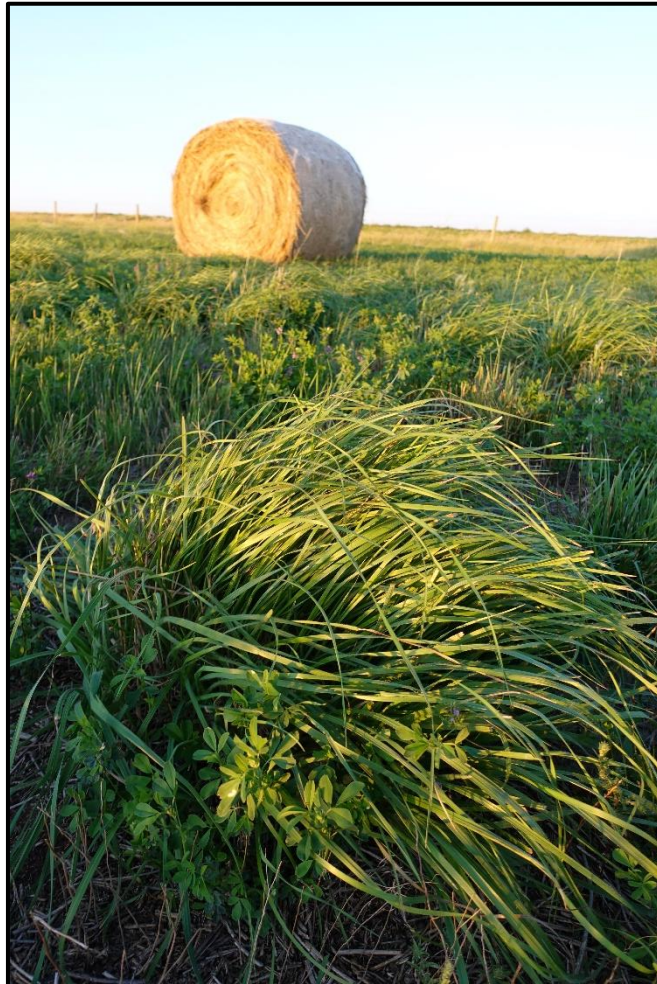




# FALL 2020 FORAGE MARKET PRICE DISCOVERY - SASKATCHEWAN



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This document details the current market prices and general trends for forage products in Saskatchewan and nearby jurisdictions as at September 30, 2020. 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.

## 1. Executive Summary

The September 2020 Saskatchewan Forage Market Price Discovery Report is general overview as well as a look at price and market trends with forages through the compilation of data and information collected from a diverse group of forage industry stakeholders in Saskatchewan as well as neighbouring jurisdictions.

Saskatchewan producers have become adept at pre-planning for forage needs before the growing season. With a cooler spring, and lack of early precipitation in most regions perennial forage production was slow to start. The far north west experienced flooding into June and July which left forages suffering. For the majority in the central and southern regions, cut forage and pasture plants shut down production and have gone dormant months ago. As of September 16th, 2019, hayland and pasture topsoil moisture was rated as 26 per cent adequate, 33 per cent short and 41 per cent very short.

In 2020, perennial hay production yields were once again below the long-term provincial average. While yields were near average in many regions, especially on younger stands, yields in the east central region were especially disappointing. Greenfeed yields (reported in August) were reported above average at 1.8 tons/acre. Producers have implemented management strategies such as baling intentional greenfeed, purchasing some forages, feeding straw and grain, and silaging. Utilizing annuals and alternatives has a significant impact on forage prices by offsetting demand for perennial forages.

At September 30th, asking prices sat high to try to capitalize on what past forage prices had been. Despite below average perennial yields, supply in the market was slow to move with price being a limiter. Alfalfa/grass hay is list at \$135.50 slightly higher than 2019 at \$130.74/tonne. First and second cut alfalfa has a current value of \$137.68/tonne and \$204.65/tonne respectively, but without indication of quality. Grass hay has an average value of \$122.48/tonne which is similar to 2018 (\$126.63/tonne), but higher than 2019 (\$100.21/tonne). Greenfeed is currently calculated to have a weighted average of \$92.75/tonne, about \$30/ tonne less than in 2018. Straw value (\$56.58/tonne) has normalized back to price levels seen before the past two lower production years. Forage demand has continued the trend of normalizing, with many forage users saying they won't be caught having to purchase high cost feed again. Sales of reasonably priced forages, below the asking average, are slow but are taking place. The majority of buyers and sellers continue to utilize electronic listings by means of initiating a non neighbour-to-neighbour transaction.

## 2. Saskatchewan Forage Production Trends for 2020

Good spring topsoil moisture conditions provincially had forage users looking for an average year. Low forage carryovers were seen on farm going to pasture as spring growth province wide was slow; cold and wet or flooded conditions in the north, and cool dry conditions in the south. Following the trend of the past three years, annual forage use continues to be a large market player.

The Saskatchewan Ministry of Agriculture reported a slightly below average perennial forage yields for hay in 2020 provincially, as shown below in Table 1. Long-term average yields by crop are displayed in Figure 1. 2020 saw perennial yields higher than the three previous years, and solid greenfeed yields coming in slightly above average.

**Table 1. Estimated Provincial Hay Yields (in tons/acre) as at August 13<sup>th</sup>, 2020<sup>^</sup>.**

2020 Provincial Forage Yields (tons/acre)		
Crop	Dry Land	Irrigated Land
Alfalfa	1.2	3.0
Brome/Alfalfa	1.1	2.7
Other Tame Hay	1.0	NA
Wild Hay	1.0	NA
Greenfeed	1.8	2.8

Data source: Saskatchewan Ministry of Agriculture 2018 Crop Reports.

<sup>^</sup> - Beginning In 2019 forage yield data for this report was collected from first full week in August instead of July (2011-2018 data).

Regionally, the lowest yields were seen in the east central with yields of 0.9 tons/acre and then northern areas where flooding has meant no hay crop on many fields. Early seeded greenfeed yield reports indicated lower yields (1.2 tons/acre) in the east central region and above average yields in the other regions (nearing 3 tons/acre). However, after yields from later seeded greenfeed was accounted for, yields were slightly below to slightly above average in all regions.

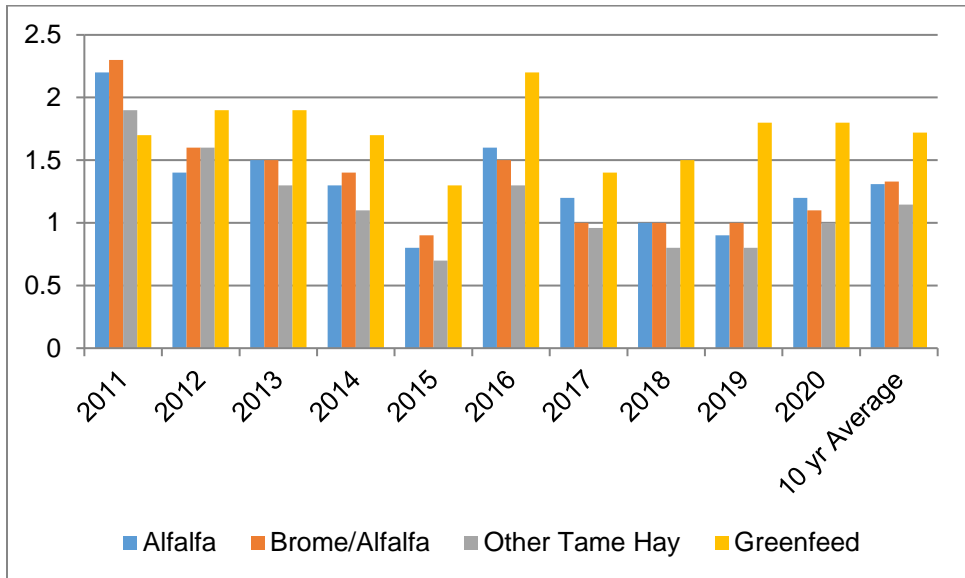
While crop sat over winter (2019/20), there is not a strong indication it was baled instead of combined in April 2020. This commodity, for the most part, stayed in the grains market.

Usage of silage continues to expand on cow/calf operations. Silage bales are common place in the market now especially where dry-down is hampered and on-farm time efficiencies are being sought.

Forages harvested in 2020 are rated as good (65%) to fair (20%) quality across all regions of Saskatchewan. Higher humidity, showers, and rapid maturity were noted as anti-quality factors. Producers, as always, are being advised to feed test. Currently there is no indication micotoxins or ergot will be an anti-quality factor this year in greenfeeds. Few producers are anticipating second cuts where they normally would have the opportunity.

**Figure 1. Long-term Saskatchewan Average Hay Yields (in tons/acre) from 2011-2020, as Reported Annually in July^.**

Average Saskatchewan Forage Yields (tons/acre) 2011-2020



2011-2020 Long-term Average Dryland Forage Yields in Saskatchewan	
Crop	(tons/acre)
Alfalfa	1.31
Brome/Alfalfa	1.33
Other Tame Hay	1.15
Greenfeed	1.72

Data sources: Ministry of Agriculture Crop Report, 2020; Saskatchewan Forage Council 2019 Forage Market Price Survey. Beginning in 2019, forage yield data for this report was collected from first full week in August instead of July (2011-2018 data).

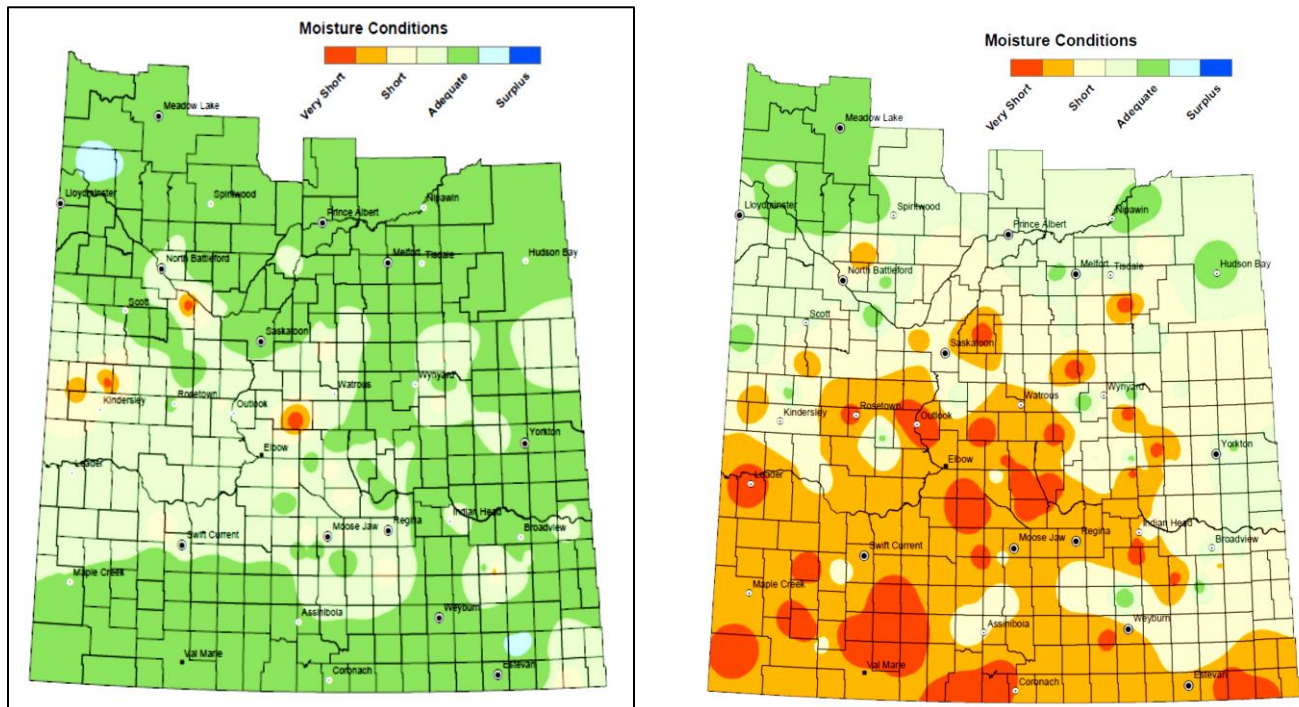
Production trend influences- weather related

Winter weather is one of many factors influencing forage production trends. Fall 2019 grazing was cut short in many locations by lack of crop off for fall grazing, and then early snow and cold. Fall rains had left topsoil moisture in a good place across most of the province, but saturated on the forest fringe.

This season, there was a lack of heat units to get forages growing. Livestock producers faced issues in 2020 again with late turnouts due to lack of spring heat. Take in dates were bumped back 1-2 weeks in many patron pasture coops and provincial pastures to allow for more grass growth. However, pproducers had prepared well and those that often need to pick up some late in the spring had a mild winter and didn't need extra forage in spring 2020. While this spring forage demand was an influencer on the forage markets in 2017 & 2018, it is a normalized factor now with forage users and it is not weighing on prices. Going into winter 2020/21, pasture conditions and carryover is fair to good through northern regions while very poor to fair in central and southern regions.

Soil moisture conditions on hayland and pastures at the start of May was near adequate nearly province wide (Figure 2). Hayland and pasture topsoil moisture was rated as two per cent surplus, 77 per cent adequate, 19 per cent short, and two per cent very short as of May 4th, 2020. As of September 16th, 2019, hayland and pasture topsoil moisture was rated as 26 per cent adequate, 33 per cent short and 41 per cent very short (Fig 2). Producers in their 60's have noted 2020 is setting up just like 1987 did. They are wary for how the current cycle could progress.

**Figure 2. Hay and Pasture Topsoil Moisture Conditions in April and September of 2020.**



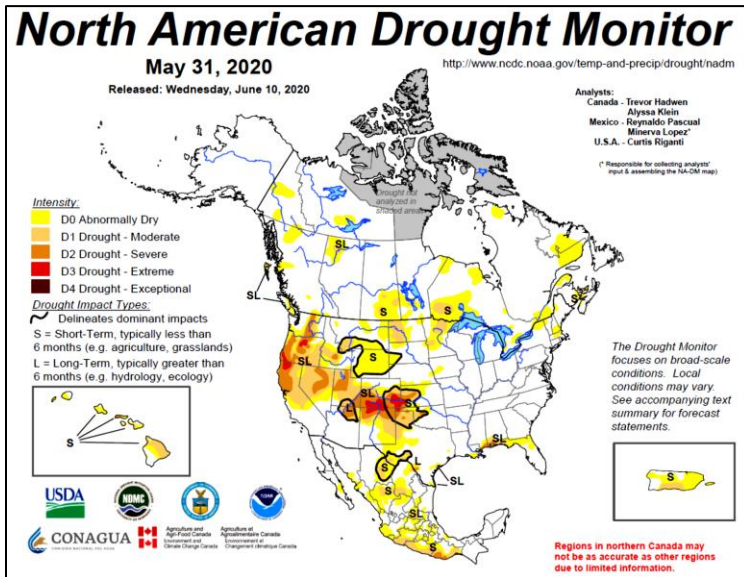
Data source: Saskatchewan Ministry of Agriculture, May 4, 2020 and September 16, 2019.

Overall, the lack of heat units at the critical times for forages and patchy precipitation early in the growing season resulted in lack luster perennial forage yields. Timely precipitation was a benefit for greenfeed fields, but as many producers reported, benefit was very dependent on the crop stage, and there was not a consistency provincially or even regionally.

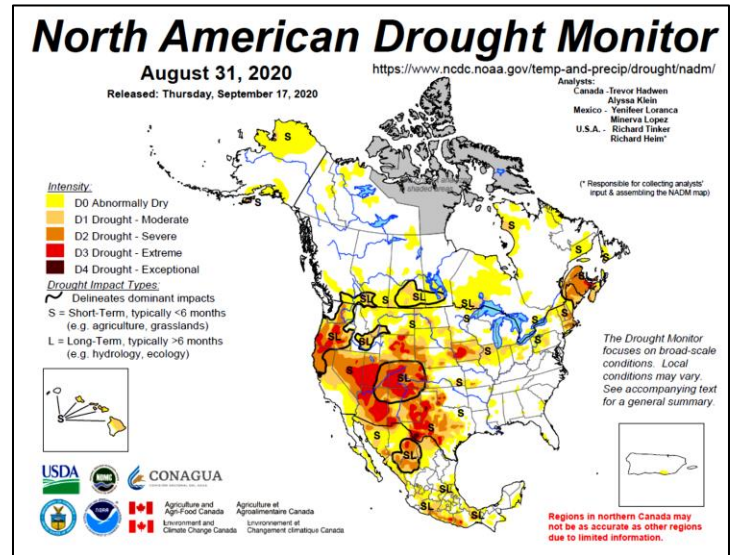
With an early and near complete crop harvest, aftermath grazing will provide a valuable forage source for one to two months. Water will be a limiting factor within nearly every central and southern region as majority of wetlands are dry.

Across North America, abnormally dry conditions in eastern Saskatchewan and parts of Montana and North Dakota southern were seen at the end of May. Drought conditions are shown in Figure 3. Conditions at August 31<sup>st</sup> show a more sustained drought across the southern prairies. A concern moving into the winter is the extreme drought in the western US, and the forecast for it to persist and grow northward over the next few months.

Figure 3. North American Drought Conditions at May 31, 2020 and August 31, 2020.



Data source: National Drought Mitigation Center May 31, 2020 and August 31, 2020.



In areas of Saskatchewan where drought and lack of precipitation prevails, the top concern of producers interviewed is livestock water and pastures for 2021. The desire for reasonably priced perennial forage is still there. However, after utilizing annual forages more and more over the last number of years, forage users are not relying heavily on high priced perennials.

Production trend influences - non-weather related

The crop harvest was at 77% complete, well ahead of the long-term average of 58%, in Saskatchewan leading up to September 23<sup>rd</sup>. Crops being salvaged for forage will not be a widespread practice in 2020. However, conditions for harvesting straw is favorable and straw stocks will be full. A return to normal price on straw is being seen. Hailed mature crops or hailed crops with multi-stages were not seen wide spread this growing season. While in recent years, a low supply would have increased the demand/price of these forages when available, with the amount of planned greenfeed being produced, demand is no longer above this supply.

Planned annual greenfeed has become one of the most important and used forages in Saskatchewan. Producer have indicated that they have become yield and goal orientated in greenfeed production. Inputs, quality seed and timely agronomics have all resulted in producers improving their greenfeed production, even on minimal moisture (Forage Specialists, pers comm, 2020).

Age of current perennial forage stands provincially continues to factor into lower production. Provincial Specialists do not indicate a significant level of or an increase in stand rejuvenation through fertility

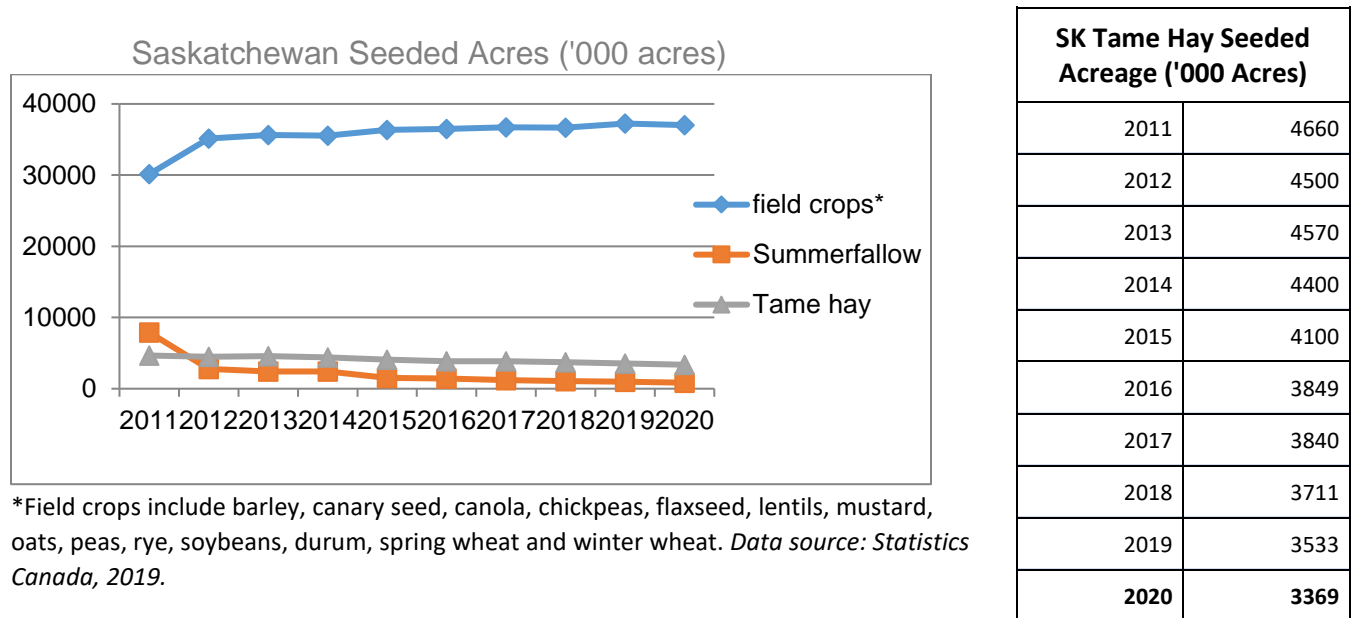
management or reseeding. They note older stand production levels are impacting overall forage production information and yields. However, provincially quantifiable data is not available.

Once again, Canada’s cattle herd decreased; 0.5% to 12.2 million head in July (Statistics Canada, 2020<sup>1</sup>). However, after a year of herd contraction in Saskatchewan in 2019, by July 2020 a rebound in the provincial herd was seen. Beef cow inventory increased by 10,000 to 1.109 million and overall heifer inventory increased by 11,000, of which over a third were beef replacement heifers. The provincial cow herd rebounded to levels closer to 2017/18 before hard culling and sending decently priced heifers to feed were a tool used to manage forage shortages. Forage production has caught up to the demand which has been a contributing factor to the slight rebound in herd size.

Currently, Statistics Canada estimates the seeded tame hay acreage for 2020 in Saskatchewan at 3.369 million acres with an adjusted 2019 estimate at 3.533 million acres. Although this is still an estimate, it should be noted that this is 342,000 acres less than in 2018.

Acres seeded to field crops have steadily increased. When looking at 2018, 2019 and 2020 estimates of field crop production it is noted that wheat seeded acres are static, pea acres increased, while canola seeded acres are not increasing (decrease seen). Change is seen in 1) loss of tame hay acres 2) increase in acres of barley, oats, mixed grains, and rye. When analyzing the data, while it appears about half tame hay acres were being turned to pasture, about half were converted also to cropland, and based on the seeded acreages, there was an increase if seeded acreage of cereals that lend to greenfeed usage. Summerfallow acres continued to decline but at a slower rate than 10 years ago.

**Figure 4. Seeded Acreage for Field Crops and Tame Hay in Saskatchewan are Displayed for 2011-2020.**



\*Field crops include barley, canary seed, canola, chickpeas, flaxseed, lentils, mustard, oats, peas, rye, soybeans, durum, spring wheat and winter wheat. *Data source: Statistics Canada, 2019.*



Manitoba's seeded tame hay acres remained relatively stable (according to revised Stats Canada data) until 2019/2020 where acres are estimating to have dropped about 100,000 acres from 2017/18. Alberta, like Saskatchewan, has experienced a continued reduction in the reported seeded acres of tame hay, with another 200,000 less acres projected for 2020. Nationally, tame hay acres had remained level at around 14.5 million acres for a handful of years until an over one million acre decline now through 2019/2020 production years.

### 3. Weeds, Field Pests and Disease Impacts in 2020

There were no major provincial outbreaks of forage pests this past season. Cutworm, aphid, and flea beetle impacts were noted provincially with seedling stands bearing the most noticeable brunt- stand failures were noted. Alfalfa weevil was not seen as a wide spread concern. Weather stress once again overshadowed any pest impacts.

The grasshopper forecast for 2020 was 0-2/ m<sup>2</sup> across the province with pockets of very light (2-4/m<sup>2</sup>) to moderate (8-12/ m<sup>2</sup>) infestations in the southeast and in the west central areas based on fall 2019 counts (SCIC Provincial Grasshopper Map, 2019). Increase in grasshopper counts through August have been noted province wide and without a substantial fall rain event, infestations are expected throughout the province in 2021.

Richardson ground squirrel infestations continue to increase in pockets across Saskatchewan. A repeating cycle of warm, dry springs and warm, dry falls can see infestations increase. Producers in areas of infestations have noted they are using shooting, burrow collapse and poisoning to control colonies.

### 4. Saskatchewan Hay and Forage Freight Rates

Hay transporters have indicated demand is light this year for long hauls. Close hauls are steady and most transporters indicate they are moving silage bales, straw, and greenfeed for an operator or else between close neighbors.

Hay transporters continue to further standardize how they provide rates to potential clients. Most provide a flat hourly rate or flat rate per bale for short hauls 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	\$3.00/bale + 0.26/bale/loaded km
Hourly rate (shorter distances)	\$137.50/ hr (mean \$140/hr)
<100 miles distance, 34-37 bales/load	\$7.53/ loaded mile
>100 miles distance, 34-37 bales/load	\$6.20/ loaded mile* (mean \$6.00/mile)

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

According to the Government of Saskatchewan's 2020-21 Farm Machinery Custom and Rental Rate Guide for self-unloading PT bale movers (best suited for short hauls), an approximate hourly custom rate is \$198.35/hr. Self-picking costs vary, but most custom operators have moved to a price per bale to start plus a km/bale addition as a standardized way for clients (average of \$3.00/bale + \$0.26/km). Self-unloading trucks are seeing high demand this fall with operators noting hauling silage bales, greenfeed and straw produced on-farm or from a close neighbour.

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

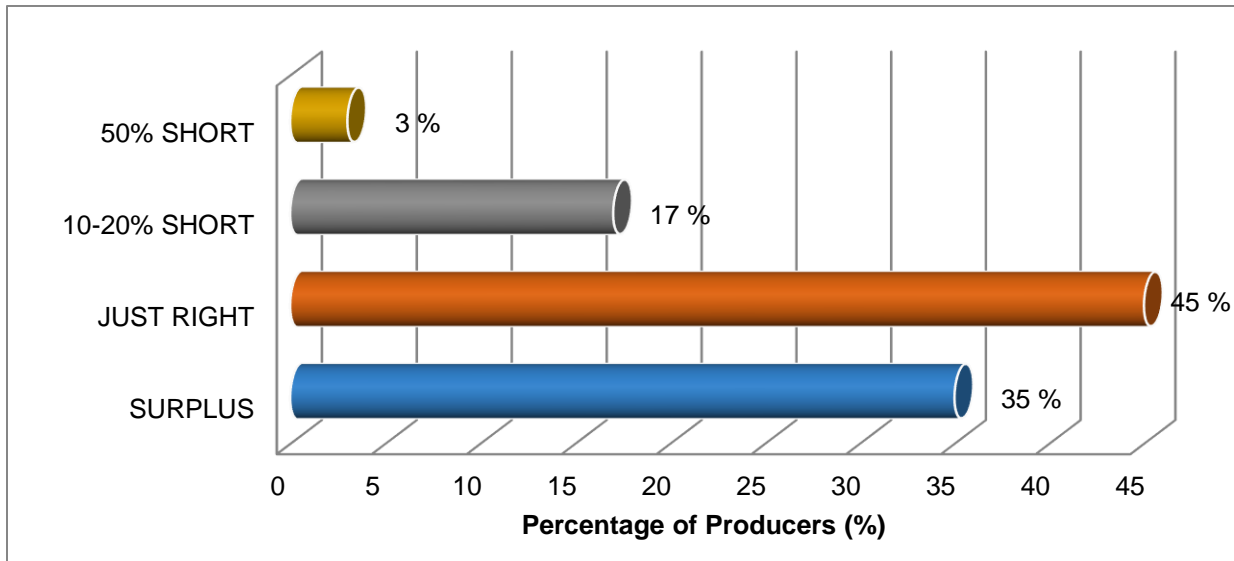
Saskatchewan producers secured needed forages early in 2020, with majority of transactions between neighbours in 2020, though there are still numerous listed forages. The electronic listing service Kijiji has become by far the most popular means of buying and selling on farms across Saskatchewan over the past five years; while the number of hits on a hay advertisement was hitting over 100 per day in 2018/2019, listings can now take a week to receive the same number of hits. Listings can easily sit of two to three weeks or more, as compared to the last two years when forage moved within a week quickly. Social media, print advertising and radio 'trading posts' are also used but far less than the other two means.

Pasture conditions are a noted concern from portions of every region of Saskatchewan. The potential for poor spring growth on pastures in 2021 continues to be most alarming, as pastures generally have little carryover and plants are hurting after a tough 2020 growing season.

While feed tests are still coming in, forage quality is expected to be average provincially with good quality greenfeed in most locations. Some quality loss is anticipated because of the humid haying season many producers faced in pockets in nearly every region. Those locations in the north west that faced flooding and frequent precipitation are seeing lower quality (per MOA Livestock Specialists).

Demand for forages at the currently listed prices is light. Producers planned ahead with many noting forages were secured before the growing season began. Pre-planning province wide, along with the lessened drought during spring in the west central area has lowered demand and caused prices to settle. To gauge supply and demand, livestock producers were surveyed via twitter and personal communication in September as to their level of feedstocks before they started sourcing feed outside of their normal practices. 135<sup>^</sup>. In 2020, 80% of respondents indicated they had sufficient forage resources. This is above the 67% sufficient level in 2019, and 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 above and beyond what they did 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 September 2020**



<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.

With adequate supply of traditional and alternative forages available, prices (majority asking prices) will settle softer than asking prices and softer than years previous. Price information was collected through September and is reported in Table 3 (below).

**Table 3. Average 2020 Forage Prices in Saskatchewan**

Forage Type	Simple Average Price (\$/tonne)	Weighted Average Price (\$/tonne)	High (\$/tonne)	Low (\$/tonne)
Grass Hay	\$119.62	\$122.48	\$179.12	\$65.32
First Cut Alfalfa	\$137.64	\$141.45	\$176.37	\$110.23
Second Cut Alfalfa	\$204.65	178.10	\$231.48	\$165.34
Alfalfa/Grass mix	\$134.93	\$135.35	\$198.41	\$82.67
Greenfeed	\$106.03	\$92.74	\$156.16	\$58.01
Clover	80.17	**	na	na
Cereal Straw	\$56.58	\$48.28	\$88.18	\$26.46
Pulse Straw	\$62.32	\$73.49	\$73.49	\$55.15

\*In 2020 this is number of listings or trades, as majority were not monitored long-term for achievement of sale.

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

<sup>^^</sup> Planned greenfeed is considered an 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 \$137.64/tonne and \$204.65/tonne (includes dairy quality) respectively, compared to \$175.34/tonne and \$181.66/tonne the same time last year. Dryland second cuts were very limited even in the northern areas. Supply is tight for second cut alfalfa, with the majority coming from irrigation or from out-of-province. With the low supply of second cut higher prices will likely be maintained for available high RFV (relative feed value) alfalfa for those needing to use higher quality forages. Dairy quality second cut alfalfa continues to sit around \$220/tonne with highs above \$250/tonne. Those dairy operations not set on using traditional alfalfa feedstuff move to cost effective feeding means at this price point which includes silage and alternatives. Premium alfalfa out of Alberta sits within this range.

While value of first cut alfalfa in currently listed closer to 2018 levels than 2019 levels, buyers are not hard on listings when there is overall more forages available in the market. First cut alfalfa closer to \$100 to \$120/tonne, with lower priced lots available in northern areas, is expected as a slight premium over mixed forage could still be seen.

**Alfalfa/grass** hay has a current weighted average asking price of \$135.35/tonne which falls in the same range of 2019 of \$130.74/tonne. What is being seen with these asking prices is sellers looking to capitalize on the high alfalfa/grass prices that were being seen in the two previous years.

Upon further analysis, when anything above \$154/tonne (0.07/lbs) was removed from the price pool, the simple average was brought to \$124.31/ tonne. The mean September asking price was \$0.06/lbs or \$132.28/tonne.

When looking at this class of forage that has moved, and what transporters/brokers are seeing is that 4-6 cents a pound with movement at \$100/tonne. Forage users have set themselves up to buffer need with annuals, and previous purchasers are not making big moves to purchase in 2020/21. A greater number of neighbor to neighbor transactions in the northern and central regions this season has left forage on the market.

**Grass hay** has a current weighted average asking value of \$122.48/ tonne which exceeds the long term average. Sellers are looking to capitalize on past high prices, which buyers are not willing to pay even for grass hay destined for the horse market. Unlike in 2018, when supply was tight which inflated asking prices, the current supply is decent and with current demand, settled prices reasonably lower can be expected.

**Greenfeed** is currently calculated to have a weighted average of \$92.74/tonne. Greenfeed is no longer considered an 'alternative' forage, with an estimated 50-60% of producers using greenfeed for an estimated 50% of their forage needs. 2020 trends saw forage users acquiring and continuing to keep acquiring greenfeed to the sufficient supply level needed early within the growing season. Neighbour to neighbour sales on poor grain crops or hailed crops filled many users' needs locally. Transporters indicated short hauls of greenfeed (instead of long hauls) were what clients were requesting this season. The prices currently listed for greenfeed do not align with what purchasers are looking to spend. \$0.025 to \$0.04/lbs range is where purchasers are most comfortable.

To produce annual forages there are high yearly expenses. When estimated variable expenses (excluding fixed expenses), producing barley is \$173 to 184/ acre (Crop Planning Guide, 2020). When greenfeed yields sit provincially at 1.8 tons/acre (1.63 tonnes/acre), expense sits in that \$106 to \$112/ tonne range. Even if one was to remove some of the variable costs applied less in greenfeed situations such as fungicides and higher priced herbicides, to be a profitable seller, high yields and low production costs need to align- sellers really are going to want to stay above the \$80/tonne range for profitability. However, as the winter season progresses, and inventory for sale continues to sit, it is expected lower prices will be widespread provincially.

Silage bales continue to grow in popularity with weights in the 1800 to 2200 lbs range and prices between \$65-85/bale. While some listings are noted, the high cost of transportation due to wet weight has proven limiting in the distance silage bales can be hauled cost effectively.

**Cereal straw** has seated itself as a valuable alternative feedstuff. While straw prices edged up in the past two seasons, an easily baled 2020 crop across the province has resulted in a return to normal price levels. Forage users indicated a securement of supply. Straw prices are listed in the \$48.28/ tonne range (weighted) and \$56.58/tonne range (simple average). Generally, straw is listed in the \$18-30/bale range. Custom rate of baling straw is estimated at \$13.68/bale (include \$2/bale for netwrap) for 2020 wrap (Ministry of Agriculture, 2020). The cost of trucking 1000-pound straw bales continues to limit the trucking distance and settled price. Affordable straw is not anticipated to climb in price over the winter. Listings left unsold will likely see a long time on the market and discounts by the time they are moved.

**Pulse straw** saw an average of \$62.32/tonne, which is lower than the last two previous years (\$85/tonne range). Neighbour to neighbour sales are most common with this commodity. The price softening in 2020 is a reflection of a sufficient supply of diverse feedstuffs available going into winter 2020.

**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.

**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. The certified organic listings prices fall within the listed value range of non-organic hay for 2020, and currently, large round organic hay is not anticipated to fetch a premium.

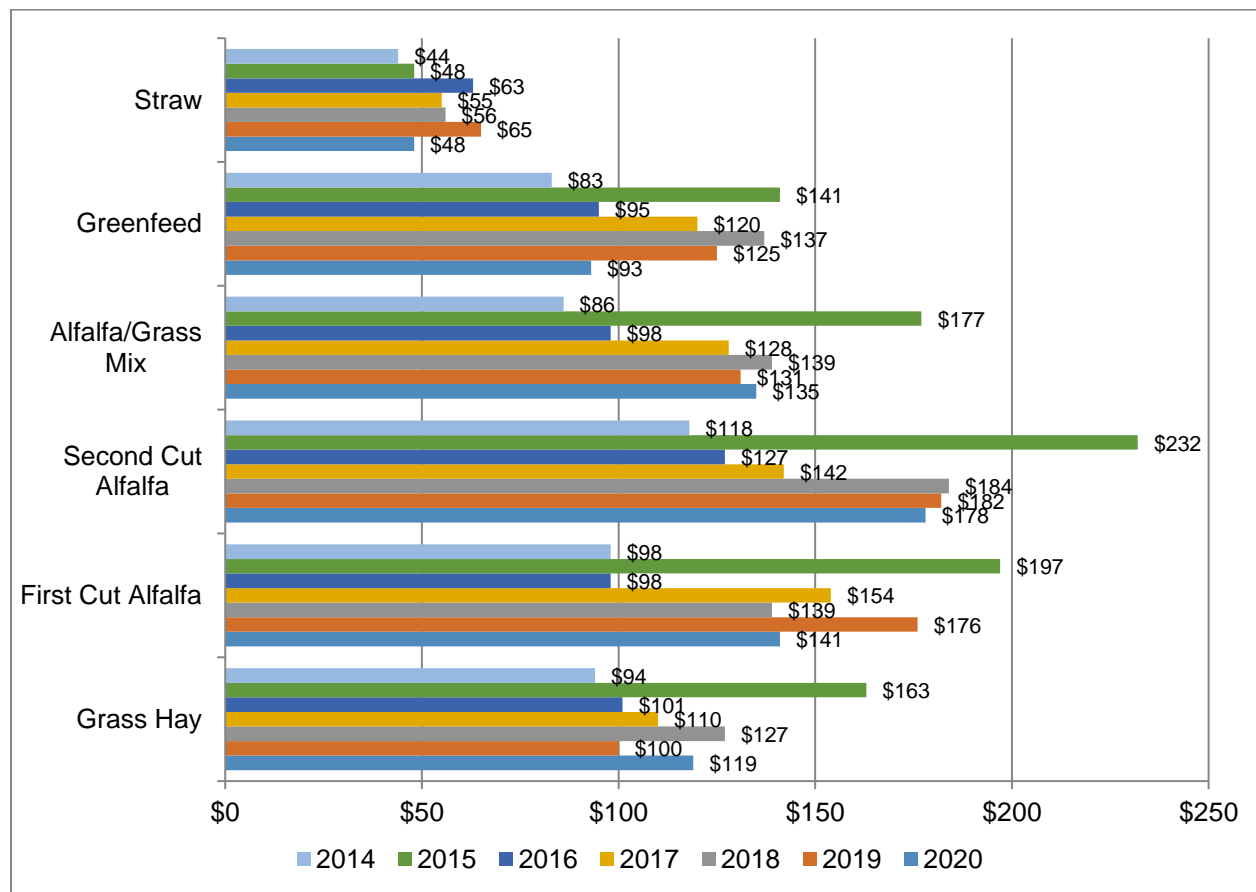
A comparison of forage prices from 2013-2020 can be viewed below in Table 4 with a graphical analysis for 2014-2020 in Figure 5 found following the table.

**Table 4. Average Fall Forage Prices in Saskatchewan from 2013-2020 (weighted)**

	2020	2019	2018	2017	2016	2015	2014	2013
Forage Type	Average *asking Price (\$/Tonne)	Average Price (\$/Tonne)	Average Price (\$/Tonne)	Average Price (\$/Tonne)	Average Price (\$/Tonne)	Average Price (\$/Tonne)	Average Price (\$/Tonne)	Average Price (\$/Tonne)
Grass Hay	\$122.48	\$100.21	\$126.63	\$110.013	\$100.66	\$162.98	\$94	\$82
First Cut Alfalfa	\$141.45	\$175.98	\$138.82	\$153.89	\$97.78	\$197.23	\$98	\$98
Second Cut Alfalfa	\$178.10	\$181.66	\$183.72*	\$141.92	\$127.36	\$232.33	\$118	\$111
Alfalfa/Grass Mix	\$135.35	\$130.74	\$138.80	\$127.93	\$97.98	\$177.35	\$86	\$81
Greenfeed	\$92.74	\$125.40	\$137.01	\$120.37	\$94.60	\$140.96	\$83	\$79
Straw	\$48.28	65.36	\$55.63	\$54.80	\$63.11	\$47.99	\$44	\$46
Yellow Sweet Clover	80.17	-	-	\$87.87	-	192.90	-	-

Data Sources: Saskatchewan Forage Council, 2013, 2014, 2015, 2016, 2017, 2018, 2019 & 2020.

**Figure 6. Average Saskatchewan Forage Prices (in \$/tonne) from 2014-2020**



### **A) Standing Hay**

Standing hay agreements are often on a mutual, long-term basis, between neighbours. Prices held steady through 2020 after some adjustments were seen in 2018/19. 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. 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. The crown land hayland lease rate for 2020 was \$17.04/acre- steady from 2019. 2020 price per acre varied greatly from \$10.00-\$85.00/acre across the province (matched 2019 and 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 and 2020 as most had set long term purchase agreements that saw average rates of \$0.033/lbs with the range between \$0.0288/lbs \$0.068/lbs. Assuming these stands yielded the 2019 provincial average of 1.1 tons/acre (equivalent to 0.997 tonnes/acre), this would result in a standing per acre price ranging from \$11.00-\$149.60/acre.

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 \$13.38/acre and the cost of baling\* is \$12.93/1800lbs bale (2020-21 Farm Machinery Custom Rate and Rental Guide). For a crop that yields the provincial 2020 average of 1.1 tons/acre, the cost of cutting (\$13.38/acre) and baling (\$15.80/acre) would be approximately \$29.18/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 round 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. 2020 Small Square Bale Asking Prices Across Saskatchewan**

Forage Type	2017 Average Price (\$/bale)	2018 Average Price (\$/bale)	2019 Average Price (\$/bale)	2020 Average Price (\$/bale)
Alfalfa	\$6.25	\$7.39	NA	\$8.03
Alfalfa/Grass	\$6.20	\$6.52	\$7.07	\$5.93
Grass	\$5.30	\$5.19	\$8.40	\$5.06
Unspecified Hay	\$5.00	NA	NA	NA
Straw	\$2.94	\$3.12	\$3.20	\$3.10
Organic Hay	\$5.92	* straw \$2.50	NA	\$4.50
Greenfeed	\$6.50	\$4.67	\$7.50	\$4.25

2020 saw a return to asking prices more similar to 2017/2018. Most listings remain unsold or partially sold for a number of weeks. There are notably listings from across the province which is reflective of the pockets of fair production seen.

With the highest prices removed (\$8/bale), the average list price was \$5.73/bale for grass/alfalfa. Good quality square bales should be easily acquired below \$5.50/bale into the winter based on the number of reasonable listings and lack of advertised buyers.

### **C) Silage**

There were mixed opinions on the 2020 silage crops. Cereal silage was average in most locations with pockets of poor yield through the central region. Limited moisture in many areas, and then widespread killing frost September 8<sup>th</sup>, 2020 resulted in very disappointing corn silage crops province wide. Some producers who previously were using corn silage have cut corn out of their production. Cereal yields averaged 5 ton with a range of 1-10 ton provincially. Corn silage sat in the 6-9 ton range (with pockets of higher yield), which is close to half of normal yields for most.

The trend for cow/calf operations to include silage as a primary forage source has continued in every region provincially. Those moving to using silage tend to be 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.

Wrapped silage bales (including haylage) continue to be an option for many growers with wrapping shortly after baling key. Wrapping prices were noted at \$7/bale for custom wrapping. Silage bales listed (Alberta) from \$65 to \$85 per 1800-2200 lbs bale.

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. In 2020 cereal silage (i.e. barley, or mixed grains) to have an average value of \$55.92/tonne at the pit. The value range is from \$44-\$70/tonne. There is no regional price trend. Feedlots using corn silage were valuing all silage the same when surveyed. Canfax (Canadian Cattlemen's, 2020) reported Alberta barley silage at \$60.75 /ton (\$66.82/tonne) in September, a change from 68.13/ton (\$75.10/tonne) last year at this time.

In 2020 custom operators and producers were surveyed as to the custom cost of silage. Costs of chopping, hauling, packing range from \$11-16/tonne with swathing extra. Other outfits offer hourly services (chopper, 2 trucks, packer) for \$1000.00 to \$1100/hour with additional trucks between \$130-\$150/hour.

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. Canfax reported average feed barley prices at September 28<sup>th</sup> was \$223.21/tonne or 4.86/bushel\* (Canadian Cattlemen, 2020). Using the rule of thumb to estimate, barley silage would be valued at \$58.32/tonne. This is within the reported range.

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  
= \$92.74 per tonne for greenfeed / 2.428 conversion to silage factor  
= \$38.19/tonne value

When \$15/ tonne of additional inputs for chopping/hauling is added to the figure, an estimate of **\$53.19/tonne** is reached<sup>^^^</sup>. Closely matching the average value producers have placed on their silage.

*^^^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 2020 are found in Table 6. While there are some higher listing prices in the south, the prices do not necessarily align with low production area as seen in 2019. Prices listed in 2020 are a reflection of forage producers looking to capitalize on the high prices seen in the year past. Prices moving forward in 2020 can be expected to fall closer to the prices being asked in the north west and north east.

**Table 6. 2020 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	\$165.34	No listings	\$140.71	\$113.61	\$73.49
South East	\$160.56	110.47	\$135.58	\$111.85	\$60.99
East Central	\$138.81	\$95.73	\$147.91	\$119.40	\$60.35
Central & West Central	\$158.96	\$144.48	\$140.17	\$99.48	\$55.12
North West	\$178.73	\$97.98	\$109.38	\$92.93	\$26.46
North Central & North East	\$119.72	\$86.43	\$124.44	\$94.88	\$41.34

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

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

Forage production in the region was heavily dependent on the fall 2019 soil moisture. Most of the 2020 precipitation did not begin until mid-June which was late to benefit perennial forages. Younger forage stands produced average, while older stands tended to yield much less. Alfalfa/grass yields averaged 1.2 tons/acre- in sync with 2019. Greenfeed yields in the south west and south central averaged 1.8 tons/acre.

Rain, summer long, was infrequent- timely for crop production but has left pastures dormant region wide for the past two months and haylands with very little regrowth. Very short topsoil moisture conditions are now persisting. There likely will not be regional shortages seen with greenfeed, straw and hay available. With lower older stand hay yields greenfeed is being used as the option to cover feed needs. Producers in the region are generally expected to be utilizing about 50% annuals through winter 2020/21.

At September 23rd, pasture conditions are rated as 27 per cent fair and 68 per cent poor/very poor. Pastures have been dormant for nearly two months now while the weather continued to be hot, dry and windy. There is anticipation that feeding and supplementation will start earlier than normal for cattle in the southwest region.

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

The south east region started out the growing season with adequate topsoil moisture. While timely rains have allowed for adequate forage and pasture in the far east areas this summer, within the Moose Jaw area pastures and haylands have suffered nearly season long. Alfalfa and alfalfa/grass yields were estimated at 1.1 tons/acre with greenfeed shy of 2 tons/acre at 1.9 tons/acre for the region.

Harvest allowed for field crops to be combined instead of salvaged for feed as was seen frequently in years previous. However, straw was plentiful. Movement of forages has been slow in the region. Indications are that forage availability is higher than demand. It is estimated that at least 50% of winter forages for livestock are annual forages in the south east region. Demand from western Manitoba is unlikely, and little movement would be expected into North Dakota with the current border restrictions.

Generally, pasture and hayland topsoil moisture is rated short across the region. Dry pastures, with plants that have gone dormant and poor livestock water sources are generalized for the region.

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

The east central region experienced a very dry spring which extended into a dry summer for many parts of the region. Pastures were slow to grow (June for many) which left cattle producers feeding as long as they could. With very little hay carryover many forage users were struggling. Despite the dryness, humidity at haying saw forages taking a long time to dry down. Yields averaged 0.9 tons/acre on alfalfa and alfalfa/grass and early greenfeed averaged 1.7 tons/acre- all below average.



Even with depressed yields, forage users have worked to secure a base supply of forages this year through sourcing locally early. More silage acres were chopped, or more greenfeed was baled. Slow movement is still expected in the region on reasonably priced forages. It is estimated 50-60% of forage users harvest greenfeed with it making up 25-50% of their forage supply. Perennial forage acres for hay are noted to be continuing to decline in this region as annual forages take their place.

The high moisture in 2012-2015 in this region where pastures were flooded, followed by very dry conditions where weeds could flourish has left pastures in rough shape. Dry sloughs and dugouts, and low yielding annuals are contributing to producer struggles. Good fall, winter, and spring moisture conditions are needed to help this region's pastures rebound from the short to very short moisture conditions at September 21<sup>st</sup>.

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

Spring started slower than normal once again in the north east region. Many producers continued to supplement herds on pasture and take-ins were often delayed. July rains resulted in late cuts for many fields in the northern areas while the southern areas of the region saw hay come off quickly. Feed test results are indicating average to poorer quality, area dependent. Yields were good with averages of 1.6 tons/acre (alfalfa/grass) and early estimates of 1.9 tons/acre on greenfeed. Dryland alfalfa average yields stood out at 1.9 tons/acre.

Forage is available within the region. While listed at prices lower than many other regions, they are still high and not priced to move. Transporters/brokers in the area indicate that the price point of \$0.04/lbs is where they have seen movement at. In the southern areas of the region greenfeed is estimated to make up 25-50% of the forage use, with a drop off in use further north in the region.

In the southern areas of the region, some pastures were likely grazed more than they should have been to be due to poor water conditions (short to very short topsoil moisture at September 21<sup>st</sup>). Good snow-cover and runoff will help with some of the poor water conditions and to ensure timely growth next spring.

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

Fall moisture in 2019 had brought hay and pasture topsoil moisture closer to adequate, but still in the short range going into spring in the west central region. 2020 quality is mixed with perennials cut at maturity with poorer quality and earlier cut forages with decent quality. Hay yields were about average north of Highway 7 and below average south of Highway 7 and into the eastern areas of the region. In the Outlook area no second cut on dryland hay was seen and the irrigation yields were below normal for the area. The regions average yields were 1.1-1.3 tons/acre on alfalfa/grass and alfalfa. This is a near ½ ton higher than 2019. Greenfeed yields were noted in the 2.2 ton/acre range.

Grazing corn is a common practice in the region. Corn was hard hit with the early September killing frost. Lower yields (1/2 of normal predicted) and immature cobs will result in supplementing with grain or higher energy feeds. Silage and greenfeed production continues to grow in the region. Estimated greenfeed usage is 75% of producers using anywhere up to 95% of supply. Producers in the region pre-planned for 2020 and took the acres need for greenfeed and silage until enough tonnage was obtained. Most forage users have adequate supplies or are slightly short. There are listings within the area this season, but the price buyers are willing to pay has left many listings on the market.

Pastures are rated at 43 per cent fair and 35 per cent poor or very poor across the region with soil moisture conditions short to very short in most areas at September 21<sup>st</sup>.

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

The north west has experienced wet conditions season long with most of the region receiving 11-19" of precipitation. Flooding in the northern areas of the region meant forage reserves being used instead of pastures being available. Haying began the first week of July but was then delayed due to rain. As of July 27<sup>th</sup>, less than 30% of the hay crop had been cut and baled and harvest was prolonged to mid-August with periods of significant rainfall the first week of August. Little to no second cuts were expected. Alfalfa/grass yields averaged from 1.4 tons/acre across the entire region with alfalfa yields at 2 tons/acre. August greenfeed yields were estimated at 1.8 tons/acre although some later cut yield reports were above 3 tons/acre.

Annual forage usage is estimated at 33-50%, with a high number of operations using annuals. Straw, pellets, silage, DDGS, pea straw and frosted canola are all noted at feeds many producers are using to lower the need for perennial forages. Forage movement is light in the region, with some seen on the very east side of the region. Transporters/brokers note a lot of availability and very few long-haul movements of forage. Recovery of flooded acres will be important in the northern areas of the region into 2021. For the most part pasture conditions are good and moisture conditions on pasture are rated adequate.

## 7. Forage Price Trends in Neighbouring Jurisdictions

Producers in Alberta experienced adequate, if not at times excessive, moisture throughout the growing season across the majority of the province. Soil moisture conditions and pasture growing conditions remain fair to good in the south and eastern regions through September. Haying was for the most part, timely across the province. In August, The Alberta Crop report estimated *provincial average yield for first cut dryland hay is estimated at 1.9 tons per acre, above the 5-year average of 1.3 tons per acre. quality of the baled dryland hay was rated as 52 per cent good and 16 per cent excellent, above the 5-year average..* Yields averaged 1.5 tons/acre in the southern region, 1.9 tons/acre in the central region and 1.8 tons/acre and 2.7 tons/acre in the north east and north west regions respectively (Alberta Agriculture, 2020).

Decent harvest conditions have resulted in less salvaged crops that in 2019. The trend seen in baled silage in the years previous is still holding. It has become a viable option for many looking to use forages. In 2019, Forage Specialists estimate 90% of Alberta operations will rely on some form of annuals for livestock forage. Trade of forages from Saskatchewan to Alberta this season are not anticipated with adequate supply in all regions.

Western Manitoba has experienced similar conditions to eastern Saskatchewan through the growing season. Manitoba in general saw a cold, dry spring, hot summer with less than average precipitation and high heat units. In the northern regions unsettled conditions prolonged haying and decreased quality.

Below normal yields were also seen. Southern areas received adequate moisture for a slightly below to average hay crop. With good harvest conditions, dugouts still at 75% capacity, and fall pasture in fair condition, sales of feed and straw is light in the southern area. Northern regions were noted to still be working on greenfeed and silage into September with poorer pasture conditions and low dugout water levels. The wide spread killing frost at the beginning of September will have an impact on corn silage.

Silage usage continues to grow in Manitoba. Annual forage use is high and continues to grow in the province as old perennial stands are taken out of production. Favorable harvest conditions have lead to a noticeable baling of straw province-wide.



The United States hay stocks are reported May 1st yearly. The report noted “All hay stored on United States farms as of May1,2020 totaled 20.4 million tons, up 3 7percent from May 1, 2019, which were the second lowest since records began in 1950. Disappearance from December 1 ,2019 – May 1, 2020 totaled 64.1 million tons, down less than 1 percent from the same period a year earlier.” However, Montana stocks were par for May 2019 at 1040 thousand tons, and North Dakota was up to 1290 from 1000 (thousand tons) the year previous.

Forage production in Montana and North Dakota was average in 2020. Areas close to the Saskatchewan border did experience drier conditions than deeper south within the state. The seasonal drought outlook (<http://go.usa.gov/3eZ73>) sees the drought in north western North Dakota persisting through to January. Fall rains would be welcome across both states as conditions continue to become drier. The marketing of forages to southern and western states experiencing unprecedented droughts and wildfires continues. It is unclear how Covid border restrictions could limit trade stateside as there is not a demand to cite trade this fall.

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. 2020 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	\$91.22 -143.30	\$121.45	\$88.18 - 242.51	\$130.38	\$125.05- 182.63	\$160.05	\$102.98- 198.60	\$151.80
Alfalfa 2nd cut	\$132.28 -220.46	\$175.27	\$110.23- 188.97	\$157.02	-	\$220.67	\$102.98- 242.74	\$171.34
Alfalfa/ Grass	\$68.42 -176.37	\$112.96	\$88.18- 202.09	\$137.42	\$102.98- 261.60	\$169.80	\$98.08- 162.33	\$130.57
Grass	\$73.49 -190.40	\$126.80	\$77.16- 176.37	\$126.69	-	\$132.40	\$79.86- 133.74	\$104.41
Straw	\$39.68 -66.14	\$57.22	\$33.07- 88.18	\$56.73	\$58.84- 132.41	\$95.62	\$44.14- 87.48	\$68.35
Green-feed	\$68.89 -140.00	\$102.05	\$86.85- 154.32	\$115.83	\$110.33- 264.80	\$158.32	\$91.94- 138.47	\$116.28
Pulse straw	\$33.07 -66.14	55.12	\$48.50- 77.16	\$67.61	-	-	\$44.14- 87.48	\$49.60

*\*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 25, 2020(\$1USD = \$1.33462CDN)*

All classes of forages fell in price in Alberta in September 2020 as compared to September 2019. Average price drop for alfalfa/grass and grass was in the \$50.00/tonne range with green feed and straw seeing a \$30-40 tonne drop. Highs for sellers are now in the past as economics of utilizing high priced feed 1) does not pencil out in Alberta and 2) the weather cooperated to allow for a return to average yields.

Manitoba hay prices have also fallen off through 2020 to closer to what is considered average. Alfalfa/grass is seen in that \$0.062/lbs range, which can economically make sense for many users. High quality alfalfa, with a listed high RFV is listed for \$70-120/tonne less than in 2019. This brings this high quality alfalfa back into line with 2017 prices. Listings of forages are notably up in Manitoba, with good yields and an early crop harvest noted as contributing factors (Manitoba Ag, pers. Comm.)

Montana hay listings are fewer in number than historically. Mixed hay price range is fairly in line with 2019. Demand from Wyoming and western states due to drought and fire continues to support the prices that linger from the years previous when Montana saw drought. Listings in North Dakota are very similar to what was seen in 2019 which is to be expected under the similar 'average' growing conditions. Prices in North Dakota are very similar to Saskatchewan and Manitoba. Importing hay (if border restrictions allowed) into Southern Saskatchewan would not automatically pencil out in 2020.

In September 2020, 1.00 USD=1.33462 CDN while the week ending September 21st, 2019 was 1.00 USD= 1.323 CND. Forage prices in 2020 and 2019 are easily compared as the US dollar remains at the same level as fall 2019.

## 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.

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 have been estimated to range from \$1.05-\$2.00/pair/day. SFC is working with MOA and patron groups to systematically collect and poll this information.

2020 pasture rates were reported as between \$0.80-\$1.50/pair/day depending on who is responsible for maintenance and animal care. This fits within the range seen in 2019. Demand remains steady.



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 2020 Crown lease rates were based on the 2019 calf market. 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>	2020	8.52

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. web

Across the province the majority of pastures have not had regrowth or moisture for the majority of the growing season. Exceptions are found in pockets in the south east, central, and north west, and generally across the north east.



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~Numerous personal communications were made through the report period and kept on file as .~