

# The Barley Bulletin

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## **Procurement and Production Agriculture: Bridging the Gap – Doyle Lentz, Chairman**

The number of farms in the United States have steadily declined over time, from approximately 7 million in 1940 to approximately 2 million farms today. Farms have become larger, and thus less people are involved in production agriculture. Buyers of agricultural products may have little to no knowledge of the production system required to produce a given crop. This has strengthened the need for targeted education to help procurement teams understand the components of crop enterprise decision making, the risks growers face in crop production, and how these risks impact growers, buyers, and ultimately the end user.

The overall decline in barley production in the United States has resulted in a shift in purchasing. We have seen barley move from being traded as a commodity to being procured as an ingredient, largely under contract with the malting and brewing industry. Procurement teams within a given company can consist of buyers, quality assurance specialists, attorneys, and accountants. The diversity of these positions alone can make development of targeted education a challenging task. Consequently, the Barley Council has implemented educational programming to assist those with minimal to no background in production agriculture in understanding the complexity of crop enterprise selection and malting barley production. This involves barley growers as well as our colleagues at North Dakota State University, Northern Crops Institute, U. S. Grains Council, National Barley Growers Association, The Beer Institute, The Brewers Association, and many private companies that are seeking a better understanding of malt barley production. Educational offerings include but are not limited to the following:

- **Contract Program Development:** contracting specialty crops (e. g. dry beans, sunflowers, mustard, etc.) is not new to North Dakota growers. The Barley Council utilizes information from numerous crop contracting programs to assist buyers in developing and refining malting barley contract programs that are practical. This educational program has helped buyers understand the procurement process and how to utilize contracts as a procurement tool as well as a communication tool.
- **Comparative Risks in Crop Enterprise Selection:** how do growers decide the combination of acres that will be planted to wheat, canola, barley, soybeans, sunflower, corn, and the many other crop choices available? This educational program shows buyers how growers select crop enterprises (inclusive of both quality factors and business management factors).
- **Barley Production 101:** as elementary as this may seem, buyers have appreciated receiving a general understanding of the production practices required for malting barley (e. g. planting, fertilization, weed control, disease management, harvest, and storage) and the risks growers must manage throughout the season. Malting barley is the only crop that must be delivered in a "living state" (i. e. it must germinate to make malt). This type of education helps buyers recognize the management required for malting barley production.
- **Price Derivation:** malting barley does not have a futures market, and thus it is very typical for buyers (many of which have backgrounds in accounting, finance, economics, or statistics) to try to find a proxy for determining purchase price (both for contracting and open market production). This education explains the pros and cons and using a futures market (such as wheat or corn) as a reference for determining the price for malting barley.
- **Developing Realistic Specifications:** plump, germination, DON, and protein are components of the specifications found in malting barley production contracts. Helping buyers understand how specifications impact growers is critical to developing contracting programs that are practical. Growers must manage many risks, and thus growers can minimize risks via good management practices, but Mother Nature can provide challenges that are outside of the control of the grower.

Educational programming for malting barley procurement teams will continue to be very important, especially for those buyers that have minimal to no background in production agriculture. Communication is the key, and we need to build long term relationships with the industry to which we supply barley. After all: ***"No Barley – No Beer"***.

## **Craft Brewing on the Rise**

The craft brewing industry in the U. S. continues to enjoy steady growth. Craft brewers are seeking to reach 20% market share in the U. S. by 2020. Craft beers are growing by 12% per year for the past 10 years. Craft malt usage is 3.40 times the amount of malt used by volume brewers, causing the craft industry to approach 30% of the U. S. malt market. There were roughly 500 craft breweries in the U. S. in the mid 1990's, compared with over 4,000 craft breweries today. The North Dakota Barley Council works with the Brewers Association to help craft brewers understand barley production and malt utilization.

## Barley Production Trends

The 2015 crop production year is behind us. Barley production in North Dakota was generally good with respect yields and quality. There were pockets that experienced elevated levels of DON, which caused some barley to be outside of the specifications in a given contract.

North Dakota regained its position as the largest barley producing state in 2015. North Dakota Growers harvested 1,050,000 acres of barley in 2015, an increase of 94% from the 540,000 acre level harvested in 2014. North Dakota acres accounted for approximately 34% of U. S. barley acres in 2015.

North Dakota produced 67,200,000 bushels in 2015, an increase of 87% from the 35,845,000 bushels level of 2014. Growers reported good yields and generally good crop quality. Malting industry representatives have estimated acceptance rates in the area of 85% or higher.

“In general, yields and quality were good”, states Doyle Lentz, chairman of the North Dakota Barley Council. “There were pocketed areas in which scab caused DON issues, but in general the year was favorable.”

Nationally, barley production was at 214,297,000 bushels, an increase of 18% from 2014. North Dakota represents approximately 36% of U. S. production.

## Barley Acreage Forecast Lower in 2016

The increased barley production in 2015 has resulted in lower acreage levels for the 2016 crop year. USDA-NASS estimates that North Dakota growers will plant approximately 800,000 acres of barley in 2016, a 29% decrease from 2015.

“Buyers reduced the number of malting barley contracts available for 2016” states ND Barley Council chairman Doyle Lentz. “This resulted in less acres planted to barley. Open acre barley production is simply too risky, and growers need a profitable price in order to grow barley.”

## Market Development

The Barley Council participates in a number of projects with its alliance partners to expand market development.

- **Malting Barley for Mexico:** the Barley Council, in cooperation with U. S. Grains Council and NDSU, provided in-depth education programs to Constellation Brands Incorporated and CCM – Heineken, both of which are in Mexico. The program was directed toward the procurement team. Topics included: 1) environmental stress on barley during the growing season and the impacts on malt quality; 2) factors growers use in selecting barley as a crop enterprise, and how the risks compare with other crops; 3) components of developing a practical contracting program for malting barley; and 4) barley variety development. “Mexico, Central America, and northern South America are our best near term opportunities for export market development for barley,” states Mark Seastrand, a board member of the North Dakota Barley Council who also serves as the barley sector director on the U. S. Grains Council board of directors. “Expansion of the malting and brewing industry in these regions provides U. S. growers with a unique opportunity to be part of the long term supply.”
- **Food Barley for Japan, Taiwan, and Korea:** the North Dakota Barley Council, Northern Crops Institute, and U. S. Grains Council are developing a survey of companies in Japan, Taiwan, and Korea to obtain a better understanding of long term market potential for food barley. Barley provides benefits to cardiovascular health, and markets in Asia are anticipated to increase barley usage in food applications.

## Education and Outreach

- **The Beer Institute:** North Dakota Barley Council vice chairman Greg Kessel participated in a panel discussion at the Beer Institute Annual Meeting in Washington DC. Greg represented National Barley Growers Association at this event. Topics discussed on the panel included Waters of the United States (WOTUS), utilization of technology on barley farms (e. g. drones, GPS, etc.), beer taxation, food safety, and GMO’s. “This was the first time a grower has been included on the panel at the Beer Institute Annual Meeting”, said Kessel. “Growers are a vital part of the supply chain, and it is important that we help the industry understand the complexity of production agriculture.”

STATE	2012	2013	2014	2015	Change From 2014 to 2015
Idaho	590,000	600,000	515,000	550,000	7%
Maryland	40,000	52,000	45,000	35,000	-22%
Minnesota	100,000	75,000	60,000	120,000	100%
Montana	790,000	830,000	775,000	850,000	10%
North Dakota	1,010,000	720,000	540,000	1,050,000	94%
Oregon	53,000	50,000	30,000	37,000	23%
Washington	175,000	185,000	105,000	100,000	-5%
	2,758,000	2,512,000	2,070,000	2,742,000	
United States:	3,244,000	3,040,000	2,497,000	3,109,000	25%
North Dakota:	31.13%	23.68%	21.63%	33.77%	

Table 1. Barley Acres Harvested (National Barley Growers Association Member States). Data Source: USDA-NASS.

STATE	2012	2013	2014	2015	Percent Change From 2014 to 2015
Idaho	53,690,000	57,660,000	51,700,000	53,350,000	3%
Maryland	3,280,000	4,420,000	3,465,000	2,415,000	-30%
Minnesota	5,700,000	5,175,000	3,120,000	9,240,000	196%
Montana	41,870,000	43,160,000	44,660,000	44,200,000	-1%
North Dakota	61,610,000	46,080,000	35,845,000	67,200,000	87%
Oregon	3,816,000	3,500,000	1,900,000	1,924,000	1%
Washington	12,600,000	14,040,000	6,300,000	4,800,000	-24%
Totals:	182,566,000	174,035,000	146,990,000	183,129,000	
United States	220,284,000	216,745,000	181,542,000	214,297,000	18%
North Dakota:	33.75%	26.48%	24.39%	36.70%	

Table 2. Barley Production for National Barley Grower Association Member States. Data Source: USDA-NASS.

STATE	2012	2013	2014	2015	2016	Percent Change From 2015 to 2016
Idaho	610,000	650,000	560,000	580,000	560,000	-3%
Maryland	60,000	75,000	70,000	50,000	50,000	0%
Minnesota	115,000	90,000	75,000	135,000	100,000	-26%
Montana	900,000	990,000	920,000	970,000	1,010,000	4%
North Dakota	1,060,000	760,000	620,000	1,120,000	800,000	-29%
Oregon	56,000	63,000	40,000	49,000	60,000	22%
Washington	185,000	205,000	115,000	110,000	125,000	14%
	2,986,000	2,833,000	2,400,000	3,014,000	2,705,000	
United States:	3,637,000	3,528,000	3,031,000	3,558,000	3,140,000	-12%



- **Barley Field School:** hosted by the department of plant science at NDSU, the Barley Field School has been a successful educational event since its inception in 2012. The field school includes classroom time in which participants learn about barley variety development, production trends, and basic production practices. In addition, participants toured barley fields, a barley nursery, a barley farm, and the NDSU greenhouse facility. Participants include craft brewers, craft maltsters, growers, and university extension. “The increase in craft brewing is generating considerable interest in how barley is produced and malted,” states Doyle Lentz. “Dr. Rich Horsley, Dr. Paul Schwarz, and the entire barley team at NDSU provide a comprehensive educational program on the intricacies of barley variety development, production, and malting.” The Barley Field School will be held in Fargo in July 2016.
- **Crop Insurance:** The North Dakota Barley Council and the North Dakota Grain Growers Association collaborated with Watts and Associates to provide an update to crop insurance agents on the new malting barley endorsement and spring wheat margin protection crop insurance products. Malt barley endorsement (MBE) is available for the 2016 crop year. “The new malt barley insurance product is a joint effort between growers and industry to improve risk management for malt barley producers”, states Barley Council chairman Doyle Lentz. “We are aware that MBE has some challenges and issues that need to be fixed, and we are working with USDA-RMA, the developer, growers, and crop insurance agents to implement the repairs. New insurance products are a work in progress, and we expect the product to be enhanced during the 5 year pilot period.”
- **National Barley Improvement Committee:** NBIC is an alliance of maltsters, brewers, university researchers, and growers that work together to secure federal research funding for barley. “Barley variety development is still largely under the public sector, and thus requires federal funding for disease research, genetic improvement, and variety development,” states North Dakota Barley Council director Gary Beck, who represents North Dakota barley producers on NBIC. NBIC meets annually in Washington DC to maintain relationships with members of Congress and USDA Agricultural Research Service for the improvement of barley.

## GET STORED PRODUCT INSECT PROTECTION

HELP IMPROVE MALTING BARLEY PROFITS

Treat and protect harvested malting barley from stored product insect infestations with Diacon®-D IGR.

Busch Agricultural Resources LLC and MillerCoors™ have approved Diacon®-D IGR products for use by its growers and companies that supply its growers.

To learn more about Diacon®-D IGR for your stored grains, contact your distributor, call 800.248.7763 or visit [bugfreegrains.com](http://bugfreegrains.com) and download a complete Q&A about controlling stored product insects.



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## Protecting Stored Barley from Costly Infestations

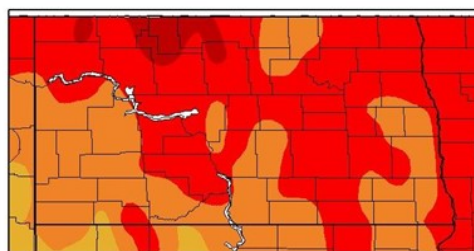
Guest columnist, Paul Drache, Regional Manager for Central Life Sciences

Current year, barley stored in all positions in North Dakota totaled 65.1 million bushels, up 66 percent from 2014. From October 1, 2016 through the first week of March, average daily temperatures statewide were between 6 and 10 degrees higher than average, with average humidity readings at 67%, reaching up to 100%. This combination of increased barley in storage and warmer, humid weather presents ideal conditions for increased insect activity within stored barley. Without taking proper precautions, barley growers could face a very serious economic impact.

The cost of not treating barley can reach an estimated \$1.91 per bushel after accounting for cleaning costs, handling expenses and having a load rejected from a plant 60 miles away. By comparison, the cost to turn and treat barley with Diacon®-D IGR is only \$0.24 per bushel. Diacon®-D IGR is an EPA-registered stored grain protectant that plays a critical role in a thorough SLAM program established to address infestations from multiple angles. SLAM consists of four essential components: Sanitation inside and around all storage bins; Loading the

conditioned barley with a protectant such as Diacon®-D IGR; Aeration of stored grain during cold periods; and regular Monitoring of grain with temperature probes, insect traps and core samplers. For efficient protection of your stored barley against insect infestations and their related costs, implement a thorough SLAM program incorporating Diacon®-D IGR.

Departure from Normal Temperature (F)  
10/1/2015 - 3/10/2016



Generated 3/11/2016 at HPRCC using provisional data.

Regional Climate Centers



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### **NORTH DAKOTA BARLEY COUNCIL DIRECTORS & STAFF**

- Doyle Lentz: District IV, Chairman, Rolla, ND.
- Greg Kessel: District V, Vice Chairman, Belfield, ND.
- Mark Seastrand: District II, Director, Sheyenne, ND.
- Gary Beck: District I, Director, Munich, ND.
- James McCullough: District III, Director, Bismarck, ND.
- Steven Edwardson, Executive Administrator.
- Lori Buckhouse, Administrative Assistant.

### **Calendar of Events**

May 3 – 6:	Craft Brewers Conference, Philadelphia, PA
June 13 – 15:	National Barley Growers Association Summer Meeting, Golden, CO
June 20 – 24:	ND Grain Growers Association Environmental Tour (E-Tour) for EPA staff, western North Dakota.
June 26 – 30:	12 <sup>th</sup> International Barley Genetics Symposium, Minneapolis, MN
July 7:	ND Barley Council Summer County Rep meeting, Dickinson/Belfield
July 19 – 22:	NDSU Barley Field School, Fargo, ND
July 25 – 27:	USGC board of delegates meeting, Hyatt Regency, Louisville, KY
August 13 – 17:	World Brewing Congress, Denver, CO
December 4 – 6:	National Fusarium Head Blight Forum, St. Louis, MO