PROJECT TITLE: Canola Performance Evaluations near Moccasin, Sidney, Havre, Kalispell, Huntley and Conrad, Montana. (Exps. 09-CN07, 09-CN03, 09-CN02, 09-CN05, 09-CN08, 09-CN18)

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OBJECTIVES:

To provide canola growers in Montana with a reliable, unbiased, up-to-date source of information that will permit valid dryland and/or irrigated seed production comparisons among improved canola hybrids and experimental lines submitted for testing by participating commercial and university entities. Over time, this information should help canola producers in Montana select hybrids best suited to different regions of the state.

RESULTS and SUMMARY:

In 2009, four sponsors submitted sixteen canola hybrids and experimental lines for testing near Moccasin, Sidney, Havre, Kalispell, Huntley and Conrad, MT (Table 1). Moccasin, Havre, Huntley and Conrad were dryland sites, while Sidney was an irrigated site and Kalispell was a high rainfall site. Genetic herbicide resistance and contact information is also presented in Table 1.

Statewide summaries of yield, percent oil and pounds of oil per acre are presented in Tables 2 through 4. 'InVigor 5440', a Liberty Link canola hybrid from Bayer CropScience was the only entry to produce a seed yield equal to the highest yielding entry at all six sites. Across sites tested, InVigor 5440 averaged over 1900 lb/ac seed (Table 2) and 784 lb/ac of oil (Table 4).

Central Agricultural Research Center, Moccasin: In a dryland environment, canola seed yield at CARC ranged from 312 to 736 lb/ac. Seed yield averaged 538 lb/ac with only four of sixteen entries yielding statistically equivalent to the highest yielding line 'IS 3057' from Interstate Seed/Monsanto (736 lb/ac). Canola test weight at CARC averaged 49.0 lb/bu and percent grain oil averaged 37.8. Canola ID, plant count, grain yield, grain test weight, grain moisture, grain protein, grain oil, oil yield, flowering date, and plant height data are summarized for CARC in Table 5.

Eastern Agricultural Research Center, Sidney: In an irrigated environment, overall canola seed yield at EARC averaged 1867 lb/ac. One submission by Bayer CropScience, LLP and one submission by Interstate Seed/Monsanto were statistically the highest yielding entries in the trial with 'InVigor 5440' at 2638 lb/ac and 'DKL 72-55' at 2220 lb/ac. Test weights of all entries averaged 51 lb/bu. Grain oil percent ranged from 41.3 to 47.3 with InVigor 5440 producing the most oil per acre at 1176 lbs. Canola ID, plant stand, grain yield, grain test weight, grain protein, grain oil, oil yield, flowering date and plant height are summarized for EARC in Table 6.

Northern Agricultural Research Center, Havre: In a dryland environment, canola seed yield at NARC averaged 2047 lb/ac. Six of the 15 entries grown produced yields statistically equal to the highest yielding entry, 'DKL 30-42', at 2320 lb/ac. Test weights of all entries averaged 52.6 lb/bu. Grain oil averaged 33 percent with 'InVigor 5630' producing the most oil per acre at 756 lbs. Canola ID, plant stand, plant count, grain yield, grain test weight, grain moisture, grain protein, grain oil, oil yield, flowering date, maturity date, plant height, pod shatter and lodging index are summarized for NARC in Table 7.

Northwestern Agricultural Research Center, Kalispell: In a recrop, high rainfall environment, overall canola seed yield at NWARC averaged 2367 lb/ac. Eight of the 15 entries grown produced yields statistically equal to the highest yielding entry, 'DKL 30-42', at 2578 lb/ac. Test weights of all entries averaged nearly 50 lb/bu. Grain oil averaged nearly 40 percent with 'DKL 72-55' producing the most oil per acre at 1064 lbs. Canola ID, plant stand, grain yield, grain test weight, grain moisture, grain protein, grain oil, oil yield, flowering date, maturity date, plant height, pod shatter and lodging index are summarized for NWARC in Table 8.

Southern Agricultural Research Center, Huntley: In a dryland environment, canola seed yield at SARC averaged 1347 lb/ac. Four of the 11 entries grown yielded statistically equal to the highest yielding entry, 'InVigor 5550', at 1675 lb/ac. Test weights of all entries averaged just over 49 lb/bu. Grain oil ranged from 37.5% to 40.3% with 'DKL 30-42' producing the most oil per acre at 659 lbs. Canola ID, plant count, grain yield, grain test weight, grain moisture, grain protein, grain oil, oil yield, flowering date and plant height are summarized for SARC in Table 9.

Western Triangle Agricultural Research Center, Conrad: In a dryland environment, canola seed yield at WTARC averaged 1781 lb/ac. Ten of the 16 entries grown produced yields statistically equal to the highest yielding entry, 'DKL 30-42', at 2049 lb/ac. Grain oil ranged averaged 46 percent with DKL 30-42 also producing the most oil per acre at 1045 lbs. Canola ID, grain yield, grain protein, grain oil, oil yield, flowering date and plant height are summarized for WTARC in Table 10.

FUTURE PLANS:

With continued support from the canola industry and research center personnel, multi-location canola evaluations will continue in 2010 at selected sites across Montana.

Table 1. Contact Information for Seed Sources of Sixteen Commercial Hybrid Canola Entries Tested near Moccasin, Sidney, Havre, Kalispell, Huntley and Conrad, MT. 2009.
(Exps. 09-CN07, 09-CN03, 09-CN02, 09-CN05, 09-CN08, 09-CN18)

SPONSOR	HYBRIDS TESTED	HERBICIDE RESISTANCE	CONTACT
Bayer CropScience	InVigor 5440 InVigor 5550 InVigor 8440	Liberty Link Liberty Link Liberty Link	Mr. Jordan Varberg Bayer CropScience 1524 Walnut Street Grand Forks, ND 58201 PH: 701-775-2700 FX: 701-795-5118 EM: jordan.varberg@bayercropscience.com
Croplan Genetics	HyClass 921-RR HyClass 940-RR	Roundup Ready Roundup Ready	Mr. Monte Reiner Winfield Solution, LLC 525 55th ST SE Minot, ND 58701 PH: 701-852-3556 FX: 701-852-3036 EM: mrreiner@landolakes.com
DEKALB	DKL 30-42 DKL 52-41 DKL 72-55	Roundup Ready Roundup Ready Roundup Ready	Mr. Jeff Widder Monsanto Company 800 N. Lindbergh Blvd Mail Zone - NC3K St. Louis, MO 63167 PH: 314-694-6152 FX: 314-694-4249 EM: jeffrey.widder@monsanto.com
MSU Research Centers These commercial hybrids and university entries were paid for by Central Ag Research Center and included in the trials in order to complete a multi-year, multi-location dataset.	InVigor 5630 HyClass 924-RR Hyola 357 Magnum IS 3057 RR IS 7145 RR UISC0135 UISC3117 Oscar	Liberty Link Roundup Ready Roundup Ready Roundup Ready Roundup Ready None None None	

Table 2. 09CNxx: Montana Statewide Industry and University Canola Trial Grain Yield Summary. 2009.

Entry	ID	Moccasin dryland	Sidney irrigated	Havre dryland	Kalispell high rainfall	Huntley dryland	Conrad dryland	Average for Sites
		Grain Yield						
		lb/ac	lb/ac	lb/ac	lb/ac	lb/ac	lb/ac	lb/ac
1	InVigor 5440	**632.0**	**2638.0**	**2304.3**	**2433.7**	**1484.0**	**1944.2**	1906.0
2	InVigor 5550	555.8	2138.4	**2280.8**	2310.0	**1675.0**	**2039.7**	1833.3
3	InVigor 5630	572.1	1719.7	**2269.0**	**2519.3**	-	**1848.4**	1785.7
4	InVigor 8440	563.7	1769.1	2104.9	**2523.7**	1062.6	**1874.3**	1649.7
5	HyClass 924-RR	469.1	1664.1	1906.3	2310.0	-	1609.4	1591.8
6	HyClass 940-RR	481.2	1946.9	2096.6	**2575.9**	1254.9	**1960.2**	1719.3
7	DKL 30-42	**626.0**	2075.2	**2319.7**	**2577.9**	**1674.4**	**2048.8**	1887.0
8	DKL 52-41	553.6	1744.0	1908.0	**2539.3**	1238.8	1741.8	1620.9
9	DKL 72-55	541.4	**2219.6**	**2233.8**	**2518.1**	1328.6	**1809.4**	1775.1
10	Hyola 357 Magnum	**628.2**	1760.3	2073.2	**2525.9**	**1539.5**	1669.9	1699.5
11	IS 3057 RR	**735.9**	1948.6	1872.9	2226.2	-	**1885.9**	1733.9
12	IS 7145 RR	542.7	1819.0	**2118.8**	**2442.3**	-	**1928.7**	1770.3
13	UISC0135	496.5	1500.9	1908.8	2101.9	1166.0	1630.2	1467.4
14	UISC3117	312.5	1924.4	1681.4	1834.8	1150.9	1367.2	1378.5
15	Oscar	366.1	1255.8	1628.8	2061.1	1242.4	1394.4	1324.8
16	HyClass 921-RR	-	1750.7	-	-	-	**1749.2**	1749.9
	Average	538.4	1867.2	2047.1	2366.7	1347.0	1781.4	1680.8
	LSD (p=0.05)	140.74	472.97	210.85	263.48	276.3	303.01	-
	CV%	18.31	15.19	7.22	7.80	14.20	11.94	-

bold Indicates cultivars yielding equal to the highest yielding entry in each column based on Fischer's Protected LSD at the 0.05 probability level.

Table 3. 09CNxx: Montana Statewide Industry and University Canola Trial Grain Oil Content Summary. 2009.

Entry	ID	Moccasin dryland	Sidney irrigated	Havre dryland	Kalispell high rainfall	Huntley dryland	Conrad dryland	Average for Sites
		Oil Content						
		%	%	%	%	%	%	%
1	InVigor 5440	36.9	44.7	32.4	42.1	38.5	45.2	40.0
2	InVigor 5550	37.4	45.1	32.7	40.4	37.8	46.0	39.9
3	InVigor 5630	37.7	45.3	33.3	38.8	-	47.9	40.6
4	InVigor 8440	37.1	44.3	33.3	39.3	38.8	46.1	39.8
5	HyClass 924-RR	36.3	44.7	33.0	39.1	-	46.4	39.9
6	HyClass 940-RR	39.5	44.6	33.7	40.8	38.6	46.6	40.7
7	DKL 30-42	37.6	45.9	32.5	41.1	39.5	46.9	40.6
8	DKL 52-41	38.0	45.1	32.6	40.2	39.1	46.8	40.3
9	DKL 72-55	39.3	45.9	33.8	42.2	40.3	47.5	41.5
10	Hyola 357 Magnum	36.5	43.4	32.6	38.1	38.1	43.8	38.7
11	IS 3057 RR	38.4	46.2	35.7	40.9	-	47.9	41.8
12	IS 7145 RR	37.9	45.2	33.0	40.1	-	46.8	40.6
13	UISC0135	36.3	42.5	33.0	38.1	38.2	44.7	38.8
14	UISC3117	40.6	41.3	33.0	40.5	38.8	46.9	40.2
15	Oscar	37.1	41.6	30.4	36.9	37.5	41.8	37.5
16	HyClass 921-RR	-	47.3	-	-	-	49.4	48.3
	Average	37.8	44.6	33.0	39.9	38.6	46.3	40.6
	LSD (p=0.05)	1.21	1.34	1.65	0.79	0.81	1.65	-
	CV%	2.23	1.80	3.50	1.39	1.46	2.50	-

Grain oil is reported on a dry matter basis.

Table 4. 09CNxx: Montana Statewide Industry and University Canola Trial Grain Oil Yield Summary. 2009.

Entry	ID	Moccasin dryland	Sidney irrigated	Havre dryland	Kalispell high rainfall	Huntley dryland	Conrad dryland	Average for Sites
		Oil Yield						
		lb/ac	lb/ac	lb/ac	lb/ac	lb/ac	lb/ac	lb/ac
1	InVigor 5440	**233.1**	**1176.3**	**745.3**	**1024.3**	**571.7**	**953.9**	784.1
2	InVigor 5550	207.8	964.3	**745.3**	933.0	**633.0**	**1018.6**	750.3
3	InVigor 5630	215.3	778.4	**756.3**	**979.1**	-	**961.1**	738.0
4	InVigor 8440	207.9	784.5	**701.1**	**990.6**	410.8	**937.0**	672.0
5	HyClass 924-RR	169.3	743.0	629.1	902.6	-	810.4	650.9
6	HyClass 940-RR	190.2	866.9	**705.5**	**1052.5**	483.8	**992.5**	715.2
7	DKL 30-42	**235.1**	951.9	**755.0**	**1058.5**	**659.4**	**1045.0**	784.2
8	DKL 52-41	210.2	786.2	621.3	**1021.9**	483.6	884.3	667.9
9	DKL 72-55	213.7	**1015.0**	**756.3**	**1064.1**	534.2	937.2	753.4
10	Hyola 357 Magnum	228.9	764.6	674.8	**963.6**	**586.6**	790.8	668.2
11	IS 3057 RR	**282.9**	901.8	667.1	910.7	-	**981.8**	748.9
12	IS 7145 RR	204.9	822.2	**700.3**	**978.5**	-	**980.0**	737.2
13	UISC0135	179.7	637.4	628.6	801.6	444.9	791.5	580.6
14	UISC3117	126.9	793.6	550.8	744.0	445.6	695.8	559.5
15	Oscar	135.5	522.0	492.5	760.9	465.1	633.2	501.5
16	HyClass 921-RR	-	827.9	-	-	-	**938.6**	883.2
	Average	202.8	833.5	675.3	945.7	519.9	897.0	699.7
	LSD (p=0.05)	51.84	202.52	74.32	111.9	103.49	147.14	-
	CV%	17.91	14.57	7.71	8.29	13.78	11.52	-

bold Indicates cultivars yielding equal to the highest yielding entry in each column based on Fischer's Protected LSD at the 0.05 probability level.

Grain oil yield is reported on a dry matter basis.

Table 5. 09CN07: Statewide Industry and University Canola Trial - Dryland.
Central Agricultural Research Center. Moccasin, MT. 2009.

Entry	ID	Plant Stand	Plant Count	Grain Yield		Test Weight	Grain Moisture	Grain Protein	Grain Oil	Oil Yield		Flowering Date Julian	Flowering Date Calendar	Maturity Date Julian	Maturity Date Calendar	Plant Height	Pod Shatter	Lodging Index
		%	no/ft2	lb/ac		lb/bu	%	%	%	lb/ac		day	date	day	date	inches	%	rating
1	InVigor 5440		14.1	**632.0**	*	50.6	7.2	21.2	36.9	**233.1**	*	173.0	22-Jun			29.9		
2	InVigor 5550		11.6	555.8		50.5	11.0	20.4	37.4	207.8		173.0	22-Jun			30.5		
3	InVigor 5630		13.3	572.1		49.1	6.5	20.4	37.7	215.3		174.0	23-Jun			28.2		
4	InVigor 8440		12.9	563.7		48.3	12.3	21.0	37.1	207.9		170.0	19-Jun			26.1		
5	HyClass 924-RR		14.3	469.1		49.4	11.5	22.5	36.3	169.3		172.0	21-Jun			26.8		
6	HyClass 940-RR		8.6	481.2		48.6	9.0	19.0	39.5	190.2		174.0	23-Jun			28.9		
7	DKL 30-42		8.0	**626.0**	*	49.4	11.8	19.6	37.6	**235.1**	*	171.0	20-Jun			25.2		
8	DKL 52-41		11.2	553.6		48.8	7.0	22.0	38.0	210.2		173.0	22-Jun			28.0		
9	DKL 72-55		9.9	541.4		49.4	6.3	19.1	39.3	213.7		173.0	22-Jun			29.0		
10	Hyola 357 Magnum		10.1	**628.2**	*	49.3	8.2	21.2	36.5	228.9		169.0	18-Jun			25.1		
11	IS 3057 RR		11.8	**735.9**	**	49.2	10.1	20.5	38.4	**282.9**	**	169.0	18-Jun			28.3		
12	IS 7145 RR		12.0	542.7		49.8	6.8	21.2	37.9	204.9		175.0	24-Jun			28.2		
13	UISC0135		11.4	496.5		48.8	10.4	21.0	36.3	179.7		174.0	23-Jun			27.9		
14	UISC3117		7.6	312.5		45.9	4.0	17.6	40.6	126.9		175.0	24-Jun			26.8		
15	Oscar		6.4	366.1		48.1	4.1	21.1	37.1	135.5		175.0	24-Jun			28.8		
	Average		10.9	538.4		49.0	8.4	20.5	37.8	202.8		173.0	22-Jun			27.9		
	LSD (p=0.05)		2.71	140.74		2.00	ns	1.13	1.21	51.84		1.00	-			3.12		
	CV%		17.47	18.31		2.86	58.80	3.87	2.23	17.91		0.004	-			7.84		

Grain yield is adjusted to 8 percent grain moisture content.

** Indicates highest yielding cultivar within a column.

***** Indicates cultivars yielding equal to the highest yielding entry based on Fisher's Protected LSD at the 0.05 probability level.

Grain protein, grain oil and oil yeild are reported on a dry matter basis.

Seeding Date: April 22, 2009
Harvest Date: August 17, 2009

Table 6. 09CN03: Statewide Industry and University Canola Trial - Irrigated.
Eastern Agricultural Research Center. Sidney, MT. 2009.

Entry	ID	Plant Stand	Plant Count	Grain Yield		Test Weight	Grain Moisture	Grain Protein	Grain Oil	Oil Yield		Flowering Date Julian	Flowering Date Calendar	Maturity Date Julian	Maturity Date Calendar	Plant Height	Pod Shatter	Lodging Index
		%	no/ft2	lb/ac		lb/bu	%	%	%	lb/ac		day	date	day	date	inches	%	rating
1	InVigor 5440	91.7		**2638.0**	**	52.0		24.6	44.7	**1176.3**	**	188.3	7-Jul			39.0		
2	InVigor 5550	91.7		2138.4		52.3		24.6	45.1	964.3		188.7	8-Jul			38.5		
3	InVigor 5630	90.0		1719.7		49.8		24.7	45.3	778.4		188.3	7-Jul			32.2		
4	InVigor 8440	95.0		1769.1		49.5		22.7	44.3	784.5		190.0	9-Jul			33.6		
5	HyClass 924-RR	93.3		1664.1		51.8		24.6	44.7	743.0		187.7	7-Jul			33.5		
6	HyClass 940-RR	88.3		1946.9		51.0		21.9	44.6	866.9		187.3	6-Jul			32.3		
7	DKL 30-42	91.7		2075.2		51.7		20.9	45.9	951.9		183.3	2-Jul			32.7		
8	DKL 52-41	93.3		1744.0		50.0		22.4	45.1	786.2		187.7	7-Jul			29.7		
9	DKL 72-55	93.3		**2219.6**	*	51.3		22.5	45.9	**1015.0**	*	186.7	6-Jul			32.5		
10	Hyola 357 Magnum	90.0		1760.3		50.0		24.0	43.4	764.6		182.0	1-Jul			30.2		
11	IS 3057 RR	90.0		1948.6		50.3		25.4	46.2	901.8		182.0	1-Jul			30.4		
12	IS 7145 RR	93.3		1819.0		52.0		23.4	45.2	822.2		187.7	7-Jul			27.3		
13	UISC0135	86.7		1500.9		50.2		22.4	42.5	637.4		187.3	6-Jul			30.2		
14	UISC3117	90.7		1924.4		50.7		22.9	41.3	793.6		186.3	5-Jul			32.2		
15	Oscar	85.0		1255.8		50.8		24.3	41.6	522.0		189.3	8-Jul			32.0		
16	HyClass 921-RR	83.3		1750.7		52.0		22.7	47.3	827.9		186.3	5-Jul			32.4		
	Average	90.5		1867.2		51.0		23.4	44.6	833.5		186.8	6-Jul			32.4		
	LSD (p=0.05)	ns		472.97		0.88		-	1.34	202.52		2.79	-			4.71		
	CV%	4.74		15.19		1.04		-	1.80	14.57		0.90	-			8.71		

Grain yield is reported "as was" at harvest - not adjusted to a uniform moisture content.

** Indicates highest yielding cultivar within a column.

***** Indicates cultivars yielding equal to the highest yielding entry based on Fisher's Protected LSD at the 0.05 probability level.

Grain protein, grain oil and oil yeild are reported on a dry matter basis.

Seeding Date: May 18, 2009
Harvest Date: September 14, 2009

Table 7. 09CN02: Statewide Industry and University Canola Trial - Dryland.
Northern Agricultural Research Center. Havre, MT. 2009.

Entry	ID	Plant Stand	Plant Count	Grain Yield		Test Weight	Grain Moisture	Grain Protein	Grain Oil	Oil Yield		Flowering Date Julian	Flowering Date Calendar	Maturity Date Julian	Maturity Date Calendar	Plant Height	Pod Shatter	Lodging Index
		%	no/ft2	lb/ac		lb/bu	%	%	%	lb/ac		day	date	day	date	inches	%	rating
1	InVigor 5440	97.6	9.8	**2304.3**	*	53.8	5.4	28.6	32.4	**745.3**	*	170.5	20-Jun	209.5	29-Jul	38.0	6.3	0.0
2	InVigor 5550	96.7	8.0	**2280.8**	*	53.6	5.1	29.8	32.7	**745.3**	*	168.8	18-Jun	209.5	29-Jul	38.1	3.0	0.0
3	InVigor 5630	98.3	10.0	**2269.0**	*	52.8	5.2	28.6	33.3	**756.3**	**	169.8	19-Jun	209.5	29-Jul	36.1	6.5	0.0
4	InVigor 8440	99.0	9.5	2104.9		52.5	5.3	27.3	33.3	**701.1**	*	167.8	17-Jun	208.8	28-Jul	36.7	11.3	0.0
5	HyClass 924-RR	98.4	13.0	1906.3		52.3	5.0	29.3	33.0	629.1		168.0	17-Jun	208.0	27-Jul	35.3	7.5	0.0
6	HyClass 940-RR	95.8	7.8	2096.6		52.8	5.2	28.0	33.7	**705.5**	*	169.3	18-Jun	208.5	28-Jul	32.8	11.3	0.0
7	DKL 30-42	97.0	8.0	**2319.7**	**	51.8	4.9	29.3	32.5	**755.0**	*	167.5	17-Jun	208.0	27-Jul	33.9	2.0	0.0
8	DKL 52-41	96.4	8.0	1908.0		52.4	5.2	30.3	32.6	621.3		168.3	17-Jun	209.5	29-Jul	35.0	12.5	0.0
9	DKL 72-55	95.1	6.8	**2233.8**	*	52.5	5.0	28.7	33.8	**756.3**	*	166.8	16-Jun	208.5	28-Jul	33.9	6.3	0.0
10	Hyola 357 Magnum	96.9	8.3	2073.2		52.0	5.3	27.3	32.6	674.8		166.8	16-Jun	208.0	27-Jul	29.6	1.0	0.0
11	IS 3057 RR	94.8	10.8	1872.9		51.9	5.0	26.7	35.7	667.1		166.3	15-Jun	206.0	25-Jul	31.8	4.3	0.0
12	IS 7145 RR	96.5	10.5	**2118.8**	*	53.0	5.0	28.9	33.0	**700.3**	*	172.0	21-Jun	211.3	30-Jul	37.1	8.8	0.0
13	UISC0135	98.1	10.0	1908.8		51.9	5.2	26.9	33.0	628.6		167.8	17-Jun	209.5	29-Jul	35.9	6.5	0.0
14	UISC3117	95.3	9.0	1681.4		51.9	5.1	26.7	33.0	550.8		168.8	18-Jun	211.0	30-Jul	32.1	5.3	0.0
15	Oscar	96.2	10.5	1628.8		53.2	5.3	29.0	30.4	492.5		169.3	18-Jun	210.5	30-Jul	32.9	5.3	0.0
	Average	96.8	9.3	2047.1		52.6	5.1	28.3	33.0	675.3		168.5	18-Jun	209.1	28-Jul	34.6	6.5	0.0
	LSD (p=0.05)	ns	2.46	210.85		0.38	0.12	1.86	1.65	74.32		1.11	-	1.69	-	3.17	4.84	-
	CV%	2.45	18.51	7.22		0.50	1.59	4.59	3.50	7.71		0.47	-	0.56	-	6.42	52.13	-

Grain yield is adjusted to 8 percent grain moisture content.
** Indicates highest yielding cultivar within a column.
***** Indicates cultivars yielding equal to the highest yielding entry based on Fisher's Protected LSD at the 0.05 probability level.
Grain protein, grain oil and oil yeild are reported on a dry matter basis.

Seeding Date: April 21, 2009
Harvest Date: August 11, 2009

Table 8. 09CN05: Statewide Industry and University Canola Trial - High Rainfall.
Northwestern Agricultural Research Center. Kalispell, MT. 2009.

Entry	ID	Plant Stand	Plant Count	Grain Yield		Test Weight	Grain Moisture	Grain Protein	Grain Oil	Oil Yield		Flowering Date Julian	Flowering Date Calendar	Maturity Date Julian	Maturity Date Calendar	Plant Height	Pod Shatter	Lodging Index
		%	no/ft2	lb/ac		lb/bu	%	%	%	lb/ac		day	date	day	date	inches	%	rating
1	InVigor 5440	87.5		**2433.7**	*	49.8	5.3	19.2	42.1	**1024.3**	*	168.0	17-Jun	220.0	8-Aug	36.3	1.3	0.5
2	InVigor 5550	87.5		2310.0		50.5	5.5	21.0	40.4	933.0		173.8	23-Jun	221.5	10-Aug	40.0	3.8	0.3
3	InVigor 5630	87.5		**2519.3**	*	50.6	6.0	21.5	38.8	**979.1**	*	173.8	23-Jun	222.0	10-Aug	43.5	5.0	0.3
4	InVigor 8440	86.0		**2523.7**	*	50.7	5.8	21.4	39.3	**990.6**	*	173.0	22-Jun	221.3	9-Aug	43.8	5.0	0.5
5	HyClass 924-RR	92.1		2310.0		50.6	5.3	22.5	39.1	902.6		170.0	19-Jun	221.3	9-Aug	40.3	2.5	0.8
6	HyClass 940-RR	85.6		**2575.9**	*	50.0	5.5	20.0	40.8	**1052.5**	*	170.8	20-Jun	220.5	9-Aug	39.0	2.5	1.0
7	DKL 30-42	86.3		**2577.9**	**	50.5	5.1	20.2	41.1	**1058.5**	*	169.5	19-Jun	220.8	9-Aug	37.8	2.5	0.8
8	DKL 52-41	84.0		**2539.3**	*	49.5	5.5	21.6	40.2	**1021.9**	*	170.8	20-Jun	221.3	9-Aug	41.3	5.0	0.8
9	DKL 72-55	87.1		**2518.1**	*	50.0	5.1	18.7	42.2	**1064.1**	**	170.5	20-Jun	220.8	9-Aug	37.5	2.5	0.5
10	Hyola 357 Magnum	86.7		**2525.9**	*	48.6	6.1	21.7	38.1	**963.6**	*	168.0	17-Jun	222.0	10-Aug	33.8	1.3	1.8
11	IS 3057 RR	85.6		2226.2		49.2	5.8	19.6	40.9	910.7		173.5	23-Jun	221.8	10-Aug	43.5	5.0	0.5
12	IS 7145 RR	88.5		**2442.3**	*	49.2	5.8	20.1	40.1	**978.5**	*	171.5	21-Jun	220.8	9-Aug	40.8	6.3	0.5
13	UISC0135	88.5		2101.9		49.7	5.7	22.5	38.1	801.6		170.0	19-Jun	220.3	8-Aug	41.3	3.8	0.8
14	UISC3117	82.9		1834.8		49.6	5.8	19.2	40.5	744.0		171.0	20-Jun	221.3	9-Aug	40.8	5.0	2.0
15	Oscar	90.0		2061.1		50.4	7.3	22.1	36.9	760.9		171.8	21-Jun	222.5	11-Aug	41.5	3.8	0.8
	Average	87.1		2366.7		49.9	5.7	20.8	39.9	945.7		171.1	20-Jun	221.2	9-Aug	40.1	3.7	0.8
	LSD (p=0.05)	ns		263.48		0.36	0.42	1.10	0.79	111.9		1.09	-	0.83	-	2.81	ns	0.68
	CV%	7.32		7.80		0.50	5.18	3.70	1.39	8.29		0.45	-	0.26	-	4.92	111.10	61.82

Grain yield is adjusted to 8 percent grain moisture content.

** Indicates highest yielding cultivar within a column.

***** Indicates cultivars yielding equal to the highest yielding entry based on Fisher's Protected LSD at the 0.05 probability level.

Grain protein, grain oil and oil yeild are reported on a dry matter basis.

Seeding Date: May 1, 2009
Harvest Date: August 10, 2009

Table 9. 09CN08: Statewide Industry and University Canola Trial - Dryland.
Southern Agricultural Research Center. Huntley, MT. 2009.

Entry	ID	Plant Stand	Plant Count	Grain Yield		Test Weight	Grain Moisture	Grain Protein	Grain Oil	Oil Yield		Flowering Date Julian	Flowering Date Calendar	Maturity Date Julian	Maturity Date Calendar	Plant Height	Pod Shatter	Lodging Index
		%	no/ft2	lb/ac		lb/bu	%	%	%	lb/ac		day	date	day	date	inches	%	rating
1	InVigor 5440		7.9	**1484.0**	*	50.0	12.7	12.2	38.5	**571.7**	*	169.8	19-Jun			94.3		
2	InVigor 5550		6.1	**1675.0**	**	49.4	13.1	12.4	37.8	**633.0**	*	168.3	18-Jun			99.9		
3	InVigor 8440		5.6	1062.6		48.6	12.6	12.5	38.8	410.8		166.3	15-Jun			96.0		
4	HyClass 940-RR		5.6	1254.9		49.5	11.8	11.2	38.6	483.8		168.5	19-Jun			92.1		
5	DKL 30-42		5.8	**1674.4**	*	50.0	11.9	11.1	39.5	**659.4**	**	166.8	16-Jun			90.9		
6	DKL 52-41		5.6	1238.8		49.6	11.4	10.2	39.1	483.6		167.5	17-Jun			99.4		
7	DKL 72-55		6.7	1328.6		50.2	10.8	10.1	40.3	534.2		167.3	16-Jun			88.6		
8	Hyola 357 Magnum		6.1	**1539.5**	*	48.7	11.9	11.8	38.1	**586.6**	*	165.5	15-Jun			81.2		
9	UISC0135		4.4	1166.0		49.0	12.8	12.4	38.2	444.9		167.8	18-Jun			93.6		
10	UISC3117		7.1	1150.9		48.6	12.8	12.5	38.8	445.6		168.3	18-Jun			98.7		
11	Oscar		5.1	1242.4		49.3	13.3	12.3	37.5	465.1		168.3	18-Jun			94.9		
	Average		6.0	1347.0		49.3	12.3	11.7	38.6	519.9		167.6	17-Jun			93.6		
	LSD (p=0.05)		ns	276.30		0.87	1.18	1.00	0.81	103.49		0.98	-			ns		
	CV%		37.75	14.20		1.22	6.65	5.95	1.46	13.78		0.41	-			9.05		

Grain yield is adjusted to 10 percent grain moisture content.
** Indicates highest yielding cultivar within a column.
***** Indicates cultivars yielding equal to the highest yielding entry based on Fisher's Protected LSD at the 0.05 probability level.
Grain protein, grain oil and oil yeild are reported on a dry matter basis.

Seeding Date: March 23, 2009
Harvest Date: August 3, 2009

Table 10. 09CN18: Statewide Industry and University Canola Trial - Dryland.
Western Triangle Agricultural Research Center. Conrad, MT. 2009.

Entry	ID	Plant Stand	Plant Count	Grain Yield		Test Weight	Grain Moisture	Grain Protein	Grain Oil	Oil Yield		Flowering Date Julian	Flowering Date Calendar	Maturity Date Julian	Maturity Date Calendar	Plant Height	Pod Shatter	Lodging Index
		%	no/ft2	lb/ac		lb/bu	%	%	%	lb/ac		day	date	day	date	inches	%	rating
1	InVigor 5440			**1944.2**	*			13.1	45.2	**953.9**	*	179.5	29-Jun			45.0		
2	InVigor 5550			**2039.7**	*			13.3	46.0	**1018.6**	*	177.3	26-Jun			52.0		
3	InVigor 5630			**1848.4**	*			10.4	47.9	**961.1**	*	179.0	28-Jun			45.0		
4	InVigor 8440			**1874.3**	*			11.0	46.1	**937.0**	*	177.5	27-Jun			43.0		
5	HyClass 924-RR			1609.4				12.8	46.4	810.4		177.8	27-Jun			45.0		
6	HyClass 940-RR			**1960.2**	*			10.6	46.6	**992.5**	*	177.8	27-Jun			41.0		
7	DKL 30-42			**2048.8**	**			11.7	46.9	**1045.0**	**	177.3	26-Jun			40.0		
8	DKL 52-41			1741.8				12.2	46.8	884.3		178.0	27-Jun			40.0		
9	DKL 72-55			**1809.4**	*			11.0	47.5	**937.2**	*	177.8	27-Jun			45.0		
10	Hyola 357 Magnum			1669.9				13.0	43.8	790.8		177.0	26-Jun			37.0		
11	IS 3057 RR			**1885.9**	*			9.7	47.9	**981.8**	*	176.0	25-Jun			41.0		
12	IS 7145 RR			**1928.7**	*			12.2	46.8	**980.0**	*	180.8	30-Jun			47.0		
13	UISC0135			1630.2				12.6	44.7	791.5		178.5	28-Jun			44.0		
14	UISC3117			1367.2				10.8	46.9	695.8		179.3	28-Jun			44.0		
15	Oscar			1394.4				14.9	41.8	633.2		181.0	30-Jun			41.0		
16	HyClass 921-RR			**1749.2**	*			9.8	49.4	**938.6**	*	178.3	27-Jun			48.0		
	Average			1781.4				11.8	46.3	897.0		178.3	27-Jun			43.6		
	LSD (p=0.05)			303.01				1.55	1.65	147.14		1.28	-					
	CV%			11.94				9.23	2.50	11.52		0.50	-					

Grain yield is reported "as was" at harvest - not adjusted to a uniform moisture content.
** Indicates highest yielding cultivar within a column.
***** Indicates cultivars yielding equal to the highest yielding entry based on Fisher's Protected LSD at the 0.05 probability level.
Grain protein, grain oil and oil yeild are reported on a dry matter basis.

Seeding Date: May 6, 2009
Swathing Date: August 18, 2009
Harvest Date: August 23, 2009