PROJECT TITLE: Off-station spring wheat variety evaluations in eastern Montana – 2012 (4W4145)

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Personnel:

Site/County	Producer	CES Agent
Flaxville, Daniels	Jeff Mohn	Bobbie Roos
Circle, McCone	Victor Wagner	Ken Nelson
Poplar, Roosevelt	Mark Swank	Ann Ronning
Nashua, Valley	Bill Lauckner	Shelley Mills
Wibaux, Wibaux	David Maus	Dave Bertelsen

The Wibaux and Flaxville sites were not harvested because of poor stands.

OBJECTIVE: To evaluate varieties of spring wheat under dryland conditions at various sites in eastern Montana.

RESULTS: Summaries of yields, test weights, protein contents, heights in centimeters, and heights in inches across all sites are shown in Tables 1-5. Vida yielded most across sites (Table 1). SY Tyra had greatest test weight across sites (Table 2). McNeal had the highest protein content across sites (Table 3). Ap604CL was tallest across sites and Jedd was shortest across sites (Tables 4 and 5). Table 6 shows a summary of averages across sites.

Circle, McCone County: Performances and relative values of yield, test weight and protein of spring wheat varieties at Circle are shown in Tables 7-10. Volt had greatest economic return.

Nashua, Valley County: Performances and relative values of yield, test weight and protein of spring wheat varieties at Nashua are shown in Tables 11-14. Ap604CL had greatest economic return.

Poplar, Roosevelt County: Performance and relative values of yield, test weight and protein of spring wheat varieties at Poplar are shown in Tables 15-18. Kelby had greatest economic return.

SUMMARY: Off-station yield trials are conducted at several sites in eastern Montana. All experiments reported under this project are of the replicated small plot type. These trials provide important information about performance of experimental lines and varieties from Montana State University, other state universities, and private companies.

FUNDING SUMMARY: Expenditure information to be provided by OSP. No other grants support this project.

MWBC FY2014 GRANT SUBMISSION PLANS: It is planned to submit this project for funding consideration in the next fiscal year.

Table 1. Summary of spring wheat yields in bu/acre at three off-station sites in eastern Montana, 2012.

Variety	Circle, dryland recrop	Nashua, dryland fallow	Poplar, dryland fallow	average
McNeal	13.1	20.5	43.8	25.8
Reeder	17.3	23.7	47.0	29.3
Outlook	**20.1**	20.9	42.7	27.9
Choteau	13.7	20.9	44.2	26.2
Vida	17.9	25.5	49.0	**30.8**
Ap604CL	15.4	25.6	**50.1**	30.4
Corbin	12.8	26.2	38.7	25.9
Kelby	15.4	**29.6**	44.1	29.7
Volt	14.5	23.9	41.3	26.5
Jedd	17.0	27.6	45.5	30.0
ONeal	14.5	25.2	40.0	26.6
Mott	14.7	23.4	47.2	28.5
SY Tyra	18.5	24.1	45.7	29.4
Duclair	15.1	20.8	46.8	27.6
Gunnison	15.9	25.6	44.2	28.6
IMICHT79	16.2	22.0	48.0	28.7
Prosper	13.6	29.5	46.9	30.0
Hank	17.6	28.2	42.3	29.4
MT1008	13.4	23.0	48.9	28.4
MT1053	16.6	26.4	45.0	29.3
site average	15.7	24.6	45.1	28.5
probability	<0.001	0.009	0.678	
CV (S/Mean)	11.5	12.7	13.0	
CV(SE/Mean)	6.6	7.3	7.5	
LSD 0.05	3.0	5.2	9.7	

Table 2. Summary of spring wheat test weights in lb/bu at three off-station sites in eastern Montana, 2012.

Variety	Circle, dryland recrop	Nashua, dryland fallow	Poplar, dryland fallow	average
McNeal	55.0	56.5	55.5	55.7
Reeder	58.5	57.5	58.0	58.0
Outlook	55.5	56.5	56.5	56.2
Choteau	57.5	56.5	56.0	56.7
Vida	57.0	57.5	56.0	56.8
Ap604CL	56.0	59.0	58.5	57.8
Corbin	54.5	58.5	56.5	56.5
Kelby	56.0	59.5	**59.0**	58.2
Volt	53.5	57.0	**59.0**	56.5
Jedd	56.5	59.0	57.0	57.5
ONeal	57.5	59.0	55.5	57.3
Mott	57.5	58.0	57.0	57.5
SY Tyra	**60.5**	**60.0**	57.0	**59.2**
Duclair	56.0	57.0	56.0	56.3
Gunnison	58.0	59.5	57.0	58.2
IMICHT79	56.5	58.0	56.5	57.0
Prosper	55.0	57.0	56.0	56.0
Hank	55.5	56.5	53.0	55.0
MT1008	53.0	56.5	56.5	55.3
MT1053	54.5	58.0	54.5	55.7
site average	56.2	57.9	56.6	56.9

Table 3. Summary of spring wheat protein contents in percent at three dryland off-station sites in eastern Montana, 2012.

Variety	Circle, dryland recrop	Nashua, dryland fallow	Poplar, dryland fallow	average
McNeal	14.23	16.33	16.54	**15.70**
Reeder	12.97	15.60	15.92	14.83
Outlook	12.29	15.81	14.54	14.21
Choteau	13.25	**16.70**	16.54	15.49
Vida	12.20	14.55	15.31	14.02
Ap604CL	13.93	15.24	15.88	15.01
Corbin	14.49	15.48	16.25	15.41
Kelby	14.41	15.89	16.32	15.54
Volt	**15.94**	15.48	15.21	15.54
Jedd	13.36	14.50	15.99	14.62
ONeal	13.17	15.17	16.92	15.09
Mott	13.07	15.26	16.04	14.79
SY Tyra	11.33	14.11	14.81	13.42
Duclair	12.76	14.72	15.84	14.44
Gunnison	12.20	14.06	15.47	13.91
IMICHT79	12.86	15.39	16.39	14.88
Prosper	13.36	14.32	15.49	14.39
Hank	12.49	14.68	**16.94**	14.70
MT1008	15.39	14.59	15.55	15.18
MT1053	13.37	13.93	16.30	14.54
site average	13.35	15.09	15.91	14.78

Table 4. Summary of spring wheat heights in cm at three dryland off-station sites in eastern Montana, 2012.

Variety	Circle, dryland recrop	Nashua, dryland fallow	Poplar, dryland fallow	average
McNeal	56.0	65.3	80.0	67.1
Reeder	52.0	65.3	82.7	66.7
Outlook	58.3	64.3	83.3	68.7
Choteau	50.0	65.7	76.3	64.0
Vida	50.0	65.7	82.0	65.9
Ap604CL	53.3	69.0	85.0	69.1
Corbin	50.7	64.0	78.0	64.2
Kelby	51.3	63.3	77.0	63.9
Volt	56.0	60.0	77.0	64.3
Jedd	50.0	57.0	70.7	59.2
ONeal	55.7	64.3	79.7	66.6
Mott	50.0	66.0	85.3	67.1
SY Tyra	50.0	59.7	70.7	60.1
Duclair	52.3	69.3	79.0	66.9
Gunnison	52.0	62.3	74.7	63.0
IMICHT79	51.0	59.0	76.0	62.0
Prosper	50.3	64.7	84.3	66.4
Hank	53.7	65.3	74.7	64.6
MT1008	50.3	62.7	76.0	63.0
MT1053	51.0	60.3	74.7	62.0
site average	52.2	63.7	78.4	64.7
probability	0.040	0.011	<0.001	
CV (S/Mean)	6.0	5.659	3.7	
CV(SE/Mean)	3.5	3.267	2.1	
LSD 0.05	5.2	5.956	4.7	

Table 5. Summary of spring wheat heights in inches at three dryland off-station sites in eastern Montana, 2012.

Variety	Circle, dryland recrop	Nashua, dryland fallow	Poplar, dryland fallow	average
McNeal	22.0	25.7	31.5	26.4
Reeder	20.5	25.7	32.5	26.2
Outlook	22.9	25.3	32.8	27.0
Choteau	19.7	25.9	30.0	25.2
Vida	19.7	25.9	32.3	26.0
Ap604CL	21.0	27.2	33.5	27.2
Corbin	20.0	25.2	30.7	25.3
Kelby	20.2	24.9	30.3	25.2
Volt	22.0	23.6	30.3	25.3
Jedd	19.7	22.4	27.8	23.3
ONeal	21.9	25.3	31.4	26.2
Mott	19.7	26.0	33.6	26.4
SY Tyra	19.7	23.5	27.8	23.7
Duclair	20.6	27.3	31.1	26.3
Gunnison	20.5	24.5	29.4	24.8
IMICHT79	20.1	23.2	29.9	24.4
Prosper	19.8	25.5	33.2	26.2
Hank	21.2	25.7	29.4	25.4
MT1008	19.8	24.7	29.9	24.8
MT1053	20.1	23.7	29.4	24.4
site average	20.6	25.1	30.9	25.5
probability	0.043	0.012	<0.001	
CV (S/Mean)	6.0	5.7	3.7	
CV(SE/Mean)	3.4	3.3	2.1	
LSD 0.05	2.0	2.4	1.9	

Table 6. Summary of spring wheat yield trials at three off-station sites in eastern Montana, 2012, including Circle, Poplar, and Nashua.

Variety	height, cm	height, in	grain protein, %	test wt, lb/bu	yield, bu/ac
McNeal	67.1	26.4	**15.70**	55.7	25.8
Reeder	66.7	26.2	14.83	58.0	29.3
Outlook	68.7	27.0	14.21	56.2	27.9
Choteau	64.0	25.2	15.49	56.7	26.2
Vida	65.9	26.0	14.02	56.8	**30.8**
Ap604CL	69.1	27.2	15.01	57.8	30.4
Corbin	64.2	25.3	15.41	56.5	25.9
Kelby	63.9	25.2	15.54	58.2	29.7
Volt	64.3	25.3	15.54	56.5	26.5
Jedd	59.2	23.3	14.62	57.5	30.0
ONeal	66.6	26.2	15.09	57.3	26.6
Mott	67.1	26.4	14.79	57.5	28.5
SY Tyra	60.1	23.7	13.42	**59.2**	29.4
MT 0832 (Duclair)	66.9	26.3	14.44	56.3	27.6
Gunnison	63.0	24.8	13.91	58.2	28.6
IMICHT79	62.0	24.4	14.88	57.0	28.7
ND808 (Prosper)	66.4	26.2	14.39	56.0	30.0
Hank	64.6	25.4	14.70	55.0	29.4
MT1008	63.0	24.8	15.18	55.3	28.4
MT1053	62.0	24.4	14.54	55.7	29.3
average	64.7	25.5	14.78	56.9	28.5

Table 7. Performance of spring wheat grown under dryland recrop conditions at Circle, MT.
Planted: May 3, 2012 Harvested: September 6, 2012 Cooperator: Victor Wagner

Variety	height, in	test wt, lb/bu	grain protein, %	yield, bu/acre	$/acre[1] +/- Vida
Volt	22.0	53.5	15.94	14.5	23.14
Outlook	22.9	55.5	12.29	20.1	17.20
Kelby	20.2	56.0	14.41	15.4	8.17
SY Tyra	19.7	60.5	11.33	18.5	4.69
MT1008	19.8	53.0	15.39	13.4	3.40
Vida	19.7	57.0	12.20	17.9	0.00
Ap604CL	21.0	56.0	13.93	15.4	-0.15
Jedd	19.7	56.5	13.36	17.0	-1.60
Hank	21.2	55.5	12.49	17.6	-2.35
Reeder	20.5	58.5	12.97	17.3	-4.69
MT1053	20.1	54.5	13.37	16.6	-4.86
IMICHT79	20.1	56.5	12.86	16.2	-13.30
Gunnison	20.5	58.0	12.20	15.9	-15.64
Corbin	20.0	54.5	14.49	12.8	-16.84
McNeal	22.0	55.0	14.23	13.1	-17.63
Duclair	20.6	56.0	12.76	15.1	-21.90
ONeal	21.9	57.5	13.17	14.5	-21.95
Mott	19.7	57.5	13.07	14.7	-25.03
Choteau	19.7	57.5	13.25	13.7	-28.46
Prosper	19.8	55.0	13.36	13.6	-29.28
average	20.6	56.2	13.35	15.7	
probability	0.043			<0.001	
CV (S/Mean)	6.0			11.5	
CV(SE/Mean)	3.4			6.6	
LSD 0.05	2.0			3.0	

[1] Wheat prices compiled and summarized by P. Lamb, NARC, Havre, MT, from 2-yr (2010-2011) average daily market values for PNW, supplied by the Montana Wheat and Barley Committee.

Table 8. Relative yielding abilities of spring wheat varieties as compared to Vida when grown under dryland conditions in McCone County in cooperation with CES.

Cultivar	2008	2009	2010	2011	2012	Ave	as % of Vida
Vida	12.6	39.5	13.9	45.4	17.9	25.9	100.0
Hank	--	--	--	--	17.6	17.6	98.3
SY Tyra	--	--	--	42.6	18.5	30.6	96.5
IMICHT79	--	--	--	43.6	16.2	29.9	94.5
Duclair	--	--	14.3	42.2	15.1	23.9	92.7
MT1053	--	--	--	--	16.6	16.6	92.7
ONeal	12.2	29.8	12.3	46.3	14.5	23.0	89.0
Mott	--	31.2	12.6	44.9	14.7	25.9	88.6
Reeder	11.9	26.9	10.1	46.2	17.3	22.5	86.9
Gunnison	--	--	--	39.0	15.9	27.5	86.7
Prosper	--	--	--	40.3	13.6	27.0	85.2
Jedd	13.8	28.4	9.4	40.2	17.0	21.8	84.1
Outlook	11.4	22.0	9.9	45.3	20.1	21.7	84.1
Choteau	11.9	25.1	10.9	46.2	13.7	21.6	83.4
AP604CL	--	26.3	6.7	42.8	15.4	22.8	78.1
Corbin	11.7	23.7	10.3	40.4	12.8	19.8	76.5
McNeal	7.0	28.7	9.3	39.6	13.1	19.5	75.6
MT1008	--	--	--	--	13.4	13.4	74.9
Kelby	11.3	24.4	6.3	37.7	15.4	19.0	73.5
Volt	5.8	26.2	4.6	43.9	14.5	19.0	73.5

NOTE: Average yields in this summary should not be compared to each other since they are not grown in the same years. Compare yields only to the check variety.

Table 9. Relative test weights of spring wheat varieties as compared to Vida when grown under dryland conditions in McCone County in cooperation with CES.

Cultivar	2008	2009	2010	2011	2012	Ave	as % of Vida
SY Tyra	--	--	--	62.0	60.5	61.3	104.7
Gunnison	--	--	--	61.0	58.0	59.5	101.7
AP604CL	--	60.0	62.5	62.0	56.0	60.1	101.4
Reeder	59.5	59.3	62.5	60.5	58.5	60.1	101.2
Mott	--	58.8	62.0	61.5	57.5	60.0	101.1
Jedd	60.5	60.3	59.5	60.5	56.5	59.5	100.2
Kelby	59.7	58.7	61.5	61.0	56.0	59.4	100.1
Vida	59.5	58.2	62.0	60.0	57.0	59.3	100.0
Choteau	59.5	57.3	61.5	60.5	57.5	59.3	99.9
IMICHT79	--	--	--	60.0	56.5	58.3	99.6
Corbin	59.8	59.0	61.5	60.5	54.5	59.1	99.5
ONeal	59.5	59.8	58.5	60.0	57.5	59.1	99.5
Duclair	--	--	62.0	60.0	56.0	59.3	99.4
Volt	59.8	59.0	61.0	61.5	53.5	59.0	99.4
Prosper	--	--	--	61.0	55.0	58.0	99.1
Outlook	58.2	57.8	61.0	59.5	55.5	58.4	98.4
McNeal	57.0	58.0	60.0	60.0	55.0	58.0	97.7
Hank	--	--	--	--	55.5	55.5	97.4
MT1053	--	--	--	--	54.5	54.5	95.6
MT1008	--	--	--	--	53.0	53.0	93.0

NOTE: Average test weights in this summary should not be compared to each other since they are not grown in the same years. Compare test weights only to the check variety.

Table 10. Relative protein contents of spring wheat varieties as compared to Vida when grown under dryland conditions in McCone County in cooperation with CES.

Cultivar	2008	2009	2010	2011	2012	Ave	as % of Vida
MT1008	--	--	--	--	15.4	15.4	126.2
Kelby	14.2	15.6	15.1	16.4	14.4	15.1	111.5
MT1053	--	--	--	--	13.4	13.4	109.8
Corbin	14.6	16.1	13.9	14.5	14.5	14.7	108.4
AP604CL	--	14.7	12.0	16.1	13.9	14.2	106.4
ONeal	14.4	15.2	13.5	15.4	13.2	14.3	105.6
Reeder	15.2	14.9	12.8	15.4	13.0	14.3	105.0
Volt	14.2	13.7	12.8	14.0	15.9	14.1	104.0
Mott	--	13.7	13.5	14.5	13.1	13.7	102.8
Hank	--	--	--	--	12.5	12.5	102.5
Choteau	14.0	14.8	12.3	15.0	13.2	13.9	102.1
Jedd	13.2	13.4	14.7	14.5	13.4	13.8	101.9
McNeal	14.1	13.6	12.1	14.2	14.2	13.6	100.4
Vida	14.6	13.6	11.8	15.7	12.2	13.6	100.0
Prosper	--	--	--	14.4	13.4	13.9	99.6
Outlook	13.8	14.5	12.3	14.6	12.3	13.5	99.4
IMICHT79	--	--	--	14.1	12.9	13.5	96.8
Duclair	--	--	11.0	14.2	12.8	12.7	95.7
Gunnison	--	--	--	14.3	12.2	13.3	95.0
SY Tyra	--	--	--	14.6	11.3	13.0	92.8

NOTE: Average protein contents in this summary should not be compared to each other since they are not grown in the same years. Compare protein contents only to the check variety.

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Table 11. Performance of spring wheat grown under dryland conditions at Poplar, MT.
Planted: May 2, 2012 Harvested: Sept 10, 2012 Cooperator: Mark Swank

Variety	height, inches	test wt, lb/bu	grain protein, %	yield, bu/acre	$/acre[1] +/- Vida
Ap604CL	33.5	58.5	15.88	50.1	52.55
IMICHT79	29.9	56.5	16.39	48.0	28.93
Mott	33.6	57.0	16.04	47.2	19.93
Reeder	32.5	58.0	15.92	47.0	17.68
MT1008	29.9	56.5	15.55	48.9	12.16
Duclair	31.1	56.0	15.84	46.8	2.79
Jedd	27.8	57.0	15.99	45.5	0.81
Vida	32.3	56.0	15.31	49.0	0.00
MT1053	29.4	54.5	16.30	45.0	-4.82
Prosper	33.2	56.0	15.49	46.9	-9.24
Choteau	30.0	56.0	16.54	44.2	-13.82
Kelby	30.3	59.0	16.32	44.1	-14.95
McNeal	31.5	55.5	16.54	43.8	-18.32
Hank	29.4	53.0	16.94	42.3	-35.19
Gunnison	29.4	57.0	15.47	44.2	-38.13
SY Tyra	27.8	57.0	14.81	45.7	-59.55
ONeal	31.4	55.5	16.92	40.0	-61.07
Corbin	30.7	56.5	16.25	38.7	-75.69
Volt	30.3	59.0	15.21	41.3	-80.31
Outlook	32.8	56.5	14.54	42.7	-100.30
average	30.9	56.6	15.91	45.1	
probability	<0.001			0.678	
CV (S/MEAN)	3.7			13.0	
CV (SE/MEAN)	2.1			7.5	
LSD (0.05)	1.9			9.7	

[1] Wheat prices compiled and summarized by P. Lamb, NARC, Havre, MT, from 2-yr (2010-2011) average daily market values for PNW, supplied by the Montana Wheat and Barley Committee.

Table 12. Relative yields of spring wheat varieties as compared to Vida when grown under dryland conditions in Roosevelt County in cooperation with CES.

Cultivar	2006	2009	2010	2011	2012	Ave	as % of Vida
Vida	30.1	59.7	47.7	63.8	49.0	50.1	100.0
Duclair	--	--	52.2	61.4	46.8	53.5	99.9
MT1008	--	--	--	--	48.9	48.9	99.8
IMICHT79	--	--	--	64.3	48.0	56.2	99.6
AP604CL	--	58.6	52.1	57.3	50.1	54.5	99.0
Kelby	--	55.1	54.0	64.6	44.1	54.5	98.9
SY Tyra	--	--	--	62.4	45.7	54.1	95.8
Mott	--	59.5	37.4	64.0	47.2	52.0	94.5
Reeder	28.2	59.3	47.5	54.5	47.0	47.3	94.5
Jedd	--	48.1	52.5	58.5	45.5	51.2	92.9
Choteau	22.9	58.0	47.6	58.4	44.2	46.2	92.3
MT1053	--	--	--	--	45.0	45.0	91.8
Prosper	--	--	--	56.5	46.9	51.7	91.7
ONeal	--	58.0	43.9	57.9	40.0	50.0	90.7
Outlook	29.9	53.0	37.9	62.9	42.7	45.3	90.5
McNeal	27.5	50.7	38.8	58.7	43.8	43.9	87.7
Gunnison	--	--	--	54.5	44.2	49.4	87.5
Volt	--	55.8	34.6	59.5	41.3	47.8	86.8
Hank	--	--	--	--	42.3	42.3	86.3
Corbin	--	52.4	41.6	57.0	38.7	47.4	86.1

NOTE: Average yields in this summary should not be compared to each other since they are not grown in the same years. Compare yields only to the check variety.

Table 13. Relative test weights of spring wheat varieties as compared to Vida when grown under dryland conditions in Roosevelt County in cooperation with CES.

Cultivar	2006	2009	2010	2011	2012	Ave	as % of Vida
AP604CL	--	62.7	59.5	62.0	58.5	60.7	103.1
Volt	--	63.0	58.5	62.0	59.0	60.6	103.0
Kelby	--	62.5	58.0	61.5	59.0	60.3	102.3
Reeder	51.3	62.2	58.0	61.5	58.0	58.2	101.3
Gunnison	--	--	--	61.5	57.0	59.3	101.3
MT1008	--	--	--	--	56.5	56.5	100.9
SY Tyra	--	--	--	61.0	57.0	59.0	100.9
Jedd	--	62.0	57.5	61.0	57.0	59.4	100.8
Mott	--	61.5	56.5	61.5	57.0	59.1	100.4
Vida	51.7	61.0	57.5	61.0	56.0	57.4	100.0
Corbin	--	61.3	57.0	60.5	56.5	58.8	99.9
ONeal	--	62.7	57.0	60.0	55.5	58.8	99.9
Prosper	--	--	--	60.0	56.0	58.0	99.1
IMICHT79	--	--	--	59.5	56.5	58.0	99.1
Choteau	51.5	61.7	55.5	59.5	56.0	56.8	99.0
McNeal	50.5	61.0	56.0	60.0	55.5	56.6	98.5
Outlook	51.0	60.8	55.0	59.5	56.5	56.6	98.5
Duclair	--	--	55.0	59.0	56.0	56.7	97.4
MT1053	--	--	--	--	54.5	54.5	97.3
Hank	--	--	--	--	53.0	53.0	94.6

NOTE: Average test weights in this summary should not be compared to each other since they are not grown in the same years. Compare test weights only to the check variety.

Table 14. Relative protein contents of spring wheat varieties as compared to Vida when grown under dryland conditions in Roosevelt County in cooperation with CES.

Cultivar	2006	2009	2010	2011	2012	Ave	as % of Vida
Hank	--	--	--	--	16.9	16.9	110.5
MT1053	--	--	--	--	16.3	16.3	106.5
Kelby	--	13.4	16.2	15.7	16.3	15.4	106.2
MT1008	--	--	--	--	15.6	15.6	102.0
ONeal	--	11.6	16.4	14.1	16.9	14.8	101.7
Prosper	--	--	--	15.0	15.5	15.3	101.7
Reeder	17.9	12.4	15.4	15.1	15.9	15.3	101.5
IMICHT79	--	--	--	14.0	16.4	15.2	101.3
Corbin	--	12.2	15.5	14.4	16.2	14.6	100.5
Duclair	--	--	16.1	13.8	15.8	15.2	100.2
Vida	17.6	12.4	15.6	14.7	15.3	15.1	100.0
AP604CL	--	11.9	15.4	14.4	15.9	14.4	99.3
Mott	--	12.0	15.6	14.0	16.0	14.4	99.3
Choteau	16.9	12.2	15.3	13.9	16.5	15.0	98.9
Gunnison	--	--	--	14.0	15.5	14.8	98.3
Jedd	--	11.7	14.9	13.7	16.0	14.1	97.1
McNeal	17.3	11.3	14.9	13.3	16.5	14.7	97.0
Volt	--	11.3	16.2	13.2	15.2	14.0	96.4
Outlook	17.1	11.5	15.0	13.6	14.5	14.3	94.8
SY Tyra	--	--	--	13.6	14.8	14.2	94.7

NOTE: Average protein contents in this summary should not be compared to each other since they are not grown in the same years. Compare protein contents only to the check variety.

Table 15. Performance of spring wheat grown under dryland conditions at Nashua, MT.
Planted: May 3, 2012 Harvested: September 7, 2012 Cooperator: Bill Lauckner

Variety	height, inches	test wt, lb/bu	grain protein, %	yield, bu/acre	$/acre[1] +/- Vida
Kelby	24.9	59.5	15.89	29.6	87.69
Corbin	25.2	58.5	15.48	26.2	35.03
Hank	25.7	56.5	14.68	28.2	33.31
ND808 (Prosper)	25.5	57.0	14.32	29.5	30.22
Ap604CL	27.2	59.0	15.24	25.6	21.70
Jedd	22.4	59.0	14.50	27.6	20.20
O'Neal	25.3	59.0	15.17	25.2	17.53
Volt	23.6	57.0	15.48	23.9	10.42
Reeder	25.7	57.5	15.60	23.7	8.28
Vida	25.9	57.5	14.55	25.5	0.00
Mott	26.0	58.0	15.26	23.4	-1.25
MT1053	23.7	58.0	13.93	26.4	-5.60
IMICHT79	23.2	58.0	15.39	22.0	-9.91
Choteau	25.9	56.5	16.70	20.9	-10.19
Gunnison	24.5	59.5	14.06	25.6	-12.86
McNeal	25.7	56.5	16.33	20.5	-14.69
Outlook	25.3	56.5	15.81	20.9	-15.83
MT1008	24.7	56.5	14.59	23.0	-24.05
SY Tyra	23.5	60.0	14.11	24.1	-26.48
MT 0832 (Duclair)	27.3	57.0	14.72	20.8	-39.81
average	25.1	57.9	15.09	24.6	
probability	0.012			0.009	
CV (S/Mean)	5.7			12.7	
CV(SE/Mean)	3.3			7.3	
LSD 0.05	2.4			5.2	

[1] Wheat prices compiled and summarized by P. Lamb, NARC, Havre, MT, from 2-yr (2010-2011) average daily market values for PNW, supplied by the Montana Wheat and Barley Committee.

Table 16. Relative yielding abilities of spring wheat varieties as compared to Vida when grown under dryland conditions in Valley County in cooperation with CES.

Cultivar	2008	2009	2010	2011	2012	Ave	as % of Vida
Hank	--	--	--	--	28.2	28.2	110.6
Kelby	16.0	29.5	44.9	46.0	29.6	33.2	106.8
MT1053	--	--	--	--	26.4	26.4	103.5
AP604CL	--	30.9	44.4	43.5	25.6	36.1	103.1
Vida	15.4	25.0	40.8	48.8	25.5	31.1	100.0
Reeder	16.1	30.4	38.6	45.1	23.7	30.8	99.0
ONeal	18.4	29.8	31.2	47.0	25.2	30.3	97.5
Volt	15.4	30.8	35.1	46.2	23.9	30.3	97.4
McNeal	17.7	26.9	38.8	44.4	20.5	29.7	95.4
SY Tyra	--	--	--	45.2	24.1	34.7	93.3
Jedd	15.4	29.3	29.0	43.5	27.6	29.0	93.1
Prosper	--	--	--	39.3	29.5	34.4	92.6
Corbin	13.3	20.7	38.6	41.9	26.2	28.1	90.5
MT1008	--	--	--	--	23.0	23.0	90.2
IMICHT79	--	--	--	42.4	22.0	32.2	86.7
Outlook	15.1	24.5	28.1	42.0	20.9	26.1	84.0
Gunnison	--	--	--	36.8	25.6	31.2	84.0
Choteau	11.7	22.2	28.4	40.4	20.9	24.7	79.5
Mott	--	26.2	18.0	41.9	23.4	27.4	78.2
Duclair	--	--	25.8	35.9	20.8	27.5	71.7

NOTE: Average yields in this summary should not be compared to each other since they are not grown in the same years. Compare yields only to the check variety.

Table 17. Relative test weights of spring wheat varieties as compared to Vida when grown under dryland conditions in Valley County in cooperation with CES.

Cultivar	2008	2009	2010	2011	2012	Ave	as % of Vida
SY Tyra	--	--	--	61.5	60.0	60.8	103.4
Jedd	54.7	60.8	57.0	61.0	59.0	58.5	102.4
Volt	55.0	60.3	58.0	62.0	57.0	58.5	102.3
ONeal	55.2	61.2	56.5	60.0	59.0	58.4	102.2
Gunnison	--	--	--	60.5	59.5	60.0	102.1
AP604CL	--	59.5	58.0	60.5	59.0	59.3	101.9
Kelby	53.8	59.3	58.0	60.5	59.5	58.2	101.9
MT1053	--	--	--	--	58.0	58.0	100.9
IMICHT79	--	--	--	60.5	58.0	59.3	100.9
Reeder	54.1	59.8	56.5	60.0	57.5	57.6	100.8
Mott	--	58.8	56.5	60.5	58.0	58.5	100.6
Corbin	53.5	59.5	56.0	59.5	58.5	57.4	100.5
McNeal	54.7	59.3	56.5	59.5	56.5	57.3	100.3
Vida	53.2	59.0	56.0	60.0	57.5	57.1	100.0
Prosper	--	--	--	60.0	57.0	58.5	99.6
Outlook	53.0	58.8	55.5	59.5	56.5	56.7	99.2
Choteau	53.5	58.2	55.5	59.5	56.5	56.6	99.1
Duclair	--	--	54.0	59.5	57.0	56.8	98.3
Hank	--	--	--	--	56.5	56.5	98.3
MT1008	--	--	--	--	56.5	56.5	98.3

NOTE: Average test weights in this summary should not be compared to each other since they are not grown in the same years. Compare test weights only to the check variety.

Table 18. Relative protein contents of spring wheat varieties as compared to Vida when grown under dryland conditions in Valley County in cooperation with CES.

Cultivar	2008	2009	2010	2011	2012	Ave	as % of Vida
Reeder	17.5	16.2	15.8	16.2	15.6	16.3	103.0
Hank	--	--	--	--	14.7	14.7	100.7
Vida	17.4	16.9	14.7	15.3	14.6	15.8	100.0
MT1008	--	--	--	--	14.6	14.6	100.0
Kelby	17.2	15.5	15.2	15.0	15.9	15.8	99.9
Corbin	17.6	15.3	15.0	15.2	15.5	15.7	99.6
ONeal	17.4	15.8	15.2	14.6	15.2	15.6	99.1
Choteau	16.0	16.1	14.9	14.5	16.7	15.6	99.1
Mott	--	15.5	15.2	14.8	15.3	15.2	98.9
McNeal	16.5	15.4	14.7	14.2	16.3	15.4	97.7
AP604CL	--	15.1	14.8	14.8	15.2	15.0	97.4
Duclair	--	--	14.8	13.9	14.7	14.5	97.3
Outlook	16.6	15.2	14.9	14.0	15.8	15.3	97.0
IMICHT79	--	--	--	13.5	15.4	14.5	96.7
Volt	17.2	14.2	14.5	14.0	15.5	15.1	95.6
Jedd	17.0	15.2	14.4	14.2	14.5	15.1	95.4
MT1053	--	--	--	--	13.9	13.9	95.2
Prosper	--	--	--	14.1	14.3	14.2	95.0
SY Tyra	--	--	--	14.0	14.1	14.1	94.0
Gunnison	--	--	--	13.7	14.1	13.9	93.0

NOTE: Average protein contents in this summary should not be compared to each other since they are not grown in the same years. Compare protein contents only to the check variety.