## Small Grain Quick Facts: Hard Red Spring Wheat

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VIDA - Vida was derived from the cross of Scholar/Reeder and is a semi dwarf hard red spring wheat with white glumes and awns. Vida is moderately resistance to leaf and stripe rust but is moderately susceptible to stem rust. Vida has good milling and baking characteristics.

**REEDER** - Developed by the North Dakota Agricultural Experiment Station from the cross IAS#4/H567.71//Stoa/3/ND674. Reeder was released in 1999. Reeder is an awned, semidwarf hard red spring wheat. Reeder yields well especially in northeastern Montana and western North Dakota. Reeder has resistance to the upper Midwest races of stem and leaf rust. Milling and baking qualities are acceptable.

**DUCLAIR** - Duclair was derived from a cross of Choteau//Reeder/Scholar. Duclair is a solid stem semidwarf hard red spring wheat with white glumes and awns. Compared with Choteau, Duclair is one day earlier in heading date and one inch taller. Duclair has slightly fewer solid stems than Choteau and generally has more solid stems than Fortuna. Duclair is resistant to the prevalent races of stem rust in Montana. Duclair exhibits good milling and baking traits.

**LANNING** – Lanning was released by the Montana Agricultural Experiment Station due to its yield potential in dryland areas of Montana and its superior end-use quality. Lanning was derived from the cross 'Glenn'/MT0747 by single seed descent beginning in the F<sub>2</sub> generation. Lanning has grain yield similar to 'Vida' with higher grain protein and stronger gluten characteristics than Vida. Lanning is hollow-stemmed, suggesting that it will be susceptible to damage caused by the wheat stem sawfly.

**NS PRESSER CLP** – NS Presser CLP hard red spring wheat (*Triticum aestivum* L.) was developed by the Montana Agricultural Experiment Station and released in 2016 to the commercial partner Northern Seed LLC. NS Presser CLP is a two-gene Clearfield wheat intended for use with the selective imidazolinone herbicide imazamox (Beyond, BASF Corp.). NS Presser CLP was developed by a single backcross of alleles for resistance to the imidazolinone herbicide class into the recurrent parent 'Vida'. Yield trials at sites in Montana showed that NS Presser CLP has yield potential under dryland production similar to Vida.

**DAGMAR** – Dagmar has similar grain yield potential to 'Vida' (PI 642366), the most widely grown cultivar in Montana. Stems of Dagmar are more solid than those of Vida, suggesting increased resistance to the wheat stem sawfly. Dagmar has higher grain protein and stronger gluten than Vida.

All varieties are covered by PVP and research fees are collected for (VIDA, DUCLAIR, LANNING, and DAGMAR).

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

VARIETY	KALISPELL, BOZEMAN, HUNTLEY, MOCCASIN, CONRAD, HAVRE, SIDNEY(DRY), SIDNEY(IRRI), & FORT BENTON								
	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN)	HEADING (JULIAN DAYS)	HEADING DATE	STEM SOLIDNESS (5-25)		
SY INGMAR	60.0	61.1	15.3	29.0	174	JUNE 23	9.5		
SY ROCKFORD	63.8	59.9	14.4	29.8	176	JUNE 25	8.5		
WB GUNNISON	59.5	61.4	13.9	28.9	174	JUNE 23	11.9		
CORBIN	59.3	61.3	14.7	29.9	<u>172</u>	JUNE 21	12.1		
FORTUNA	54.1	60.4	14.5	<u>36.0</u>	175	JUNE 24	14.9		
LCS REBEL	62.8	62.0	15.0	32.3	173	JUNE 22	8.8		
REEDER	62.1	60.9	14.9	31.3	175	JUNE 24	7.3		
MCNEAL	60.5	59.8	14.7	31.5	176	JUNE 25	7.8		
CHOTEAU	59.8	60.3	15.1	29.2	175	JUNE 24	22.6		
VIDA	66.0	60.2	14.2	29.8	175	JUNE 24	11.8		
DUCLAIR	63.6	60.2	14.5	30.0	<u>172</u>	JUNE 21	19.8		
EGAN	59.2	59.4	<u>16.1</u>	30.4	176	JUNE 25	7.7		
LANNING	62.8	60.5	15.2	29.1	173	JUNE 22	7.2		
NS PRESSER CLP	<u>66.4</u>	59.3	14.5	32.0	178	JUNE 27	8.0		
DAGMAR	<u>66.4</u>	61.3	15.0	30.5	<u>172</u>	JUNE 21	16.8		
WB 9590	61.1	61.3	15.0	26.6	173	JUNE 22	8.7		
WB 9719	65.6	<u>63.1</u>	14.3	28.5	176	JUNE 25	7.3		
WB 9879 CLP	61.8	60.7	15.0	29.6	175	JUNE 24	23.2		
ALUM	62.2	61.2	14.4	30.2	175	JUNE 24	9.1		
LSD (0.05)	3.6	0.6	0.4	0.8	1.0	-	1.8		
N=LOC*YEARS	N=29	N=29	N=29	N=29	N=28	N=28	N=4		

Table 2. Grain yield (bu/ac) for selected varieties in	n advanced spring wheat nursery across	the Montana (9 environments), 2017-2020

VARIETY	Kalispell Dryland	Bozeman Dryland	Huntley Dryland	Moccasin Dryland	Conrad Dryland	Havre Dryland	Sidney Dryland	Sidney Irrigated	Fort Benton	Overall 9 Environments
SY INGMAR	50.8	84.9	78.1	44.7	57.6	43.5	52.3	95.6	32.2	60.0
SY ROCKFORD	51.2	92.4	86.0	<u>50.9</u>	55.1	45.7	55.7	97.9	39.7	63.8
WB GUNNISON	49.7	80.6	72.6	49.6	64.1	44.3	47.1	81.9	45.6	59.5
CORBIN	49.8	81.7	77.5	45.3	59.7	41.7	46.7	88.4	43.1	59.3
FORTUNA	45.4	72.9	72.9	38.7	56.3	38.3	43.8	72.3	46.3	54.1
LCS REBEL	58.4	89.4	79.0	48.3	60.6	42.0	50.9	95.3	41.3	62.8
REEDER	50.4	84.8	76.8	45.3	61.1	44.4	56.4	94.7	45.1	62.1
MCNEAL	52.7	75.5	78.4	45.8	56.0	44.2	53.3	89.5	48.8	60.5
CHOTEAU	44.9	81.0	79.5	45.1	60.0	43.0	50.2	86.2	48.0	59.8
VIDA	55.0	<u>94.3</u>	85.8	48.7	62.3	<u>49.3</u>	57.6	97.2	44.2	66.0
DUCLAIR	54.1	88.1	83.2	44.9	62.7	43.6	49.7	89.9	<u>56.1</u>	63.6
EGAN	47.8	77.4	80.6	42.7	54.9	43.8	47.8	83.7	53.7	59.2
LANNING	50.8	85.5	79.0	49.9	61.4	45.0	51.9	96.1	46.0	62.8
NS PRESSER CLP	<u>60.5</u>	89.8	<u>86.6</u>	48.4	66.4	45.8	<u>58.4</u>	90.7	51.3	<u>66.4</u>
DAGMAR	56.0	89.6	85.2	49.5	<u>74.0</u>	48.4	54.0	96.6	44.2	<u>66.4</u>
WB 9590	51.2	88.3	73.5	48.2	57.3	41.7	52.8	94.5	42.6	61.1
WB 9719	47.3	91.8	80.3	45.0	68.3	47.6	57.4	<u>99.5</u>	53.0	65.6
WB 9879 CLP	48.1	83.0	78.2	46.6	63.3	47.1	50.8	86.5	53.0	61.8
ALUM	51.1	86.9	78.1	45.5	57.1	44.5	54.1	91.1	51.6	62.2
LSD (0.05)	7.5	11.9	ns	4.7	7.2	4.4	ns	6.2	7.4	3.6
N=LOC*YEARS	N=2	N=4	N=3	N=4	N=3	N=4	N=4	N=4	N=1	N=29

## Table 3. Milling and baking quality for selected varieties in the advanced spring wheat nursery, 2017-2019

VARIETY	WHOLE GRAIN		FLOUR ANALYSIS		MIXOGRAPH			BAKE		
	PROTEIN (%)	HARDNESS (%)	YIELD (%)	PROTEIN (%)	TOLERANCE	TIME (MIN.)	ABSORP. (%)	TIME (MIN.)	ABSORP. (%)	LOAF VOLUME (CC)
SY INGMAR	15.7	75.6	72.1	14.6	3.9	6.4	72.5	14.3	82.7	1220
SY ROCKFORD	15.0	71.6	71.2	13.5	3.4	3.6	69.0	6.6	78.8	1121
WB GUNNISON	14.5	75.6	67.9	13.1	4.6	6.7	68.4	14.1	81.0	1132
CORBIN	15.5	65.0	70.4	13.8	2.5	4.9	68.6	12.0	78.8	1100
FORTUNA	15.0	68.9	72.2	13.7	2.5	3.2	66.4	5.5	76.2	1126
LCS REBEL	15.5	72.3	<u>73.4</u>	14.4	3.6	5.0	72.3	12.4	82.4	1164
REEDER	15.5	70.9	69.5	14.0	2.4	3.2	68.2	5.2	77.4	1154
MCNEAL	15.4	<u>84.9</u>	68.4	14.0	<u>5.0</u>	7.8	72.2	14.2	82.7	1259
CHOTEAU	15.7	69.0	70.3	14.4	1.9	3.2	69.6	5.5	79.1	1154
VIDA	14.7	75.6	72.5	13.4	2.3	3.8	68.7	7.0	78.0	1110
DUCLAIR	15.5	67.3	69.9	13.9	3.5	4.4	69.8	7.9	79.6	1208
EGAN	<u>16.7</u>	73.0	68.8	<u>15.4</u>	<u>5.0</u>	<u>9.4</u>	<u>74.4</u>	<u>19.0</u>	<u>84.9</u>	<u>1304</u>
LANNING	15.9	69.9	70.3	14.7	3.0	3.9	71.3	8.4	81.3	1230
NS PRESSER CLP	14.9	68.0	72.4	13.6	1.8	3.9	68.3	8.9	77.5	1028
DAGMAR	15.6	70.4	70.5	14.0	4.1	4.3	71.8	8.1	80.8	1140
WB 9590	15.7	68.6	70.9	14.5	2.8	4.7	71.3	9.9	81.3	1071
WB 9719	14.7	74.7	71.1	13.4	4.0	4.9	69.8	10.3	80.2	1076
WB 9879 CLP	15.6	63.7	68.6	14.2	1.6	2.0	65.2	2.3	73.9	1041
ALUM	15.0	68.4	71.0	13.6	3.4	4.7	68.0	8.8	77.8	1211
LSD (0.05)	0.4	4.5	0.8	0.4	0.8	0.9	2.0	2.1	2.1	44
N=LOC*YEARS	N=8	N=7	N=8	N=8	N=8	N=8	N=8	N=8	N=8	N=8