

Small Grain Quick Facts: Hard Red Spring Wheat
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<http://plantsciences.montana.edu/foundationseed/quickfacts>

CHOTEAU – Choteau was derived from the cross of MT 9401/MT 9328. Choteau is a semidwarf hard red spring wheat with solid stems conferring tolerance to the wheat stem sawfly. Choteau is resistant to the prevalent race of stem rust in Montana. Choteau has good grain protein and acceptable milling and baking quality.

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.

VIDA - Vida was derived from the cross of Scholar/Reeder and is a semidwarf 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.

WB9879CLP - WB9879CLP was derived from the cross of Choteau*3//Choteau/IMI8134 made in 2004 to be used as a two gene Clearfield wheat. WB9879CLP heads about one and a half days later than Choteau while plant height is the same as Choteau. WB9879CLP has solid stems similar to Choteau. WB9879CLP exhibits acceptable milling and baking quality traits similar to Choteau. WB9879CLP is currently licensed to WestBred, a unit of Monsanto.

EGAN - Egan has resistance to the orange wheat blossom midge (OWBM). Egan has shown good yield potential in northwestern Montana, and has relatively high grain protein content and resistance to stripe rust. Egan should be grown in a blend with a OWBM-susceptible variety (90% Egan – 10% susceptible) to lessen the possibility that the OWBM will overcome the resistance.

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 F₂ 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 (CHOTEAU, DUCLAIR, VIDA, EGAN, LANNING, and DAGMAR).

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

Table 1. Agronomic parameters for selected varieties in the advanced spring wheat nursery, 2016-2019

VARIETY	KALISPELL, BOZEMAN, HUNTLEY, MOCCASIN, CONRAD, HAVRE, SIDNEY(DRY), & SIDNEY(IRRI)						BOZEMAN
	YIELD (bu/ac)	TEST WEIGHT (lb/bu)	PROTEIN (%)	PLANT HEIGHT (inch)	HEADING (JULIAN DAYS)	HEADING DATE	STEM SOLIDNESS (5-25)
SY INGMAR	61.7	61.5	14.9	29.4	174	JUNE 23	9.0
SY Valda	65.3	61.2	14.1	29.3	174	JUNE 23	8.1
SY Rockford	64.3	59.9	14.1	30.2	176	JUNE 25	8.1
WB GUNNISON	60.0	61.2	13.7	28.9	173	JUNE 22	11.4
CORBIN	60.3	61.3	14.4	30.4	172	JUNE 21	11.8
THATCHER	49.8	58.8	14.9	38.5	177	JUNE 26	8.3
FORTUNA	54.3	60.8	14.5	36.2	174	JUNE 23	15.6
REEDER	63.9	61.1	14.7	31.8	174	JUNE 23	7.3
MCNEAL	60.4	59.8	14.5	31.4	175	JUNE 24	7.9
CHOTEAU	59.7	60.4	14.6	29.7	174	JUNE 23	22.1
VIDA	66.7	60.4	14.0	30.4	175	JUNE 24	11.0
DUCLAIR	63.3	60.1	14.3	30.4	172	JUNE 21	19.0
EGAN	59.5	59.5	15.9	30.5	175	JUNE 24	7.7
LANNING	63.2	60.6	14.8	29.5	172	JUNE 21	7.2
NS PRESSER CLP	65.3	59.4	14.0	31.9	177	JUNE 26	8.0
WB9879 CLP	61.0	60.7	14.6	29.8	174	JUNE 23	22.8
ALUM	62.8	61.3	14.1	30.5	174	JUNE 23	9.4
DAGMAR ¹⁾	67.7	61.2	14.8	30.3	172	JUNE 21	15.0
LSD (0.05)	3.2	0.5	0.3	1.0	0.6	-	1.4
N=LOC*YEARS	N=30	N=30	N=30	N=30	N=30	N=30	N=4

1) three year's data ('17-'19)

Table 2. Grain yield (bu/ac) for selected varieties in advanced spring wheat nursery across the Montana (8 environments), 2016-2019

VARIETY	Kalispell Dryland	Bozeman Dryland	Huntley Dryland	Moccasin Dryland	Conrad Dryland	Havre Dryland	Sidney Dryland	Sidney Irrigated	Overall 8 Environments
SY INGMAR	59.2	74.0	78.1	42.3	60.6	39.4	51.8	88.0	61.7
SY Valda	67.2	80.2	80.8	42.4	63.9	39.1	54.5	94.1	65.3
SY Rockford	57.6	78.7	81.4	48.0	59.4	40.5	58.0	90.8	64.3
WB GUNNISON	65.3	72.2	73.7	44.8	64.6	37.5	47.5	74.7	60.0
CORBIN	60.1	72.5	78.4	41.3	61.2	39.1	49.6	80.3	60.3
THATCHER	56.1	58.9	59.4	32.8	47.5	32.9	43.8	66.6	49.8
FORTUNA	60.1	63.8	67.7	35.9	57.6	35.1	45.4	68.4	54.3
REEDER	65.8	75.5	78.5	42.1	61.6	40.1	58.1	89.1	63.9
MCNEAL	64.0	67.3	75.4	42.2	55.5	39.7	54.6	84.7	60.4
CHOTEAU	55.9	72.2	78.7	40.7	60.1	36.1	52.1	82.1	59.7
VIDA	68.7	84.4	82.7	43.7	65.1	43.3	57.3	88.1	66.7
DUCLAIR	66.3	77.2	85.1	41.1	62.0	37.3	51.7	85.7	63.3
EGAN	65.5	67.4	77.6	39.2	57.6	39.8	48.5	80.1	59.5
LANNING	60.0	75.4	78.0	46.6	62.7	40.5	53.2	89.3	63.2
NS PRESSER CLP	71.5	79.2	79.4	44.2	66.9	40.6	58.3	82.0	65.3
WB9879 CLP	56.9	72.5	77.4	42.4	62.4	42.1	51.8	82.1	61.0
ALUM	60.5	74.7	79.4	44.0	59.6	43.0	55.9	84.9	62.8
DAGMAR ¹⁾	56.0	86.4	81.3	48.2	74.0	41.2	57.7	97.0	67.7
LSD (0.05)	ns	8.2	11.0	ns	7.1	4.9	6.3	7.4	3.2
N=LOC*YEARS	N=3	N=4	N=3	N=4	N=4	N=4	N=4	N=4	N=30

1) three year's data ('17-'19)

Table 3. Milling and baking quality for selected varieties in the advanced spring wheat nursery, 2016-2018

VARIETY	WHOLE GRAIN		FLOUR ANALYSIS		MIXOGRAPH			BAKE		
	PROTEIN (%)	HARDNESS (%)	YIELD (%)	PROTEIN (%)	TOLERANCE	TIME (MIN.)	ABSORP. (%)	TIME (MIN.)	ABSORP. (%)	LOAF VOLUME (CC)
SY INGMAR	15.4	75	72.1	14.5	4.3	7.4	73.6	16.6	83.6	1201
SY Valda	15.1	73	71.1	13.5	2.5	4.2	68.8	9.6	78.4	1074
SY Rockford	14.7	73	71.2	13.3	3.1	4.1	70.0	8.5	79.9	1114
WB GUNNISON	14.3	76	68.3	13.1	4.4	7.4	69.4	14.9	80.5	1118
CORBIN	15.1	66	70.4	13.9	2.8	5.4	69.0	13.5	78.9	1080
THATCHER	15.8	75	69.5	14.2	3.5	4.8	68.9	10.7	78.8	1196
FORTUNA	14.9	67	72.2	13.7	2.4	3.3	66.5	6.0	76.4	1127
REEDER	15.2	71	69.8	13.9	2.6	3.3	68.3	6.4	78.0	1158
MCNEAL	15.4	85	68.4	14.1	4.8	8.0	72.0	14.5	81.2	1261
CHOTEAU	15.3	69	70.6	14.1	2.4	3.4	68.8	6.3	78.4	1161
VIDA	14.8	76	72.7	13.6	2.3	3.8	68.4	7.8	78.0	1128
DUCLAIR	15.0	67	70.2	13.8	3.8	4.9	69.1	8.7	78.8	1214
EGAN	16.6	73	69.0	15.3	5.1	8.8	74.4	19.3	84.8	1315
LANNING	15.3	71	70.4	14.2	3.5	4.4	69.6	9.2	80.0	1198
NS PRESSER CLP	14.7	68	72.5	13.4	2.0	3.9	67.6	9.7	76.9	1019
WB9879 CLP	15.2	66	69.1	13.8	1.8	2.1	65.4	2.7	74.3	1033
ALUM	14.9	68	71.3	13.8	3.3	5.5	69.5	10.2	79.4	1183
DAGMAR ¹⁾	15.6	70	70.4	14.2	3.8	4.5	73.0	8.9	82.6	1148
LSD (0.05)	0.6	5.0	0.9	0.6	0.8	1.4	1.9	2.2	1.9	57.0
N=LOC*YEARS	N=8	N=8	N=8	N=8	N=8	N=8	N=8	N=8	N=8	N=8

1) two year's data ('17-'18)