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Idaho Barley REPORT

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IBC approves Barley Research Endowment at University of Idaho

The Idaho Barley Commission board voted unanimously on February 20 to **create an Idaho Barley Research Endowment with the University of Idaho**, which would be funded over a period of five years. This one million dollar endowment will enable the University of Idaho to create a dedicated Barley Agronomist / Soil Fertility Professorship (70% applied research and 30% extension) to be located at the UI's Aberdeen Research & Extension Center.

The University of Idaho is committing an equal or greater investment, including 100% of the cost of a new scientist's salary and some technical support *immediately and up until the 5-year period when adequate funds are generated by the IBC's endowment investment*. The UI also agrees to help cost-share this scientist into perpetuity, guaranteeing that this research position will NOT be eliminated in the face of future state funding cuts.

In order to achieve this $1 million investment over the next five years, the IBC board voted to **raise the Idaho barley assessment from the current rate of $.02 per hundredweight (less than 1 cent/bu) to $0.03 per hundredweight (1.4 cents/bu), effective July 1, 2013. This barley check-off increase will sunset after 5 years unless a future IBC board votes to continue the $.03/Cwt. rate**.

The endowment decision came after a 9-month in-depth feasibility assessment on the need and cost-effectiveness of pursuing a greatly expanded research partnership with the University of Idaho, conducted by the IBC with full participation by barley industry partners. This evaluation was launched at a face-to-face meeting with UI administrators and malting barley industry representatives last April in Moscow and continued through this winter.

Pat Purdy, IBC Vice Chairman and barley grower from Picabo, is a stronger supporter of strengthening our barley research capacity within the University of Idaho and Agricultural Research Service, noting that in an era of declining public budgets we can't expect to maintain a high level of independent scientific research without grower involvement. "As an Idaho barley grower we are constantly faced with new challenges that are putting pressure on our bottom line profit. These include rising input costs such as fuel, seed and fertilizer and diseases such as Fusarium Head Blight and pest pressure like wire worm. To help growers face these challenges, we need the research efforts and field work that only a dedicated barley scientist with the University of Idaho can provide, and this endowment will guarantee that such a position is permanently in place."

IBC WANTS TO HEAR FROM GROWERS

about the Idaho Barley Research Endowment and the barley check-off increase. Growers should contact:

Administrator Kelly Olson, Boise, 208-334-2090, kolson@idahobarley.org

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Domestic beer market rebounds in 2012 — After three consecutive years of declining sales, the $78 billion a year U.S. beer market showed positive growth in 2012, with domestically produced beer volumes increasing by 1.2%. One category – the craft or specialty beer market saw their volume increase by 15%, following 12% growth the previous year. **Although only 7% of the beer market today, this craft segment consumes about 21% of the malt produced in the U.S.** Craft beer sales have nearly doubled in the past five years to more than $12 billion last year and are projected to increase to $18 billion annually in the next five years. According to the Brewers Association which represents craft brewers, the hottest consumer segment for craft beers is millennials (25 to 34 year olds) who report consumption levels as high as 50%, with taste and local appeal as key factors driving their rising consumption.

Anheuser Busch Inbev, the U.S. and world's largest brewing company and the largest buyer of Idaho barley, reported an increase of about 1% in U.S. beer sales volume last year. They attributed their gains to an improving employment picture, beer product innovations and favorable weather that encouraged beer drinking. ABI noted that beer sales volume returned to positive trends particularly in convenience stores which are the largest outlets for their mega beer brands.

Food barley acreage expands in Idaho in 2013 — The IBC's Food Barley Strategic Initiative including investments in both variety and market development is beginning to pay dividends. IBC reports acreage of these specialty food barley types is expanding in all regions of Idaho this year to meet rising market demand in Asia and the U.S. The commission sponsored a food barley mission to targeted Asian markets last October which has resulted in contract production in several areas of northern Idaho.

IBC reaffirms strong commitment to research — The IBC has set its preliminary research budget for the upcoming FY 2014, which begins July 1. Research typically receives about a quarter or more of the annual IBC budget. Projects that will be funded include:

- **USDA/ARS barley breeding** – $55,000 ($33,000 in FY 2013)
- **OSU barley breeding** – $5,000 ($18,000 in FY 2013)
- **UI Tetonia Research Farm** – no request in FY 2014 ($15,000 in FY 2013)
- **UI Extension barley variety trials & north Idaho support scientist** – $19,712 ($17,291 in FY 2013)
- **UI Winter Barley Tolerance to Grass Herbicides** – $7,513 ($7,513 in FY 2013)
- **UI Long-Term Impacts of Manure Applications** (8-year study) – $16,000 ($16,000 in FY 2013).

Focusing on irrigation efficiencies in a water-short year

2013 winter precipitation was well below average across southern and eastern Idaho drainages, prompting producers to look closely at ways to achieve best economic use of their water while maximizing output.

According to Dr. Howard Neibling, UI Extension Water Management Engineer based at Twin Falls/Kimberly, it will be **critical for producers to check their subsoil moisture profile early in the growing season, and if dry, to fill it up as quickly and efficiently as possible by at least by the first of June** (use post hole digger or soil auger to dig down at least two feet). To more precisely target available irrigation to crop demand, soil moisture testing should be occur at tillering and again at the boot to flowering stage. Further, Neibling emphasized that barley should not be watered beyond the soft dough stage, unless there are unusual circumstances.

In general, barley crop stress will result from either under or over-watering, thereby reducing yields, test weight, plumpness and kernel brightness. Water management is critical in three time periods: Early season to establish vigorous growth and enhance later tillering; mid-season at flowering to properly fill heads and produce yields with optimum water efficiency; and in late season to avoid over-irrigation and resulting quality deterioration.

Grain crops are most dependent on timely moisture in three key growth periods (in order of priority): (1) between head emergence and early grain fill, (2) during tillering, and (3) in early boot.

UI agronomists and water engineers offer the following tips this year to help growers maximize their irrigation efficiencies and overall crop productivity:

- Early planting is recommended to take advantage of available soil moisture during the tillering stage.
- Minimize tillage operations; you lose about an inch of moisture by moldboard plow and ½ inch for every additional tillage pass.
- Lower your seeding rates if moisture is expected to be short: dryland rate of 40-50 lb/A and 50-70 lb/A for irrigated areas that expect water shortages, compared to the usual 80-100 lb/A seeding rate.
- Producers should always take samples for soil testing to determine the residual N available at planting. Fertilize for 40 bu yield if only one irrigation is expected and up to 50 bu for two irrigations. For barley in rotation with potatoes or other row crops there may be sufficient residual fertility to preclude N fertilization. Banding 10 lbs of phosphate fertilizer with or below the seed will promote healthy roots that can then seek water deeper in the soil profile.
- Don't scrimp on water early in the season; a barley crop needs a good 6-7 inches of moisture (soil stored and applied) to satisfy its vegetative growth needs. You can add 5 bu yield for each additional inch of water available during the growing period.
- If targeting production for malt where quality is essential and water supplies are limited, consider stressing the plant during the jointing to early boot stage. This will reduce height (and lodging potential) and sacrifice some production but will stress condition the plant for subsequent moisture stress and save water. This will ensure adequate moisture during later grain fill when quality is determined.
- Slow down your center pivot systems (as much as possible without producing surface runoff) to give your crop a longer, deeper drink. This puts more water through the crop and avoids excessive surface evaporation; complete a full circle every 3½ to 4½ days rather than every day or 1½ days (on all but very sandy or shallow low-water holding soils). This will also reduce damage from foliar pathogens.
- Consider center pivot nozzles that drop lower to the ground to improve energy (and water use) efficiencies.
- Conversely, surface irrigation systems need to move the water across the field as quickly as possible; consider using PAM to maximize uniformity of application and avoid runoff and soil erosion.
- Capture and re-use surface runoff where feasible.
- Know the water holding capacity of your soil, and match as closely as practicable the soil moisture deficit to the amount of water applied. Use Agrimet evapotranspiration estimates to predict moisture loss between sets during vegetative and grain fill stages.

These additional irrigation management guidelines will help ensure a successful barley crop… The first and second irrigations are vital to early crop growth and tillering where yield potential is determined. The first water application should be managed according to your soil moisture level and crop needs rather than the calendar. Experts caution against delaying the first irrigation because of chemical applications and other management priorities. Excessive moisture may also cause the seedling to rot and may create a field environment for disease problems.

UI recommendations: *The first irrigation should be set on an 8-hour schedule (usual practice is 12 hours) in order to keep the nitrogen in the root zone. Soil moisture levels in the root zone should be maintained above 50 percent ASM (available soil moisture) throughout the growing season for maximum spring barley yields. To maintain soil moisture above 50% ASM, a soil with a total water holding capacity of 4.0 inches in the top 3 feet of soil profile would need to be irrigated before available soil moisture dropped below 2.0 inches. Producers should be particularly careful to keep the soil moisture above 50% ASM during tillering and flowering. For more information, refer to UI Extension Publication on CIS 1039 Irrigation Scheduling.*

The last irrigation is also critical to finishing the crop and maintaining quality. Without careful management, some producers will get behind in their irrigation scheduling, and if the soil moisture is short, will have to irrigate later than is desirable from a quality standpoint. Unneeded irrigations consume energy, waste water, increase lodging, reduce grain quality and inflate production costs.

UI recommendations: *At the soft dough stage, if the soil is moist (to a depth of 2 ft) then no additional irrigation is needed unless on very sandy (or shallow) soils.*

LOWERING WATER AND ENERGY LOSSES FROM LEAKS AND WORN NOZZLES

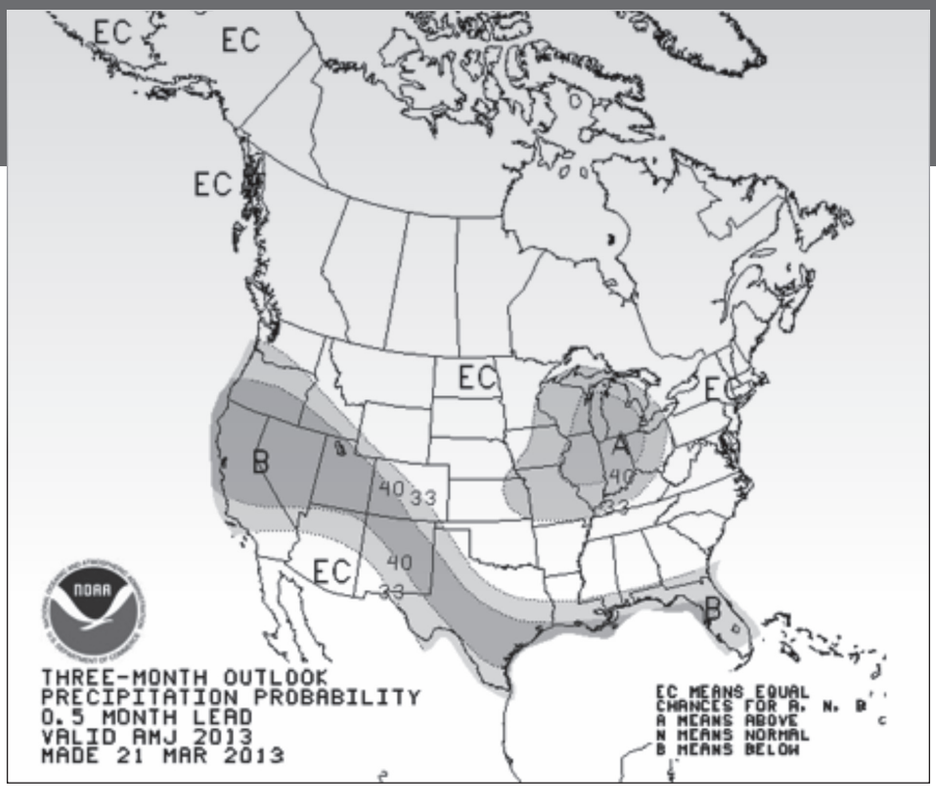
Dr. Neibling presented excellent data during our winter 2013 UI Extension Cereal Schools (see link at www.barley.idaho.gov) on the need to lower water losses resulting from leaks and worn nozzles. Neibling completed a study in 2012 that found at least 10% or more of applied water can be lost to leaks and worn nozzles, contributing to less system pressure and lower uniformity, higher power costs, greater potential for plant disease and more nitrate leaching.

Neibling noted the main factors that contribute to poor water application uniformity include:

- nozzle wear
- wrong nozzles (installation and maintenance)
- leaks/low pressure
- plugged or missing nozzles
- plugged pressure regulators

He concluded the **potential to save both water and energy by replacing key components is significant**, noting that 25% of the standard wheel lines tested had leak losses greater than 15%. He also noted that system age was not a good predictor of either the number of lateral leaks in set systems or uniformity in center pivots.

Irrigation efficiency incentives are available from power companies — Both Idaho Power Co. and Rocky Mountain Power offer incentives to their southern and eastern Idaho agricultural customers to improve irrigation efficiencies, including upgrading equipment and nozzle, gasket and drain replacements.



NRCS WATER SUPPLY OUTLOOK:
April 1, 2013

Snow accumulation during the key three month winter period (January through March) this year was a record low for 16 SNOTEL sites stretching from the Payette Basin to the Little Lost River basin, and another 24 stations were the 2nd and 3rd lowest on record. Water year-to-date totals range from 110% in the North Panhandle to 87% in the Upper Snake Basin in eastern Idaho. A lack of mid-elevation snowpack is a particular concern in the Owyhee, Boise and Wood River basins. Additional information about the new reservoir and streamflow normals along with April 1 snow percentage comparison of the old and new normals are available at: http://www.id.nrcs.usda.gov/snow/data/averages.html.

Reasons for poor snow accumulation — For a good portion of this past winter the West suffered from a split flow in the jet stream as a result of a high pressure system off of the coast of Washington, diverting storms to the north and south of the Intermountain Region. Many areas of North Idaho benefitted from heavy precipitation. Another factor was the Polar Vortex which kept the Arctic Oscillation and North Atlantic Oscillation indexes to remain more negative for a prolonged period, which in turn disrupted the jet stream over the western half of the U.S.

Spring 2013 Outlook — NOAA's seasonal weather outlook call for more of the same for our region.

CURRENT GLOBAL GRAIN MARKET OUTLOOK:
April 2013

- World barley production down 3% (U.S. crop up 41%), usage down 3% (U.S. up 14%) and carryover down 12% (U.S. up 25%). **Consumption outpaced production for the 3rd consecutive year. Near record low global stocks-to-use.**
- World wheat production down 6% (U.S. crop up 13%), usage down 3% (U.S. up 17%) and carryover down 9% (U.S. down 2%).
- World corn production down 3% (U.S. crop down 13%), usage down 2% (U.S. down 6%) and carryover down 5% (U.S. down 23%). **Near record low global and domestic stocks-to-use.**

KEY DRIVERS TO WATCH

- **Outside market influences remain a big factor** – investment money flow continues to be influenced by global economic growth prospects, as well as geopolitical risks, triggering periods of high volatility in commodity markets, the dollar and crude oil.
- **2013 acreage and yields** – In its March 29 planting intensions report, USDA projected U.S. barley acreage nearly unchanged this year at 3.63 million. Wheat acres are projected at 56.4 million, up only 1% from 2012, but spring wheat acres could increase more than expected if spring planting delays in the Northern Plains push acreage out of corn into either barley or wheat. U.S. corn acres are pegged at 97.3 million, up slightly from last year, but again that number could be affected by spring planting delays. Corn yields are expected to recover to near normal or trend-line (160 by/A or better), up sharply from last year's drought affected average yield of 123.4 bu/A.
- **U.S. beer demand increased by 1.2% in 2012**, with good prospects for further growth in 2013.

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MY 2012/13 U.S. Grain Supply & Demand, USDA, April 10, 2013 (million bu)

	BARLEY		CORN		WHEAT	
	2011/12	2012/13	2011/12	2012/13	2011/12	2012/13
Harvested Acres (mln)	2.2	3.2	84	87.4	45.7	49.0
Carryin	89	60	1,128	989	862	743
Production	156	220	12,360	10,780	1,999	2,269
Imports	16	23	29	125	112	130
Total Supply	261	303	13,516	11,894	2,974	3,142
Food, seed & industrial	155	155	6,439	5,937	1,017	1,026
Ethanol			5,011	4,550		
Feed	38	65	4,545	4,400	164	360
Exports	9	8	1,543	800	1,050	1,025
Total usage	201	228	12,527	11,137	2,231	2,411
Ending stocks	60	75	989	757	743	731
Stocks-to-use	30%	33%	7.9%	6.8%	33.3%	30.3%

MY 2012/13 World Grain Supply & Demand USDA, April 10, 2013 (million metric tons, MMT)

	BARLEY		CORN		WHEAT	
	2011/12	2012/13	2011/12	2012/13	2011/12	2012/13
Carryin	24.3	22.3	128.2	131.9	198.9	199.4
Production	134.2	129.9	882.5	855.9	696.9	655.4
Total supply	158.5	152.2	1010.7	987.8	895.8	854.8
Export trade	21.4	18.8	103.4	96.4	153.5	143.4
Total usage	136.2	132.6	878.8	862.5	696.1	675.1
Carryout	22.3	19.7	131.9	125.3	199.4	182.3
Stocks / use	16.4%	14.9%	15%	14.5%	28.6%	27%

CURRENT GLOBAL GRAIN MARKET OUTLOOK:

April 2013

continued from previous page

- **International Grains Council projects world wheat production will increase by 4% and ending stocks by 1% in MY 2013/14.** World corn production is projected to make a strong recovery led by expected jump in U.S. acres and yields, up 10%, while ending stocks jump 22%.
- **How much corn will China need to import to meet its expanding livestock feed demand**? China has imported about 2.5 MMT so far this year, compared to 4.3 MMT last year. Early indications suggest that China will increase its domestic corn acreage by about 4% this year, but will still fall short of rising demand.
- **U.S. ethanol demand** – Ethanol production began falling sharply last summer in the wake of skyrocketing corn prices resulting from last year's near record drought. This trend is beginning to turnaround as new crop corn prices ease and idled plants come back on line. Corn demand for ethanol is projected by USDA to fall about 9% this year but could rebound in MY 2013/14 if the Renewable Fuels Standard blending mandate remains in place.

National Barley Growers Association March 2013 Legislative Priorities

FARM PROGRAMS & POLICY

1. NBGA requests Congress expedite passage of a new Farm Bill.
2. NBGA supports a Title I farm program safety net that is market-driven with price support levels equitable to other program crops.
3. NBGA opposes major crop insurance authorization changes that do not improve crop insurance within the context of the Farm Bill reauthorization.

RESEARCH

1. Food security is a major priority of the NBGA. Thus the NBGA opposes any further reductions to funding of federal agriculture research programs.
2. NBGA supports the FY 2014 federal research funding priorities established by the National Barley Improvement Committee.

TRADE

1. NBGA supports maintaining funding for the Market Access Program (MAP) at the existing level of $200 million annually and the Foreign Market Development (FMD) program at full authorized levels.
2. NBGA supports the ongoing Trans-Pacific Partnership (TPP) and US-European Union Free Trade negotiations with sanitary/phytosanitary rule enforcement.

FARM LABOR

NBGA supports creation of a workable guest worker program that secures the borders of the United States and provides a legal, affordable, and stable workforce for agriculture.

ENVIRONMENTAL

1. NBGA opposes environmental mandates by government agencies that are detrimental to production agriculture operations.
2. NBGA will support federal climate change legislation that results in a net economic benefit to U.S. barley producers based on comprehensive, science-based analysis. NBGA does request that USDA conduct comprehensive, detailed scientific and economic analyses of that legislation or regulation prior to its implementation. NBGA opposes any implementation of greenhouse gas legislation or regulation until other major carbon emitting countries agree to similar regulations and costs.
3. NBGA supports legislation to prohibit additional EPA permitting requirements beyond the Federal Insecticide, Fungicide & Rodenticide Act (FIFRA) for pesticide and chemical applications.
4. NBGA supports legislation that increases the minimum storage capacity required for EPA Spill Prevention Control & Countermeasure (SPCC) compliance.

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