Sun Grant Quarterly Report
DOT-Funded Projects

Project Quarter: July – Sept 2008

Project Title: Development of Camelina as a Low-Input Oilseed Crop for Oregon, Idaho and Washington

Project Coordinator:
Russ Karow, Head, Crop and Soil Science, Oregon State University

Research Leaders:
UI Moscow – Stephen Guy
OSU Corvallis – Tom Chastain and Daryl Ehrensing
OSU Pendleton – Don Wysocki
WSU Lind – Bill Schillinger

1. PROJECT PROGRESS/ACCOMPLSHMENTS

This is a three-year project with four defined objectives: 1) to determine the optimum planting date for camelina across the PNW; 2) to identify from among available germplasm that best adapted to the PNW; 3) to explore nitrogen fertility needs of camelina grown in different environments in the PNW; and 4) to share research findings through publications, field tours, grower meetings and other venues to allow camelina to become a viable part of cropping systems across the PNW.

2007-08 was the first crop year of this study.

General Observation from Lind

East-central Washington experienced severe drought during the 2008 crop year (Sept. 1, 2007 – Aug. 31, 2008). The Lind Research Station received only 6.85 inches of precipitation in 2008 compared to the long-term average of 9.50 inches. In addition, due to evaporation and sublimation of water from prolonged snow cover, over-winter precipitation storage efficiency in the soil was only 41% compared to the long-term average of 68%. Only 0.30 inches of rainfall occurred during the combined months of April and May. This was one of the toughest crop years in the 93-year history of the Lind Dryland Research Station.

Camelina was essentially a failure in all trials at Lind in 2008. Although camelina stands averaged 65 plants per square meter when measured in early April, approximately 75% of the established plants died from drought in May and June. Plants that survived were single stem (i.e., no branching) and only 5-8 inches tall. This was an extremely difficult year for all recrop (i.e., no fallow) crops at Lind. For example, recrop spring wheat yielded only 5 bu/acre.

Objective 1: Determining optimum planting dates.
Scope of work: Two planting methods - direct drilling and broadcast with packing - and six planting dates are planned to be used at all four sites. Planting dates are planned for fall and through late spring but will be weather dependent at each location. Four replications of each planting date and planting method. Plant Calena variety at 4-5 lbs/acre with nitrogen @ 25 lbs/acre. Stand counts using quadrant method. Grain yield with plot combine. Take samples from each treatment for oil content.

OSU - Corvallis
Fall planting began November 9, 2007 and continued roughly monthly until April 17, 2008. Drilled plots were planted using a Nordsten grain drill, and all plots were 7.5 feet by 50 feet in length. Broadcast plots were planted using a Scott's fertilizer drop spreader followed by rolling with a flat roller as conditions permitted. Winter plantings are often a problem in Western Oregon due to wet soil conditions that do not allow the ground to be well worked before planting. Wet conditions made seed drilling difficult in several of the winter planting dates, and resulting seedling emergence and stand establishment were poor under these conditions. Reworking the seedbed just prior to planting greatly improved stand establishment regardless of planting method.

Young camelina seedlings are quite sensitive to surface flooding and are easily killed by several days of flooding conditions. Some plots in this trial were completely lost due to flooding shortly after seedling emergence.

Fall and early spring planted plots were harvested on July 23, 2008 using a Wintersteiger Elite plot combine. Later planted plots were combine harvested on August 5, 2008. Seed was cleaned on a Clipper M2B cleaner. Samples were weighed on an electronic balance, and yield was calculated based on plot width and length. Results for the planting date and method trial are shown in the tables below.

Planting Date	**Yield** (lb/ac)	**Homogenous Groups**
1/23/2008	1809	A
11/9/2007	1765	A
2/18/2008	1460	A
12/13/2007	693	B
4/3/2008	634	B
4/17/2008	249	B

LSD 0.05 = 547

Planting Method	Yield (lb/ac)	Homogeneous Groups
Drill	1124	A
Broadcast/Pack	1080	A

LSD 0.05 = 316

Planting Date	Planting Method	Yield (lb/ac)	Homogenous Groups
11/9/2007	Broadcast	2037	A
1/23/2008	Drill	1838	A
1/23/2008	Broadcast	1751	A
2/18/2008	Broadcast	1568	AB
11/9/2007	Drill	1493	AB
2/18/2008	Drill	1353	ABC
12/13/2008	Drill	888	BCD
4/3/2008	Broadcast	656	CD
4/3/2008	Drill	612	CD
12/13/2007	Broadcast	497	D
4/17/2008	Drill	265	D
4/17/2008	Broadcast	234	D

LSD 0.05 = 774

OSU - Pendleton

Date of planting trails were photographed on 20 June to document weed density and stand density. All plots received 30 lb N at sowing or broadcasting as dry urea placed with a disk opener in to the plot area. Plots were harvested on 23 July 2008 using a Hege 140 plot combine equipped with an auger-feed header. The bottom sieve on the combine was covered with 1/8"hardware cloth to facilitate cleaning of the sample. Concave to cylinder adjustment was set to a midrange opening. Cylinder speed was 900 RPM and fan speed was 850 RPM. Plots were harvested into cloth bags and cleaned with an M2B Clipper clean with 2mm upper sieve and 0.3mm lower sieve. Samples were weighed on an electronic balance and yield determined using header width and plot length. Sub samples were take to determine oil content and fatty acid profile.

The tables below shows yield results for the 6 planting dates and 2 sowing methods. Sowing and broadcast rates of seeding were all 3 lb/acre. Fall and winter plantings did poorly because of competition with winter annual weeds and poor stand establishment. Glyphosate was applied 20 October and March 4 on the plot area for "burndown" weed control. Overall early March sowing dates performed the best and sowing performed

better than broadcasting. However there were specific interactions between sowing date and sowing methods.

Comparisons of Yield and Sowing Date

Sowing Date	Yield #/acre	Homogeneous Groups
3/5/2008	1479	A
4/1/2008	1286	A
3/22/2008	1244	A
2/12/2008	1193	A
10/23/2007	862	B
12/21/2007	451	C

LSD 0.05 =390

Comparisons of Yield and Sowing Method

Sowing Method	Yield #/acre	Homogeneous Groups
broadcast	1101	A
sow	1070	A

LSD 0.05 =97

Comparisons of Yield with Sowing Date X Sowing Method

Sowing Date	Sowing Method	Yield #/acre	Homogenous Groups
3/5/2008	sow	1531	A
3/5/2008	broadcast	1427	AB
3/22/2008	sow	1329	AB
4/1/2008	sow	1297	ABC
4/1/2008	broadcast	1274	ABC
2/12/2008	sow	1203	ABC
2/12/2008	broadcast	1182	BC
3/22/2008	broadcast	1159	BC
10/23/2007	broadcast	976	CD
10/23/2007	sow	747	DE
12/21/2007	broadcast	589	E
12/21/2007	sow	312	F

LSD 0.05=344

UI - Moscow

Idaho planting date and seeding method assessment was started in the fall of 2007. All trials in 2008 were randomized complete block designs with four replications. The site on the UI Parker farm near Moscow was selected for easy access for planting, but there was concern for herbicide carry over from a Beyond application two years prior. Soil was collected from the site and camelina was seeded on that soil and clean soil at room temperature. Plant germination and development was normal through several leaf stages in the herbicide carry over assessment. Based on that bioassay, the site was thought to be

okay for camelina planting. Fall and winter seeding proceeded on the trial site as conditions allowed for seeding and at two week intervals for the last two dates. Plants established early became stunted and distorted when the weather turned cold. Cold season planting dates also would germinate poorly and germinated plants were distorted. Later planting dates faired better, but herbicide injury was evident at all dates. It appears that under cold conditions, the plants were not metabolizing some residual herbicide and were adversely affected. This reduced stands, plant vigor, growth rate, and delayed maturity producing a 4 September harvest date. The adverse growing conditions produced short plant heights, averaging 23 inches, but yields were surprisingly good averaging 1440 lb/a and the April 12 drilled treatment was over 2100 lb/a. This trial demonstrated that camelina can withstand some injury, survive through poor growing conditions and still yield a useful crop. Yields and plant heights are shown in Table 1. There was an interaction of seeding date and method for yield and plant height.

Table 1. Camelina date of seeding and seeding method at Moscow Idaho, 2008

	Seed Yield		Plant Height	
Seeding Date	Drill	Broadcast	Drill	Broadcast
	-----lb/acre-----		----inches----	
16 Oct. 2007	297	945	--	19
21 Dec. 2007	1005	1483	20	20
7 Mar. 2008	1695	1434	23	23
12 Apr. 2008	2111	1576	29	24
26 Apr. 2008	1938	1198	26	22
10 May 2008	2066	1529	26	24
Average	1519	1361	25	22
LSD 0.05 (w/in column)	475	475	5	5
CV	21.9		15.2	

WSU - Lind

Snow covered the ground at Lind from late November through late November, thus we were able to establish only four of the planned six sowing dates. In order to obtain an accurate grain yield, plants in each plot were hand harvest on July 8 within a large 3 x 3 meter square sampling square, threshed by hand, and cleaned with a Clipper seed cleaner

The tables below show yield results for the 4 planting dates and 2 sowing methods. All treatments received 25 lbs. N/acre. The data show mixed results, but overall the earliest sowing (Oct. 31) did the best and the late seeding (March 14) was the worst. Plant stands were better with sowing compared to broadcasting + packing seed, but there were no consistent differences in grain yield. This trial became heavily infested with Russian thistle in June after a 0.21-inch rain shower.

We were not satisfied with the coil packer used in the broadcast + pack treatment. We plan to replace the coil packer with a spike-tooth harrow for this trial in the 2009 crop year.

Comparisons Yield and Sowing Date – Lind

Sowing Date	Yield #/acre	Homogeneous Groups
October 31	118	A
November 20	57	AB
February 26	77	AB
March 14	27	B

LSD 0.05 =69

Comparisons of Yield and Sowing Method – Lind

Sowing Method	Yield #/acre	Homogeneous Groups
Sow	74	A
Broadcast	66	A

LSD 0.05 =23

Comparisons of Yield with Sowing Date X Sowing Method - Lind

Sowing Date	Sowing Method	Yield #/acre	Homogenous Groups
October 31	Broadcast	134	A
October 31	Sow	102	ABC
November 20	Broadcast	89	ABC
November 20	Sow	25	CD
February 26	Broadcast	37	ABCD
February 26	Sow	118	AB
March 14	Broadcast	3	D
March 14	Sow	52	ABCD

LSD 0.05=86

Objective 2: Cultivar Evaluation.

Scope of Work: Evaluate 15 – 20 cultivars and numbered lines at each location. Four replications. Nitrogen @ 25-30 lbs/acre. Grain yield with plot combine. Take samples from each treatment for oil content.

OSU - Corvallis

Eighteen camelina varieties were planted in Corvallis on April 12, 2008 using a randomized complete block design with four replications. Plot dimensions were 5 feet by 20 feet. All varieties germinated well and established rosettes quickly despite cool, dry weather conditions following planting. All plots were harvested on July 28 using a Wintersteiger Elite plot combine. Seed was cleaned on a Clipper M2B cleaner. Samples were weighed on an electronic balance, and yield was calculated based on plot width and length. Yield results are shown in the table below.

This was quite a late planting compared to a more normal mid-February date in Western Oregon, but seed of these varieties was unavailable until mid-March, and wet field conditions prevented earlier field work and planting. As a result of late planting and lack of rainfall in April and May, plant performance this season was quite poor in this trial, and seed yields were very low compared to earlier plantings.

Variety	**Yield** (lb/ac)	**Homogenous Groups**
Celine	303	A
Calena	289	AB
GP41	287	AB
SO-2	272	ABC
GP42	245	ABCD
Columbia	235	ABCD
Cheyenne	230	ABCD
GP07	228	ABCD
Suneson	226	ABCD
SO-5	218	ABCD
GP48	215	ABCD
Ligena	213	ABCD
SO-3	208	ABCD
Blaine Creek	195	BCD
SO-4	189	BCD
GP67	178	CD
SO-6	170	CD
SO-1	146	D

LSD .05 = 102

OSU - Pendleton

Eighteen varieties were sown in trials on 12 March 2008 using a randomized complete block design using a 3 lb/acre sowing rate. Plot dimensions were 5 x 20 ft. All varieties established well, however emergence was very slow because very cool spring conditions. Plants were 3-4 cm rosettes on May 4. Forty pounds of N and 7 lbs of S were applied broadcast to the plot area prior to planting. Bloom began the 2 through 3 week in May. One cultivar completed bloom by June 12; other lines continued bloom until June 20. Yellow sticky traps for insect monitoring were placed in the trials by Silva Rondon, OSU Entomologist at Hermiston. Complete data is not yet available, but a small feeding insect was identified which is the first sighting in the US. Plots were harvested on 19 July 2008 using a Hege 140 plot combine equipped with an auger-feed header. The bottom sieve on the combine was covered with 1/8”hardware cloth to facilitate cleaning of the sample. Concave to cylinder adjustment was set to a midrange opening. Cylinder speed was 900 RPM and fan speed was 850 RPM. Plots were harvested into cloth bags and cleaned with

an M2B Clipper clean with 2mm upper sieve and 0.3mm lower sieve. Samples were weighed on an electronic balance and yield determined using header width and plot length. Sub samples were take to determine oil content and fatty acid profile. The table below shows yield results for the lines in the trial.

Comparison of Yield among Varieties

Variety	Yield lb/acre	Homogeneous Groups
Celine	1714	A
Calena	1653	AB
GP48	1653	AB
SO-1	1596	ABC
Suneson	1585	ABC
GP42	1565	ABCD
SO-2	1553	ABCD
GP41	1551	ABCD
SO-4	1537	ABCDE
SO-5	1522	BCDE
Ligena	1519	BCDE
SO-3	1517	BCDE
Columbia	1475	BCDE
SO-6	1461	CDE
Blaine Creek	1453	CDE
GP67	1388	DEF
Cheyenne	1360	EF
GP07	1247	F

LSD 0.05 = 183

UI – Moscow

Idaho Camelina cultivar evaluations were conducted in 2008 at Moscow, a 24 inch average precipitation site, and Lewiston, a 14 inch average precipitation site. 18 cultivars were evaluated and seeded with 5 lb/a seed. Two additional seeding rates of 3 and 7 lb/a were evaluated for the cultivar 'Columbia' for a total of 20 entries into teach trial.

Precipitation was below normal at both locations, and later growing season rainfall was much below normal. Lewiston was seeded later than desirable on 3 April, 2008 due to wet spring conditions and harvest occurred on 15 July. Cooler than normal conditions after seeding allowed the crop to develop well producing an average mature height of 37 inches and I estimated yield prior to harvest to be 1500 to 1800 lb/a. When the crop had matured, I noticed across the trial many pods and a significant amount of seed scattered on the soil surface along with short broken stems. This did not appear to be conventional seed shatter of pods opening prior to harvest. I concluded it was bird damage. This camelina was the first mature crop in the region and would thus be a target for bird feeding. It is impossible to estimate the seed loss, but it was a large portion of the yield. Average yield was 734 lb/a, so it is possible that half or more of seed yield was lost.

The Moscow location was planted on 26 April, 2008 that I consider to be a very delayed planting date. Harvest was 11 August. Previous trials show that yield potential drops as planting is delayed beyond the beginning of April. Average plant height was 31 inches, and average yield was 1162 lb/a. Results are presented for both locations in the Table 2.

Table 2. Camelina cultivar performance at Lewiston and Moscow Idaho, 2008

	Seed Yield		Test Weight		Plant Height	
Cultivar	Lws	Msc	Lws	Msc	Lws	Msc
	----lb/acre----		--lb/bushel--		---inches--	
Blaine Creek	879	1156	47.0	50.7	36	32
Calena	672	1287	46.5	51.2	37	32
Celine	752	1279	49.0	51.0	37	33
Columbia	710	1223	49.6	51.4	36	33
Cheyenne	744	1102	43.8	50.2	37	30
Ligena	826	1229	45.9	50.3	37	31
Suneson	657	1113	46.9	51.4	38	34
SO-1	804	1000	45.2	50.6	36	28
SO-2	718	1148	45.8	51.4	38	32
SO-3	679	997	48.0	50.6	38	30
SO-4	867	1148	48.4	51.1	34	30
SO-5	589	1212	47.3	50.2	37	31
SO-6	651	1052	44.5	50.2	36	30
GP07	749	996	48.1	49.9	33	28
GP41	730	1261	47.9	51.3	37	32
GP42	899	1242	49.5	51.2	37	33
GP48	914	1170	47.8	50.9	37	32
GP67	535	1239	47.4	50.3	37	32
Columbia-3lb	619	1161	48.2	51.5	38	31
Columbia-7lb	694	1234	48.0	51.3	37	32
Average	734	1162	47.3	50.8	37	31
LSD 0.05	207	150	3.4	0.3	1	3
CV	19.7	9.1	5.0	0.4	3.6	6.3

WSU – Lind

Eighteen camelina cultivars were sown in trials on 6 March 2008 using a randomized complete block design with 4 replications. Plot dimensions were 5 x 20 ft. As reported in the April-June progress report, the “Calena” entry achieved the best stands with 160 plants per square meter with some of the other entries (see previous report) with stands of less than 50 plants square meter. This trial was kept clean of weeds by removing Russian thistle by hand. Plots were harvest on July 9 with a Hege 140 plot combine. We had to keep the header at ground level and use a broom to sweep the camelina plants onto the cutting platform. Per the recommendation of Don Wysocki, we covered the bottom sieve on the combine with 1/8”hardware cloth to facilitate cleaning of the sample. Passing them through a Clipper seed cleaner then further cleaned samples. Grain yields ranged from 57 to 152 lbs/acre and there were no significant differences among treatments. The table below shows yield results for the lines in the trial.

Comparison of Yield among Cultivars – Lind		
Variety	Yield lb/acre	Homogeneous Groups
SO-5	152	A
GP41	147	A
Celine	145	A
Suneson	142	A
SO-1	131	A
Calena	130	A
GP07	117	A
SO-4	116	A
SO-6	115	A
SO-3	112	A
SO-2	112	A
GP67	110	A
Columbia	106	A
Cheyenne	105	A
Ligena	94	A
Blaine Creek	89	A
GP48	63	A
GP42	57	A

LSD 0.05 = 173

Objective 3: Determining Optimum Fertilizer Rates.
Scope of work: N rates used will be location specific.

OSU- Corvallis
To examine the effect of nitrogen and sulfur on seed yield of camelina, sulfur was applied at a rate of 0 and 20 lb S/ac to adjacent parts of the field and the entire field was worked to a final seedbed prior to planting. On February 18, 2008 field plots were planted with Calena camelina at the rate of 5 pounds of seed per acre using a Nordsten grain drill. Nitrogen treatments were applied on April 1 at the rates of 0, 20, 40, 60, 80, and 100 lb N/ac in a randomized design with four replications. All plots were harvested on July 15 using a Wintersteiger Elite plot combine. Seed was cleaned on a Clipper M2B cleaner. Samples were weighed on an electronic balance, and yield was calculated based on plot width and length. Yield results are shown in the table below.

N Rate (lb/ac)	S Rate (lb/ac)	Yield (lb/ac)	Homogenous Groups
80	20	2464	A
100	0	2420	A
80	0	2231	AB
100	20	2199	AB
0	20	1928	ABC
60	20	1909	ABC
60	0	1893	ABC
40	0	1872	ABC
40	20	1839	ABC
20	0	1631	BC
20	20	1588	BC
0	0	1433	C

LSD 0.05 = 674

OSU - Pendleton

Nitrogen rates of 0, 15, 30, 45, 60, 75 lb N/acre were applied on 12 March using a randomized complete block experimental design with five replications.. The plot area had a high sulfur background level. Both a 45 lb N x 8 lb S treatment and 45 lb N x S and P treatment were also used in the experiment. The cultivar “Calena” was sown into the trial on 12 March at 3 lb seed/acre. The stand established slowly because of very cold conditions in March. Neutron axis tubes were installed on May 15 for soil water measurement. Tubes were installed to a depth of 4 feet. Tubes were installed in the 0, 45, and 75 lb N/acre treatments and in a control spring wheat strip sown adjacent to the trial with 45 lb N/acre. Soil samples were collected for bulk density and soil water to specifically develop a correlation with the neutron probe. Soil water is monitored bi-weekly at 1 foot increments to 4 feet in each tube. Soil water use has not yet been determined. Plots were harvested on 19 July 2008 using a Hege 140 plot combine equipped with an auger-feed header. The bottom sieve on the combine was covered with 1/8”hardware cloth to facilitate cleaning of the sample. Concave to cylinder adjustment was set to a midrange opening. Cylinder speed was 900 RPM and fan speed was 850 RPM. Plots were harvested into cloth bags and cleaned with an M2B Clipper clean with 2mm upper sieve and 0.3mm lower sieve. Samples were weighed on an electronic balance and yield determined using header width and plot length. Sub samples were take to determine oil content and fatty acid profile. The table below shows the yield response to applied nitrogen, sulfur, and phosphorus. Background nitrogen levels in the plot area were determined by soil analysis to be 50 lb N/acre in the top 3 feet. Optimum N rates were in the range of 15 to 30 lb N /acre. No response to applied sulfur or phosphorus was observed.

Comparison of Yield to Applied Nitrogen, Sulfur and Phosphorus

Fertility Rate lb/acre	Yield lb/acre	Homogeneous Groups
75 # N	1600	A
45 # N+S	1518	A
45 # N	1499	A
60 # N	1452	A
45 # N+P&S	1444	A
30 # N	1417	A
15 # N	1384	AB
0 # N	1161	B

LSD 0.05 = 224

UI- Moscow

Nitrogen rates of 0, 20, 40, 60, 80, 100 lb N/acre were broadcast applied after seeding using urea on 26 April and 20 lb/a of sulfur as thiosol was applied on 28 April in a randomized complete block two factor factorial split plot design with N rates as main plots and sulfur as the split. Soil sampling before seeding showed 37, 23, and 27 lb/a of available N in the top 3 foot increments, respectively, as nitrate and ammonium. Sulfur did not have a significant effect as a factor or interaction with N rate for any measured parameter, however oil content will be analyzed. Seed yield, plant height, and test weight were increased as N rate increased (Table 3). It appears that the 60 lb/a N rate was optimum under these conditions, although yield potential was low due to late seeding and environmental conditions.

Table 3. Camelina nitrogen and sulfur fertilizer response at Moscow Idaho, 2008

	Seed Yield		Test Weight		Plant Height	
Applied N rate	S-	S+	S-	S+	S-	S+
	---lb/acre---		--lb/bushel--		---inches---	
0	559	629	51.4	51.4	27	28
20	675	673	51.6	51.7	28	29
40	735	788	51.5	51.6	28	30
60	909	841	51.6	51.7	30	30
80	875	842	51.6	51.6	29	31
100	909	911	51.8	51.7	30	30
Average	776	781	51.6	51.6	29	29
LSD 0.05 (w/in col.)	101	101	0.3	0.3	2	2
CV	8.8		0.4		5.0	

An additional trial was started at Moscow in 2008 to evaluate the crop sequence influence of spring crops on winter wheat. Eight spring crops were seeded on 28 April and harvested on 15 August or 24 August. Winter wheat will be seeding in the fall of 2008 and five N fertilizer rates will be applied to the winter wheat in a split plot factorial on the 2008 crops. Crop yields for 2008 are presented in Table 4.

Table 4. Spring crop yields at Moscow, Idaho, 2008

Spring Crop	Yield (lb/a)
Spring wheat	3752
Spring barley	4624
Dry pea	1832
Lentil	1076
Camelina	1893
Yellow Mustard	1391
Oriental Mustard	913
Canola	700

WSU - Lind
This trial was established on February 29. Nitrogen rates were 0, 10, 20, 30, 40, and 50 lbs/acre. In addition, 8 lbs/acre of sulfur was applied with N rates 10 and 50 (i.e., 10-0-0-8 and 30-0-0-8). Fertilizer was applied in a liquid Solution 32 mix in mid February. Camelina was broadcast on the surface with a no-till air drill (openers were 5 inches above the soil surface to blow seed evenly on the ground) and then pressed into the soil with an attached coil packer. Individual plots were 8 x 100 ft.

Stand establishment was less than satisfactory in this trial. In addition, as with the date and method of planting trial, most camelina plants had been killed by drought by June and the plots were heavily infested with Russian thistle. This study was terminated with a glyphosate herbicide application in mid June and no harvest data were collected. We plan to direct sow this trial (instead of broadcast) for the 2009 crop year.

Objective 4. Technology Transfer
Scope of Work: To share research findings through publications, field tours, grower meetings and other venues to allow camelina to become a viable part of cropping systems across the PNW.

OSU – Corvallis

Ehrensing, D. 19 June 2008 Meeting with ODOT to discuss biofuel feedstock production on ODOT right of way using camelina.

Ehrensing, D. 24 September 2008. Consultation with growers at Willamette Biomass Processors grand opening.

OSU - Pendleton

Wysocki, D. 4 September 2008. Update on camelina trails Dryland Extension Meeting, Pendleton, OR.

WSU – Lind

Schillinger, W., S. Guy, D. Wysocki, T. Chastain, D. Ehrensing, and R. Karow. 2008. Camelina agronomy research in the Pacific Northwest. *In*

2008 Field Day Abstracts: Highlights of Research Progress. Dept. of Crop and Soil Sciences Tech. Report 08-1, WSU, Pullman, WA.

Schillinger, W.F., T.A. Smith, S.E. Schofstoll, and B.E. Sauer. 2008. Camelina cropping systems research at Lind. *In* 2008 Field Day Abstracts: Highlights of Research Progress. Dept. of Crop and Soil Sciences Tech. Report 08-1, WSU, Pullman, WA.

Plans for the 2008-09 Growing Season

OSU – Corvallis
We will plan on conducting similar trials for 2009 and attempt to take care of some of the problems we encountered in 2008 trials, for example, we hope to obtain variety seed in time to avoid late planting.

OSU- Pendleton
We plan to plant similar to last year. Our first planting will be when we think there is enough water to germinate and sustain the crop. It looks like it will be in October. We will attempt the winter planting if a window is there. We are planning to increase the seeding rate from 3 to 6 lb, for the fall and winter plantings because of the poor performance at the lower rate.

UI – Moscow
We will plan on conducting similar trials for 2009 and attempt to take care of some of the problems we encountered in 2008 trials. Stephen Guy has taken a new position with WSU but will continue to manage the UI trials with most work being handled, as it was this year, by a graduate student.

WSU – Lind
All trials will be conducted again with these changes:

- Planting date - We were not satisfied with the coil packer used in the broadcast + pack treatment. We plan to replace the coil packer with a spike-tooth harrow for this trial in the 2009 crop year.
- Fertility study – The 2008 study was terminated with a glyphosate herbicide application in mid June and no harvest data were collected due to stand loss and weed competition. We plan to direct sow this trial (instead of broadcast) for the 2009 crop year.