

MONTANA BARLEY



MONTANA

In the following pages you will find information on the Montana wheat industry, as well as an analysis of the current crop. This industry book has been created to allow our customers to have the most thorough and up to date information available. The following pages will show regional analysis of hard red winter wheat, hard red spring wheat, and durum for each part of the state. Included in this information is kernel quality, milling, dough, and baking analysis, and varietal information for each region.

Along with this industry book, we also have many tools and resources available on our website <http://wbc.agr.mt.gov>.

Thank you so much for visiting Montana and being such a huge part of one of the biggest industries in the state. Your influence has helped shape Montana agriculture, and allows us to keep improving to maintain the highest quality wheat in the world.



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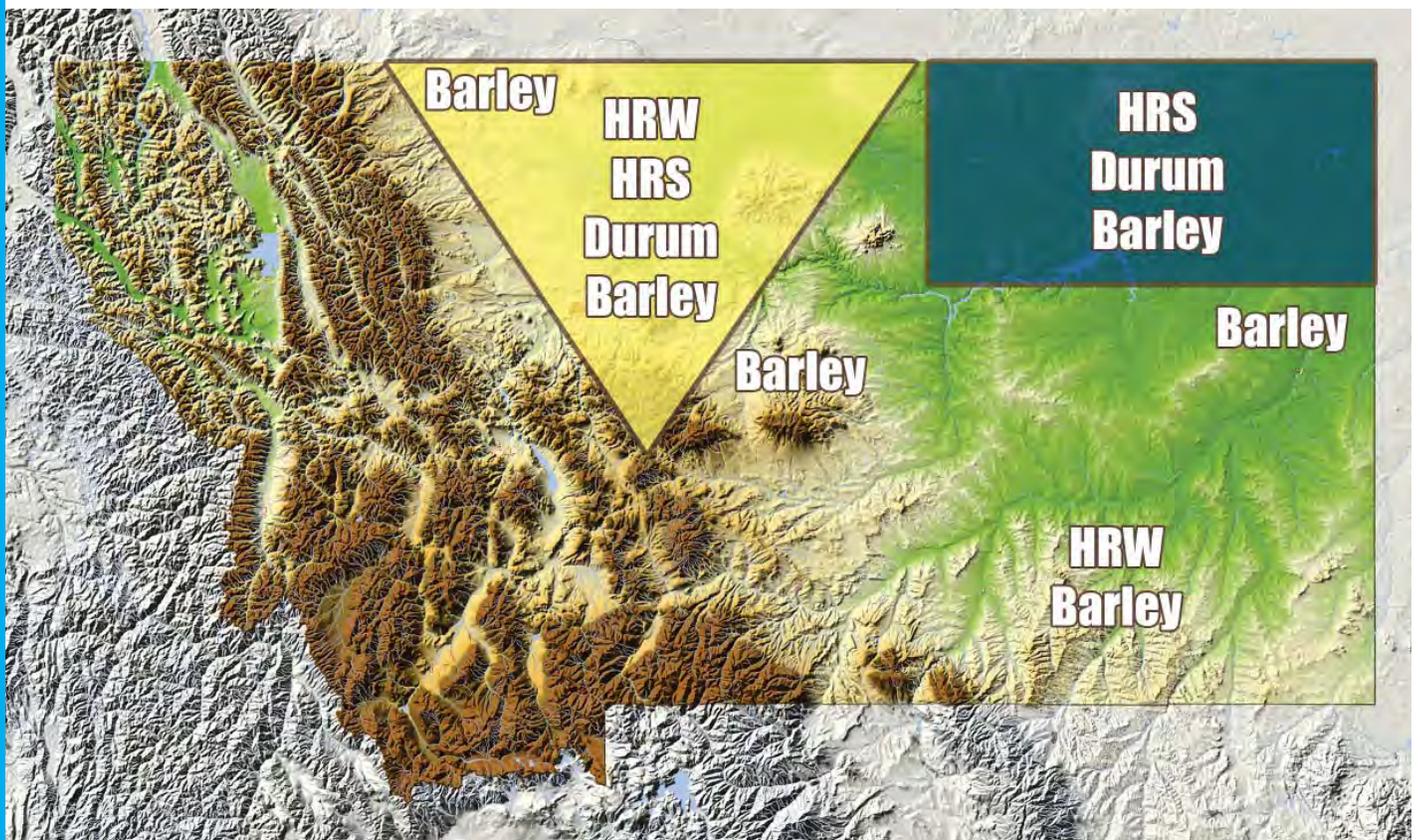


Montana Wheat and Barley Committee Chairman Chris Kolstad (second from right) representing the Montana grains overseas

Crop Quality

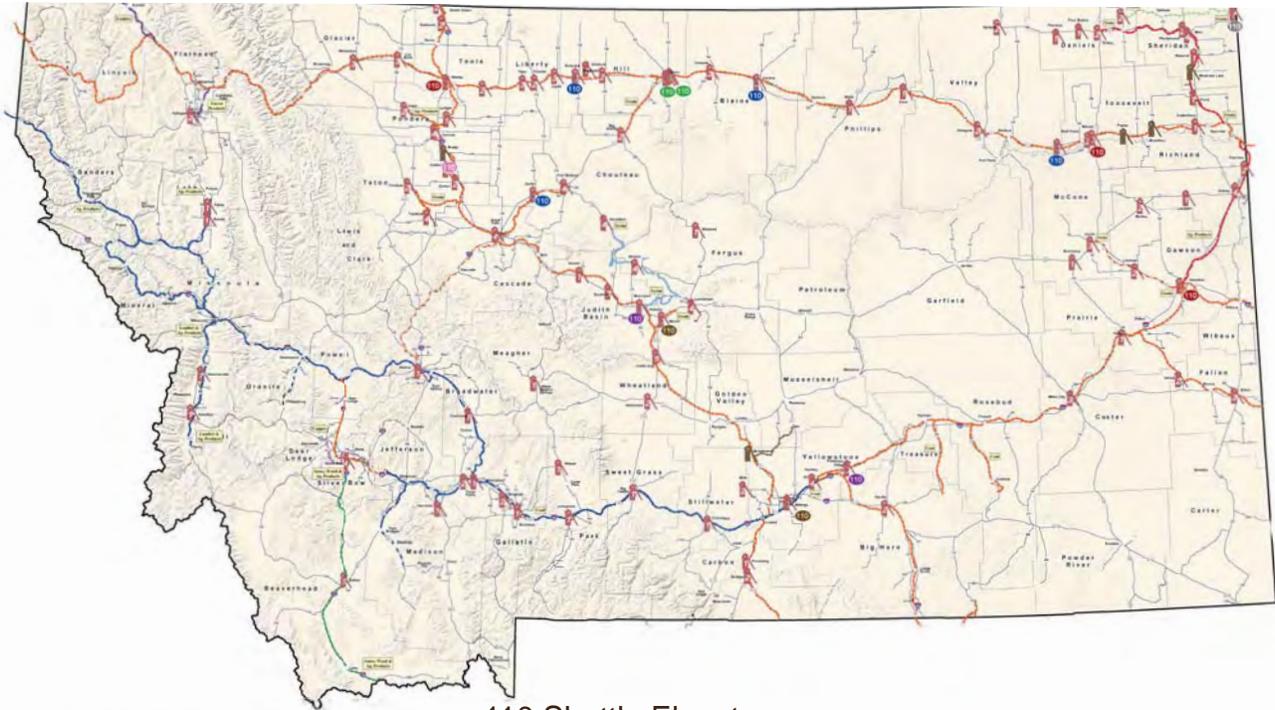
2013 was a very interesting and unusual year for Montana wheat. Untimely moisture in the spring led to two different planting seasons. Some producers were able to get in the field and plant early, while precipitation forced other areas of the state to plant late. This led to a very long harvest season, and rain during this harvest created some inconsistency in the 2013 crop. There is some protein available, but it will be very important to buy early, as the high protein will not last. Although protein is lower, overall the 2013 crop appears to be sound for milling and baking.

2014 planting intentions show all wheat acres at 5.65 million, a 4% increase over 2013. Winter wheat acres are up, and spring wheat is slightly down. Barley planted acres are 900,000.

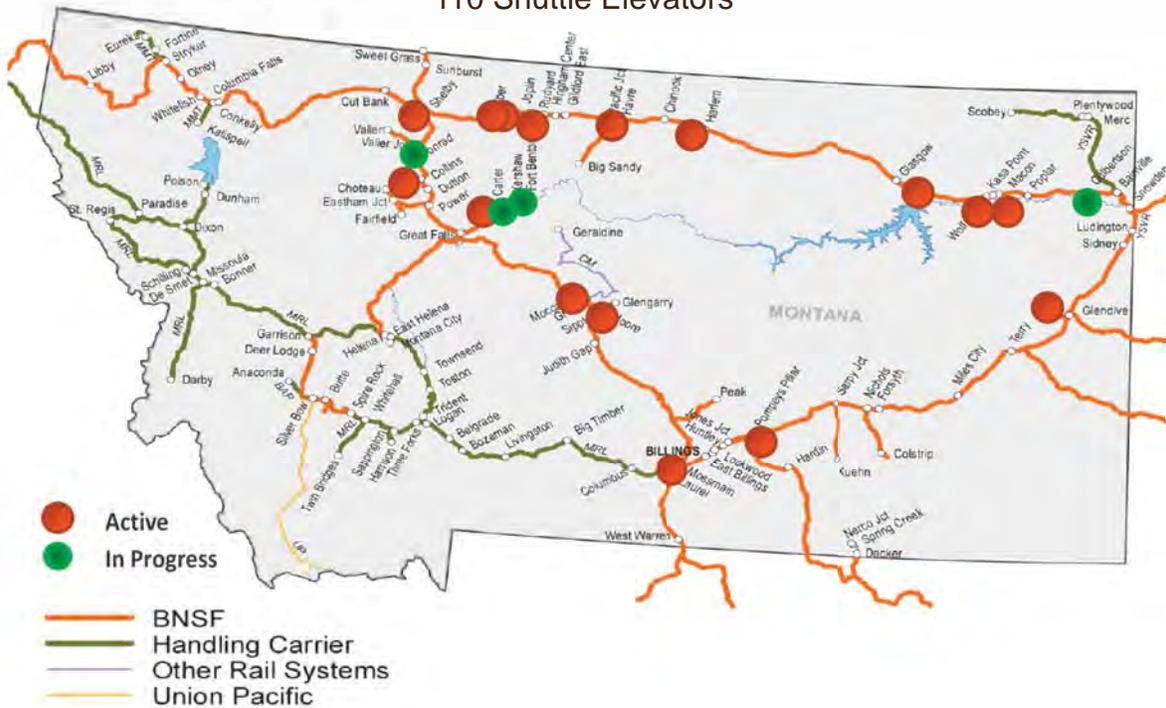


Transportation

Montana Elevators



110 Shuttle Elevators



Barley

(bushels, acres)

Year	Montana				United States			
	Planted (1000 acres)	Harvested (1000 acres)	Yield (bu/ac)	Production (1000 bu)	Planted (1000 acres)	Harvested (1000 acres)	Yield (bu/ac)	Production (1000 bu)
1958	1,680	1,583	34.0	53,822	16,150	14,791	32.3	477,368
1959	1,938	1,874	27.5	51,535	16,766	14,869	28.3	420,203
1960	1,820	1,721	23.5	40,444	15,527	13,856	31.0	429,005
1961	1,801	1,465	18.0	26,370	15,623	12,806	30.6	392,441
1962	1,909	1,802	30.5	54,961	14,380	12,214	35.0	427,726
1963	1,642	1,514	29.5	44,663	13,452	11,236	35.0	392,833
1964	1,626	1,529	32.5	49,692	11,652	10,277	37.6	386,059
1965	1,366	1,300	38.5	50,050	10,123	9,166	42.9	393,055
1966	1,735	1,651	38.5	63,564	11,184	10,250	38.3	392,108
1967	1,319	1,255	29.5	37,022	10,077	9,230	40.5	373,745
1968	1,200	1,155	37.0	42,735	10,486	9,732	43.8	426,151
1969	1,680	1,617	42.0	67,914	10,291	9,557	44.7	427,055
1970	1,800	1,714	38.0	65,132	10,476	9,712	42.8	416,091
1971	1,740	1,680	35.0	58,800	11,061	10,104	45.8	462,423
1972	1,820	1,707	37.5	64,013	10,567	9,645	43.7	421,719
1973	2,100	2,000	30.0	60,000	11,045	10,295	40.5	417,434
1974	1,370	1,250	30.0	37,500	8,713	7,930	37.7	298,669
1975	1,360	1,300	39.0	50,700	9,373	8,617	44.0	379,162
1976	1,220	1,170	44.5	52,065	9,301	8,439	45.4	383,007
1977	1,550	1,430	36.5	52,195	10,778	9,728	44.0	427,784
1978	1,420	1,300	43.0	55,900	9,989	9,248	49.2	454,759
1979	1,100	1,040	39.0	40,560	8,116	7,527	50.9	383,201
1980	1,180	1,050	42.0	44,100	8,320	7,260	49.7	361,135
1981	1,400	1,320	43.0	56,760	9,618	9,038	52.4	473,512
1982	1,650	1,560	49.0	76,440	9,549	9,013	57.2	515,935
1983	1,950	1,850	42.0	77,700	10,411	9,721	52.3	508,269
1984	2,320	2,110	28.0	59,080	11,934	11,218	53.3	598,034
1985	2,350	1,500	20.0	30,000	13,139	11,591	50.9	590,213
1986	2,400	2,180	39.0	85,020	13,024	11,974	50.8	608,532
1987	2,300	2,100	45.0	94,500	10,929	9,957	52.4	521,499
1988	1,800	1,250	24.0	30,000	9,831	7,636	38.0	289,994
1989	1,700	1,600	43.0	68,800	9,125	8,313	48.6	404,203
1990	1,600	1,380	41.0	56,580	8,221	7,529	56.1	422,196
1991	1,800	1,650	52.0	85,800	8,941	8,413	55.2	464,326
1992	1,350	1,200	44.0	52,800	7,762	7,285	62.5	455,090
1993	1,300	1,100	58.0	63,800	7,786	6,753	58.9	398,041
1994	1,300	1,200	44.0	52,800	7,159	6,667	56.2	374,862
1995	1,300	1,200	52.0	62,400	6,689	6,279	57.2	359,376
1996	1,250	1,150	43.0	49,450	7,094	6,707	58.5	392,433
1997	1,250	1,150	53.0	60,950	6,706	6,198	58.1	359,878
1998	1,350	1,200	48.0	57,600	6,337	5,864	60.0	352,125
1999	1,300	1,150	50.0	57,500	5,194	4,734	59.2	280,292
2000	1,250	950	40.0	38,000	5,864	5,213	61.1	318,728
2001	1,100	720	41.0	29,520	4,967	4,289	58.2	249,420
2002	1,180	930	42.0	39,060	5,008	4,123	55.0	226,906
2003	1,150	850	40.0	34,000	5,348	4,727	58.9	278,283
2004	1,000	830	59.0	48,970	4,527	4,021	69.6	279,743
2005	900	700	56.0	39,200	3,875	3,269	64.8	211,896
2006	770	620	50.0	31,000	3,452	2,951	61.0	180,165
2007	900	720	44.0	31,680	4,018	3,502	60.0	210,110
2008	860	740	51.0	37,740	4,246	3,779	63.6	240,193
2009	870	720	57.0	41,040	3,567	3,113	73.0	227,323
2010	760	620	62.0	38,440	2,872	2,465	73.1	180,268
2011	700	620	50.0	31,000	2,559	2,239	69.6	155,780
2012	900	790	53.0	41,870	3,637	3,244	67.9	220,284
2013	990	830	54.0	44,820	3,480	3,000	71.7	215,078
2014 ¹	900				3,165			
Averages ³	1,443	1,305	41.1	51,332	8,658	7,969	51.0	376,201

¹ Preliminary; * Estimates; ³ Averages include years since 1955 (not shown)

Barley

(metric tons, hectares)

Year	Montana				United States			
	Planted (1000 hct)	Harvested (1000 hct)	Yield (mt/hct)	Production (1000 mt)	Planted (1000 hct)	Harvested (1000 hct)	Yield (mt/hct)	Production (1000 mt)
1958	680	641	2.3	1,464	6,536	5,986	2.2	12,984
1959	784	758	1.8	1,402	6,785	6,017	1.9	11,430
1960	737	696	1.6	1,100	6,284	5,608	2.1	11,669
1961	729	593	1.2	717	6,323	5,183	2.1	10,674
1962	773	729	2.1	1,495	5,820	4,943	2.4	11,634
1963	665	613	2.0	1,215	5,444	4,547	2.4	10,685
1964	658	619	2.2	1,352	4,716	4,159	2.5	10,501
1965	553	526	2.6	1,361	4,097	3,709	2.9	10,691
1966	702	668	2.6	1,729	4,526	4,148	2.6	10,665
1967	534	508	2.0	1,007	4,078	3,735	2.7	10,166
1968	486	467	2.5	1,162	4,244	3,939	2.9	11,591
1969	680	654	2.8	1,847	4,165	3,868	3.0	11,616
1970	728	694	2.6	1,772	4,240	3,930	2.9	11,318
1971	704	680	2.4	1,599	4,476	4,089	3.1	12,578
1972	737	691	2.5	1,741	4,276	3,903	2.9	11,471
1973	850	809	2.0	1,632	4,470	4,166	2.7	11,354
1974	554	506	2.0	1,020	3,526	3,209	2.5	8,124
1975	550	526	2.6	1,379	3,793	3,487	3.0	10,313
1976	494	473	3.0	1,416	3,764	3,415	3.1	10,418
1977	627	579	2.5	1,420	4,362	3,937	3.0	11,636
1978	575	526	2.9	1,520	4,043	3,743	3.3	12,369
1979	445	421	2.6	1,103	3,285	3,046	3.4	10,423
1980	478	425	2.8	1,200	3,367	2,938	3.3	9,823
1981	567	534	2.9	1,544	3,892	3,658	3.5	12,880
1982	668	631	3.3	2,079	3,864	3,648	3.8	14,033
1983	789	749	2.8	2,113	4,213	3,934	3.5	13,825
1984	939	854	1.9	1,607	4,830	4,540	3.6	16,267
1985	951	607	1.3	816	5,317	4,691	3.4	16,054
1986	971	882	2.6	2,313	5,271	4,846	3.4	16,552
1987	931	850	3.0	2,570	4,423	4,030	3.5	14,185
1988	728	506	1.6	816	3,979	3,090	2.6	7,888
1989	688	648	2.9	1,871	3,693	3,364	3.3	10,994
1990	648	558	2.8	1,539	3,327	3,047	3.8	11,484
1991	728	668	3.5	2,334	3,618	3,405	3.7	12,630
1992	546	486	3.0	1,436	3,141	2,948	4.2	12,378
1993	526	445	3.9	1,735	3,151	2,733	4.0	10,827
1994	526	486	3.0	1,436	2,897	2,698	3.8	10,196
1995	526	486	3.5	1,697	2,707	2,541	3.8	9,775
1996	506	465	2.9	1,345	2,871	2,714	3.9	10,674
1997	506	465	3.6	1,658	2,714	2,508	3.9	9,789
1998	546	486	3.2	1,567	2,565	2,373	4.0	9,578
1999	526	465	3.4	1,564	2,102	1,916	4.0	7,624
2000	506	384	2.7	1,034	2,373	2,110	4.1	8,669
2001	445	291	2.8	803	2,010	1,736	3.9	6,784
2002	478	376	2.8	1,062	2,027	1,669	3.7	6,172
2003	465	344	2.7	925	2,164	1,913	4.0	7,569
2004	405	336	4.0	1,332	1,832	1,627	4.7	7,609
2005	364	283	3.8	1,066	1,568	1,323	4.4	5,764
2006	312	251	3.4	843	1,397	1,194	4.1	4,900
2007	364	291	3.0	862	1,626	1,417	4.0	5,715
2008	348	299	3.4	1,027	1,718	1,529	4.3	6,533
2009	352	291	3.8	1,116	1,444	1,260	4.9	6,183
2010	308	251	4.2	1,046	1,162	998	4.9	4,903
2011	283	251	3.4	843	1,036	906	4.7	4,237
2012	364	320	3.6	1,139	1,472	1,313	4.6	5,992
2013	401	336	3.6	1,219	1,408	1,214	4.8	5,850
2014 ¹	364				1,281			
Averages ³	584	529	3	1,378	3,648	3,353	3	10,277

Preliminary; * Estimates; ³ Averages include years since 1955 (not shown)

Montana Barley Quality

The **Northwest** region consists of **3** counties. This region grows **2-rowed dryland barley**. This region generally contains about **34% of Montana's overall barley crop**. In 2012, the top varieties in this region were: Haybet, Haxby, and Lavina.



	2010	2011	2012	2013	Average
<u>Production Data</u>					
Bushels produced (1,000 bu)	11458	10663			11061
Average Yield bu/ac	57.60	46.90			52.25
<u>Malt Barley Kernel Data 2-Rowed</u>					
Moisture Content (%)	12.80	9.90	10.20	10.70	10.90
Test Weight (lb/bu)	50.10	49.60	48.90	49.30	49.48
Test Weight (kg/hl)	64.40	63.80	62.90	63.50	63.65
1000 Kernel Weight (g)	46.30	42.50	40.30	43.20	43.08
Protein (%)	11.00	11.20	11.40	11.20	11.20
Color	3.40	1.30	2.00	3.00	2.43
Plump %	92.10	84.50	83.00	88.00	86.90

The **West** region consists of **3** counties. This region grows both **2-rowed dryland and irrigated barley**. This region generally contains about **22% of Montana's overall barley crop**. In 2012, the top varieties in this region were: AC Metcalfe, Haybet, Hocket, Haxby, and Lavina.



	2010	2011	2012	2013	Average
<u>Production Data</u>					
Bushels produced (1,000 bu)	7614	6803			7209
Average Yield bu/ac	77.20	57.40			67.30
<u>Malt Barley Kernel Data 2-Rowed</u>					
Moisture Content (%)	13.30	11.20	10.00	9.90	11.10
Test Weight (lb/bu)	49.90	49.70	48.80	48.60	49.25
Test Weight (kg/hl)	64.20	64.00	62.80	62.60	63.40
1000 Kernel Weight (g)	46.30	42.00	40.70	43.30	43.08
Protein (%)	11.60	12.00	12.70	12.10	12.10
Color	3.20	1.40	2.00	3.00	2.40
Plump %	91.50	82.90	80.00	89.00	85.85

The **Central** region consists of **2** counties. This region grows both **2-rowed dryland and irrigated barley**. This region generally contains about **3% of Montana's overall barley crop**. In 2013, the top varieties in this region were: AC Metcalfe, Haxby, and Hocket.



	2010	2011	2012	2013	Average
<u>Production Data</u>					
Bushels produced (1,000 bu)	1777	764			1305
Average Yield bu/ac	45.50	28.10			37.20
<u>Malt Barley Kernel Data 2-Rowed</u>					
Moisture Content (%)	12.70	8.20	8.40	9.20	9.63
Test Weight (lb/bu)	49.20	48.40	48.60	53.60	49.95
Test Weight (kg/hl)	63.40	62.30	62.50	69.00	64.30
1000 Kernel Weight (g)	43.10	37.90	39.20	45.70	41.48
Protein (%)	10.50	11.90	12.00	11.80	11.55
Color	3.00	1.50	1.00	3.00	2.13
Plump %	89.40	81.70	80.00	95.00	86.53

For more data and information, contact our office at wbc@mt.gov or 406.761.7732

Updated 10/8/2012

Montana Barley Quality

The ***Northeast** region consists of 4 counties. This region grows **6-rowed dryland barley**. This region generally contains about **2% of Montana's overall barley crop**. In 2013, the top varieties in this region were: Haybet, Tradition, and Haxby.



	2010	2011	2012*	2013*	Average
Production Data					
Bushels produced (1,000 bu)	462	439*			661
Average Yield bu/ac	53.70	25.6*			49.25
Malt Barley Kernel Data 6-Rowed Barley					
Moisture Content (%)	13.20	12.20	11.30	12.00	12.18
Test Weight (lb/bu)	46.00	43.90	46.80	47.30	46.00
Test Weight (kg/hl)	59.20	56.50	60.20	60.90	59.20
1000 Kernel Weight (g)	34.60	37.00	38.50	40.10	37.55
Protein (%)	9.70	13.20	12.40	11.30	11.65
Color	4.00	4.50	4.00	6.00	4.63
Plump %	91.00	81.50	83.00	87.00	85.63

*The East and Northeast samples were combined in 2012 to create a larger composite

The ***East** region consists of 2 counties. This region grows **2-rowed irrigated barley**. This region generally contains about **5% of Montana's overall barley crop**. In 2013, the top varieties in this region were: Haybet, Tradition, and Haxby.



	2010	2011	2012*	2013*	Average
Production Data					
Bushels produced (1,000 bu)	1757	1669*			1853
Average Yield bu/ac	62.70	41.6*			58.85
Malt Barley Kernel Data 2-Rowed Barley					
Moisture Content (%)	12.60	14.20	11.30	12.00	12.53
Test Weight (lb/bu)	49.30	45.30	46.80	47.30	47.18
Test Weight (kg/hl)	63.40	58.30	60.20	60.90	60.70
1000 Kernel Weight (g)	46.80	39.90	38.50	40.10	41.33
Protein (%)	10.60	12.60	12.40	11.30	11.73
Color	4.80	5.50	4.00	6.00	5.08
Plump %	89.10	83.80	83.00	87.00	85.73

*The East and Northeast samples were combined in 2012 to create a larger composite

The **South** region consists of 3 counties. This region grows both **2-rowed irrigated and dryland barley**. This region generally contains about **6% of Montana's overall barley crop**. In 2013, the top varieties in this region were: Haybet, Moravian 115, and Conrad.



	2010	2011	2012	2013	Average
Production Data					
Bushels produced (1,000 bu)	3456	1977			2962
Average Yield bu/ac	90.20	69.90			83.47
Malt Barley Kernel Data 2-Rowed Barley					
Moisture Content (%)	11.10	10.90	9.90	10.90	10.70
Test Weight (lb/bu)	48.40	46.20	47.30	45.60	46.88
Test Weight (kg/hl)	62.30	59.50	60.90	58.70	60.35
1000 Kernel Weight (g)	42.70	39.30	39.20	39.00	40.05
Protein (%)	10.00	11.70	10.20	10.90	10.70
Color	4.40	3.90	2.00	4.00	3.58
Plump %	84.80	77.40	88.00	83.00	83.30

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Updated 10/8/2012