BARLEY SITUATION UPDATE FOR NORTH DAKOTA NORTH DAKOTA BARLEY COUNCIL Last Update: April 3, 2023 Note: this report includes updated information from the following information sources. --USDA-NASS Prospective Plantings Report, March 31, 2023 --USDA-NASS Grain Stocks Report, March 31, 2023

Overview

Spring weather in the northern plains continues to result in snowfall, with the majority of North Dakota covered in snow. It is estimated that spring planting will be delayed until mid-May, with many areas hoping for a slow melt to prevent or lessen impacts of spring flooding.

The following sections of this update provide a general insight into the barley situation for 2023 following the release of the USDA-NASS Prospective Plantings report (released on March 31, 2023), as well as the USDA-NASS Grain Stocks Report (released on March 31, 2023).

A component of this report provides a possible scenario on 2023 production based upon historical yields and area planted. The scenario is only for illustration purposes to provide a perspective on 2023 barley production, and is not intended to serve as a forecast for actual barley production. There are too many variables at this writing (such as the barley crop not yet being planted) to provide an accurate forecast on barley production for 2023.

Area Planted

							Percent
Area Planted (Acres)							Change
							From
STATE	2018	2019	2020	2021	2022	2023	2022 to 2023
Idaho	550,000	550,000	530,000	530,000	560,000	590,000	5%
Maryland	45,000	32,000	34,000	33,000	28,000	34,000	21%
Minnesota	80,000	70,000	70,000	55,000	65,000	55,000	-15%
Montana	790,000	950,000	970,000	970,000	1,030,000	1,090,000	6%
North Dakota	470,000	580,000	530,000	580,000	740,000	610,000	-18%
Oregon	43,000	45,000	45,000	40,000	36,000	40,000	11%
Washington	85,000	95,000	90,000	83,000	72,000	85,000	18%
	2,063,000	2,322,000	2,269,000	2,291,000	2,531,000	2,504,000	
United States:	2,548,000	2,772,000	2,726,000	2,708,000	2,945,000	2,922,000	-1%
Minnesota % of U.S.:	3%	3%	3%	2%	2%	2%	
North Dakota % of U. S.:	18%	21%	19%	21%	25%	21%	
NBGA % of U.S. Acres	81%	84%	83%	85%	86%	86%	

The following table summarizes area planted to barley for the member states of the National Barley Growers Association, including planting intentions for 2023 (source: USDA-NASS Prospective Planting Report, March 31, 2023).

North Dakota producers intend to plant 610,000 acres of barley in 2023, a decrease of 18% from the 740,000 acres planted in 2022. Montana growers intend to increase barley planting 6% from 2022. Nationally, growers intend to plant 2,922,000 acres of barley in 2023, a decrease in planted area of 1% from the 2,945,000 acres planted in 2022. Minnesota and North Dakota are the only NBGA member states intending to reduced area planted to barley in 2023.

Area Harvested

The following table summarizes area harvested for the member states of the National Barley Growers Association (source: USDA – NASS Crop Production Summary for 2022, January 12, 2023).

Area Harvested (Acres)							
							Change
							From
STATE	2018	2019	2020	2021	2022	2023	2022 to 2023
Idaho	530,000	530,000	500,000	500,000	540,000	563,971	4%
Maryland	24,000	17,000	21,000	18,000	16,000	18,977	19%
Minnesota	67,000	55,000	50,000	34,000	55,000	42,221	-23%
Montana	600,000	760,000	790,000	650,000	840,000	842,378	0%
North Dakota	385,000	445,000	460,000	430,000	660,000	500,621	-24%
Oregon	26,000	35,000	30,000	21,000	19,000	25,072	32%
Washington	67,000	84,000	71,000	70,000	60,000	70,400	17%
	1,699,000	1,926,000	1,922,000	1,723,000	2,190,000	2,063,638	
United States:	1,982,000	2,221,000	2,214,000	1,990,000	2,433,000	2,312,175	-5%
North Dakota:	19.42%	20.04%	20.78%	21.61%	27.13%	21.65%	
Acreage Percentage:	86%	87%	87%	87%	90%	89%	

The values in blue are calculated estimates. Harvested acres for 2023 are an estimate based upon the ratio of the most recent 5 years (2018 – 2022) average harvested acres as a percent of average planted acres for each state for the same 5 year time period. This is an estimate of harvested acres in an effort to provide a perspective of area harvested relative to the most recent 5 year average for each individual NBGA member state, as well as nationally. This estimate indicates that, on average, North Dakota could potentially harvest approximately 500,621 acres of barley in 2023, an estimated decrease of 24% from the actual harvested area of 660,000 acres in 2022. Estimated harvested acres for Montana are essentially flat relative to 2022 crop (mathematically at 0% change). Idaho could anticipate harvesting 563,971 acres, a 4% estimated increase from 2022. Nationally, barley area harvested could decline by 5% based upon the ratio of planted to harvested area over the past 5 years.

Production

The following table summarizes barley production for the National Barley Growers Association member states (source: USDA-NASS Crop Production Summary for 2022, January 12, 2023).

							Percent
Production (Bushels)							Change
							From
STATE	2018	2019	2020	2021	2022	2023	2022 to 2023
Idaho	53,530,000	55,120,000	55,000,000	44,500,000	59,540,000	58,088,971	-2%
Maryland	1,680,000	1,445,000	1,533,000	1,350,000	1,312,000	1,461,209	11%
Minnesota	5,092,000	3,685,000	2,350,000	1,870,000	3,960,000	2,676,785	-32%
Montana	33,600,000	44,840,000	49,770,000	24,700,000	34,440,000	43,298,225	26%
North Dakota	28,490,000	32,040,000	28,980,000	21,930,000	48,180,000	33,341,338	-31%
Oregon	1,378,000	2,730,000	2,160,000	672,000	1,045,000	1,454,163	39%
Washington	4,891,000	5,880,000	6,390,000	2,660,000	5,040,000	4,998,400	-1%
Totals:	128,661,000	145,740,000	146,183,000	97,682,000	153,517,000	145,319,091	
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United States	153,587,000	172,499,000	170,813,000	120,090,000	174,333,000	168,511,286	-3%
North Dakota:	22.14%	21.98%	19.82%	22.45%	31.38%	22.94%	
NBGA Member Percentage:	84%	84%	86%	81%	88%	86%	

The values in blue are calculated estimates. The production estimates were calculated by multiplying the 5 year (2018 – 2022) average yield in bushels per acre for each state by the estimated harvested acres in the previous table. Yield data is from USDA-NASS. The bushel per acre yield data utilized to calculate an average yield is found in the following table:

	Barley Yield in Bushels Per Acre					
						5 Year
STATE	2018	2019	2020	2021	2022	Average
Idaho	101	104	110	89	111	103
Maryland	70	85	73	75	82	77
Minnesota	76	67	47	55	72	63
Montana	56	59	63	38	41	51
North Dakota	74	72	63	51	73	67
Oregon	53	78	72	32	55	58
Washington	73	70	90	38	84	71
National:	73	70	90	38	84	71

Delayed planting, coupled with hot weather during the growing season, can result in reduced yields. Consequently, the calculated estimate for North Dakota indicates a scenario in which barley production could decline 31% in 2023 (although it is simply too early to know for certain). This provides a scenario for consideration given the current situation with likely delays in planting.

Nationally, barley production could decline 3% in 2023, depending upon growing season conditions. It is far too early to forecast production with any real certainty since the barley crop has not yet been planted. However, a worst case scenario of this nature can provide a perspective into the importance of inventory procurement strategies that result in buyers carrying additional inventory as opposed to purchasing open market barley production in a year when supplies may be limited.

Barley Stocks

Barley stocks have increased from 2022 to 2023, largely due to increased area planted and higher yields in 2022 as compared to the drought conditions of 2021. The USDA-NASS Grain Stocks report on March 31, 2023 provided the following information on U. S. barley stocks for the NBGA member states.

		March 1, 2022			March 1, 2023		
	On	Off	Total all	On	Off	Total all	% Change in Total
STATE	Farm	Farm	Positions	Farm	Farm	Positions	From 2022 - 2023
Idaho	10,500,000	16,370,000	26,870,000	9,800,000	15,753,000	25,553,000	-5%
Maryland	NA	74,000	NA	NA	NA	NA	NA
Minnesota	250,000	NA	NA	1,000,000	2,416,000	3,416,000	NA
Montana	6,500,000	7,470,000	13,970,000	8,500,000	7,008,000	15,508,000	11%
North Dakota	4,100,000	10,023,000	14,123,000	12,500,000	14,033,000	26,533,000	88%
Oregon	80,000	362,000	442,000	430,000	428,000	858,000	94%
Washington	490,000	1,547,000	2,037,000	500,000	2,287,000	2,787,000	37%
NATIONAL	25,250,000	47,591,000	72,841,000	36,680,000	52,045,000	88,725,000	22%

Barley stocks in all positions for North Dakota increased 88% from 14,123,000 bushels in March 2022 to 26,533,000 bushels in March 2023. It is estimated that the majority of the barley inventory is already priced, and is waiting for delivery to either malting operations or pet food processors.

Nationally, barley stocks in all positions increased 22% from 72,841,000 bushels in March 2022 to 88,725,000 bushels in March 2023, thus indicating higher yields and production relative to the drought conditions of 2021 have assisted in rebuilding inventory.

Drought Situation

The barley producing states (namely Idaho, Montana, and North Dakota) are exhibiting a variety of drought conditions. North Dakota ranges from abnormally dry to severe drought, with most of the state in a moderate drought category. Although currently dry, winter snowfall and spring rain in 2023 can result in adequate soil moisture conditions by spring planting. Current snow cover conditions in North Dakota indicate adequate moisture for spring planting, assuming the snow melt results in adequate levels of infiltration and lower levels of runoff. In general, abnormally dry to moderate drought conditions may subside once snow melting is complete (source for maps: <u>https://droughtmonitor.unl.edu/</u>).

North Dakota



Map released: Thurs. March 30, 2023

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Data valid: March 28, 2023 at 8 a.m. EDT

Intensity



D4 (Exceptional Drought)

Authors

United States and Puerto Rico Author(s): Curtis Riganti, National Drought Mitigation Center

Pacific Islands and Virgin Islands Author(s): Ahira Sanchez-Lugo, NOAA/NCEI

Montana

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United States and Puerto Rico Author(s): Curtis Riganti, National Drought Mitigation Center

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Idaho



Both Idaho and Montana continue to exhibit abnormally dry to moderate drought. The 8 to 14 day precipitation outlook indicates near normal to below normal precipitation for the major barley producing states. Below normal precipitation may be beneficial for North Dakota to facilitate snow melt (map source: https://www.cpc.ncep.noaa.gov/products/predictions/814day/).



Barley Prices – Current Situation and Contract Prices for 2023

The reduced level of open market supplies of barley stimulated increased prices in the spot cash market for barley in the malt, feed, and pet food categories in May and June of 2022, with prices declining in July, August, and September as the 2022 barley crop was harvested. Supplies continue to be limited, and thus prices have remained relatively stable. At this writing, spot cash prices paid to farmers in North Dakota are in the following price areas:

- Malting barley: USD \$4.50 per bushel \$6.00 per bushel.
- Feed barley: USD \$4.50 per bushel to \$5.00 per bushel.
- Pet food barley: USD \$5.00 per bushel to \$6.00 per bushel.

Between 20% and 30% of North Dakota barley production is sold into pet food markets (barley is a primary ingredient in manufacturing dog and cat food). Pet food buyers implemented direct contracting programs with farmers in the 2022 crop year in an effort to secure a supply base, which required malting barley buyers to offer competitive contract prices for the 2022 crop year. This trend appears to be continuing into 2023.

Malting and brewing companies initiated malt barley contract price offerings for 2023 crop to growers in September 2022, with prices ranging from \$7.50 per bushel to \$8.00 per bushel. Competing crops (e. g. corn, soybeans, wheat, canola, flax etc.) continue to demonstrate competitive prices for the 2023 crop year in an effort to attract grower interest and production.

Summary Comments and Outlook

In general, the 2022 crop year resulted in higher barley yields, greater production, and improved quality for barley relative to the 2021 crop year. Harvest conditions were favorable for barley, thus resulting in timely field operations. Contract price offerings for 2023 are available for malting barley and pet food barley, and are competitive with other crop enterprises. Barley is essentially an ingredient that is procured via grower production contracts relative to specifications outlined by the buyer. Malting barley buyers and pet food buyers utilize specifications in barley production contracts in an effort to secure consistent quality for their ingredient requirements.

It is too early to determine the quantity of barley production for the 2023 crop year, as the barley crop has not yet been planted. Numerous environmental factors can positively and negatively impact crop production. For North Dakota, the reduction in area planted to barley implies less production for 2023, however, the exact impact will not be known until harvest.

For Additional Information

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