



MONTANA 2023 WHEAT VARIETIES

HIGHLIGHTS

This report provides the results of the wheat portion of the 2023 Wheat and Barley Variety Survey, conducted by the National Agricultural Statistics Service, Mountain Regional Office, USDA. The survey was funded by the Montana Wheat and Barley Committee. Access to this report is available for free or online at www.nass.usda.gov/mt. Thank you to each person who supplied data and made this report possible.

All variety acreage numbers in this publication are based on survey averages. Survey respondents totaled 2,094 with 1,812 usable reports for both wheat and barley. Usable, positive spring wheat reports totaled 727. Usable, positive reports for winter wheat totaled 620, and Durum wheat reports totaled 149. At the district level, the number of reports for minor varieties is generally limited. Thus, yearly fluctuations in the district variety acreage may be the result of sample variation.

Total acreage of all wheat seeded in Montana for 2023 is estimated at 5.40 million acres, down from 5.46 million acres planted in 2022. Montana is ranked fourth in all wheat planted acreage in the United States, with 10.8 percent of the 49.81 million acres planted.

Vida is once again the leading spring wheat variety in Montana for 2023. Vida accounts for 22.5 percent of the 2.80 million acres of spring wheat planted in 2023. Reeder ranks second with 11.7 percent of the spring wheat acreage. Dagmar represents 9.0 percent of the spring wheat planted, and ranks third. SY Longmire ranked fourth, with 8.8 percent of spring wheat planted. Lanning accounts for 4.4 percent of the spring wheat acres and ranks fifth. These top five varieties account for 56.4 percent of the spring wheat planted in 2023. Montana continues to rank second in spring wheat acreage in the United States, with 24.7 percent of the spring wheat planted in 2023.

Warhorse is once again the leading winter wheat variety planted in Montana for 2023. Warhorse accounts for 18.7 percent of the 1.9 million acres of winter wheat planted. Bobcat accounts for 15.7 percent of winter wheat planted, and ranks second. Keldin ranks third, with 11.4 percent of winter wheat acres planted. Yellowstone ranks fourth, and represents 8.7 percent of acres planted.

Brawl CL Plus ranks fifth with 4.9 percent of acres. These five varieties account for 59.4 percent of the winter wheat planted for 2023. Montana ranks fifth in winter wheat planted acreage in the United States with 5.2 percent of the 36.8 million acres planted.

Alzada is the leading Durum wheat variety in Montana during 2023. Alzada accounts for 18.5 percent of the 650,000 acres planted. Divide ranks second with 16.8 percent of the Durum wheat acres planted. ND Riveland ranks third with 15.3 percent of the Durum wheat acres planted. Brigade represents 10.4 percent of the Durum wheat and ranks fourth. Transcend accounts for 8.5 percent of Durum wheat and ranks fifth. These top varieties account for 69.5 percent of the Durum wheat acreage in Montana for 2023. Montana continues to rank second in Durum wheat planted acreage in the United States with 35.3 percent of the nation's estimated 1.48 million acres planted in 2023.

SPRING WHEAT

Vida, for a third year, is the leading spring wheat variety planted in 2023. Montana producers seeded 22.5 percent of the State's acres to Vida this year. Vida was derived from a cross of Scholar and Reeder in 1998 by the Montana Agricultural Experiment Station, and was released in 2005. It is a high yielding hard red spring with moderate resistance to leaf and stripe rust. Vida is a semi-dwarf with white glumes and awns; kernels are red ovate with rounded cheeks. Good milling and baking characteristics have made Vida a popular variety each year.

Reeder is the second most common spring wheat variety planted this year, representing 11.7 percent of the acreage seeded in Montana. Reeder was developed by the North Dakota Agricultural Experiment Station, and was released in 1999. It is an awned, semi-dwarf, hard red spring wheat. Reeder is resistant to upper Midwest stem and leaf rust. It was developed by crossing a relative of Stoa and germplasm from Brazil. Its stay-green trait allows for a longer head-filling period, and in turn higher yield.

Dagmar ranks as the third most common spring wheat variety planted for 2023, with 9.0 percent of planted acreage. Dagmar is a solid stemmed hard red spring wheat, and shows strong resistance to wheat stem sawfly. It has excellent dryland yields, as well as high gluten strength.

SY Longmire is the fourth most common spring wheat variety planted this year, covering 8.8 percent of the seeded acreage. SY Longmire is a hard red spring wheat with high yield and good protein potential. It is sawfly tolerant with a solid stem, medium maturity, and medium to short plant height. It also shows good resistance to stem and leaf rust. It is especially adapted to North Dakota, Montana, and northern Minnesota.

Lanning is the fifth most common spring wheat variety in 2023, accounting for 4.4 percent of Montana’s seeded spring wheat. Lanning was developed by Montana State University, and was released in 2016. Lanning has a high grain protein. It is a hollow-stemmed wheat with a high grain yield. This variety combines the traits of Glenn and MT0747. This variety also has a stay green trait for continued growth and increased yield.

Montana Top 5 Spring Wheat Varieties	
Variety	Percent of Acres Planted
Vida	22.5
Reeder	11.7
Dagmar	9.0
SY Longmire	8.8
Lanning	4.4

WINTER WHEAT

Warhorse is the most common winter wheat variety for a third year, planted on 18.7 percent of Montana’s 2023 winter wheat acreage. Warhorse is a solid-stemmed, hard red winter wheat released in 2013 by the Montana Agricultural Experiment Station. Warhorse has medium maturity, and medium short, semi-dwarf height. Warhorse yield is similar to Judee, while test weight and protein are above average. Warhorse is resistant to both stem and stripe rust. Warhorse has acceptable mill and bake qualities.

Bobcat is the second most common winter wheat variety for 2023. It accounts for 15.7 percent of the State’s planted winter wheat acreage. Bobcat was developed by the Montana Agricultural Experiment Station, and was released in 2019. Bobcat is a hard red winter wheat with a solid stem and improved yield potential. Bobcat is marked by medium to late maturity, and is an awned, white-glumed, and semi-dwarf variety. Bobcat was the top performing line where sawfly cutting has occurred. It has above average test weight and average protein. It is resistant to prevalent races of stripe and stem rust, but is susceptible to leaf rust. It is also winter hardy.

Keldin ranks third in winter wheat acres for 2023 and accounts for 11.4 percent of planted winter wheat acreage. Keldin is a medium late, semi-dwarf hard red winter wheat. It has excellent yield and a strong stem. It also has good resistance to disease. It was developed by Pflanzenzucht Oberlimpurg of Germany and licensed to WestBred.

Yellowstone is the fourth most common winter wheat variety planted in Montana. It accounts for 8.7 percent of the total winter wheat acreage in 2023. Yellowstone was released in 2005, and developed by the Montana Agricultural Experiment Station. Yellowstone is marked by high yields, medium test weight, height, maturity, and grain protein. It has good milling, and excellent baking qualities. It shows resistance to stripe rust, but is susceptible to stem rust. It is also winter hardy.

Brawl CL Plus ranks fifth for winter wheat planted in Montana, representing 4.9 percent of the total acreage. Brawl CL Plus is a hard red winter wheat developed by the Colorado Agricultural Experiment Station, and was released in 2011. It is tolerant of the Imazamox herbicide (Beyond), resistant to strip rust, has high test weight, and superior milling and bread baking qualities. It is suited for dryland, and irrigated production in the west central Great Plains.

Montana Top 5 Winter Wheat Varieties	
Variety	Percent of Acres Planted
Warhorse	18.7
Bobcat	15.7
Keldin	11.4
Yellowstone	8.7
Brawl CL Plus	4.9

DURUM WHEAT

Alzada is ranked as the most common Durum variety, representing 18.5 percent of Montana’s total Durum wheat acreage planted. Alzada was developed by WestBred, LLC in Bozeman, Montana, and was first released for commercial planting in 2004. The variety has competitive yields, along with excellent straw strength and good sawfly tolerance. Alzada has a high test weight, protein content, and demonstrates good scores for semolina color and gluten strength.

Divide is the second most common wheat variety in 2023, representing 16.8 percent of Durum wheat acreage planted. Released in 2005 by NDSU, Divide has above average height, strong straw strength, medium maturity, and good overall quality.

ND Riveland ranks as the third most popular variety for 2023, with 15.3 percent of the total Durum wheat planted acreage. Released in 2017 by NDSU, ND Riveland has medium height, good straw strength, medium maturity, and good overall quality.

AC Brigade is the fourth most popular Durum wheat variety for 2023, with 10.4 percent of acres planted in Durum. Brigade was developed for the production areas of the Canadian prairies. It has good yield, strong straw strength, high gluten strength, and good Fusarium head blight resistance.

AC Transcend is the fifth most popular Durum wheat variety for 2023, and represents 8.5 percent of the Durum wheat acreage planted. Transcend is characterized by high yield, protein concentration, strong straw strength, and improved Fusarium head blight resistance.

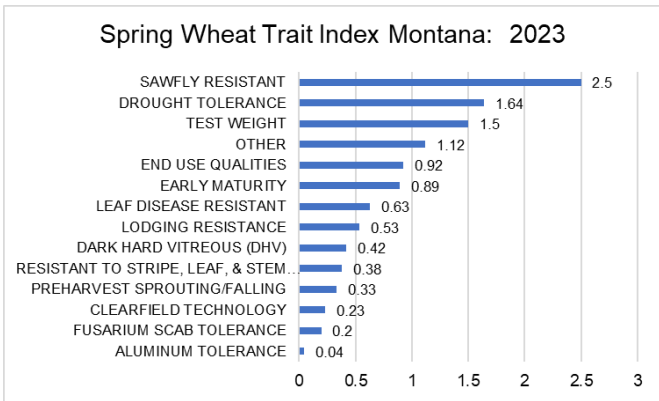
Montana Top 5 Durum Wheat Varieties	
Variety	Percent of Acres Planted
Alzada	18.5
Divide	16.8
ND Riveland	15.3
AC Brigade	10.4
AC Transcend	8.5

IMPORTANCE OF WHEAT VARIETY TRAITS

Wheat growers were asked to rank traits in order of importance when choosing a wheat variety for 2023, where 5.00 is the highest and 1.00 is the lowest.

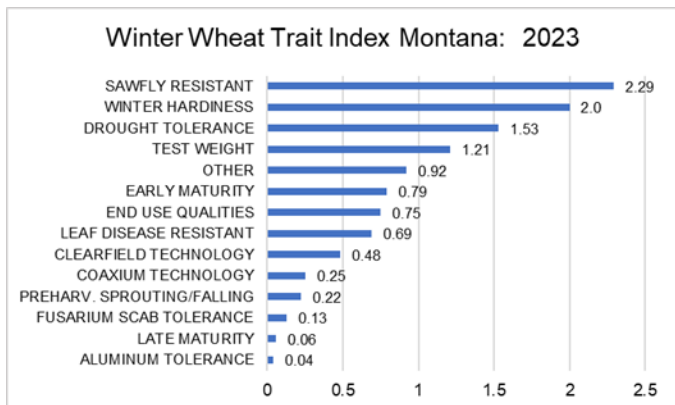
SPRING WHEAT

Sawfly resistance was the highest ranked trait of importance when choosing a spring wheat variety, garnering an average of 2.50 points out of 5.00. Drought tolerance was second, with an average of 1.64 points. Test weight was the third most important trait, averaging 1.50 points. Other was in fourth place, with an average of 1.12 points. End use qualities was the fifth-ranked trait, at 0.92 points. These, and all other traits listed on the survey, are illustrated on the following chart.



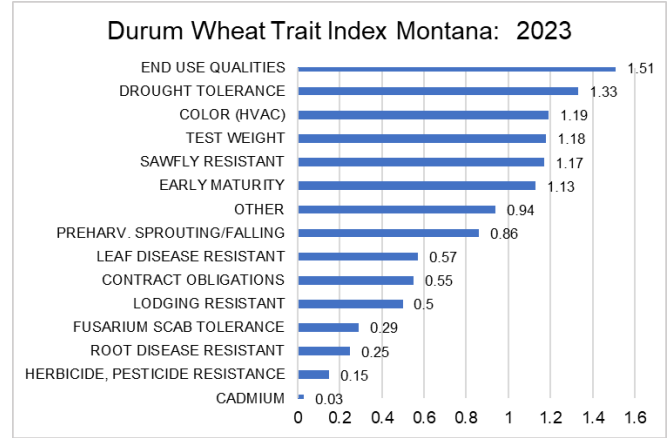
WINTER WHEAT

Sawfly resistance was again the highest ranked trait of importance for winter wheat, with an average of 2.29 points out of 5.00. Winter wheat hardiness ranked second, with an average of 2.0 points. Drought tolerance was ranked third at an average 1.53 points. Test weight and other were ranked fourth and fifth, with averages of 1.21 and 0.92 points, respectively.



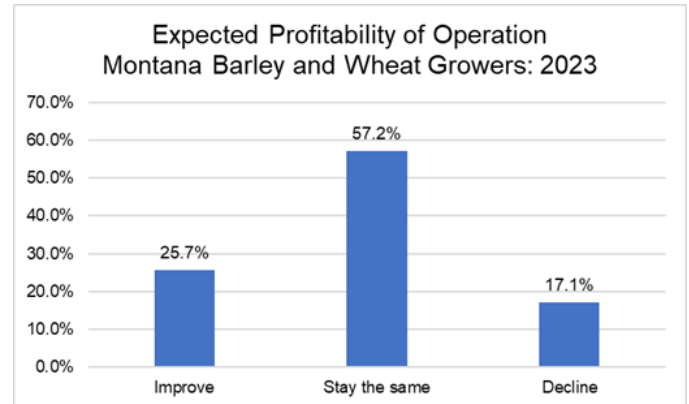
DURUM WHEAT

End use qualities was the highest ranked trait of importance for Durum wheat, averaging 1.51 points out of 5.00. Drought tolerance was second, with an average of 1.33 points. In third place, Color (HVAC) had an average of 1.19 points. Test weight and sawfly resistance were ranked fourth and fifth, with averages of 1.18 and 1.17 points, respectively.



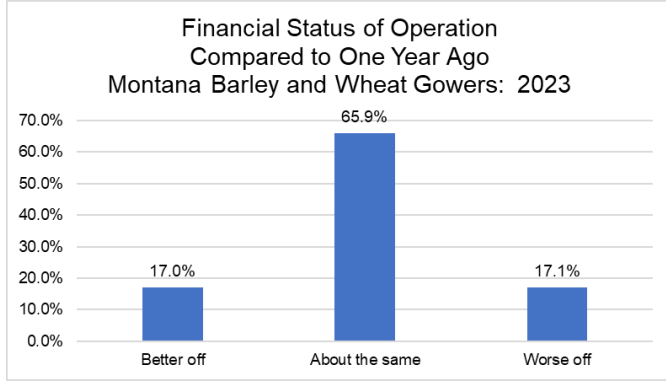
PROFITABILITY OF OPERATION

Growers of both barley and wheat were asked about their expectations concerning the profitability of their operation over the next twelve months. Farmers who reported the profitability of their operation would be better off was 25.7 percent. No change in profitability of their operation was expected by 57.2 percent of farmers. Farmers who expected their operation would decline stood at 17.1 percent.



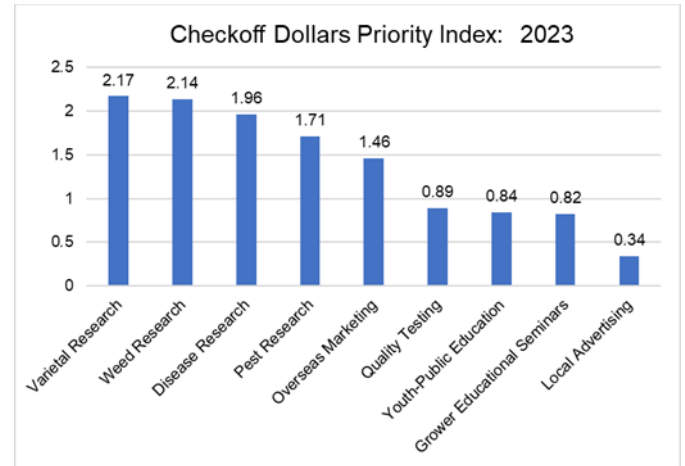
FINANCIAL COMPARISON TO ONE YEAR AGO

Growers of both barley and wheat were asked about the financial status of their operation compared to one year ago. Farmers who reported their operation was better off stood at 17.0 percent. Farmers who reported their operation was about the same came to 65.9 percent, and those who said their operation was worse off financially stood at 17.1 percent.



INVESTMENT OF CHECK-OFF DOLLARS

Lastly, farmers were asked how they would like their check-off dollars invested with 5.00 as the highest, and 1.00 as the lowest choice. Varietal Research was the highest ranked answer, with an average of 2.17 out of 5.00 points. Weed Research was ranked a close second, with 2.14 out of 5.00 points. Disease Research was ranked third most important, with an average of 1.96 points. Pest Research was ranked fourth, averaging 1.71 points, and Overseas Marketing was fifth, at 1.46 points. These, and all answers with rankings, are illustrated on the chart below.



Montana's Agricultural Districts



Spring Wheat: Reported Percent Planted by District and Variety – Montana: 2023

Variety	District 10 Northwest	District 20 North Central	District 30 Northeast	District 50 Central	District 70 Southwest	District 80 South Central	District 90 Southeast	State Total
	%	%	%	%	%	%	%	%
Vida	--	31.3	14.6	27.8	--	--	--	22.5
Reeder	--	--	25.3	--	--	--	21.2	11.7
Dagmar	--	13.5	4.1	22.7	--	--	--	9.0
SY Longmire	--	10.3	8.3	--	--	--	--	8.8
Lanning	--	6.3	3.0	--	--	--	--	4.4
Corbin	--	8.8	--	--	--	--	--	4.2
WB Gunnison	--	6.5	--	--	--	--	--	3.2
Duclair	--	5.5	--	--	--	--	--	2.7
SY Ingmar	--	0.9	4.2	11.4	--	--	--	2.6
Barlow	--	--	5.0	--	--	--	--	2.4
Choteau	--	3.3	--	--	--	--	--	1.7
SY McCloud	--	--	3.7	--	--	--	--	1.7
AP Smith	--	--	3.2	--	--	--	--	1.6
SY Soren	--	--	3.4	--	--	--	--	1.5
WB 9668	58.0	0.1	--	8.3	21.7	24.4	--	1.4
Rockford	--	--	2.4	--	--	--	--	1.3
Mott	--	--	2.1	--	--	--	--	1.0
WB 9879 CLP	--	1.0	--	--	6.8	20.7	--	0.9
Elgin	--	--	1.6	--	--	--	--	0.7
Brennan	--	--	1.3	--	--	--	--	0.7
Fortuna	--	1.1	--	--	--	--	--	0.6
Trigger	--	--	0.7	--	--	--	--	0.5
Rocker	--	0.8	--	--	--	--	--	0.4
McNeal	--	--	0.6	--	--	--	--	0.3
WB 9719	--	0.3	--	--	--	--	--	0.3
Egan	--	--	--	--	--	--	--	0.2
Bolles	--	--	0.4	--	--	--	--	0.2
Other, Unknown ¹	42.0	10.3	16.1	29.8	71.5	54.9	78.8	13.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(--) No data, minor amount reported, or withheld to avoid disclosing data for individual operations.

¹) Other, Unknown includes AAC Concord, Ambush, AP Gunsmoke CL2, Conan, Glenn, Lang, Oneal, Other, and Unknown varieties.

Winter Wheat: Reported Percent Planted by District and Variety – Montana: 2023

Variety	District 10 Northwest	District 20 North Central	District 30 Northeast	District 50 Central	District 70 Southwest	District 80 South Central	District 90 Southeast	State Total
	%	%	%	%	%	%	%	%
Warhorse	--	26.4	--	10.3	--	--	--	18.7
Bobcat	--	22.9	--	5.9	--	--	--	15.7
Keldin	74.8	12.0	--	9.0	12.8	14.2	--	11.4
Yellowstone	--	9.1	21.1	7.9	--	3.1	8.6	8.7
Brawl CL Plus	--	2.1	--	14.7	--	4.1	--	4.9
Battle AX	--	4.2	--	7.4	--	--	--	4.7
Standclear CLP	--	3.0	--	4.9	--	--	--	4.6
SY Monument	--	3.4	--	6.2	--	--	--	3.9
Fourosix	--	--	13.2	5.9	--	--	--	2.2
Judee	--	2.6	--	2.0	--	--	--	2.0
SY Clearstone 2CL	--	1.4	--	--	24.4	3.0	--	1.7
WB 4619	--	0.5	--	--	--	--	--	1.2
Loma	--	1.8	--	--	--	--	--	1.1
AP 18 AX	--	0.7	--	--	--	4.7	--	0.9
SY 517 CL2	--	--	--	--	--	4.7	--	0.8
Ramsay	--	0.8	--	--	--	2.2	--	0.7
Ray	--	0.3	--	1.9	--	--	1.9	0.7
Decade	--	0.5	--	--	--	--	--	0.6
Northern	--	--	--	2.8	--	--	--	0.6
CDC Falcon	--	--	--	--	--	--	--	0.5
Willow Creek	--	0.1	1.7	0.7	--	1.2	2.5	0.5
Rampart	--	--	--	--	--	--	--	0.5
Fortify SF	--	0.2	--	--	--	3.2	--	0.4
Other, Unknown ¹	25.2	34.4	64.0	30.7	62.8	59.6	87.0	13.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(--) No data, minor amount reported; withheld to avoid disclosing data for individual operations.

¹⁾ Other, Unknown includes AAC Wildfire, Flathead, Jagalene, Morgan, SY Wolf, SY Wolverine, WB 4792, Other, and Unknown varieties.

Durum Wheat: Reported Percent Planted by District and Variety – Montana: 2023

Variety	District 10 Northwest	District 20 North Central	District 30 Northeast	District 50 Central	District 70 Southwest	District 80 South Central	District 90 Southeast	State Total
	%	%	%	%	%	%	%	%
Alzada	--	96.3	--	--	--	--	--	18.5
Divide	--	--	20.8	--	--	--	--	16.8
ND Riveland	--	--	18.9	--	--	--	--	15.3
Brigade	--	--	12.9	--	--	--	--	10.4
Transcend	--	--	10.1	--	--	--	--	8.5
Joppa	--	--	7.6	--	--	--	--	6.4
Tioga	--	--	2.8	--	--	--	--	2.2
Mountrail	--	--	1.8	--	--	--	--	1.4
Grenora	--	--	--	--	--	--	--	0.2
Other, Unknown ¹	--	3.7	25.1	--	--	--	--	20.3
Total	--	100.0	100.0	100.0	--	--	--	100.0

(--) No data, minor amount reported, or withheld to avoid disclosing data for individual operations.

¹⁾ Other, Unknown includes AC Strongfield, Carpio, Kyle, Lebsack, Luster, Other, and Unknown varieties.