Small Grain Quick Facts: Hard Red Spring Wheat

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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.

NS PRESSER CLP – NS Presser CLP is a high yielding hard red spring wheat Clearfield variety released by Montana State University in 2016 and licensed to Nutrien LLC. NS Presser CLP is a two-gene Clearfield variety intended for use with the selective imidazolinone herbicide imazamox (Beyond, BASF Corp.). It was developed by transferring the imidazolinone herbicide class resistance genes into Vida. Yield trials show NS Presser CLP's yield potential, grain protein content and end-use quality is similar to Vida but is not as resistant 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.

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

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

Table 1. Agronomic parameters for selected varieties in the advanced spring wheat nursery, 2018-2021

VARIETY	KALISPELL, BOZEMAN, HUNTLEY, MOCCASIN, CONRAD, HAVRE, SIDNEY(DRY), and SIDNEY(IRRI)						BOZEMAN
	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN)	HEADING (JULIAN DAYS)	HEADING DATE	STEM SOLIDNESS (5-25)
DAGMAR	**67.1**	61.5	15.3	30.5	**174**	**JUNE 23**	18.5
VIDA	**66.9**	60.5	14.3	30.3	177	JUNE 26	13.0
NS PRESSER CLP	**65.9**	59.4	14.6	**31.9**	179	JUNE 28	8.1
WB 9719	**65.6**	**63.4**	14.4	28.5	178	JUNE 27	7.6
SY ROCKFORD	**65.5**	60.0	14.6	30.0	178	JUNE 27	8.9
MT SIDNEY	**65.3**	61.5	14.8	30.6	**174**	**JUNE 23**	9.8
LANNING	63.4	60.5	15.4	29.0	174	JUNE 23	7.6
SY LONGMIRE	63.2	61.5	15.0	28.9	176	JUNE 25	19.5
REEDER	62.3	61.1	15.0	**31.4**	176	JUNE 25	7.9
DUCLAIR	62.3	60.1	14.9	29.8	**174**	**JUNE 23**	20.0
SY 611 CL2	61.9	62.0	15.0	27.7	175	JUNE 24	9.1
WB 9590	61.8	61.4	15.3	26.3	174	JUNE 23	9.2
WB 9879 CLP	61.7	60.7	15.2	29.5	177	JUNE 26	**23.0**
SY INGMAR	61.6	61.4	15.4	28.9	176	JUNE 25	9.4
CHOTEAU	60.8	60.5	15.0	29.5	176	JUNE 25	**22.0**
WB GUNNISON	60.3	61.5	14.2	28.7	176	JUNE 25	12.5
SY McCLOUD	59.9	62.4	15.6	29.4	**174**	**JUNE 23**	9.2
CORBIN	59.2	61.3	15.0	29.9	**174**	**JUNE 23**	13.1
McNEAL	59.1	60.0	15.0	31.1	178	JUNE 27	8.3
EGAN	58.0	59.4	**16.3**	30.1	177	JUNE 26	8.2
LSD (0.05)	**3.3**	**0.5**	**0.3**	**0.7**	**0.6**	**-**	**1.8**
N=LOC*YEARS	**28**	**28**	**28**	**28**	**26**	**26**	**4**

Table 2. Grain yield (bu/ac) for selected varieties in advanced spring wheat nursery across the Montana (8 environments), 2018-2021

VARIETY	Kalispell High rainfall	Bozeman Dryland	Huntley Dryland	Moccasin Dryland	Conrad Dryland	Havre Dryland	Sidney Dryland	Sidney Irrigated	Dry Locs. (2)	All Locs. (8)
DAGMAR	67.0	**88.9**	**70.1**	**45.7**	**67.6**	**47.4**	**60.4**	**89.5**	**63.4**	**67.1**
VIDA	72.0	**92.8**	**72.0**	**46.9**	58.0	**46.6**	**61.7**	**90.5**	**63.0**	**66.9**
NS PRESSER CLP	**83.4**	**87.9**	**75.8**	**46.1**	**61.1**	**43.6**	**63.1**	83.8	**62.9**	**65.9**
WB 9719	67.7	**91.1**	64.6	42.6	**61.9**	**44.7**	**63.0**	**91.4**	**61.3**	**65.6**
SY ROCKFORD	73.6	**90.5**	**73.6**	**48.6**	52.5	**43.9**	**59.8**	**89.6**	**61.5**	**65.5**
MT SIDNEY	80.4	**88.0**	**74.8**	43.5	56.7	**44.9**	**59.9**	**89.6**	**61.3**	**65.3**
LANNING	70.7	85.1	66.9	**47.1**	57.0	**43.5**	57.0	**87.2**	59.4	63.4
SY LONGMIRE	71.4	81.9	**70.8**	42.5	56.4	**45.2**	56.3	**89.6**	58.9	63.2
REEDER	71.0	83.6	64.0	42.8	53.8	42.2	**61.0**	**88.6**	57.9	62.3
DUCLAIR	72.0	**87.1**	**73.1**	41.9	55.2	42.4	54.4	81.7	59.0	62.3
SY 611 CL2	72.9	79.3	64.4	44.1	54.2	41.8	56.9	**92.4**	56.8	61.9
WB 9590	73.2	**87.2**	60.4	**45.8**	54.0	41.1	**58.4**	**86.0**	57.8	61.8
WB 9879 CLP	63.7	82.4	66.7	**44.5**	58.1	**46.0**	55.0	79.0	58.8	61.7
SY INGMAR	67.1	83.1	65.4	42.4	53.0	41.8	56.7	**88.8**	57.1	61.6
CHOTEAU	61.7	80.7	**69.4**	42.3	54.4	42.6	56.8	79.5	57.7	60.8
WB GUNNISON	70.6	80.1	61.8	**46.8**	58.6	**44.8**	51.6	78.1	57.3	60.3
SY McCLOUD	66.9	81.8	62.3	43.7	54.2	40.9	53.6	82.9	56.1	59.9
CORBIN	71.1	80.0	63.2	43.3	55.9	42.8	51.5	77.4	56.1	59.2
McNEAL	70.9	72.7	**68.1**	43.6	49.2	41.3	**57.8**	81.0	55.5	59.1
EGAN	61.5	77.6	65.7	40.6	51.5	41.5	52.1	77.1	54.8	58.0
LSD (0.05)	**ns**	**6.5**	**8.1**	**4.5**	**7.0**	**4.1**	**5.7**	**6.7**	3.4	**3.3**
N=LOC*YEARS	**2**	**4**	**3**	**4**	**3**	**4**	**4**	**4**	**22**	**28**

Table 3. Milling and baking quality for selected varieties in the advanced spring wheat nursery, 2018-2020

VARIETY	WHOLE GRAIN		FLOUR ANALYSIS		MIXOGRAPH			BAKE	
	PROTEIN (%)	HARDNESS (%)	YIELD (%)	PROTEIN (%)	TOLERANCE	TIME (MIN.)	ABSORP. (%)	TIME (MIN.)	LOAF VOLUME (CC)
ALUM	14.1	69.7	71.1	12.9	3.2	4.4	65.7	8.3	1167
CHOTEAU	14.8	70.0	70.6	13.8	1.8	3.0	68.2	5.5	1117
CORBIN	14.7	67.2	70.3	13.2	2.4	5.0	67.3	10.9	1057
DAGMAR	14.9	70.7	70.4	13.5	3.7	3.7	69.0	7.0	1126
DUCLAIR	14.6	68.4	70.0	13.2	3.3	4.0	67.6	7.8	1156
EGAN	**16.1**	75.0	68.5	**14.9**	**4.7**	**7.8**	**71.7**	**16.8**	**1273**
FORTUNA	14.4	69.6	72.2	13.3	2.2	3.0	65.6	5.3	1111
LANNING	15.2	70.6	70.2	14.1	3.0	4.0	**70.0**	8.6	1187
LCS REBEL	14.7	72.2	**73.2**	13.8	3.3	4.7	**70.6**	11.6	1128
McNEAL	14.7	83.7	68.8	13.4	**4.6**	6.9	**71.2**	14.5	1197
MT SIDNEY	14.5	78.0	71.2	13.4	1.6	4.2	67.8	10.5	1123
REEDER	14.8	72.3	69.4	13.5	2.3	3.1	66.3	5.2	1109
SY 611 CL2	14.9	**87.2**	68.2	13.1	2.9	2.9	67.6	5.1	1039
SY INGMAR	14.9	78.6	72.1	13.9	3.7	4.9	69.2	12.1	1176
SY LONGMIRE	14.9	75.7	70.7	13.8	3.8	4.5	69.2	8.7	1191
SY McCLOUD	15.3	76.9	69.8	14.0	3.1	4.3	**70.8**	9.0	1098
SY ROCKFORD	14.4	71.6	71.2	13.2	3.2	3.3	67.2	5.7	1084
VIDA	14.1	77.5	72.4	12.9	1.8	3.1	67.2	6.3	1090
WB 9590	14.9	71.0	70.8	13.9	2.8	4.3	69.5	8.8	1048
WB 9719	14.0	77.3	70.9	12.9	3.7	4.4	67.2	9.0	1037
WB 9879 CLP	15.1	65.8	68.7	13.9	1.7	2.0	65.4	2.7	1037
WB GUNNISON	14.0	76.7	68.2	12.7	**4.2**	6.3	67.7	14.4	1116
LSD (0.05)	**0.5**	**3.5**	**0.7**	**0.5**	**0.7**	**0.6**	**2.1**	**1.7**	**46**
N=LOC*YEARS	**N=9**	**N=8**	**N=9**	**N=9**	**N=9**	**N=9**	**N=9**	**N=9**	**N=9**