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# Quality of western Canadian oats 2024

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# Introduction

This report presents information on the quality and production of oats grown in western Canada in 2024.

## Annual harvest survey of oats

### Sample collection and general quality trends

The annual oats survey is based on oat samples submitted to the Canadian Grain Commission’s Harvest Sample Program. In 2024, we received 253 samples from various growing districts in Manitoba, Saskatchewan, Alberta, and British Columbia (Figure 1). The majority of samples in 2024 were graded No. 3 Canada Western (CW) based on their test weight (Figure 2). The protein content of oats in 2024 was below the 5-year average for each grade (Figure 3). A comparison of the average protein content (% dry basis) of oats grown in each province in 2024 is given in Figure 4.

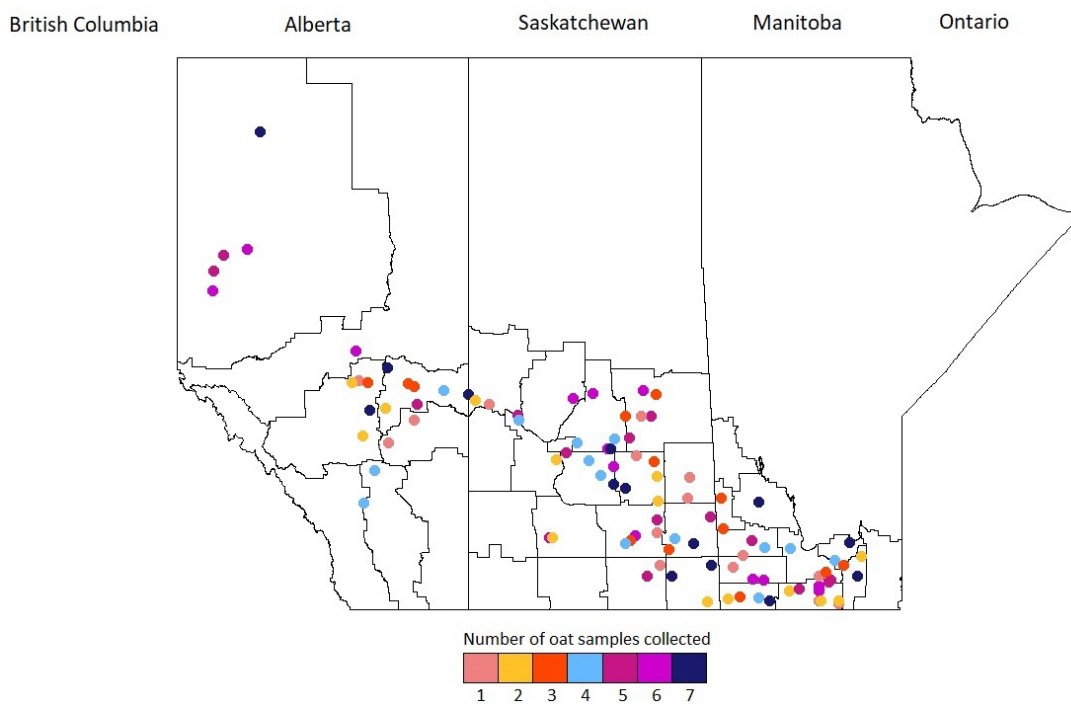


Figure 1 Origin and number of oat samples collected through the Canadian Grain Commission’s Harvest Sample Program in 2024.

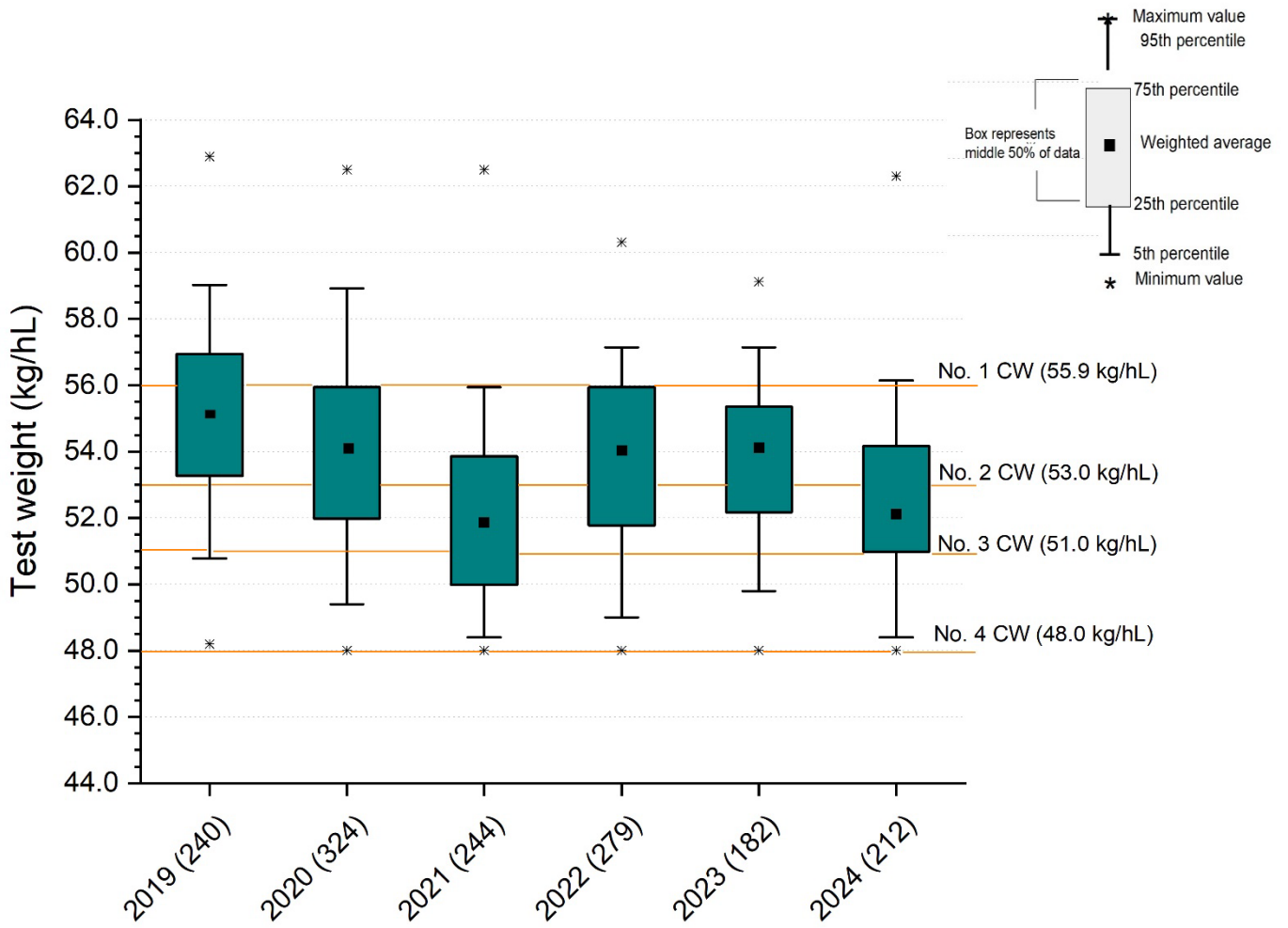


Figure 2 Comparison of test weight (kg/hL) ranges of oat samples collected through the Canadian Grain Commission’s Harvest Sample Program from 2019 to 2024. The number of samples for each year is in parentheses.

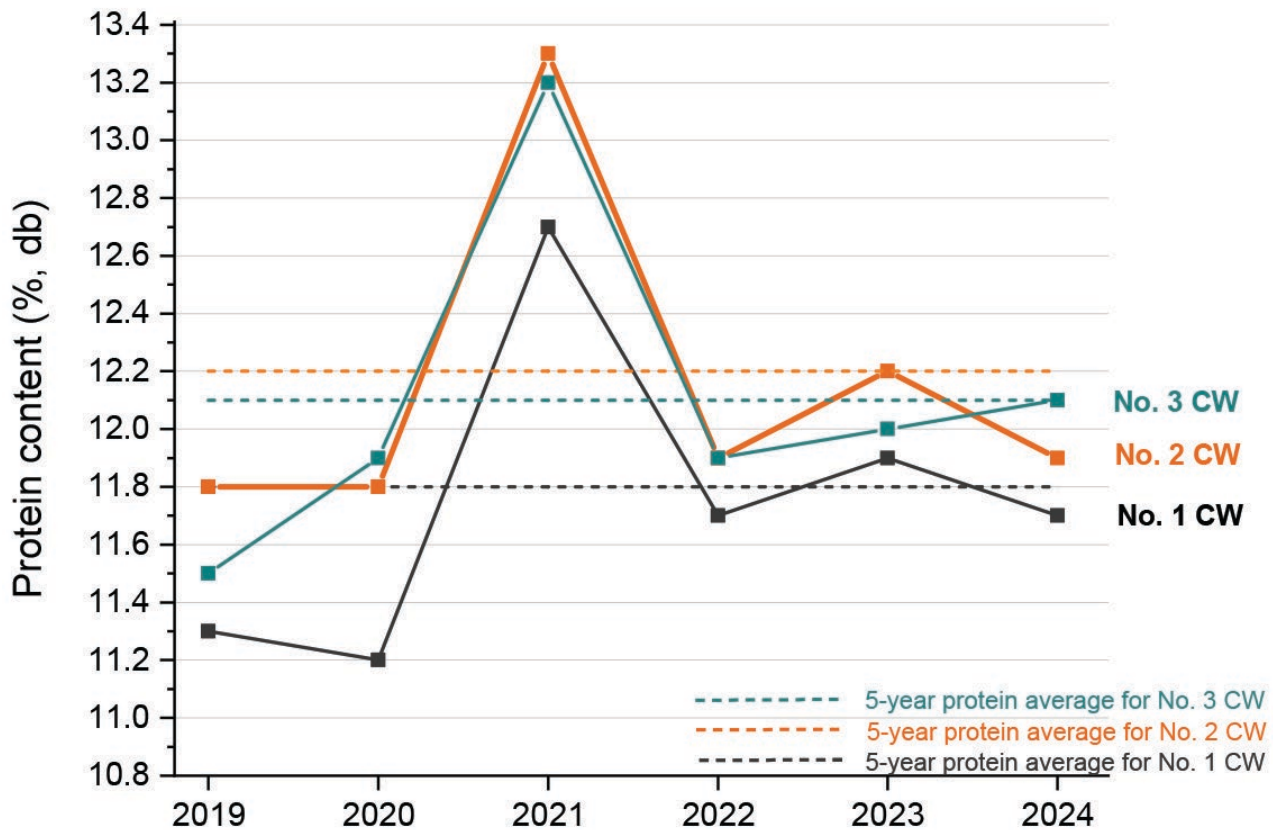


Figure 3 Average protein content<sup>1</sup> (% dry basis) in oats of different grades collected through the Canadian Grain Commission’s Harvest Sample Program for each year from 2019 to 2024. The number of samples tested in 2024 is in parentheses for each grade.

<sup>1</sup> Protein content in oats was determined using the Foss Infratec™ 1241 whole grain analyzer using near-infrared (NIR) transmittance technology. NIR calibration was verified by the Combustion Nitrogen Analysis reference method. Protein is expressed as Nitrogen x 6.25 on a dry weight basis (db).

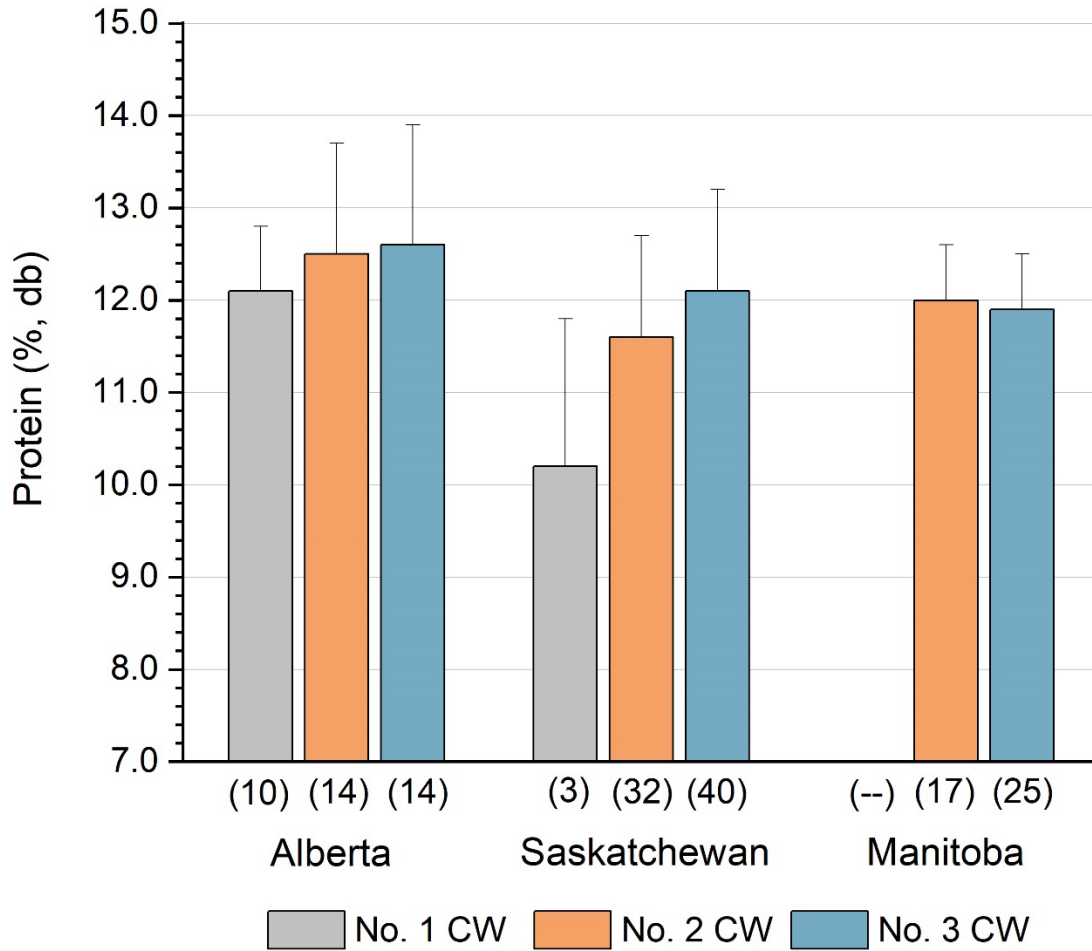


Figure 4 Comparison of average protein content<sup>1</sup> (% dry basis) in oats grown in different provinces in 2024. The number of samples for each grade is in parentheses.

<sup>1</sup> Protein content in oats was determined using the Foss Infratec™ 1241 whole grain analyzer using near-infrared (NIR) transmittance technology. NIR calibration was verified by the Combustion Nitrogen Analysis reference method. Protein is expressed as Nitrogen x 6.25 on a dry weight basis (db).

Table 1 Protein content (% dry basis) and test weight (kg/hL) for oat varieties collected through the Canadian Grain Commission's Harvest Sample Program in 2024.

Variety	Grade	Number of samples	Protein content, % db		Test weight, kg/hL	
			Mean	SD	Mean	SD
AAC Douglas	No. 1 CW	0	-	-	-	-
	No. 2 CW	3	12.0	0.1	53.8	0.5
	No. 3 CW	3	12.3	0.3	51.5	0.5
	No. 4 CW	3	12.0	0.5	49.7	0.4
AC Morgan	No. 1 CW	9	12.0	0.7	57.2	2.4
	No. 2 CW	8	12.0	0.9	53.9	0.7
	No. 3 CW	7	12.2	1.3	53.2	3.0
	No. 4 CW	3	12.3	0.3	51.6	3.8
AC Mustang	No. 1 CW	1	13.0	-	56.3	-
	No. 2 CW	1	11.9	-	55.2	-
	No. 3 CW	1	11.4	-	55.9	-
	No. 4 CW	0	-	-	-	-
CDC Anson	No. 1 CW	0	-	-	-	-
	No. 2 CW	1	12.3	-	53.0	-
	No. 3 CW	2	11.8	0.0	51.6	0.6
	No. 4 CW	0	-	-	-	-
CDC Arborg	No. 1 CW	2	10.0	2.3	56.0	0.1
	No. 2 CW	6	12.4	1.5	53.8	0.9
	No. 3 CW	19	12.3	0.9	52.2	1.8
	No. 4 CW	16	12.5	1.0	48.8	0.9
CS Camden	No. 1 CW	0	-	-	-	-
	No. 2 CW	10	12.5	0.9	54.0	0.7
	No. 3 CW	13	12.0	0.7	51.7	0.5
	No. 4 CW	5	13.1	0.9	49.3	0.9
CDC Endure	No. 1 CW	0	-	-	-	-
	No. 2 CW	6	10.7	0.7	54.1	1.0
	No. 3 CW	10	11.7	1.4	52.3	1.9
	No. 4 CW	10	12.5	0.3	49.3	0.7
CDC Ruffian	No. 1 CW	0	-	-	-	-
	No. 2 CW	4	11.7	0.8	54.3	1.3
	No. 3 CW	0	-	-	-	-
	No. 4 CW	0	-	-	-	-
CDC SO-I	No. 1 CW	0	-	-	-	-
	No. 2 CW	0	-	-	-	-
	No. 3 CW	0	-	-	-	-
	No. 4 CW	3	12.0	1.2	49.7	0.2
Leggett	No. 1 CW	0	-	-	-	-
	No. 2 CW	3	11.9	0.9	55.2	0.7
	No. 3 CW	1	11.9	-	56.3	-
	No. 4 CW	0	-	-	-	-

<b>ORe3542M</b>	No. 1 CW	1	10.8	-	56.5	-
	No. 2 CW	2	11.9	0.1	54.1	1.5
	No. 3 CW	0	-	-	-	-
	No. 4 CW	1	12.6	-	48.6	-
<b>Pinnacle</b>	No. 1 CW	0	-	-	-	-
	No. 2 CW	2	12.0	0.6	53.3	0.1
	No. 3 CW	1	12.1	-	51.6	-
	No. 4 CW	1	11.5	-	49.4	-
<b>Summit</b>	No. 1 CW	0	-	-	-	-
	No. 2 CW	9	11.6	0.4	53.6	0.7
	No. 3 CW	9	12.1	0.9	52.2	1.6
	No. 4 CW	4	11.7	0.6	49.4	0.6

Table 2 Percentage of samples containing different levels (ppm) of deoxynivalenol (DON) for all grades of oat samples collected through the Canadian Grain Commission’s Harvest Sample Program in 2024.

	Western Canada	British Columbia	Alberta	Saskatchewan	Manitoba
<b>Number of samples</b>	<b>250</b>	<b>1</b>	<b>57</b>	<b>119</b>	<b>73</b>
<b>DON level (ppm)</b>			<b>%</b>		
<b>Below limit (&lt; 0.3 ppm)</b>	77.6	0	87.7	77.3	71.2
<b>0.3 to 0.5</b>	15.6	100.0	8.8	17.6	16.4
<b>0.6 to 1.0</b>	5.6	0	1.8	5.0	9.6
<b>1.1 to 2.0</b>	0.8	0	1.8	0	1.4
<b>2.1 to 5.0</b>	0.4	0	0	0	1.4
<b>5.1 to 6.0</b>	0	0	0	0	0
<b>Above limit (&gt; 6.0 ppm)</b>	0	0	0	0	0

# Composition of groats from selected oat varieties

A comparison of groat quality for varieties grown in the Prairies in 2023 and 2024 is given for proteins (Figure 5), beta-glucans (Figure 6), lipids (Figure 7), and ash (Figure 8). All oat samples selected for analyses were graded No. 2 CW or No. 3 CW based on their test weight; no other degrading factors were identified. The samples were sorted for size using a 5.5/64" x 3/4" slotted screen and only plump kernels remaining on the screen were dehulled to produce groats (Codema LLC™ Laboratory Oat Huller). Figures 5 to 8 show the number of samples for each variety in parentheses.

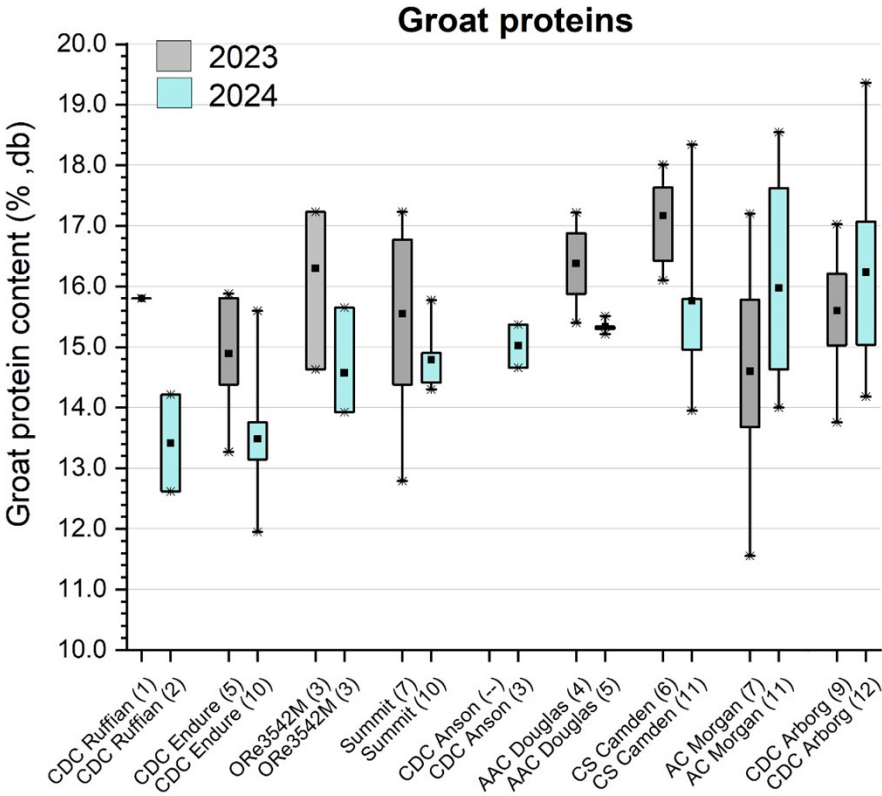


Figure 5 Comparison of the protein content (% dry basis) in groats of selected oat varieties grown in the Prairies in 2023 and 2024.<sup>2</sup>

<sup>2</sup> Only plump kernels remaining on the 5.5/64" x 3/4" screen were used to produce groats.

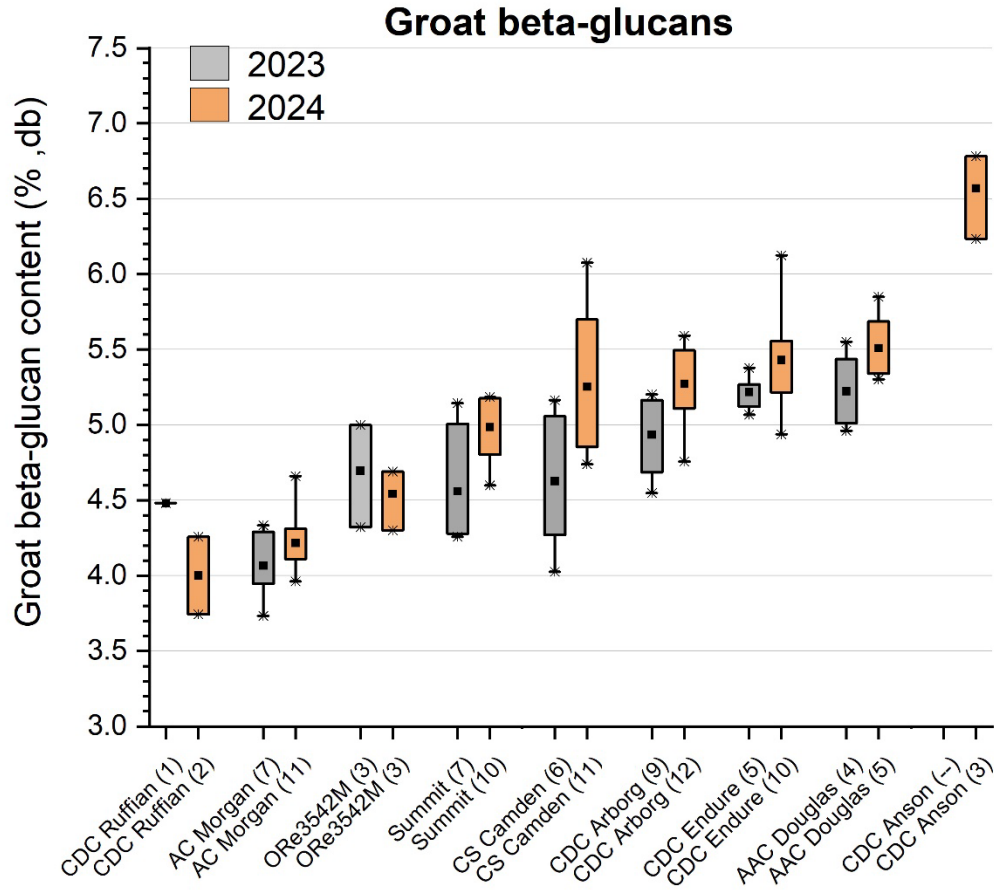


Figure 6 Comparison of the beta-glucan content (% ,dry basis) in groats of selected oat varieties grown in the Prairies in 2023 and 2024.<sup>2</sup>

<sup>2</sup> Only plump kernels remaining on the 5.5/64" x 3/4" screen were used to produce groats.

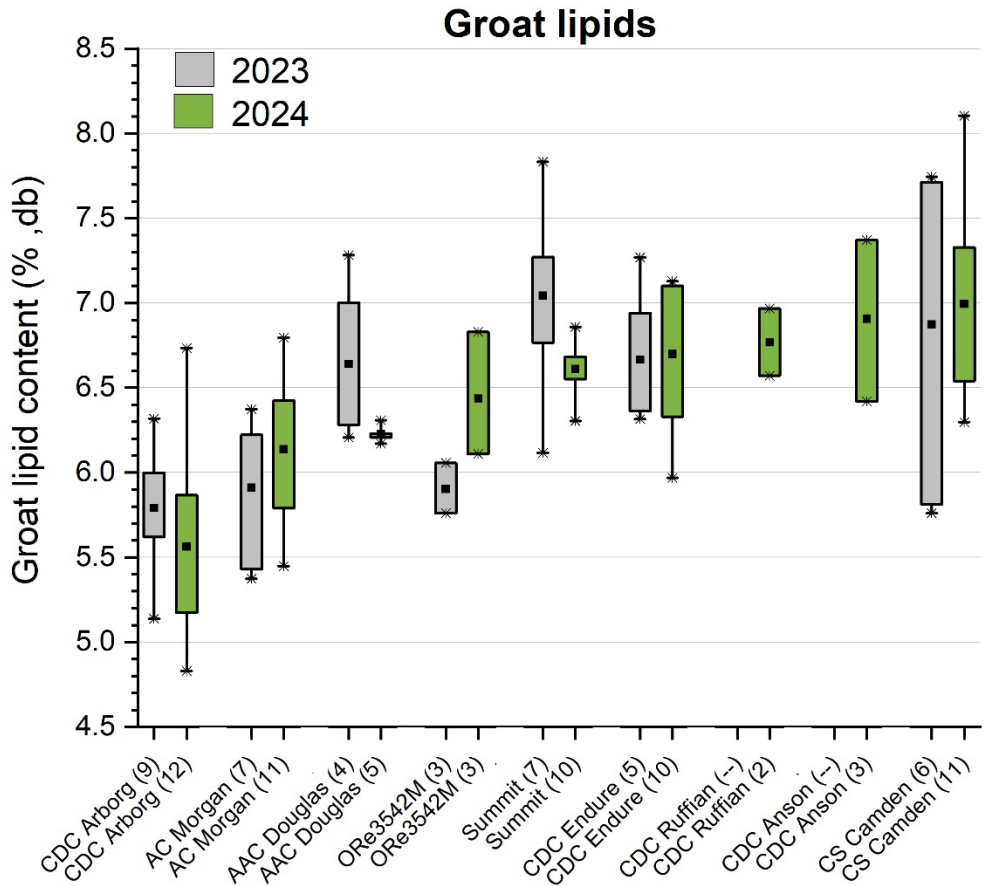


Figure 7 Comparison of the lipid content (% dry basis) in groats of selected oat varieties grown in the Prairies in 2023 and 2024.<sup>2</sup>

<sup>2</sup> Only plump kernels remaining on the 5.5/64" x 3/4" screen were used to produce groats.

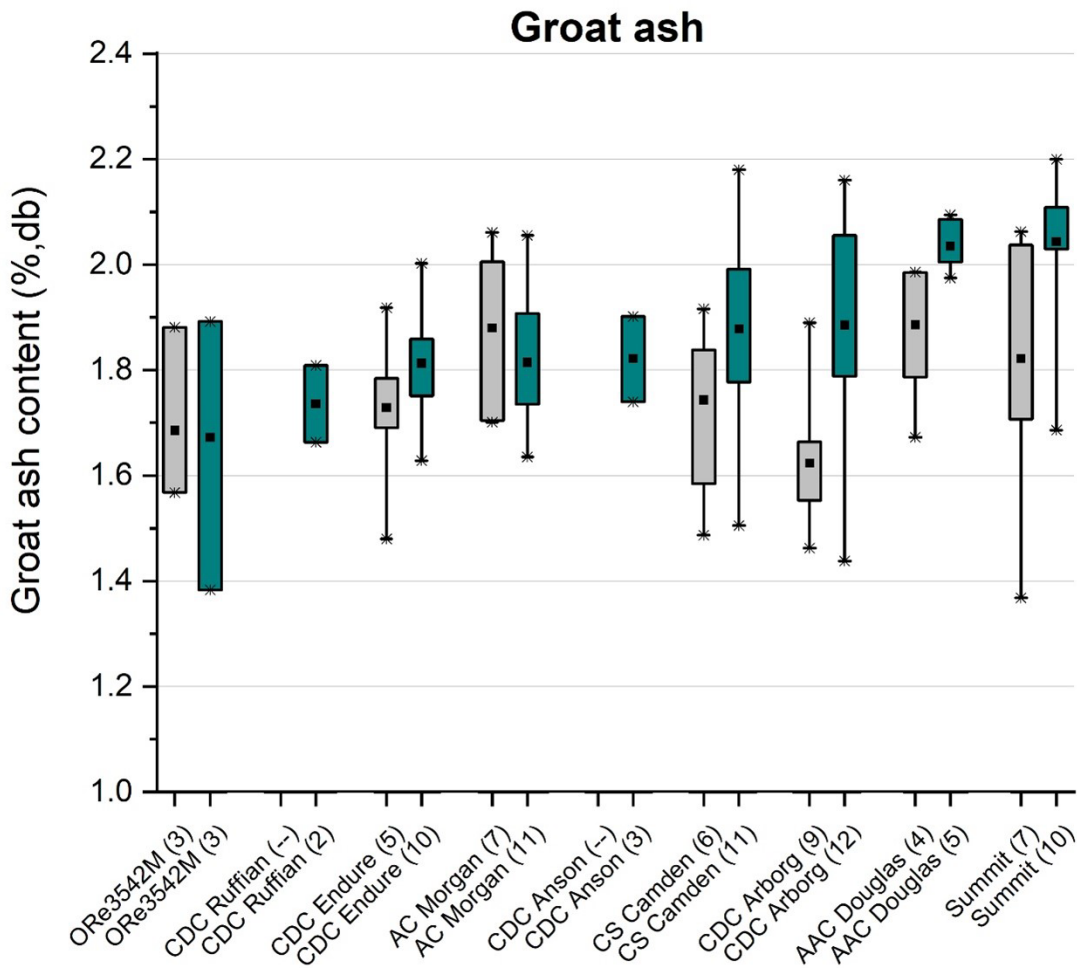


Figure 8 Comparison of the ash content (% dry basis) in groats of selected oat varieties grown in the Prairies in 2023 and 2024.<sup>2</sup>

<sup>2</sup> Only plump kernels remaining on the 5.5/64" x 3/4" screen were used to produce groats.

# Production statistics

Table 3 Area (million hectares) seeded with oats in Canada.<sup>3</sup>

Location	2024	2023	5-year average <sup>4</sup>
Manitoba	0.212	0.192	0.254
Saskatchewan	0.511	0.418	0.670
Alberta	0.319	0.283	0.349
British Columbia	0.032	0.033	0.031
Western Canada	1.074	0.926	1.304
Canada	1.174	1.026	1.426

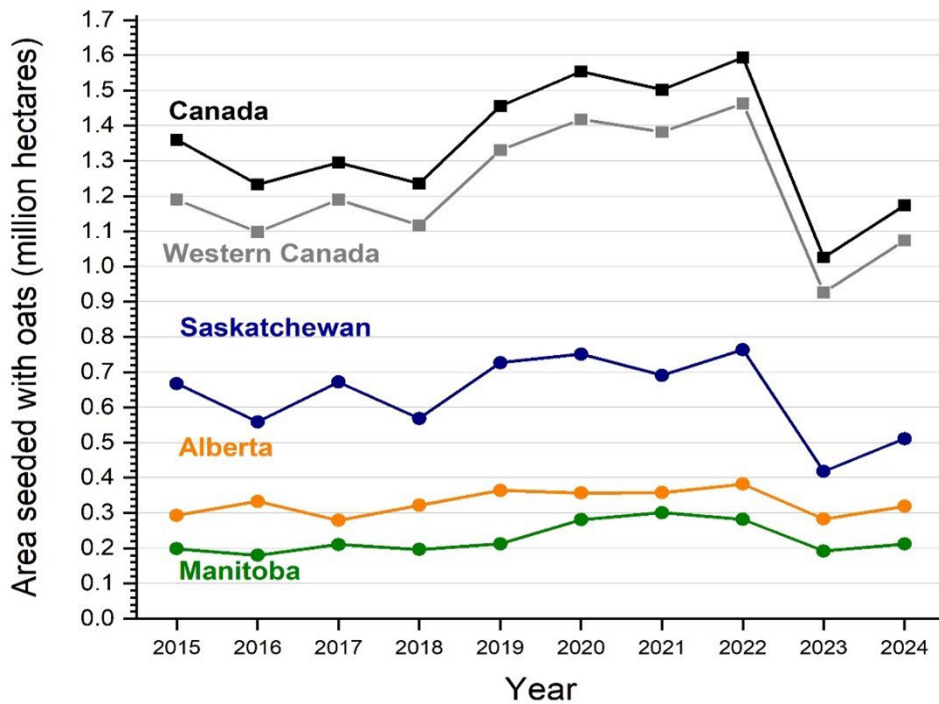


Figure 9 Comparison of area (million hectares) seeded with oats in western Canada from 2015 to 2024.

<sup>3</sup> Source: Statistics Canada, estimated as of December 5, 2024

<sup>4</sup> 5-year average from 2019 to 2023

Table 4 Oat production (million tonnes) in Canada.<sup>3</sup>

Location	2024	2023	5-year average <sup>4</sup>
Manitoba	0.934	0.653	0.900
Saskatchewan	1.470	1.034	1.853
Alberta	0.631	0.642	0.776
British Columbia	0.061	0.067	0.066
Western Canada	3.096	2.396	3.595
Canada	3.358	2.643	3.914

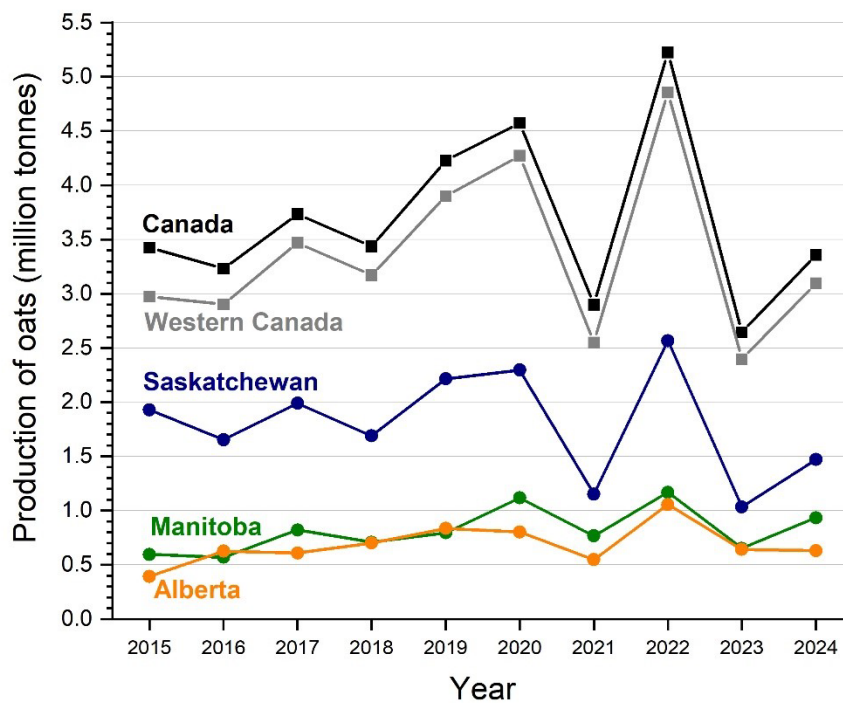


Figure 10 Comparison of oat production (million tonnes) in western Canada from 2015 to 2024.

<sup>3</sup> Source: Statistics Canada, estimated as of December 5, 2024

<sup>4</sup> 5-year average from 2019 to 2023

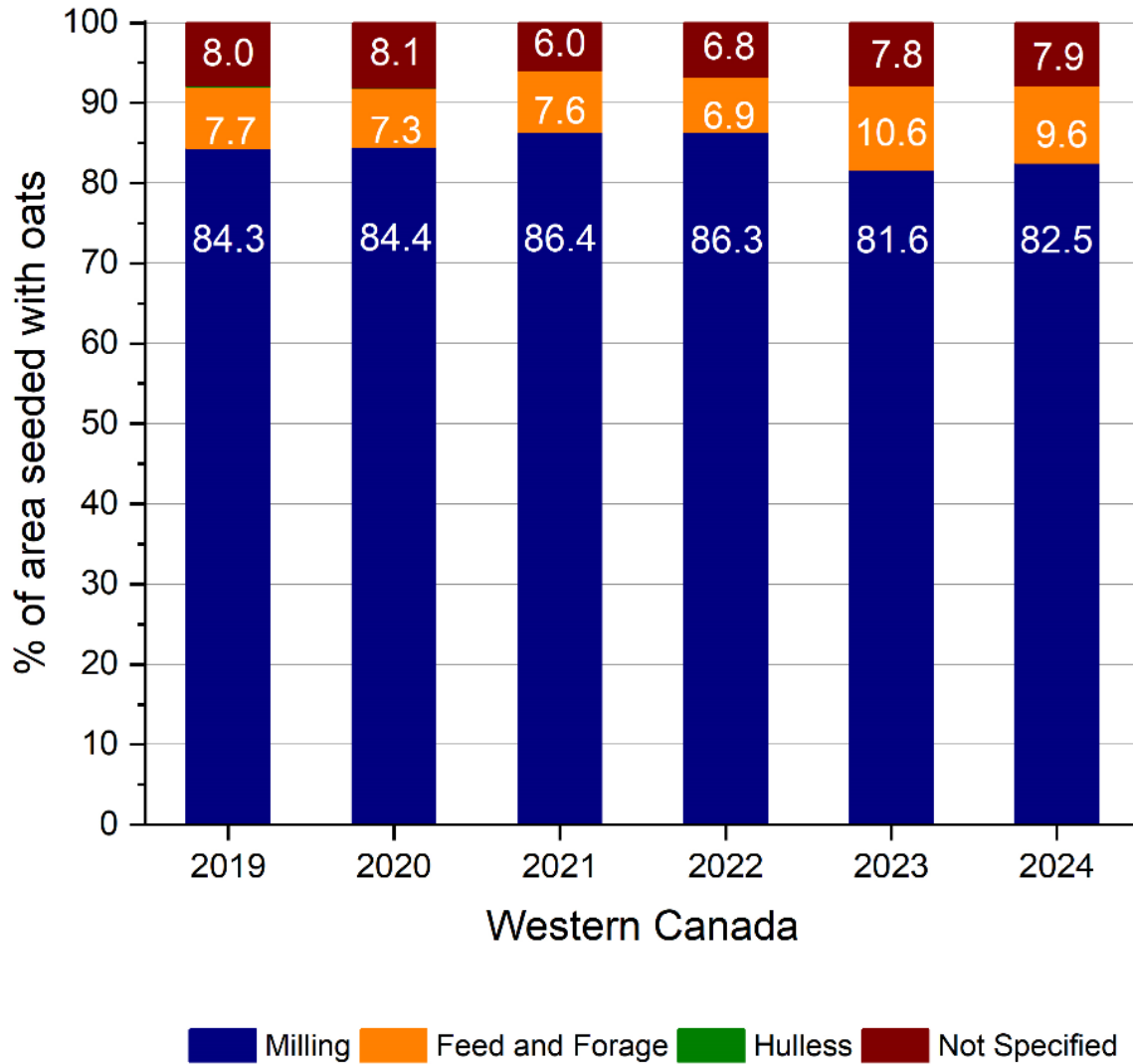


Figure 11 Distribution of oat classes as percentage (%) of area seeded with oats in western Canada from 2019 to 2024.<sup>5</sup>

<sup>5</sup> Data based on crop insurance statistics from [Saskatchewan Crop Insurance Corporation](#), [Agriculture Financial Services Corporation](#), [Manitoba Agricultural Services Corporation](#) and [British Columbia AgriStability and Production Insurance](#).

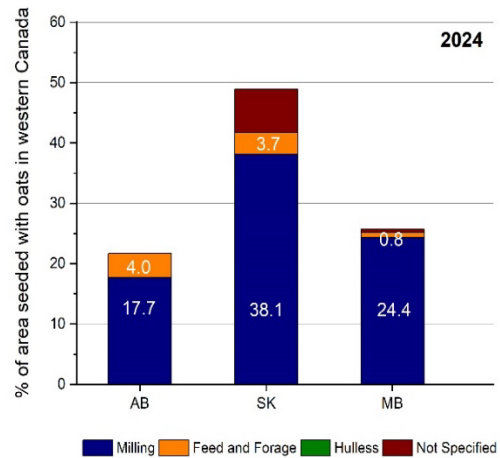
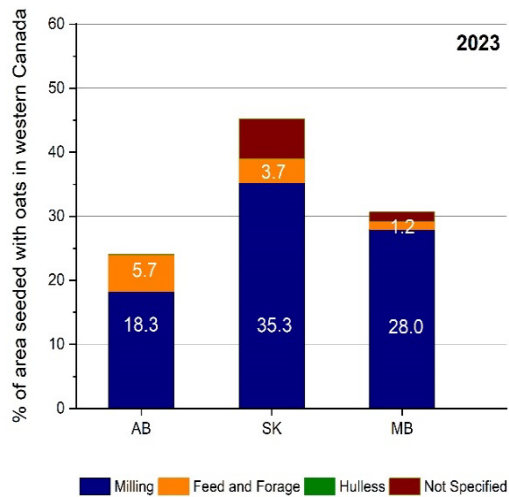


Figure 12 Distribution of oat classes in each province as the percentage (%) of area seeded with oats in western Canada in 2023 and 2024.<sup>5</sup>

<sup>5</sup> Data based on crop insurance statistics from [Saskatchewan Crop Insurance Corporation](#), [Agriculture Financial Services Corporation](#), [Manitoba Agricultural Services Corporation](#) and [British Columbia AgriStability and Production Insurance](#).

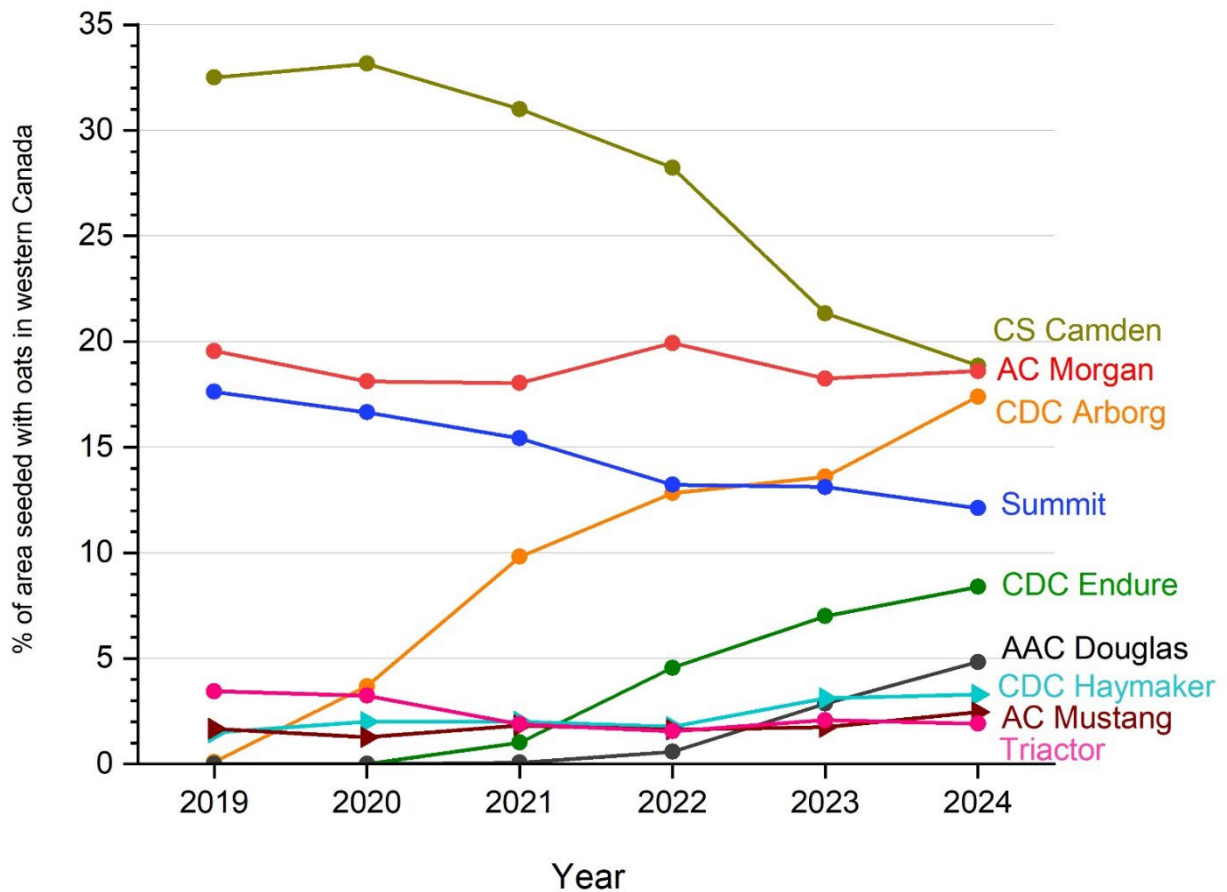


Figure 13 Comparison of area seeded with oat varieties in western Canada from 2019 to 2024. Variety names, class and registration dates include: CS Camden (milling, 2014), AC Morgan (milling, 2000), CDC Arborg (milling, 2017), Summit (milling, 2008), CDC Endure (milling, 2019), AAC Douglas (milling, 2019), CDC Haymaker (forage, 2015), AC Mustang (feed, 1994), Triactor (milling, 2007).<sup>5</sup>

<sup>5</sup> Data based on crop insurance statistics from [Saskatchewan Crop Insurance Corporation](#), [Agriculture Financial Services Corporation](#), [Manitoba Agricultural Services Corporation](#) and [British Columbia AgriStability and Production Insurance](#).

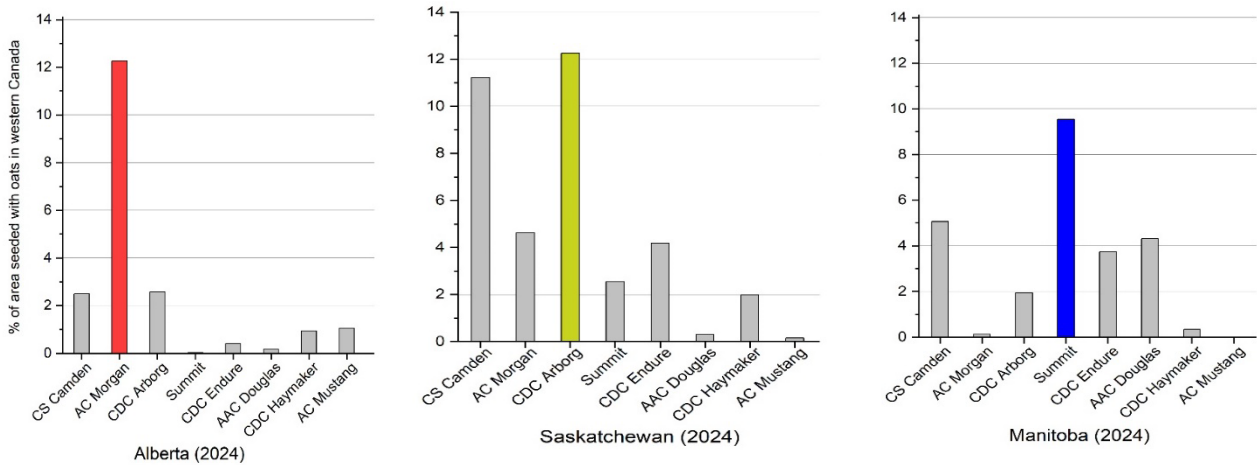


Figure 14 Area seeded with oat varieties in Alberta, Saskatchewan and Manitoba as a percentage (%) of area seeded with milling oats in western Canada in 2024.<sup>5</sup>

<sup>5</sup> Data based on crop insurance statistics from [Saskatchewan Crop Insurance Corporation](#), [Agriculture Financial Services Corporation](#), [Manitoba Agricultural Services Corporation](#) and [British Columbia AgriStability and Production Insurance](#).

Table 5 Distribution of milling, feed and forage oat varieties as a percentage (%) of the total area seeded with oats in western Canada in 2024.<sup>5</sup>

% of area seeded with oats in western Canada in 2024				
	Alberta	Saskatchewan	Manitoba	Western Canada
Milling oat variety	%	%	%	%
CS Camden	2.50	11.22	5.07	18.86
AC Morgan	12.26	4.63	0.13	18.60
CDC Arborg	2.58	12.25	1.93	17.40
Summit	0.02	2.56	9.54	12.12
CDC Endure	0.41	4.19	3.74	8.39
AAC Douglas	0.17	0.31	4.31	4.83
Triactor	0.00	1.91	0.00	1.91
CDC Ruffian	0.00	1.19	0.00	1.20
ORe3542M	0.48	0.16	0.42	1.10
Derby	0.63	0.23	0.00	0.86
CDC Dancer	0.00	0.81	0.00	0.81
Souris	0.00	0.24	0.54	0.78
Pinnacle	0.00	0.26	0.31	0.56
CDC Morrison	0.00	0.26	0.10	0.36
ORe3541M	0.07	0.12	0.17	0.36
CDC Minstrel	0.04	0.29	0.00	0.33
Leggett	0.00	0.21	0.12	0.33
CDC Orrin	0.00	0.29	0.00	0.29
Other	0.09	0.27	0.11	0.51
<b>Total milling</b>	<b>19.26</b>	<b>41.40</b>	<b>26.48</b>	<b>89.59</b>
Feed and Forage	%	%	%	%
CDC Haymaker	0.94	1.98	0.34	3.29
AC Mustang	1.06	0.15	0.00	2.46
CDC SO-I	0.67	0.91	0.33	1.90
CDC Nasser	0.69	0.31	0.00	1.00
CDC Baler	0.34	0.43	0.10	0.87
Other	0.67	0.16	0.04	0.89
<b>Total Feed and Forage</b>	<b>4.39</b>	<b>3.93</b>	<b>0.82</b>	<b>10.41</b>

<sup>5</sup> Data based on crop insurance statistics from [Saskatchewan Crop Insurance Corporation](#), [Agriculture Financial Services Corporation](#), [Manitoba Agricultural Services Corporation](#) and [British Columbia AgriStability and Production Insurance](#).