



Montana Oilseed Markets: Historical Price and Production Statistics

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Objective Analysis
for Informed
Decision Making

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Introduction

Oilseed crops are grown in Montana to satisfy a wide variety of market demands and offer economic and agronomic diversification to Montana producers. The overall demand for oilseed products is comprised of numerous markets including many that can be categorized as niche markets. Trends in each of these markets influence the overall demand for oilseeds. This policy paper provides information on historical prices and production for oilseed crops raised in Montana.

Recently, the markets for bio-fuels have received increased attention. Growing worldwide demand for fossil fuels and geopolitical instability in some fossil fuel producing areas are partly responsible for the interest in bio-fuels generated from oilseeds. The environment benefits of bio-fuels have also contributed to this interest.

Other oilseed markets have responded to possible human health benefits obtained from specialty oils derived from oilseed crops. An increased focus on the health benefits provided by the omega-3 properties of certain oilseed crops such as camelina has also contributed to the recent interest in oilseed crops.

Montana producers are always looking for ways to increase and diversify farm income as well as reduce insect and disease problems. The agronomic value of including an oilseed crop in a producer's

crop rotation is an important aspect of the planting decision. Oilseed prices are not directly linked to the prices of grain or barley which may in some cases provide income diversity to help producers manage revenue risk.

Montana Oilseed Crop Production

Canola

Canola production in Montana has declined significantly in recent years. Canola acreage in Montana was 65,000 acres in 2000 but decreased steadily between 2000 and 2006, by 2006 only 10,000 acres of canola were planted. Average yields have ranged from 900 lbs./acre to 1,590 lbs./acre over the past eight years. Montana produced 4,137 metric tons of canola in 2006, which represents less than 1% of total US canola production.¹ Canola prices have ranged from \$6.71 to \$10.70 (per cwt.) over the past eight years and have exhibited considerable year to year variability.²

¹ See MSU Agricultural Policy Center Briefing Paper number 60 (<http://www.ampc.montana.edu/briefings/briefing60.pdf>) for more information.

² The coefficient of variation for canola prices (1999-2005) is 0.168 and the standard deviation is \$1.55.

Canola	1999	2000	2001	2002	2003	2004	2005	2006
Planted Acres	60,000	65,000	58,000	37,500	28,000	15,000	17,000	10,000
Harvested Acres	58,000	58,000	49,500	34,500	27,000	15,000	16,500	9,500
Yield per Acre*	1,200	960	910	900	940	1,590	1,290	960
Price per Cwt.	\$7.82	\$6.71	\$8.77	\$10.60	\$10.60	\$10.70	\$9.40	n/a
Total Metric Tons	31,570	25,256	20,432	14,084	11,512	10,818	9,655	4,137

* Lbs. per acre

Safflower

Safflower is Montana's second leading oilseed crop with over 30,000 acres planted in each of the last eight years. Montana's safflower production was 15,744 metric tons in 2005 and accounted for approximately 18% of total US production. Montana's share of total US production has increased since 1999, when Montana accounted for 8% of total US production. Yields have varied from year to year. For example, safflower yields in 2005 rebounded to 890 lbs./acre after 2004 yields of less than 700 lbs./acre.³ Safflower prices over the period 1999 to 2005 reached a low of \$10.60 in 2000 and a high of \$13.70 in 2003.⁴

Sunflower

Sunflower production in Montana is very limited. In 2006, only 1,500 acres were planted to sunflowers

and planted acreage has not exceeded 8,000 acres in any of the past eight years. Yields for Montana sunflower production were high in 2004 and 2005 compared to yields in the period of extended drought between 1999 to 2003. Total US sunflower planted acreage has ranged from 1.8 million acres to 3.4 million acres over the past eight years. Over the period 1999-2006, sunflower prices ranged from a low of \$7.53 and a high of \$13.70.⁵ Thus, spot market prices for sunflower have been highly volatile over this period.

³ See MSU Agricultural Marketing Policy Center Briefing Paper number 58

(<http://www.ampc.montana.edu/briefings/briefing58.pdf>) for more information.

⁴ The coefficient of variation for safflower prices (1999-2005) is 0.099 and the standard deviation is \$1.22.

⁵ The coefficient of variation for sunflower prices (1999-2005) is 0.243 and the standard deviation is \$2.55.

Safflower	1999	2000	2001	2002	2003	2004	2005	2006
Planted Acres	41,000	41,500	31,000	39,000	42,500	33,500	30,000	35,000
Harvested Acres	39,000	39,000	28,000	36,000	42,000	31,000	39,000	33,000
Yield per Acre*	850	770	800	750	770	680	890	n/a
Price per Cwt.	\$13.70	\$10.60	\$10.90	\$12.20	\$13.70	\$12.10	\$12.60	n/a
Total Metric Tons	15,037	13,621	10,160	12,247	14,669	9,562	15,744	n/a

* Lbs. per acre

Sunflower	1999	2000	2001	2002	2003	2004	2005	2006
Planted Acres	7,800	5,500	2,500	1,700	2,600	5,000	6,800	1,500
Harvested Acres	7,100	4,100	2,000	1,600	1,200	4,500	6,400	1,300
Yield per Acre*	860	741	619	580	763	975	1,150	n/a
Price per Cwt.	\$7.53	\$6.89	\$9.62	\$12.10	\$12.10	\$13.70	\$11.50	n/a
Total Metric Tons	2,770	1,378	562	421	415	1,990	3,338	n/a

* Lbs. per acre

Mustard

Mustard seed production in Montana has ranged from 11,500 acres to 27,000 acres in recent years. Yields for Montana mustard production have averaged 681 lbs./acre over the last eight years. Montana production accounted for approximately 17% percent of the total US production in 2005, down from over 30% in 1999.⁶ Mustard prices have also been volatile over the period ranging from \$10.10 in 2000 to \$16.00 in 2003.⁷

Flax

Flax acreage in Montana has more than doubled since 2000, with acreage expanding from 16,000 acres to 40,000 acres. Flax yields and harvested acreage were at or near their highest levels in a

decade in 2005. Montana flax production accounted for over 8% of US production; up from approximately 4% in 1999. Flax was Montana's leading oilseed crop in 2005 and 2006.⁸ Flax prices have ranged from a low of \$3.30 per bushel in 2000 and a high of \$8.07 per bushel in 2004 over this period.⁹

⁶ See MSU Agricultural Policy Center Briefing Paper number 59 (<http://www.ampc.montana.edu/briefings/briefing59.pdf>) for more information.

⁷ The coefficient of variation for mustard prices (1999-2005) is 0.169 and the standard deviation is \$2.26.¹

⁸ See MSU Agricultural Policy Center Briefing Paper number 56 (<http://www.ampc.montana.edu/briefings/briefing56.pdf>) for more information.

⁹ The coefficient of variation for flax prices (1999-2005) is 0.308 and the standard deviation is \$1.63.

Mustard	1999	2000	2001	2002	2003	2004	2005	2006
Planted Acres	21,500	12,000	11,000	27,000	20,500	11,500	11,500	12,000
Harvested Acres	21,000	10,000	10,000	25,000	20,200	11,400	10,800	11,400
Yield per Acre*	850	700	850	480	610	700	580	n/a
Price per Cwt.	\$11.40	\$10.10	\$12.10	\$15.40	\$16.00	\$15.20	\$13.50	n/a
Total Metric Tons	8,097	3,175	3,856	5,443	5,589	3,620	2,841	n/a

* Lbs. per acre

Flax	1999	2000	2001	2002	2003	2004	2005	2006
Planted Acres	21,000	16,000	14,000	17,000	17,000	20,000	55,000	40,000
Harvested Acres	20,500	14,000	12,000	15,000	17,000	19,000	54,000	38,000
Yield per Acre*	16	14	15	13	13	18	17	n/a
Price per Cwt.	\$3.79	\$3.30	\$4.29	\$5.77	\$5.88	\$8.07	\$5.90	n/a
Total Metric Tons	7,582	4,531	4,161	4,507	5,108	7,905	21,220	n/a

* Bushels per acre ** Assumes 50.96 lbs. per bushel

Camelina

Camelina is a relatively new oilseed crop in Montana. Estimates of the acreage planted to camelina in Montana during 2006 range from 7,000 to 20,000 acres.¹⁰ Yields for camelina production in Montana have ranged from less than 800 lbs./acre to over 1,400 lbs./acre. Based on field trials performed by WestBred, LLC, the 2006 average yield for Montana camelina is estimated at approximately 1,200 lbs./acre. Future camelina production is difficult to forecast because of the lack of well established markets for camelina. Secondly, future yields are difficult to predict because of the limited data on the performance of the crop on farms.

Oilseed Processing

Montana is home to several commercial oilseed processing facilities. The three largest facilities are located in Great Falls, Culberson and Malta. Out-of-state oilseed processing facilities (for example, the canola processing facility in Lethbridge, Alberta) also process oilseeds grown in Montana. Products produced by these facilities include cooking oils, margarines, bio-lubricants and animal feed. Other small scale processing facilities may also be operating in Montana.

Summary

Oilseed production has been, and seems likely to continue to be modest compared to wheat and barley production in Montana. Oilseed production, although limited in total acreage, offers producers the opportunity to diversify their crop rotations and farm income. However, oilseed prices exhibit considerable year to year volatility that may mitigate the ability of these crops to stabilize farm income. The future of oilseed production in Montana depends of factors such as wheat prices, soybean meal prices, corn prices, energy prices and the health benefits of oilseed based products.

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¹⁰ The USDA National Agricultural Statistics Service does not publish estimates of camelina acreage.



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