Small Grain Quick Facts: Hard Red Spring Wheat Jason Cook and Hwa young Heo, Montana State University (Updated January 2023) http://plantsciences.montana.edu/foundationseed/quickfacts

VIDA - Vida is a high yielding semi dwarf hard red spring wheat variety released by Montana State University in 2005. Vida performs well in dryland environments and has moderate wheat stem sawfly resistance. Grain protein content and end-use quality are average.

DUCLAIR - Duclair is a solid stem, early maturing semidwarf hard red spring wheat variety released by Montana State University in 2011. Duclair has good yield potential and above average wheat stem sawfly resistance. Duclair exhibits above average grain protein content, good end-use quality and has tolerance to high aluminum soils.

LANNING – Lanning is a hollow stem, early maturing, semi dwarf hard red spring wheat variety released by Montana State University in 2016 due to good yield potential in dryland environments and superior end-use quality. Lanning has higher grain protein content and stronger gluten strength than Vida. Lanning is tolerant to high aluminum soils but susceptible to wheat stem sawfly.

DAGMAR – Dagmar is a semi-solid, high yielding, high protein, early maturing semi-dwarf hard red spring wheat variety released by Montana State University in 2019. Dagmar has performed very well in dryland environments, has excellent end-use quality and good resistance to wheat stem sawfly.

MT SIDNEY – MT Sidney is a hollow-stem, high yielding semi dwarf hard red spring wheat variety released by Montana State University in 2021. MT Sidney is moderately resistant to FHB (Scab), has 0.5% higher grain protein content than Vida, above average TWT and average end-use quality. MT Sidney is susceptible to wheat stem sawfly.

MT 1809 – Released by the Montana Agricultural Experiment Station in 2023, MT 1809 is an unnamed variety that has high yield potential, good grain protein content and aluminum tolerance. MT 1809 is resistant to common races of stem rust, has moderate resistance to foliar disease and scab (fusarium head blight). MT 1809 is moderately susceptible to wheat stem sawfly and has average end-use quality. Registered seed will be available for this line in 2024.

All varieties are covered by PVP and research fees are collected for CHOTEAU, VIDA, DUCLAIR, LANNING, DAGMAR and MT SIDNEY.

Spring Wheat Variety Performance Evaluations: <u>http://plantsciences.montana.edu/crops</u>

VARIETY	KALISP	BOZEMAN					
	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN)	HEADING (JULIAN DAYS)	HEADING DATE	STEM SOLIDNESS (5-25)
MT 1809	<u>65.6</u>	60.0	14.4	29.4	179	28-Jun	12.3
DAGMAR	64.4	61.3	14.7	29.5	<u>176</u>	<u>25-Jun</u>	18.3
VIDA	63.1	60.5	13.9	29.6	179	28-Jun	13.1
SY ROCKFORD	62.8	59.8	14.4	28.9	180	29-Jun	8.9
WB 9719	61.7	<u>63.4</u>	14.1	27.7	180	29-Jun	7.3
MT SIDNEY	61.5	61.2	14.5	29.4	177	26-Jun	9.8
LANNING	60.4	60.4	14.9	28.1	177	26-Jun	8.1
SY LONGMIRE	60.3	61.6	14.5	28.4	178	27-Jun	20.1
DUCLAIR	60.0	59.9	14.5	29.4	<u>176</u>	<u>25-Jun</u>	19.7
SY 611 CL2	59.3	62.0	14.5	26.7	178	27-Jun	9.5
WB 9879 CLP	59.2	60.5	14.7	28.7	179	28-Jun	<u>23.0</u>
SY INGMAR	59.1	61.4	<u>15.0</u>	28.1	179	28-Jun	9.0
REEDER	59.0	61.1	14.6	30.1	179	28-Jun	7.7
WB GUNNISON	58.2	61.3	13.8	27.8	178	27-Jun	12.9
CHOTEAU	58.1	60.3	14.5	28.9	178	27-Jun	21.8
CORBIN	57.7	61.1	14.5	29.0	177	26-Jun	13.4
McNEAL	56.4	60.1	14.4	<u>30.3</u>	180	29-Jun	8.1
LSD (0.05)	3.4	0.4	0.3	0.7	0.5	-	1.7
N=LOC*YEARS	30	29	30	29	24	24	4

Table 1. Agronomic parameters for selected varieties in the advanced spring wheat nursery, 2019-2022

VARIETY	Kalispell High Rainfall	Bozeman Dryland	Huntley Dryland	Moccasin Dryland	Conrad Dryland	Havre Dryland	Fort Benton Dryland	Sidney Dryland	Sidney Irrigated	Dry Locs. (7)	All Locs. (9)
MT 1809	76.0	<u>87.9</u>	69.2	<u>42.7</u>	52.9	<u>49.0</u>	41.2	<u>61.5</u>	89.1	<u>58.8</u>	<u>65.6</u>
DAGMAR	74.2	83.7	68.6	40.5	<u>58.5</u>	47.5	38.5	58.3	88.4	57.7	64.4
VIDA	71.2	85.1	70.5	41.4	51.5	46.1	38.7	58.9	87.7	56.6	63.1
SY ROCKFORD	76.7	86.5	68.9	41.8	46.0	42.0	30.8	58.8	87.5	55.0	62.8
WB 9719	69.4	84.2	66.9	33.2	54.2	42.9	39.8	58.9	89.2	54.7	61.7
MT SIDNEY	<u>80.8</u>	80.2	70.0	36.9	47.1	43.4	34.9	57.9	84.4	53.1	61.5
LANNING	69.2	80.7	63.4	<u>42.7</u>	47.3	41.4	36.6	55.0	86.4	53.4	60.4
SY LONGMIRE	74.7	75.2	67.5	33.9	51.7	43.7	39.2	52.4	90.3	51.4	60.3
DUCLAIR	79.0	80.6	69.8	37.4	46.3	43.6	41.8	51.2	82.1	51.8	60.0
SY 611 CL2	72.7	74.1	64.6	35.8	46.7	39.6	29.1	55.2	<u>91.2</u>	50.3	59.3
WB 9879 CLP	68.4	77.6	64.1	37.3	54.3	44.5	40.6	53.1	79.2	53.4	59.2
SY INGMAR	70.4	79.7	64.1	33.5	46.9	40.9	29.7	55.7	86.9	51.3	59.1
REEDER	69.4	76.9	61.9	36.1	46.1	41.0	35.4	57.4	85.8	51.5	59.0
WB GUNNISON	73.1	72.9	60.8	38.9	51.9	44.8	37.9	48.3	77.2	51.4	58.2
CHOTEAU	67.3	76.6	64.9	36.4	48.2	43.0	39.7	55.7	79.8	52.0	58.1
CORBIN	73.7	75.2	60.5	36.4	49.2	42.1	34.6	49.9	77.3	50.6	57.7
McNEAL	69.0	69.6	64.0	38.4	43.7	40.5	37.4	53.2	80.2	49.1	56.4
LSD (0.05)	ns	4.9	ns	5.7	ns	3.8	5.1	4.9	6.7	3.6	3.4
N=LOC*YEARS	3	4	2	4	2	4	3	4	4	23	30

Table 3. Milling and baking quality for selected varieties in the advanced spring wheat nursery, 2019-2021

VARIETY	WHOLE GRAIN		FLOUR ANALYSIS		M	IXOGRAPH	BAKE		
	PROTEIN (%)	HARDNESS (%)	YIELD (%)	PROTEIN (%)	TOLERANCE	TIME (MIN.)	ABSORP. (%)	TIME (MIN.)	LOAF VOLUME (CC)
CHOTEAU	14.6	70.4	70.8	13.5	1.6	3.0	68.1	5.6	1121
CORBIN	14.2	68.9	71.0	12.8	2.2	4.7	65.8	10.4	1031
DAGMAR	14.8	73.3	70.3	13.4	3.4	3.7	68.3	6.9	1112
DUCLAIR	14.5	68.4	70.3	13.1	3.2	3.7	67.3	7.7	1139
EGAN	<u>15.7</u>	76.7	68.6	<u>14.4</u>	4.2	<u>7.7</u>	<u>70.8</u>	<u>15.7</u>	<u>1244</u>
LANNING	15.0	71.3	70.4	14.0	2.8	3.8	69.5	8.5	1187
McNEAL	14.4	83.3	69.1	13.1	<u>4.3</u>	6.3	69.9	13.9	1168
MT 1809	14.7	78.8	71.1	13.2	2.1	2.7	67.2	4.7	1132
MT SIDNEY	14.4	76.0	71.0	13.2	1.7	4.1	67.0	9.5	1114
REEDER	14.6	72.9	69.4	13.4	2.0	3.0	65.6	5.1	1109
SY 611 CL2	14.8	<u>86.9</u>	68.5	13.2	2.9	3.2	68.0	6.0	1050
SY INGMAR	14.8	78.4	71.3	13.9	3.4	4.9	68.1	11.6	1181
SY LONGMIRE	14.7	75.3	70.7	13.5	3.7	4.6	68.7	9.1	1188
SY McCLOUD	15.0	76.7	69.9	13.7	3.2	4.4	70.0	9.6	1097
SY ROCKFORD	14.3	71.9	71.0	13.0	3.2	3.5	66.3	6.2	1109
VIDA	13.9	77.7	<u>72.2</u>	12.6	1.8	3.1	66.8	6.1	1104
WB 9590	14.7	70.7	71.0	13.6	2.9	4.3	67.6	8.6	1057
WB 9719	14.1	77.1	70.9	13.0	3.8	4.9	67.6	11.0	1031
WB 9879 CLP	15.0	67.8	68.8	13.7	1.9	2.3	65.5	3.2	1043
WB GUNNISON	13.9	77.2	68.4	12.5	4.2	6.4	66.1	13.7	1142
LSD (0.05)	0.5	4.4	0.8	0.5	0.8	1.0	2.3	2.4	57
N=LOC*YEARS	N=9	N=9	N=9	N=9	N=9	N=9	N=9	N=9	N=9