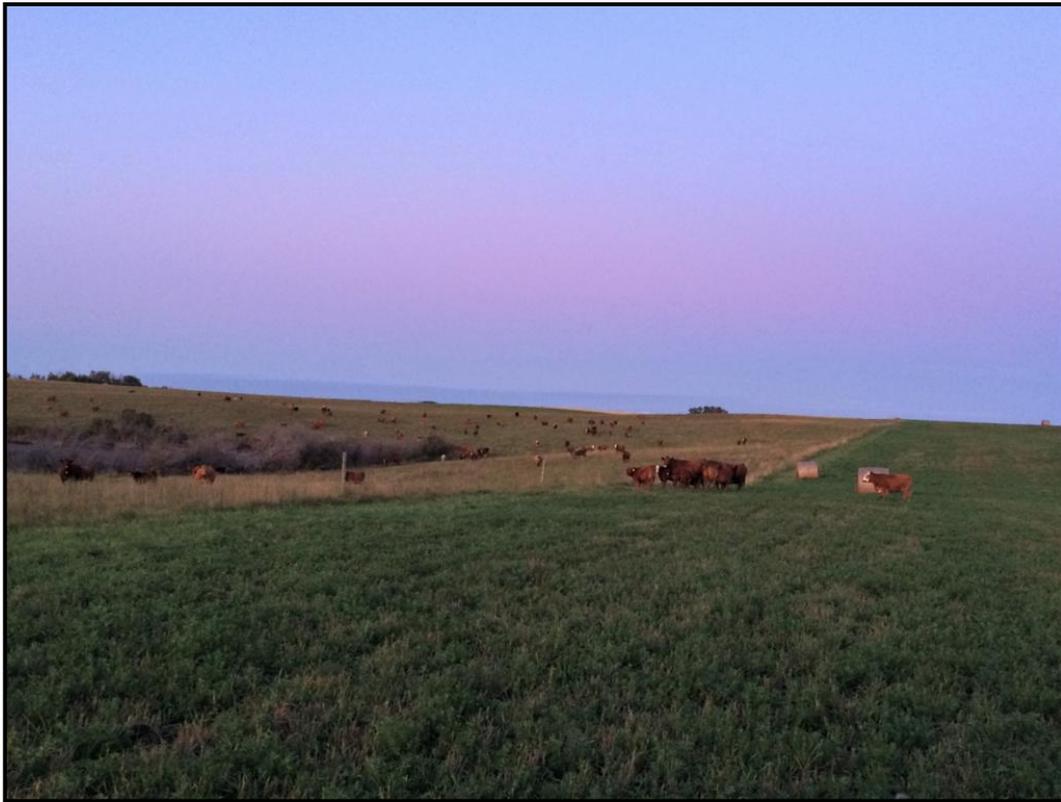




# FALL 2019 FORAGE MARKET PRICE DISCOVERY - SASKATCHEWAN



This document details the current market prices and general trends for forage products in Saskatchewan and nearby jurisdictions as at September 30, 2019. Information was obtained through a variety of methods including telephone interviews, personal interviews, electronic correspondence, social media communication as well as advertisements found on-line. The goal of this report is to provide an accurate assessment of forage prices across Saskatchewan at this current point in time. All data collected was as current and credible as possible, and each piece was carefully analyzed to determine its relevancy. The Saskatchewan Forage Council, including the author of this report, have made every effort to ensure the accuracy of the data reported, however it does not guarantee and accepts no legal liability arising from or connected to the accuracy, reliability or completeness of any material contained in this document.

A sincere thank you goes out to all of the **forage, dairy and beef producers, and those in the industry** that were contacted to share their insight and current perspectives on this valuable industry. **Thank you** for taking time out of your busy schedules!



*Cover photo credit: D. Korol*

## Table of Contents

1. Executive Summary - 4
2. Saskatchewan Forage Production Trends for 2019 - 5
3. Weeds, Field Pests and Disease Impacts in 2019 - 11
4. Saskatchewan Hay and Forage Freight Rates - 12
5. Current Saskatchewan Forage Prices by Crop and Sector - 13
  - a. Standing Hay - 17
  - b. Small Square Hay Bales - 18
  - c. Dairy Sector - 18
  - d. Organic Hay - 19
  - e. Silage - 19
6. Regional Forage Pricing Trends and Growing Conditions - 21
  - a. South Central/ South West Region - 21
  - b. South East Region - 22
  - c. East Central Region - 23
  - d. North East Region - 24
  - e. West Central/ Central Region - 24
  - f. North West /North Central Region - 25
7. Forage Price Trends in Neighbouring Jurisdictions - 26
8. Saskatchewan Pasture Rates - 29
9. References - 31

## List of Tables

- Table 1. Estimated Provincial Hay Yields (in tons/acre) as at August 12, 2019 - 5
- Table 2. Hay Transportation Costs in Saskatchewan as Reported by the Hour - 12
- Table 3. Average 2019 Forage Prices in Saskatchewan - 14
- Table 4. Average Forage Prices in Saskatchewan From 2013-2018 - 16
- Table 5. 2019 Small Square Bale Asking Prices Across Saskatchewan - 18
- Table 6. 2019 Saskatchewan Forage Crop Prices by Region - 21
- Table 7. 2019 Forage Prices in Adjacent Provinces and States (reported in CDN\$/tonne) - 28

## List of Figures

- Figure 1. Long-term Saskatchewan average hay yields (in tons/acre) from 2011-2019, as reported annually in July - 6
- Figure 2. Hay and Pasture Topsoil Moisture Conditions in April and September of 2019 - 7
- Figure 3. North American Drought Conditions at May 31, 2019 and August 31, 2019 - 8
- Figure 4. Seeded Acreage for Field Crops and Tame Hay in Saskatchewan, 2011-2019 - 11
- Figure 5. Level of Feedstocks on Farm, Surveyed August and September 2019 - 13
- Figure 6. Average Saskatchewan Forage Prices (in \$/tonne) from 2013-2019 - 16

## 1. Executive Summary

The September 2019 Saskatchewan Forage Market Price Discovery Report is a compilation of data and information collected from a diverse group of forage industry stakeholders in Saskatchewan as well as neighbouring provinces and states during August and September. This report presents a general overview of growing conditions for forage crops across Saskatchewan in 2019, as well as prices and market trends for different forage types as of this fall.

Saskatchewan producers prepared themselves for drought and poor forage yields after 2017 and 2018. Spring was cool and dry. Lack of precipitation was widespread through June across Saskatchewan, but as precipitation arrived in June, forages began to grow. Too little, too late for many. As at September 23, 2019, hayland and pasture topsoil moisture was rated as six per cent surplus, 81 per cent adequate, 12 per cent short and one per cent very short.

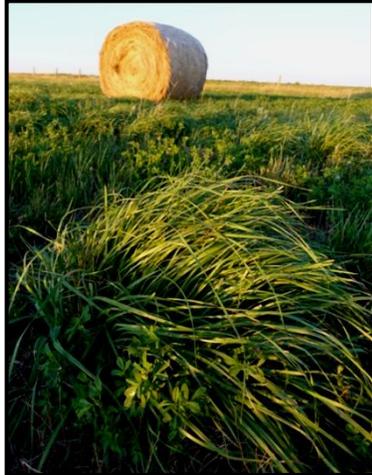
In 2019, hay production yields were once again below the long-term provincial average for the third year in a row. Yields were surprisingly average for the south west, but disappointing in the central regions. Producers have implemented management strategies such as baling intentional greenfeed, purchasing some forages, feeding straw and grain, and silaging. It is estimated 50% to 90% of livestock operations (region dependant) are using some form of annuals for winter feed.

At September 30th, prices sat mid-way between 2017 and 2018 prices. Alfalfa/grass hay is worth \$130.74/tonne- slightly lower than \$138.82/tonne in 2018. First and second cut alfalfa has a current value of \$175.98/tonne and \$181.66/tonne respectively, but very little is on offer. Grass hay has an average value of \$100.21 /tonne, significantly lower than in 2018 (\$126.63/tonne) Greenfeed is currently calculated to have a weighted average of \$125.40/tonne, about \$12/ tonne less than in 2018. Straw is valued at \$65.36/tonne- higher than the last two years, but very little crop has been harvested to flood the market to lower the price to the same 2018 and 2017 price range (\$55/tonne). The majority of buyers and sellers continue to utilize electronic listings by means of initiating a non neighbour-to-neighbour transaction. Less early season hay auctions were advertised in 2019 compared to 2018.

Alberta was hit with widespread early drought followed by near continual rain over the summer, causing quality issues. Manitoba producers are experiencing widespread drought and low forage yields. The northern counties in North Dakota are still suffering drought and low forage production, but Montana forages have returned to more normal production levels and prices.

## 2. Saskatchewan Forage Production Trends for 2018

By the end of April, forage users in the central and southern regions had estimated that the 2019 forage production would be low. Low forage carryovers were seen on farm going into the spring. Many producers took to grazing hay fields early when there was no pasture growth. Others planned to hold



off haying as long as possible to try for tonnage over quality. Planned greenfeed and planned silage was seeded across the province by both mixed producers, straight cattle producers, and straight crop producers.

The Saskatchewan Ministry of Agriculture reported below average perennial forage yields for hay in 2019 across the province as shown below in Table 1. Long-term average yields by crop are displayed in Figure 1. 2019 saw the second lowest average forage production in nine years. In the low production years of 2015 and in 2017 late spring frost was a factor in depressed yields, while 2018 yield were depressed by early spring drought and heat. Greenfeed yields were above average.

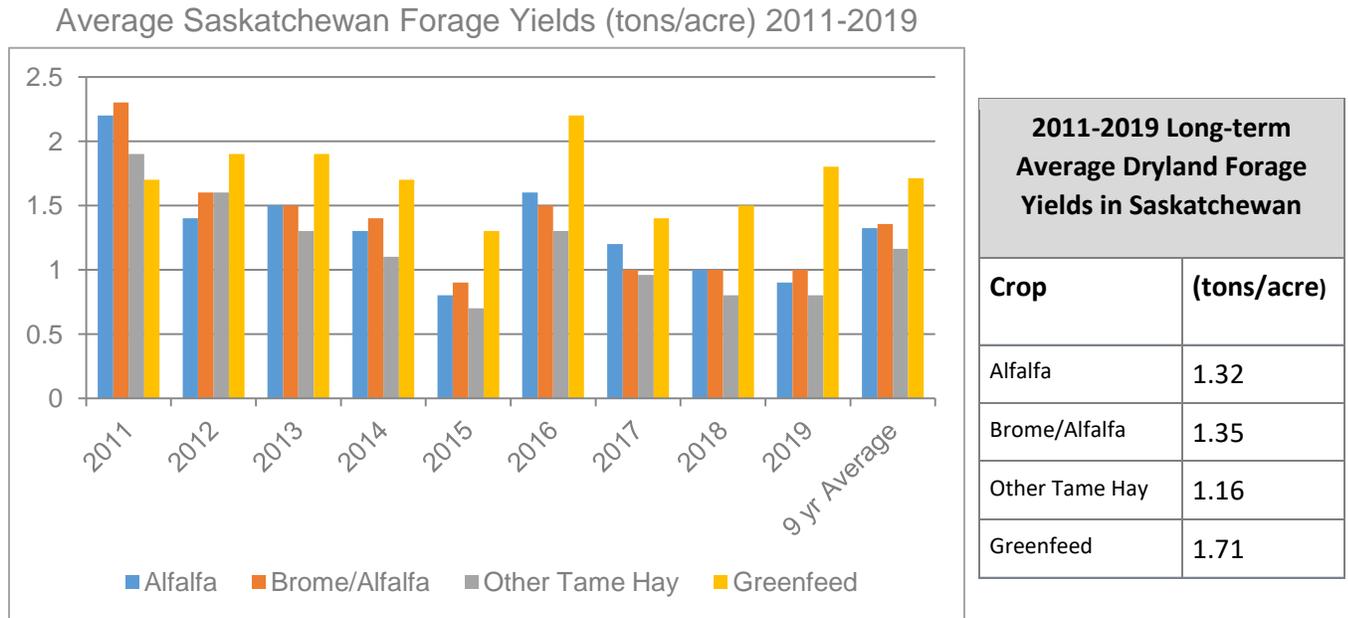
**Table 1. Estimated Provincial Hay Yields (in tons/acre) as at August 12<sup>th</sup>, 2019<sup>^</sup>.**

2019 Provincial Forage Yields (tons/acre)		
Crop	Dry Land	Irrigated Land
Alfalfa	0.9	2.4
Brome/Alfalfa	1.0	2.2
Other Tame Hay	0.8	1.9
Wild Hay	0.7	1.2
Greenfeed	1.8	3.2

Data source: Saskatchewan Ministry of Agriculture 2018 Crop Reports.  
<sup>^</sup> - Due to later hay harvest (only 20% cut at July 16, 2019), August 12, 2019 yield reports were used instead of July reports for 2019.

Regionally, the hardest hit areas were the west central with yields of 0.6-0.8 tons/acre and the south east and east central with yields of 0.9 tons/acre. Early seeded greenfeed yield reports indicated lower yields (1.5- 1.6 tons/acre) in the central regions and average to above average yields in the other regions (1.7 to 2.6 tons/acre). Yields from late seeded greenfeed is anticipated to be higher due to August and September rains, but many of these crops are still standing. Of the past nine years, the four worst yielding years for perennial forages are contained within the last five.

**Figure 1. Long-term Saskatchewan Average Hay Yields (in tons/acre) from 2011-2019, as Reported Annually in July<sup>^</sup>.**



Data sources: Ministry of Agriculture Crop Report, 2019; Saskatchewan Forage Council 2018 Forage Market Price Survey.  
<sup>^</sup>- due to later hay harvest (only 20% cut at July 16, 2019), August 12th yield averages were used for 2019.

Acres seeded to greenfeed rose significantly in 2018 and then once again in 2019. Greenfeed production estimates of 1.8 tons/acre at August 12th (Ministry of Agriculture, 2019), were slightly above the provincial long term average of 1.7 tons/acre. The majority of forage producers were happy with greenfeed yields and felt they were average. Greenfeed yields were highly variable dependant on local moisture.

Usage of silage continues on cow/calf operations. Interest in silage bales is also strong, especially in the north east where drying has been hampered. Silage use and production is an interesting trend that the Ministry of Agriculture may find value in tracking. It continues to beg the question, will cut silage continue to be the next 'thing' like bale grazing was when hay was considered inexpensive?

Forages harvested in 2019 are of generally poorer quality due to weathering. Hay put up early mainly escaped rains, while later hay was more mature and faced weathering. Supplementation of minerals, grains, and good proteins will likely be needed for cattle. Producers, as always, are being advised to feed test. Forage Specialists are advising on feed testing and balancing rations when using greenfeed. However, some grain crop reports are coming back with ergot present (September). Currently there is no indication micotoxins or ergot will be an anti-quality factor this year. However, molds may arise dependant on moisture at baling. The Ministry of Agriculture reported that as at July 16, 2019, approximately 8% of the hay crop was baled or silaged with an additional 13% cut. In the two years previous, 70-80% was baled and/or cut already by the same time. Producers province wide are looking for a second cut or to graze many fields due to sufficient regrowth after frost hits the end of September.

Production trend influences- weather related

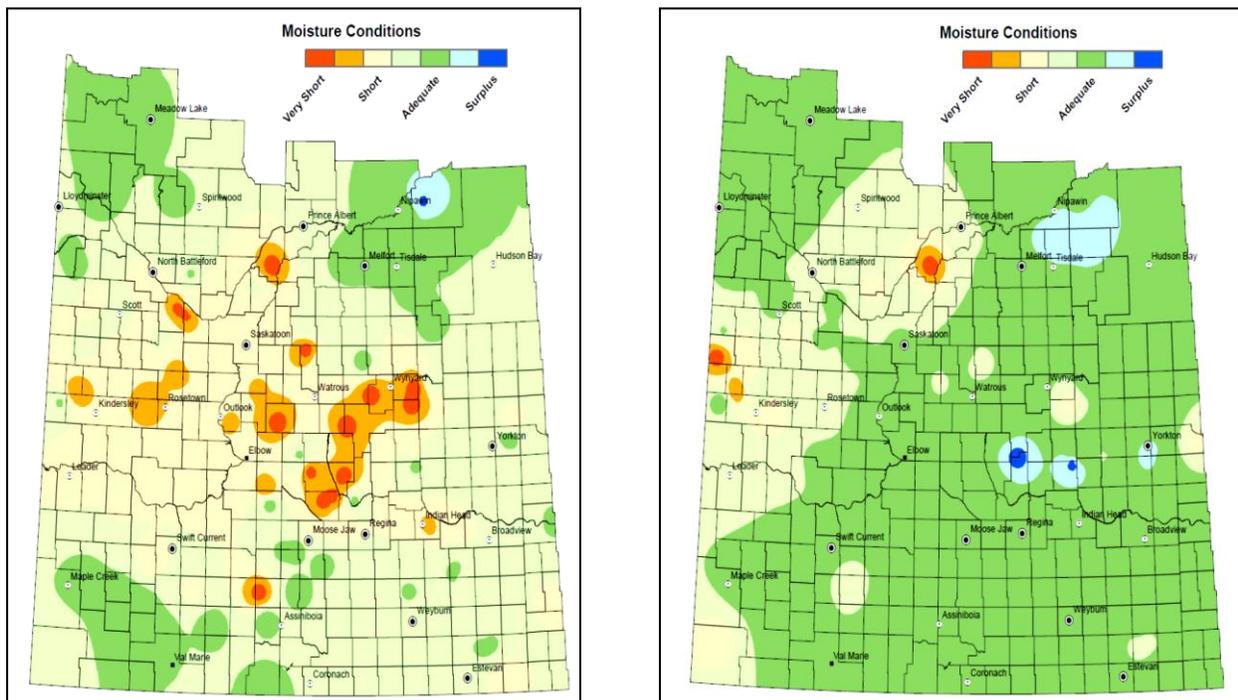
Winter weather is one of many factors influencing forage production trends. Once again, winter 2018/19 was considered cold and long just as winter 2017/18 was. Producers indicated in fall 2018 that pastures were in poorer condition going into winter generally across the province. Livestock producers faced issues in 2018 with a late turnout. The majority, where they could, were planning ahead for a later 2019 turnout also. Forages were still trading quickly in March and April of 2019 across the province as winter feed was being used up with the prolonged colder conditions.

Spring turnout, in fact, was delayed with very cool temperatures and lack of moisture to get forages growing. Take in dates were bumped back in many patron pasture coops and provincial pastures to allow for more grass growth. Many cattle were drylot fed into June.

In 2017 and 2018 low carryover contributed to the fall demand in a two-fold way: Producers who usually have carryover and may sell excess forages (increasing market supply) do not have forages to sell; and producers who count on some carryover to get them through the year do not have carryover (increasing market demand) and are entering the market as buyers. However, the shift to annual forage use over the past two years has re-aligned this demand (lower prices) for 2019.

Soil moisture conditions on hayland and pastures at the start of May were short nearly province wide. Sparse pockets of adequate moisture and very short existed (Figure 2). Hayland and pasture topsoil moisture was rated as one per cent surplus, 53 per cent adequate, 35 per cent short, and 11 per cent very short as of May 6th, 2019. As of September 16th, 2019, hayland and pasture topsoil moisture was rated as three per cent surplus, 83 per cent adequate, 11 per cent short and 3 per cent very short (Fig 2).

**Figure 2. Hay and Pasture Topsoil Moisture Conditions in April and September of 2019.**



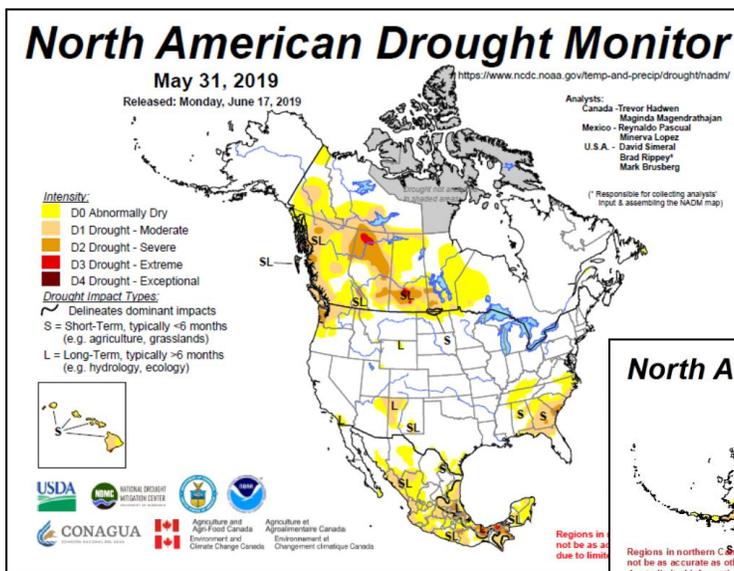
Data source: Saskatchewan Ministry of Agriculture, May 6, 2019 and September 16, 2019.

Temperatures remained low provincially during May while moisture was short and continued to become more depleted. Provincially, the conditions were not conducive to bulk matter (stem and leaf) production at the critical times in May and early June. Areas where moisture was available or precipitation fell saw better perennial forage growth.

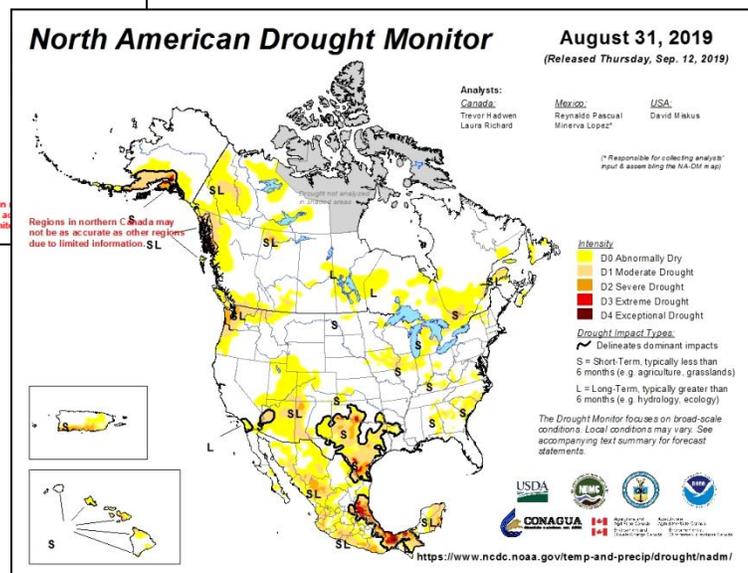
Topsoil moisture conditions remained dire (short to very short) province wide until after June 17th. By this point, most perennial forages had limited growth. Plants were beginning to reach maturity with little bulk matter growth. Perennial forage harvest was 1) either grazed or hayed early with the hope of moisture and regrowth, or 2) held off harvesting for quantity over quality.

As rains were more frequent later in July and through August, many forage crops were harvested with difficulty. The harvest was prolonged. Perennial forage regrowth, in most areas of Saskatchewan, has been sufficient due to later summer rains. As livestock come off pasture in the east central and northern regions, without a substantial amount of crop harvested for aftermath grazing, very little options may exist other than to begin feeding.

Figure 3. North American Drought Conditions at May 31, 2019 and August 31, 2019.



Data source: National Drought Mitigation Center  
 May 31, 2019 and August 31, 2019.

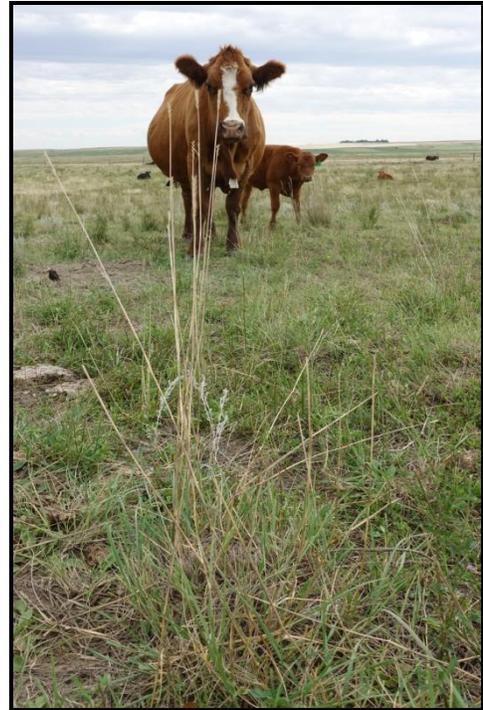


Across North America, drought prevailed mainly in Canada and touches of the northern states. Drought conditions are shown in Figure 3. Relief from drought was not seen until July for the majority of the prairies. Fall drought through Texas and the mid-west may cause a concern moving into the spring.

In areas of Saskatchewan where drought prevails, the top concern of producers interviewed is pastures and grazing for 2020. Fall moisture is easing concerns. The desire for reasonably priced perennial forage is still there. However, after utilizing annual forages more and more, producers are continually turning to annuals as a feed source.

#### Production trend influences - non-weather related

The crop harvest completion of 39% is well behind the long-term average of 62% in Saskatchewan leading up to September 23<sup>rd</sup>. The south west was only 58% complete while the north west and east central areas were only 22% complete. Widespread precipitation throughout September and through to the end of September have caused huge challenges. Widespread frost was not seen until the final days of September with snowfall. It is yet to be seen how much unharvestable crop will enter into the forage market. In 2016 there was a last ditch effort to salvage crops this way. However, in 2019, much of the greenfeed needed has been made already. Hailed crops or crops with multi-stages of growth due to poor spring germination and moisture entered the market early. Over the past 2 years, crop producers have used the forage market as a income source through straw, hailed crops, or poorer crops. Forage use, however, is now no longer above this supply.



Compounding on weather factors, as discussed in 2018, we may be beginning to see a production capability factor showing up in forage stands. Through *GreenCover*, *Ag Policy Framework*, and *Growing Forward 1* there were many acres of cropland converted to forages. The programs' cost share funding encouraged perennial seeding on nearly any class of land (*GreenCover* was an exception). As a result of the past seeding programs, we could be seeing that:

- 1) Forage stands on higher assessed land (with a higher production potential) are being returned to annual crop production once again. Marginal land with less soil production potential is staying in forages.
- 2) Forage stands previously seeded are getting old. The start of APF was over 15 years ago and GF1 was over 10 years ago. Production could be decreasing due to stand age combined with a grass increase/alfalfa die out (straight alfalfa use was restricted in these programs).
- 3) Fertility management on forage stands is not a common practice. Nutrients are a limiting factors for production as a stand ages. Yields can be 10-40% better than on fields without fertility programs.
- 4) New forage stands are most often being seeded on "marginal land" today (Forage Specialists personal comm.). Unfortunately, marginal land's ability to hold moisture and meet production goals is limited. Expectations for production should be realistic.

Once again, Canada's cattle herd decreased; 1.3% to 12.26 million head in July (Statistics Canada, 2019<sup>1</sup>). Largest declines for the second year in a row were seen in breeding cows and heifers. Producers on the prairies continue to send decently priced heifers to feed as a tool in buffering drought and forage prices. Nationally, beef heifer retention was down 4.8% from July 2018 to 637,800 heifers. Nationally, the number of beef cows decreased 1.7% after a 1.2% decrease in 2018 (still in the 3.7 million head range).

The provincial cattle herd size remained close from July 2018 to July 2019, however an approximate 0.6% decrease was seen, primarily on cow calf operations. Saskatchewan's herd decreased from 2.580 million head to 2.565 million head at July 1<sup>st</sup>, 2019 (\*note: the new form Statistics Canada numbers were used in this calculation).

The number of farms reporting cattle inventories dropped once again in 2018- this year by 0.5%. With a continued increase in cattle slaughter numbers nationally, a decrease in the cattle herd, and a decrease in farms reporting cattle, it can most likely be assumed dispersal cattle were not just absorbed into other herds.

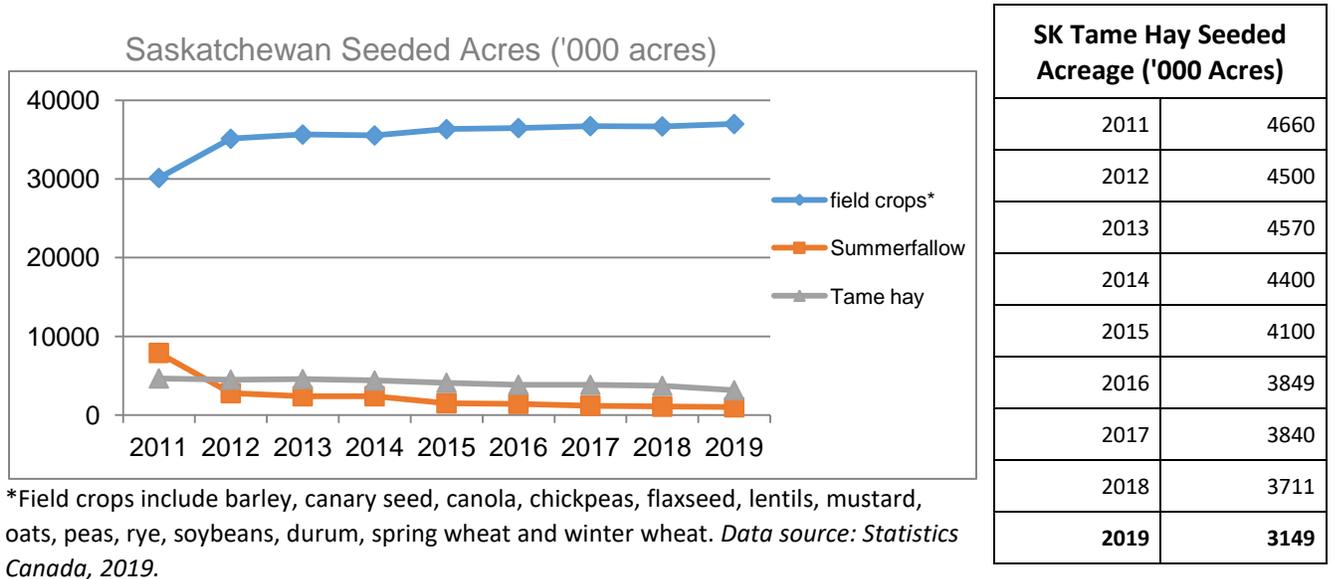
Producers interviewed indicate they are finding a new 'normal'. Some indicate that a return to more normal conditions (for example, a dry west central region) has meant less cows or more land sought, which in turn is contributing to a normalized forage demand.

In 2018, Statistics Canada revised the historic *Seeded Acreage for Field Crops and Tame Hay*. Please refer to the 2018 Report for specifics. Currently, the estimated seeded tame hay acreage for 2019 is 3.149 million acres. Although this is still an estimate, it should be noted that this is 516,000 acres less than in 2018.

Acres seeded to field crops have steadily increased. Summerfallow acres continued to decline but at a slower rate than 5 years ago. When analyzing the data, it appears about half of the lost tame hay acres have been put back into field crop production, while the other half has been converted to non-hay uses such as pasture. This was also the case in 2018, although there were less overall tame hay acres taken out of hay production.

\*Note: Statistics Canada altered the way of tabulating the cattle herd size in July 2017, thus previous year estimates were revised with the new methodology and were made available in January 2018 for usage. Additionally, revisions to numbers are made by Statistics Canada for up to a year after the release date.\*

**Figure 4. Seeded Acreage for Field Crops and Tame Hay in Saskatchewan are Displayed for 2011-2019.**



SK Tame Hay Seeded Acreage ('000 Acres)	
2011	4660
2012	4500
2013	4570
2014	4400
2015	4100
2016	3849
2017	3840
2018	3711
<b>2019</b>	<b>3149</b>

Manitoba's seeded tame hay acres have remained relatively stable (according to revised Stats Canada data) over the past 8 years. In 2019, acreage is estimated to be 1.48 million acres- a decline of 90,000 acres from 2018. Alberta, like Saskatchewan, has experienced a continued reduction in the reported seeded acres of tame hay, although at a lesser rate (4.1 million acres in 2019 from 4.325 million acres in 2018). Nationally, tame hay acres had remained level at 14.5 million acres for a handful of years until a one million acre decline now in 2019.

### 3. Weeds, Field Pests and Disease Impacts in 2019

There were no major provincial outbreaks of forage pests this past season. Although early season pests such as cutworms, wireworms, and aphids were prevalent, existing perennial stands were not specifically noted as impacted. Alfalfa weevil was not seen as a wide spread concern across regions in 2018, and once again in 2019 it was considered a minor pest. Weather stress overshadowed any pest impacts.

The grasshopper forecast for 2019 was 0-2/ m<sup>2</sup> across the province with extremely small pockets of very light (2-4/m<sup>2</sup>) infestations between Weyburn and Estevan based on fall 2018 counts (SCIC Provincial Grasshopper Map, 2018). No significant infestations were noted in forages in 2019 by Provincial Specialists. The cool damp August and September will continue to assist in keeping populations low.

There were no notable reports of diseases affecting perennial forage crops at the Ministry of Agriculture Crop Protection Laboratory once again in 2019. In general, herbicide carryover, early insect damage, fungus' and environmental stress were the most common issues for annual crops. Very little impact would be seen on forage quality.

Richardson ground squirrel infestations continue to increase in pockets across Saskatchewan. Early losses in corn crops were seen in the west/ south west areas while drought conditions persisted. These appear to still be localized but as seen in the past, under warm and dry spring conditions that carry through to fall, colonies can become a nuisance to forages in a short amount of time. Producers in areas of infestations have noted they are using shooting, burrow collapse and poisoning to control colonies.

There continues to be few systemic weed problems reported in forages. Localized infestations of weeds such as Canada thistle, narrow-leaved hawk's beard, absinthe, kochia, foxtail barley, leafy spurge, downy brome, scentless chamomile, and toadflax may occur. As forages were purchased and transported from afar by producers in 2017 and again in 2018, an increased level of invasive species may be spread in purchased forages. Less movement is expected in 2019, but areas where forages were fed in 2017 and 2018 should be monitored.

In Saskatchewan, there are currently 14 reported herbicide resistances within weeds: cleavers, kochia<sup>2</sup>, wild oats, chickweed, shepherd's purse, wild and ball mustard, redroot pigweed, Russian thistle, stinkweed, hemp nettle, Persian dandelion, and green foxtail (Crop Production News, 2017). Healthy perennial forages can generally outcompete these species.

#### 4. Saskatchewan Hay and Forage Freight Rates

Hay transporters have steady work as harvest continues. Wet fall conditions now will slow hauling. Fuel surcharges (7-10%) or mobilizations rate (from \$300-\$400/ job) to cover fuel are once again common as clear diesel sat at 113.1 to 119.9 cents /L in Saskatchewan during September (www.nrcan.gc.ca). An additional cost consideration transporters are now looking at is how to deal with Carbon Taxation. One operator noted for every \$2500.00 in fuel purchased, the carbon tax of \$125 is applied to his cost.

Hay transporters continue to further standardize how they provide rates to potential clients. Most provide a flat hourly rate and a longer distance rate.

**Table 2. Hay Transportation Costs in Saskatchewan as Reported by the Hour**

Condition of Measurement	Rate average
Self loading/unloading units	\$2.40/bale/loaded mile*
Hourly rate (shorter distances)	\$162.50/ hr
<100 miles distance, 34-37 bales/load	\$7.81/ loaded mile
>100 miles distance, 34-37 bales/load	\$6.88/ loaded mile*

\* a mobilization fee or empty travel fee may be on top of this rate.

According to the Government of Saskatchewan's 2018-19 Farm Machinery Custom and Rental Rate Guide for self-unloading PT bale movers (best suited for short hauls), an approximate hourly custom rate is \$187.77/hr. **Self-picking costs vary from \$1.50/bale/mile to 3.29/bale/mile for an average of \$2.40/bale/mile.** A mobilization fee may be charged on top of this rate. It should be noted that in years of low production/high demand self-loading units do not accurately depict what it costs to transport hay to livestock on a provincial scale.

## 5. Current Saskatchewan Forage Prices by Crop and Sector

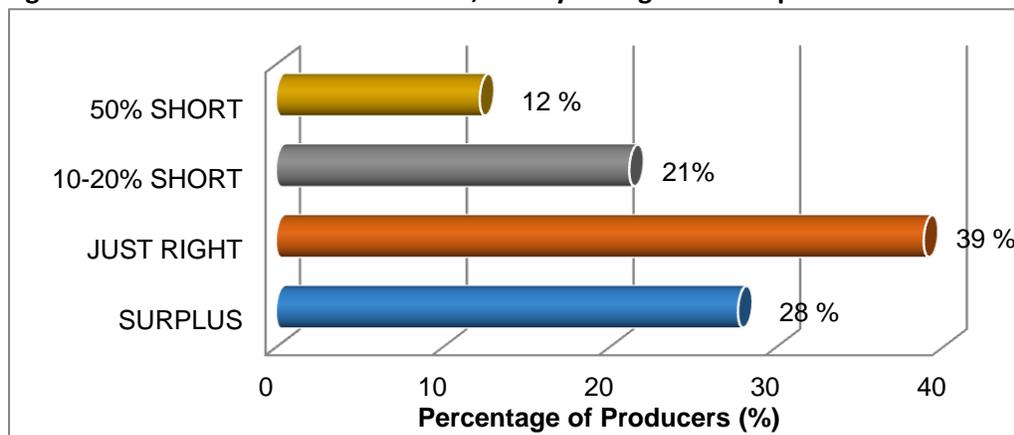
Saskatchewan producers who are buying and selling forage, conduct the majority of their transactions between neighbours or through acquaintances instead of listing publicly. The electronic listing service Kijiji has become by far the most popular means of buying and selling on farms across Saskatchewan over the past 5 years; the number of hits on a hay advertisement can easily reach over 100 in a day. Through September 2019, the majority of listings of average priced forages in a week on Kijiji. Social media, print advertising and radio 'trading posts' are also used but far less than the other two means.

In 2019, perennial forage crop yields were below normal in most areas, closely resembling yields experienced in 2018, 2017 and 2015. Some areas of average perennial forage yields were seen. Greenfeed yields were close to average or above average in most areas. Provincially, the potential for poor spring growth on pastures in 2020 continues to be most alarming, as pastures generally have little carryover and plants are hurting after three years of spring/summer drought. Pasture conditions are a noted concern from every region of Saskatchewan.

Forage quality is expected to be lower overall provincially as 1) many producers waited longer to cut perennial forage, hoping for tonnage resulting in more mature forage, or 2) later forage was rained on and weathered to a point of lesser quality. Two noted selling point in 2019 are "not rained on" and "baled in July". Quality will continue to be a challenge until spring for many producers province wide.

Demand for forages this season is lighter than 2018, mainly due to fair yields in the south west and a shift to annuals. To gauge supply and demand, livestock producers were surveyed via twitter and personal communications mid-August through mid-September as to their level of feedstocks before they started sourcing feed outside of their normal practices<sup>^</sup>. In 2019, 67% of respondents indicated they had sufficient forage resources. This is a stark contrast to 55% of producers indicating they were short of forages in 2018. This is a broad picture, and by no means an official survey without error. Many producers surveyed who are 'surplus' or 'just right' had planned greenfeed, silage, and planned straw. The take away from this is that livestock producers took additional steps in 2019 to ensure adequate forage supplies, which in turn will have an overall impact on market demand.

**Figure 5. Level of Feedstocks on Farm<sup>^</sup>, Surveyed August and September 2019**



<sup>^</sup> Responses were not grouped or tracked based on region and regions were not necessarily proportionally represented in survey results. While efforts were made to only have Saskatchewan producers respond, producers from outside of Saskatchewan may have responded on twitter to the survey questions.

Since 2017, it has become evident there is a ceiling value for the end forage user (beef cattle), and as such, they have moved to silage, planned greenfeed<sup>^^</sup> and straw as a feed source and have actively grown annual crops for livestock. Price information was collected through September and is reported in Table 3 (below).

**Table 3. Average 2019 Forage Prices in Saskatchewan**

Forage Type	Weighted Average Price (\$/tonne)	High (\$/tonne)	Low (\$/tonne)
Grass Hay	\$100.21	\$236.21	\$100.21
First Cut Alfalfa	\$175.98	\$214.95	\$152.63
Second Cut Alfalfa	NA**	\$270.00	\$142.86
Alfalfa/Grass mix	\$181.66		
Alfalfa/Grass mix	\$130.74	\$214.95	\$94.48
Greenfeed	\$125.40	\$134.43	\$97.98
Clover	na	na	na
Cereal Straw	\$65.36	\$91.86	\$47.24
Pulse Straw	\$88.50	\$110.23	\$55.11

*\*\*No weighted average was available; the simple average should also be considered.*

*^^ Planned greenfeed is considered a annual crop that was seeded specifically to be turned into forage and not harvested as grain. Unplanned greenfeed is a crop seeded with the intent of grain harvest but turned into forage due to hail, drought, wildlife damage or high demand by oneself/to sell.*

**First and second cut alfalfa** has a current simple average of \$175.34/tonne and \$181.66/tonne respectively, compared to \$138.82/tonne and \$183.72/tonne the same time last year. There was not enough of this class of forage produced this year to notice a trend. Supply is tight. Growers had small first cuts, and then continual moisture is resulting in growers having a hard time getting second cuts off. Quality is deminished, and where it is not, producers are looking to haylage options. It is unlikely quality is going to warrant a generally high price for alfalfa hitting the market.

Please refer to the dairy market section 5(a) for additional insight on dairy quality alfalfa not included in this section of the price analysis.

**Alfalfa/grass** hay has a current weighted average of \$130.74/tonne which falls in the middle of 2018 and 2017 prices. In 2019, forage users have generally been prepared to buffer low perennial yields by producing annual forage crops (however, quality may be an issue). Transactions are generally slower in the south west and south east than has been seen the past two falls. A number of producers in these regions who purchased last year, did not and will not be purchasing this year. Demand is still strong in the west central region for reasonably priced forages.

Upon further analysis, when anything above \$185/tonne (0.084/lbs) was removed from the calculations, the weighted average was brought to \$125.63/ tonne. The September mean price was \$153.36/tonne overall. With the high volume of wet crop still in the field, even if feeding starts early province wide, prices likely will be impacted as demand softens (substitution of salvaged crop for perennial forage).

\$10/tonne on either side of \$110/tonne (\$0.05/lbs) is foreseeable for first cut alfalfa/grass moving forwards.

**Grass hay** has a current weighted average value of \$100.29/ tonne which has fallen back into the average six year price range. Asking price may be influenced by the class of grass hay (slough, ditch, seeded), but demand is mixed. High prices are noted to be targeting select horse customers that require dry, rain-free hay and are not settled. Overall, supply is fair, with moderate sales. Prices are anticipated to hold steady through the fall on rain-free grass hay.

**Greenfeed** is currently calculated to have a weighted average of \$125.40/tonne. Producers across the province indicated they seeded a large quantity of planned greenfeed<sup>^^</sup> in preparation for poor perennial forage yields. A number of haled crops or cereals that were reseeded late on failed canola stands entered the market as neighbour to neighbour sales.

Very few listings of greenfeed were seen relative to alfalfa/grass mixes. This is likely due to one of three reasons 1) early greenfeed is being used on farm and not sold, 2) late greenfeed is still in the field, unable to be put up, or 3) neighbour to neighbour trades occurred early.

In 2016, the quantity of unharvested crops taken as greenfeed 'saved the day'. September 2016 prices sat at \$95/tonne, and then lowered thereafter. 2019 greenfeed baled early, before the rains and snow, should hold in value, but salvaged crops could see lower (\$80/ tonne range) IF they can even be taken off the field as sprouts and poorer quality are likely. Haylage is an option that many people surveyed are actively looking into.

**Cereal straw** has become a common alternative feedstuff province wide and is anticipated to be used once again this winter as feed barley is reasonably priced to use with straw (\$3.75/bushel barley is available). Straw is currently priced at \$65.36/ tonne- \$10/ tonne higher than in 2018. This price is not related to the supply available out there, but more so to grain producers continuing to hope to make additional profits and the general cost of making a bale at \$14.82/bale<sup>^^^</sup> or about \$30/ tonne plus loading. Likely as harvest can progress, straw prices will fall to 2017/2018 levels as demand is satisfied. Prices could fall further if crops are salvaged and demand shifts to those forages. Feedlots note that many of them pre-arranged straw prior to July, when general crop failures were anticipated. The cost of trucking 1000 lbs straw bales continues to limit the trucking distance and settled price.

<sup>^^^</sup> while the custom rate guide specifies \$14.82 for a 1800 lbs bale, most would estimate making a straw bale still to be in the \$14/ bale range as little inputs are different between the two bale weights.

**Pulse straw** saw an average of \$88.50/tonne on par with the 2018 value of \$87.48/tonne. Neighbour to neighbour sales are most common with this commodity. The price may soften as more of this commodity becomes available.

**Yellow sweet clover** hay is no longer commonly found across the province. Previously, some organic plow down sweet clover crops may have found their way into the forage market or it was seeded as a short term forage. Today, annual cereal crops are turned to as the preferred solution for feed needs. There were no listings this year.

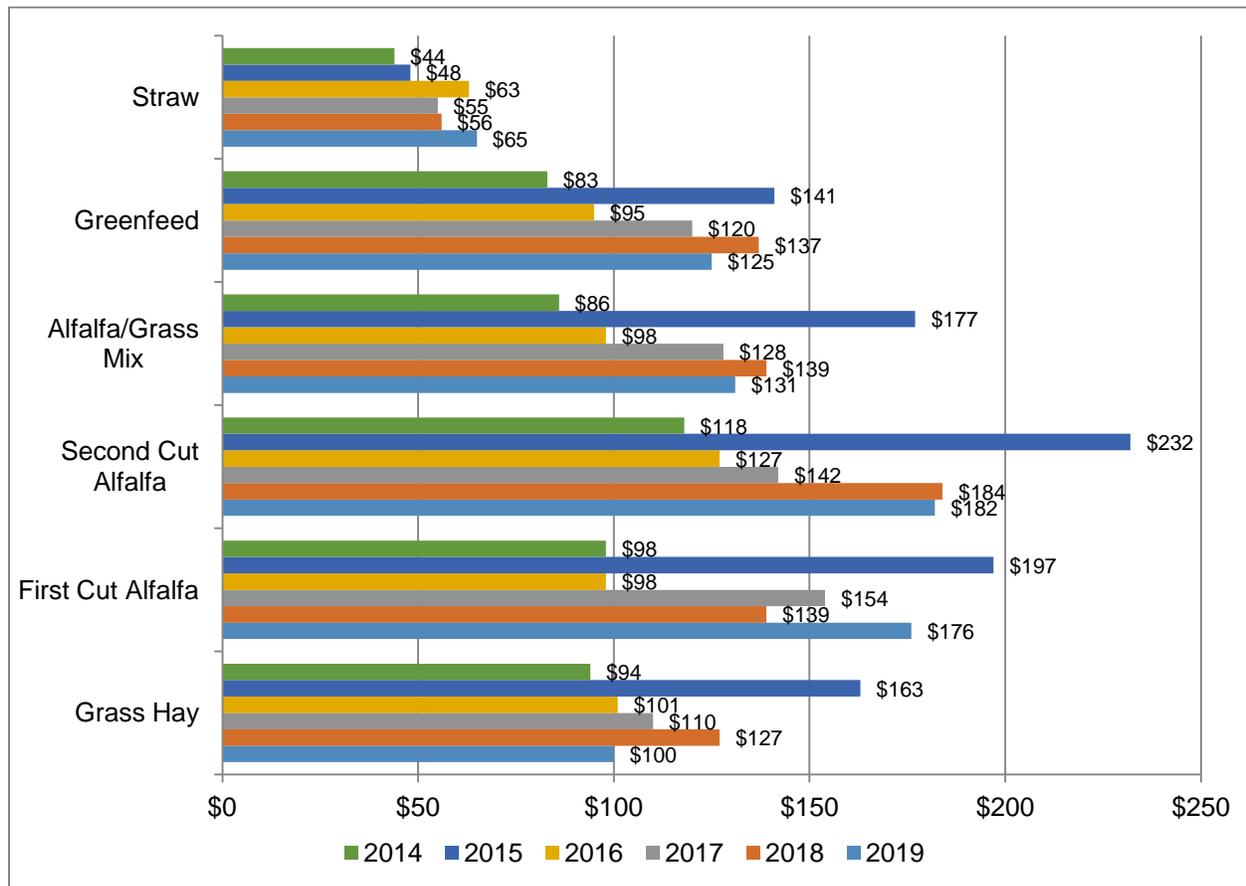
A comparison of forage prices from 2013-2019 can be viewed below in Table 4 with a graphical analysis for 2014-2019 in Figure 5 found following the table.

**Table 4. Average Fall Forage Prices in Saskatchewan from 2013-2019**

Forage Type	2019	2018	2017	2016	2015	2014	2013
Forage Type	Average Price (\$/Tonne)						
Grass Hay	\$100.21	\$126.63	\$110.013	\$100.66	\$162.98	\$94	\$82
First Cut Alfalfa	\$175.98	\$138.82	\$153.89	\$97.78	\$197.23	\$98	\$98
Second Cut Alfalfa	\$181.66	\$183.72*	\$141.92	\$127.36	\$232.33	\$118	\$111
Alfalfa/Grass Mix	\$130.74	\$138.80	\$127.93	\$97.98	\$177.35	\$86	\$81
Greenfeed	\$125.40	\$137.01	\$120.37	\$94.60	\$140.96	\$83	\$79
Straw	65.36	\$55.63	\$54.80	\$63.11	\$47.99	\$44	\$46
Yellow Sweet Clover	-	-	\$87.87	-	192.90	-	-

Data Sources: Saskatchewan Forage Council, 2013, 2014, 2015, 2016, 2017, 2018 & 2019.

**Figure 6. Average Saskatchewan Forage Prices (in \$/tonne) from 2014-2019**



### **A) Standing Hay**

Standing hay agreements are often on a mutual, long-term basis, between neighbours. Organizations with a habitat conservation focus such as Environment Canada, Ducks Unlimited Canada, Saskatchewan Wildlife Federation, and Nature Conservancy of Canada often control large tracks of land that are tendered for hay yearly, bi-yearly or on an as-needed basis. Standing hay rates were actively sought from producers across Saskatchewan known to purchase standing hay. They also noted rented stands being converted back into cropland.

There are three common agreements for standing hay:

*1) the buyer takes responsibility for cutting, baling and hauling the forage and then takes a previously agreed upon share of the hay. 1/3 share or a 50/50 share is common.*

*2) a price per acre.* The buyer is responsible to match their per acre offer in accordance to what they gauge production will be. This is more common with habitat conservation organizations or government. The 2019 lease rate (crown) for hayland was \$17.00/acre. It is estimated habitat conservation organizations offer a minimum of 12,000 acres of standing hay yearly. 2019 price per acre varied greatly from \$10.00-\$85.00/acre across the province (matched 2018). There is no trend regionally.

*3) sold on a per weight basis (i.e. 15% dry matter) after the hay was cut, baled, and weighed by the purchaser.* In previous years, long-term agreements stood, and price remained constant. In 2018, prices crept up. Many purchasers indicated they paid more so that they were not pushed out of the market, and so that the land was not turned back to annual crop production. The rates set last year remained for 2019 with producers surveyed as most had recently negotiated long-term agreements. Rates from across the province averaged \$0.033/lbs with the range being \$0.005- \$0.068/lb. The mean price was \$0.0288/lb. Assuming these stands yielded the 2019 provincial average of 1.0 tons/acre (equivalent to 0.91 tonnes/acre), this would result in a per acre price ranging from \$10.00-\$136.00/acre.

2019 saw standing greenfeed as a traded commodity of note. Settled prices ranged from \$0.035-\$0.05/lb across the province. Due to good supply in the south west and marginal supply elsewhere, price trends were not noted with any specific area.

The cost of cutting and baling hay should be factored in when evaluating standing forage compared to baled forage. The approximate cost of cutting\* is \$14.46/acre and the cost of baling\* is \$14.82/1800lbs bale (Saskatchewan's 2018-19 Farm Machinery Custom Rate and Rental Guide). For a crop that yields the provincial 2019 average of 1.0 tons/acre, the cost of cutting (\$14.46/acre) and baling (\$16.47/acre) would be approximately \$30.93/acre in addition to the cost of the standing forage. Cutting and baling forages is costly, mainly due to the high cost of equipment.

\* The cost of cutting is the average of 14' disc & 14' sickle conditioner custom rate. Bale is 5'x6' and includes \$1.25/bale netwrap.



### B) Small Square Bales

Small square bales are most often sold on a per bale basis. Small square hay bales typically weigh 50-70 lbs and straw bales weigh approximately 40 lbs. The bales may be purchased by small-scale farmers, or recreational or acreage owners feeding small numbers of livestock.

Table 5 demonstrates the average prices for small square hay and straw bales on a per bale basis.

**Table 5. 2019 Small Square Bale Asking Prices Across Saskatchewan**

Forage Type	2017 Average Price (\$/bale)	2018 Average Price (\$/bale)	2019 Average Price (\$/bale)
Alfalfa	\$6.25	\$7.39	NA
Alfalfa/Grass	\$6.20	\$6.52	\$7.07
Grass	\$5.30	\$5.19	\$8.40
Unspecified Hay	\$5.00	NA	NA
Straw	\$2.94	\$3.12	\$3.20
Organic Hay	\$5.92	* straw \$2.50	NA
Greenfeed	\$6.50	\$4.67	\$7.50

There were more mixed alfalfa/grass bales for sale with a higher listed price in 2019 than in years previous. Likely, many sellers are hoping to capitalize on the needs of purchasers. However, there was notably less buyers looking for square hay bales this year and less horses for sale 'because of no forage supply' in September.

### C) Dairy Sector

Producers continue to make very strong indications annual forages are relied upon heavily. The strong shift to silage use where possible continues. See Section 5(e) regarding silage yields and pricing. Silage pricing (\$/mt) is consistent across all end-user industries. Those producers who utilize high quality alfalfa have had a more difficult time securing it in 2019 due to rainy weather during the second cut season in Saskatchewan. This is supported by the lack of listings coming out of the irrigation districts. However, it should be noted that long-term purchasing relationships dominate the industry.



Dairies in southern regions (those that are traditional alfalfa users) are reporting premium alfalfa at \$200-270/tonne. Second cut alfalfa out of Alberta is averaging \$234/ tonne. With the severe drought conditions being seen in Manitoba, the ability to draw premium alfalfa from that province appears limited. Dairy quality hay out of Montana was trading at \$220-240/ tonne USD for the week ending September 13th.

Dairy forage is often sold based on the Relative Feed Value (RFV) as reported in the nutritional analysis. Minimum RFV for dairy use is 140 (or greater). The \$/RFV of alfalfa has been climbing steadily

over the past number of years from \$0.80/RfV pre 2015, to \$1.42-1.70/RfV in 2017. In 2018, industry contacts indicated that dairy quality hay is worth approximately \$1.50/RfV but upwards of \$2.00/RfV unit delivered has been seen. This holds true into 2019. Converting that to \$/tonne is demonstrated in the following calculation:

$$140 \text{ RfV} \times \$1.50/\text{RfV unit} = \$210/\text{ton or } \$231.00/\text{tonne}$$

It should be noted that silage values cannot be converted to a RfV as RfV is based on ADF and NDF, and is not able to take into consideration the additional starch that a silage provides. It is therefore only a useful number to compare different alfalfa products when paying for quality. Dairy sector sellers and buyers continue to have long standing relationships.

#### ***D) Organic Hay***

Many producers who are certified organic in grain production do not raise their livestock as certified organic, hence a lower demand for certified organic forages. Additionally, most perennial forage is grown 'organically' within the province as-is. Organic listings in August fell at \$157.38/ tonne were. In 2016, it was estimated that an organic forage would command a 25% premium over a conventional forage. If applied to 2019 conventionally produced grass/alfalfa forage (\$130.74/tonne) the organic product would be priced at \$163.42/tonne- still within the price range of conventional forages.

The trend of cocktail cover crops within the organic sector is continuing. These cover crops are multi-species mixes of various annual or biennial plants. Many of the plant species involved are not traditionally found in Saskatchewan, but have a significant forage value. Producers with cover crops are 1) only plowing in cover crops, 2) having the crop custom mob-grazed, or 3) taking on livestock for grazing themselves. Industry representatives indicate cover crop grazing rates are settling in the \$1.00/day/pair range with many different arrangements for fence, water and animal management occurring.

#### ***E) Silage***

The majority of growers were satisfied, or pleasantly surprised with the 2019 silage crop. Where growers received timely rains yields were decent 6-11 ton/acre (5.4-10 tonne/acre) or higher. In areas including large areas of west central Saskatchewan, and pockets elsewhere, when timely rains were not received yields were in the 3.5-5 ton/acre (3.17-4.5 tonne/acre). Cereal silage yields are overall reflective of what early seeded greenfeed yields are in an area. The corn silage has yet to begin across Saskatchewan at this time. No corn silage yields or prices are available to report. A request should be made for the provincial crop report to begin tracking silage yield with the other forage yields recorded.

The trend for cow/calf operations to include silage as a primary forage source has continued. Those in the industry note producers with large cow herds (250+), or mixed operations (own large equipment already), or those in areas where land prices are high are turning to silage as an option. As this trend continues, determining how to set a trading value on the commodity when it is not easily transported will continue to be a challenge.

2019 saw a continued strong interest in haylage- baled and wrapped high moisture feed. Poor conditions to put up dry feed has caused producers to turn towards this practice in greater numbers in 2019. Producers in late September still indicated they would be searching out haylage services for the coming weeks. As this commodity is easily transported and traded, its values might be more easily tracked.

Silage values are reported as being priced in the pit, on a wet metric tonne basis (60-65% moisture). The cost of growing a crop for silage, including inputs such as seed, fertilizer, and crop protection products, as well as the cost to harvest, haul, pack and cover silage, all need to be factored in when developing a current valuation of silage in the pit or pile. Values provided below were used by producers to calculate costs of rations or net worth or, in some cases, to work back payment to growers for standing silage. As such, it can be assumed that the following figures are an accurate depiction on 2019 cost of silage.

In 2019 cereal silage (i.e. barley, or mixed grains) to have an average value of \$69.00/tonne at the pit. There is no regional price trend. There are no alfalfa silage or corn silage crops to report at this time- the late frost has left both in the field still. Canfax (Canadian Cattlemen's, 2019) reported Alberta barley silage at \$68.13/ton (\$75.10/tonne) in September.

In 2019 producers were surveyed as to the custom cost of silage. Costs of chopping, hauling, packing range from \$12.12- \$16.53/tonne with swathing extra. Other outfits offer all-in services for \$13.50- \$25.00/tonne.

Two other methods of silage valuation are used by producers. In previous years, some producers gauged cereal silage values off feed barley prices by multiplying bushel price by 12. The Lethbridge feed barley price average for the week ending September 28<sup>th</sup> was \$197.50/tonne or 4.30/bushel\* (Alberta Agriculture, 2019). Using the rule of thumb to estimate, barley silage would be valued at \$51.60/tonne. This is below the reported average in 2019 but still falls within the reported range. In 2017 and 2018 using this factor it produced a figure above the average price reported.

Others suggest that working a silage value back from the greenfeed going price may produce a more realistic value.

Hay to silage conversion= (100-15% moisture in hay) / (100- 65% moisture in silage)= 2.428  
= \$125.40 per tonne for greenfeed / 2.428 conversion to silage factor  
= \$51.64/tonne value

Using this valuation method produces a silage value matching the first method. When \$15/ tonne of additional inputs is added to the figure, an estimate of \$66.64/tonne is reached<sup>^^^</sup>.

<sup>^^^</sup>However, it is yet to be determined if this method should take into consideration additional costs of chopping and hauling on top of this value (Noting that swathing costs are both incurred in silaging and baling and the cost of baling is likely similar to the costs of packing a pit).

## 6. Regional Forage Pricing Trends and Growing Conditions

The variation in price listings by region in 2019 are noticeable. The price pattern follows the production trend (high prices in areas with low production). Regions in order from general highest asking price to lowest are: west central & south west, north west, followed by eastern regions. A general observation is that there are very few listings in the north west. There are also very few listings in north east Alberta (adjacent). Producers in the area have stated haying has been difficult to complete and generally sales are neighbour-to-neighbour. Table 6 demonstrates the price variability according to region across Saskatchewan.

**Table 6. 2019 Saskatchewan Forage Crop Prices by Region (simple average)**

Region of Saskatchewan	\$/Tonne (number of listings)				
	Alfalfa*	Grass	Alfalfa/ Grass	Greenfeed	Straw
South West & South Central	\$209.42	\$117.58	\$177.83	\$124.93	\$77.16
South East	\$176.37	No listings	\$144.86	\$132.28	\$61.70
East Central	\$187.39	No listings	\$148.16	\$110.23	\$68.07
Central & West Central	No listings	\$193.01	\$161.27	\$134.42	\$76.49
North West	\$152.63	\$105.82	\$152.12	\$102.88	\$66.14
North Central & North East	\$152.63	\$100.21	\$143.44	\$97.98	\$66.71

*\*includes both first and second-cut alfalfa*

### **A) South Central/South West Region**

The dry cool start to the 2019 growing season saw slow growing hay crops. Annual emergence was slow. Most producers in the region held off haying for hope of quantity over quality. Haying was significantly later than normal. June rains saved annual forages and helped with bulking up and then regrowth in perennial forages. Alfalfa/grass yields averaged 1.2 tons/acre compared to 0.7 tons/acre in 2018. With the excess fall moisture some producers are looking to second cuts, but wet weather is persisting. Greenfeed yields in the south west and south central averaged 1.9 tons/acre. Due to the later haying season, feed quality across the regions is still being tested.

Alfalfa weevil was not seen in the region again this year. The cool spring limited grasshopper prevalence and damage.

Pasture turnout was late as spring growth was slow. There was low hay inventory at the end of feeding this spring, but producers had planned ahead in general with greenfeed acre increases. Forage users in the south west were a bit short to in a surplus situation after greenfeed was put up. Excess forage is being used locally or is being traded northward. A cold winter will generally put the area in a demand situation again.

Perennial hay is reported on average at \$177.83/tonne and greenfeed at \$155.51/ tonne. Trading is light on higher priced forage. Movement into/out of Montana is virtually non-existent in 2019. Standing cereals priced early in the growing season were priced in the \$0.05/lb range.

There is a strong trend regionally of forage users turning to grazing or haying annuals and mixed cover crops. An estimated 25-50% of winter forage use is coming from annuals on 80% of operations in the south west/ south central region. Traditional perennial forage users are seeking out annual cropland to rent for greenfeed production. Unproductive perennial forage acres are being put back into annual crop production.

At September 23rd, pasture conditions are rated as 13 per cent excellent, 50 per cent good, 29 per cent fair, seven per cent poor and one per cent very poor for the south west (Ministry of Agriculture, 2019). More moisture and rest are needed generally as pastures will continue to struggle to recover.



### ***B) South East Region***

The south east region started out with very poor soil moisture which persisted into late June. Haying was later than normal in general. Those waiting to hay until late July saw some weather delays. Planned greenfeed has become a staple forage produced in the region. Alfalfa/grass yields came in at 0.9 tons/acre- half a ton an acre lower than 2018. Greenfeed yields were once again adequate at 2.1 tons/acre average.

Alfalfa weevil was not a widespread concern in 2019. Moisture dependant diseases (ergot and fusarium) is just beginning to be reported in some crop samples (late September), and could become a quality factor to watch for in the region.

Carryover on-farm was low coming out of winter 2018/19. Producers indicated forage supplies were 'just right' going into September with greenfeed accounted for. Greenfeed and straw will continue to make up the difference on-farm where perennial forage yields were short. It is estimated that at least 50% of winter forages for livestock are annual forages in the south east region.

September hay prices are averaging \$145/tonne in the south east region, which is slightly higher than the \$139/tonne seen in 2017 and 2018. Little greenfeed was listed. Due to poorer growing conditions elsewhere, some forages could be pulled out of the region to the east central region, western Manitoba or northern North Dakota. Forages are priced to compete with canola, wheat and lentils for acres in the region. Standing cereals priced early in the growing season were priced at \$0.04/lb.

The amount of crop that will be salvaged for feed is expected to be high in the coming weeks with saturated fields, and only 40% of the crop harvested at September 23rd. Sprouting is noted already. Demand from drought stricken areas of Manitoba and North Dakota may be seen.

In the south east region land capable of annual crop production has already been converted away from perennial forages and is not being put back into perennials. Mixed producers, and even straight livestock producers have turned to relying on annuals for winter forage. Silage usage is increasing year over year. Pasture conditions have improved in the region due to August/September rain and are now rated as 26 per cent excellent, 50 per cent good, 15 per cent fair and nine per cent poor (MOA, 2019). Movement of livestock to crop aftermath will be critical for the continued recovery of pastures.

### ***C) East Central Region***

Pastures were grazed hard in the fall of 2018, which left little for the start of 2019. Moisture was also lacking in the east central region through to late June. Many crop producers saw canola fields written off early (frost, drought, flea beetles). Some areas started to receive adequate rainfall in late June, but at September first, others were still dry. Widespread alfalfa weevil infestations were not seen.

September has been excessively wet for most in the east central region. Moisture limitations year after year are not something the region is generally accustomed to. Alfalfa/grass yields for the region averaged 0.9 tons/acre in 2019 ( compared to 1.3 tons/acre in 2018 and 0.9-1.1 tons/acre in 2017). Early greenfeed averaged 1.6 tons/acre.

Forage quality in the east central region is mixed depending on when hay was cut and if producers waited longer to hay in hopes of more tonnage. Late greenfeed, mainly seeded on canola that did not come up, is expected to yield over 2 tons/acre, but will be a challenge to put up with the rainy conditions seen through September.

Asking price for alfalfa/grass hay averages \$148.16/ tonne, with most listings sitting right in this average range. Trade is fair. Standing greenfeed is reported at \$0.035/lb. Earlier fall feeding and a later spring feeding period are expected again in 2019/2020.

Pre-planning for 2019 has resulted in most producers being only '10-20% short' on feed. Livestock producers in the east central region did plan ahead and most seeded planned greenfeed or crops that could be taken as greenfeed. Silage usage continues to grow across the region and haylage is being seen this fall.

Pasture conditions were rated at three per cent excellent, 46 per cent good, 36 per cent fair and 15 per cent poor at September 23rd (Ministry of Agriculture, 2019). While September rains have improved topsoil, pasture conditions remain without much carryover- similar to 2018. Many livestock producers who rent seeded pasture in the region are finding pastures are being converted back to canola production, leaving the livestock producers even shorter on pasture. Pasture is at a premium for many.



#### ***D) North East Region***

Spring started slower than normal in the north east region. Many producers continued to supplement herds on pasture. Rains came to the eastern side of the region in time for forages to benefit. Areas around Prince Albert fought low moisture conditions year-long. Harvest conditions were generally good early, but producers who waited to harvest later were still fighting to finish haying at September 1st due to rains. Producers felt that yields were below average for the region. Alfalfa/grass yields averaged 1.0 ton/acre.

A high percentage of producers are expected to use planned greenfeed this year. Greenfeed yield estimates were 2.6 tons/acre at August 15th. The current asking price for alfalfa/grass is \$143.44/tonne, with a high number of listings. Good quality hay is expected to be in shorter supply in the region, so prices may hold for this class of forage. With high greenfeed yields, some producers may be selling good quality alfalfa/grass they now have as surplus in hopes of capitalizing on the potential market. Poor harvest conditions and later crops may result in some late annual crops being salvaged and baled. Haylage and silage use continues to grow.

Pasture conditions are rated as 59 per cent good, 31 per cent fair and 10 per cent poor at September 23rd (Ministry of Agriculture, 2019). Concerns of limited growth continue across much of the region, with some producers supplementing cattle or moving cattle earlier than normal.

#### ***E) West Central /Central Region***

The west central and central region experienced spring moisture stress and cool conditions that persisted into June. The widespread lack of precipitation once again in 2019 resulted in poor forage yields, spotty annual crop emergence, and pastures in tough shape. Haying was started later than normal and then weathering (showers and humidity) has resulted in widespread poor quality. 2019 yields are estimated to be 0.6-0.8 tons/acre for mixed stands and alfalfa stands in the west central region. Greenfeed yields were below average, but less so, at 1.5 tons/acre due to timely rains at critical times. Dryland second cut alfalfa was non-existent. This continues to be a region hard hit by drought conditions, but timely rains over much of the region have buffered some of the drought impacts. Producers in the west are beginning to discuss that these drier years may be a return to 'normal' after a number of moist years.

No notable insect or disease pressures were seen in the region this year. Livestock producers fed into June in the region. Little to no carry-over remained on-farm over the summer for a third summer in a row.

Alfalfa/grass hay is currently listed at \$161.27/tonne. There are very few greenfeed listings for the area, but indications are trades were neighbour-to-neighbour in the \$0.05-0.07/lb range. Producers are continuing to determine how much they are able or willing to pay for the needed forage.

Livestock producers in the west central region are facing widespread supply shortfalls of perennial forages (50%), but have changed strategies over the past three years, and most are confident they will have enough feed. It is estimated that 75-100% of operations in the region are relying on annuals for some forage use. Of those producers using annuals, an estimated 50% to 70% of their winter forage

use is coming from annuals. Producers will be once again utilizing hauled crops, straw, grain, greenfeed, wet/sprouted crops, silage, and purchased feed. Silage use continues to trend upwards in the region.

Unfortunately, pastures have been pushed again in the region due to slow spring growth and poor topsoil moisture conditions. At September 23rd, pasture conditions are rated as four per cent excellent, 14 per cent good, 53 per cent fair, 27 per cent poor and two per cent very poor (Ministry of Agriculture, 2019).

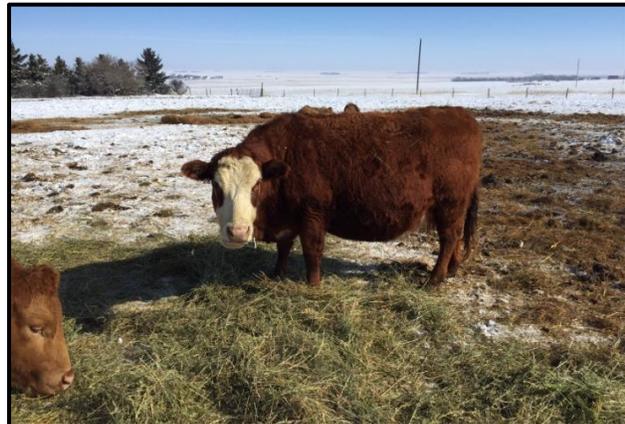
#### ***F) North West /North Central Region***

Haying conditions and growth were variable in the north west region again in 2019. Hay put up in June was light on yield, but dry. As the summer progressed, haying became more difficult, with rain causing quality to fall and stands to mature before cutting. Greenfeed, for the most part, was put up in good condition. Alfalfa/grass yields averaged from 1-1.2 tons/acre across the entire region. August greenfeed yields were estimated at 1.7 tons/acre- the same yield as 2018.

While yields were reported as good in the Meadow Lake through to Big River area, quality due to rain weathering, has been poor. Producers who typically would get a second cut in the Meadow Lake/Loon Lake/Makwa/Goodsoil/Pierceland areas did not and likely will not.

There was no indication of significant disease or pest infestations in 2019 in the north west region. There is some reports of ergot in grain crops at September 23rd, which could impact salvaged crop prices.

While levels of carry-over forages are generally low in the north west, it was pushed a bit more than normal as feeding lasted into late-May or mid-June as pastures were slow to grow. For the majority, after perennial forages were baled, producers sat short of feed (10-50%). Additional annuals are expected to make up the shortfalls as they are available. Little forage is listed to trade in the north west. Indications are that producers are not willing to pay high prices- with \$0.052/ lbs a top price.



Silage acres continue to grow in the north west/ north central region. Producer inquires about hay preservatives, haylage, and salvaging canola have been daily to Specialists in the region.

At September 23rd, pasture conditions are rated as 51 per cent good, 32 per cent fair, 11 per cent poor and six per cent very poor (Ministry of Agriculture, 2019). In drier areas, producers turned cattle into hayfields instead of haying them. In the southern and eastern areas of the region pastures are dry and facing poor carryover. Growing conditions were favorable and pastures are in good shape in the north and west.

## 7. Forage Price Trends in Neighbouring Jurisdictions

Producers in Alberta experienced a cool dry May, which gave way in June to generally wet and showery conditions. Areas south of Hanna to the US boarder are still experiencing dry conditions with concern for pastures and low regrowth on hayland. Forage production elsewhere in Alberta has been hampered by the generally wet, cool conditions. Haying was prolonged across Alberta with some producers still trying to get first cuts completed after continual rains and inability for drying even at the end of September. The Alberta Agriculture Crop Report (13/08/19) cited "*over the past five years, 94 per cent of first cut hay across the province has been baled by this time of year, while in the current year only 62 per cent of haying is finished.*" Average alfalfa/grass yields of 1.4 tons/acre were above the five year average (of 1.3 tons/acre) across Alberta. Yields averaged 1.0 tons/acre in the southern region, 1.3 tons/acre in the central region and 1.7 tons/acre and 1.7 tons/acre in the north east and north west regions respectively (Alberta Agriculture, 2019).

Producers have been and are continuing to salvage hay by silaging perennial and annual forages (pits or wrapped bales). The increase in silage usage continues to grow exponentially in Alberta. Forage Specialists estimate 90% of Alberta operations will rely on some form of annuals for livestock forage in 2019. While quantity will not be the underlying forage issue in Alberta this year, quality will be. Producers are desperate to get crop, greenfeed, perennial hay, and straw off across the majority of the province.

Manitoba experienced slow forage growth throughout May due to lack of moisture. Cattle were turned out at the end of May onto generally poor pastures with little growth potential. Moisture continued to limit production up to haying and into September in most regions of the province. Livestock water supply is a province wide concern. Producers anticipated the lower perennial forage production and took measures to seed greenfeed crops, planned on baling straw and silaging more corn and annuals. By early summer some annual crops were being salvaged for forage. As haying progressed, perennial forages yielded 20-50% of average across the province. This comes after yields of 40-60% of average in 2018. In 2019, the low yields were highly variable across the province and within regions. Pockets of the south west did see some yields closer to average.

Silage usage continues to grow in Manitoba. Forage Specialists estimate 70-80% of Manitoba operations will rely on some form of annuals for livestock forage in 2019, with annual used for about 50% of the cattle diet on those operations. A higher cull rate is anticipated this fall.

The United States hay stocks are reported May 1st yearly. The May 20th, 2019 Dairy Herd Management article summarized May 1 hay stocks; "*The Crop Production report from USDA-NASS included the May 1 hay stocks for the U.S. and states. Total U.S. hay stocks were 14.9 million tons, down 2.9 percent year over year. However, May 1 hay stocks in 2018 were also small. The 2019 figure is down 31.4 percent from the five-year 2014-2018 average and 28.8 percent lower than the ten-year average from 2009-2018. The 2019 hay crop year is starting with current hay inventories the smallest since the drought years of 2012-2013. However, by state, Montana is up 120.0 percent and North Dakota is up 38.9 percent.*"

Forage production in Montana was average to above average in 2019. Good moisture has helped pastures rebuild after the droughts of 2016 and 2017. While moisture has been welcome, some regions are now having weather challenges putting up second cuts of hay. Trade continues to be slow, but is occurring. Lack of demand from Alberta and Saskatchewan and the more southern states now that wide-spread droughts have broken is cited for slow trade (United States Department of Agriculture, 2019).

As discussed in 2018, forage acres are decreasing in Montana. CRP land is due for renovation and other land is being moved into crop production. As in Saskatchewan, Montana producers are continuing to make a shift towards using annuals as forages. Much of the forage research in Montana is currently being conducted on annuals.

North Dakota faced the cool, dry May and June with late summer/fall rains similar to Saskatchewan. Grass was heading out by late May at six inches tall. The southern part of the state fared better than the northern areas. With the 3rd year in a row of tough drought conditions, perennial forage yielded 50% to 70% of average in the northern counties. Producers seeded more annual forages for grazing and silage, continue to cull cows as needed, and hope to graze crop areas late. Although on-farm supplies are 25% short after alfalfa haying in these counties (North Dakota Forage Specialists, pers comm., 2019), forage movement remains slow in the northern regions of the state. Many are taking a wait and see approach as they wait for prices to soften, finish making greenfeed and silage, and hope to graze later. Pastures are in poor shape after three years of sustained drought, but with the wet August and September they are beginning to recover. Many North Dakota forage listings cite hailed crop as a reason for greenfeed.



The following table demonstrates price averages for various forage types across Western Canada and Montana and North Dakota. The table is based on data collected from a variety of online sources, including the respective government forage listing services, kijiji.ca, craigslist.com, hayexchange.com, bizmanonline.com and others.

**Table 7. 2019 Forage Prices in Adjacent Provinces and States (reported in CDN\$/tonne)**

Forage Type	Alberta		Manitoba		Montana**		North Dakota**	
	Price Range	Avg Price (\$/Tonne)	Price Range	Avg Price (\$/Tonne)	Price Range	Avg Price (\$/Tonne)	Price Range	Avg Price (\$/Tonne)
Alfalfa 1st cut	\$146.97-231.48	\$194.02	\$158.63-312.32	\$250.04	\$116.95-233.90	\$148.62	\$87.48-145.79	\$126.35
Alfalfa 2nd cut	\$203.93-253.53	\$234.24	\$220.46-306.19	\$263.74	\$160.81-241.21	\$181.27	\$82.01-131.21	\$106.61
Alfalfa/Grass	\$106.43-220.46	\$167.36	\$154.32-297.62	\$200.56	\$95.02-233.90	\$144.41	\$54.67-204.11	\$124.38
Grass	\$137.79-242.51	\$171.22	\$45.93-212.30	\$147.67	\$87.71-205.39	\$128.87	\$64.80-145.79	\$104.20
Straw	\$66.13-110.23	\$88.18	\$44.09-88.18	\$63.38	-	\$116.95	\$58.31-87.48	\$72.89
Green-feed	\$104.72-165.34	\$145.14	\$58.79-191.06	\$160.70	\$95.02-204.66	\$125.98	\$93.72-170.09	\$121.36
Pulse straw	-	-	-	-	-	-	-	-

*\*first and second cut alfalfa were separated since 2017 as listings in both categories were adequate.*

*\*\*American prices have been converted to CDN currency values average for week ending Sept 20, 2019(\$1USD = \$1.3262CDN)*

Alberta forages continue to be priced high through September. Quality feed with no rain is able to ask higher prices as rain has hampered getting forages baled. Excellent quality, high priced forages (8-10 cents/lbs) are still trading. Listings are numerous in the Edmonton region. Although greenfeed acres were seeded, the weather is causing issues for harvest of greenfeed (note lack of listings). Sales to Saskatchewan and British Columbia are weak. The alfalfa asking price has weakened by \$20-35/ tonne from 2018. The price of grass has remained steady- an indication of the steady demand within the province from horse owners. Greenfeed is averaging \$145.14/ tonne compared to \$181.67/ tonne last year at this time. Mixed hay is \$15-20/tonne less than in 2018. As the wet fall weather persists, grain crops will likely move into the salvage position in Alberta which will likely lower prices.

As seen in Table 7, Manitoba hay prices are the strongest of any jurisdiction. The demand from within the province is fueling prices. High quality alfalfa is listed for \$50/tonne more than in 2018 and \$140/tonne more than in 2017. Forages geared towards cow/calf producers are \$50/tonne more than in 2018 and \$80-100/ tonne more than 2017. Greenfeed and straw are in demand locally and generally not hitting the marketplace. It is anticipated that prices will generally hold as the short supply is widespread.

Montana hay prices fell in 2018 and again in 2019 thanks to relief from drought, which brought decent perennial production and good greenfeed yields. The price to stateside buyers is approximately \$10-20/tonne (USD) lower than 2018 in all forage types. Even though the Canadian dollar is worth less than a year ago, the prices stateside are still significantly less (\$15/ tonne) than in 2018. Importing hay would be possible for southern Saskatchewan producers in needed. In North Dakota, prices remained static

from 2018 prices (USD) for greenfeed and alfalfa/grass. Very few alfalfa crops were on offer in September 2019, but those that were, were asking less (\$30/tonne USD). Little forages are on offer in the northern regions of the state.

In September 2018, 1.00 USD=1.296 CDN while the week ending September 21st, 2018 was 1.00 USD=1.323 CDN. Although the USD strengthened against the CND, once again in 2019, forages supplies are high and a lower USD asking price far offset the three cent difference in the dollar.

## 8. Saskatchewan Pasture Rates

Pasture rates continue to vary greatly depending on the arrangements made between the livestock owner and landowner, the location within the province, as well as whether the rental agreement is a long-term or short-term arrangement. Long-term rental agreements are most common on unsupervised pasture where renters must invest in infrastructure. Unsupervised pastures are those where the cattle are moved, checked, treated and supplied mineral by the cattle owner. Fence maintenance is usually left up to the cattle owner. In a supervised pasture, cattle management and fence repair falls on the landowner's shoulders.

Private pasture rates have stayed static. The current mean private pasture rate in Saskatchewan for yearling cattle is \$0.77/head/day, with a range in rates from \$0.75/head/day up to \$0.80/head/day. Unsupervised and supervised pastures both fall within this rate range. The current average unsupervised pasture rate for pairs is \$1.06/pair/day across the province (range of \$0.75/pair/day to 1.51/pair/day). The current mean rate is \$1.00/pair/day. The current average supervised pasture rate for pairs is \$1.20- \$1.50/pair/day.

One trend to note in central and east central Saskatchewan is that land seeded to forages (pasture) and rented out is being turned back into cropland for canola production.



The Saskatchewan Ministry of Agriculture administers a Crown Lease program whereby producers rent grazing land, typically on a long-term basis. Lease rates are set annually using a market driven formula that takes into consideration the price of cattle the fall prior to the grazing season. For example, the 2019 Crown lease rates were based on the 2018 calf market. Rates are set using Animal Unit Months (AUMs) which is the amount of forage a 1000 lb cow, with or without a calf, can consume in one month.

An excerpt from an article by the Saskatchewan Cattlemen's Association (February, 2017) provides the breakdown how the grazing lease rates are determined.

**Rent rate = price per pound x 46 pounds x 0.8 x 12.75%**

Price per pound = the preceding October/November weighted value of beef (i.e. calves, feeders & cull cows)\*.

46 pounds = the amount of beef actually produced from one AUM.

0.8 = 80% conservation factor. A factor that allows the leaseholder to stock at 80% of the established carrying capacity of the land thus allowing for constant stocking of the land. This actually allows one year's free rent in five to account for drought years.

12.75% = percentage share of production that the Crown takes for rent

As seen below historic lease rates have changed drastically over the years, as have the fall calf prices it follows.

Historical Saskatchewan Crown Grazing Lands Lease Rates (\$/AUM):

2009	3.93*	<b>2015</b>	<b>11.19</b>
<b>2010</b>	<b>3.93*</b>	2016	10.87
2011	5.00	<b>2017</b>	<b>7.17</b>
<b>2012</b>	<b>6.09</b>	2018	8.97
2013	5.99	<b>2019</b>	<b>8.50</b>
<b>2014</b>	<b>6.42</b>		

As the grazing rates are based on AUM's, each pasture is rated at an appropriate carrying capacity, which will vary according to ecoregion. Given that cows in Western Canada are larger, a rule of thumb is to assume one adult cow is equal to 1.4 AUMs. The rate equates to approximately \$0.39/hd/day. The leaseholder is also responsible for paying the land taxes and improvements over and above the lease fee. Taxes and improvement costs will vary according to each situation.

The provincial government has transitioned the formal Federal AESB pastures to patron corporations, and the first of the Saskatchewan Pasture Program (SPP) pastures have transitioned to patron owned corporations. Pasture Corporation fees ranges are from \$1.05-\$2.00/pair/day with most at \$1.40/pair/day. Most corporations have a buy-in fee as an assurance of spring delivery and fall payment.

In 2018, there was movement of cow/calf pairs northward from the southwest as a drought proofing strategy. Many individuals made the same arrangements in 2019 unless due to tough conditions in the central regions arrangements could not be made. Conservation organizations with land indicated an increase in inquires about potential for grazing. Livestock producers contacting conservation organizations were once again willing to spend \$1.00-\$1.50/day unsupervised for good grazing.

In the south west, pastures have improved and have had good regrowth with moisture, while elsewhere in the province, producers indicate that pastures are in over-grazed states. It is hoped fall moisture will improve pastures.

## 9. References

- Alberta Agriculture, 2019.** Alberta Crop Report (weekly). Accessed at: <https://open.alberta.ca/dataset/2830245>
- Alberta Agriculture and Forestry, 2019.** Dollars/Bushel : Dollars/Tonne Converter. Accessed at: <http://www.agric.gov.ab.ca/app19/calc/crop/bushel2tonnevalue.jsp>
- Alberta Agriculture, 2019.** Lethbridge Barley Price for week ending Sept 27th. Accessed at: <https://open.alberta.ca/publications/3479492>
- Bank of Canada, 2019.** Daily exchange rates for the week ending September 20, 2019. Accessed at: <http://www.bankofcanada.ca/rates/exchange/daily-exchange-rates/>
- Canadian Cattlemen's Magazine, 2019.** Canfax Alberta Silage prices September 2019.
- Dairy Herd Management Magazine, May 2019.** Producers Are Trying to Rebuild Hay Supplies. Accessed at: <https://www.dairyherd.com/article/producers-are-trying-rebuild-hay-supplies>
- Government of Saskatchewan, 2018.** 2018-19 Farm Machinery Custom and Rental Rate Guide. Accessed at: <http://publications.gov.sk.ca/documents/20/85808-Farm%20Machinery%20Custom%20Rate%20and%20Rental%20Guide.pdf>
- Manitoba Agriculture Crop Reports, 2019.** April- August 2019 Crop Reports. Accessed at: <http://mfga.net/resources/>
- National Centers for Environmental Information, 2019.** North American Drought Monitor 2019 Maps. Accessed at: <https://www.ncdc.noaa.gov/temp-and-precip/drought/nadm/maps/en/201907>
- Saskatchewan Cattlemen's Association, 2017.** News and Views; Saskatchewan Grazing Rates. Accessed at: <http://www.saskbeef.com/news--views/saskatchewan-community-pasture-grazing-rates>
- Saskatchewan Crop Insurance Corporation & Saskatchewan Ministry of Agriculture, 2018.** Provincial Grasshopper Forecast 2019 Map. Accessed at: [https://pubsaskdev.blob.core.windows.net/pubsask-prod/97017/97017-2019\\_Grasshopper\\_Forecast.pdf](https://pubsaskdev.blob.core.windows.net/pubsask-prod/97017/97017-2019_Grasshopper_Forecast.pdf)
- Saskatchewan Forage Council, 2018.** Forage Market Price Discovery in Saskatchewan as of September, 2018. Available online at: <http://www.saskforage.ca/publications/>
- Saskatchewan Ministry of Agriculture, 2019.** Weekly Crop Reports. Available online at: <http://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/agribusiness-farmers-and-ranchers/agricultural-programs-and-services/statistics-for-farmers-and-agribusiness/crops-statistics/crop-report>
- Saskatchewan Ministry of Agriculture, 2019.** Crop Production News 2019 Issues. Accessed at: <https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/agribusiness-farmers-and-ranchers/agricultural-programs-and-services/information-services-for-agribusiness-farmers-and-ranchers/crop-production-news>
- Statistics Canada, 2019<sup>1</sup>.** Livestock estimates, July 1, 2019. Accessed at: <https://www150.statcan.gc.ca/n1/daily-quotidien/190822/dq190822d-eng.htm>
- Statistics Canada, 2019<sup>2</sup>.** Estimated areas, yield, production and average farm price of principal field crops, in metric units. Accessed at: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210035901>
- United States Department of Agriculture, 2019.** Weekly Montana Hay Report (for the week ending September 21). Accessed at: <http://northernag.net/Markets/HayMarkets.aspx>

## 10. Personal Communications and Resources Used

### *Feed Listings*

Kijiji.ca (Alberta, Saskatchewan, Manitoba) – August and September, 2019  
Craigslist.com (Montana and North Dakota) – September, 2019  
Manitoba, Agriculture and Rural Development – Manitoba Hay Listings – September, 2019  
Montana Department of Agriculture – Hay Hotline – September, 2019  
North Dakota State University – NDSU Feedlist – September, 2019  
Hayexchange.com – August and September, 9  
Bismanonline.com/hay\_feed\_seed - September 2019

### *Personal Communications*

\*note several dozen individual hay and livestock producers and hay transporters were contacted and surveyed for this report; for privacy and space limitations, only those who are available to the public are listed here.

Alberta Agriculture–Forage Agrolgists, AB  
Manitoba Forage Association- MB  
Manitoba Agriculture- Forage Agrolgists, MB  
Borderline Cattle Feeders Inc – Ceylon, SK  
Ducks Unlimited Canada –Jeremy Brown, Agrolgist  
Nature Conservancy of Canada- Matthew Braun  
Montana State University – Forage in-term specialist  
DairySmart Nutrition- Leland Fuhr, Saskatoon, SK  
North Dakota State Dept of Agriculture– Ag specialists, northern counties  
Connect-On-Farm- Geoff Bingham, Swift Current, SK  
Poundmaker Ag Ventures Ltd. – Lanigan, SK  
Red Coat Cattle Feeders Inc. – Hazenmore, SK  
Davidson Lonesome Dove Ranch- Tara M. Davidson, Pontix, SK  
Saskatchewan Ministry of Agriculture – Range Specialists, Livestock &Feed Specialists  
University of Saskatchewan – David Christensen, U of S Dairy Professor