

PROJECT TITLE: Camelina Performance Evaluations near Moccasin, Sidney, Havre, Kalispell, Huntley and Conrad, Montana. (Exps. 09-CM07, 09-CM03, 09-CM02, 09-CM05, 09-CM08, 09-CM18)

PROJECT LEADERS: Peggy F. Lamb, Agronomy Research Associate, NARC, Havre
Gregg R. Carlson, Associate Professor of Agronomy, NARC, Havre

PROJECT PERSONNEL: Eleri Haney, Agronomy Research Assistant, NARC, Havre
David Wichman, Assistant Professor of Agronomy, CARC, Moccasin
Sally Dahlhausen, Seasonal Field Technician, CARC, Moccasin
Jerry Bergman, Professor of Agronomy, EARC, Sidney
Chuck Flynn, Research Chemist, EARC, Sidney
Heather Mason, Assistant Professor of Cropping Systems, NWARC, Kalispell
Louise Strang; Agronomy Research Assistant, NWARC, Kalispell
Ken Kephart, Professor of Agronomy, SARC, Huntley
Gigi Opena, Agronomy Research Associate, SARC, Huntley
Grant Jackson, Professor of Agronomy, WTARC, Conrad
Clint Rouns, Soils Research Assistant, WTARC, Conrad

OBJECTIVES:

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

RESULTS and SUMMARY:

In 2009, two industry sponsors submitted eleven camelina entries that were included in a trial with four named camelina check varieties for testing near Moccasin, Sidney, Havre, Kalispell, Huntley and Conrad, MT (Table 1). Moccasin, Sidney, Havre, Huntley and Conrad were dryland sites, while Kalispell was a high rainfall site. Two trials were grown at Moccasin; one seeded on fallow and one seeded on recrop. The trial at Kalispell was also seeded on recrop.

Statewide summaries of yield, percent oil and pounds of oil per acre are presented in Tables 2 through 4. Two check varieties, 'Ligena' and 'Calena' and one submission from Sustainable Oils, LLC, 'SO-5', were the only entries to produce an average yield of over 1500 lb/ac across all testing sites (Table 2). Across all trials, the 15 camelina entries produced an average of 532 lbs of oil per acre (Table 4).

Central Agricultural Research Center, Moccasin: Rainfall during the 2009 crop year was nearly 4.5 inches below average, resulting in a stressful dryland cropping environment. Fallow seeded camelina seed yield at CARC ranged from 1146 to 1568 lb/ac, with no statistical difference among entries (Table 5). Test weight for fallow seeded camelina at CARC averaged over 52 lb/bu and percent grain oil averaged 35.7. Camelina ID, plant count, grain yield, grain test weight, grain protein, grain oil, oil yield and plant height data are summarized for CARC fallow seeded camelina in Table 5. Fatty acid composition data are summarized for CARC fallow seeded camelina in Table 12.

Recrop seeded camelina seed yield at CARC ranged from 766 lb/ac to 1118 lb/ac, again with no statistical difference among entries (Table 6). Test weight for recrop seeded camelina at CARC averaged 52 lb/bu and percent grain oil averaged 34.9. Camelina ID, plant count, grain yield, grain test weight, grain protein, grain oil, oil yield and plant height data are summarized for CARC recrop seeded camelina in Table 6. Fatty acid composition data are summarized for CARC recrop seeded camelina in Table 13.

Eastern Agricultural Research Center, Sidney: In a dryland environment, fallow seeded camelina at EARC produced an overall average seed yield of 1715 lb/ac. Two check entries, 'Ligena' and 'Calena' produced statistically more seed than all other entries at 2022 and 2010 lb/ac, respectively (Table 7). Test weights of all entries averaged nearly 53 lb/bu. Grain oil ranged from 33.4 to 35 percent with Ligena and Calena per acre at 696 lbs. Camelina 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 7. Fatty acid composition data are summarized for EARC fallow seeded camelina in Table 14.

Northern Agricultural Research Center, Havre: In a dryland environment, fallow seeded camelina seed yield at NARC averaged 1453 lb/ac. Twelve of the 15 entries grown produced yields statistically equal to the highest yielding entry, 'SO-2' (1608 lb/ac), submitted by Sustainable Oils, LLC (Table 8). Test weights averaged nearly 52 lb/bu. Grain oil averaged 39 percent and 13 of the 15 entries produced over 550 pound of oil per acre. Camelina 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 8. Fatty acid composition data are summarized for NARC fallow seeded camelina in Table 15.

Northwestern Agricultural Research Center, Kalispell: In a high rainfall environment, recrop camelina seed yield averaged 2041 lb/ac. Seven of the 15 entries grown produced yields statistically equal to the highest yielding entry, 'Calena', at 2439 lb/ac (Table 9). Test weights averaged 52 lb/bu. Grain oil averaged nearly 39 percent with Calena producing the most oil per acre at 950 lbs. Camelina 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 NWARC in Table 9. Fatty acid composition data are summarized for NWARC high rainfall, recrop seeded camelina, in Table 16.

Southern Agricultural Research Center, Huntley: At the end of July, this site was pummeled by pea-sized hail, resulting in significant shatter damage. In a dryland environment, fallow seeded camelina seed yield at SARC averaged 750 lb/ac (Table 10). The highest yielding entry (Great Plains 'GP-07') was one that showed substantial shatter resistance and yielded statistically higher than any other entry at 1254 lb/ac. Test weights averaged 52 lb/bu. Grain oil ranged from 36.7 to 39.0 percent and average oil per acre for the 15 entries was 289 lbs. Camelina ID, 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 SARC in Table 10. Fatty acid composition data are summarized for SARC fallow seeded camelina in Table 17.

Western Triangle Agricultural Research Center, Conrad: In a dryland environment, fallow seeded camelina seed yield at WTARC averaged 1816 lb/ac. Eight of the 15 entries grown produced yields statistically equal to the highest yielding entry, 'Calena', at 2062 lb/ac (Table 11). Grain oil averaged just over 38 percent with Calena producing the most oil per acre at 808 lbs. Camelina ID, plant count, grain yield, grain protein, grain oil, oil yield, flowering date, plant height and lodging index are summarized for WTARC in Table 11. Fatty acid composition data are summarized for WTARC fallow seeded camelina in Table 18.

FUTURE PLANS:

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

Table 1. Contact Information for Industry Seed Sources of Eleven Camelina Lines Tested near Moccasin, Sidney, Havre, Kalispell, Huntley and Conrad, MT. 2009.
(Exps. 09-CM07, 09-CM03, 09-CM02, 09-CM05, 09-CM08, 09-CM18)

COMPANY	LINES TESTED	CONTACTS	
Great Plains Oil & Exploration The Camelina Company	GP-07	Mr. Sam Huttenbauer, Jr	Mr. Alan Brownell
	GP-10	Chief Development Officer	Director - MT Agricultural Sales
	GP-11	1 Enfield Street	PO Box 2691
	GP-42	Cincinnati, OH 45218	Big Fork, MT 59911
	GP-68	PH: 1-513-825-8770 FX: 1-513-825-8830 EM: shuttenbauer@gpo-e.com	PH: 1-877-922-6645 CELL: 1-406-949-8488 EM: abrownell@CamelinaCompany.com
Sustainable Oils, LLC	SO-1	Mr. Jack Kiser	Mr. Mike Waring
	SO-2	Research Manager	Territory Sales Manager
	SO-3	2815 Eastlake Ave. East Suite 300	2907 9th Street N.E.
	SO-4	Seattle, WA 98102	Great Falls, MT 59404
	SO-5	PH: 1-503-750-3776	PH: 1-406-788.2433
	SO-6	FX: 1-503-758-3993 EM: jack.kiser@susoils.com	FX: 1-406-761-7213 EM: mike.waring@susoils.com

Table 2. 09CMxx: Montana Statewide Camelina Trial Grain Yield Summary. 2009.

Entry	ID	Moccasin	Moccasin	Sidney	Have	Kalispell	Huntley	Conrad	Average across all Sites
		dryland fallow	dryland recrop	dryland fallow	dryland fallow	high rainfall recrop	dryland fallow	dryland fallow	
		Grain Yield							
		lb/ac	lb/ac	lb/ac	lb/ac	lb/ac	lb/ac	lb/ac	lb/ac
1	GP-07	1196.9	707.0	1609.7	1076.4	1266.0	1254.1	1333.8	1206.3
2	GP-10	1355.3	871.6	1753.3	1503.8	2130.4	822.3	1801.9	1462.7
3	GP-11	1245.7	1118.3	1639.3	1317.4	1848.7	632.9	1726.1	1361.2
4	GP-42	1497.9	980.0	1689.3	1572.1	2197.2	659.9	1803.7	1485.7
5	GP-68	1455.1	858.8	1811.0	1439.4	1987.3	776.8	1589.5	1416.8
6	Blaine Creek	1382.1	827.9	1690.0	1548.9	2258.0	756.0	1859.7	1474.7
7	Calena	1329.2	1013.3	2010.3	1507.6	2439.3	683.3	2062.1	1577.9
8	Ligena	1348.4	1018.6	2021.7	1458.9	2116.3	872.2	1859.7	1528.0
9	Suneson	1278.0	888.8	1655.7	1504.7	2306.0	619.8	2009.2	1466.0
10	SO-1	1146.2	765.7	1640.0	1385.6	1723.0	607.4	1932.0	1314.3
11	SO-2	1280.9	1002.3	1693.0	1608.4	1993.7	775.9	1812.3	1452.4
12	SO-3	1260.1	868.5	1691.7	1551.6	2112.5	672.2	1948.3	1443.6
13	SO-4	1312.8	836.9	1530.7	1545.9	1862.1	725.4	1928.7	1391.8
14	SO-5	1568.5	934.6	1730.0	1401.9	2314.4	760.0	1918.9	1518.3
15	SO-6	1269.8	835.6	1556.3	1374.7	2056.9	693.0	1658.1	1349.2
Average		1328.5	901.9	1714.8	1453.2	2040.8	749.7	1816.3	1429.9
LSD (p=0.05)		ns	ns	168.04	228.4	324.04	-	207.21	-
CV%		13.38	18.14	5.86	11.04	11.13	17.3	7.99	-

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. 09CMxx: Montana Statewide Camelina Trial Grain Oil Content Summary. 2009.

Entry	ID	Moccasin	Moccasin	Sidney	Have	Kalispell	Huntley	Conrad	Average across all Sites
		dryland fallow	dryland recrop	dryland fallow	dryland fallow	high rainfall recrop	dryland fallow	dryland fallow	
		Oil Content							
		%	%	%	%	%	%	%	%
1	GP-07	37.5	35.8	34.2	37.9	38.2	38.8	37.3	37.1
2	GP-10	36.0	35.3	34.8	38.9	39.0	38.8	38.8	37.4
3	GP-11	34.7	34.5	33.4	38.3	38.2	36.7	37.3	36.2
4	GP-42	36.4	35.1	34.3	39.2	39.0	39.2	38.3	37.4
5	GP-68	35.5	35.1	34.9	38.1	38.5	38.3	37.5	36.8
6	Blaine Creek	36.0	34.9	35.0	39.5	38.7	38.8	39.4	37.5
7	Calena	34.9	35.1	34.6	39.3	38.9	39.0	39.2	37.3
8	Ligena	36.3	35.1	34.4	40.1	38.3	39.0	38.2	37.3
9	Suneson	35.0	34.8	34.2	39.2	38.8	38.0	38.7	37.0
10	SO-1	34.8	34.7	34.7	39.7	39.2	39.3	38.3	37.2
11	SO-2	35.3	34.9	34.3	37.9	39.1	38.4	38.7	36.9
12	SO-3	35.7	34.6	34.4	38.9	39.3	38.3	38.8	37.1
13	SO-4	36.1	34.8	34.0	39.0	38.6	38.2	38.1	37.0
14	SO-5	35.9	35.2	34.4	39.9	39.3	38.3	38.3	37.3
15	SO-6	35.2	33.9	33.9	39.2	38.6	38.6	37.7	36.7
Average		35.7	34.9	34.4	39.0	38.8	38.5	38.3	37.1
LSD (p=0.05)		0.81	0.66	0.73	0.73	ns	-	1.17	-
CV%		1.59	1.14	1.27	1.31	1.12	1.64	2.14	-

Grain oil is reported on a dry matter basis.

Table 4. 09CMxx: Montana Statewide Camelina Trial Grain Oil Yield Summary, 2009.

Entry	ID	Moccasin	Moccasin	Sidney	Have	Kalispell	Huntley	Conrad	Average
		dryland fallow	dryland recrop	dryland fallow	dryland fallow	high rainfall recrop	dryland fallow	dryland fallow	
		Oil Yield							
		lb/ac	lb/ac	lb/ac	lb/ac	lb/ac	lb/ac	lb/ac	lb/ac
1	GP-07	448.9	253.3	550.5	407.6	484.2	487.5	497.0	447.0
2	GP-10	488.3	307.2	609.6	584.6	831.0	318.7	698.4	548.2
3	GP-11	431.8	386.2	548.0	504.2	706.5	232.2	643.8	493.2
4	GP-42	545.1	343.7	579.2	616.9	855.5	258.5	690.3	555.6
5	GP-68	515.7	301.4	631.6	547.9	766.8	297.2	593.9	522.1
6	Blaine Creek	498.5	289.0	591.6	612.2	874.9	293.1	730.3	555.7
7	Calena	465.2	355.7	695.7	592.1	950.3	266.6	808.4	590.6
8	Ligena	489.4	356.9	696.1	584.9	809.3	339.9	711.3	569.7
9	Suneson	446.6	309.7	565.3	590.3	895.6	235.2	775.6	545.5
10	SO-1	398.6	265.2	567.2	550.4	676.8	238.5	738.6	490.8
11	SO-2	452.3	349.9	580.4	609.6	780.0	297.9	700.6	538.7
12	SO-3	450.0	300.1	581.1	603.5	829.7	257.9	755.3	539.7
13	SO-4	474.8	291.7	520.5	602.5	717.9	277.0	734.8	517.0
14	SO-5	563.2	328.5	595.1	558.9	909.5	290.9	733.5	568.5
15	SO-6	447.6	282.1	527.4	539.1	794.9	267.2	623.0	497.3
Average		474.4	314.7	589.3	567.0	792.2	289.2	695.6	532.0
LSD (p=0.05)		ns	ns	57.57	87.76	126.92	-	79.09	-
CV%		13.76	18.23	5.84	10.84	11.22	17.29	7.96	-

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. 09CM07: Statewide Industry Camelina Trial - Dryland, Fallow.
Central Agricultural Research Center. Moccasin, MT. 2009.

Entry	ID	Plant	Plant	Grain	Test	Grain	Grain	Grain	Oil	Flowering Date		Maturity Date		Plant	Pod	Lodging
		Stand	Count	Yield	Weight	Moisture	Protein	Oil	Yield	Julian	Calendar	Julian	Calendar	Height	Shatter	Index
		%	no/ft2	lb/ac	lb/bu	%	%	%	lb/ac	day	date	day	date	inches	%	rating
1	GP-07		10.4	1196.9	52.2		31.6	37.5	448.9					26.4		
2	GP-10		13.5	1355.3	52.9		30.3	36.0	488.3					25.8		
3	GP-11		13.4	1245.7	52.7		31.0	34.7	431.8					27.6		
4	GP-42		11.4	1497.9	53.2		30.0	36.4	545.1					26.8		
5	GP-68		12.1	1455.1	51.5		30.2	35.5	515.7					28.2		
6	Blaine Creek		9.5	1382.1	52.0		30.1	36.0	498.5					28.0		
7	Calena		10.8	1329.2	52.0		30.3	34.9	465.2					27.0		
8	Ligena		12.4	1348.4	51.4		30.0	36.3	489.4					28.4		
9	Suneson		11.1	1278.0	52.5		30.6	35.0	446.6					26.6		
10	SO-1		13.6	1146.2	52.2		30.8	34.8	398.6					26.4		
11	SO-2		15.5	1280.9	52.8		30.6	35.3	452.3					25.8		
12	SO-3		11.8	1260.1	51.4		30.0	35.7	450.0					27.6		
13	SO-4		10.6	1312.8	51.8		30.5	36.1	474.8					25.4		
14	SO-5		9.7	1568.5	53.0		30.2	35.9	563.2					26.9		
15	SO-6		10.4	1269.8	51.5		30.6	35.2	447.6					26.7		
Average				11.7	1328.5	52.2		30.5	35.7	474.4				26.9		
LSD (p=0.05)				ns	ns	0.69		0.58	0.81	ns				ns		
CV%				28.29	13.38	0.92		1.33	1.59	13.76				7.81		

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

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

Seeding Date: April 13, 2009

Harvest Date: August 10, 2009

9

Table 6. 09CM07: Statewide Industry Camelina Trial - Dryland, Recrop.
Central Agricultural Research Center. Moccasin, MT. 2009.

Entry	ID	Plant	Plant	Grain	Test	Grain	Grain	Grain	Oil	Flowering Date		Maturity Date		Plant	Pod	Lodging
		Stand	Count	Yield	Weight	Moisture	Protein	Oil	Yield	Julian	Calendar	Julian	Calendar	Height	Shatter	Index
		%	no/ft2	lb/ac	lb/bu	%	%	%	lb/ac	day	date	day	date	inches	%	rating
1	GP-07		9.7	707.0	51.5		32.7	35.8	253.3					25.1		
2	GP-10		11.4	871.6	52.6		30.6	35.3	307.2					24.5		
3	GP-11		9.1	1118.3	52.7		30.3	34.5	386.2					26.5		
4	GP-42		11.7	980.0	52.6		30.5	35.1	343.7					25.9		
5	GP-68		11.4	858.8	51.4		30.6	35.1	301.4					26.5		
6	Blaine Creek		10.1	827.9	51.8		31.2	34.9	289.0					26.0		
7	Calena		12.4	1013.3	52.6		30.5	35.1	355.7					24.9		
8	Ligena		8.7	1018.6	51.5		29.8	35.1	356.9					26.6		
9	Suneson		11.2	888.8	52.6		30.2	34.8	309.7					26.6		
10	SO-1		11.7	765.7	51.9		30.1	34.7	265.2					25.7		
11	SO-2		12.0	1002.3	52.8		30.0	34.9	349.9					25.9		
12	SO-3		7.5	868.5	51.1		30.6	34.6	300.1					24.0		
13	SO-4		12.3	836.9	51.7		30.8	34.8	291.7					23.4		
14	SO-5		8.7	934.6	52.5		30.3	35.2	328.5					26.5		
15	SO-6		5.6	835.6	50.7		30.2	33.9	282.1					24.7		
Average				10.3	901.9	52.0		30.5	34.9	314.7				25.5		
LSD (p=0.05)				3.87	ns	0.89		0.86	0.66	ns				ns		
CV%				22.58	18.14	1.03		1.69	1.14	18.23				5.91		

Grain yield is reported "as was" at harvest - not adjusted to a uniform moisture content.
Grain protein, grain oil and oil yeild are reported on a dry matter basis.

Seeding Date: April 10, 2009
Harvest Date: August 3, 2009

7

Table 7. 09CM03: Statewide Industry Camelina Trial - Dryland, Fallow.
Eastern Ag Research Center. Sidney, MT. 2009.

Entry	ID	Plant	Plant	Grain	Test	Grain	Grain	Grain	Oil	Flowering Date		Maturity Date		Plant	Pod	Lodging
		Stand	Count	Yield	Weight	Moisture	Protein	Oil	Yield	Julian	Calendar	Julian	Calendar	Height	Shatter	Index
		%	no/ft2	lb/ac	lb/bu	%	%	%	lb/ac	day	date	day	date	inches	%	rating
1	GP-07	90.0		1609.7	53.0		34.0	34.2	550.5	171.0	20-Jun			23.1		
2	GP-10	83.3		1753.3	53.0		32.1	34.8	609.6	171.7	21-Jul			24.4		
3	GP-11	86.7		1639.3	53.5		33.1	33.4	548.0	171.0	20-Jun			22.8		
4	GP-42	91.7		1689.3	52.8		30.4	34.3	579.2	172.0	21-Jul			23.5		
5	GP-68	88.3		1811.0	52.5		31.2	34.9	631.6	171.0	20-Jun			27.4		
6	Blaine Creek	80.0		1690.0	52.5		30.9	35.0	591.6	171.0	20-Jun			23.1		
7	Calena	81.7		2010.3 *	54.8		31.3	34.6	695.7 *	173.3	22-Jul			24.8		
8	Ligena	88.3		2021.7 **	52.0		31.3	34.4	696.1 **	172.3	21-Jul			26.4		
9	Suneson	86.7		1655.7	53.3		31.5	34.2	565.3	171.3	20-Jun			25.6		
10	SO-1	86.7		1640.0	52.5		30.6	34.7	567.2	172.0	21-Jul			23.0		
11	SO-2	86.7		1693.0	52.7		31.9	34.3	580.4	172.3	21-Jul			23.9		
12	SO-3	86.7		1691.7	52.2		32.1	34.4	581.1	172.0	21-Jul			24.7		
13	SO-4	88.3		1530.7	52.5		32.3	34.0	520.5	171.0	20-Jun			22.2		
14	SO-5	85.0		1730.0	52.8		31.5	34.4	595.1	172.7	22-Jul			25.1		
15	SO-6	83.3		1556.3	52.3		31.9	33.9	527.4	171.3	20-Jun			25.5		
Average		86.2		1714.8	52.8		31.7	34.4	589.3	171.7	21-Jul			24.4		
LSD (p=0.05)		ns		168.04	1.34		0.79	0.73	57.57	1.12	-			ns		
CV%		4.99		5.86	1.52		1.49	1.27	5.84	0.39	-			8.22		

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 yield are reported on a dry matter basis.

Seeding Date: April 24, 2009

Harvest Date: August 11, 2009

Table 8. 09CM02: Statewide Industry Camelina Trial - Dryland, Fallow.
Northern Ag Research Center. Havre, MT. 2009.

Entry	ID	Plant	Plant	Grain	Test	Grain	Grain	Grain	Oil	Flowering Date		Maturity Date		Plant	Pod	Lodging
		Stand	Count	Yield	Weight	Moisture	Protein	Oil	Yield	Julian	Calendar	Julian	Calendar	Height	Shatter	Index
		%	no/ft2	lb/ac	lb/bu	%	%	%	lb/ac	day	date	day	date	inches	%	rating
1	GP-07	97.6	49.3	1076.4	51.5	9.3	26.0	37.9	407.6	162.5	12-Jun	201.0	20-Jul	25.5	0.0	0.0
2	GP-10	91.7	39.4	1503.8 *	52.2	8.1	24.4	38.9	584.6 *	168.5	18-Jun	204.8	24-Jul	29.4	0.0	0.0
3	GP-11	95.3	63.3	1317.4	52.6	9.2	24.5	38.3	504.2	167.3	16-Jun	203.5	23-Jul	27.3	0.0	0.0
4	GP-42	97.0	58.6	1572.1 *	52.3	9.2	24.8	39.2	616.9 **	168.3	17-Jun	204.0	23-Jul	29.6	0.0	0.0
5	GP-68	94.6	34.8	1439.4 *	50.3	10.2	24.9	38.1	547.9 *	167.5	17-Jun	203.5	23-Jul	28.9	0.0	0.0
6	Blaine Creek	94.9	44.9	1548.9 *	50.7	11.4	23.1	39.5	612.2 *	168.3	17-Jun	203.8	23-Jul	30.2	0.0	0.0
7	Calena	94.9	59.2	1507.6 *	51.2	11.5	23.7	39.3	592.1 *	169.0	18-Jun	204.0	23-Jul	29.6	0.0	0.0
8	Ligena	94.9	61.5	1458.9 *	50.9	11.1	22.3	40.1	584.9 *	168.3	17-Jun	205.0	24-Jul	29.1	0.0	0.0
9	Suneson	98.1	63.3	1504.7 *	52.8	9.4	23.6	39.2	590.3 *	167.3	16-Jun	204.0	23-Jul	29.9	0.0	0.0
10	SO-1	96.4	51.6	1385.6 *	51.8	8.5	23.6	39.7	550.4 *	168.3	17-Jun	203.0	22-Jul	30.3	0.0	0.0
11	SO-2	95.8	51.5	1608.4 **	52.0	9.8	25.0	37.9	609.6 *	168.5	18-Jun	204.8	24-Jul	30.3	0.0	0.0
12	SO-3	98.1	57.2	1551.6 *	51.0	9.7	23.8	38.9	603.5 *	167.3	16-Jun	203.8	23-Jul	31.9	0.0	0.0
13	SO-4	98.1	45.2	1545.9 *	51.5	9.2	24.3	39.0	602.5 *	166.8	16-Jun	203.5	23-Jul	28.6	0.0	0.0
14	SO-5	96.2	61.4	1401.9 *	52.0	9.6	23.4	39.9	558.9 *	168.0	17-Jun	204.3	23-Jul	30.2	0.0	0.0
15	SO-6	96.2	43.0	1374.7	50.8	10.2	23.6	39.2	539.1 *	167.5	17-Jun	203.5	23-Jul	28.9	0.0	0.0
Average		96.0	52.3	1453.2	51.6	9.7	24.1	39.0	567.0	167.5	17-Jun	203.8	23-Jul	29.3	0.0	0.0
LSD (p=0.05)		ns	ns	228.4	1.10	ns	1.11	0.73	87.76	1.29	-	1.13	-	2.1	-	-
CV%		3.9	26.3	11.04	1.49	18.37	3.23	1.31	10.84	0.54	-	0.39	-	5.02	-	-

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 yield are reported on a dry matter basis.

Seeding Date: April 11, 2009

Harvest Date: July 31, 2009

Table 9. 09CM05: Statewide Industry Camelina Trial - High Rainfall, Recrop.
Northwestern Ag Research Center. Kalispell, MT. 2009.

Entry	ID	Plant	Plant	Grain	Test	Grain	Grain	Grain	Oil	Flowering Date		Maturity Date		Plant	Pod	Lodging
		Stand	Count	Yield	Weight	Moisture	Protein	Oil	Yield	Julian	Calendar	Julian	Calendar	Height	Shatter	Index
		%	no/ft2	lb/ac	lb/bu	%	%	%	lb/ac	day	date	day	date	inches	%	rating
1	GP-07	98.1	125.3	1266.0	51.2	7.7	26.6	38.2	484.2	168.5	18-Jun	207.8	27-Jul	25.0	1.8	1.3
2	GP-10	97.9	198.5	2130.4 *	52.7	8.1	25.0	39.0	831.0 *	171.0	20-Jun	213.5	2-Aug	27.8	0.5	2.0
3	GP-11	91.7	230.3	1848.7	52.8	8.4	25.3	38.2	706.5	170.7	20-Jun	208.5	28-Jul	28.3	1.5	2.0
4	GP-42	78.1	183.3	2197.2 *	52.7	8.3	24.5	39.0	855.5 *	170.7	20-Jun	213.5	2-Aug	30.8	1.5	1.5
5	GP-68	93.1	191.8	1987.3	51.5	8.7	25.0	38.5	766.8	170.3	19-Jun	208.5	28-Jul	30.0	1.8	1.5
6	Blaine Creek	81.5	129.3	2258.0 *	52.0	8.9	24.7	38.7	874.9 *	170.7	20-Jun	213.0	1-Aug	29.8	1.5	1.3
7	Calena	80.4	159.0	2439.3 **	52.6	8.6	24.5	38.9	950.3 **	171.3	20-Jun	214.0	2-Aug	29.8	0.8	1.5
8	Ligena	79.2	132.3	2116.3 *	51.5	9.9	25.0	38.3	809.3	170.7	20-Jun	215.5	4-Aug	30.8	1.5	1.3
9	Suneson	96.5	166.3	2306.0 *	52.9	8.3	24.7	38.8	895.6 *	170.0	19-Jun	211.8	31-Jul	29.3	1.5	1.3
10	SO-1	83.3	198.7	1723.0	51.8	8.6	24.4	39.2	676.8	171.7	22-Jun	208.8	28-Jul	28.3	1.5	1.3
11	SO-2	73.8	165.5	1993.7	52.3	9.2	23.9	39.1	780.0	171.0	20-Jun	213.3	1-Aug	29.3	4.0	1.3
12	SO-3	93.1	169.5	2112.5	51.3	9.0	23.9	39.3	829.7 *	170.8	20-Jun	214.0	2-Aug	29.0	1.5	1.0
13	SO-4	96.7	180.5	1862.1	51.4	8.3	24.9	38.6	717.9	168.5	18-Jun	208.3	27-Jul	26.3	0.5	2.3
14	SO-5	82.7	134.0	2314.4 *	52.1	10.0	23.7	39.3	909.5 *	171.3	20-Jun	214.3	2-Aug	28.0	0.8	2.3
15	SO-6	96.0	132.3	2056.9	51.5	8.8	24.7	38.6	794.9	171.5	22-Jun	211.5	31-Jul	29.0	3.0	1.3
Average		88.1	166.3	2040.8	52.0	8.7	24.7	38.8	792.2	170.5	20-Jun	211.7	31-Jul	28.7	1.6	1.5
LSD (p=0.05)		ns	ns	324.04	0.52	ns	0.82	ns	126.92	0.54	-	3.25	-	2.02	ns	ns
CV%		23.979	27.76	11.13	0.70	8.98	2.33	1.12	11.22	0.04	-	1.07	-	4.92	138.38	51.04

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 yield are reported on a dry matter basis.

Seeding Date: May 1, 2009

Harvest Date: August 9, 2009

Table 10. 09CM08: Statewide Industry Camelina Trial - Dryland, Fallow.
Southern Ag Research Center. Huntley, MT. 2009.

Entry	ID	Plant	Plant	Grain	Test	Grain	Grain	Grain	Oil	Flowering Date		Maturity Date		Plant	Pod	Lodging
		Stand	Count	Yield	Weight	Moisture	Protein	Oil	Yield	Julian	Calendar	Julian	Calendar	Height	Shatter	Index
		%	no/ft2	lb/ac	lb/bu	%	%	%	lb/ac	day	date	day	date	inches	%	rating
1	GP-07		11.7	1254.1	51.5	8.0	25.6	38.8	487.5	153.3	2-Jun	186.3	5-Jul	27.0	10.0	1.7
2	GP-10		9.7	822.3	52.6	7.8	24.5	38.8	318.7	153.0	2-Jun	189.3	8-Jul	32.0	36.7	5.0
3	GP-11		9.3	632.9	52.8	8.3	26.3	36.7	232.2	153.0	2-Jun	190.3	9-Jul	31.6	53.3	3.7
4	GP-42		10.4	659.9	52.5	8.6	23.3	39.2	258.5	153.5	3-Jun	189.0	8-Jul	30.5	50.0	3.5
5	GP-68		10.8	776.8	51.5	8.2	24.5	38.3	297.2	154.0	3-Jun	189.0	8-Jul	31.6	46.7	2.7
6	Blaine Creek		9.0	756.0	51.6	8.2	23.8	38.8	293.1	153.5	3-Jun	189.0	8-Jul	33.2	42.5	1.5
7	Calena		11.1	683.3	52.5	8.0	24.0	39.0	266.6	152.3	1-Jun	189.3	8-Jul	34.8	52.5	1.5
8	Ligena		9.8	872.2	51.2	8.5	23.6	39.0	339.9	153.5	3-Jun	188.8	8-Jul	32.8	42.5	2.8
9	Suneson		10.4	619.8	53.4	8.0	24.9	38.0	235.2	152.7	2-Jun	189.0	8-Jul	32.9	60.0	2.7
10	SO-1		10.4	607.4	51.8	8.5	23.2	39.3	238.5	151.8	1-Jun	189.3	8-Jul	31.7	45.0	1.0
11	SO-2		9.9	775.9	52.9	8.3	23.8	38.4	297.9	152.3	1-Jun	189.3	8-Jul	33.3	43.3	5.0
12	SO-3		8.5	672.2	51.3	7.9	24.4	38.3	257.9	152.3	1-Jun	190.0	9-Jul	33.7	50.0	2.0
13	SO-4		10.2	725.4	51.5	8.3	24.6	38.2	277.0	151.5	1-Jun	188.0	7-Jul	31.3	55.0	4.5
14	SO-5		10.8	760.0	52.8	8.0	24.2	38.3	290.9	153.7	3-Jun	190.3	9-Jul	31.6	50.0	1.7
15	SO-6		10.7	693.0	50.7	8.3	23.4	38.6	267.2	152.0	1-Jun	188.0	7-Jul	32.6	50.0	1.3
Average			10.2	749.7	52.0	8.2	24.2	38.5	289.2	152.8	2-Jun	189.0	8-Jul	32.1	46.1	2.7
CV%			12.73	17.3	0.40	5.67	3.13	1.64	17.29	0.55	-	0.45	-	6.74	23.49	49
Pr > F			0.21	< 0.01	< 0.01	0.6	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01	-	< 0.05	< 0.01	< 0.01

Grain yield is adjusted to 10 percent grain moisture content.

** Indicates highest yielding cultivar within a column.

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 11. 09CM18: Statewide Industry Camelina Trial - Dryland, Fallow.
Western Triangle Ag Research Center. Conrad, MT. 2009.

Entry	ID	Plant Stand %	Plant Count no/ft2	Grain Yield lb/ac	Test Weight lb/bu	Grain Moisture %	Grain Protein %	Grain Oil %	Oil Yield lb/ac	Flowering Date		Maturity Date		Plant Height inches	Pod Shatter %	Lodging Index rating
										Julian day	Calendar date	Julian day	Calendar date			
1	GP-07		42.0	1333.8			29.5	37.3	497.0	166.0	16-Jun			34.0		3.8
2	GP-10		48.8	1801.9			26.3	38.8	698.4	171.3	20-Jun			35.0		3.8
3	GP-11		34.5	1726.1			27.2	37.3	643.8	170.3	19-Jun			31.0		4.8
4	GP-42		35.3	1803.7			26.4	38.3	690.3	173.0	22-Jun			36.0		4.3
5	GP-68		38.3	1589.5			26.7	37.5	593.9	172.5	22-Jun			34.0		3.3
6	Blaine Creek		48.0	1859.7 *			25.5	39.4	730.3 *	171.0	20-Jun			36.0		2.5
7	Calena		30.0	2062.1 **			25.2	39.2	808.4 **	174.5	24-Jun			34.0		2.0
8	Ligena		32.3	1859.7 *			26.3	38.2	711.3	172.5	22-Jun			37.0		3.3
9	Suneson		44.3	2009.2 *			26.5	38.7	775.6 *	172.3	21-Jun			33.0		3.0
10	SO-1		30.8	1932.0 *			26.8	38.3	738.6 *	172.8	22-Jun			35.0		2.8
11	SO-2		33.8	1812.3			26.3	38.7	700.6	174.3	23-Jun			37.0		3.3
12	SO-3		32.3	1948.3 *			25.5	38.8	755.3 *	173.0	22-Jun			38.0		2.5
13	SO-4		36.0	1928.7 *			26.9	38.1	734.8 *	167.5	17-Jun			36.0		5.0
14	SO-5		38.3	1918.9 *			26.7	38.3	733.5 *	171.8	21-Jun			35.0		3.3
15	SO-6		37.5	1658.1			26.4	37.7	623.0	172.8	22-Jun			33.0		3.0
Average			37.5	1816.3			26.5	38.3	695.6	171.7	21-Jun			34.9		3.4
LSD (p=0.05)			ns	207.21			1.14	1.17	79.09	2.62	-			-		0.59
CV%			23.33	7.99			3.01	2.14	7.96	1.07	-			-		12.39

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 yield are reported on a dry matter basis.

Seeding Date: April 9, 2009

Swathing Date August 10, 2009

Harvest Date: August 17, 2009

Table 12. 09CM07: Statewide Camelina Trial - Dryland, Fallow. Fatty Acid Composition.
Central Agricultural Research Center. Moccasin, MT. 2009

Entry	ID	Palmitic	Stearic	Oleic	Linoleic	α -Linolenic	Arachidic	Gondoic	Eicosadienoic	Erucic	Nervonic	Mono-		Poly-
		Acid (16:0)	Acid (18:0)	Acid (18:1)	Acid (18:2)	Acid (18:3)	Acid (20:0)	Acid (20:1)	Acid (22:0)	Acid (22:1)	Acid (24:1)	Saturated	unsaturated	unsaturated
		%	%	%	%	%	%	%	%	%	%	%	%	%
1	GP-07	4.9	2.7	16.5	15.9	35.2	1.9	14.7	0.4	3.4	0.8	9.5	33.5	52.1
2	GP-10	5.5	2.7	18.9	17.8	29.8	2.0	14.5	0.4	3.2	0.7	10.3	36.4	49.0
3	GP-11	5.4	2.5	19.0	17.2	31.8	1.9	14.2	0.4	3.2	0.7	10.1	35.6	50.0
4	GP-42	5.5	2.7	18.4	19.6	29.4	2.1	14.5	0.4	3.2	0.7	10.2	35.7	49.8
5	GP-68	5.3	2.6	20.0	16.5	30.6	2.0	14.8	0.4	3.4	0.7	10.1	37.6	48.0
6	Blaine Creek	5.3	2.6	19.6	16.1	31.2	2.0	14.6	0.4	3.3	0.7	10.1	37.3	48.4
7	Calena	5.5	2.6	18.8	16.9	30.8	1.9	14.4	0.4	3.4	0.7	10.1	35.9	49.4
8	Ligena	5.4	2.6	18.1	19.2	30.3	2.0	14.5	0.4	3.2	0.7	10.1	35.5	50.2
9	Suneson	5.5	2.6	19.5	17.5	30.7	1.9	14.3	0.4	3.3	0.7	10.3	36.7	49.1
10	SO-1	5.4	2.5	20.3	17.3	31.4	1.8	14.0	0.4	3.0	0.7	10.1	36.6	49.2
11	SO-2	5.6	2.6	18.6	19.5	29.5	2.1	14.2	0.4	3.2	0.7	10.3	35.6	50.0
12	SO-3	5.3	2.6	19.5	16.2	31.6	1.9	14.7	0.4	3.4	0.7	10.1	37.1	48.9
13	SO-4	5.4	2.6	19.1	17.8	30.6	2.0	14.6	0.4	3.3	0.7	10.2	36.6	49.1
14	SO-5	5.5	2.6	18.6	19.5	29.4	2.1	14.5	0.4	3.2	0.7	10.3	36.0	49.7
15	SO-6	5.4	2.6	19.9	17.0	30.8	1.9	14.2	0.4	3.1	0.7	10.2	36.9	48.8
Average		5.4	2.6	19.0	17.6	30.9	2.0	14.4	0.4	3.3	0.7	10.1	36.2	49.4
LSD (p=0.05)		0.13	0.05	0.65	0.69	0.69	0.11	0.23	0.01	0.12	0.02	0.10	0.63	0.60
CV%		1.67	1.33	2.40	2.75	1.57	4.11	1.11	1.79	2.67	1.77	0.69	1.22	0.85

Fatty acid composition reported on dry matter basis of the whole seed.

Table 13. 09CM07: Statewide Camelina Trial - Dryland, Recrop. Fatty Acid Composition.
Central Agricultural Research Center. Moccasin, MT. 2009

Entry	ID	Palmitic	Stearic	Oleic	Linoleic	α -Linolenic	Arachidic	Gondoic	Eicosadienoic	Erucic	Nervonic	Mono- Saturated	Poly- unsaturated	
		Acid (16:0)	Acid (18:0)	Acid (18:1)	Acid (18:2)	Acid (18:3)	Acid (20:0)	Acid (20:1)	Acid (22:0)	Acid (22:1)	Acid (24:1)			%
1	GP-07	4.8	2.5	15.9	17.1	37.4	1.8	13.5	0.4	2.7	0.8	9.2	31.6	55.7
2	GP-10	5.2	2.6	18.0	20.2	31.7	1.9	13.7	0.4	2.6	0.8	10.0	35.3	52.4
3	GP-11	5.1	2.5	18.0	18.1	33.4	1.8	14.0	0.4	2.9	0.7	9.8	35.4	52.1
4	GP-42	5.3	2.5	17.8	21.7	31.0	1.9	13.6	0.4	2.6	0.8	10.0	34.8	52.9
5	GP-68	5.0	2.5	18.9	18.1	32.5	1.9	14.1	0.4	2.9	0.7	10.0	36.7	51.3
6	Blaine Creek	5.1	2.5	18.9	18.1	33.1	1.9	13.7	0.4	2.7	0.8	10.0	36.0	52.0
7	Calena	5.2	2.5	17.2	18.2	33.3	1.9	13.7	0.4	2.9	0.8	9.8	34.3	52.9
8	Ligena	5.1	2.5	17.4	21.0	31.8	2.0	13.9	0.4	2.7	0.7	9.8	35.0	52.9
9	Suneson	5.1	2.5	18.1	19.2	32.6	1.9	13.7	0.4	2.7	0.7	9.9	35.5	52.5
10	SO-1	5.0	2.5	18.6	18.6	33.1	1.7	14.0	0.4	2.7	0.7	9.8	36.0	52.0
11	SO-2	5.3	2.5	17.7	21.8	31.1	1.8	13.5	0.4	2.5	0.7	9.9	34.9	53.1
12	SO-3	5.1	2.6	19.2	17.6	32.4	1.9	14.3	0.4	3.0	0.7	10.0	37.2	50.7
13	SO-4	5.1	2.5	17.8	19.6	32.8	2.0	14.0	0.4	2.9	0.7	9.8	35.2	52.8
14	SO-5	5.3	2.5	17.8	21.5	30.7	2.0	13.6	0.4	2.6	0.8	10.1	35.1	52.7
15	SO-6	5.1	2.5	19.4	17.0	32.1	1.9	14.3	0.4	3.0	0.7	9.9	37.5	49.9
Average		5.1	2.5	18.0	19.2	32.6	1.9	13.8	0.4	2.8	0.7	9.9	35.4	52.4
LSD (p=0.05)		0.16	0.05	0.36	1.37	1.19	0.11	ns	0.01	0.33	0.04	0.17	1.06	1.39
CV%		1.86	1.13	1.20	4.25	2.18	3.40	2.67	1.80	7.18	3.60	1.05	1.80	1.58

Fatty acid composition reported on dry matter basis of the whole seed.

Table 14. 09CM03: Statewide Industry Camelina Trial - Dryland, Fallow. Fatty Acid Composition.
Eastern Agricultural Research Center. Sidney, MT. 2009.

Entry	ID	Palmitic	Stearic	Oleic	Linoleic	α -Linolenic	Arachidic	Gondoic	Eicosadienoic	Erucic	Nervonic	Mono- Saturated	Poly- unsaturated	
		Acid (16:0)	Acid (18:0)	Acid (18:1)	Acid (18:2)	Acid (18:3)	Acid (20:0)	Acid (20:1)	Acid (22:0)	Acid (22:1)	Acid (24:1)			
		%	%	%	%	%	%	%	%	%	%	%	%	
1	GP-07	4.7	2.4	16.2	18.8	39.2	1.6	14.1	0.4	3.0	0.8	9.2	31.8	57.1
2	GP-10	5.0	2.5	18.0	19.9	34.8	1.7	14.3	0.4	3.0	0.8	9.8	34.8	54.0
3	GP-11	5.0	2.4	17.7	19.2	36.3	1.6	14.1	0.4	3.0	0.8	9.6	33.9	54.8
4	GP-42	4.9	2.4	18.3	20.1	34.6	1.7	14.7	0.4	3.2	0.7	9.6	35.6	53.6
5	GP-68	4.7	2.5	19.3	16.9	35.6	1.7	15.1	0.4	3.4	0.7	9.7	37.3	51.6
6	Blaine Creek	4.7	2.5	19.2	17.3	35.5	1.7	15.1	0.4	3.3	0.7	9.7	37.2	51.6
7	Calena	5.0	2.5	17.4	18.2	35.3	1.7	14.5	0.4	3.2	0.7	9.6	34.3	53.6
8	Ligena	5.1	2.4	17.4	21.9	33.8	1.7	14.2	0.4	3.0	0.7	9.7	34.0	54.5
9	Suneson	5.0	2.5	18.2	19.8	34.6	1.7	14.4	0.4	3.0	0.7	9.8	35.2	53.6
10	SO-1	4.6	2.4	19.9	17.8	37.0	1.5	14.8	0.4	3.2	0.7	9.6	36.9	52.8
11	SO-2	5.2	2.5	18.0	21.7	33.2	1.7	14.1	0.4	2.9	0.8	9.9	34.7	54.0
12	SO-3	4.9	2.5	19.6	17.4	35.1	1.7	14.8	0.4	3.3	0.7	9.9	37.0	51.6
13	SO-4	4.8	2.4	17.9	19.0	36.5	1.7	14.9	0.4	3.4	0.7	9.6	35.1	54.1
14	SO-5	5.1	2.5	17.9	21.3	33.5	1.8	14.3	0.4	3.0	0.7	9.8	34.9	53.7
15	SO-6	4.8	2.5	19.8	17.6	35.5	1.6	14.7	0.4	3.2	0.7	9.8	37.0	51.9
	Average	4.9	2.5	18.3	19.1	35.4	1.7	14.5	0.4	3.1	0.7	9.7	35.3	53.5
	LSD (p=0.05)	0.12	0.09	1.05	0.84	0.87	0.11	0.35	0.01	0.17	0.04	0.15	0.89	0.42
	CV%	1.41	2.24	3.43	2.62	1.46	4.00	1.45	1.39	3.16	2.87	0.90	1.51	0.46

Fatty acid composition reported on dry matter basis of the whole seed.

Table 15. 09CM02: Statewide Industry Camelina Trial - Dryland, Fallow. Fatty Acid Composition.
Northern Agricultural Research Center. Havre, MT. 2009.

Entry	ID	Palmitic	Stearic	Oleic	Linoleic	α -Linolenic	Arachidic	Gondoic	Eicosadienoic	Erucic	Nervonic	Mono- Saturated	Poly- unsaturated	
		Acid (16:0)	Acid (18:0)	Acid (18:1)	Acid (18:2)	Acid (18:3)	Acid (20:0)	Acid (20:1)	Acid (22:0)	Acid (22:1)	Acid (24:1)			
		%	%	%	%	%	%	%	%	%	%	%	%	
1	GP-07	3.7	3.0	17.2	3.1	41.0	2.2	19.2	0.4	4.8	0.5	8.1	39.7	48.7
2	GP-10	3.9	2.9	19.9	7.0	36.8	2.1	18.7	0.4	4.5	0.5	9.0	42.5	45.9
3	GP-11	3.9	2.9	19.0	5.1	38.6	2.1	18.8	0.4	4.6	0.5	8.6	41.5	46.8
4	GP-42	4.3	2.8	18.4	13.4	33.7	2.0	17.1	0.4	3.7	0.6	9.4	39.6	48.1
5	GP-68	3.9	3.0	20.3	5.0	36.8	2.2	19.2	0.4	4.7	0.5	8.9	43.5	44.6
6	Blaine Creek	3.8	3.0	20.1	4.2	37.4	2.2	19.4	0.4	4.8	0.4	8.8	43.6	44.3
7	Calena	3.8	3.1	19.1	1.3	38.7	2.3	20.1	0.4	5.2	0.4	8.4	42.9	45.1
8	Ligena	3.6	3.2	19.4	1.2	38.8	2.3	20.5	0.4	5.2	0.4	8.3	43.6	45.0
9	Suneson	3.8	3.1	19.5	3.2	38.3	2.2	19.6	0.4	4.8	0.4	8.6	43.1	45.2
10	SO-1	3.8	2.9	20.3	5.6	37.5	1.9	18.9	0.4	4.5	0.4	8.8	43.0	45.2
11	SO-2	4.1	2.9	19.4	8.0	35.9	2.2	18.7	0.4	4.5	0.5	9.0	41.9	46.4
12	SO-3	3.8	3.0	20.5	3.9	37.0	2.2	19.6	0.4	4.9	0.4	8.8	44.1	43.8
13	SO-4	3.8	3.0	19.4	4.1	38.1	2.3	19.7	0.4	5.0	0.4	8.6	42.9	45.4
14	SO-5	4.0	3.0	19.0	7.5	35.8	2.2	18.9	0.4	4.5	0.5	8.9	41.8	46.2
15	SO-6	3.7	3.0	20.3	3.6	37.7	2.1	19.3	0.4	4.7	0.4	8.7	43.6	44.5
Average		3.9	3.0	19.4	5.1	37.5	2.2	19.2	0.4	4.7	0.4	8.7	42.5	45.7
LSD (p=0.05)		0.25	0.16	0.75	4.94	2.02	0.19	1.33	0.01	0.59	0.07	0.43	1.51	1.29
CV%		4.49	3.77	2.68	68.26	3.78	6.25	4.87	2.09	8.80	11.43	3.42	2.49	1.98

Fatty acid composition reported on dry matter basis of the whole seed.

Table 16. 09CM05: Statewide Industry Camelina Trial - High Rainfall, Recrop. Fatty Acid Composition.
Northwestern Agricultural Research Center. Kalispell, MT. 2009.

Entry	ID	Palmitic	Stearic	Oleic	Linoleic	α -Linolenic	Arachidic	Gondoic	Eicosadienoic	Erucic	Nervonic	Mono- Saturated	Poly- unsaturated	
		Acid (16:0)	Acid (18:0)	Acid (18:1)	Acid (18:2)	Acid (18:3)	Acid (20:0)	Acid (20:1)	Acid (22:0)	Acid (22:1)	Acid (24:1)			
		%	%	%	%	%	%	%	%	%	%	%	%	
1	GP-07	4.0	2.9	16.5	7.5	40.1	2.0	17.9	0.4	4.5	0.6	8.3	37.2	50.1
2	GP-10	4.0	3.0	18.6	6.9	37.6	2.1	18.6	0.4	4.5	0.5	8.7	40.9	46.9
3	GP-11	4.0	2.9	18.6	5.8	39.0	2.0	18.3	0.4	4.6	0.5	8.5	40.2	47.5
4	GP-42	4.0	2.9	18.2	8.0	37.2	2.2	18.3	0.4	4.5	0.5	8.7	40.1	47.6
5	GP-68	3.9	3.0	19.9	5.2	37.8	2.2	19.0	0.4	4.9	0.5	8.7	42.7	45.1
6	Blaine Creek	3.8	3.0	19.8	3.4	39.0	2.2	19.4	0.4	5.0	0.5	8.5	42.9	45.2
7	Calena	3.9	3.0	18.3	4.7	38.9	2.1	18.9	0.4	4.9	0.5	8.5	40.6	47.0
8	Ligena	3.8	3.0	18.5	4.3	39.4	2.3	19.4	0.4	4.9	0.5	8.3	41.3	47.3
9	Suneson	4.0	2.9	18.5	7.2	37.7	2.1	18.3	0.4	4.5	0.5	8.7	40.3	47.4
10	SO-1	3.6	2.9	19.9	3.9	40.3	2.1	19.1	0.4	4.8	0.5	8.4	42.2	46.2
11	SO-2	4.0	3.0	18.6	6.5	37.0	2.3	18.9	0.4	4.7	0.5	8.7	41.2	46.4
12	SO-3	3.7	3.1	20.2	2.4	38.6	2.2	19.9	0.4	5.2	0.4	8.5	43.7	44.2
13	SO-4	3.9	2.9	18.7	7.1	37.8	2.1	18.6	0.4	4.7	0.5	8.7	40.8	46.9
14	SO-5	3.9	3.0	18.6	5.3	37.9	2.3	19.0	0.4	4.8	0.5	8.5	41.2	46.5
15	SO-6	3.8	3.0	19.9	4.0	38.4	2.1	19.0	0.4	4.8	0.5	8.6	42.4	45.4
	Average	3.9	3.0	18.8	5.5	38.4	2.1	18.8	0.4	4.7	0.5	8.6	41.2	46.6
	LSD (p=0.05)	0.08	0.07	0.31	1.83	0.76	0.12	0.44	0.01	0.20	0.03	0.15	0.66	0.79
	CV%	1.45	1.61	1.14	23.46	1.39	3.82	1.65	1.70	2.95	4.24	1.22	1.13	1.19

Fatty acid composition reported on dry matter basis of the whole seed.

Table 17. 09CM08: Statewide Industry Camelina Trial - Dryland, Fallow. Fatty Acid Composition.
Southern Agricultural Research Center. Huntley, MT. 2009.

Entry	ID	Palmitic	Stearic	Oleic	Linoleic	α -Linolenic	Arachidic	Gondoic	Eicosadienoic	Erucic	Nervonic	Mono- Saturated	Poly- unsaturated	
		Acid (16:0)	Acid (18:0)	Acid (18:1)	Acid (18:2)	Acid (18:3)	Acid (20:0)	Acid (20:1)	Acid (22:0)	Acid (22:1)	Acid (24:1)			
		%	%	%	%	%	%	%	%	%	%	%	%	
1	GP-07	4.2	2.9	16.5	7.4	38.9	2.0	18.8	0.4	4.7	0.5	8.1	37.3	50.1
2	GP-10	4.5	2.8	18.5	10.2	35.7	1.7	18.2	0.4	4.4	0.5	8.7	39.1	48.2
3	GP-11	4.4	2.8	19.0	7.8	37.7	1.9	18.6	0.4	4.8	0.4	8.5	39.3	48.5
4	GP-42	4.3	2.9	18.7	8.0	36.0	2.1	19.2	0.4	4.9	0.4	8.5	40.2	47.2
5	GP-68	4.2	2.8	19.8	6.6	36.7	2.0	19.1	0.4	5.0	0.4	8.6	41.4	46.0
6	Blaine Creek	4.2	2.9	19.9	6.3	36.7	2.0	19.3	0.4	5.0	0.4	8.6	41.8	45.6
7	Calena	4.2	2.9	18.3	6.8	37.5	2.0	19.0	0.4	4.9	0.4	8.4	39.5	47.9
8	Ligena	4.2	2.9	18.6	8.1	36.8	2.0	19.2	0.4	4.9	0.4	8.5	40.3	47.7
9	Suneson	4.4	2.8	18.9	8.3	36.7	2.0	18.7	0.4	4.7	0.4	8.6	39.8	47.6
10	SO-1	4.2	2.8	19.7	7.6	37.0	1.8	18.7	0.4	4.6	0.4	8.5	40.7	46.8
11	SO-2	4.5	2.8	18.6	9.8	35.1	2.0	18.7	0.4	4.7	0.4	8.7	39.6	47.8
12	SO-3	4.3	2.8	20.3	7.7	36.2	1.9	18.9	0.4	4.9	0.4	8.8	41.7	45.8
13	SO-4	4.2	2.9	19.2	7.2	36.8	2.1	19.4	0.4	5.1	0.4	8.5	40.7	46.9
14	SO-5	4.4	2.8	18.7	9.5	35.5	2.1	18.7	0.4	4.7	0.4	8.7	39.8	47.7
15	SO-6	4.3	2.8	20.3	6.9	36.5	1.8	18.8	0.4	4.7	0.4	8.6	41.5	45.8
Average		4.3	2.8	19.0	7.8	36.7	2.0	18.9	0.4	4.8	0.4	8.5	40.2	47.3
CV%		2.41	2.45	1.63	21.18	1.69	5.57	2.83	1.18	4.54	7.11	1.49	1.79	1.29
Pr > F		< 0.01	0.72	< 0.01	0.13	< 0.01	< 0.01	0.29	< 0.01	0.08	<0.05	< 0.01	< 0.01	< 0.01

Fatty acid composition reported on dry matter basis of the whole seed.

Table 18. 09CM18: Statewide Industry Camelina Trial - Dryland, Fallow. Fatty Acid Composition.
Western Triangle Agricultural Research Center. Conrad, MT. 2009.

Entry	ID	Palmitic	Stearic	Oleic	Linoleic	α -Linolenic	Arachidic	Gondoic	Eicosadienoic	Erucic	Nervonic	Saturated	Mono- unsaturated	Poly- unsaturated
		Acid (16:0)	Acid (18:0)	Acid (18:1)	Acid (18:2)	Acid (18:3)	Acid (20:0)	Acid (20:1)	Acid (22:0)	Acid (22:1)	Acid (24:1)			
		%	%	%	%	%	%	%	%	%	%	%	%	%
1	GP-07	4.3	2.4	18.7	15.2	39.9	1.5	15.6	0.4	3.9	0.7	9.1	35.9	53.3
2	GP-10	4.6	2.4	20.1	17.1	35.3	1.5	15.5	0.4	3.5	0.6	9.6	37.9	50.6
3	GP-11	4.4	2.3	21.0	15.1	37.4	1.4	15.8	0.4	3.9	0.6	9.5	38.9	50.3
4	GP-42	4.7	2.4	19.9	18.1	34.9	1.6	15.3	0.4	3.5	0.6	9.6	37.5	51.0
5	GP-68	4.5	2.4	21.8	15.0	36.1	1.6	15.8	0.4	3.9	0.6	9.7	40.0	48.9
6	Blaine Creek	4.2	2.5	21.4	13.6	36.4	1.6	16.5	0.4	4.0	0.6	9.5	40.6	48.1
7	Calena	4.5	2.4	18.9	15.3	36.2	1.5	15.7	0.3	3.7	0.6	9.4	37.1	51.1
8	Ligena	4.6	2.4	19.1	18.3	34.9	1.6	15.4	0.4	3.5	0.6	9.5	36.9	51.7
9	Suneson	4.6	2.5	19.7	16.6	35.6	1.6	15.5	0.4	3.6	0.6	9.6	37.7	50.7
10	SO-1	4.5	2.4	20.9	16.1	36.0	1.4	15.2	0.4	3.2	0.6	9.5	38.3	50.4
11	SO-2	4.7	2.4	19.8	18.6	34.6	1.6	15.3	0.4	3.4	0.6	9.7	37.4	51.2
12	SO-3	4.6	2.5	20.8	14.8	34.8	1.6	15.9	0.4	3.7	0.6	9.6	39.5	48.4
13	SO-4	4.4	2.3	21.6	15.6	36.6	1.5	16.1	0.4	4.1	0.6	9.7	40.0	49.5
14	SO-5	4.7	2.4	19.6	18.7	34.8	1.6	15.3	0.4	3.5	0.6	9.6	37.2	51.5
15	SO-6	4.4	2.4	22.2	13.5	36.4	1.5	16.0	0.4	3.8	0.6	9.5	40.6	48.3
Average		4.5	2.4	20.4	16.1	36.0	1.5	15.7	0.4	3.7	0.6	9.5	38.4	50.3
LSD (p=0.05)		ns	0.09	1.34	1.71	1.32	0.10	ns	0.02	0.45	0.03	0.11	2.03	1.27
CV%		4.75	2.50	4.61	7.42	2.58	4.52	3.56	3.44	8.57	3.22	0.79	3.71	1.77

Fatty acid composition reported on dry matter basis of the whole seed.