	167	99	125	56	98	167	35	16
WB-Junction	147	104	176	146	136	56	98	165	34	30
Average	129	101	154	110	123	55	95	169	36	11
LSD (0.05)	19	14				1	12	1	1	14
- (/										
Hard Red and	White (W)									
AP Paladin	103	70	110	46	94	55	97	168	35	5
Bonneville	104	99	107	76	103	55	97	171	42	36
Boundary	116	107	120	69	114	55	98	168	37	12
Curlew	122	87	114	94	108	55	95	167	38	50
Decade	101	83	126	40	103	57	96	168	38	9
Deloris	107	112	119	20	113	58	94	169	40	19
Eddy	110	97	116	50	108	57	97	166	34	10
Esperia	123	82	137	94	114	57	98	163	31	7
Garland	81	101	116	68	99	53	94	170	28	24
Golden Spike (W)	116	111	131	84	119	56	97	170	37	37
Greenville	119	111	162	113	131	55	96	167	31	7
LHS (W)	107	116	126	49	116	56	98	170	38	32
Manning	114	107	130	112	117	55	94	168	37	42
Moreland	123	94	121	34	113	56	95	167	34	6
Norwest 553	132	95	148	153	125	58	97	168	32	1
NuHills (W)	109	60	138	49	102	54	96	163	35	2
NuHorizon (W)	137	90	138	119	122	59	95	165	36	6
Promontory	134	104	135	114	124	58	95	167	37	19
Utah 100	120	106	152	108	126	54	96	170	40	10
WB-Arrowhead	137	99	141	135	126	58	97	167	38	9
Weston	113	86	114	89	104	58	95	167	41	26
Whetstone	126	93	137	68	119	57	97	162	36	20
Yellowstone	129	102	157	116	129	57	95	167	39	21
Average		96		85	114	56	96	167	36	
	117		128							17
LSD (0.05)	17	16				1	3	1	2	19



2011 Idaho Winter Wheat Variety Performance Tests and 2009-2011 Yield Summaries

•	nd Winter Variety Performance in Southern Idaho, 2010-20 Rockland Ririe Test Spring Heading Weight						
	Yield	Yield	Weight	Stand	Date	Height	Protein
Hard Winter Whea	bu/A t	bu/A	lbs/bu	percent	Julian	(in)	percent
Bonneville	29	13	62	69	6/26	26	12
Boundary	27	11	60	77	6/24	23	10
Curlew	29	19	61	71	6/24	26	11
Decade	24	12	61	73	6/23	24	11
Deloris	28	12	62	73	6/25	27	11
DW	26	15	60	75	6/24	24	11
Garland	22	12	59	72	6/25	20	12
Gary (W)	27	12	61	74	6/25	24	10
Golden Spike (W)	23	12	60	73	6/26	24	11
Greenville	26		60	58	6/19	25	11
Juniper	26	12	61	73	6/22	30	11
LHS (W)	28	13	60	72	6/25	23	10
Lucin-CL	29	15	62	76	6/23	29	11
Moreland	23	13	60	71	6/23	23	11
Norwest 553	25	13	61	69	6/25	22	11
NuHorizon (W)	28	11	61	74	6/22	22	10
Promontory	22	10	62	78	6/24	25	11
SRG	31	11	61	76	6/23	27	11
UI Darwin (W)	22	9	62	80	6/24	26	12
UI Silver (W)	29	9	62	76	6/26	25	11
UICF Grace (W)	26	14	60	76	6/22	32	11
Utah 100	31	14	61	76	6/23	27	11
Weston	29	11	61	69	6/22	28	12
Yellowstone	29	11	61	74	6/23	25	10
	29	12		74		25 25	11
Average LSD (0.05)	6	5	61		6/24	20	
Soft White Winter							
00-475-2DH		8	60	65	6/30	19	11
96-16702		12	61	70	6/27	21	9
Agripro Legion		13	59	63	6/28	21	9
Agripro Salute		12	58	63	6/28	21	8
AP Badger		11	58	65	6/29	19	8
AP Legacy		9	59	70	6/30	22	11
Bitterroot		8	61	73	6/30	20	11
Brundage		9	60	65	6/27	19	9
Brundage 96		10	58	68	6/28	21	9
Bruneau		8	58	60	6/29	19	9
BZ6W02-647AA		9	58	65	6/27	20	8
Coda*		11	61	68	6/30	19	10
Goetze		7	61	55	6/28	20	9
ID98-19010A		7	59	65	6/27	20	9
ID0663		8	58	70	6/27	19	9
Lambert		9	60	50	6/28	21	9
Madsen		8	56	55	6/29	21	9
ORCF-101		9	56	58	6/29	21	9
ORCF-102		11	60	63	6/28	21	10
Simon		12	57	70	6/28	20	9
Skiles		11	61	68	6/28	21	10
Stephens		8	61	73	6/29	19	9
SY Ovation		9	59	53	6/29	20	10
UICF Brundage		9	59	60	6/28	20	9
UICF Lambert		8	58	60	6/28	21	9
WA8092		9	59	68	7/2	20	10
WB 456		8	59	73	6/28	21	9
WB 528		12	60	78	6/27	21	9
WB-Junction		8	58	70	6/27	20	9
Average		9	59	65	6/28	20	9
				-	J/ LJ	20	9

гепопианы	e			ge Yield
Performance	Northern District Rainfed	Western District Irrigated	Southern/ Eastern District Irrigated	Eastern
Site/years	16	6	9	6
Variety		b	u/A	
Soft White				
Agripro Legion		143	129	28
Agripro Salute		132	129	27
Bitterroot	90	132	129	29
Brundage			133	21
Brundage 96	90		129	25
Bruneau	95	146	132	26
Coda*			124	32
Goetze		122	123	26
Lambert	86		127	23
Madsen	95		128	26
ORCF-101			129	27
ORCF-102	91	126	128	29
Simon	90		129	28
Skiles	90	133	126	24
Stephens		133	121	28
Tubbs 06		130		
UICF Brundage	90	122	125	28
UICF Lambert	85	127	128	25
WB 456			126	22
WB 528			133	26
Average	90	131	128	26
LSD (0.05)	3	4	6	4
AP Paladin			112	
Bonneville			108	38
Boundary	91		119	40
Curlew			114	44
Deloris			124	45
DW			113	
Eddy			116	
Esperia Octobro	82		113	
Garland			115	40
Gary (W)				40
Golden Spike (W)			111	40
Juniper				39
Manning			114	
Moreland		137	119	40
Norwest 553	97	132	131	
NuHills (W)			110	
NuHorizon (W)		133	126	41
Promontory			122	39
UI Darwin (W)			113	37
UI Silver (W)		118		43
UICF Grace (W)		108		39
Utah 100			128	43
			130	
WB-Arrowhead				
			108	37
Weston			108 123	37
WB-Arrowhead Weston Whetstone Yellowstone		 		

*club wheat

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LSD (0.05)



Round-Up of Idaho Barley

Commission Programs

New marketing focus: putting fiber-rich barley into traditional cereal-grain foods



Team of Asian food technologists add fiber-rich barley to traditional wheat foods suitable for their Asian markets

s part of our ongoing barley market diversification campaign, the Idaho Barley Commission is expanding its efforts to stimulate the use of barley as an ingredient in cereal-based food products. One of our marquee events in this multi-year campaign is a Technical Short Course on Barley-Fortified Wheat Flour Products developed jointly by the commission and cereal chemists at the Wheat Marketing Center in Portland, OR, specifically tailored for international

customers. IBC received competitive grant funds from the US Department of Agriculture to sponsor these training courses.

Our first technical short course was held in early March for food companies from Japan, Taiwan and South Korea. A second course was held in mid-August for millers from Mexico and Colombia.

The objectives of this course are twofold:

- Enhance the nutritional value of traditional wheat flour-based products using barley flour and
- Develop formulations and modified processing conditions for barley-fortified wheat flour based products.

Why the focus on food barley? There

are many good reasons that we are allocating resources to build demand for barleys suitable for human consumption. The leading reason is that For the Management of the Mana



barley contains a unique beta-glucan fiber that has been shown to lower bad cholesterol and reduce the risk of heart disease, which is the leading cause of death among both U.S. men and women. Research shows that most Americans fall far short of the daily recommended intake of total dietary fiber – 25 to 38 grams per day depending on weight – with the average consumption in the 12 to 15 gram range.

There are many other health advantages of incorporating barley in the human diet, including weight management and the regulation of glucose and insulin metabolism, which is very beneficial to people suffering from Type II diabetes, estimated at 26 million, with another 7 million people undiagnosed.

IBC and University of Idaho assess barley research infrastructure

The Idaho Barley Commission has joined ▲ forces with the University of Idaho College of Agricultural and Life Sciences and Idaho's malting barley industry to assess the University of Idaho's barley research capacity to determine whether there is a need to create a new research position dedicated solely to barley. This effort known as the Idaho Barley Research Roadmap - began with a roundtable discussion hosted by College of Agricultural and Life Sciences Dean John Hammel and Ag Experiment Station Director Donn Thill during the University's Capital Campaign Gala on the Moscow campus last April. During this initial phase, participants evaluated current UI barley research strengths and weaknesses and pinpointed opportunities

for strengthening our barley research footprint in Idaho. According to IBC leaders who attended, including IBC chairman Tim Dillin and new south-central Idaho commissioner Pat Purdy, "a critical part of this discussion was engaging leaders from the Idaho malting industry on research priorities that will help achieve consistent and reliable malting barley production year in and year out."

This first Idaho Barley Research Roundtable highlighted current barley agronomic, disease and irrigation research and extension programs at the UI, based mostly in southern and eastern regions of the state, and identified some areas of immediate interest, including research into soil fertility and nutrient management to help growers

manage their high fertilizer costs while meeting yield and quality goals.

Next phase in the Idaho Barley Research Roadmap

All parties have committed to participate in a second major roundtable discussion in early October in eastern Idaho. During this stage we will determine whether it is in the long-term interests of Idaho barley producers to help fund an endowment to create a dedicated barley scientist position in the University of Idaho. The IBC board feels very strongly about thoroughly discussing this potential investment with growers throughout the state before making any funding commitments.

Collaborating with UI Extension on producer risk management education

For the past 11 consecutive years, the IBC has been awarded competitive grant funding from the Western Center for Risk Management Education (WCRME) housed at Washington State University, to conduct grain marketing and risk management education for grain producers throughout the state. Since 2001, the IBC has received more than \$136,500 in WCRME grant funding. For the past two years, we have collaborated with University of Idaho extension faculty from several northern and southern Idaho counties to deliver this producer education. 2012 projects included:

- Southern/Eastern Idaho Extension (extension team leaders are Joel Packham, Cassia Co.; Reed Findlay, Power Co.; Steve Harrison, Caribou Co. and Ben Eborn, Teton Co.)
- Farm & Ranch Management Schools oneday courses were offered in Burley on Dec. 19, Pocatello on Dec. 20 and Rexburg on Dec. 21.
- 6-week course on financials, enterprise budgets, grain marketing and succession planning were held in Rexburg, Pocatello and Burley from mid-January to early March.
- 2012/13 program will include another series of in-depth farm and ranch management education

courses offered in at least 4 locations and short courses on estate and succession planning.

- North Idaho Extension (extension team leader is Ken Hart, Lewis Co.)
- Business/Succession Planning Short Courses were held in Craigmont on Jan. 23, 24 and 26 and in Moscow on March 12,13 and 15. A similar short course was held in Grangeville last year.
- 2012/13 program will include an innovative three-stage program to strengthen basic and advanced grain marketing skills, with Step One-Tooling Up, Step Two–Stepping Up, and Step Three–Wrapping it Up.

MARKET OUTLOOK: MY 2012/13 Global Grain Market Fundamentals

- World barley production is projected to be down 2% (U.S. crop up 42%), usage down 2% (U.S. usage up 22%) and carryover down 12% (U.S. carryover up 2%).
- World wheat production down 5% (U.S. crop up 13%), usage down 2% due to smaller anticipated feed usage but that is likely to change due to problems with the corn crop (U.S. usage up 5%) and carryover down 10% (U.S. carryover down 6%).
- World corn production down 3% (U.S. crop down 13%), usage down 1% (U.S. usage down 9%) and carryover down 9% (U.S. carryover down 36%).

Key Drivers

- U.S. beer demand remains stagnant (down 1.7% in 2011; but craft beer segment was up about 12 to 15%). Fortunately, mid-year statistics show that overall 2012 domestic beer consumption is on the upswing.
- 2012 U.S. corn yields are expected to fall dramatically this year more than half of the U.S. has been declared a drought emergency and crop watchers now expect U.S. corn yields to fall to as low as 120 bushels per acre or lower, sparking a major price rally in late summer.
- Future of the Renewable Fuels Standard the U.S. livestock industry formally filed a petition with the EPA in late July to waive the current ethanol blending mandate which stands at 13.2 billion gallons (4.7 billion bushels corn) in 2012 and 13.8 billion gallons (4.9 billion bushels corn) in 2013. Livestock feeders argue they are suffering severe economic effects from rising corn prices triggered by the 2012 drought that are exacerbated by the government mandate for corn ethanol production. They are calling for a suspension of the RFS for the remainder of 2012 and into 2013.
- How much corn will China need to import to meet its expanding livestock feed demand? China has purchased about 5.2 MMT of U.S. corn in the current marketing year compared to only 743 TMT for the same period the previous year. While China is on pace to produce a record high corn crop this year many analysts believe

China will need to import more corn yet this year to refill their strategic reserves and meet rising demand for feed grains. Imports could be sourced from other U.S. competitors, like Argentina and Ukraine, but their corn crops also are projected to decline and there are many phytosanitary import restrictions which might make these other origins

more difficult.

■ Outside market influences – investment money flow, value of the dollar and crude oil will continue to strongly influence market direction, with continued high volatility attributed to the protracted European debt crisis and a weakening global economic outlook.

MY 2012/13 World Grain Supply & Demand USDA, Aug. 10, 2012 (million metric tons, MMT)												
	BAR	RLEY	со	RN	WH	EAT						
	2011/12	2012/13	2011/12	2012/13	2011/12	2012/13						
Carryin	24.3	21.6	127.5	135.9	197.2	197.2						
Production	133.9	130.8	876.8	849.0	694.7	665.3						
Total Supply	158.2	152.4	1,004.3	984.9	891.9	862.5						
Export Trade	18.9	16.6	98.5	90.9	149.2	135.6						
Total Usage	136.6	133.3	868.3	861.6	694.7	680.1						
Carryout	21.6	19.1	135.9	123.3	197.2	182.4						
Stocks/Use	15.8%	14.3%	15.7%	14.3%	28.4%	26.8%						

	MY2012/13 U.S.Grain Supply & Demand USDA, Aug.10, 2012 (million bu)											
	BAI	RLEY	СС	RN	WH	WHEAT						
	2011/12	2012/13	2011/12	2012/13	2011/12	2012/13						
Harvested Acres (mln)	2.2	3.3	84	87	45.7	48.8						
Carryin	89	60	1,128	1,021	862	743						
Production	156	221	12,358	10,779	1,999	2,268						
Imports	16	25	25	75	112	130						
Total Supply	261	306	13,511	11,875	2,974	3,141						
Food, seed & industrial	155	155	6,390	5,850	1,018	1,023						
Ethanol			5,000	4,500								
Feed	37	80	4,550	4,075	163	220						
Exports	9	10	1,550	1,300	1,050	1,200						
Total usage	201	245	12,490	11,225	2,231	2,443						
End stocks	60	61	1,091	650	743	698						
Stocks to use	30%	25%	8.2%	5.8%	33%	29%						



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