

# 2007 North Dakota Alternative Crop Variety Performance

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This publication contains information on selected buckwheat, chickpea, field pea, lentil, proso millet, mustard, safflower and triticale varieties that North Dakota State University tested in 2007. Additional varieties may have been tested but are not listed. Trial mean listed in data tables indicates the average of printed varieties plus additional varieties tested but not listed in the tables. Although alternative crops may have been tested across the state, adaptation may be limited to specific regions.

Information contained in this publication is based on research coordinated by the following NDSU Research Extension Center and Main Station research agronomists:

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Contact NDSU Research Extension Centers or Extension Service offices for more detailed and site-specific information on alternative crop variety performance and production recommendations.

Crop variety data are available in an electronic format at

*[www.ag.ndsu.nodak.edu/aginfo/variety/index.htm](http://www.ag.ndsu.nodak.edu/aginfo/variety/index.htm)*

Weather data are available at

*<http://ndawn.ndsu.nodak.edu/>*

## NDSU

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## Buckwheat Variety Trials, 2007

Variety	Yield (lb/acre)						
	Location				2007 Avg	2 yr Avg	3 yr Avg
	Langdon	Carrington	Williston	Prosper			
Koma	2386	2339	650	1618	1748	1333	--
Mancan	2282	2023	686	1945	1734	1426	1499
Manor	2342	2348	760	1747	1799	1442	1485
Mean	2337	2237	699	1770	--	--	--
LSD 5%	NS	NS	NS	NS	--	--	--

Variety	Test Weight (lb/bu)				
	Location				Avg
	Langdon	Carrington	Williston	Prosper	
Koma	49.1	51.1	40.1	44.8	46.3
Mancan	48.8	49.3	41.5	43.1	45.7
Manor	48.1	48.4	40.4	43.1	45.0
Mean	48.7	49.6	40.7	43.7	--
LSD 5%	0.7	1.4	NS	1.2	--

Variety	Days to Flower		
	Location		Avg
	Williston	Prosper	
Koma	35	35	35
Mancan	31	34	33
Manor	32	34	33
Mean	33	34	--
LSD 5%	1	1	--

## Buckwheat Variety Trials, 2007

Variety	Plant Height (inches)				Avg
	Location				
	Langdon	Carrington	Williston	Prosper	
Koma	41	46	31	43	40
Mancan	41	44	34	43	40
Manor	42	46	34	42	41
Mean	42	45	33	43	--
LSD 5%	NS	NS	NS	NS	--

Variety	1000 KWT (grams)			Lodging (0-9)			
	Location		Avg	Location			Avg
	Prosper	Carrington		Langdon	Carrington	Prosper	
Koma	27.0	31.5	29.3	1.3	0.8	4.0	2.0
Mancan	26.8	28.9	27.9	1.0	1.3	5.0	2.4
Manor	26.8	29.0	27.9	0.8	1.0	5.0	2.3
Mean	26.8	29.8	--	1.0	1.0	4.7	--
LSD 5%	NS	1.4	--	NS	NS	NS	--

Location	Planting Date	Harvest Date
Langdon	June 1	September 17
Carrington	June 6	August 23
Williston	May 29	September 10
Prosper	May 24	September 11

## Chickpea Variety Trials, 2007

<b>Seed Yield (lb/acre)</b>				
Variety	Carrington	Williston <sup>1</sup>	Hettinger	Avg
<b><i>Kabuli</i></b>				
CDC Frontier	1954	786	2599	1780
CDC Xena	684	--	1972	--
Dylan	1048	--	1576	--
Sierra	567	63	1726	785
Troy	1299	--	1874	--
<b><i>Desi</i></b>				
CDC Anna	1971	382	2569	1641
Trial Mean	1211	401	1984	--
LSD 5%	369	105	283	--

<sup>1</sup> *Ascochyta blight significantly influenced varieties less resistant to the disease.*

<b>Days to First Flower</b>				
Variety	Carrington	Williston	Hettinger	Avg
<b><i>Kabuli</i></b>				
CDC Frontier	51	54	55	53
CDC Xena	48	--	54	--
Dylan	45	--	55	--
Sierra	49	56	56	54
Troy	48	--	56	--
<b><i>Desi</i></b>				
CDC Anna	49	54	54	52
Trial Mean	48	54	55	--
LSD 5%	2	1	1	--

## Chickpea Variety Trials, 2007

<b>Plant Height (inches)</b>				
Variety	Carrington	Williston	Hettinger	Avg
<b><i>Kabuli</i></b>				
CDC Frontier	21	11	15	16
CDC Xena	18	--	14	--
Dylan	19	--	12	--
Sierra	20	11	15	15
Troy	19	--	14	--
<b><i>Desi</i></b>				
CDC Anna	22	11	13	15
Trial Mean	19	11	14	--
LSD 5%	NS	1.0	10.3	--

<b>Test Weight (lb/bu)</b>				
Variety	Carrington	Williston	Hettinger	Avg
<b><i>Kabuli</i></b>				
CDC Frontier	57.1	60.1	56.1	58
CDC Xena	58.0	--	53.9	--
Dylan	56.3	--	50.6	--
Sierra	58.3	45.7	55.4	53
Troy	56.2	--	56.0	--
<b><i>Desi</i></b>				
CDC Anna	56.2	56.9	50.2	54
Trial Mean	56.9	57.0	53.2	--
LSD 5%	1.6	6.0	2.6	--

## Chickpea Variety Trials, 2007

Seed Size (%)						
Carrington				Hettinger		
Variety	> 9mm	>8mm	>7mm	>9mm	>8mm	>7mm
<b>Kabuli</b>						
CDC Frontier	11	39	35	--	--	--
CDC Xena	28	26	19	19	39	42
Dylan	31	24	14	30	38	32
Sierra	29	28	17	25	42	33
Troy	35	26	11	43	31	26
<b>Desi</b>						
CDC Anna	1	7	40	--	--	--
Trial Mean	24	26	23	30	36	34
LSD 5%	8	6	21	8	9	9

Location	Plant Date	Harvest date
Carrington	May 9	September 28
Williston	May 10	September 6
Hettinger	April 30	August 8

*Single or multiple applications of foliar fungicides were applied to manage ascochyta blight.*



## Field Pea Variety Descriptions, 2007

Variety	Vine length	Harvest ease	Powdery mildew tolerance	Maturity	Seed size	2007 Average yield (% of CDC Mozart)
<b>Yellow</b>						
CDC Mozart	short	fair	good	medium	medium	100
DS Admiral	medium	good	good	early-med	medium	95
Eclipse	medium	good	good	medium	large	98
Miami	medium	fair	poor	medium	medium	97
<b>Green</b>						
Cruiser	medium	fair	poor	medium	med-small	88
Majoret	medium	fair	poor	medium	medium	93
Nitouche	medium	good	poor	medium	large	89
Medora	medium	good	good	medium	med-small	62

## Field Pea Variety Trials, 2007

Seed Yield (bu/acre)											
Variety	Carring dryland	Minot	Langdon	Prosper	Hettinger	Williston fallow	Williston recrop	Carring irrigated	Dazey	Wishek	Avg
<b>Yellow</b>											
CDC Mozart	49.8	39.6	52.7	73.1	47.4	55.1	48.9	65.4	53.0	42.8	52.8
DS Admiral	51.2	31.7	56.2	57.3	50.5	49.5	45.9	62.8	49.8	47.9	50.3
Eclipse	48.5	36.6	58.5	62.9	50.1	54.5	50.0	63.6	41.9	50.5	51.7
Miami	51.9	40.8	58.9	58.7	45.9	56.8	46.8	62.4	40.6	48.3	51.1
<b>Green</b>											
Cruiser	40.6	17.4	54.1	60.9	49.4	48.7	48.3	65.5	40.9	39.9	46.6
Majoret	42.5	25.2	61.2	65.0	48.6	52.2	45.7	59.4	40.6	48.3	48.9
Medora	24.2	15.4	32.0	34.5	38.7	36.1	36.2	--	44.3	31.0	32.5
Nitouche	43.3	24.2	63.2	60.7	50.1	47.1	43.3	55.9	46.3	36.3	47.0
Trial Mean	47.2	34.3	55.6	59.9	46.4	49.8	45.5	62.0	44.8	41.8	--
LSD 5%	7.8	7.6	8.0	11.0	6.1	4.0	4.6	8.8	6.1	6	--

Seed Weight (grams/1000)											
Variety	Carring dryland	Minot	Langdon	Prosper	Hettinger	Williston fallow	Williston recrop	Carring irrigated	Dazey	Wishek	Avg
<b>Yellow</b>											
CDC Mozart	202	170	208	196	169	221	216	228	227	217	205.4
DS Admiral	211	176	224	200	163	224	231	231	226	216	210.2
Eclipse	204	179	224	213	140	234	232	244	248	238	215.6
Miami	210	171	220	190	195	230	230	235	232	215	212.8
<b>Green</b>											
Cruiser	177	146	196	172	160	187	195	201	203	174	181.1
Majoret	197	146	200	177	174	196	202	219	193	190	189.4
Medora	172	134	152	175	153	179	186	--	210	166	169.6
Nitouche	229	182	268	213	185	253	260	259	260	251	236.0
Trial Mean	206	170	212	193	174	218	226	230	228	213	--
LSD 5%	16	13	--	9	10	7	14	9	10	9	--

## Field Pea Variety Trials, 2007

<b>Test Weight (lb/bu)</b>											
Variety	Carring dryland	Minot	Langdon	Prosper	Hettinger	Williston fallow	Williston recrop	Carring irrigated	Dazey	Wishek	Avg
<b>Yellow</b>											
CDC Mozart	64.8	63.4	61.7	65.0	62.2	65.6	65.4	64.6	64.1	65.2	64.2
DS Admiral	63.8	62.1	61.6	64.7	63.9	65.6	65.2	63.9	63.6	65.1	64.0
Eclipse	63.6	63.0	61.9	64.2	63.1	64.8	65.4	64.2	64.6	65.8	64.1
Miami	62.9	62.7	61.1	64.2	61.0	66.7	65.8	64.0	63.2	65.0	63.7
<b>Green</b>											
Cruiser	64.5	61.4	61.6	63.4	62.3	65.0	66.2	63.6	63.7	64.3	63.6
Majoret	63.2	62.2	61.8	64.4	64.3	65.7	66.3	64.5	63.0	64.4	64.0
Medora	62.9	61.4	60.7	62.1	62.1	64.7	66.1	--	63.4	64.5	63.1
Nitouche	62.7	61.8	61.2	63.9	61.5	63.3	65.9	63.8	63.4	64.3	63.2
Trial Mean	63.5	62.6	61.5	64.0	62.6	65.1	66.2	64.1	63.7	64.8	--
LSD 5%	1.2	0.5	0.5	0.6	1.6	NS	1.1	0.5	0.5	0.7	--

<b>Seed Protein (%)</b>									
Variety	Carring dryland	Minot	Langdon	Williston fallow	Williston recrop	Carring irrigated	Dazey	Wishek	Avg
<b>Yellow</b>									
CDC Mozart	23.8	27.2	24.4	20.9	22.9	23.8	23.9	23.6	23.8
DS Admiral	23.9	26.7	24.0	21.1	23.1	25.0	23.3	23.0	23.8
Eclipse	25.6	29.2	26.0	22.0	23.2	25.0	24.1	24.1	24.9
Miami	25.1	27.1	25.5	22.0	24.1	24.9	24.8	24.1	24.7
<b>Green</b>									
Cruiser	24.8	28.5	25.5	21.3	22.9	24.2	25.6	24.1	24.6
Majoret	26.1	29.1	26.8	21.4	24.0	25.3	24.0	23.7	25.1
Medora	23.8	29.5	27.6	22.8	23.6	--	25.0	26.8	25.6
Nitouche	25.9	27.0	26.0	21.8	23.9	24.8	25.3	24.5	24.9
Trial Mean	24.9	27.8	25.4	21.8	23.5	24.3	24.6	24.3	--
LSD 5%	1.2	2.2	1.6	NS	1.0	1.3	1.2	1.0	--

## Field Pea Variety Trials, 2007

<b>Days to First Flower</b>										
Variety	Carring dryland	Langdon	Prosper	Hettinger	Williston fallow	Williston recrop	Carring irrigated	Dazey	Wishek	Avg
<b>Yellow</b>										
CDC Mozart	52	56	44	59	55	53	51	51	53	53
DS Admiral	52	57	44	58	55	54	50	51	54	53
Eclipse	51	56	43	59	56	55	49	53	54	53
Miami	51	57	44	58	53	53	49	52	53	52
<b>Green</b>										
Cruiser	52	56	44	60	53	53	50	53	55	53
Majoret	53	58	44	60	56	55	51	53	54	54
Medora	55	60	45	60	56	56	--	56	56	55
Nitouche	51	58	44	59	55	55	52	51	55	53
Trial Mean	52	58	44	59	54	54	51	53	54	--
LSD 5%	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.9	1.2	--

<b>Days to Physiological Maturity</b>						
Variety	Carring dryland	Langdon	Hettinger	Carring irrigated	Dazey	Avg
<b>Yellow</b>						
CDC Mozart	84	98	79	80	88	86
DS Admiral	83	98	78	79	87	85
Eclipse	85	96	79	80	89	86
Miami	83	94	77	78	86	84
<b>Green</b>						
Cruiser	85	94	80	80	87	85
Majoret	85	95	81	80	86	85
Medora	86	97	80	--	88	88
Nitouche	86	96	82	81	87	86
Trial Mean	84	96	80	80	87	--
LSD 5%	1.7	5.0	1.0	1.3	1.3	--

## Field Pea Variety Trials, 2007

<b>Harvest Ease (0-9*)</b>						
Variety	Carring dryland	Langdon	Prosper	Dazey	Wishek	Avg
<b>Yellow</b>						
CDC Mozart	8.0	6.8	5.3	6.3	4.5	6.2
DS Admiral	3.3	5.5	4.0	4.2	2.0	3.8
Eclipse	5.5	5.8	2.8	4.8	2.0	4.2
Miami	5.3	6.5	5.5	7.8	3.3	5.7
<b>Green</b>						
Cruiser	4.0	5.3	6.8	4.0	3.0	4.6
Majoret	5.3	5.5	4.5	7.5	5.0	5.6
Medora	4.0	4.5	2.8	3.3	2.0	3.3
Nitouche	4.0	3.3	3.5	4.5	2.5	3.6
Trial Mean	3.7	5.2	4.7	5.6	3.3	--
LSD 5%	1.3	1.8	1.6	1.7	1.6	--

\*0=all plants upright/very easy harvest, 9=all plants flat/very difficult to direct harvest.

Location	Planting date	Harvest date
Carrington - dryland	April 27	July 30
Carrington - irrigated	May 4	August 7
Dazey	April 26	July 29
Hettinger	April 25	July 24
Langdon	April 27	August 26
Minot	--	August 23
Prosper	May 14	August 22
Williston -Fallow	April 25	July 25
Williston Re-Crop	April 25	July 20
Wishek	April 24	July 29

## Field Pea Variety Trials, Carrington (dryland), 2007

Variety	Days to Bloom	Bloom Duration	Days to PM	Vine Length	Canopy			Lodge at PM	Harvest Ease		Seeds/ Pound	Test Weight	Seed Yield	
					Bloom Duration	days	PM		cm	Ht at Harvest			Index %	0-9
<b>Green Cotyledon Type</b>														
61758	14	14	84	69	30	45	4.3	4.5	--	26.2	2717	63.4	36.0	--
93018	14	14	82	83	37	46	3.0	3.3	--	25.6	2461	62.4	52.0	--
711446	15	15	84	75	38	53	2.3	2.8	--	25.3	2232	63.8	46.0	--
Aragorn	21	21	83	66	31	48	3.8	5.0	4.6	26.1	2767	62.3	39.5	47.3
CDC Sage	14	14	86	66	35	54	3.8	4.3	--	24.1	2973	64.0	35.8	--
CDC Striker	13	13	85	74	43	58	2.3	2.0	2.5	25.7	2159	64.3	48.1	51.7
Camry	14	14	86	57	13	23	6.5	8.3	5.8	24.1	2344	63.0	49.0	52.3
Matrix	11	11	84	70	40	56	2.5	3.0	2.8	22.6	2015	62.8	60.9	62.9
Cooper	12	12	86	74	33	45	2.8	3.3	2.9	23.4	1822	63.2	55.9	57.3
Cruiser	18	18	85	63	36	56	4.0	4.0	4.2	24.8	2562	64.5	40.6	45.9
K2	17	17	83	62	37	60	2.5	2.8	3.2	24.9	2406	64.3	43.0	49.5
Majoret	14	14	85	68	25	37	4.5	5.3	4.4	26.1	2319	63.2	42.5	50.7
Medora	15	15	86	63	36	58	2.8	4.0	3.5	23.8	2639	62.9	24.2	44.0
Nitouche	17	17	86	70	33	47	3.5	4.0	3.8	25.9	1986	62.7	43.3	48.8
Tamora	11	11	87	70	34	49	2.8	4.0	4.2	24.1	1800	62.7	53.9	53.1
<b>Yellow Cotyledon Type</b>														
86010	14	14	82	78	41	52	2.0	2.0	--	24.4	1908	64.2	56.1	--
97113	13	13	79	80	36	46	3.3	3.5	--	23.6	2067	62.7	52.9	--
Agassiz	18	18	85	76	33	44	3.0	3.0	--	25.9	2177	62.9	54.2	--
CDC Golden	17	17	84	78	35	45	2.5	3.5	3.8	25.6	2410	64.3	48.3	56.8
CDC Meadow	18	18	83	71	42	61	2.0	2.3	--	23.8	2550	64.3	46.9	--
Trial Mean	15	15	84	72.5	35.7	49.3	3.0	3.7	--	24.9	2250	63.5	47.2	--
C.V.%	1.2	11.0	1.5	8.7	19.1	20.9	26.1	25.1	--	3.4	5.7	1.4	11.9	--
LSD 5%	1	2	2	8.7	9.4	14.3	1.1	1.3	--	1.2	1.7	1.2	7.8	--

## Field Pea Variety Trials, Carrington (dryland), 2007

Variety	Days to Bloom	Bloom Duration	Days to PM	Vine Length	Canopy		Height Index	Lodge at PM	Harvest Ease		Seeds/ Pound	Test Weight	Seed Yield	
					Ht at Harvest	Ht at PM			2007	3-yr. Avg			2007	3-yr. Avg
	days	days	PM	cm	cm	%	0-9	0-9	%	lb/bu	bu/ac	2007	3-yr. Avg	
<b>Yellow Cotyledon Type</b>														
CDC Mozart	52	17	84	64	20	31	6.8	8.0	6.8	23.8	2256	64.8	49.8	57.8
Ceb 4152	50	20	86	80	43	55	1.0	1.5	1.6	25.2	1898	63.6	55.8	58.0
Ceb 4163	53	17	86	75	24	32	5.3	6.3	--	26.1	2081	62.7	58.3	--
DS Admiral	52	14	83	74	32	43	2.8	3.3	2.6	23.9	2154	63.8	51.2	56.7
Eclipse	51	16	85	67	25	38	3.5	5.5	4.0	25.6	2227	63.6	48.5	56.3
Fusion	50	18	85	69	33	49	3.3	3.5	4.3	24.0	1962	63.6	52.8	55.8
IN 4176	50	18	82	80	46	56	0.8	1.5	--	26.7	2625	64.2	36.9	--
IN 4179	48	19	84	82	32	40	2.5	3.8	--	25.6	2090	62.5	54.5	--
Miami	51	16	83	75	27	36	4.8	5.3	--	25.1	2166	62.9	51.9	--
Noble	54	16	87	79	38	48	1.8	2.3	--	26.3	2257	62.7	51.0	--
PS01102958	54	15	86	62	16	25	6.5	7.8	7.5	25.1	1959	63.2	46.6	51.6
Polstead	52	17	86	68	15	23	5.8	7.8	5.8	25.6	1939	63.0	62.3	60.8
SW Capri	53	14	82	70	38	55	2.3	2.5	2.3	24.9	2639	62.9	46.3	55.9
SW Circus	51	14	82	67	48	72	1.8	2.3	2.8	23.4	2962	63.7	34.4	49.4
SW Marquee	53	16	85	69	55	80	0.8	0.8	1.4	25.7	2466	63.9	46.1	50.9
SW Midas	53	14	81	74	32	44	3.0	3.8	3.6	23.9	2458	64.2	56.0	55.3
SW Salute	52	16	83	71	32	45	3.3	4.0	5.2	24.4	2375	64.1	48.9	53.1
Thunderbird	59	11	85	78	40	52	2.3	2.3	--	25.1	2287	64.1	49.4	--
Tudor	54	15	85	84	39	47	2.0	2.5	2.7	24.9	2012	63.6	51.2	55.9
<b>Misc. Type</b>														
<i>Marrowfat</i>														
Orka	51	15	86	65	25	40	4.0	5.3	5.4	24.3	1414	63.7	44.9	46.8
Trial Mean	52	15	84	72.5	35.7	49.3	3.0	3.7	--	24.9	2250	63.5	47.2	--
C.V.%	1.2	11.0	1.5	8.7	19.1	20.9	26.1	25.1	--	3.4	5.7	1.4	11.9	--
LSD 5%	1	2	2	8.7	9.4	14.3	1.1	1.3	--	1.2	1.77	1.2	7.8	--

Harvest Ease scores: 0 = all plants upright ~ very easy harvest, to 9 = all plants flat ~ very difficult to harvest direct.  
 Harvest Index: Plant height at time of harvest relative to plant height at end of bloom.

# Field Pea Variety Trials, Langdon, 2007

Variety	Days to 1st Flower	Days to End Flower	Bloom Duration	Days to Mature	Vine Length inch	Seeds/Pound	Protein %	Harvest Ease*	Test Weight lb/bu	Yield	
										2007	2007
<b>Green Cotyledon Type</b>											
Camry	57	82	25	97	33	1957	25.1	6.5	61.5	56.0	--
CDC Sage	59	86	27	98	36	2415	24.3	5.5	61.7	52.4	--
CDC Striker	58	78	20	98	35	2142	26.4	5.5	62.3	58.6	--
Ceb 1093	59	78	19	96	34	1802	22.7	6.5	61.3	66.4	69.7
Cooper	61	82	21	97	35	1720	24.1	4.8	61.3	58.0	64.6
Cruiser	56	83	27	94	33	2316	25.5	5.3	61.6	54.1	59.6
Majoret	58	83	25	95	34	2270	26.8	5.5	61.8	61.2	61.7
Medora	60	88	28	97	34	2987	27.6	4.5	60.7	32.0	--
Nitouche	58	84	27	96	36	1694	26.0	3.3	61.2	63.2	66.0
Pro 031-7029	56	82	25	97	35	2142	23.4	6.8	60.8	44.2	--
Tamora	61	81	20	95	32	1746	25.5	4.0	60.9	53.2	--
<b>Yellow Cotyledon Type</b>											
APCM 714:202	64	86	22	98	41	1773	25.3	3.8	62.7	49.5	56.4
CDC Golden	57	86	29	95	34	2270	26.4	5.3	62.1	51.0	--
CDC Meadow	57	87	30	95	36	2467	24.8	4.3	62.1	56.4	--
CDC Mozart	56	88	32	98	35	2183	24.4	6.8	61.7	52.7	62.0
Ceb 4152	56	86	30	101	41	1720	24.4	3.8	61.6	64.6	69.2
Ceb 4159	57	83	26	95	35	1861	26.1	6.8	62.0	71.2	72.0
Ceb 4163	57	86	29	94	32	2225	27.5	5.5	60.9	56.7	62.6
DS Admiral	57	82	24	98	37	2027	24.0	5.5	61.6	56.2	64.3
Eclipse	56	86	31	96	34	2027	26.0	5.8	61.9	58.5	64.2
Fusion	56	85	29	94	33	1746	24.6	5.3	61.5	52.7	62.2
IN 4176	56	82	26	99	38	1892	27.1	3.3	61.5	46.8	--
IN 4179	54	80	26	93	35	1892	25.4	3.5	61.1	67.6	--
Miami	57	83	27	94	31	2064	25.5	6.5	61.1	58.9	64.7
Noble	58	89	30	102	39	2183	27.1	3.5	61.4	58.8	--
Polstead	57	84	27	98	32	1669	24.4	4.8	61.2	65.3	--
PS01102958	59	85	27	97	33	2183	24.9	6.8	61.5	47.6	--
SW Capri	57	83	26	94	32	2316	26.1	6.0	61.4	53.3	63.7
SW Circus	58	81	23	96	34	2365	25.1	5.5	61.3	47.3	56.8
SW Marquee	57	85	28	99	38	2467	26.2	3.3	61.8	53.8	64.0
SW Midas	58	82	24	92	32	2293	25.5	7.0	61.8	53.9	61.1
Tudor	61	83	22	98	35	1991	25.8	5.3	61.3	59.2	--
Trial Mean	58	84	26	96	35	--	25.4	5.2	61.5	55.6	--
C.V. %	1.0	2.8	9.1	3.7	6.7	--	3.1	24.5	0.6	10.2	--
LSD 5%	1	3	3	5	3	--	1.6	1.8	0.5	8	--

\* Harvest Ease: 0=plants standing erect, 9=plants laying horizontal.



## Field Pea Variety Trials, Minot, 2007

Variety	Vine Length inch	Canopy		Height Index %	Lodge <sup>1</sup> 0-9	Seeds/ Pound	Test Weight lb/bu	Protein %	Yield		
		Harvest inch	Height inch						2-yr avg	3-yr avg	
<b>Green Cotyledon Type</b>											
Majoret	24.1	21.2	87.8	4.8	3142	62.2	29.1	25.2	31.8	40.6	
Cruiser	23.6	21.7	91.8	4.0	3122	61.4	28.5	17.4	28.4	36.1	
Nitouche	24.4	24.7	100.0	3.5	2499	61.8	27.0	24.2	33.3	40.6	
Medora	26.4	25.6	97.1	2.0	3403	61.4	29.5	15.4	--	--	
Cooper	26.8	24.6	92.1	2.8	2309	62.2	26.7	40.3	41.3	48.3	
CDC Striker	26.9	23.1	86.3	3.5	2818	63.0	29.3	31.0	38.7	44.6	
CDC Sage	25.8	23.6	91.5	4.0	3413	61.7	28.3	21.8	26.0	--	
Pro 031-7029	27.6	24.6	89.3	3.5	3250	63.3	24.7	30.5	--	--	
Aragorn	22.4	21.7	97.2	4.3	3246	62.1	27.0	24.3	34.0	39.6	
61758	25.6	21.7	84.6	3.5	3110	63.1	28.8	23.2	31.7	--	
711446	26.8	24.6	92.1	2.5	2558	63.3	27.6	28.7	32.8	--	
93018	27.3	26.1	95.6	4.3	2711	62.1	28.3	35.6	37.6	--	
K2	21.9	20.7	94.6	1.5	3066	62.5	29.0	25.8	32.3	39.7	
Ceb 1093	25.1	22.7	90.3	3.3	2381	62.3	24.7	50.4	46.8	50.3	
SWC 6232	24.4	22.2	91.1	4.8	3166	62.3	27.1	36.3	--	--	
Camry	21.9	20.2	92.4	4.5	2579	62.8	26.6	32.3	35.9	37.4	
Tamora	24.6	21.2	85.9	3.3	2222	62.2	26.6	42.1	40.1	--	
<b>Yellow Cotyledon Type</b>											
CDC Mozart	23.4	18.7	80.4	4.8	2675	63.4	27.2	39.6	43.7	47.6	
Eclipse	26.1	22.6	86.8	3.5	2542	63.0	29.2	36.6	40.6	46.5	
DS Admiral	24.9	22.2	89.5	3.3	2592	62.1	26.7	31.7	35.1	41.9	
Miami	23.1	21.2	91.6	5.3	2659	62.7	27.1	40.8	42.7	--	
SW Capri	23.6	24.1	100.0	1.5	3475	62.0	29.5	26.9	36.7	46.5	
Fusion	23.9	21.7	90.6	5.3	2316	62.6	26.6	39.1	41.8	--	
Agassiz	27.6	25.6	92.9	2.5	2651	62.6	29.2	49.2	--	--	
Thunderbird	28.1	27.1	96.7	2.8	3046	63.8	29.8	30.1	--	--	
Ceb 4152	27.3	25.6	93.9	1.8	2222	63.4	28.3	37.0	40.2	47.4	
Trial Mean	25.7	23.3	90.9	3.7	2732	62.6	27.8	34.3	--	--	
C.V.%	6.7	9.9	9.4	40.1	6.0	0.6	5.6	15.8	--	--	
LSD 5%	2.4	3.2	NS	2.1	231	0.5	2.2	7.6	--	--	

## Field Pea Variety Trials, Minot, 2007

Variety	Vine		Canopy		Height Index %	Lodge <sup>1</sup> 0-9	Seeds/ Pound	Test Weight lb/bu	Protein %	Yield		
	Length inch	Harvest inch	Height inch	Harvest inch						2007	2-yr. avg	3-yr. avg
<b>Yellow Cotyledon Type</b>												
CDC Golden	27	24	89	3.3	2803	64.3	28.4	39.9	44.6	50.4		
CDC Meadow	28	26	92	2.3	2825	63.7	27.9	46.0	--	--		
IN 4176	28	27	96	1.8	2889	62.0	28.5	21.0	--	--		
IN 4179	29	24	83	3.3	2398	62.9	28.2	43.5	--	--		
Pro 053-7072	28	24	86	4.0	2382	62.0	25.0	35.0	--	--		
97113	25	24	95	4.8	2323	61.6	25.7	44.1	43.4	--		
86010	28	26	91	1.8	2185	63.9	29.6	46.2	44.1	--		
SW Circus	25	22	90	3.3	3403	62.6	26.3	30.8	--	--		
SW Salute	24	21	86	4.0	2798	62.9	27.5	37.0	--	--		
SW Marquee	26	24	92	1.5	3295	62.1	30.9	32.1	37.6	--		
SW Midas	26	24	92	4.0	3172	62.9	27.4	45.6	45.5	--		
Ceb 4159	28	25	89	4.5	2630	63.1	28.1	39.8	40.6	--		
APCM 714202	29	28	99	1.5	2417	65.6	28.8	15.8	27.5	--		
Lasso	26	23	88	5.3	2426	62.1	28.5	37.3	--	--		
Tudor	28	26	91	4.5	2495	63.0	27.7	41.0	42.1	--		
Polstead	23	20	89	6.5	2373	62.3	27.0	48.0	46.5	--		
Noble	27	24	91	3.3	2797	62.5	28.1	27.6	--	--		
Ceb 4163	27	23	84	6.0	2585	62.6	29.1	44.6	48.6	--		
<b>Marrowfat</b>												
Orka	25	21	84	5.0	1735	62.2	25.9	31.3	--	--		
Trial Mean	26	23	91	3.7	2732	62.6	27.8	34.3	--	--		
C.V.%	6.7	9.9	9.4	40.1	6.0	0.6	5.6	15.8	--	--		
LSD 5%	2	3	NS	2.1	231	0.5	2.2	7.6	--	--		

<sup>1</sup> Lodging score based on scale 0-9 (0=upright, 9=flat)

Aphids were present across trial site. Green types tended to have higher population levels.

## Field Pea Variety Trials, Williston (recrop), 2007

Variety	Days to Bloom		Plant Height inch	Test Weight lb/bu	Seeds/ Pound	Seed Protein %	Yield	
	Bloom	Duration days					2007	3 yr avg
<b>Yellow Cotyledon</b>								
CDC Golden	55	15	25	67.3	2147	25.7	46.7	34.9
CDC Meadow	54	16	25	67.0	2251	23.7	46.7	--
CDC Mozart	53	18	23	65.4	2101	22.9	48.9	35.4
Ceb 4163	55	15	23	66.9	1931	23.3	49.2	--
DS Admiral	54	15	22	65.2	1968	23.1	45.9	33.4
Eclipse	55	15	24	65.4	1953	23.2	50.0	35.5
IN 4176 PCA	50	20	25	66.6	1782	23.9	46.5	--
IN4179	52	19	26	66.5	2125	23.9	40.7	--
Miami	53	16	21	65.8	1971	24.1	46.8	--
Noble	56	14	26	65.5	2063	24.5	42.4	--
Polstead	53	16	22	66.0	1812	23.4	50.4	--
Pro 053-7072	51	19	26	67.2	1839	24.0	42.4	--
PS01102958	55	16	20	66.9	1809	24.5	43.5	--
SW Capri	54	15	22	66.2	2235	22.9	45.4	35.3
SW Marquee	55	16	22	67.0	2204	24.0	45.7	34.2
SW Midas	55	15	22	66.6	2326	22.2	46.1	--
SW Salute	54	17	24	66.4	2036	23.2	50.0	36.5
Tudor	57	13	27	66.2	1683	23.2	42.6	33.7
<b>Green Cotyledon</b>								
Camy	54	16	20	66.1	2011	22.3	50.5	35.7
CDC Sage	55	16	26	66.8	2348	22.3	39.5	--
CDC Striker	56	15	24	66.7	1934	25.0	41.9	31.4
Cooper	59	11	25	64.9	1681	23.6	49.2	35.9
Cruiser	53	18	25	66.2	2328	22.9	48.3	33.2
K2	51	20	23	66.2	2131	23.2	45.5	--
Majoret	55	15	22	66.3	2245	24.0	45.7	32.1
Medora	56	15	25	66.1	2434	23.6	36.2	--
Nitouche	55	16	22	65.9	1754	23.9	43.3	31.8
Scuba	53	17	25	65.5	2128	23.1	41.1	27.1
SWC 6232	54	16	21	66.4	2295	22.6	49.6	--
Tamora	58	12	24	65.2	1599	22.7	44.0	--
Trial Mean	54	16	23	66.2	2038	23.5	45.5	--
C.V. %	1	7	10	0.8	3	2.1	7.2	--
LSD 5%	1	2	3	1.1	120	1.0	4.6	--

## Lentil Variety Descriptions, 2007\*

Variety	Market class	Cotyledon color	Maturity	Seed size	2007 Average yield (% of Richlea)
Riveland	green	yellow	early	extra large	82
Pennell	green	yellow	med late	extra large	85
CDC Plato	green	yellow	med late	large	65
CDC Richlea	green	yellow	medium	medium	100
CDC Milestone	green	yellow	small	small	83
CDC Blaze	red	red	small	small	68
Crimson	red	red	small	small	78
CDC Robin	red	red	very small	very small	86
*References include 'Manitoba Seed - 2007'.					

## Lentil Variety Trials, 2007

Seed Yield (lb/acre)							
Variety	Seed Size	Location				Avg	
		Carrington <sup>1</sup>	Hettinger	Williston fallow	Williston recrop	2007	3 yr
<b>Spanish Brown</b>							
Pardina	Small	--	896	1224	1298	1139	1355
<b>French Green</b>							
CDC LeMay	Small	--	797	1103	1282	1061	1485
<b>Green</b>							
CDC Glamis	Large	--	797	806	803	802	1460
CDC Grandora	Large	--	1046	802	678	842	--
CDC Improve <sup>2</sup>	Large	681	--	--	--	681	--
Laird	Ext Large	--	672	794	731	732	1396
CDC Meteor	Large	--	1394	1033	1200	1209	--
CDC Milestone	Small	490	1145	1159	1188	996	1585
Pennell	Ext Large	549	1494	946	1094	1021	1458
CDC Plato	Large	281	1070	881	901	783	--
CDC Richlea	Medium	494	1742	1268	1296	1200	1873
Riveland	Large	648	1095	989	1181	978	--
CDC Sedley	Large	--	896	706	511	704	1329
CDC Sovereign	Large	--	1444	990	830	1088	1543
CDC Viceroy	Small	1056	1693	1164	1286	1300	2076
<b>Red</b>							
CDC Blaze	Small	535	697	1009	1040	820	1351
Crimson	Small	279	1046	1154	1249	932	1361
CDC Impact <sup>2</sup>	Small	742	--	--	--	742	--
CDC Imperial <sup>2</sup>	Very Small	598	--	--	--	598	--
CDC Redberry	Small	1027	1593	1233	1397	1313	1803
CDC Robin	Very Small	645	1095	1113	1260	1028	1509
CDC Rouleau	Small	677	1195	1183	1316	1093	1781
Trial Mean	--	677	1130	1072	1105	998	--
C.V.%	--	27.2	12.5	9.0	15.0	15.9	--
LSD 5%	--	263	232	132	228	214	--

<sup>1</sup> Trial severely infected with anthracnose by mid July.

<sup>2</sup> Clearfield types.

Location	Planting Date	Harvest Date
Carrington	May 9	August 17
Hettinger	April 30	August 8
Williston-Fallow	May 1	July 25 and July 31
Williston-Recrop	May 1	July 24 and July 31

## Lentil Variety Trials, 2007

<b>Plant Height (inches)</b>				
Variety	Location			Avg
	Hettinger	Williston fallow	Williston recrop	
<b>Spanish Brown</b>				
Pardina	7	9	10	9
<b>French Green</b>				
CDC LeMay	10	10	10	10
<b>Green</b>				
CDC Glamis	13	12	12	12
CDC Grandora	13	12	12	12
CDC Improve <sup>1</sup>	--	--	--	--
Laird	11	12	13	12
CDC Meteor	12	12	12	12
CDC Milestone	10	10	10	10
CDC Plato	13	11	11	12
Pennell	13	11	11	12
CDC Richlea	12	11	11	11
Riveland	12	11	12	--
CDC Sedley	12	11	12	12
CDC Sovereign	12	12	12	12
CDC Viceroy	12	11	11	11
<b>Red</b>				
CDC Blaze	10	9	9	9
Crimson	7	9	10	9
CDC Impact <sup>1</sup>	--	--	--	--
CDC Imperial <sup>1</sup>	--	--	--	--
CDC Redberry	10	12	12	11
CDC Robin	11	9	10	10
CDC Rouleau	12	10	12	11
Trial Mean	11	11	11	11
C.V.%	13.7	8.0	8.5	10.1
LSD 5%	3	1	1	2

<sup>1</sup> Clearfield types.

## Lentil Variety Trials, 2007

Days to Bloom (DAP <sup>1</sup> )					
Variety	Location				Avg
	Carrington <sup>2</sup>	Hettinger	Williston fallow	Williston recrop	
<b>Spanish Brown</b>					
Pardina	--	52	49	49	50
<b>French Green</b>					
CDC LeMay	--	57	55	55	56
<b>Green</b>					
CDC Glamis	--	61	56	56	58
CDC Grandora	--	60	53	53	55
CDC Improve <sup>3</sup>	47	--	--	--	47
Laird	--	60	56	55	57
CDC Meteor	--	56	53	53	54
CDC Milestone	46	55	52	51	51
Pennell	47	57	52	52	52
CDC Plato	48	59	54	55	54
CDC Richlea	47	56	53	54	52
Riveland	45	54	50	51	50
CDC Sedley	--	57	52	52	54
CDC Sovereign	--	58	55	55	56
CDC Viceroy	48	58	55	53	54
<b>Red</b>					
CDC Blaze	46	56	53	52	52
Crimson	47	56	55	53	53
CDC Impact <sup>3</sup>	46	--	--	--	46
CDC Imperial <sup>3</sup>	45	--	--	--	45
CDC Redberry	46	56	53	53	52
CDC Robin	46	55	51	51	51
CDC Rouleau	--	54	52	53	53
Trial Mean					
	46	56	52	52	52
C.V.%					
	1.6	1.4	1.3	1.3	1.4
LSD 5%					
	1	1	1	1	1

<sup>1</sup> DAP = Days after planting.

<sup>2</sup> Trial severely infected with anthracnose by mid July.

<sup>3</sup> Clearfield types.

## Lentil Variety Trials, 2007

Test Weight (lb/bu)				
Variety	Location			Avg
	Carrington <sup>1</sup>	Williston fallow	Williston recrop	
<b>Spanish Brown</b>				
Pardina	56.7	63.9	63.5	61.4
<b>French Green</b>				
CDC LeMay	--	63.4	62.8	63.1
<b>Green</b>				
CDC Glamis	--	58.6	59.0	58.8
Grandora	--	58.7	58.1	58.4
CDC Improve <sup>2</sup>	57.1	--	--	57.1
Laird	--	58.6	58.6	58.6
CDC Meteor	--	60.9	60.9	60.9
CDC Milestone	56.3	62.5	62.5	60.4
CDC Plato	55.0	58.9	58.7	57.5
Pennell	53.6	58.1	58.5	56.7
CDC Richlea	56.1	60.1	59.9	58.7
Riveland	54.3	58.5	58.2	57.0
CDC Sedley	--	59.4	45.1	52.3
CDC Sovereign	--	59.9	59.9	59.9
CDC Viceroy	58.9	63.0	62.6	61.5
<b>Red</b>				
CDC Blaze	58.7	64.2	63.6	62.2
Crimson	58.0	62.9	62.9	61.3
CDC Impact <sup>2</sup>	57.9	--	--	57.9
CDC Imperial <sup>2</sup>	56.5	--	--	56.5
CDC Redberry	58.2	63.3	63.2	61.6
CDC Robin	57.7	64.1	63.9	61.9
CDC Rouleau	55.7	62.2	61.8	59.9
Trial Mean	56.7	61.1	60.2	59.3
C.V.%	1.7	0.4	6.7	1.1
LSD 5%	1.3	0.5	NS	0.9

<sup>1</sup> Trial severely infected with anthracnose by mid July.

<sup>2</sup> Clearfield types.



## Lentil Variety Trials, 2007

Variety	Seeds per Pound			Avg
	Location			
	Carrington <sup>1</sup>	Williston fallow	Williston recrop	
<b>Spanish Brown</b>				
Pardina	--	12542	12610	12576
<b>French Green</b>				
CDC LeMay	--	16021	16213	16117
<b>Green</b>				
CDC Glamis	--	8536	8647	8592
CDC Grandora	--	7476	7870	7673
CDC Improve <sup>2</sup>	7157	--	--	7157
Laird	--	8147	7845	7996
CDC Meteor	--	10102	10651	10377
CDC Milestone	14134	13494	14114	13914
Pennell	8022	7200	7357	7526
CDC Plato	9216	8035	7974	8408
CDC Sedley	--	7055	7092	7074
CDC Sovereign	--	7933	8014	7974
CDC Richlea	10927	9627	9998	10184
Riveland	8174	6372	6821	7122
CDC Viceroy	17004	16939	16088	16677
<b>Red</b>				
CDC Blaze	16086	14616	13897	14866
Crimson	14890	14488	14362	14580
CDC Impact <sup>2</sup>	15942	--	--	15942
CDC Imperial <sup>2</sup>	19635	--	--	19635
CDC Redberry	16410	16438	16329	16392
CDC Robin	18773	17878	18264	18305
CDC Rouleau	14774	13182	13230	13729
Trial Mean	13653	11373	11441	11946
C.V.%	4.3	3.0	2.0	3.1
LSD 5%	828	625	500	651

<sup>1</sup> Trial severely infected with anthracnose by mid July.

<sup>2</sup> Clearfield types.

## Mustard Variety Trials, 2007

Variety		Seed Yield (lb/acre)								
		Location						2007 Avg	2 yr Avg	3 yr Avg
		Langdon	Carrington	Williston	Prosper	Minot	Hettinger			
Type										
AC Pennant	Yellow	1753	904	881	801	1105	821	1044	1094	1120
Ace	Yellow	1659	950	864	862	1204	534	1012	1086	1115
Andante	Yellow	1766	1014	974	844	1336	616	1092	1160	1182
Tilney	Yellow	1836	962	994	816	1242	1027	1146	1108	1082
Forage	Oriental	2514	--	1184	628	1437	863	--	--	--
Common	Brown	1486	--	820	269	720	945	--	--	--
Duchess	Brown	2089	--	1073	556	1441	1109	--	--	--
Mean		1872	--	970	682	1212	845	--	--	--
LSD 5%		381	--	141	147	200	259	--	--	--

Variety		Days to Bloom						
		Location						Avg
		Langdon	Carrington	Williston	Prosper	Minot	Hettinger	
Type								
AC Pennant	Yellow	42	47	77	36	42	52	49
Ace	Yellow	41	48	78	36	43	51	49
Andante	Yellow	41	46	77	35	42	51	49
Tilney	Yellow	40	46	75	36	42	51	48
Forge	Oriental	46	--	77	38	45	53	--
Common	Brown	48	--	81	43	45	56	--
Duchess	Brown	47	--	82	40	45	54	--
Mean		44	--	78	38	43	53	--
LSD 5%		1	--	1	1	1	1	--

## Mustard Variety Trials, 2007

Variety		Plant Height (inches)						
		Location						Avg
		Langdon	Carrington	Williston	Prosper	Minot	Hettinger	
Type	Langdon	Carrington	Williston	Prosper	Minot	Hettinger	Avg	
AC Pennant	Yellow	46	30	34	33	25	37	34
Ace	Yellow	47	40	36	34	30	40	38
Andante	Yellow	44	37	36	36	29	39	37
Tilney	Yellow	44	36	36	31	28	35	35
Forge	Oriental	49	--	40	37	39	53	--
Common	Brown	44	--	37	35	37	44	--
Duchess	Brown	49	--	39	35	38	49	--
Mean		46	--	37	34	32	42	--
LSD 5%		NS	--	3	3	4	5	--

Variety		Days to End Bloom					Days to Mature		
		Location				Avg	Location		Avg
		Langdon	Prosper	Minot	Carrington		Langdon	Hettinger	
Type	Langdon	Prosper	Minot	Carrington	Avg	Langdon	Hettinger	Avg	
AC Pennant	Yellow	71	59	62	47	60	91	86	89
Ace	Yellow	72	61	63	48	61	89	87	88
Andante	Yellow	71	58	62	46	59	89	86	88
Tilney	Yellow	70	58	62	46	59	88	86	87
Forge	Oriental	76	56	65	--	--	92	88	--
Common	Brown	76	63	65	--	--	93	88	--
Duchess	Brown	77	58	65	--	--	93	88	--
Mean		73	59	63	47	--	91	87	--
LSD 5%		2	2	2	1	--	3	NS	--

## Mustard Variety Trials, 2007

Variety	Type	Bloom Duration (Days)				Lodging (0-9)				
		Location			Avg	Location				Avg
		Williston	Prosper	Hettinger		Carrington	Prosper	Hettinger	Langdon	
AC Pennant	Yellow	22	23	22	22	1	1.3	1.8	2.3	1.5
Ace	Yellow	22	25	22	23	0	1.0	2.0	3.8	1.7
Andante	Yellow	22	23	23	23	1	1.0	2.2	3.3	1.8
Tilney	Yellow	24	22	23	23	0	1.3	1.8	2.8	1.5
Forge	Oriental	27	18	22	22	--	1.8	1.0	4.0	--
Common	Brown	25	20	20	23	--	2.3	1.2	7.3	--
Duchess	Brown	23	18	21	21	--	1.5	1.2	8.0	--
Mean		24	21	22	--	0.3	1.4	1.6	4.5	--
LSD 5%		2	2	1	--	NS	0.6	NS	2.2	--

Variety	Type	Oil (%)			1000 KWT (g)	Test Weight (lb/bu)				
		Location		Avg		Location				Avg
		Williston	Minot		Minot	Carrington	Williston	Prosper	Minot	
AC Pennant	Yellow	26.4	23.3	24.9	5.6	55.2	56.9	54.2	57.4	55.9
Ace	Yellow	26.1	22.9	24.5	5.5	56.3	56.6	54.7	57.4	56.3
Andante	Yellow	25.2	22.8	24.0	5.7	55.8	57.0	54.1	57.4	56.1
Tilney	Yellow	26.4	23.0	24.7	5.4	55.2	56.8	53.9	57.5	55.9
Forge	Oriental	36.4	31.6	34.0	2.3	--	54.7	50.9	54.7	--
Common	Brown	33.9	29.6	31.8	2.4	--	54.5	51.3	48.5	--
Duchess	Brown	34.9	31.0	33.0	2.4	--	54.6	51.6	54.2	--
Mean		29.9	26.3	--	4.2	--	55.9	53.0	55.3	--
LSD 5%		0.7	0.9	--	0.5	--	0.5	0.7	4.5	--

Location	Planting Date	Harvest Date	Comments:
Langdon	May 8	August 24	
Carrington	May 5	August 24	No data on brown and oriental mustard because of poor stands.
Williston	April 26	July 30	
Prosper	May 24	August 22	
Minot	May 9	August 7	
Hettinger	April 18	July 14	

## Proso Millet Variety Trials, 2007

Seed Yield (lb/acre)						
Variety	Hettinger	Carrington	Minot	Williston	Prosper	Avg
Horizon	2530	1363	2220	1072	2262	1889
Sunrise	2280	1425	3180	1028	2189	2020
Sunup	2032	1545	3720	811	2327	2087
C.V. %	10.5	12.2	34	8	11	--
LSD 5%	415	NS	NS	138	NS	--

Test Weight (lb/bu)						
Variety	Hettinger	Carrington	Minot	Williston	Prosper	Avg
Horizon	55.3	50.8	50.5	51.5	52.1	52.0
Sunrise	57.0	50.3	50.9	50.5	51.1	52.0
Sunup	55.7	53.1	51.6	53.7	52.2	53.3
C.V. %	0.7	0.8	2.3	0.2	2.9	--
LSD 5%	0.7	0.7	NS	0.6	NS	--

Plant Height (inches)						
Variety	Hettinger	Carrington	Minot	Williston	Prosper	Avg
Horizon	33	41	38	32	48	38
Sunrise	35	44	37	32	50	40
Sunup	32	40	35	34	47	38
C.V. %	4.3	7.2	4.9	7	4.8	--
LSD 5%	NS	NS	NS	NS	NS	--

Miscellaneous data						
Variety	--- Days to Head ---		1000 Seed wt	----- Lodging -----		
	Hettinger	Prosper	Minot	Hettinger	Carrington	Prosper
			Grams	----- 0 – 9* -----		
Horizon	65	54	6.5	1.0	0.3	5.5
Sunrise	65	54	6.3	1.8	0.0	4.5
Sunup	65	53	6.2	0.0	0.5	5.0
C.V. %	0.9	1	5.9	31.5	189	18.9
LSD 5%	NS	1	NS	0.5	NS	NS

\* Lodging: 0 = none, 9 = laying flat on ground.

	Hettinger	Carrington	Minot	Williston	Prosper
Planting Date	May 23	June 6	June 6	May 29	June 1
Harvest Date	Sept. 26	Aug. 31	Oct. 5	Sept. 12	Sept. 11

## Safflower Variety Trials, 2007

<b>Seed Yield (lb/acre)</b>									
Variety	Minot fallow	Hettinger no-till	Carrington recrop	--- Williston --- recrop	--- Williston --- fallow	---- Sidney, MT ---- fallow	---- Sidney, MT ---- irrigated*	---- Sidney, MT ---- recrop	7 location avg
<b>Oleic</b>									
Montola 2003	3943	1994	1191	936	943	978	2416	1275	1609
Montola 2000	3363	1500	897	1177	957	1128	1814	1593	1516
Mon-Dak	4288	1801	1374	995	938	1026	2555	1647	1724
Montola 2004	2983	2055	936	903	895	1248	1794	1289	1473
<b>Linoleic</b>									
Finch	3427	1958	1328	1131	1080	1374	2334	1237	1648
Nutrasaff	2718	1400	712	755	749	1162	2026	1174	1239
Cardinal	3900	2270	1779	1204	1166	1363	2528	1833	1931
S-541	3133	2279	971	1029	--	--	--	--	--
Trial Mean	3481	1815	1175	1095	924	1165	2347	1321	--
LSD 5%	741	253	208	124	110	206	358	264	--

\* Irrigated plots received from 15 to 40% hail damage and are not included in the average

<b>Plant Height (inches)</b>								
Variety	Minot fallow	Carrington recrop	--- Williston --- recrop	--- Williston --- fallow	---- Sidney, MT ---- fallow	---- Sidney, MT ---- irrigated*	---- Sidney, MT ---- recrop	6 location avg
<b>Oleic</b>								
Montola 2003	23	22	15	20	27	19	24	22
Montola 2000	22	22	15	17	26	16	24	21
Mon-Dak	26	24	15	20	30	22	27	24
Montola 2004	22	22	14	18	27	20	21	21
<b>Linoleic</b>								
Finch	26	25	16	20	29	19	25	24
Nutrasaff	25	27	17	22	33	23	30	26
Cardinal	28	28	19	22	31	22	30	26
S-541	26	24	16	--	--	--	--	--
Trial Mean	25	24	15	20	28	20	25	--
LSD 5%	3	3	3	2	3	3	4	--

\* Irrigated plots received from 15 to 40% hail damage and are not included in the average

## Safflower Variety Trials, 2007

Test Weight (lb/bu)									
Variety	Minot fallow	Hettinger no-till	Carrington recrop	--- Williston ---		----- Sidney, MT -----			7 location avg
				recrop	fallow	fallow	irrigated*	recrop	
<b>Oleic</b>									
Montola 2003	44.5	38.4	31.7	41.1	41.3	40.8	43.2	41.2	39.9
Montola 2000	46.0	36.2	28.5	39.9	40.0	39.3	42.3	40.7	38.7
Mon-Dak	45.0	38.9	32.7	41.8	42.2	40.2	42.7	41.5	40.3
Montola 2004	43.8	39.7	30.9	39.8	40.7	39.7	42.5	41.7	39.5
<b>Linoleic</b>									
Finch	45.3	40.1	34.1	42.9	43.7	44.2	45.8	44.8	42.2
Nutrasaff	39.9	31.0	29.8	37.9	37.7	39.0	40.3	38.2	36.2
Cardinal	45.0	40.1	35.2	43.9	43.7	44.0	46.0	43.7	42.2
S-541	42.7	35.0	29.4	41.3	--	--	--	--	--
Trial Mean	43.6	37.1	31.7	40.2	40.5	40.2	42.2	40.8	--
LSD 5%	3.0	2.0	2.0	0.7	0.6	1.0	0.8	1.0	--

\* Irrigated plots received from 15 to 40% hail damage and are not included in the average

Seed Oil (%)								
Variety	Minot fallow	Hettinger no-till	--- Williston ---		----- Sidney, MT -----			6 location avg
			recrop	fallow	fallow	irrigated*	recrop	
<b>Oleic</b>								
Montola 2003	37.4	37.7	36.4	37.1	39.5	39.7	38.1	37.7
Montola 2000	39.6	37.5	36.5	37.8	40.4	39.5	40.1	38.7
Mon-Dak	36.7	35.2	34.0	35.5	37.2	38.2	37.6	36.0
Montola 2004	35.6	34.2	33.0	34.5	37.9	36.6	36.0	35.2
<b>Linoleic</b>								
Finch	37.5	37.2	34.3	35.4	39.5	37.9	39.3	37.2
Nutrasaff	44.6	45.3	43.9	44.0	49.6	49.1	48.9	46.1
Cardinal	36.7	35.9	39.6	34.2	38.4	36.4	38.6	37.2
S-541	40.9	42.1	40.1	--	--	--	--	--
Trial Mean	39.1	38.2	36.4	37.5	40.7	40.1	40.0	--
LSD 5%	3.6	0.9	0.9	0.6	0.9	0.9	2.7	--

\* Irrigated plots received from 15 to 40% hail damage and are not included in the average

## Safflower Variety Trials, 2007

<b>Location</b>	<b>Plant Date</b>	<b>Harvest Date</b>
Hettinger	April 25	August 22
Minot	May 10	October 24
Carrington	May 9	September 19
Williston Fallow	April 28	August 29
Williston Recrop	April 28	August 30
Sidney Fallow	April 26	September 3
Sidney Recrop	April 25	September 3
Sidney Irrigated	May 4	September 17



## Triticale Variety Trials, 2007

Yield (bu/acre) <sup>1</sup>								
Variety	Location				----- Avg -----			
	Carrington	Hettinger	Minot	Williston	2007	2006	2005	3 year
Companion	26.9	48.8	46.6	40.4	40.8	52.3	65.0	52.7
Laser	25.9	51.8	54.2	42.9	44.0	47.0	61.9	51.0
Marvel	19.7	41.2	41.1	34.2	34.0	40.3	56.1	43.5
RSI 310	33.5	62.4	62.7	35.3	52.9	54.7	67.8	58.5
Standswell	28.7	--	--	--	28.7	--	--	--
Trical 2700	20.8	51.9	43.8	37.0	38.8	49.9	62.7	50.5
Wapiti	28.7	39.7	47.9	38.7	38.8	51.6	67.7	52.7
Mean	26.3	49.3	49.4	38.1	40.8	63.4	69.0	57.7
CV%	17.7	5.9	12.1	6.3	10.5	--	--	--
LSD 5%	6.9	4.4	9.0	3.6	6.0	5.3	5.1	5.5

<sup>1</sup> Yield in bushels/acre based on 50 lb/bu.

Days to Head <sup>1</sup>					
Variety	Location				Avg
	Carrington	Hettinger	Minot	Williston	2007
Companion	52	62	56	53	56
Laser	52	62	54	53	55
Marvel	54	62	57	54	57
RSI 310	54	60	56	55	56
Standswell	54	--	--	--	--
Trical 2700	58	64	58	57	59
Wapiti	53	62	54	53	55
Mean	54	62	56	54	56
CV%	1.3	0.8	1.4	1.0	1.1
LSD 5%	1	1	1	1	1

<sup>1</sup> Days after planting.

Plant Height (inches)				
Variety	Location			Avg
	Hettinger	Minot	Williston	2007
Companion	50	50	41	47
Laser	47	47	39	44
Marvel	46	47	38	44
RSI 310	44	39	32	38
Standswell	--	--	--	--
Trical 2700	48	51	40	46
Wapiti	50	50	40	47
Mean	47	47	38	44
CV%	2.2	5.7	4.0	4.0
LSD 5%	2	4	2	3

## Triticale Variety Trials, 2007

<b>1000 Seed Weight (grams)</b>			
Variety	Location		Avg
	Carrington	Minot	2007
Companion	42.1	35.9	39.0
Laser	39.8	38.1	39.0
Marvel	34.1	31.8	33.0
RSI 310	36.2	32.7	34.5
Standswell	34.1	--	--
Trical 2700	32.7	32.9	32.8
Wapiti	40.9	37.8	39.4
Mean	37.1	34.8	36.0
CV%	3.7	5.0	4.4
LSD 5%	2.1	2.6	2.4

<b>Test Weight (lb/bu)</b>					
Variety	Location				Avg
	Carrington	Hettinger	Minot	Williston	2007
Companion	50.1	51.2	51.5	49.8	50.7
Laser	50.4	54.0	51.3	51.7	51.9
Marvel	43.7	46.4	45.2	41.4	44.2
RSI 310	48.7	53.3	51.2	48.0	50.3
Standswell	49.3	--	--	--	--
Trical 2700	44.3	52.4	46.7	45.1	47.1
Wapiti	50.4	51.4	51.4	50.1	50.8
Mean	48.1	51.5	49.6	47.7	49.2
CV%	1.4	2.3	1.1	6.0	2.7
LSD 5%	1.0	1.8	0.8	0.7	1.1

<b>Protein (%)<sup>1</sup></b>				
Variety	Location			Avg
	Carrington	Minot	Williston	2007
Companion	22.2	22.7	22.7	22.5
Laser	20.2	20.0	19.6	19.9
Marvel	22.3	23.8	24.0	23.4
RSI 310	21.5	21.1	23.5	22.0
Standswell	22.0	--	--	22.0
Trical 2700	22.9	22.3	25.3	23.5
Wapiti	21.3	22.9	22.6	22.3
Mean	21.8	22.1	22.9	22.5
CV%	2.8	2.7	2.1	2.5
LSD 5%	0.9	0.9	1.3	1.0

<sup>1</sup> Seed protein percentages reported on a 12% moisture basis.

## Triticale Variety Trials, 2007

<b>Location</b>	<b>Planting Date</b>	<b>Harvest Date</b>	<b>Previous Crop</b>
Carrington	May 9	August 1	Soybean
Hettinger	April 17	July 31	Field Pea
Minot	May 12	September 19	Fallow
Williston	May 4	August 16	Fallow

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