



Canada Organic Trade Association

Growing Organic in the Prairies

May 2016

The Prairies – Fast Facts

The Prairies: Canada's organic breadbasket

The Prairies are the organic breadbasket of Canada; 89% of all organic wheat and oat, as well as 85% of the rye grown in Canada are from Alberta, Saskatchewan, and Manitoba.

The Prairies: The organic protein crop powerhouse

In Canada, 99% of organic protein crops are grown in the Prairies; making this region one of the top world producers. Protein crops include pinto beans, dried legumes, dried beans, dried green beans, dried fava beans, chickpeas, chickling vetch, and others.

The Prairies: The third largest producer of organic pulses in the world

2016 is the international year of pulses! The Prairies collectively rank amongst the top 5 producers of organic pulses in the world, right behind France and Spain. Pulses include lentils, legumes, peas, and others.

The Prairies: Organic growth and diversification of operations

In 2014, there was important growth in the number of primary producers in the Prairies; Saskatchewan led the way with 78 new organic operations, followed by Alberta with 42 new organic operations and Manitoba with 10 newly certified primary producers. Organic operators in the Prairies are diversifying their activities; there are more organic producers that also are processing, handling or distributing their commodities.

The Prairies: Leader in organic acreage

59% of the organic acreage in the country is grown in the Prairies:

- While Saskatchewan has 22% of the total number of primary producers in Canada, they account for more than 36% of overall organic acreage in Canada.
- While Alberta has almost 8% of the total number of primary producers in Canada, they account for more than 18% of overall organic acreage in Canada.
- Manitoba has more than 3% of the primary producers in Canada, and accounts for 3.5% of overall organic acreage in Canada.

Data source

This report is based on the 2014 data collected by organic certifying bodies and subsequently provided to the Canada Organic Trade Association for analysis.

Organic Operators in the Prairies

In 2014, there was a total of 1,466 certified organic operations in the prairie provinces, 25% (365) of them in Alberta, 63% (923) of them in Saskatchewan, and 12% (178) of them in Manitoba. More specifically, there was a total of 1,281 organic field crop producers and a total of 128 organic livestock producers in the prairies in 2014. Of the organic field crop producers, 24% (305) of them were in Alberta, 66% (842) of them were in Saskatchewan, and 10% (134) of them were in Manitoba. Of the organic livestock producers, 50% (64) of them were in Alberta, 22% (28) of them were in Saskatchewan, and 28% (36) of them were in Manitoba.

Figure 1 - Organic Operators in the Prairies by Type, 2014

Province	Total Primary Producers	Livestock Operators	Processors/Handlers*	Total Certified Organic Operations
Alberta	305	64	82	365
Saskatchewan	842	28	89	923
Manitoba	134	36	54	178
Total	1281	128	225	1466

* Processors/handlers include millers, seed cleaners, abattoirs, broker/buyers, truckers, baggers, and packagers.

The number of organic operators in the Prairies has steadily increased since 2012. The most significant changes can be seen in the number of organic processors operating in the Prairies between 2012 – 2014. In 2012, Alberta reported 76 organic processors in operation, and then climbed to 82 in 2014. Saskatchewan also saw a notable increase in organic processors, from 67 in 2012 to a reported 89 in 2014. Manitoba experienced a 92% increase in organic processor operations, reporting 28 organic processors in 2012 and jumping to 54 organic processors in 2014.

The total number of organic primary producers (both crop and livestock producers) increased steadily in Alberta and Manitoba between 2012 - 2014. Total organic primary producer numbers in Saskatchewan changed significantly, reporting a count of 832 in 2012, dropping to 764 in 2013, and then jumping up again to 842 in 2014. There could possibly be a discrepancy in Saskatchewan's numbers due to the fact that a certification body was split into two entities, making it impossible to reconcile the data from both certifying bodies; the number of organic producers may have been underreported.

Figure 2 – Growth in Organic Primary Producers and Processors, 2012-2014

Province	Primary Producers			Processors		
	2012	2013	2014	2012	2013	2014
Alberta	266	263	305	76	61	82
Saskatchewan	832	764	842	67	64	89
Manitoba	131	124	134	28	44	54
Total	1229	1151	1281	171	169	225

Prairie Crops

The table below shows the amount of field crops produced by each prairie province in 2014, in terms of acres. The final column, entitled “Prairie Total,” shows the combined production of the prairie provinces.

Figure 3 – Organic Crop Production by Category (in acres)

	Alberta	Saskatchewan	Manitoba	Prairie Total
Cereals*	93,761	357,225	22,916	473,902
Pulses	15,964	55,186	2,471	73,621
Oilseeds	2,973	77,719	2,739	83,431
Other Field Crops	4,543	9,852	1,293	15,688
Pasture	177,509	105,620	17,475	300,604
Fallow Land	6,352	44,027	966	51,345
Forage	67,284	93,635	19,612	180,531
Other	73,342	130,121	16,472	219,935
<u>TOTAL</u>	<u>441,728</u>	<u>873,385</u>	<u>83,944</u>	<u>1,399,057</u>

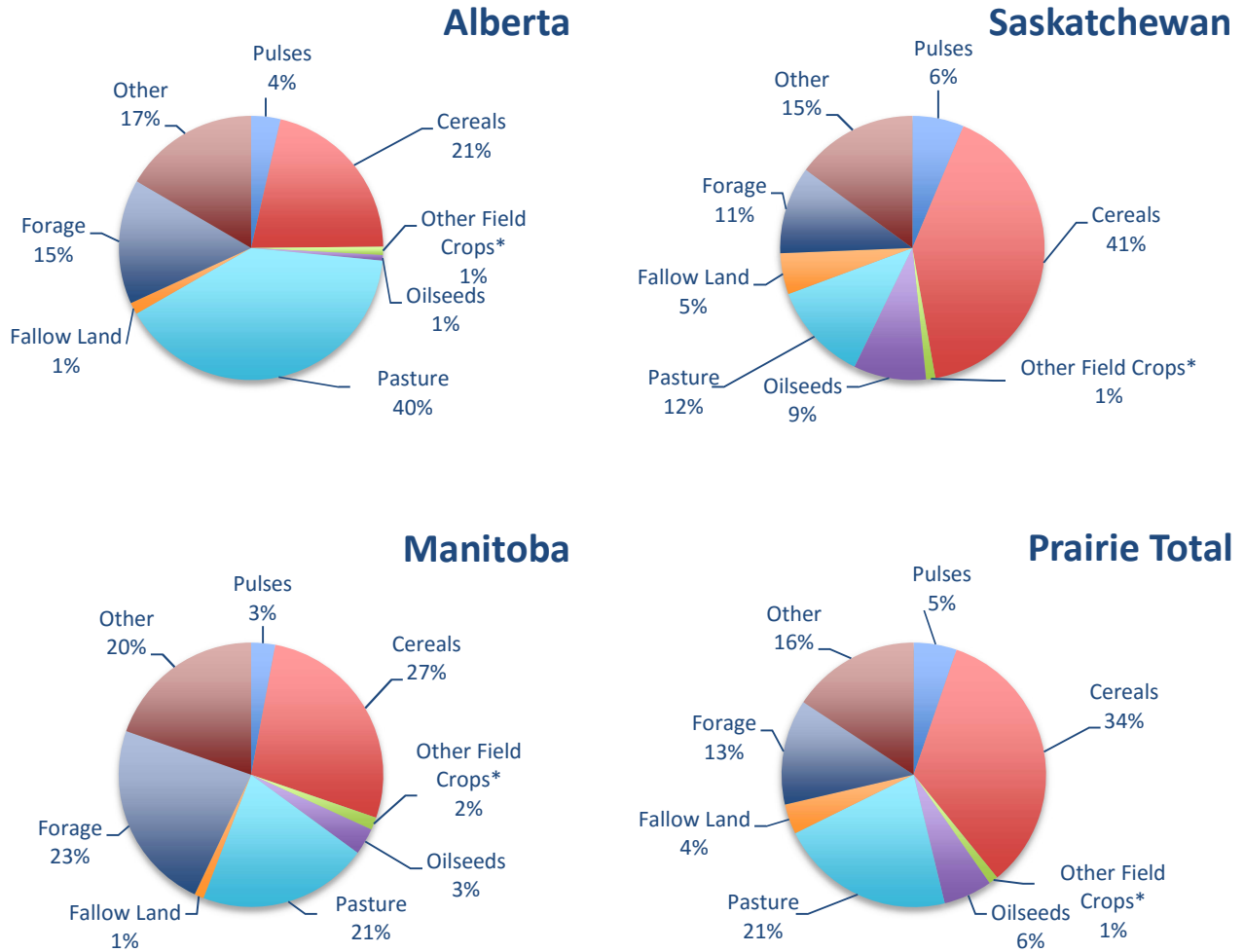
* Cereals includes wheat production. For a breakdown of the other crop categories, please see the appendix at the end of this document.

Breakdown of Organic Crop Production by Category

The following graphs show how the total organic production of each prairie province breaks down into more specific categories of organic production. The fourth graph (i.e. Prairie Total) shows how the combined organic production of Alberta, Saskatchewan and Manitoba breaks down into the same categories of production.

The size of a given production category is determined by the number of acres dedicated to that particular type of production in each province. The raw acreage numbers are given in the preceding table. It is evident that the largest category of organic production in Alberta is pasture, while in both Saskatchewan and Manitoba it is cereals. A detailed breakdown of the acreage associated with each of these production categories can be found in the appendix.

Figure 4 – Breakdown of Organic Crop Production by Category

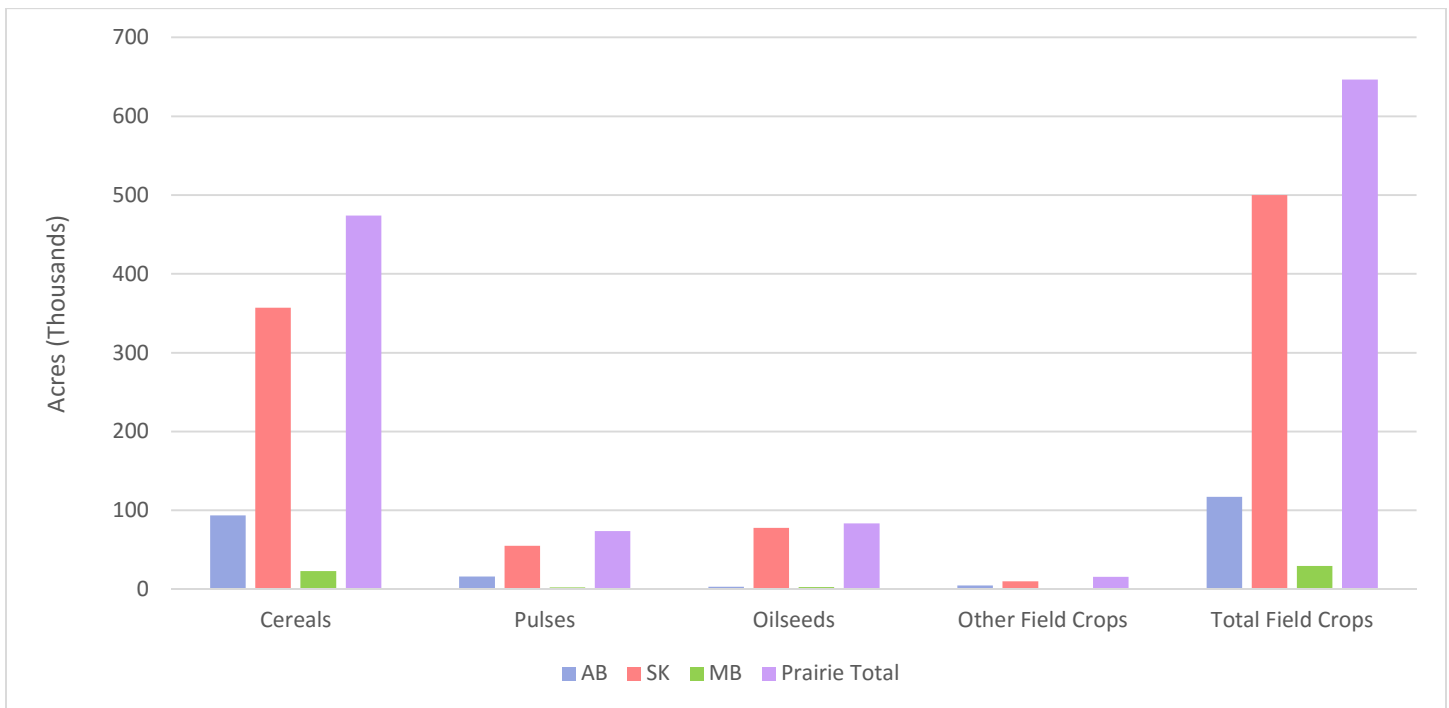


* "Other Field Crops" represents data collected wherein the type of field crop being produced was not specified. As a result this data cannot be included in other categories of production.

Field Crops

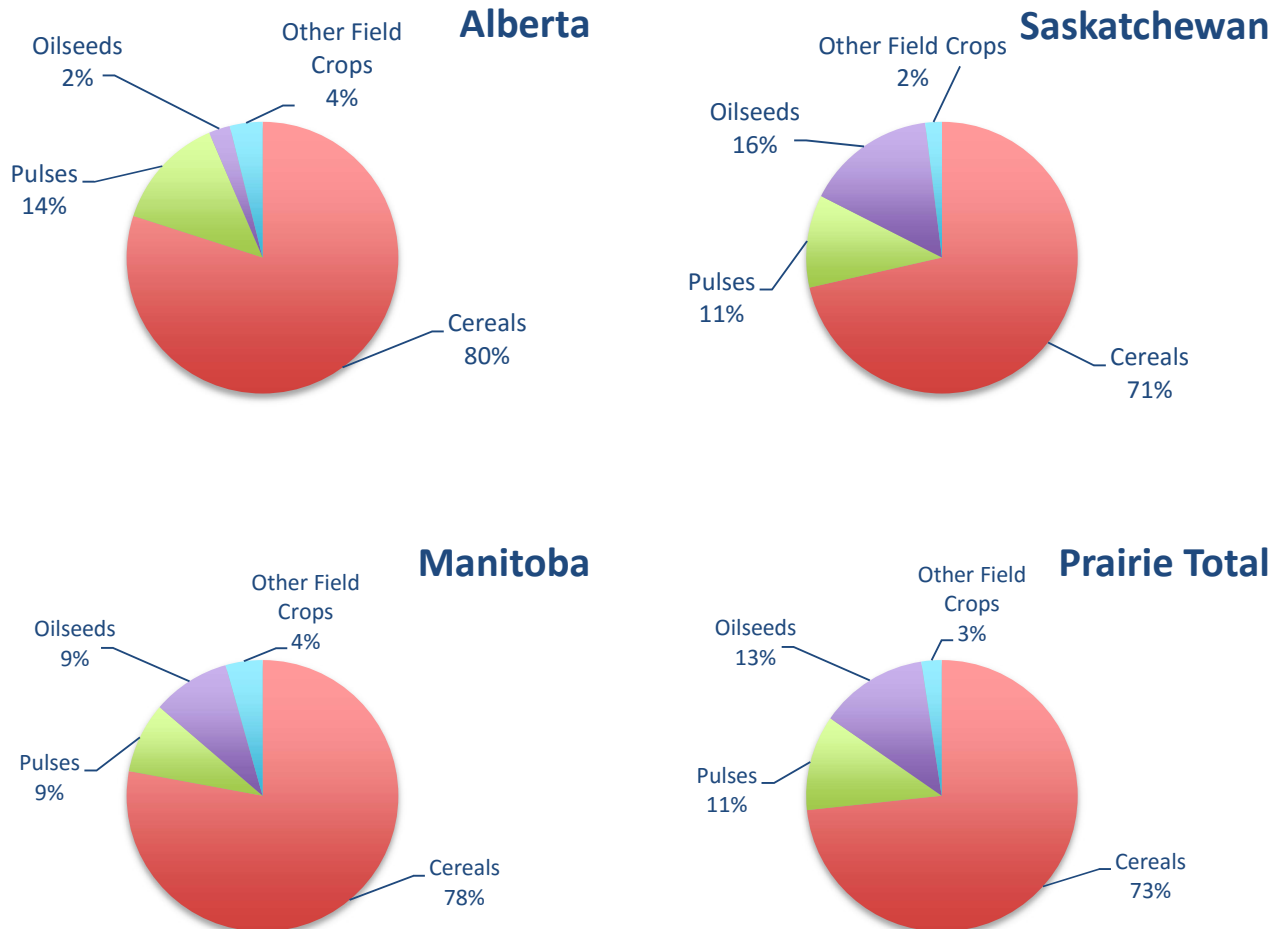
In 2014, organic field crops accounted for 54.2% of all organic acreage across Alberta, Saskatchewan and Manitoba, totalling 646,642 acres. Saskatchewan has the highest acreage of organic field crops (accounting for 77% of the acreage) with 499,982 acres, followed by Alberta (117, 241 acres) and Manitoba (29,419 acres).

Figure 5 – Organic Field Crops in the Prairies by Main Crop Groups, 2014



Saskatchewan produces 76% of the pulses, 93% of the oilseeds, 72% of the cereals, 80% of the wheat and 91% of the organic flax grown in the prairies. The province is a very large and diverse producer of organic pulses.

Figure 6 – Distribution of Organic Field Crops by Province, 2014



Total organic field crop production in the Prairies declined from 747,384 acres in 2013 down to 646,642 acres in 2014. A major cause for the decline seems to be in Saskatchewan’s organic oat production, which dropped from 289,051 acres in 2013 to 89,664 acres in 2014. The appearance of decline in oat production could also be due to reporting issues in 2014. A certification body was split into two entities, making it impossible to reconcile the data from both CBs, and leaving us with a lower-end acreage estimate for operations certified by those CBs in 2014.

Other organic field crops have increased significantly in the Prairies. Organic wheat production in Saskatchewan grew from 118,632 acres in 2013 to 163,850 acres in 2014. Organic flax production in Saskatchewan more than doubled, from 20,199 acres in 2013 to 41,452 in 2014. Saskatchewan also saw an increase in organic mustard from 3,345 acres in 2013 to 34,211 acres in 2014.

Organic Pulses

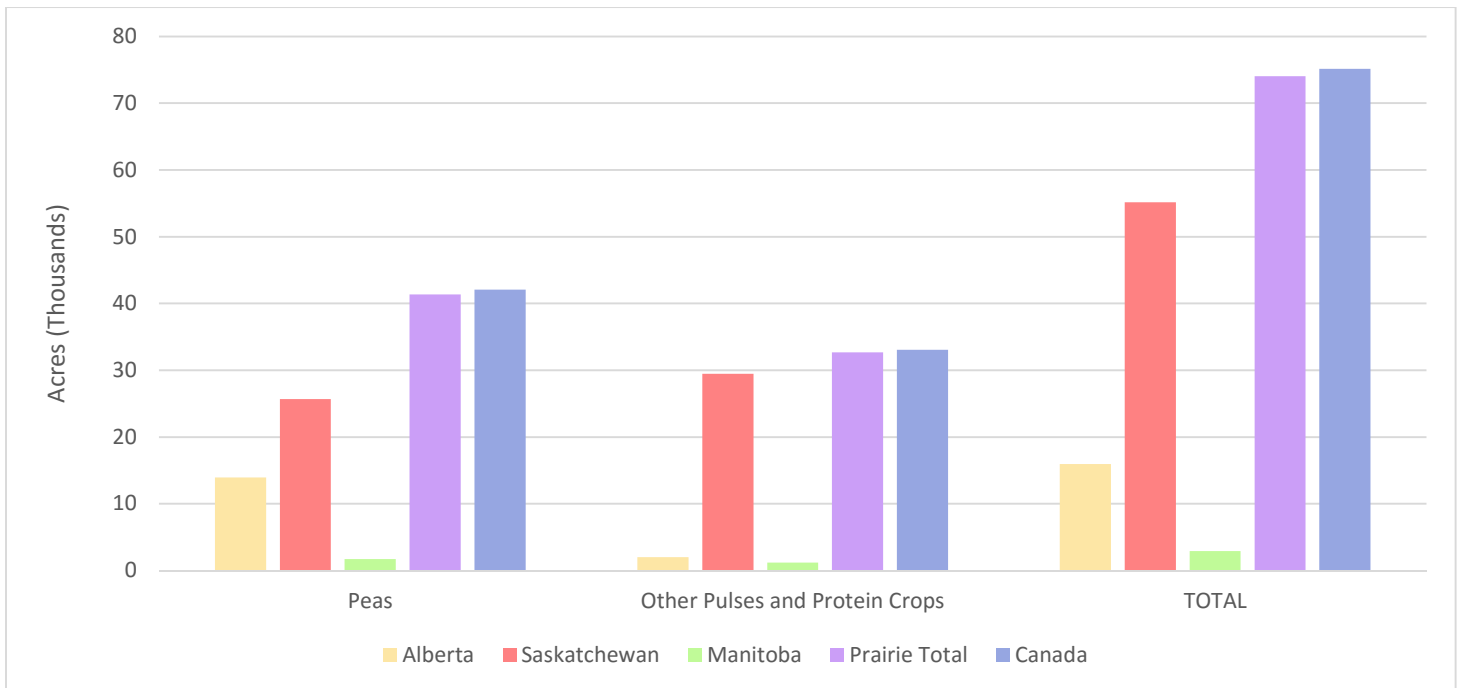
2016 is the International Year of Pulses, and Canada is one of the world's biggest producers of organic pulses. In 2013, Canada was ranked #3 in global organic protein crop production, reporting 71,456 acres of the world total of 733,903 acres.¹ In 2014, Canada reported 75,152 acres. Since the Prairies produced 99% of Canada's total organic pulse and protein crops for that year (74,063 acres), we can state that the Prairie Provinces are the third largest producer of organic pulses in the world. Most of these crops are organic lentils and organic peas. Saskatchewan grows 74% of the organic pulses and protein crops in the Prairies, and also accounts for 97% of Canada's organic lentil production.

Figure 7 – Organic Pulses and Protein Crops by Type and Province, 2014 (in acres*)

	Alberta	Saskatchewan	Manitoba	Prairie Total	Canada
Peas	13,958	25,708	1,708	41,374	42,080
Other Pulses and Protein Crops ⁺	2,006	29,478	1,205	32,690	33,072
TOTAL	15,964	55,186	2,913	74,063	75,152

* acreage is rounded to the nearest value.
⁺ Other Pulses and Protein Crops includes pinto beans, dried legumes, dried beans, dried green beans, dried fava beans, chickpeas, chickling vetch, and others (no details).

Figure 8 - Pulses and Protein Crops by Type and Province, 2014



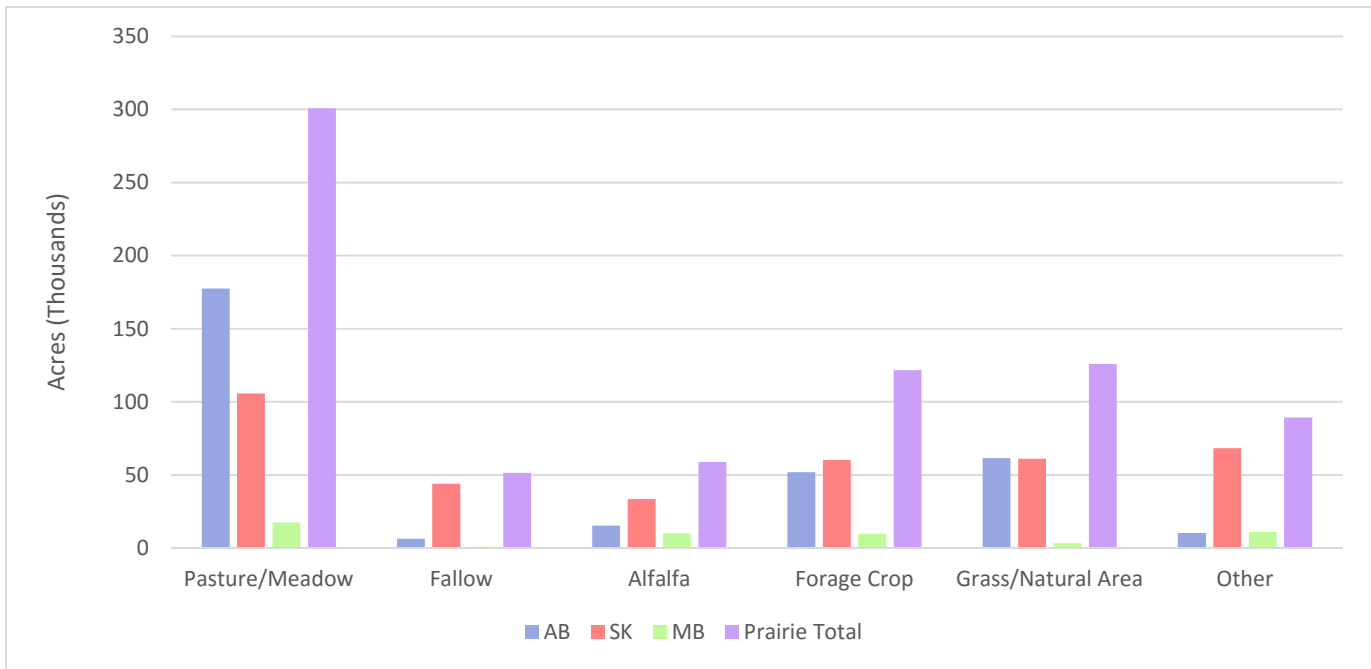
*Other Pulses and Protein Crops includes dried beans, dried green beans, dried fava beans, chickpeas, chickling vetch, and others (no details).

¹ This statistic was taken from *The World of Agriculture: Statistics and Emerging Trends 2015*, published by FiBL and IFOAM.

Pasture and Forage

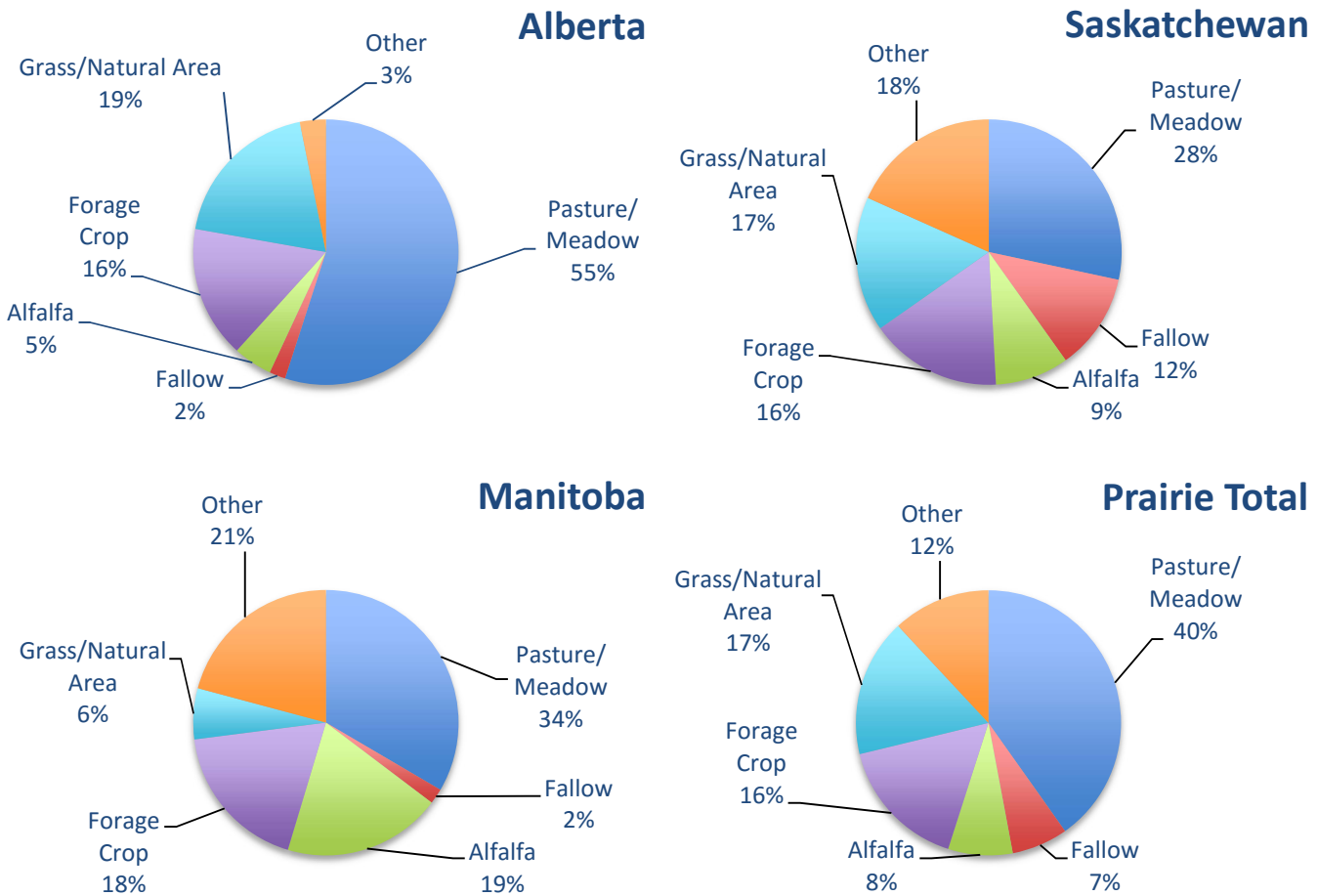
Organic growers in Alberta, Saskatchewan and Manitoba reported a total of 747,704 acres of pasture and forage. Saskatchewan and Alberta together accounted for 93% of the pasture and forage grown in the Prairies, reporting 372,689 acres and 322,854 acres respectively. Manitoba accounts for the remaining 7% with 52,161 acres.

Figure 9 – Organic Pasture and Forage in the Prairies by Major Crop Category, 2014



Much of the organic pasture and forage lands in the Prairie Provinces is pasture and meadows (40%). Alberta has the highest acreage of organic pasture and meadows of the three provinces with 177,510 acres. Saskatchewan produces 57% of the organic alfalfa grown in the Prairies (33,492 acres).

Figure 10 – Organic Pasture and Forage by Province, 2014



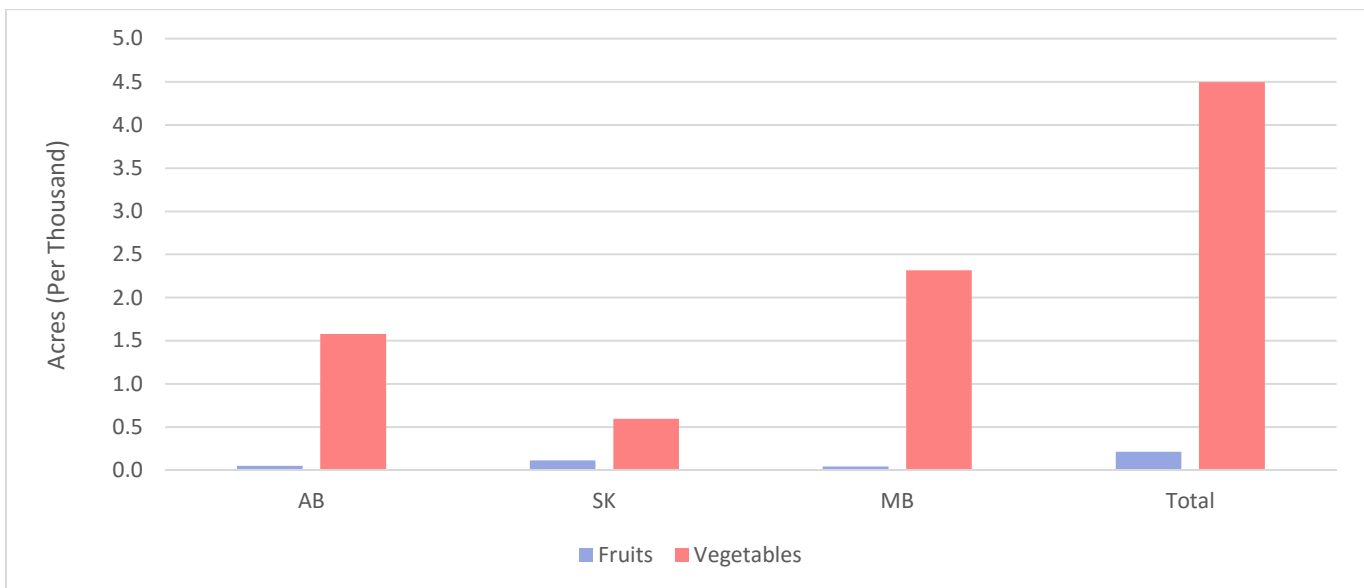
In 2014, both Alberta and Manitoba saw an increase in organic pasture and forage production. Alberta's pasture and forage increased by 23% from 248,139 acres in 2013 and in Manitoba by 69.4% from 15,913 acres in 2013.

Saskatchewan saw a 12% decrease in organic pasture and forage production, which can partly be attributed to the province's decline in organic clover production, from 120,036 acres to 8,645 acres. Since there are no mandatory nomenclature/classification systems for reporting data across the country, clover production may have been reported in another broader category (e.g. forage crop) in the 2014 data collection.

Fruits and Vegetables

In 2014, Prairie organic growers produced 215 acres of fruit and 4,493 acres of vegetables and root crops. Manitoba produces the most organic growers potatoes in the Prairies, reporting 2213 acres. This accounts for 95% of the province's vegetable and root crop acreage. Saskatchewan accounts for 54% of the organic fruit grown in the prairies. Sea buckthorn accounts for 33% of Saskatchewan's organic fruit production.

Figure 11 – Organic Fruits and Vegetables in the Prairies, 2014*



*95% of Manitoba's vegetables are varieties of root crop

Both Saskatchewan and Alberta saw an increase in organic vegetable crops in 2014, each almost tripling their numbers. Alberta's organic vegetable production grew from 566 acres in 2013 to 1,579 acres while Saskatchewan grew from 199 acres to 598 acres. Organic fruit production in the Prairies grew steadily, from 173 acres in 2013 to 215 acres in 2014.

Organic Livestock in the Prairies

Organic Livestock Producers

- **Alberta** is the third largest organic livestock producer province in Canada, next to BC and Quebec. 15% of the organic livestock operations are located in Alberta. Alberta has a total of 64 livestock producers; including 41 beef/cattle producers, 14 poultry, 6 dairy producers, and 5 swine operations.
- **Saskatchewan** has a total of 28 livestock operations. The main organic livestock production is beef/cattle with more than 25 operations in the province, followed by 5 poultry and 3 swine operations.
- **Manitoba** has a total of 36 livestock producers, including 31 producers of beef/cattle, 2 dairy producers, 3 poultry, and 5 other livestock producers.

Organic Milk

There is a relatively small organic milk industry in the Prairies compared to the rest of Canada. Of the 218 total Canadian organic milk producers reported in 2014/2015, a combined eight farms operate in the Prairie Provinces. In Canada, Alberta ranks fourth in provincial organic milk production, and Manitoba fifth. Saskatchewan does not have a reportable organic milk industry.

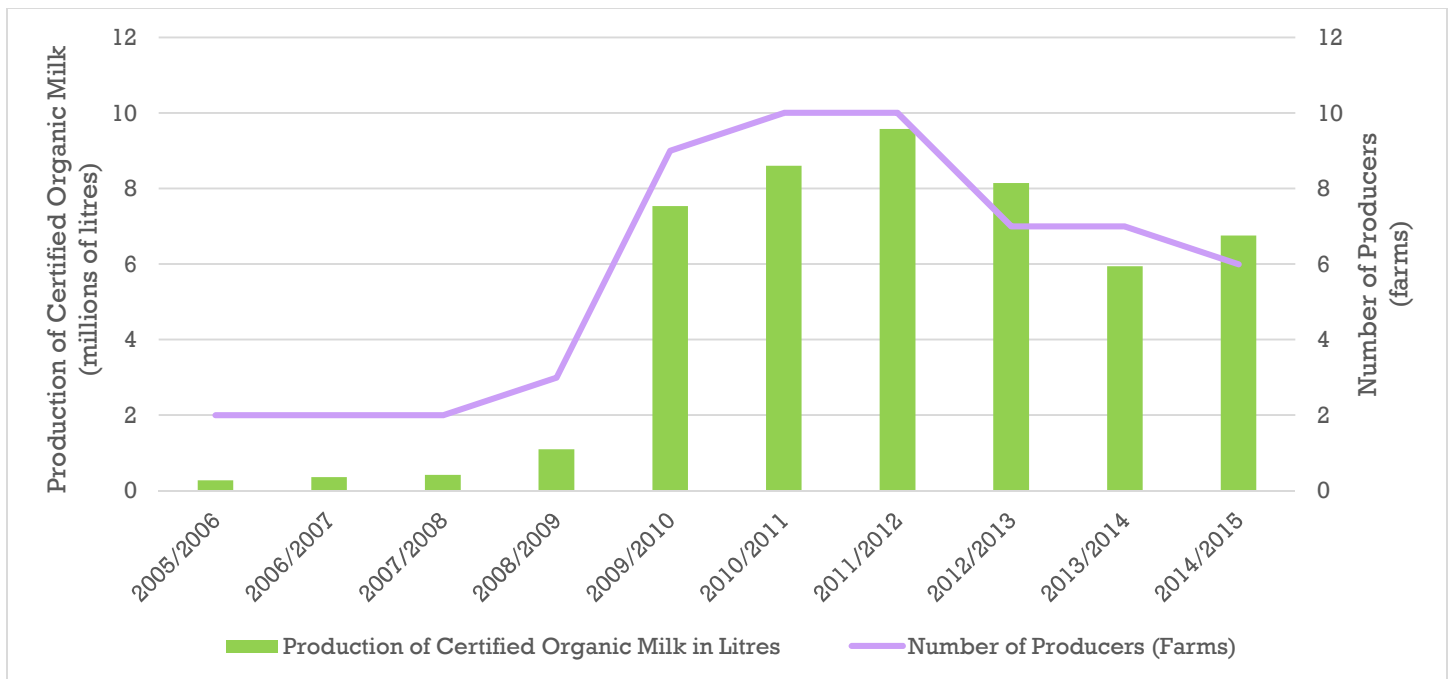
Figure 12 - Average Organic Milk Production by Province

Provinces	# of Operations	Average Litres/Farm
BC	26	1,042,873
AB	6	1,126,283
MB	2	467,450
ON	74	361,346
QC	109	378,302
NS	1	559,800
<u>CANADA</u>	<u>218</u>	<u>474,044</u>

Data source: Canadian Dairy Information Center. Original data was in hectolitres, and was converted to litres and rounded for the purposes of this report.

- Alberta accounts for the highest organic milk production in the Prairies, counting six producers in 2014/2015. Though the number of milk producers in the province decreased by one since 2013/2014, organic milk production has increased. In 2014/2015, Alberta produced 6,757,700 litres of organic milk compared to 5,929,400 litres in 2013/2014. Although it is the fourth ranking organic dairy producer, Alberta organic dairy farms have the highest average production of milk by farm in Canada; 1,126,200 litres per farm compared to 474,044 litres in Canada. This suggests that the herds of these farms are growing.
- Manitoba's peak organic milk production was in 2010/2011, reporting five producers and a total annual production of 2,003,100 litres. This number has decreased to two producers and 934,900 litres in 2014/2015. Manitoba organic dairy farms average production of milk is similar to the national average; 467,450 litres of organic milk per farm compared to 474,044 litres in Canada.

Figure 13 - Production of Certified Organic Milk and Number of Producers in Alberta, 2005-2015



Data source: Canadian Dairy Information Center

Organic Hemp

According to the data collection, organic hemp production in the Prairies has declined since 2013. This is most notable in Alberta and Manitoba. Alberta's reported acreage of organic hemp decreased by 61.3% in 2014, from 4,327 acres down to 1,673 acres. Manitoba experienced an 81% decline in organic hemp crops between 2013-2014, from 741 acres to 140 acres. However, there is a disparity between the data collected and what is being reflected in Canada's organic hemp market. We saw an increase in demand and offer of organic hemp seed in the past few years. It is possible that hemp acre numbers are reported under other categories (e.g. another field crop) by the certification bodies, thus we may not have the complete picture for this industry.

Comparing Organic Production in the Prairies and Canada

In 2014, the Prairies accounted for 80% of organic field crop production in Canada. Saskatchewan alone grows 60.6% of the approximately 788,940 acres of organic field crops in the country. Particularly notable cereal and wheat crops are organic barley (90% of Canadian total), organic oat (89%), hard red spring wheat (96%), and durum wheat (95%).

The Prairies grow the majority of Canada's organic pulses, including chickpeas, dried beans, dried fava beans and dried legumes. The Prairies accounts for 96.7% of Canada's organic flax production. The Prairies also accounted for 48% of organic pasture and forage acreage in Canada in 2014. Most notable crops here are alfalfa (53% of Canadian total), hay (62%), and grass and grasslands (94%). Saskatchewan also produces 97.6% of Canada's organic green manure/plough down.

Appendix

Overall Organic Field Production (in acres*)				
AB	SK	MB	PRAIRIE TOTAL	
440,094	872,670	81,580	1,394,345	

* acreage is rounded to the nearest value.

Organic Field Production by Category (in acres)				
	AB	SK	MB	PRAIRIE TOTAL
Cereals*	93,761	357,225	22,916	473,902
Pulses	15,964	55,186	2,471	73,621
Oilseeds	2,973	77,719	2,739	83,431
Other Field Crops	4,543	9,852	1,293	15,688
Pasture	177,509	105,620	17,475	300,604
Fallow Land	6,352	44,027	966	51,345
Forage	67,284	93,635	19,612	180,531
Other	73,342	130,121	16,472	219,935
TOTAL	441,728	873,385	83,944	1,399,057

* Cereals includes wheat production. Below it is broken down further into types of cereal excluding wheat and also into specific types of wheat. The Other category includes grass, fruits and vegetables, and other types of production. A further breakdown of these categories can be found below.

Below is a detailed breakdown of all the major production categories included in the “Organic Field Production by Category” chart, using acreage* as the unit of measure:

Cereals Excluding Wheat				
	AB	SK	MB	PRAIRIE TOTAL
Cereals, no details	1,565	6,537	418	8,520
Barley	14,916	44,485	1,964	61,365
Buckwheat	34	756	272	1,062
Kamut	2,443	31,288	0	33,731
Mixed grain	550	2,397	501	3,448
Oat	40,377	89,664	6,782	136,823
Rye	1,846	17,858	2,991	22,695
Other	432	390	288	1,110
TOTAL	62,163	193,375	13,216	268,753

Wheat				
	AB	SK	MB	PRAIRIE TOTAL
Wheat, no details	5,394	20,078	5,879	31,352
Common winter wheat	4,405	18,532	1,677	24,614
Durum	5,692	16,063	0	21,755
Hard white spring wheat	360	3,202	0	3,562
Hard red spring wheat	12,074	87,095	1,504	100,673
Red Fife wheat	641	1,285	0	1,926
Soft white spring wheat	1,405	12,000	0	13,405
Soft white winter wheat	140	1,125	0	1,265
Spelt	1,057	3,280	620	4,957
Other	430	1,190	20	1,640
TOTAL	31,598	163,850	9,700	205,148
Pulses				
	AB	SK	MB	PRAIRIE TOTAL
Lentils, dried	860	26,682	80	27,622
Legume, dried	0	1,206	0	1,206
Peas	13,958	25,708	1,266	40,932
Other	1,146	1,591	1,125	3,862
TOTAL	15,964	55,186	2,471	73,621
Oil Seeds				
	AB	SK	MB	PRAIRIE TOTAL
Canola	670	813	0	1,483
Flax	2,088	41,452	2,221	45,761
Mustard	70	34,211	50	34,331
Soybeans	33	735	295	1,063
Other	112	508	173	793
TOTAL	2,973	77,719	2,739	83,431
Other Field Crops				
	AB	SK	MB	PRAIRIE TOTAL
Field crops, no details	2,870	6,538	1,153	10,561
Hemp, no details	1,673	3,314	140	5,127
TOTAL	4,543	9,852	1,293	15,688
TOTAL FIELD CROP	117,241	499,982	29,419	646,642
Pasture				
	AB	SK	MB	PRAIRIE TOTAL
Pasture	173,389	104,251	16,605	294,246
Permanent meadow	3,852	1,369	390	5,611
Other	269	0	480	749
TOTAL	177,509	105,620	17,475	300,605

Fallow Land				
	AB	SK	MB	PRAIRE TOTAL
Fallow land, crop rotation	6,352	44,027	966	51,344
Forage				
	AB	SK	MB	PRAIRE TOTAL
Forage crop, no details	9,030	8,385	872	18,287
Hay	41,299	42,417	7,047	90,764
Clover	1,438	8,645	2,182	12,265
Alfalfa	15,332	33,492	9,504	58,328
Other	184	697	7	888
TOTAL	67,284	93,635	19,612	180,531
Grass, Grassland & Natural Area				
	AB	SK	MB	PRAIRE TOTAL
Grassland (Permanent and Temporary)	10	1,734	270	2,014
Grass, no details	1,457	1,469	925	3,851
Native Grass	2,780	1,337	375	4,492
Wheatgrass	0	1,489	0	1,489
Biodiversity area	54,258	54,721	349	109,328
Ecological acres	3,000	415	1,317	4,732
TOTAL	61,505	61,165	3,236	125,906
Fruits & Vegetables				
Fruits & Vegetables	1633	714	2364	4711
Other				
	AB	SK	MB	PRAIRE TOTAL
Manures, no details	0	0	2,421	2,421
Green manures/plow down*	0	56,564	969	57,533
Wild Crafting	6,504	0	0	6,504
Wild rice	0	11,678	7,482	19,160
Bush	3,700	0	0	3,700
TOTAL	10,204	68,242	10,872	89,318

* acreage is rounded to the nearest value.