FALL 2021 FORAGE MARKET PRICING DISCOVERY
SASKATCHEWAN

September 2021
Saskatchewan Forage Council

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This document details the current market prices and general trends for forage products in Saskatchewan and nearby jurisdictions as of September 30, 2021. 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 2021 Saskatchewan Forage Market Price Discovery Report is a general industry overview of price and market trends with forages through the compilation of data and information collected from a diverse group of forage industry stakeholders in Saskatchewan and in neighbouring jurisdictions.

Saskatchewan producers have become adept at pre-planning for forage needs before the growing season but nothing could prepare them for the extremes of 2021. The lack of spring moisture and run-off, persistent drought conditions province-wide and high grain prices all resulted in feed shortages and unusually high forage prices in many parts of the province. The cool, dry spring across much of the province slowed initial pasture and hay growth, delaying cattle turnout in many regions and using up more feed reserves than planned. The lack of rain at critical times during the growing season and the hot summer resulted in forage yields that were much lower than average. Most of the province had low soil moisture at seeding, except the east-central and northeast regions who noted good moisture conditions in early May. Unseasonal heat in early June across most regions had a devastating effect on hay crops and grain crops, in terms of both quantity and quality.

In 2021, perennial hay production yields were once again well below the long-term provincial average across the province. The southeast and northeast were in better shape than much of the province, with yields of 1.0 ton/acre or approximately 70 per cent of the ten-year average, while the southwest and west central regions saw even lower yields of approximately 0.4 tons/acre. Greenfeed yields (reported in August) in the west side of the province were reported well below the provincial average of 1.0 tons/acre (as low as 20 per cent of the provincial average in the southwest), while the northeast and southeast above average. However, the provincial average is still well below the 10-year average of 1.65 tons/acre.

Producers have implemented management strategies that include baling intentional greenfeed, salvaging crops, purchasing forages, feeding straw and grain, silaging, and heavier culling of the cow herd. Many livestock producers are trying to secure anything they can for feed for the winter, but many are still coming up short, with nowhere to acquire more. At September 30th, all asking prices sat high, due to the decreased availability of forage resources and increasing costs of production. Many producers scrambled early to secure enough feed for the winter and any reasonably priced forage, although much higher priced than 2020 moved quickly.

There is little feed being sold in the province, many producers are relying on greenfeed to carry them through winter as perennial grass production was poor across the province. Prices are up an average 186 per cent across all categories, with the largest price increase of 209 per cent in the greenfeed category. Greenfeed appeared to be the easiest feed to purchase this fall. Compared to perennial forage, there was more reasonable local supply and the energy provided by greenfeed coupled with high feed grain prices lead to higher demand and prices. The three categories of perennial grass hay are up by an average of 175 per cent from spring base price. Most producers with perennial forage of decent quality kept their own supply rather than selling. Alfalfa hay, at current prices, would typically be used by dairy operations that have a larger incentive to utilize alfalfa versus an annual or grass hay. Similarly, grass hay has a market as horse feed, which may have resulted in a slightly higher price than mixed alfalfa/grass hay.
2. Saskatchewan Forage Production Trends for 2021

Lower than normal topsoil moisture conditions due to dry conditions last fall and little snow cover this past winter provincially had forage users expecting lower than average production. Low forage carryovers were seen on farm as spring growth province wide was slow; with cooler dryer conditions seen throughout the province. Late spring frosts and cooler nighttime temperatures slowed pasture growth as well. Prolonged unseasonal June temperatures in the 30-low 40°C range had a devastating effect on hay crops. Following the trend of the past three years, annual forage use continues to be a large market player, with the use of greenfeed being relied on heavily as a source of feed. Due to the low forage yields seen across the board and with poor yielding and poor-quality crops, producers in most regions are trying to secure any feed source possible for this winter including hay, greenfeed, salvage crops, pellets, kochia, straw, pea straw and screenings, and slough hay.

The Saskatchewan Ministry of Agriculture reported below average perennial forage yields for hay in 2021 provincially, as shown below in Table 1. Long-term average yields by crop are displayed in Figure 1. 2021 saw perennial and solid greenfield yields coming in lower than the three previous years.

Table 1. Estimated Provincial Hay Yields (in tons/acre) as of August 12\textsuperscript{th}, 2021\textsuperscript{v}.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Dry Land</th>
<th>Irrigated Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa</td>
<td>0.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Brome/Alfalfa</td>
<td>0.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Other Tame Hay</td>
<td>0.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Wild Hay</td>
<td>0.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Greenfeed</td>
<td>1.0</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Data source: Saskatchewan Ministry of Agriculture 2021 Crop Reports.

Regionally, the lowest yields were seen in the west central and the southwest with average yields of 0.4 tons/acre. The southeast and northeast, while still reporting low forage yields, fared the best with an average yield of 0.9 tons/acre. Greenfeed yield reports indicated low yields in the west central and southwest regions at 0.3 and 0.5 tons/acre respectively, with the highest yields seen in the southeast and northeast regions with 1.7 and 1.4 tons/acre respectively. Across the province, the overall greenfeed yield was well below average (1.0 tons/acre in 2021 vs the 10-year average of 1.65 tons/acre).
Forages harvested in 2021 were rated as excellent (4%), good (40%), fair (34%) and poor (22%) quality as of late July across all regions of Saskatchewan. Strong winds, drought stress, grasshoppers, hail and heat took their toll on crops in July. Producers, as always, are being advised to feed test. Although few feed tests have come in, nitrates are of concern in greenfeed and salvaged crops across the province. High sulphur has been reported in some salvage crops. During various stages when crops were salvaged for forage, there were varying levels of protein and TDN. High TDN and high protein was seen in salvaged canola, however mature durum had low protein and has feed values comparable to straw. 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 2012-2021, as reported annually in July.

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 2020 grazing was cut short in some areas of the province due to heavy snow in early November, in many areas. Most areas reported dry soil conditions and cold temperatures in October. Dry fall conditions resulted in lower winter cereal acres (winter wheat and fall rye) being seeded, with the exception of the northwest region, where conditions were closer to average. Dry conditions also caused concern with livestock watering as many dugouts, wetlands and wells were low or dry. Many producers felt they had enough feed to get through the winter months, however some in the drier areas in the south and central regions are expecting feed shortages.
This season, there was a lack of spring heat units to get forages growing and livestock producers faced late turnouts. Take-in dates were bumped back 1-2 weeks in many patron pasture coops and provincial pastures to allow for more grass growth. A relatively mild winter with little snow reduced winter feed needs in some areas, allowing some producers to have extra feed to give the pastures extra time in the spring. Also, many producers in the typically drier areas of the province plan to have 1-2 years of carryover. However, the poor pasture conditions have resulted in many parts of the province having to feed cows earlier than planned which will reduce their stockpile even more, leaving them in a tough position if the drought persists. The lack of runoff and a dry spring caused many producers to be worried about their feed and water conditions early on, influencing the forage market early in the season. Little to no stock water supplies and poor water quality have, and continue to be huge issues. Some producers began hauling water as early as May, and many were unable to utilize pasture resources due to the lack of water. A heat wave starting mid-June when plants were at the height of the growth cycle shut down growth in the entire west, and then east-central. Going into winter 2021/22, pasture conditions and carryover is poor to fair throughout the province due to the lack of moisture province-wide. Some areas of the south-east were in better condition.

Soil moisture conditions on hay land and pastures at the start of May were short, almost province-wide, with pockets of barely adequate soil moisture in the northeast and northwest regions. There were also pockets of very short soil moisture throughout the province (Figure 2). Hay and pasture topsoil moisture was rated as 0 per cent surplus, 27 per cent adequate, 48 per cent short, and 25 per cent very short as of May 3rd, 2021. As of September 6th, 2021, hay and pasture topsoil moisture improved slightly and was rated as 1 per cent surplus, 25 per cent adequate, 39 per cent short and 35 per cent very short (Fig 2). Areas though the northeast, east central and the west side of the southeast regions are showing adequate or near adequate soil moisture. Unfortunately, although there was some improvement in these regions, the moisture did not come at critical times during the growing season as most areas did not see much moisture until the week of August 17 which was much too late.
Overall, the late June heat that persisted throughout July resulted in low perennial forage yields, particularly in the west half of the province and the east central region. Greenfeed will be a valuable resource, however with the drought conditions, crop yield in most regions is greatly reduced. Most producers plan to mix the greenfeed off with hay, grains, alternative feed sources and straw, depending on the amount of nitrates found in the greenfeed.

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 region as the majority of wetlands are dry and many dugouts are very low or dry. Many new water sources have been developed but this is more in preparation for 2022, when they will hopefully fill with spring runoff. A lot of producers have been hauling water or pumping in order to utilize the forage resources they have available.

Abnormally dry and moderate drought conditions persist across North America, as illustrated in Figure 3. Conditions at August 31st show worsened drought conditions 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.
In most areas of Saskatchewan, where drought and lack of precipitation prevails, the top concern of producers interviewed is the ability to source feed for livestock for the winter, as well as livestock water and pastures for 2022. 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. Low soil moisture conditions have resulted in little to no interest in seeding perennial forages this fall. More producers are looking into options to rejuvenate older stands. Interest for spring seeding will be dependent on moisture conditions throughout the winter.
Production trend influences - non-weather related

The crop harvest was at 89% complete, well ahead of the long-term average of 63%, in Saskatchewan as of September 20th. Crops are being salvaged for forage as producers attempt to secure enough feed for the winter. However, the salvage was not as widespread as it needed to be to keep forage prices stable. Grain prices are at an all-time high (nearly double of normal) so most low-yielding crops were combined instead of baled for feed. For example, a 20-bushel barley crop would have been baled in previous years, still making sense for both the grain farmer and cattle producer. With barley prices at $7.50/bushel, that bale is now worth $150, with potential to increase over the next three to four months. Most cattlemen could not justify paying $150/acre for standing barley, which has really driven the high forage prices. Grain producers are working to get everything they can out of their crops this year. Poor crops in many areas of the province, as well as a hesitancy by some crop producers to drop straw, has resulted in lower straw availability and higher prices ($100-140/MT). Straw harvests were very poor and many crops were too thin and short to be baled. Concern was noted from feedlots that the availability of straw for bedding could be as much of a concern as a shortage of feed if there is a harsh winter. Low-yielding, drought-stressed and salvaged crops are being utilized for feed in many areas of the province. Some feed tests are coming back high in nitrates, however, so greenfeed options will often be mixed with hay, straw and alternative feeds to compensate for this. In many areas of the province, especially on the west side, producers are trying to access anything they can get their hands on for feed.

In response to the feed shortage this year, Saskatchewan Crop Insurance Corporation is doubling the Low Yield Appraisal threshold values for customers who salvage their cereal or pulse crops as feed, without negatively impacting future individual coverage. Customers were asked to contact their local SCIC office before they grazed, baled or silaged any damaged crops to discuss their options. There has been varying uptake for this program across the province. There were mixed results in the north east, where crops were average. There was some uptake for this program, however it mostly benefited the mixed farmers. Producers surveyed stated that some farmers wanted to capitalize on the opportunity and were charging quite a bit of money to bale it or graze damaged crops. Some grain farmers also felt that they could not ask enough to make it worth their while and chose to plough it under. In the east central region, there was not expected to be much uptake as many producers were locked into contracts and needed to combine their crops to fulfill those contracts. Those who did utilize this option to harvest some annual crops as livestock feed were mainly mixed producers, using it themselves.

Planned annual greenfeed will continue be one of the most important and utilized forages in Saskatchewan. These crops really suffered, with yields of one-third to half of normal. This had a greater impact on many operations than reduced hay yields. There were many unplanned greenfeed acres this year, as producers struggle to secure feed supplies. Silage is becoming more popular every year as it avoids weather risk and can be mixed with many types of feed stuffs. (Forage Specialists, pers comm, 2021).

Age of current perennial forage stands provincially continues to factor into lower production. Older stand production levels are impacting overall forage production and more producers are expressing interest in rejuvenating existing stands, instead of reseeding. However, provincially quantifiable data is not available. Many hay fields were grazed this year as well. Due to the dry conditions, normally wet
acres were dry enough to hay which produced a lot of bales, but they were of lower quality. Almost all hay went up dry, without rain.

Canada’s cattle herd saw a slight increase as of July 1; 0.2% to 12.23 million head in July (Statistics Canada, 2021), the first year-over-year increase since 2017. There was a rebound in the provincial herd seen in July 2020, and again in 2021. Beef cow inventory increased by 14,000 to 1.123 million and overall heifer inventory increased by 25,000, of which over a half were beef replacement heifers.

Saskatchewan 550 lb steers averaged $229/cwt in the first half of 2021, up 2% from 2020 and 1% from the five-year average. Cow-calf profitability is projected to have decreased slightly, but in general remains positive. Beef cow culling rates are expected to be 14.2% in 2021, up from 11.6% in 2020 and the long-term average of 11.4%. Cow marketings were down 5% in the first half of 2021. Drought conditions across the country are expected to result in larger cow marketings in the second half of the year and pressure cow inventories on January 1, 2022. (CANFAX, 2021).

Auction markets across the province are seeing an increase in the cull cow market, with strong summer sales. Herd dispersals and partial dispersals are being discussed. While some have been booked, recent rains, access to recently hailed crops and the announcement of the drought support has brought some optimism.

The 2021 Canada-Saskatchewan Drought Response Initiative provides relief to livestock producers to help maintain breeding stock. This consists of two payments totalling a maximum of $200/head for cattle, with adjustments made on animal unit equivalents for other livestock. Two applications are required, with the first requiring basic information and livestock numbers. Application #2 for the second payment requires more information including projected female breeding stock inventories and an extraordinary cost questionnaire outlining costs of feed, transportation of feed, water and livestock, labor, temporary fencing, alternative grazing arrangements, pasture production deficits, winter feed production and other related costs.

Additionally, the Government of Saskatchewan made changes to temporarily increase the maximum funding a livestock producer can receive from the Farm and Ranch Water Infrastructure Program (FRWIP) for dugouts, wells and pipelines for agricultural use from $50,000 to $150,000, with an increase to a 70-30% cost-share after the $50,000 cap is reached.

The federal and provincial governments have also increased the 2021 AgriStability interim benefit payment percentage from 50 per cent to 75 per cent for Saskatchewan producers. The interim benefit provides the opportunity for producers who are enrolled in AgriStability to access a portion of their benefit early, to help support losses and cover costs. (SCIC.ca)

Drought-stricken producers can also apply through Canadian Federation of Agriculture’s HayWest 2021 to bring hay in from eastern Canada on a break-even basis, with hay being bought and sold at $0.10/lb with freight being covered through funding through Agriculture and Agri-Food Canada.
Currently, Statistics Canada estimates the seeded tame hay acreage for 2020 in Saskatchewan at 3.285 million acres with a 2020 estimate at 3.369 million acres. Although this is still an estimate, it should be noted that this is 84000 acres less than in 2020. Due to the dry spring and low soil moisture conditions, many producers will continue to grow or utilize more annual crops as they can’t afford the risk of seeding forages and not having any forage produced off that land for 1-2 years while it gets established. There is also potential for poor forage establishment if it stays dry and producers can’t risk the expense of forage seed with no immediate return. There has been more talk about rejuvenation of existing stands that seeding new perennial forage.

Acres seeded to field crops have steadily increased. When looking at 2019, 2020 and 2021 estimates of field crop production it is noted that wheat seeded acres are down slightly, pea acres decreased, while canola and barley seeded acres increased. Change is seen in 1) loss of tame hay acres 2) decrease in acres of oats, mixed grains, and rye as seen in the chart below. Summer fallow acres continue to decline but at a slower rate than 10 years ago.

Figure 4. Seeded Acreage for Field Crops and Tame Hay in Saskatchewan 2011-2021.

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 and another 44,000-acre drop since 2020. Alberta, like Saskatchewan, has experienced a continued reduction in the reported seeded acres of tame hay, with another 111,500 less acres for 2021, now the lowest seen since the mid 1980’s. Nationally, tame hay acres had remained level at around 14.5 million acres for a handful of years until an over one million acres decline now through 2012/2021 production years to 12.8 million acres.
3. Weeds, Field Pests and Disease Impacts in 2021

There were no major provincial outbreaks of forage pests this past season, although flea beetle and grasshopper impacts were noted provincially. Alfalfa weevil was not seen as a widespread concern. Weather stress from strong winds, high temperatures and lack of moisture overshadowed any pest impacts.

The grasshopper forecast for 2021 was 0-2/ m² across the province with pockets of very light (2-4/m²) in the southeast, southwest and west central based on fall 2020 counts (SCIC Provincial Grasshopper Map, 2020). 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 2022.

4. Saskatchewan Hay and Forage Freight Rates

Hay transporters have indicated demand is variable. Some are very busy and indicate doing much longer hauls than usual (from 550-950 km one way), while others have been moderately busy but expecting to be busier following harvest. Truckers in some areas have not been busy as many producers sold out of feed early or had none to sell.

Hay transporters continue to 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. Some charge a fuel surcharge as well or have a minimum charge of $400-$550 depending on equipment used. Distances of what different truckers classify short haul versus long hauls vary with some considering short haul to be 300 km and under and some at 200 km or less.

<table>
<thead>
<tr>
<th>Condition of Measurement</th>
<th>Rate average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self loading/unloading units</td>
<td>$3.00/bale + 0.26/bale/loaded km</td>
</tr>
<tr>
<td>Hourly rate (shorter distances)</td>
<td>$147.50/hr</td>
</tr>
<tr>
<td>Short haul, 34-37 bales/load</td>
<td>$3.75/ loaded km ~</td>
</tr>
<tr>
<td>Long haul, 34-37 bales/load</td>
<td>$5.37/ loaded km* ~</td>
</tr>
<tr>
<td>Long haul, 38-44 bales/load</td>
<td>$4.92/loaded km</td>
</tr>
</tbody>
</table>

* a mobilization fee or empty travel fee may be on top of this rate.
~ a fuel surcharge may apply 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 in 2020). Self-unloading trucks are seeing high demand this fall with operators hauling silage bales, greenfeed and straw produced on-farm or from a close neighbour.
5. Current Saskatchewan Forage Prices by Crop and Sector

Many Saskatchewan producers have been struggling to secure forage supplies for their livestock with many resorting to securing any type of feed they can find. The electronic listing services such as Kijiji and Facebook feed sales groups have become by far the most popular means of buying and selling on farms across Saskatchewan over the past five years. The number of hits on a hay advertisement reached 50-100 per day in 2021. Low forage supplies have significantly reduced the number of advertisements as most producers do not have excess feed to sell or sold it early. Social media, print advertising and radio ‘trading posts' are also used, but far less than the other two means. There has been some concern regarding scammers on some social media groups with unscrupulous posters offering forages for sale and asking for money up front for non-existent forages.

Pasture conditions are a noted concern from portions of every region of Saskatchewan. The current potential for poor spring growth on pastures again in 2022 is alarming, as pastures generally have little carryover and plants are hurting after yet another harsh growing season. Many producers, particularly on the west side of the province, pulled cattle off pasture early or have very limited grazing time left. They are stubble grazing or grazing salvaged crops, while others are supplementing on pasture. Some community pastures have sent cattle home early, requiring producers to utilize on-farm feed supplies earlier than usual.

While feed tests are still coming in, forage quality is expected to be poor to fair quality and nitrates will be of concern. Higher than usual TDN and high protein in greenfeed and salvage crops is being seen due to the crops being so mature when cut. Elevated sulphur in salvage crops, particularly canola, has been noted. Some quality loss is anticipated because of the dry haying season many producers faced in nearly every region, hail, and grasshoppers.

Demand for forages at the currently listed prices is moderate. Low supply throughout much of the province has resulted in inflated prices. Many producers are opting to cull heavier (20-75%), with partial to full herd dispersals increasing in some areas, in lieu of paying the high feed prices. Auction markets saw a busier summer selling cows and pairs as producers attempted to reduce stress on their pastures and to attempt to have adequate feed supplies for the winter. The 2021 Canada-Saskatchewan Drought Response Initiative has some producers more optimistic, however despite the increased cash flow, they still have to source the feed.

With inadequate supply of traditional and alternative forages available, prices (majority asking prices) will settle near asking prices. Price information was collected July through September and is reported in Table 3 (below). Due to the fewer than usual forage listings, July and August were included in order to get a more accurate representation of forage pricing. **
Table 3. Average 2021 Forage Prices in Saskatchewan

<table>
<thead>
<tr>
<th>Forage Type</th>
<th>Simple Average Price ($/tonne)</th>
<th>Weighted Average Price ($/tonne)</th>
<th>High ($/tonne)</th>
<th>Low ($/tonne)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grass Hay</td>
<td>$230.38</td>
<td>**</td>
<td>$387.57</td>
<td>$88.00</td>
</tr>
<tr>
<td>First Cut Alfalfa</td>
<td>$244.97</td>
<td>**</td>
<td>$374.78</td>
<td>$69.004</td>
</tr>
<tr>
<td>Second Cut Alfalfa</td>
<td>$277.48</td>
<td>**</td>
<td>$356.13</td>
<td>$102.29</td>
</tr>
<tr>
<td>Alfalfa/Grass mix</td>
<td>$241.69</td>
<td>$251.15</td>
<td>$400.83</td>
<td>$127.97</td>
</tr>
<tr>
<td>Greenfeed</td>
<td>$213.38</td>
<td>$237.88</td>
<td>$385.80</td>
<td>$110.23</td>
</tr>
<tr>
<td>Clover</td>
<td>$91.88</td>
<td>**</td>
<td>$176.37</td>
<td>$27.55</td>
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<tr>
<td>Cereal Straw</td>
<td>$139.32</td>
<td>**</td>
<td>$264</td>
<td>$88</td>
</tr>
</tbody>
</table>

*In 2021 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.

** 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.

- includes out of province listings that were advertised in Saskatchewan

**First and second cut alfalfa** has a current simple average of $244.97/tonne and $277.48/tonne compared to $137.64/tonne and $204.65 the same time last year. Dryland second cuts were very limited. Supply is tight for second cut alfalfa again, 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 has increased as well with prices seen in Alberta of up to $382/tonne. Those dairy operations not set on using traditional alfalfa feedstuff move to cost effective feeding means before this price point which includes silage and alternatives. Premium alfalfa out of Alberta sits within this range.

The value of first-cut alfalfa is about $100/tonne over 2020 prices, as sellers seek to take advantage of the low supply and to account for the increasing costs of production. Listings in the northwest region were limited in number and the trades were part of a long-term agreement which led to pricing in this region far less than expected. With the trades from the northwest region removed from the provincial average, first cut alfalfa averaged $275.66, priced at $0.12-0.17/lb. There has been more mixed forage available on the market for a lowerprice and with the high forage costs that cattle producers are facing this winter, many forage users are opting for cheaper forage sources if they can find them and stricter culling to reduce on-farm forage demands.

**Alfalfa/grass hay** has a current weighted average asking price of $251.15/tonne which is much higher than the 2020 average of $135.35/tonne. Sellers are looking to capitalize on the low supply and high demand as well as taking into account the higher cost of production. With the significantly lower yield, in order to get the desired return per acre, they need to charge more for their product.

Upon further analysis, when anything above $300/tonne ($0.136/lbs) was removed from the price pool, the simple average was brought to $217.48/tonne (about $0.10/lb). The mean September asking price $215.52/tonne over $80/tonne above 2020 prices.
Reasonably priced hay does not stay on the market long, even at prices nearly double of those in 2020. Higher-priced hay stays on the market longer, with many surveyed cow-calf producers reporting that anything over $200/ton ($0.10/lb) is not viable. For some producers, at $3.50-$4.00/head/day, it makes more sense to sell cows than to buy hay. Some producer’s thresholds are much lower and would be strongly considering selling cows with hay prices at $0.07/lb.

_Grass hay_ has a current simple average asking value of $230.38/tonne which exceeds the long-term average. Supply is tight, and sellers looking to capitalize on inflated asking prices.

_Greenfeed_ is currently calculated to have a weighted average of $237.88/tonne. Greenfeed is no longer considered an ‘alternative’ forage, with an estimated 75% of producers using greenfeed for an estimated 50% of their forage needs. Forage users continued to try and set themselves up to buffer need with annuals, however, with a dry and hot growing season, the yield is much lower than expected and other feed sources are needed to make it through the winter. Producers are reluctant to spend the inflated prices for feed in some cases, as even with the drought assistance, it is more feasible to reduce herd size. $0.025 to $0.04/lbs range is where purchasers were most comfortable in 2020, however this year’s prices range from $0.05-0.14/lb. There has also been a lot of “unplanned” greenfeed this year as some mixed farmers made the decision to bale poor cereal crops in some areas as forage users attempt to secure forage sources, however due to the high crop prices, many producers opted to combine low yielding crops that would normally be baled. Transporters indicated both short hauls and long hauls were what clients were requesting.

To produce annual forages there are high yearly expenses, especially now considering the high grain prices. When estimated variable expenses (excluding fixed expenses), producing barley is $184 to $234/acre (Crop Planning Guide, 2021). When greenfeed yields sit provincially at 1.0 tons/acre (0.907 tonnes/acre), expense sits in that $202 to $257/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 will want to stay above the $154 to $190/tonne range for profitability. As winter progresses prices are likely to stay high, but then stabilize, as producers hit their self-imposed limits on feed prices.

Silage bales continue to grow in popularity with weights in the 1400 to 2000 lbs range and prices between $85-150/bale, based on 12 listings (including oat, barley and hay silage bales across the prairies). 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. There were very few listings for silage bales in Saskatchewan.

_Cereal straw_ is needed as a feedstuff this year. Straw prices decreased in 2020 following a 2-year price increase. This year, disastrous crops, unwillingness of some crop producers to drop straw and increased use of rotary combines has resulted in average prices over doubled for straw in 2021. Forage users indicated difficulty in securing supply. Straw prices are listed in the $91.88/tonne range (simple average), ranging from $44 -$132/tonne. Generally, straw is listed in the $40-70/bale range. Custom rate of baling straw is estimated at $13.68/bale (include $2/bale for net wrap) for 2021 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 anticipated to climb in price over the winter.
Listings will move quickly due to increased demand. Some feedlots note that if there is a harsh winter, straw for bedding could be a limiting factor.

**Pulse straw** saw a simple average of $139.32/tonne, based on 12 listings, which is higher than the last two previous years ($62.32/tonne). Neighbour-to-neighbour sales are common with this commodity. On average, estimated crop yields across the province in early September was one-third to half of 2020 estimated yields, with field peas averaging 21 bu/ac (versus 39 bu/ac average in 2020). The south west and west central regions expected to yield the lowest for most crops, while the south east and north east regions generally expected to yield the highest. Crops were greatly affected by drought during critical growing stages, resulting in many crops being shorter in stature, reducing the straw available to bale. The price increase is due to many producers working to secure any type of forage possible to make it through the winter months. Pulse straw also has a higher feed value than cereal straw with generally higher protein and energy.

**Yellow sweet clover** hay is no longer commonly found across the province. There were no sweet clover listings found. 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 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. There were no available listings for organic hay.
A comparison of forage prices from 2014-2021 can be viewed below in Table 4 with a graphical analysis for 2014-2021 in Figure 5 found following the table.

Table 4. Average Fall Forage Prices in Saskatchewan from 2014-2021 (weighted)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average *asking Price ($/tonne)</td>
<td>Average *asking Price ($/Tonne)</td>
<td>Average Price ($/Tonne)</td>
<td>Average Price ($/Tonnes)</td>
<td>Average Price ($/Tonnes)</td>
<td>Average Price ($/Tonnes)</td>
<td>Average Price ($/Tonnes)</td>
<td>Average Price ($/Tonnes)</td>
</tr>
<tr>
<td>Grass Hay</td>
<td>$230.38~</td>
<td>$122.48</td>
<td>$100.21</td>
<td>$126.63</td>
<td>$110.013</td>
<td>$100.66</td>
<td>$162.98</td>
<td>$94</td>
</tr>
<tr>
<td>First Cut Alfalfa</td>
<td>$244.97~</td>
<td>$141.45</td>
<td>$175.98</td>
<td>$138.82</td>
<td>$153.89</td>
<td>$97.78</td>
<td>$197.23</td>
<td>$98</td>
</tr>
<tr>
<td>Second Cut Alfalfa</td>
<td>$277.48~</td>
<td>$178.10</td>
<td>$181.66</td>
<td>$183.72*</td>
<td>$141.92</td>
<td>$127.36</td>
<td>$232.33</td>
<td>$118</td>
</tr>
<tr>
<td>Alfalfa/Grass Mix</td>
<td>$251.15</td>
<td>$135.35</td>
<td>$130.74</td>
<td>$138.80</td>
<td>$127.93</td>
<td>$138.80</td>
<td>$127.93</td>
<td>$86</td>
</tr>
<tr>
<td>Greenfeed</td>
<td>$237.88</td>
<td>$92.74</td>
<td>$125.40</td>
<td>$137.01</td>
<td>$120.37</td>
<td>$94.60</td>
<td>$140.96</td>
<td>$83</td>
</tr>
<tr>
<td>Straw*</td>
<td>$115.60~</td>
<td>$48.28</td>
<td>65.36</td>
<td>$55.63</td>
<td>$54.80</td>
<td>$63.11</td>
<td>$47.99</td>
<td>$44</td>
</tr>
<tr>
<td>Yellow Sweet Clover</td>
<td>-</td>
<td>80.17</td>
<td>-</td>
<td>-</td>
<td>$87.87</td>
<td>-</td>
<td>192.90</td>
<td>-</td>
</tr>
</tbody>
</table>

*Straw is an average of cereal straw and pulse straw.
~Simple Average
Standing hay agreements are often on a mutual, long-term basis, between neighbours. Prices held steady through 2021. 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 2021 was $16.34/AUM- down slightly from 2020. There was no large range in price.

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. In 2021, there was little standing hay available. Posted asking prices were $20-30/acre for hay with some posted at $0.06/lb in later July (assuming the stand yielded the 2021 provincial average of 0.7 tons/acre (equivalent to 0.635 tonnes/acre) resulting in a standing per acre price of $84/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 2021 average of 0.7 tons/acre, the cost of cutting ($13.38/acre) and baling ($15.80/acre) would be is approximately $41.68/acre in addition to the cost of the standing forage. Cutting and baling forages is costly, mainly due to the high cost of equipment and the low fuel cost to yield ratio.

* 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 net wrap.

**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. These bales may be purchased by small-scale farmers, acreage owners feeding small numbers of livestock; highest quality hay is sought by dairies.

<table>
<thead>
<tr>
<th>Forage Type</th>
<th>2017 Average Price ($/bale)</th>
<th>2018 Average Price ($/bale)</th>
<th>2019 Average Price ($/bale)</th>
<th>2020 Average Price ($/bale)</th>
<th>2021 Average Price ($/bale) (# listings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa</td>
<td>$6.25</td>
<td>$7.39</td>
<td>NA</td>
<td>$8.03</td>
<td>$11.35</td>
</tr>
<tr>
<td>Alfalfa/Grass</td>
<td>$6.20</td>
<td>$6.52</td>
<td>$7.07</td>
<td>$5.93</td>
<td>$8.72</td>
</tr>
<tr>
<td>Grass</td>
<td>$5.30</td>
<td>$5.19</td>
<td>$8.40</td>
<td>$5.06</td>
<td>$7.63</td>
</tr>
<tr>
<td>Unspecified Hay</td>
<td>$5.00</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>$6.00</td>
</tr>
<tr>
<td>Straw</td>
<td>$2.94</td>
<td>$3.12</td>
<td>$3.20</td>
<td>$3.10</td>
<td>$3.82</td>
</tr>
<tr>
<td>Organic Hay</td>
<td>$5.92</td>
<td>* straw $2.50</td>
<td>NA</td>
<td>$4.50</td>
<td>$6.50</td>
</tr>
<tr>
<td>Greenfeed</td>
<td>$6.50</td>
<td>$4.67</td>
<td>$7.50</td>
<td>$4.25</td>
<td>$10.50</td>
</tr>
</tbody>
</table>
2021 saw an increase in asking prices for all categories. Most listings sold quickly due to the reduced supply available. There are listings from across the province; reflective of the pockets of fair production.

With the highest ($15/bale) and lowest price ($5/bale) removed, the average list price was $9.07/bale for grass/alfalfa for September. An increase in asking price was seen between the July and August time periods, likely due to reduced supply available and urgency to secure winter feed. Good quality square bales will become increasingly more difficult to obtain at a reasonable price. There are a few listings for second and third cut square bales on the market for $9 to $15/bale. These will likely be a stronger commodity for smaller operations, horses, and dairy.

**c) Silage**

There were mixed opinions on the 2021 silage crops. Cereal silage was below average in most locations with some reporting 10% of normal production. Cereal yields averaged 5 ton with a range of 3-8 ton provincially. With limited moisture in many areas, 2021 resulted in reduced corn silage acreage (down 12000 acres from 2020) and while most corn silage is not mature enough to harvest yet, disappointing corn silage crops province wide are expected. 1 Manitoba producer near the Manitoba/Saskatchewan border is not chopping yet but estimates yield to be 18 MT/acre. Some producers who previously were using corn silage have cut corn out of their production.

Wrapped silage bales (including haylage) continue to be an option for some growers with wrapping shortly after baling key. Wrapping prices were noted at $22-24/bale for custom wrapping, including net wrap and silage plastic. Silage bales listed (Alberta & Manitoba) from $85-150 per 1400-2000 lbs bale for an average of $104.81, with 1 listing in Saskatchewan in the east central region for oat balage for $85/bale and 1 for alfalfa silage bales for $85/bale in the south east region.

Silage values are reported as 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 2021 cereal silage (i.e. barley, or mixed grains), based on 6 surveyed, to have an average value of $86.04/tonne at the pit. The value range is from $60-$104/tonne. There is no regional price trend. Feedlots using corn silage were unknown at this time as it is not mature enough to harvest. Canfax (CANFAX Trends Report, 2021) reported Alberta barley silage at $103.42/ton ($114.00/tonne) in September, a change from 60.75/ton ($66.82/tonne) last year at this time (based on a barley price of $9.13/bushel x 12.5 conversion to barley silage price/tonne).

In 2021 custom operators and producers were surveyed as to the custom cost of silage. Costs of chopping, hauling, packing are approximately $11-14/tonne with swathing extra, within a specified hauling distance and some requiring the farmer supplying the fuel. Other outfits offer hourly services (chopper, 2 trucks, packer) from $970-1450/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
fall forage market discovery 2021

feed barley prices at September 8th was $328.88/tonne or 7.16/bushel* (AGR Market Trends, 2021). Using the rule of thumb to estimate, barley silage would be valued at $85.92/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.

\[
\text{Hay to silage conversion} = \frac{(100-15\% \text{ moisture in hay})}{(100-65\% \text{ moisture in silage})} = 2.428 \\
\text{= $282.86 per tonne for greenfeed / 2.428 conversion to silage factor} \\
\text{= $116.49/tonne value} \\
\text{When $15/ tonne of additional inputs for chopping/hauling is added to the figure, an estimate of $131.49/tonne is reached.} \\
\text{Higher than the average value producers have placed on their silage.}
\]

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 2021 are found in Table 6. Prices across Saskatchewan are consistently much higher than in 2020, ranging from approximately 20% to 300% higher, with most prices being double from last year. The anomaly is the average alfalfa price in the northwest, which due to few trades available in the region and the trades found being based on a long-standing agreement with the seller, are much lower than seen across the province. This is most likely not an accurate representation of alfalfa hay prices in this region. As well, the grass hay listing is the northwest region is lower than expected, however with the trade as part of a long-term agreement removed, the remaining two listings averaged $181.50 which is more in line with rest of the province. Disastrous hay crops, well below average field crops, and high grain prices have reduced the forage availability across much of the province and many sellers are trying to capitalize on this. These are asking prices, not necessarily what was paid, however most forages sold quickly (within hours if reasonably priced). Much higher-priced listings remained on the marketplace for much longer (weeks) as producers have had to make the tough decision regarding purchasing high priced feed or reducing the cow herd.

### Table 6. 2021 Saskatchewan Forage Crop Prices by Region (simple average)

<table>
<thead>
<tr>
<th>Region of Saskatchewan</th>
<th>Alfalfa*</th>
<th>Grass</th>
<th>Alfalfa/ Grass</th>
<th>Greenfeed</th>
<th>Straw~</th>
</tr>
</thead>
<tbody>
<tr>
<td>South West &amp; South Central</td>
<td>No listings</td>
<td>No listings</td>
<td>$270.48</td>
<td>$289.90</td>
<td>$109.40</td>
</tr>
<tr>
<td>South East</td>
<td>$264</td>
<td>$299.70</td>
<td>$220.79</td>
<td>$185.94</td>
<td>$93.27</td>
</tr>
<tr>
<td>East Central</td>
<td>$296.19</td>
<td>$176.38</td>
<td>$206.57</td>
<td>$193.98</td>
<td>$140.48</td>
</tr>
<tr>
<td>Central &amp; West Central</td>
<td>$282.50</td>
<td>$199.20</td>
<td>$296.96</td>
<td>$228.43</td>
<td>$102.04</td>
</tr>
<tr>
<td>North West</td>
<td>$85.64</td>
<td>$155.49</td>
<td>No listings</td>
<td>$206.68</td>
<td>$96.93</td>
</tr>
<tr>
<td>North Central &amp; North East</td>
<td>$259.95</td>
<td>$242.43</td>
<td>$220.49</td>
<td>$200.97</td>
<td>$98.19</td>
</tr>
</tbody>
</table>

*Includes both first and second-cut alfalfa

~Straw – includes both Cereal and Pulse straw
A) South Central/South West Region
Forage production in the region was heavily affected by the low soil moisture, prolonged unseasonal heat in June that persisted through much of July, lack of precipitation, and wind which negated the benefits of the little rain that was seen. Alfalfa/grass yields averaged 0.5 tons/acre; much lower than 1.2 tons/acre in 2020. Greenfeed yields in the south west and south central averaged 0.5 tons/acre, well below 2020’s average of 1.8 tons/acre.

Rain was infrequent throughout the growing season resulting in reduced carrying capacity in pasture and little to no hay regrowth. Very short topsoil moisture conditions have persisted throughout the growing season. Regional shortages are seen with greenfeed, straw and hay. Producers in the region are expected to be utilizing a high amount of greenfeed as it has been more reliable than hay in the past few years. Producers plan to feed anything they can get such as chickpeas, bi-product pellets, straw and some canola. Many are having to purchase forages and the prices are high, and there are not a lot of economical options available. Nitrates are of concern as a lot of the annual crops that were baled are testing high due to the drought. Stubble grazing will be common as well, however the limiting factors are water and fencing on these fields.

At August 23rd, pasture conditions are rated as 15 per cent fair, 39 per cent poor and 46 per cent very poor. Pastures started browning off in early July while the weather continued to be hot, dry and windy. There are concerns about sourcing enough cattle feed for the winter. Producers began moving cattle off pasture as early as July in hopes that the grass would recover with rain. Water quality also proves to be a concern and has resulted in some producers unable to use certain pastures or having to haul water. Herd reductions are being seen with an increase in the cull cow market and some auction marts are expecting an earlier than usual fall calf run, however although some producers were contemplating partial herd dispersals, rain in late August helped to ease some concern.

B) South East Region
The south east region started out the growing season with mostly short and very short topsoil moisture. Timely rains in parts of the region resulted in these areas being close to average yields, while other areas such as around Moose Jaw, pastures and haylands have suffered nearly season long. The west side of the south east region, especially, suffered from prolonged high temperatures in June. In the Moose Jaw area, there will be a high amount of stubble grazing and grazing of poor crops to make up for the poor pasture conditions. Regional alfalfa and alfalfa/grass yields were estimated at 1.0 ton/acre with greenfeed at 1.7 tons/acre.

Like in the southwest region, producers will feed whatever they can get and blend, chop or grind in order to use low quality forages. Rations are expected to be heavy in salvage crops and other alternative forages in lieu of buying expensive hay. In the drier areas, fall grazing sources are already being used, while in the wetter areas, producers are trying to stay on pasture as long as possible. Some pastures have been underutilized due to the lack of water or poor water quality. In the drier areas, producers currently do not have enough feed for the winter of if they do, they will have no reserves left. Nitrates are a concern in greenfeed, as well as sulphur in some salvage crops.

Generally, pasture and hayland topsoil moisture is rated short across the region. As of August 23, pasture conditions were 3 per cent good, 33 per cent fair, 36 per cent poor and 28 per cent very poor.
and hay growth were slow due to dry conditions and cool temperatures. Dry pastures have resulted in reduced carrying capacity and some producers have been hauling water since early July as water sources dried up. Rains later in August greened up the pastures allowed to producers to graze longer and save some winter feed.

C) East Central Region
The east central region experienced a good soil moisture in the spring, however soils dried out fast which extended into a dry summer for many parts of the region. Pastures were slow to grow due to dry conditions and cool nightly temperatures, which left cattle producers feeding as long as they could. With very little hay carryover again many forage users were struggling. Cool temperatures and the absence of good general rains slowed development, reduced growth and delayed haying. Yields averaged 0.8 tons/acre on alfalfa and alfalfa/grass and early greenfeed averaged 1.0 tons/acre- all below average.

Due to the low yields, producers are feeding anything they can get. Greenfeed is very common as it has been more reliable than perennial hay for the past few years. Producers are attempting to secure winter feed, however are choosing alternative feeds such as salvage crops and canola hay, instead of expensive hay. Salvage crops and straw are the most likely to move as availability and price dictates. Straw may be difficult to come by, however, due to short crops and reluctance of some crop producers to drop straw. Lack of availability of pellets and other alternatives unless they were spoken for early on is also a concern. Interest in seeding perennial forage acres for hay are noted to be continuing to decline in this region as annual forages take their place. Auction marts saw an increase in the cull market and busier summer sales.

Pasture condition as of August 23, 2021 is 2 per cent good, 21 per cent fair, 47 per cent, poor and 30 per cent very poor. 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. Water shortages for livestock were seen as early as May. Some pastures were unable to be utilized due to water quality. Recent rains have prolonged pasture and supported silage and greenfeed regrowth to extend the grazing season. 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 13th and to improve livestock water supplies.

D) North East Region
The region saw mostly good soil moisture conditions in the spring, however cooler temperatures left the pastures slow to green. The hay was slow to develop which had producers hesitant to start cutting. The yields were expected to be lower, but some wetter areas were hoping for average. Yields were reduced with averages of 1.0 tons/acre (alfalfa/grass) and 1.4 tons/acre on greenfeed, well below last year’s averages.

Areas around Prince Albert saw a reduction in yield like the rest of the region but indicated that most producers feel they will be okay for winter feed. There are some producers selling their herds but will be keeping their hayland to cut or to rent. It is dry but producers are optimistic that is a one-off season. There is a lot of greenfeed coming off, however it came off too mature which may cause issues.
Further east and south, in the Humboldt and Tisdale areas, producers are more concerned. They are gearing up to feed greenfeed, silage, straw, salvage crops, pellets and canola, with the Humboldt area expected to be feeding by mid-October and the Tisdale area as early as mid-September. Hay, greenfeed and straw prices are higher, with at least $0.02/lb premium seen for hay and greenfeed and straw hitting $50-60/bale. Hay prices of up to $0.16/lb and greenfeed prices of up to $0.12/lb have been seen. In the Tisdale region, an estimated 25-40% are short on feed and those that usually have extra hay to sell are just hoping they have enough for themselves. Producers are trucking feed in from further away.

Regional pasture conditions as of August 23, 2021 indicates one per cent fair, 71 per cent poor and 28 per cent very poor. Little stockpiled feed is available in some areas. Cattle will be coming off pasture much earlier than usual in the southern part of the region. Corn grazing and silage are common but where 1.5 AUMS/acre is average, this year 1.1-1.2 AUMS/acre is more common. There was not much of a reduction in corn acres seeded, however some have switched from silaging it to grazing it. In the Humboldt area, producers were hauling water to at least pasture which was costly and inconvenient and about 10-15 percent of producers opted to move the cows if the water was poor. Water was not as much of concern in other areas of the region. 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**

Spring hay and pasture topsoil moisture was short. Wind further dried out the soils, and along with hot temperatures and limited moisture, pasture and hay growth were slow. Some rain was seen in mid June which helped somewhat but high winds and prolonged hot temperatures again later in June resulted in crops maturing rapidly. Haying began late June with less than 1 per cent went into silage. The regions average yields were 0.4-0.5 tons/acre on alfalfa/grass and alfalfa – 1/3 to ½ of the 2020 yield. Greenfeed yields were noted in the 0.5 ton/acre range.

There will be a lot of salvaged drought-stressed low-yielding cereal crops used for feed. There was almost no hay in the region, with irrigated acres being less than half of normal and this was limited to along the river. Straw and grain rations are common, but short crops will reduce straw availability. Producers seeking pellets are being told they will be put on the list. Other requests for mill run pellets, malt sprouts and oat hulls are offered to existing customers on a limited basis or based on historic amounts, however new customers will not have any luck. Almost everyone is trying to procure feed. Greenfeed will be mixed off with slough hay and straw depending on the nitrate level of the greenfeed. Greenfeed and silage will be fed through the fall, winter and spring. The area is dry and beyond stressed. It is expected that fall grazing resources will be done by late September or early October versus late November.

Grazing corn is a common practice in the region, however some did not tassle and form cobs and some is progressing but will be low yielding (less than half of average). Producers are planning for 100 AGD/acre (animal grazing days per acre), less than half of the 225 AGD/acre average. Corn grazing acres remained stable, while silage acres were up slightly.

Pastures are rated at 12 per cent fair and 42 per cent poor and 42 per cent very poor across the region as of August 23 with soil moisture conditions short to very short in most areas at September 21st. Pasture conditions are described as “horrid.” Pastures were browning off in early July. Portable fencing capacity
is being added in order to utilize any grazing sources available, however the concern is that it is very difficult to overcome the economic decision to feed cows expensive feed in order to maintain the herd. The cull level is estimated to be 20-100%.

F) North West/North Central Region
The north west experienced adequate spring hay and pasture topsoil moisture, however cool nightly temperatures slowed pasture and hay growth. Slow pasture growth had producers worried about running out of feed. Forages were slow to develop due to temperature, winds and very little rain. Haying started later due to stunted growth. Alfalfa/grass yields averaged from 0.9 tons/acre across the entire region with alfalfa yields at 0.8 tons/acre. August greenfeed yields were estimated at 0.9 tons/acre, half of last year’s. Hay yield is estimated at 15-50% of normal leaving producers scrambling to source feed. There are a few pockets of okay moisture, however most areas are severely deficient. A very high percentage of producers will be feeding alternatives such as greenfeed, salvaged cereal crops, straw (where available), salvaged canola (hay or silage), salvaged faba beans, kochia, flax, pellets, cereal grains, palm oil, canola meal, pea screenings, pea straw, ditch hay and slough hay. Many will not have enough feed to last the winter unless more can be sourced or a heavy cull is done. Hay prices are much higher than average, with prices seen up to $0.21/lb. Straw is hard to find. Nitrates in greenfeed are testing at 0.1-5.6%. Corn grazing has been stable. Herd reductions seem to depend on if producers have stockpiled feed (about 2 years’ worth has been the normal practice) and how much crop land was transitioned to feed by mixed farmers.

Pasture conditions as of August 23 are nine percent fair, 44 percent poor and 47 percent very poor. Producers are preg checking, culling (up to 75% in extreme cases), weaning earlier and creep feeding in an effort to extend feed supplies. Some of the community pastures were done earlier than usual. While some cows are still on pasture, some producers are feeding already and others are supplements on pasture. Water has also been an issue as many dugouts and wetlands have dried up.

7. Forage Price Trends in Neighbouring Jurisdictions
Producers in Alberta experienced drier than normal conditions throughout the growing season until early August, when it shifted to above normal for most of the province, except some areas in the northeast, northwest and Peace regions. The south region improved the most. 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 “the provincial average yield for second cut dryland hay is estimated at one ton per acre, below the 5-year average of 1.3 tons per acre. Quality is rated as 42 per cent poor to fair, 54 per cent good and 4 per cent excellent. Second cut hay on irrigated fields is 85 per cent complete, with yield estimated at 1.7 tons per acre, and below the 5-year average of 1.9 tons per acre. Quality for baled irrigated hay is rated as 40 per cent poor to fair, 53 per cent good and 7 per cent excellent. Pasture growth is minimal in most areas at this point, and heavily grazed pastures are still struggling to recover, even with the recent moisture. Pasture conditions (tame hay numbers shown in the brackets) across the province are now reported as 55 (50) per cent poor, 28 (31) per cent fair and 17 (19) per cent good”. (Alberta Agriculture, 2021).
Alberta hay prices averaged $148/ton in the first seven months of 2021, down 10% from 2020 but up 6% from the five-year average. Hay prices moved sharply higher in June and July due to drought conditions. Demand for forages of any kind and quality is strong as producers are looking for ways to maintain their herds. (CANFAX, 2021)

In Alberta, a cooler and drier spring slowed pasture and hay growth, similar to most of Saskatchewan. 90% of producers had adequate to surplus forage and 83% had adequate to surplus feed grains to get them through until grazing began. Some pastures were dried out by early August. Feed shortages were anticipated and producers were utilizing cereals and pulses for silage, greenfeed and pasture. There was not much second cut hay and first cut hay yielded 1 ton/acre (less than the 1.5 ton/acre average).

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. Little to no spring runoff left creeks and dugouts depleted and some producers starting hauling water as early June to fill dugouts. While pastures were poor throughout the region, previously overgrazed pastures fared the worst. Producers are working to secure feed supplies for the winter as hay yielded 1/3 to 2/3 of the normal yield across the northwest and southwest regions, with no second cut. Cattle were moved to fall grazing mid-August as pasture condition declined and community pastures were done earlier than usual. Culling is ongoing. Hay prices are hay and alternative feeds are expected to be double the usual cost. Late August and September rains helped out the pasture condition, extending the grazing season for most.

Silage usage continues to grow in Manitoba. Kochia is being ensiled in some places and barley silage is yielding 5-7 tons/acre (less than normal). Overall, in the southwest, silage yield is about average. Corn silage has not started yet. Seeding progressed well for corn silage in May, however drier conditions resulted in thinner cobs. Annual forage use is high and continues to grow in the province as lots of pasture is being broke up, particularly in the southwest. Many producers are cutting annuals for greenfeed or silage for feed that would normally hit the grains market. More acres of straw than normal are being baled for cattle producers.

The United States hay stocks are reported May 1st yearly. The report noted “All hay stored on United States farms as of May 1, 2021 totaled 18.0 million tons, down 12% from May 1, 2020. Disappearance from December 1, 2020 - May 1, 2021 totaled 66.0 million tons, up 3% from the same period a year earlier.” However, Montana stocks were down 970,000 tons (7%) from May 2020, and North Dakota was down from 1290 in 2020 to 950 (thousand tons) in 2021.

Drought has negatively impacted North Dakota’s hay production forcing producers to source other types of feed such as cattails, kochia, flax, soybeans, and millet. Drought and wildfires have affected Montana’s hay production with many counties eligible for their 2021 Livestock Forage Disaster Program. The seasonal drought outlook (http://g.usa.gov/3eZ73) sees the drought in North Dakota and the east half of Montana persisting through to January. Western Montana will see drought but conditions should improve. Fall rains would be welcome across both states as conditions continue to become drier. Hay continues to be delivered into Montana for 240.00-300.00 per ton from surrounding states and Canada.
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, Facebook online sales groups, hayexchange.com, bizmanonline.com and others.

Table 7. 2021 Forage Prices in Adjacent Provinces and States - reported in CDN$/tonne

<table>
<thead>
<tr>
<th>Forage Type</th>
<th>Alberta</th>
<th>Manitoba</th>
<th>Montana*</th>
<th>North Dakota*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Price Range</td>
<td>Avg Price ($/Tonne)</td>
<td>Price Range</td>
<td>Avg Price ($/Tonne)</td>
</tr>
<tr>
<td>Alfalfa 1st cut</td>
<td>-</td>
<td>-</td>
<td>$198.14</td>
<td>$198.14</td>
</tr>
</tbody>
</table>
| Alfalfa 2nd cut   | $195.99-
-382.49 | $279.32 - | -       | -       | $238.26-
420.67 | $339.13 | $280.20-
428.52 | $348.41 |
| Alfalfa/Grass     | $147.04-
-423.94 | $290.62 | $220.46-
374.78 | $294.85 | $416.92-
525.71 | $471.31 | -       | -       |
| Grass             | $191.80-
-305.33 | $239.36 | $198.41 | $198.41 | $280.45 | $280.45 | $187.06-295.31 | $221.85 |
| Straw             | $70.10-
-132.27 | $94.61 | $44.09-
-147.04 | $95.17 | -        | -        | $98.16-126.21 | $112.19 |
| Green-feed        | $270.06 | $270.06 | $141.75-
195.98 | 165.16 | $154.24-
280.42 | $217.33 | -        | -        |
| Pulse straw       | $132.27 | $132.27 | -        | -        | -        | -        | -        | -        |

*American prices have been converted to CDN currency values average for week ending Sept 17, 2021 ($1USD = $1.2721 CDN)

All classes of forages have (approximately) doubled in price in Alberta in September 2021 as compared to September 2020. Average price increase for alfalfa/grass and grass was in the $170/tonne range, greenfeed with a $170/tonne increase and straw seeing a $40/tonne increase. These are asking prices; however, most were not on the market long and there is strong demand, both in the prairies and heading south. There is some movement of feed into western Saskatchewan from Alberta.

Manitoba hay prices have increased as well, but not to the extent of Alberta’s. Alfalfa/grass is seen in that $0.13/lb range and is up $160/tonne over last year’s prices. Alfalfa, greenfeed and grass hay are up $50-70/tonne. High quality second cut alfalfa had few listings but was over double last year’s prices. Western Manitoba is similar to most of Saskatchewan; however, the forage listings increase further east.

Montana hay listings are much fewer in number than historically. Demand is high and due to the drought, supply is low. Prices are much higher than 2020 and many producers who would normally have extra feed to sell need it for own use. Listings in North Dakota are very similar to what is seen across the prairies. Prices in North Dakota and Montana are higher than Saskatchewan and Manitoba. North Dakota
and Montana are dealing with drought conditions, with much less feed on the market. Many producers are importing feed from further away; Eastern Canada or further south in the US. Hay from Saskatchewan is moving south to within about 1 hour of the border. There were no hay listings from North Dakota and Montana on Canadian sites.

In September 2021, 1.00 USD=1.2721 CDN while the week ending September 25th, 2019 was 1.00 USD=1.33462 CDN. Forage prices in 2021 and 2020 are easily compared as the US dollar remains at a similar level as fall 2020.

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.

2021 pasture rates were reported as between $1.00- $2.00/pair/day (with an average of $1.43) and yearlings at $0.10/day depending on who is responsible for maintenance and animal care. This is slightly higher than what was seen in 2020. Demand remains steady.

<table>
<thead>
<tr>
<th>Rent rate = price per pound x 46 pounds x 0.8 x 12.75%</th>
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<tbody>
<tr>
<td>Price per pound = the preceding October/November weighted value of beef (i.e. calves, feeders &amp; cull cows)*.</td>
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<tr>
<td>46 pounds = the amount of beef actually produced from one AUM.</td>
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<tr>
<td>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.</td>
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<tr>
<td>12.75% = percentage share of production that the Crown takes for rent</td>
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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 $0.38/hd/day. The leaseholder is also responsible for paying the land taxes and improvements over and above the lease fee. Across the province the majority of pastures have not had regrowth or moisture for the majority of the growing season.
9. References


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