



The 2021 Statistics Canada Farm Management Survey (FMS) provides a comprehensive insight into Canadian agricultural production and how agriculture is changing. The industry continues to work toward increasing productivity, while remaining environmentally and economically sustainable. The detailed data gathered by the 2021 FMS offers insight into how operators are adapting to a changing market environment and to economic pressures around production practices. This report focuses on operations in forage crop production.

Forage Land

According to FMS 2021, total forage land for operations reporting forage crops (hay, silage or seed production) was 10,515,391 acres, down four per cent from 2017. Between 2017 and 2021, total forage land area decreased in Manitoba (-37%) and Saskatchewan (-6%), remained stable in Alberta and Ontario, and increased in Quebec (+19%) and British Columbia (+6%). In 2021, Alberta had the largest forage area, accounting for 36 per cent of the national total, followed by Saskatchewan (28%), Quebec (15%), Manitoba (8%), Ontario (7%) and British Columbia (6%).

Table 1. Total Forage Land^{1,2}

	2017		2021		% change
	acres	% of Canada	acres	% of Canada	
Canada	10,918,852	100%	10,515,391	100%	-4%
QC	1,307,677	12%	1,551,378	15%	19%
ON	771,443	7%	770,204	7%	0%
MB	1,346,098	12%	842,479	8%	-37%
SK	3,150,261	29%	2,971,288	28%	-6%
AB	3,738,774	34%	3,737,046	36%	0%
BC	604,598	6%	642,996	6%	6%

¹Total forage land for operations reporting forage crops (hay, silage or seed production).

²Includes forage land used for hay, silage or seed, which is grazed for all or part of the year. Excludes pasture and cropland that is only used for grazing.

Source: Statistics Canada, Farm Management Survey, 2017, 2021

Forage Types

In Canada, the most common type of established forage is “mostly grass” (less than 25 per cent legumes), representing 40 per cent of total forage land in 2021. The second most common is “mixture of grass and legume” (approximately 50 per cent each) at 33 per cent, followed by “mostly legumes” (less than 25 per cent grass) at 16 per cent.¹

¹ Percentages may not add up to 100 because the total does not come from the same question in the survey as the other columns. Some respondents reported different values in the total questions than the other, more specific questions.

Since 2017 there has been an 18 per cent expansion in mostly grass forage acres, while mostly legumes acres have decreased by 22 per cent; and mixture of grass and legume have decreased 14 per cent.

The variation in forage stands can be reflected by the type of soil, climate, and precipitation. Provinces in western Canada appeared to have a relatively higher proportion of mostly grass forage with Saskatchewan and Alberta at 43 per cent, Manitoba at 39 per cent and British Columbia at 37 per cent. In comparison, Ontario (33%) and Quebec (35%) have lower percentages of mostly grass forage.

Conversely, Ontario has higher portion of mostly legumes forage at (24%) followed by Manitoba (22%), Quebec (19%), Saskatchewan (17%), Alberta (14%) and British Columbia (8%).

Table 2. Type of established forage crop

Percent (%)	Mostly Grass ¹			Mostly Legumes ²			Mixture of grass and legumes ³		
	2017	2021	% change	2017	2021	% change	2017	2021	% change
Canada	33%	40%	18%	20%	16%	-22%	37%	33%	-14%
QC	37%	35%	10%	21%	19%	9%	38%	28%	-11%
ON	26%	33%	27%	34%	24%	-28%	35%	38%	10%
MB	38%	39%	-36%	21%	22%	-33%	30%	31%	-35%
SK	29%	43%	39%	17%	17%	-10%	42%	32%	-29%
AB	32%	43%	34%	21%	14%	-35%	35%	34%	-4%
BC	43%	37%	-10%	10%	8%	-13%	35%	38%	13%

¹Mostly grass (with less than 25% of legumes); includes brome grasses, wheatgrasses, ryegrasses, fescues, orchard grass and timothy.

²Mostly legumes (with less than 25% of grasses); includes alfalfa, clover, sainfoin, trefoil and vetches.

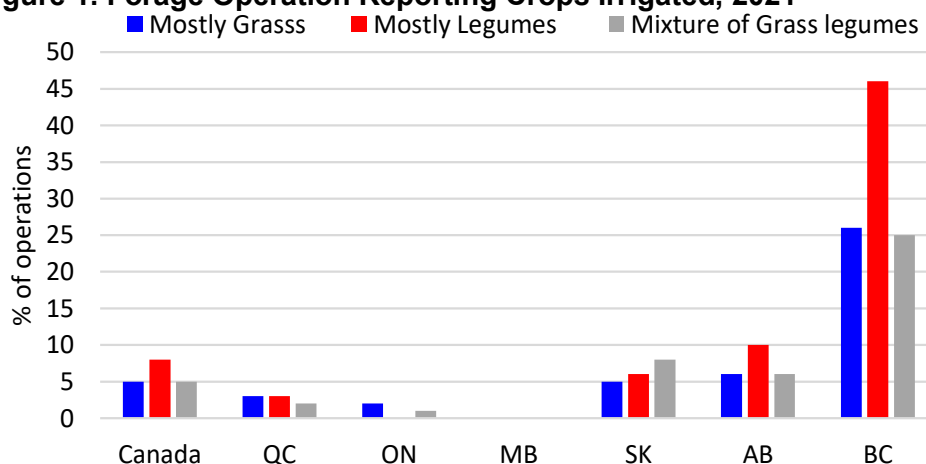
³Mixture of grass and legumes (approximately 50% each).

Source: Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Irrigation

In 2021, a limited number of operations used irrigation on forage land. On average, 95 per cent of operations with mostly grass, or grass-legume mixture lands reported no crop irrigated, while 92 per cent operations with mostly legume lands reported irrigation.

Figure 1. Forage Operation Reporting Crops Irrigated, 2021



¹Estimated from percent of operation reporting no nutrient applied to forage lands

Source: Statistics Canada, Farm Management Survey 2021.

The use of irrigation is affected by the amount of precipitation of the region, implementation cost, location of the operation and which crops are being grown. British Columbia had a higher portion of operations using irrigation compared to the rest of the country. Approximately 24-26 per cent of operations with mostly grass or grass-legume mixture lands irrigated some or all crops.

Longevity, Rejuvenation and Termination

Duration of Forage Stands

Properly managed forage stands can prolong the longevity of production. Strong management of forage stands coincides with yield. Knowing the duration of production for established forage stands can be beneficial when making management decisions.

Nationally, 40 per cent of operations-maintained forage stands in production for three to five years before termination, while 30 per cent extend to six to 10 years, and 21 per cent last for over 10 years.

In western Canada, over 60 per cent of operations reported more than six years of production before termination. In Quebec and Ontario, over 60 per cent of operations had forage stands lasting three to five years.

In Quebec and Ontario, there was a shift toward longer duration. The percentage of operation reported six to 10 years of stand life increased from 19-20 per cent in FMS 2017 to 22-26 per cent in FMS 2021.

Table 3. Duration of production for established forage stands

% of Operations	1 to 2 years		3 to 5 years		6 to 10 years		More than 10 years		Unknown	
	2017	2021	2017	2021	2017	2021	2017	2021	2017	2021
Canada	5%	5%	42%	40%	30%	30%	20%	21%	3%	4%
QC	7%	4%	70%	66%	19%	26%	F	F	x	F
ON	9%	F	62%	61%	20%	22%	x	10%	x	F
MB	2%	F	27%	30%	39%	23%	23%	38%	8%	F
SK	F	F	20%	12%	29%	41%	42%	34%	x	8%
AB	F	5%	31%	30%	38%	34%	25%	29%	x	F
BC	F	6%	17%	19%	49%	43%	27%	26%	3%	6%

¹Refers to the number of years established forage stands were in production before being terminated or broken up.

²Figures expressed as a percentage of the total operations with established forages terminated or broken up between 2013 and 2017 (FMS 2017) or 2017 and 2021 (FMS 2021).

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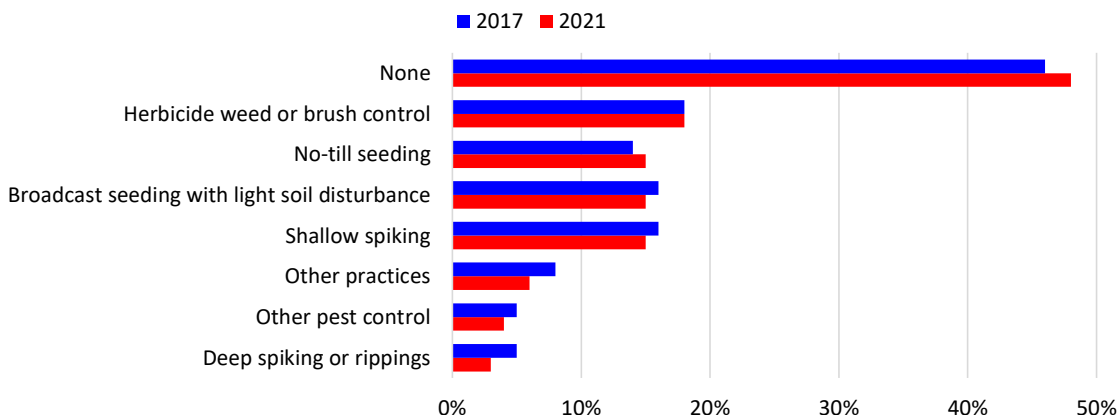
Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Rejuvenation Practices

Across Canada, 48 per cent of operations reported no practices used to restore or rejuvenate productivity on established forages between 2017 and 2021, which is higher than the 46 per cent reported in FMS 2017.

The adoption rate for no-till seeding increased to 15 per cent compared to 14 per cent in FMS 2017, while adoption rates for other rejuvenation practices declined during this period.

Figure 2. Distribution of operations by productivity restoration practices on established forages



Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Termination

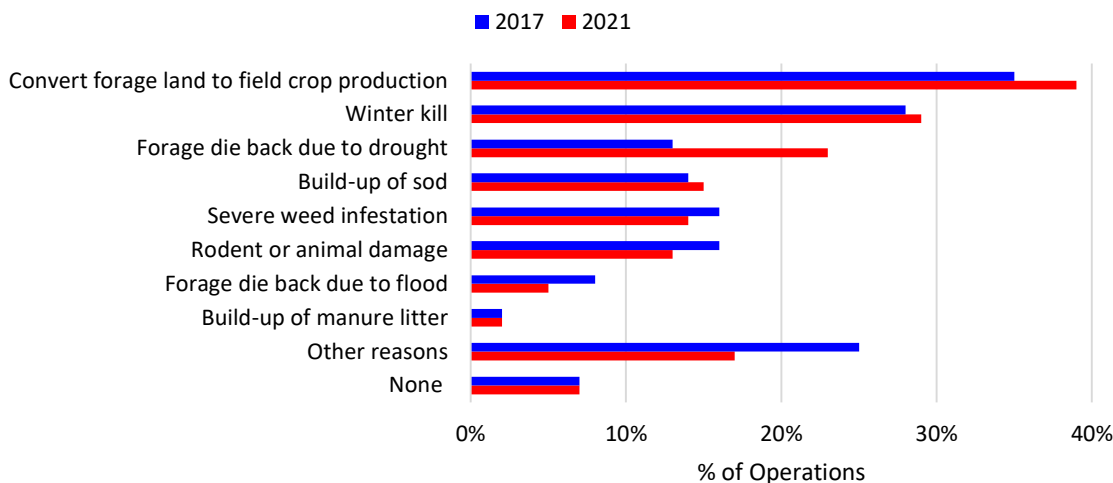
FMS 2021 shows 18,386 operations terminated or broke up established foraged between 2017 and 2021, down seven per cent from FMS 2017.

Elevated cash crop prices in the last couple of years have encouraged land conversion to crops. Thirty-nine per cent of producers terminated forage stands to convert the land for field crop production 2017 and 2021, making it the primary reason for termination.

Winter kill was the second reason for termination, cited by 29 per cent of producers. In Quebec, it was the primary reason, reported by 56 per cent of producers.

Over the past five years, producers encountered increasing challenges due to extreme temperatures and severe drought conditions. Drought emerged as the third leading cause of termination, reported by 23 per cent of producers, notably higher than the 13 per cent reported in FMS 2017. In particular, drought was the primary reason for termination in Manitoba, cited by 34 per cent of producers.

Figure 3. Reasons for forage stand termination



Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Seeding

Seeded Area

According to FMS 2021, the total acreage of land seeded to forage crops between October 2020 and September 2021 was 1,290,074 acres, showing a decrease of seven percent compared to FMS 2017.

Most provinces experienced a decline in seeded areas, except for Quebec, which saw a 12 per cent increase. Saskatchewan had the largest decline of 21 per cent, followed by Ontario (-17%) and British Columbia (-10%).

Table 4. Forage Area seeded¹

	2017		2021		21/17
	Acres	% of total forage land	Acres	% of total forage land	% Chg in seeded acres
Canada	1,381,216	13%	1,290,074	12%	-7%
QC	223,903	14%	251,542	19%	12%
ON	166,433	22%	138,282	18%	-17%
MB	161,741	19%	153,465	11%	-5%
SK	334,355	11%	265,371	8%	-21%
AB	421,241	11%	414,983	11%	-1%
BC	73,543	11%	66,431	11%	-10%

¹Total area seeded to forage crops between October 2016 and September 2017 (FMS 2017), or October 2020 and September 2021 (FMS 2021).

Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Inoculated Seeds

The purpose of inoculated seeds is to increase the nitrogen available in the soil and promote nitrogen fixation. In 2021, the adoption rate of inoculated legume seeds stood at approximately 62 per cent, stable with 2017. However, there was a shift from always use to occasional use, with the percentage of always use dropping from 51 per cent to 46 per cent, while the percentage of sometime use increasing from 12 per cent to 16 per cent.

In 2021, the adoption rate of inoculated seeds was highest in Manitoba and Saskatchewan with 75 to 76 per cent of operations reporting always or sometimes use them. In other province, the adoption rate ranged from 57 to 62 per cent.

Table 5. Distribution of operations by use of inoculated legume seeds^{1,2}

% of Operations	Always		Some of the time		Not used	
	2017	2021	2017	2021	2017	2021
Canada	51%	46%	12%	16%	36%	37%
QC	45%	44%	15%	13%	39%	43%
ON	46%	38%	13%	20%	39%	40%
MB	57%	58%	15%	18%	27%	24%
SK	57%	56%	8%	19%	35%	25%
AB	55%	47%	11%	14%	34%	39%
BC	62%	45%	12%	17%	26%	36%

¹Refers to the use of inoculated legume seeds to enhance soil nitrogen fixation by bacteria.

²Figures expressed as a percentage of the total forage operations with mostly legumes or a mixture of grass and legumes seeded between 2017 and 2021.

Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Time of Seeding

Seeding mainly happened in the spring. Some operations in Quebec, Ontario, Alberta and British Columbia opted for alternative strategies, including late summer or late fall planting.

Table 6. Distribution of operations (in percentage) by time of seeding^{1,2}, 2021

% of operations	Spring	Late summer	Late fall	Other
Canada	91%	9%	5%	1%
QB	95%	9%	3%	F
ON	86%	14%	7%	F
MB	93%	F	F	F
SK	94%	F	F	X
AB	91%	5%	5%	F
BC	86%	10%	8%	F

¹Total operations with seeded forage crops.

²The sum of the operations reporting in each season is greater than the total operations with seeded forage crops because an operation may report seeding in more than one season.

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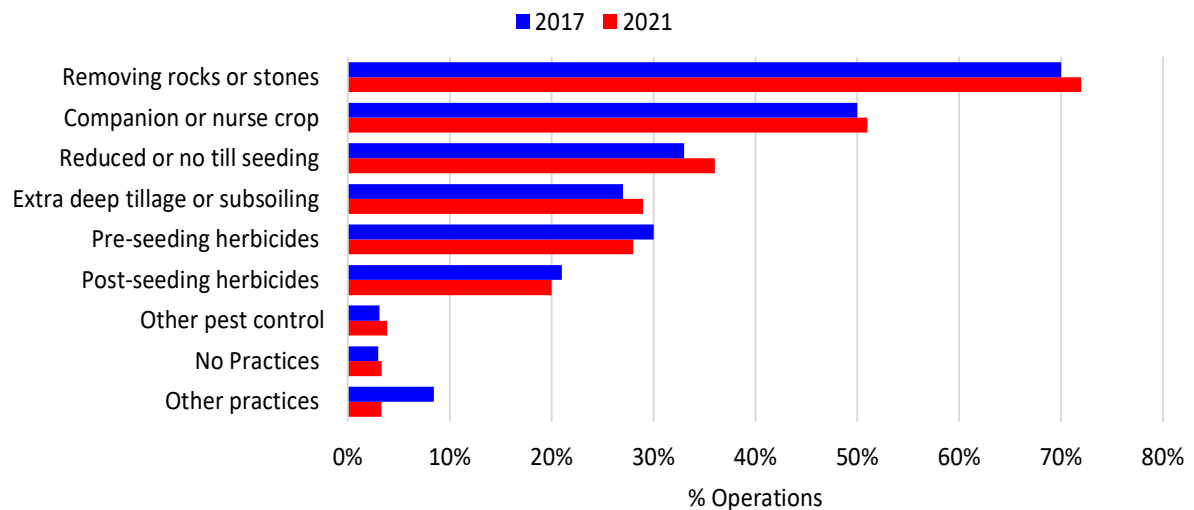
Source: Statistics Canada, Farm Management Survey, 2021.

Soil Preparation

By preparing the soil before seeding, plants have available nutrients that are needed. It is also easier for the roots to become established. Having established high quality soil before seeding allows the plants to strengthen and thrive in the soil and become sustainable forage stands.

FMS 2021 reveals variations in soil preparation practices for forage crop seeding. The most common practices were removing rocks or stones (72%), using a companion or nurse crop (51%), reduced or no till seeding (36%), and extra deep tillage or subsoiling (29%). Nationally, the adoption rates for these practices were all up in the 2017-2021 period compared to 2013-2017.

Figure 4. Practices used to establish forage crops or prepare soil for seeding



Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Table 7. Practices use to establish forage crops or prepare soil for seeding^{1,2}

% of Operations ³	Removing rocks or stones		Extra deep or subsoiling		Pre-seeding herbicides		Post-seeding herbicides		Reduced or no till seeding		Companion or nurse crop	
	2017	2021	2017	2021	2017	2021	2017	2021	2017	2021	2017	2021
Canada	70%	72%	27%	29%	30%	28%	21%	20%	33%	36%	50%	51%
QC	73%	74%	37%	41%	24%	17%	29%	22%	33%	39%	35%	44%
ON	77%	85%	19%	19%	19%	19%	25%	27%	27%	30%	49%	50%
MB	62%	70%	29%	25%	41%	44%	19%	24%	29%	42%	67%	58%
SK	66%	58%	18%	18%	46%	54%	10%	17%	55%	49%	64%	56%
AB	66%	70%	27%	32%	35%	32%	20%	15%	29%	32%	53%	56%
BC	59%	58%	39%	38%	24%	8%	11%	4%	31%	21%	45%	38%

¹Refers to practices used between 2013 and 2017 (FMS 2017) or between 2017 and 2021 (FMS 2021) to assist in establishing forage crops or preparing soil prior to seeding.

²Figures expressed as a percentage of the total operations with forage crops seeded between 2013 and 2017 (FMS 2017) or between 2017 and 2021 (FMS 2021).

³The sum of the operations reporting in each practice is greater than 100% because an operation may report more than one practice.

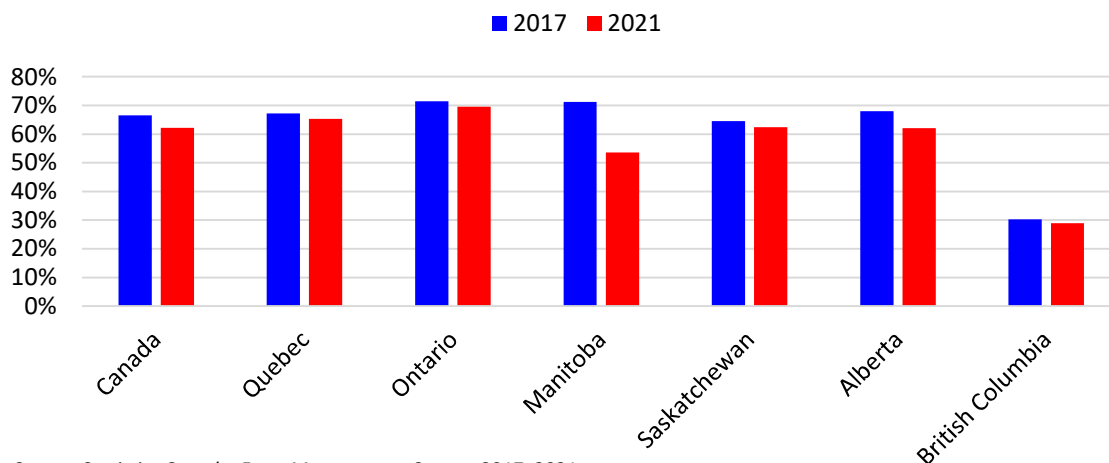
Source: Statistics Canada, Farm Management Survey, 2017, 2021.

The use of pre-seeding herbicide (28%) and post-seeding herbicide (20%) decreased by two and one percent point respectively compared to FMS 2017. British Columbia experienced the most significant decline, with a 16 percent point decrease in pre-seeding herbicide use and a six percent point decrease in post-seeding herbicides.

Field Crops on Forage Land

Among the operations with seeded forage crops, 62 per cent reported that between 2017 and 2021, field crops were ever grown on land that was in forage crops in 2021. This is five percent point lower than FMS 2017, suggesting a possible reduction in the conversion of lands from field crop to forage production or a reduction in incorporating forage crops in rotation.

Figure 5. Percent of operations with field crops ever grown on forage lands



Source: Statistics Canada, Farm Management Survey, 2017, 2021.

The most common field crops that were grown on forage land were cereals (reported by 83% of operations) followed by corn (34%), oilseeds (32%) and pulses (15%).

Regarding the duration of the land being in field crop production before being seeded back to forage, 27 per cent of operations reported one to two years, 45 per cent reported three to five years, 13 per cent reported six to 10 years, and 13 per cent reported over ten years.

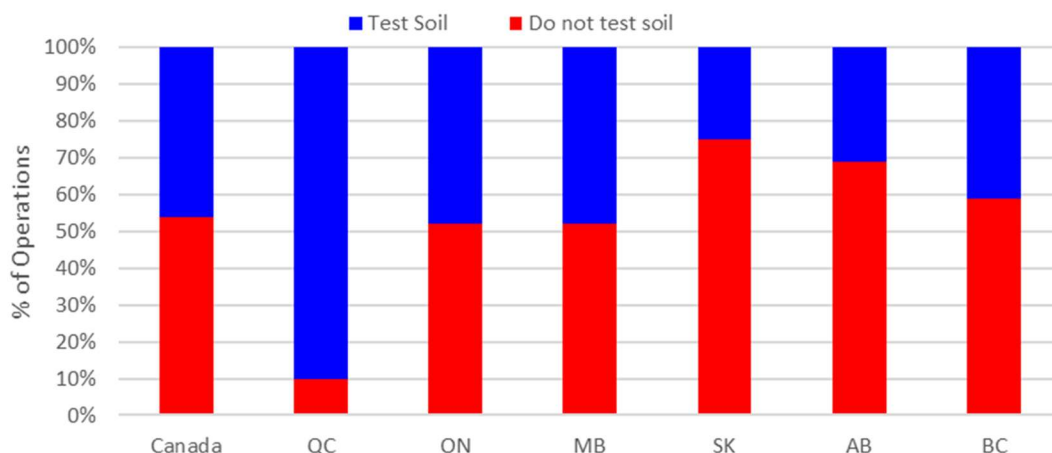
Nutrient Management

Soil Test

Soil testing measures of key elements in the soil, such as phosphorus, potassium, and calcium, to assess their availability to plants. By identifying specific nutrient deficiencies, soil testing guides the application of fertilizers, addressing the precise needs of the plants. This information empowers producers to make well-informed management decisions and optimize crop yield. By accurately determining the appropriate application rates of nutrients tailored to the plant's requirements, soil testing plays an important role in promoting efficient and sustainable agricultural practices.

In Canada, soil testing was not performed by over half of the operations (54%), up from 47 per cent in FMS 2017, showing a decline in adoption. In Saskatchewan, 75 per cent of producers did not soil test, while Quebec had the highest adoption rate at 90 per cent.

Figure 6. Distribution of operations by soil testing on forage lands, 2021



Source: Statistics Canada, Farm Management Survey, 2021.

Among producers who conducted soil tests, the most common frequency for testing was every two to three years in most provinces. However, in Quebec, soil testing was done every four to five years by over 50 per cent of the producers.

Table 8. Frequency of soil testing on forage lands

% of Operations	Every year		Every 2 to 3 years		Every 4 to 5 years		Every 6 years or more		Do not test soil	
	2017	2021	2017	2021	2017	2021	2017	2021	2017	2021
Canada	8%	8%	17%	15%	20%	17%	8%	6%	47%	54%
QC	13%	16%	20%	16%	56%	54%	5%	4%	6%	10%
ON	4%	4%	29%	22%	18%	14%	10%	8%	40%	52%
MB	9%	15%	16%	19%	12%	7%	13%	6%	50%	52%
SK	3%	3%	9%	8%	9%	7%	7%	6%	72%	75%

AB	10%	7%	14%	14%	9%	5%	8%	5%	59%	69%
BC	5%	6%	16%	12%	12%	12%	11%	11%	56%	59%

¹Refers to frequency of soil testing for nutrient content on land used for forage crop production.

²Figures expressed as a percentage of the total forage crop operations.

Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Sources of Nutrients

FMS 2021 shows 34 per cent of producers did not apply nutrients to land with forage crops, up from 28 per cent in FMS 2017.

Regional disparities were evident, with higher adoption rates in the east (Quebec and Ontario) compared to western provinces. This is not surprising given the fact that moisture conditions play a significant role in influencing fertilizer and manure use.

Table 9. Percentage of operation reported no nutrients applied to forage lands^{1,2}

	2017	2021	% change
Canada	28%	34%	21%
QC	7%	8%	14%
ON	11%	16%	45%
MB	21%	31%	48%
SK	48%	52%	8%
AB	43%	49%	14%
BC	30%	41%	37%

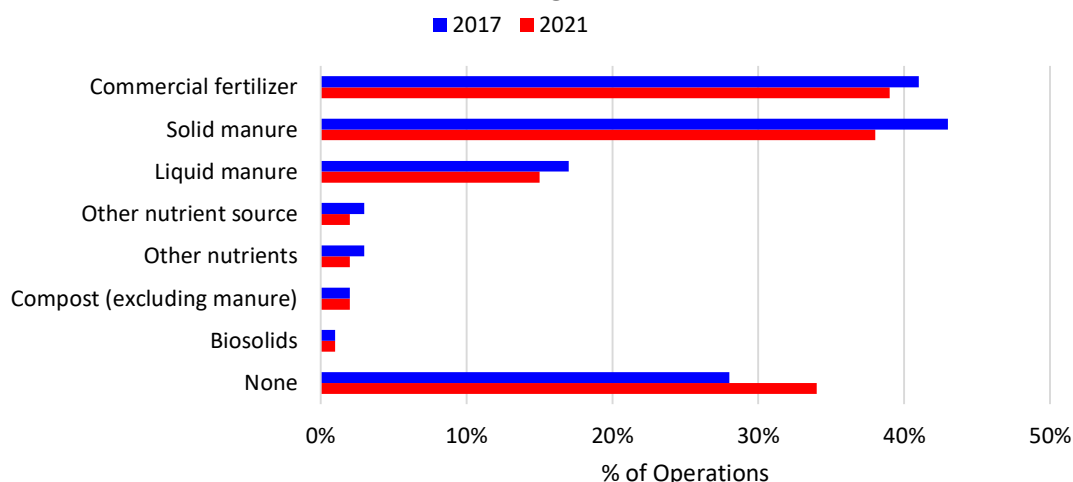
¹Refers to sources of nutrients applied between October 2016 and September 2017 (FMS 2017) or October 2020 and September 2021 (FMS 2021) to land where forage crops were grown.

²Figures expressed as a percentage of the total forage crop operations.

Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Commercial fertilizer (39%) was the most commonly used nutrient for forage lands, followed by solid manure (38%) and liquid manure (15%).

Figure 7. Sources of nutrients applied to forage lands



Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Although solid manure and liquid manure were ranked as the second and third most common nutrient types by percentage of operation, their application was limited in terms of actual land acres. Only 11 per cent of total forage land received solid manure, while seven per cent received liquid manure.

Commercial Fertilizer Management

Among all forage crop operations that utilized commercial fertilizer, 62 percent reported allocating the majority of the fertilizer to established forage stands, while the remaining 38 percent reported newly seeded forages as the primary recipients. These figures are consistent with the findings from FMS 2017, which indicated 63 per cent for established forage stands, and 27 per cent was for newly seeded forages.

The most common frequency of commercial fertilizer application is every year, cited by 73 per cent of producers. Slightly up from 71 per cent in FMS2017.

Table 10. Distribution of operations by frequency of commercial fertilizer application^{1,2}

% of Operations	Every year		Every 2 years		Every 3 years		Every 4 years or more	
	2017	2021	2017	2021	2017	2021	2017	2021
Canada	71%	73%	14%	13%	7%	5%	8%	9%
QB	84%	91%	8%	4%	4%	F	4%	F
ON	76%	69%	10%	20%	8%	F	7%	7%
MB	64%	68%	21%	17%	F	F	7%	F
SK	43%	55%	24%	17%	11%	F	22%	22%
AB	68%	71%	17%	10%	7%	8	7%	10%
BC	75%	75%	10%	11%	9%	F	7%	X

¹Refers to frequency at which commercial fertilizer is applied to land where forage crops are grown.

²Figures expressed as a percentage of the total forage crop operations applying commercial fertilizer.

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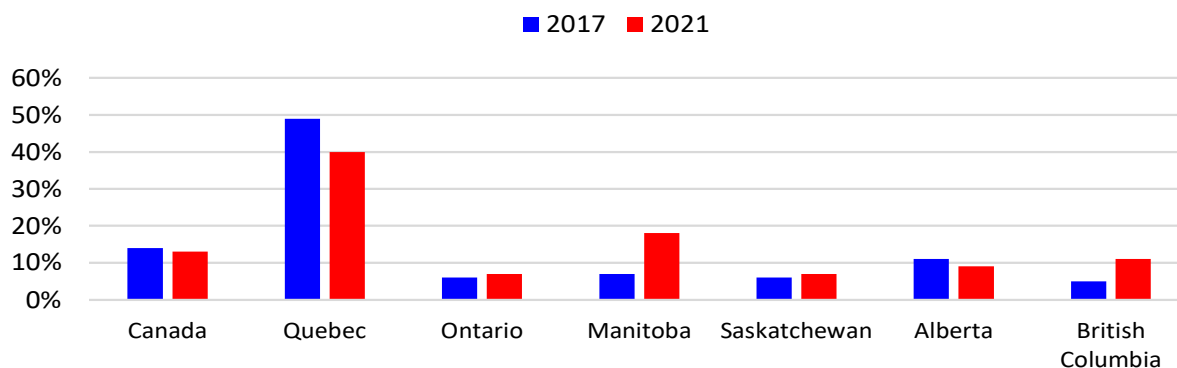
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Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Solid Manure Testing

Solid manure testing provides producers with valuable information about the nutrients that are present. By knowing the nutrients that are present producers can make educated decisions on application rates of manure, while reducing the risk to the environment.

Figure 8. Percent of operations tested solid manure^{1,2}



¹ Figures expressed as a percentage of the total forage crop operations who applied solid manure between October 2020 and September 2021 and did not apply liquid manure.

² estimated based on the percentage of operations that did not test solid manure.

Source: Statistics Canada, Farm Management Survey, 2017, 2021

Among the 12,856 forage crop operations that applied solid manure between October 2020 and September 2021 and did not apply liquid manure, only 13 per cent tested solid manure with four

per cent test every year, three per cent tested every two to three years, and three per cent tested every four to five years.

Quebec had the highest adoption rates at 40 per cent in 2021, but this is down significantly from 40 per cent in 2021. Conversely, Manitoba's utilization of test solid manure increased from seven per cent in 2017 to 18 per cent in 2021.

Harvest

Harvested Area

Regarding the type of areas harvested for various crops in Canada during the years 2017 and 2021, there was a noticeable 11 per cent decline in the area harvested for hay, dropping from 7.8 million acres in 2017 to 6.9 million acres in 2021. Conversely, silage experienced an 11 per cent increase in the area harvested, rising from 1.6 million acres to 1.8 million acres during the same period. It should be remembered that 2021 was a drought year in western Canada, impacting production practices. Seed crops witnessed a marginal one per cent rise in the harvested area, reaching 520,000 acres in 2021 compared to 515,000 acres in 2017. There was a substantial increase in the area not harvested due to crop failure soaring from 223,000 acres in 2017 to 813,000 acres in 2021 due to extreme weather conditions especially in western Canada.

Table 11. Type of area harvested

Land ('000 acres)	Hay			Silage			Seed			Not harvested due to crop failure		
	2017	2021	21/17	2017	2021	21/17	2017	2021	21/17	2017	2021	21/17
Canada	7,759	6,888	-11%	1,584	1,764	11%	515	520	1%	223	813	264%
QB	717	762	6%	745	946	27%	31	30	-4%	6	13	129%
ON	603	610	1%	231	161	-30%	F	22	--	5	7	23%
MB	901	565	-37%	103	87	-15%	156	56	-64%	F	63	--
SK	2,217	2,041	-8%	148	166	12%	109	169	55%	142	354	149%
AB	2,864	2,413	-16%	312	365	17%	165	227	38%	52	355	584%
BC	458	496	8%	46	40	-14%	28	F	--	9	21	135%

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Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Of the 10.5 million acres of forage land in Canada in 2021, 66 per cent was harvested as hay, down from 71 per cent in 2017. Seventeen per cent was silage, up from 15 per cent in 2017. The percentage of land harvested for seed remained relatively stable, staying at five per cent. The land not harvested due to crop failure experienced a significant rise from two per cent in 2017 to eight per cent in 2021, mainly due to severe drought conditions in western Canada.

Table 12. Distribution of land by type of area harvested^{1,2}

% of area	Hay		Silage		Seed		Not harvested due to crop failure	
	2017	2021	2017	2021	2017	2021	2017	2021
Canada	71%	66%	15%	17%	5%	5%	2%	8%
QB	55%	49%	57%	61%	2%	2%	0%	0%
ON	78%	79%	30%	21%	F	3%	1%	1%
MB	67%	67%	8%	10%	12%	7%	F	7%
SK	70%	69%	5%	6%	3%	6%	5%	12%
AB	77%	65%	8%	10%	4%	6%	1%	9%
BC	76%	77%	8%	6%	5%	F	1%	3%

¹Figures expressed as a percentage of the total forage land used for hay, silage or seed production.

²Percentages may not add up to 100 because the total does not come from the same question in the survey as the other columns. Some respondents reported different values in the total questions than the other, more specific questions.

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Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Forage Sold

On average, 74 per cent of forage was used on the operation, while the remaining 26 per cent was sold. In most of the provinces, the percentage of forage used on farms was above 70 per cent. British Columbia stands out with a higher percentage of forage being sold at 42 per cent, while only 58 per cent was used on the operation.

Table 13. Proportion of hay or silage production used and sold

	Percentage used on operation ^{2,4}	Percentage sold from operation ^{3,4}
Canada	74%	26%
QC	79%	21%
ON	71%	28%
MB	77%	23%
SK	74%	26%
AB	74%	26%
BC	58%	42%

¹Includes hay or silage harvested by the operation. Excludes hay or silage harvested by the operator to who it was sold.

²Average of "percentage of total hay or silage production used on operation" reported by forage crop operations with area harvested for hay or silage production

³Average of "percentage of total hay or silage production sold from operation" reported by forage crop operations with area harvested for hay or silage production

⁴Average includes operations reporting 0% of hay or silage production used or sold

Source: Statistics Canada, Farm Management Survey, 2021.

Feed Test

Testing forages to obtain an accurate analysis of nutrient content, identify potential toxins, and establish forage value provides producers with valuable information to help make the best decisions for feeding livestock. However, according to the FMS 2021, the adoption rate for feed testing remained low among operations involved in hay and silage production.

Among the 34,817 forage operations with area harvested for hay or silage production in 2021, 50 per cent reported never tested for feed quality, a slight increase from 49 per cent in 2017.

Table 14. Distribution of operations by most common practice of feed quality testing^{1,2}

% of Operations	Samples taken each year from different forage cuts or types		Samples taken in most years for only forage cuts or types where quality was uncertain		Samples taken less than once a year		Hay or silage never tested for feed quality		Other strategies	
	2017	2021	2017	2021	2017	2021	2017	2021	2017	2021
Canada	27%	27%	6%	6%	13%	11%	49%	50%	5%	5%
QB	63%	65%	2%	3%	8%	8%	23%	21%	3%	4%
ON	31%	23%	6%	4%	11%	11%	47%	59%	5%	4%
MB	19%	21%	5%	8%	19%	20%	50%	44%	8%	F
SK	10%	7%	7%	11%	12%	14%	67%	62%	3%	6%
AB	16%	20%	9%	8%	15%	10%	54%	57%	6%	4%
BC	7%	10%	7%	F	16%	12%	62%	69%	8%	6%

¹Most common practice is based on strategies used over last 5 years.

²Figures expressed as a percentage of the total forage operations with area harvested for hay or silage production.

F - Too unreliable to be published

Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Over the five-year period, feed testing strategies remained relatively consistent. In both 2017 and 2021, 27 per cent of forage operations in Canada collected samples each year from different forage cuts or types, six per cent tested forage with uncertain quality, and five per cent used other strategies. Sampling less than once a year decreased from 13 per cent in 2017 to 11 per cent in 2021.

Feed testing is most common in Quebec, with 65 per cent of operations took sample each year. The adoption rates varied across provinces from 2017 to 2021. Quebec, Manitoba, and Saskatchewan saw increases in adoption, while Ontario, Alberta, and British Columbia experienced declines.

Silage Storage

Silage or haylage stored in sealed plastic was the most widely adopted method, with its usage showing an increase from 57 per cent in 2017 to 63 percent in 2021 in Canada. The advantage of this storage method lies in its flexibility, enabling producers to conveniently move around the storage site without the need for silos. Moreover, the plastic is only used once, eliminating the need for maintenance, which can be an additional expense associated with silos. The period from 2017 to 2021 saw an increase in the popularity of sealed plastic as a storage method for silage or haylage, with increased adoption rates observed in most provinces, except for Alberta.

Bulk silage stored in horizontal silos was utilized by 26 per cent of operations, a slight increase from 24 per cent in 2017. Adoption rates increased Ontario, Manitoba, and Alberta, and remained stable in Quebec.

Table 15. Distribution of operations by silage storage methods used^{1,2}

% of Operations	Silage or haylage stored in sealed plastic		Bulk silage stored in horizontal silo		Bulk silage stored in vertical silo		Other silage storage methods	
	2017	2021	2017	2021	2017	2021	2017	2021
Canada	57%	63%	24%	26%	33%	X	8%	X
QB	57%	67%	11%	11%	47%	46%	8%	F
ON	56%	62%	31%	36%	X	X	X	F
MB	66%	71%	38%	42%	X	F	X	X
SK	62%	75%	27%	F	X	F	X	X
AB	49%	44%	47%	49%	X	F	X	F
BC	74%	75%	33%	X	X	X	X	X

¹Total operations storing silage on the operation.

²The sum of the operations reporting each storage method is greater than 100% because an operation may use more than one method.

F - Too unreliable to be published; X - suppressed to meet the confidentiality requirements of the Statistics Act

Source: Statistics Canada, Farm Management Survey, 2017, 2021.

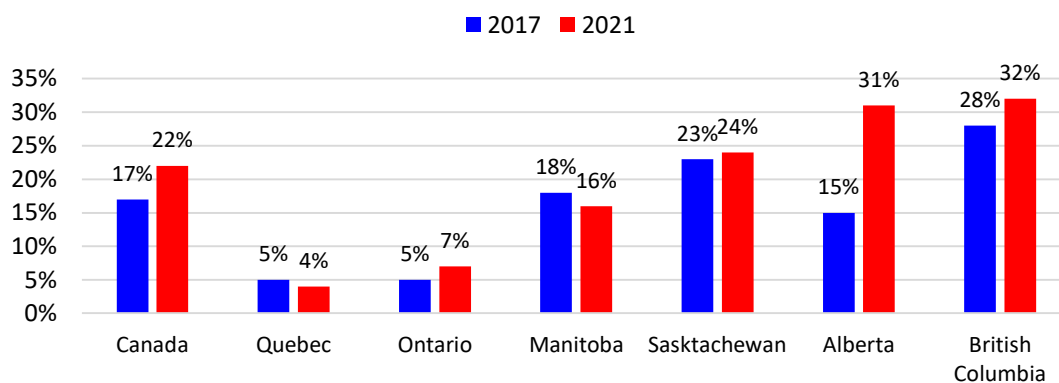
Grazing

Grazing hayfields in the fall is an option to extend the grazing season. In Canada, 22 per cent of the forage land were grazed, which is up from 17 per cent from 2017.

Alberta experienced a substantial rise in grazed forage land, going from 15 per cent in 2017 to 31 per cent in 2021. This growth may be attributed to the impact of drought conditions, which led to a shortage of feed, and cattle resorted to grazing in harvested fields to meet their dietary needs. Similarly, British Columbia also saw an increase in grazed forage land, up from 28 per cent in 2017 to 32 per cent in 2021.

Among the 11,732 forage operations reported grazing on forage lands, fall grazing was the most common practice, with 80 per cent of the operations reporting grazing in the fall. Summer grazing was also substantial, with 46 per cent of the operations opting for this season. The percentage of operations grazing in spring and winter stood at 18 per cent and 10 per cent, respectively.

Figure 9. Percentage of Forage Land Grazed



¹Figures expressed as a percentage of the total forage land for operations reporting forage crops (hay, silage or seed production).

²Includes forage land used for hay, silage or seed, which is grazed for all or part of the year. Excludes pasture and cropland that is only used for grazing.

Source: Statistics Canada, Farm Management Survey, 2017, 2021.

Table 16. Distribution of operations by time of year of grazing^{1,2}

% of Operations	Winter		Spring		Summer		Fall	
	2017	2021	2017	2021	2017	2021	2017	2021
Canada	10%	10%	19%	18%	41%	46%	79%	80%
QB	X	F	29%	41%	78%	76%	74%	72%
ON	X	F	23%	33%	65%	78%	86%	79%
MB	X	F	21%	F	34%	23%	91%	84%
SK	16%	11%	20%	15%	34%	38%	73%	77%
AB	11%	13%	14%	11%	29%	42%	78%	82%
BC	10%	11%	16%	X	25%	28%	87%	87%

¹Figures expressed as a percentage of the total forage crop operations reporting grazed forage crops for all or part of the year.

²The sum of the operations reporting in each season is greater than 100% because an operation may report grazing in more than one season.

F - Too unreliable to be published

X - suppressed to meet the confidentiality requirements of the Statistics Act

Source: Statistics Canada, Farm Management Survey, 2017, 2021.

CONCLUSION

The FMS helps to illuminate the changing way resources are being managed and potential areas for improvement. The insights generated by the FMS provide insights that can be used to design effective and well targeted policy and program responses. It helps serve as a robust basis for discussion and the creation of roadmaps that identify realistic targets for the beef industry on a range of topics including best management practices, productivity, sustainability, biodiversity and animal welfare.