

2020 WINTER FORAGE MARKET PRICE DISCOVERY SASKATCHEWAN



THE SASKATCHEWAN FORAGE COUNCIL

AT MONTH END JANUARY, 2020

This document details the current market prices and general trends for forage products in Saskatchewan and nearby jurisdictions as at January 15, 2020. Information was obtained through a variety of methods including telephone interviews, personal interviews, electronic correspondence, 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 information reported in this document is for use by the Saskatchewan Forage Council. The Saskatchewan Forage Council, including the author of this report, have made every effort to ensure the accuracy of the data reported, however it does not guarantee and accepts no legal liability arising from or connected to the accuracy, reliability or completeness of any material contained in this document.

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



Table of Contents

| | |
|---|----|
| 1) Review of 2019 Growing Season and Forage Production | 4 |
| 2) Field Pest Impact and Projections for 2020 Growing Season..... | 7 |
| 3) Regional Forage Conditions in Saskatchewan..... | 8 |
| A. South Central and South West Regions | 8 |
| B. South East Region | 8 |
| C. North East Region | 9 |
| D. East Central Region | 9 |
| E. West Central and Central Regions | 10 |
| F. North West and North Central Regions..... | 10 |
| 4) Current Forage Freight Rates in Saskatchewan | 11 |
| 5) Current & Projected Saskatchewan Forage Prices for 2020..... | 12 |
| 6) Additional 2020 Provincial Forage Market Considerations..... | 20 |
| 7) Current Alternative Feedstuff Prices | 22 |
| 8) Forage Price Trends in Neighbouring Jurisdictions | 25 |
| 9) Forage Seed Prices..... | 28 |
| 10) References | 30 |

List of Tables

| | |
|--|----|
| Table 1. 2019 Saskatchewan Dryland Hay Yield Estimates (tons/acre)..... | 4 |
| Table 2. Tame Hay Yields in Manitoba, Saskatchewan, Alberta and Canada, 2012-2019..... | 5 |
| Table 3. January, 2020 Hay Transportation Costs in Saskatchewan | 11 |
| Table 4a. Average Current Forage Prices in Saskatchewan as at January 13th, 2020..... | 13 |
| Table 4b. Average Fall Long (Aug-Dec) Forage Prices in Saskatchewan as at January 13th, 2020 | 13 |
| Table 5. Square Bale Asking Prices Across Saskatchewan from December 2019- January 2020..... | 18 |
| Table 6. Average Saskatchewan Processed Alfalfa Product Prices for 2019-2020..... | 19 |
| Table 7. Average Alberta Compressed Timothy Prices for 2019-2020 | 19 |
| Table 8. Alternative Feedstuff Prices and Availability as at January 13th, 2020..... | 23 |
| Table 9. Forage (Asking) Prices in Adjacent Provinces and States (winter) | 25 |
| Table 10. Forage Seed Prices in Saskatchewan as at January 13, 2020 | 28 |

List of Figures

| | |
|--|----|
| Figure 1. Comparison of North American Drought Conditions as at June 30 and November 30, 2019..... | 6 |
| Figure 2. 2018 Saskatchewan Grasshopper Forecast..... | 7 |
| Figure 3. Hay and Pasture Topsoil Moisture Conditions as at Final 2019 Crop Report..... | 21 |

1. Review of 2019 Growing Season and Forage Production

In 2019, hay production yields were once again below the long-term provincial average for the third year in a row. Table 1 shows Saskatchewan's dryland yield estimates for the 2019 growing season. Yields were surprisingly average for the south west, but disappointing in the central regions. Greenfeed yields were once again favorable. Saskatchewan producers prepared themselves for drought and poor forage yields after 2017 and 2018. Spring was cool and dry. Lack of precipitation was widespread through June across Saskatchewan, but as precipitation arrived in June, forages began to grow. Too little, too late for many. At November 18, 2019 hay land and pasture topsoil moisture was rated at 10 per cent surplus, 80 per cent adequate, nine per cent short and one per cent very short (see Figure 3, page 21).

The prediction and initial reports of poorer quality forage in September were not as wide spread as first anticipated. While quality is not superior, majority of tests are coming back as general book values or a lesser protein and weathered, but still manageable for those using them. Some higher nitrates are being seen in annuals but are being easily managed generally.

Forages traded steady and with reasonable volume from early August through September. Producers have implemented management strategies such as baling intentional greenfeed, salvaging grain crops, purchasing some forages, feeding straw and grain, and silaging. It is estimated 50% to 90% of livestock operations (region dependent) are using some form of annuals for winter feed.

The listing of forages has been strong, but trades of forages slowed in December and January with forage listings staying on the market for longer than in the fall. Reasonably priced perennial forages, just as in the past two years, continue to move quickly. An abundance of straw is still listed for sale. Where transportation is affordable to the buyer straw is continuing to sell.

Table 1. 2019 Saskatchewan Dryland Hay Yield Estimates (tons/acre)
Estimated 2019 Hay Yield (short tons/acre)

| Region | Date | Estimated 2019 Hay Yield (short tons/acre) | | | | On-farm stocks at Nov/19 |
|---------------------------|---------------|--|---------------|----------------|------------|--------------------------|
| | | Alfalfa | Alfalfa/Grass | Other Tame Hay | Greenfeed | |
| Southeast | Aug 12 | 0.9 | 0.9 | 0.8 | 2.1 | Adequate |
| Southwest | Aug 12 | 0.8 | 1.2 | 0.9 | 1.9 | Adequate |
| East Central | Aug 12 | 0.9 | 0.9 | 0.7 | 1.6 | Adequate |
| West Central | Aug 12 | 0.8 | 0.6 | 0.6 | 1.5 | Short to Adequate |
| Northeastern | Aug 12 | 1.2 | 1.0 | 1.0 | 2.6 | Adequate |
| Northwestern | Aug 12 | 1.2 | 1.1 | 0.9 | 1.7 | Adequate |
| Provincial AVERAGE | Aug 15 | 0.9 | 1.0 | 0.8 | 1.8 | |

Source: Saskatchewan Ministry of Agriculture, August, 2019¹.

Alberta unfortunately sits with generally poor-quality forage this year due to drought followed by widespread wet conditions and flooding August onwards. There are numerous reasonably priced forages available, but are being balanced with good quality feedstuffs.

Overall, the forage industry in Manitoba saw a low production year once again in 2019. This has posed a challenge for many forage users across the province. Little supply is listed and available and rates of livestock culling is notably higher.

The provincial reports are supported with yield data as reported by Statistics Canada (see Table 2 below). Yields are severely depressed in Manitoba, moderately depressed in Saskatchewan and with slight rebounds seen in Alberta. Tame hay yields are still well below average across the prairies. Demand for perennial forages is reflective of the tight supplies on the prairies.

Table 2. Tame Hay Yields in MN, SK, AB and Canada, 2012-2019; production in '000 metric tonnes

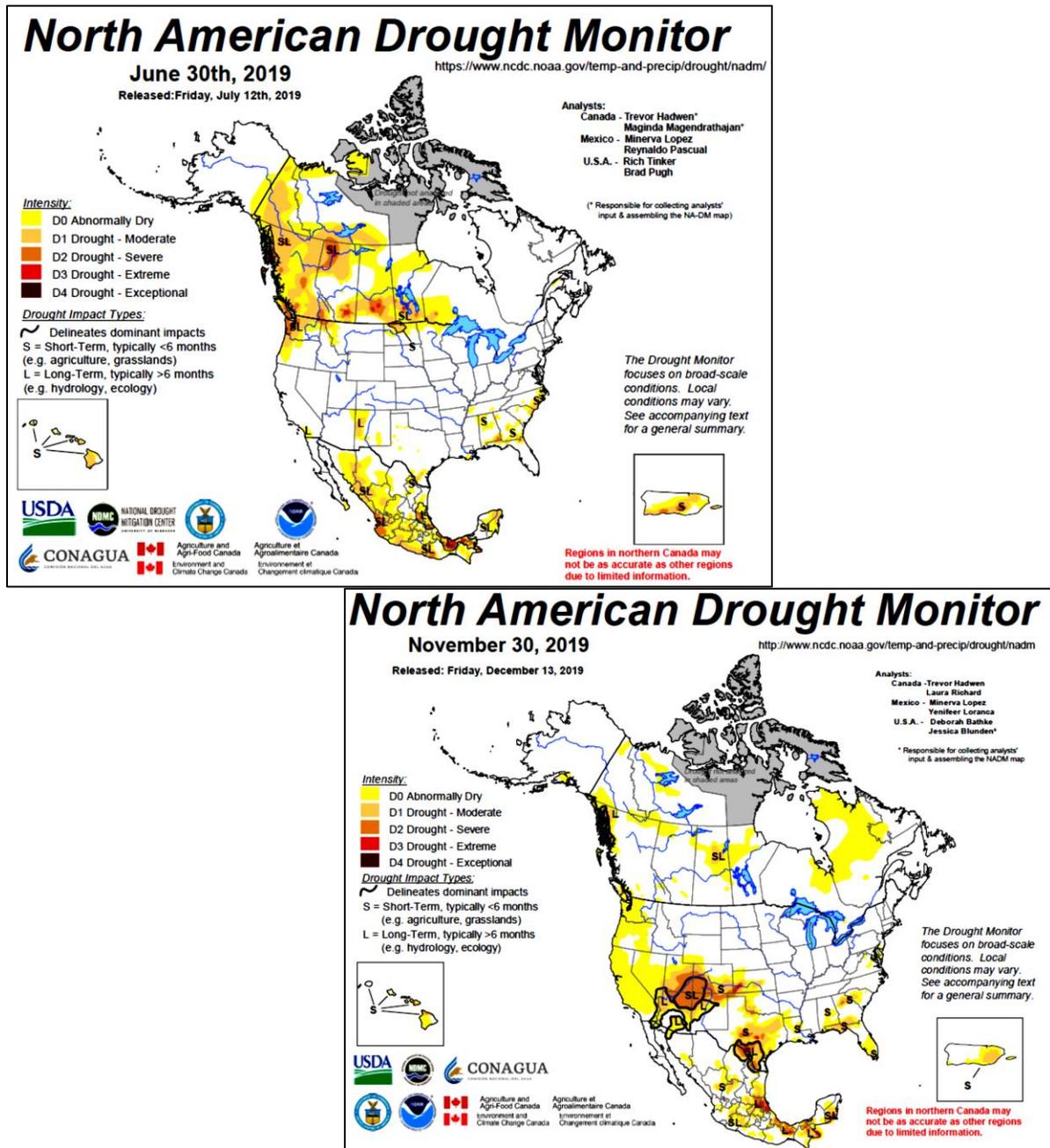
| Location | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Manitoba | 2,617 | 2,676 | 2,903 | 2,985 | 3,302 | 2,994 | 2,145 | 1,859 |
| Saskatchewan | 5,121 | 4,990 | 5,012 | 3,642 | 5,338 | 3,520 | 3,902 | 3,619 |
| Alberta | 7,711 | 7,589 | 7,258 | 4,971 | 7,819 | 7,176 | 6,035 | 6,675 |
| Canada | 25,259 | 26,405 | 25,960 | 22,526 | 27,564 | 24,156 | 20,698 | 20,633 |

Source: Statistics Canada, 2020

Successful second cuts were not widely reported in Saskatchewan this fall as wet weather hampered operations. Some silage bales were noted to be made later in the fall. Forage users continued to be resourceful through fall 2019, as they sourced what was available to them. Cooperation between distant neighbours was noted to be high by many surveyed.

The North American Drought Monitor (see Figure 1. below) shows that as of November 30, 2019, the drought conditions in Saskatchewan have improved across nearly the entire province with pockets persisting in the north east. The drought monitor paints the optimistic picture that drought has broken, which, if it is the case, it will have positive impact on spring 2020 forage production if late spring frost can be avoided.

Figure. 1 Comparison of North American Drought Conditions as at June 30 and November 30, 2019.
(Source: North American Drought Monitor, 2019.)



2. Field Pest Impact and Projections for 2020 Growing Season

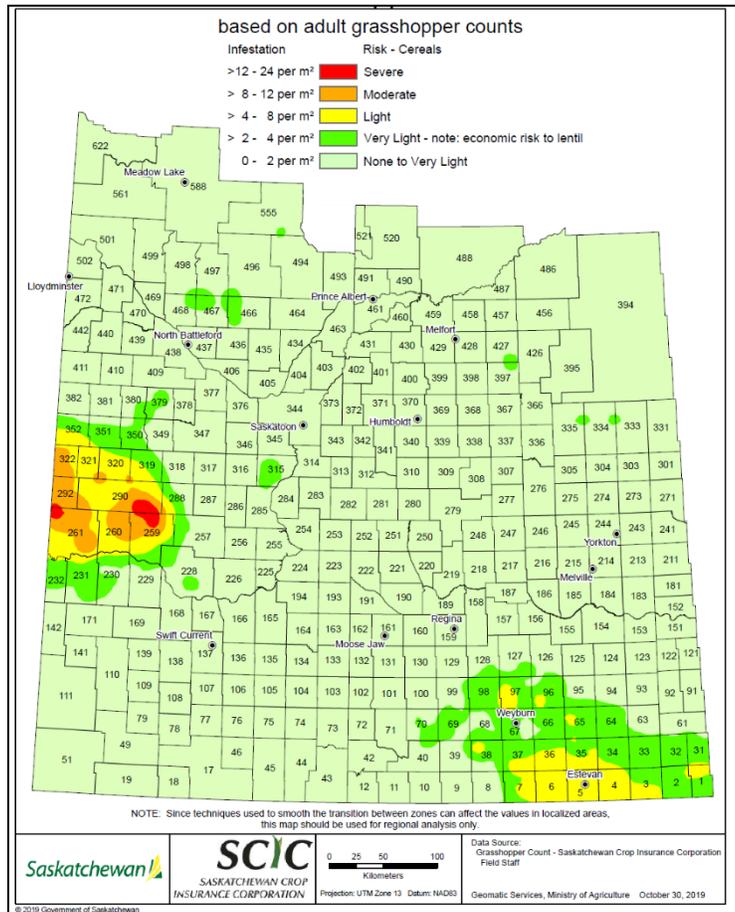
The Saskatchewan Ministry of Agriculture's 2020 Grasshopper Forecast map demonstrates that the risk of grasshoppers in 2020 is higher than the last year. Widespread drought conditions during the summer, followed by a wet fall have limited the pockets where grasshoppers are expected to be prevalent. The far west central area could see severe infestations, while the south east is most likely to see light infestations. Weather conditions through spring and into summer can affect grasshopper development and change infestation levels during the forage growing season.

Producers continue to be fortunate to not have widespread infestations of alfalfa weevils, lygus bugs, alfalfa plant bugs and lesser clover leaf weevils as all have the potential to cause economic damage to legume forages in Saskatchewan. Scouting should remain a regular practice in legume stands.

Infestations of Richardson's ground squirrels are beginning to develop in pockets throughout Saskatchewan. Early season economic losses have been reported by producers in discussions. Impacts to forages and seedling crops such as corn and greenfeed barley were noted. A wet spell after juveniles start moving around the nest and up tunnels is generally most helpful to limit infestations.

Harvest conditions in 2019 were extremely variable, with some forages being too mature and dry while others received multiple soakings and lacked the ability to dry to be put up in decent shape. Quality, for that reason, may be impacted on-farm by molds, heating, and poor nutritional value. In-field anti-quality factors such as molds, ergot, and fusarium in greenfeed crops was not a widespread concern as most quality challenges came from harvesting not while forages were actively growing. There is a strong reliance on cereal crops (greenfeed) that is projected to continue. Producers should be mindful of the risks associated with anti-quality factors. Ergot and fusarium become an issue in grasses and cereals when wet periods and heading coincide. Many more forage listings in 2019/20 are beginning to include forage test results which is a positive step extension and industry has been pushing producers towards.

Figure 2. 2020 Saskatchewan Grasshopper Forecast
(Source: Saskatchewan Ministry of Agriculture, 2019²)



3. Regional Forage Conditions in Saskatchewan

Over the past two years, the regional similarities of drought and poor forage production have been province-wide. As of January 2020, drought had been relieved in most regions, and forage prices and trades have normalized.

A) South Central and South West Regions

The southern regions saw a drastic improvement from the two years previous despite a rough, droughty start to the year. On hay land and pasture, topsoil moisture is rated as 12 per cent surplus, 75 per cent adequate and 13 per cent short in the region. Similar to fall 2018, fall 2019 saw multiple snowfall events in the south west and south-central region, but mild temperatures and melting resulted in a long fall grazing period.

Majority of the region's producers planned a head this year and set themselves up for using greenfeed. Greenfeed yields in the south west were very high- 2.0 tons/ acre. Greenfeed, straw and silage usage is strong and will be complimented by the addition of hay closer to calving. Grain and pellets are being added to rations. Grain's price and availability are lending to its use being favoured. Forage quality is tending to be fair to good, with very little nitrate issues showing up. Forage that is trading is generally hay purchased in smaller lots from within the region.



Regional Specialists indicated hard culling was seen early in the fall, prior to the majority of the fall moisture. The success of silage and greenfeed in the south central and south west regions is expected to result in more silage being seeded and the continued heavy reliance on greenfeed. Pasture health and a lack of carry over continues to be a concern that will be seen into the spring. Poor pastures may be a major influencer on the cut forage sector for the region through spring and into fall 2020. In the region often poor pastures means cows turned out in hay fields which then means increased forage demand.

B) South East Region

The south east received rain and snow during harvest, which prolonged harvest and final forage operations. Corn silaging was delayed. Hay land and pasture topsoil moisture was rated as nine per cent surplus, 90 per cent adequate and one per cent short at November 18th. Snow cover is currently below normal. Cattle have continued to forage late where crop residue was available.

Producers report regionally that they will have adequate supplies of forages and feed grain for the winter period. The reliance on salvaged crops (unplanned greenfeed) is high. A higher than expected

perennial hay crop (1.3 tons/acre) has added to producer's ease. The majority of greenfeed and salvage crops feed tests have come back with some nitrates. Forage users are blending off this feed accordingly. Straw, silage and hay are all being used. There continues to be forage listings for larger lots of forage within the south east region into January. Movement will likely be 'normal'- slow but steady for fair priced forages. The trend to utilize silage and greenfeed is anticipated to continue into 2020 as producers plan for the next growing season.

D) North East Region

Although there were multiple precipitation events in the north east region over the fall period, 99 per cent of the crop harvest is complete, and fall grazing was possible into late November. Top soil moisture is rated as nine per cent surplus, 87 per cent adequate and four per cent short.

Within the region a new normal has emerged. Utilizing a mixture of greenfeed, hay, straw, pellets/grain, and silage has become standard. Straw and greenfeed ration bases are most common. This is anticipated to continue into the future as more producers inquire about silaging to combat the short hay harvest window and continue to turn to grazing corn. The region's producers have bought forages and do continue to trade when the price is considered fair. This is not uncommon for the region (with 1/3 to ½ of producers doing some purchase). If the last half of the winter is long, forages will continue to trade to bump up on-farm supplies. Producers are not concerned for further drought or a lack of forage moving into spring 2020.

E) East Central Region

Fall was a challenge for all in the east central region due to repeated periods of precipitation and poor drying conditions. Some grain crops remained unharvested, while others were put up as salvaged forage. At November 18th, hay land and pasture topsoil moisture was rated as 15 per cent surplus, 79 per cent adequate, four per cent short and two per cent very short.

Getting fields of greenfeed, late seeded crops, or salvaged crops baled proved to be a challenge for producers. The moisture and poor drying conditions were detrimental. This is resulting in producers dealing more with molds and spoilage as a top priority than regular quality issues such as nitrates and low protein. Many producers tried turning to wrapped silage bales as an option.

Indications from Livestock Specialists are that hard culling was carried out very early in the region this fall prior to the fall moisture arriving. Neighbour to neighbour arrangements for salvaged crops or late seeded greenfeed dominated the trades within the region this fall.

Perennial forages harvested without rain are expected to be at a premium relative to the high quantity of straw and salvage crops that will be slower to move. Producers indicate they have a sufficient supply of forage, however a delayed pasture turnout to June 1st or later may see a shortage on-farm. Annuals for baling, silaging, or bale silage are anticipated to be a main forage in 2020/2021.

F) West Central/ Central Region

The west central/ central region continues to fight through what has been a long three years of poor forage conditions. Fall rains have brought hay land and pasture topsoil moisture conditions back to one per cent surplus, 81 per cent adequate, 17 per cent short and one per cent very short. Aftermath grazing, which is often supplemented with straw, greenfeed or grain/pellets was used up until Christmas where possible. Snow cover remains light within the region. Without additional snow cover for runoff, water supplies will become a concern on pasture.

Barley or wheat planned and unplanned greenfeed is the prevalent forage for winter 2020. Fall/winter rations are straw or greenfeed based with the addition of grain or pellets. Quality on unplanned greenfeed (salvaged crops) is better than expected- nitrates are present but are not high overall. Better energy and lower fibre content than anticipated for the time of year plants were harvested has generally been seen. Grain availability and price are making grain a favoured feed choice currently. Limited perennial forage is available which is not the normal for the region. Silage continues to grow in use in the region with strong indications corn silage will be even more prevalent in 2020. Forage Specialists indicate 25% - 65% of livestock producers have done some purchasing of forages this fall (including standing grain crops for salvage). Demand has slowed with most having obtained what they need. Perennial hay may still be sought on an as-need basis for use during calving.

Herds in this region were really thinned out over the past two years, including in spring 2019. The fall cull rate was fairly normal likely due to the higher cull in the past and producers predicting they had forage available for the winter with province-wide supplies not as tight as fall 2018. Moving into spring, pastures are in poor condition. This will be the greatest challenge moving forward in the region. Corn appears to be the silver lining in this region. Uptake and success in grazing or silaging (preferred for control of intake and waste) continues. Inquires for seeding perennial forages mainly focus on fixing existing stands that suffered alfalfa loss over the past three growing seasons.

G) North West and North Central Regions

Once again, this year, fall moisture prolonged crop harvest but replenished some soil moisture. Fall hay land and pasture topsoil moisture was rated as topsoil moisture is rated as one per cent surplus, 75 per cent adequate, 17 per cent short and seven per cent very short- near identical to what the region looked like in fall 2018. The most significant area of low soil moisture in the entire province sits in a triangle between Spiritwood, Saskatoon and Prince Albert.

While producers are using hay, greenfeed, silage, canola forage, straw, pellets, alternatives and grain, greenfeed and silage use has notably increase over the past two years. Lower perennial forage production was compensated for with greenfeed and silage. Producers in the region are relying on grazing corn and silage corn more so now than in the past. Forage swath dry-down was made difficult due to repeated rain events in most locations. There is variable feed quality, including some higher nitrates. Indications from the far western areas is that there is lower protein silage (corn) that is needing to be balanced with grain, WDDG, or pellets.

At January 15th, there is little snow cover for the time of year resulting in some stubble grazing and corn grazing still occurring. Indications from Forage Specialists are that the main forage purchases for the year have been made- some as standing annual crop. Prices have settled. Moving into the spring, producers have indicated that there is no major shift to produce more perennial forages (seeding). Indications are that planned greenfeed, along with the new normal of increased silage and corn grazing will be the direction producers continue in. Pasture conditions are still of concern in the areas still noted as low in soil moisture.

4. Current Forage Freight Rates in Saskatchewan

Hay transporters had steady work through the fall as harvest conditions saw many forage producers out sourcing jobs as fall conditions were wet and fall work dragged on. However, unlike what was seen in 2018 for high demand for transportation, in 2019 bookings were steady for the fall but overall, the wait was not long for bookings. Decent weather and relatively little snow November onwards aided transporters. Forage movement is light province wide and between provinces.

Forage transportation rates have remained the same as in the September Market Report. Operators are indicating that they are less likely to change prices during the year as it becomes confusing for clients. Standard hourly rates are very common and used for hauling short distances or as the fee during loading/unloading. Fuel surcharges are also common.

Table 3. January, 2020 Hay Transportation Costs in Saskatchewan

| | Rate (\$/loaded mile) @34-37 bales | Hourly Rate (\$/hour) |
|---------------------------|--|-----------------------|
| Provincial Average | \$6.88* (>100 miles); \$7.81 (< 100 miles) | \$160.41 |

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

Diesel prices, as discussed every reporting period, continue to be a major factor in forage production costs and transportation costs. Carbon taxation on diesel is **approximately 5.3 cents per litre with increases continuing until 2022 to reach 13.4 cents/litre (SARM, 2018)**. From the first week of October through the start of December diesel prices provincially stayed above \$1.22/ litre. On December 28, 2019, Natural Resources Canada reported the average diesel retail price in Regina, SK to be \$1.279/ litre (Saskatoon \$1.274/litre). This is a continual rise since 2015. Margins get tighter for all forage producers and transporters as diesel prices balloon. **Many transporters continue to indicate they have been forced to add fuel surcharges (often 10%), and frequently charge a rate for empty travel from home base. Mobilization charges are still at play and range from \$120-185/hour.**

5. Current & Projected Saskatchewan Forage Prices for 2020

Forage prices were obtained throughout the fall and winter up until January 13th, 2020. Prices were assembled from listings, as well confirmed with personal phone calls to producers, nutritionalists, feedlots, hay growers, and transporters.

Fall was long for many forage producers and users. The continued fall moisture put many in positions where poor grain crops were offered into the forage market. There is stability within the market. Below are the comparative comments between what was noted in winter 2019 and what is being seen in 2020.

1) 2019- Hay was sold before the crop harvest or was held onto until the 2019 fiscal year began.

2020- Hay sales have been continual; some excess hay is now listed due to excess greenfeed being used on-farm instead.

2) 2019- Hay is worth a maximum price and this year people spent their maximum price early- not waiting until May; people knew what they needed and what their max price was.

2020- Maximum price is lowered, feeding forages other than hay is maximized; some buyers may be waiting until spring for buying a few extra loads.

3) 2019- Saskatchewan sellers are asking reasonable prices/what buyers are willing to pay.

2020- Sellers are sitting on forages for longer at the asking price. Many are willing to deal.

4) 2019- Forage users took better inventory and planned better all through the growing season and know what they need.

2020- Planning was successful in previous year and was repeated. Grain producers opting to produce forage may have troubles profiting as forage users filled needs early.

5) 2019- small transactions of close neighbour to neighbour trades are likely slow but still occurring and cannot be captured and quantified in this report.

2020- many neighbour-to-neighbour trades have occurred. Greenfeed crops, unharvested crops and straw were high trade commodities between neighbours.

Average prices reported in Table 4a are those **collected from December 1st to January 13th**. The average prices collected from August through January were then collectively averaged to produce the figures in Table 4b. Forage prices tend to gradually soften as winter sets in. There have been fluctuations in prices over the fall with generally settling of prices where they were through September and October. These current and fall-long average prices can help support current and future price estimates.

Table 4a. Average Current Forage Prices in Saskatchewan as at January 13th, 2020

| Forage Type | Simple Average Price (\$/tonne) | Weighted Average Price (\$/tonne) | High (\$/tonne) | Low (\$/tonne) |
|--------------------|---------------------------------|-----------------------------------|-----------------|----------------|
| Grass Hay | \$132.98 | \$149.98 | \$198.41 | \$73.49 |
| First Cut Alfalfa | \$146.22 | \$145.33 | \$220.46 | \$53.44 |
| Second Cut Alfalfa | \$155.11* | \$176.37* | \$176.37 | \$133.85 |
| Alfalfa/Grass mix | \$143.00 | \$144.61 | \$220.46 | \$97.98 |
| Greenfeed | \$114.32 | \$117.03 | \$141.72 | \$62.99 |
| Clover | NA | NA | NA | NA |
| Cereal Straw | \$56.87 | \$58.64 | \$70.55 | \$34.64 |
| Pulse Straw | \$66.45 | \$70.69 | \$88.18 | \$44.09 |

* see alfalfa section for more representative pricing.

Table 4b. Average Fall Long (Aug- Jan) Forage Prices in Saskatchewan as at January 13, 2020

| Forage Type | Simple Average Price (\$/tonne) | Weighted Average Price (\$/tonne) |
|--------------------|---------------------------------|-----------------------------------|
| Grass Hay | \$141.43 | \$146.40 |
| First Cut Alfalfa | \$167.19 | \$168.21 |
| Second Cut Alfalfa | \$211.00 | \$217.97 |
| Alfalfa/Grass mix | \$156.34 | \$147.95 |
| Greenfeed | \$118.06 | \$116.69 |
| Clover | No prices | No prices |
| Cereal Straw | \$66.70 | \$77.63 |
| Pulse Straw | \$88.03 | \$91.96 |

Producers may once again see significant alfalfa winter kill in 2020 as winter kill has been seen over the past two winters. A light snow covering province-wide at January 13th may not be enough to protect alfalfa crowns from the winter kill seen with extreme fluctuations in temperature (+5 to -35). Loss of alfalfa plants may result in a further depressed production in perennial stands.

The Saskatchewan Crop Report indicates producers in all regions are comfortable with their on-farm inventory. Planned annual greenfeed or silage and active securement of salvaged annual crops have been the on-farm adjustments made. While forages were purchased early, less panic was in purchases compared to fall 2018. Strong annual forage yields were welcome. Demand in the south is soft, which when high, generally drives quick sales.

On-farm carryover of perennial forage is expected to be minimal province-wide. There may be straw and greenfeed carryover on-farm, region dependant. A late spring and slow pasture growth will indeed deplete on-farm reserves. Forage specialists note on-farm supplies are adequate till May 1st, but not likely June 1st. This could facilitate prices holding into the late spring.



With below average perennial forage production in 2017, 2018, and 2019 and if production levels mirrors 2019, the value of forages in 2020 can be expected to be very similar to what is being seen provincially at January 2020 due

to the normalized reliance on greenfeed, straw, and silage.

Prices will likely not climb significantly higher in 2020, even if perennial forage yields are poor, for a number of reasons. The shift in reliance to greenfeed, silage, and straw has users comfortable with this feedstuff, therefore the 'need' for perennials has lessened. If grain crops are disastrous, they have moved to the feed market the past two years and there is no reason to expect it would not occur again. Fall 2020 calf prices are expected to remain level, and without additional income, additional expense or output for more expensive forage is not palatable. The supply of feed grains currently will result in feed grains remaining affordable and feasible to use for the foreseeable future.

If fall moisture patterns hold into the spring and drought is broke, two general forage production scenarios may present themselves: a) perennial stand production will remain below average due to poor plant health; the reliance on good annual forage production will remain until stands are healthy again; prices will remain as-is, or b) stands will bounce back quickly with high production; some annuals will be combined instead of baled; prices will fall slightly. The possible trend to convert poor perennial stands to pastureland should be monitored.

Greenfeed: The September Market Report estimated greenfeed prices would hold at \$100- 110/ tonne for greenfeed baled early before the rains and snow, but salvaged crops could see low \$80/ tonne. The number of greenfeed listings has grown significantly over the last month as growers are taking inventory and likely have exhausted sale options locally. Current asking prices are in the \$115/ tonne range, with settled prices likely \$10/tonne lower (\$105/tonne) as there is ample supply available. Salvaged crops can be expected to be lower still. Indication is that neighbour to neighbour trades province-wide have been numerous. Prices may continue to fall to the \$90/tonne range for good greenfeed as the winter progresses due to 1) supply is high and those with it need some profit, 2) many bales were put up with higher moisture and mold and spoilage will be a concern if kept long-term and 3) many producers don't like to keep greenfeed over summer because of rodents. Forage users have indicated they will once again prepare to seed greenfeed in 2020.

First and second cut alfalfa: The current asking price for first cut straight alfalfa is \$54-220/tonne with a simple average of \$146.22/tonne (\$145.33/tonne weighted). Poor haying conditions may be reason for the large price range. While few offers of premium second cut straight alfalfa are listed, confirmed prices for high quantities out of southern Alberta are \$280-290/ tonne for dairy quality and \$200-220/tonne for good quality alfalfa. Poor conditions for second cut alfalfa limited good supplies in the western provinces. Moving forward, a basic first cut alfalfa can be expected to be in the \$140-150/tonne range provincially, but superior quality products needed for the dairy industry can still expect to fetch a higher price in the range of or above \$200/tonne.

Alfalfa/grass mix: Alfalfa/grass mixed hay has continued to have a high number of listings throughout the entire fall. The current weighted and simple averages are \$144.61/tonne and \$143.00/tonne respectfully. The average fall-long weighted and simple average price for alfalfa/grass was \$147.95/tonne and \$156.34/tonne. Many listings are lasting for two or more weeks before being removed or sold. Larger lots or higher priced lots may sit four or more weeks. Many buyers indicated trades at \$0.06/lbs (\$132/ tonne) was a compromise on a price point. Price has remained stronger than the projected winter price of \$100-120/ tonne in the September Market Report, but many forages are trading in this range. Reasonably priced mixed forage will likely trade in the coming months with winter weather having an influence on the quantity users are looking for in early spring. \$10/tonne on either side of \$120/tonne is likely for first cut alfalfa/grass moving into the spring.

Grass: Grass hay prices have been high fall-long compared to the more average price seen in September (\$100/tonne range). The pricing may be reflecting individuals targeting horse owners, wet harvest conditions and the lack of slough or wet meadow grass hay entering this forage class this fall. Currently prices sit at \$149.98/tonne (weighted average) and \$132.98/tonne (simple average) and a mean of \$130/tonne. Realistically a lower price, closer to the projected average of mixed hay is where grass hay will sit.

Straw: Straw was widely used 2018/19, which saw an ample supply on offer in fall 2019/20 despite challenging crop harvest conditions. There are numerous straw listings- many of which have been up for months listing hundreds of straw bales for sale. Straw is generally sold on a per bale basis with the current asking price of \$15-30/bale, which is in line with historic prices. The current January simple average is \$56.87/tonne (\$34-70/tonne range). The fall-long average price on cereal straw is \$66.70/tonne. Pulse straw has remained of higher value in the \$25-40/bale or \$50-88/tonne range throughout the fall and now. Its value is anticipated to hold. It can be expected that there will be cereal straw remaining unsold once again in April 2020 due to the quantity available. Straw left unsold may begin to see a drop in the asking price by the end of March- likely back down to historic spring norms of \$15-25/bale or the cost of baling.

Clover: Greenfeed has filled the forage gap that clover had previously filled in the 1990's. No listings of clover were offered during the reporting period. Clover remains a lower priced feedstuff.

Silage: The re-birth of silage continues across the prairies. Indications from feed companies, agronomists and producers are silage acres will continue to increase through spring 2020. Corn silage, particularly in the north west, has tested lower in crude protein than anticipated due to rains and leaching this fall prior to cutting. Corn silage yields were reported as average regionally by Forage Specialists. Drier regions noted 10-12 ton/ acre yields while moister areas or areas with very timely rains noted 12-15 ton/acre yields. Values on corn silage was noted between \$35-80/ton (\$38.60-88.18/tonne). There are numerous variables at play for producers depending on input and production. In September 2019 cereal silage (i.e. barley, or mixed grains) had an average value of \$69.00/tonne at the pit. The December 2019 Cattlemen Magazine (Canfax report) reported the Alberta barley silage value at \$60.13/ton (\$66.28/tonne). This is an additional indication that silage values remain consistent and figures remain reasonable for January 2020.

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

'Haylage' or silage bales are a commodity that is gaining popularity. Use has grown substantially in Alberta and in the east and north east areas of Saskatchewan due to the difficulty producers are finding in getting good quality forages baled when dry. Listings for silage bales at an average of \$87.11/tonne were noted during price discovery for Saskatchewan. Popularity in Alberta has also resulted in producers pricing silage bales at \$91.54/tonne.

Standing Corn: The use of standing corn for grazing is continuing to increase greatly province-wide. When surveyed provincially, targets are for 200 cow days/acre, with the hopes of 225-275 cow days/acre. Costs associated with grazing corn are highly variable based on seed variety, fertility and weed control. Fall 2019 did see some corn that was slated for silage pushed to grazing as it was too mature or weathered by the time it could be silage.

Certified Organic Hay: Often listings claim forage is organic but are found to not be certified upon further investigation. Premiums for organic hay continues to lack. One organic alfalfa/grass forage was listed for \$90.19/ tonne in this reporting period. Organic prices sit within the average range for non-certified forages.

Standing Hay: Standing hay was reported in September 2019 as a mean price of \$0.0288/lb or \$63.50/ tonne, with price per acre between \$10.00-\$85.00/acre across the province (matched 2018). There is no trend regionally. Long term agreements often are made between landowners are those haying. Little change has been seen over the past 12 months. There are producers looking for standing hay in 2020 advertising in various listing services. Some advertisements indicate a willingness to travel across multiple Rural Municipalities for hay land.



Small Square Bales

The price for small square bales reported is based on listings from December 15, 2019 to January 13, 2020. Current small alfalfa/grass square bale prices have held steady through fall 2019 – September of \$6.74/bale and January of \$6.67/bale. In January 2019 prices were seen in the \$8.57/bale range due to tight supply. Currently, supply is sufficient and buyers were prepared which has kept prices closer to normal. Straw continues to be listed at \$2.50- \$5.00 per bale. Listings are remaining un-sold for four weeks for many forages or longer in the case of straw. The higher general price of bales at this time of the year reflects that they have been hauled and stacked off the field. Listings (supply) can be found throughout the province.

Assuming an average square bale weight of 65lb/bale, average small square alfalfa and alfalfa/grass hay is priced at \$339.09/tonne and \$226.22/tonne respectively.



Table 5. Square Bale Asking Prices Across Saskatchewan from December, 2019 through January, 2020

| Forage Type | Average Price (\$/bale) |
|----------------------|--------------------------------|
| Alfalfa | \$10.00 |
| Alfalfa/Grass | \$6.67 |
| Grass | \$6.17 |
| Greenfeed | \$3.25 |
| Straw | \$3.45 |

Dehydrated Alfalfa and Timothy Products

There are currently three alfalfa and timothy processing plants located in Saskatchewan. Additional dehy facilities are located in south central Alberta.

Saskatchewan plants are sold out until summer 2020. Only current contracts will be filled. Agreements with alfalfa producers are long standing and do not fluctuate from year to year- \$35/tonne has remained steady. Section 7 on Alternative Feedstuffs further discusses the alfalfa pellet market trends.

Table 6 depicts the average price for sun cured and dehy products in Saskatchewan from the 2019 growing season. Note that product is not currently available.

Table 6. Average Saskatchewan Processed Alfalfa Product Prices for 2019-2020

| Product Type | Price (\$/Tonne) |
|--|-------------------------|
| Dehydrated Alfalfa Pellet (16-17% Crude Protein) | \$350.00 |
| Suncured Alfalfa Pellets (15% Crude Protein) | \$322.50 |
| Organic Suncured Alfalfa | not priced in 2019 |

Compressed timothy production continues to be an active sector in Alberta. Product goes into the North American pet food market and the Asian agricultural market primarily. The 2019 growing season was once again a challenging year. First cut crops came off well. Unfortunately, rains hampered second cuts, with over half of the second cut estimated to still be sitting in the field in Alberta. What was put up did not make it into the compressed market. With poor quality it was sent into the beef cow and dairy cow feeding markets. Other challenges face growers. Poor stand establishment over the past number of years with drought impact current production. Wire worm and cut worm damage on seedlings has also been an issue. Cut worms have impacted mature stands- causing poor production and field die-off. Producers are actively working to establish new stands.

2018 was a price anomaly for timothy producers and processors. Poor production in Washington and Australia along with high international and domestic demand saw record high prices. For the 2019 growing season, prices have dropped significantly and likely will drop once again in summer 2020 as Washington should have carryover, although generally of a poorer quality. Unprocessed timothy is priced approximately \$70.00/tonne back from the processed price (\$170-\$230/tonne). Product is unavailable or hard to come by currently. Little to no utility grade timothy was produced in Alberta as it usually comes from second cut fields and in 2019, those crops were further downgraded or ruined.

Table 7. Estimated Alberta Compressed Timothy Prices for 2019-2020

| Product Type | Price (\$/tonne) |
|--|-------------------------|
| Premium compressed timothy (pet food products) | \$300 range |
| Choice compressed timothy | \$280 range |
| Standard compressed timothy | \$240 range |
| Utility compressed timothy | Not priced |

6. Additional 2019 Provincial Forage Market Considerations

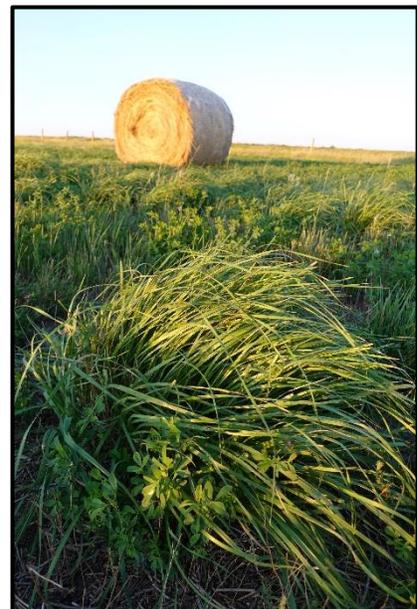
Saskatchewan reported below average hay yields once again in 2019 for the third year in a row. In addition to price trends, there are other forage market considerations for 2020.

The 2019 steer calf run, just like in 2018 was not disappointing for cow/calf producers. Stability remained for on-farm cash flow which allowed for needed purchasing. According to Canfax (pers. comm., 2020), cull rates are expected to be 13.5% for 2019. Previous year cull rates sat at 11.9% in 2017, and 13.3% in 2018. A high level of culling and cow slaughter (increased 3%) in the west was mostly seen in the first half of the year. As drought decreased more regular fall culling rates have been seen, even with producers holding cull cows for sale later. As 2020 proceeds, demand for forage could be high if producers begin an expansion phase while forages still remain in relatively tight supply.

While uncertainty is high in the agricultural community on how carbon taxation schemes will impact production costs, producers are at the mercy of input suppliers. Forage production is no exception as end users have no ability to pass on costs. The poorer economy in Alberta is impacting purchasing ability to the west. A ceiling price in Alberta does reflect back into the western reaches of Saskatchewan- lower prices in eastern Alberta influences Saskatchewan prices.

Although there is widespread adequate soil moisture (see Figure 3), pastures remain in generally poor condition. Rains arrived after most plants had set seed. Pastures need to have good growing conditions in spring for growth to get ahead of livestock. If turn-out is prolonged, there is a likelihood of producers running out of feed before pasture turn-out. Higher quality forages would be needed at that time and dry-lot feeding livestock may still be forage user's best option at that time. Too early of turn-out may further hurt weak perennial plants ability to meet growth potentials already lessened because of the past spring's drought.

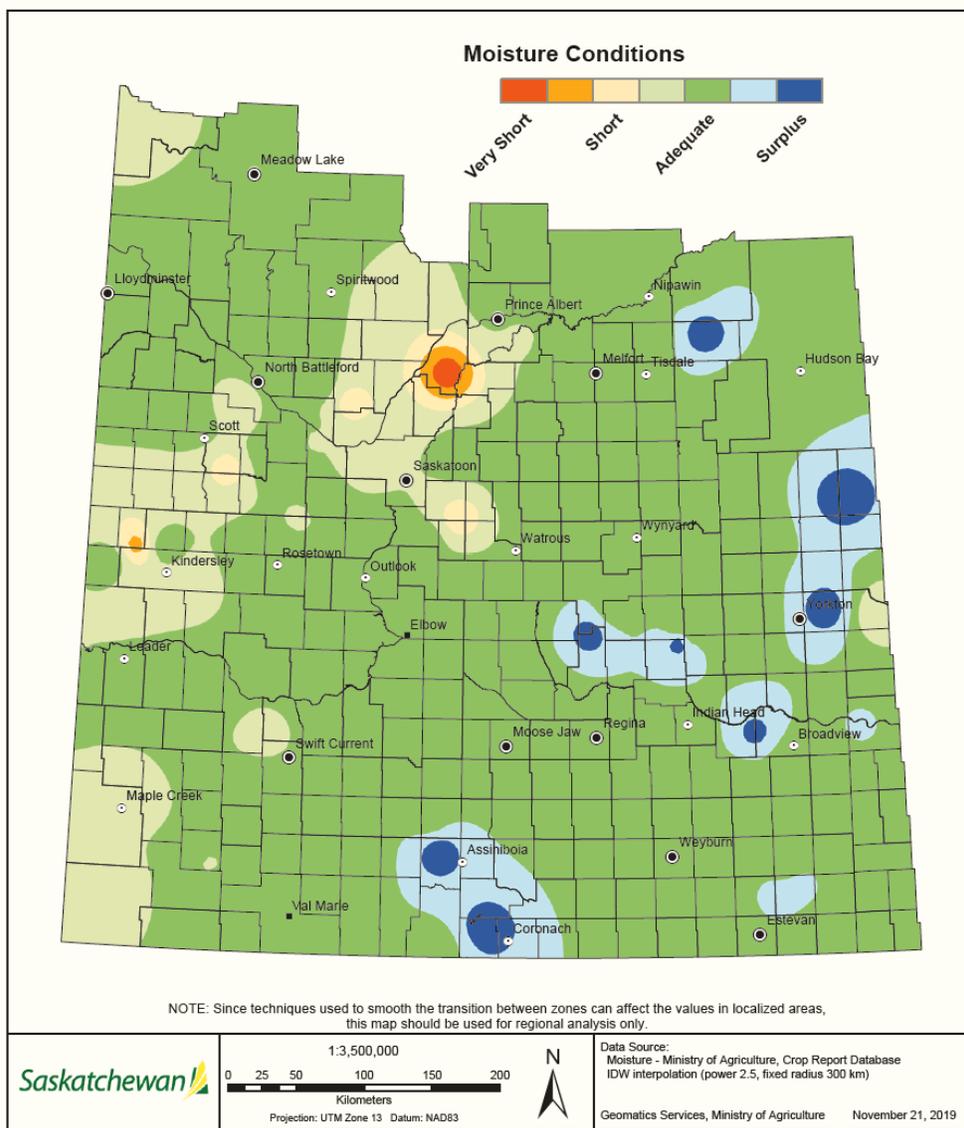
In the January 2019 report annual forage yield was first discussed (as reproduced following). *If the production potential for existing perennial stands is not maximized and perennial forage acres decrease as is the trend, shortages will be ongoing. Shortages mean increased prices for forages per tonne but can also mean lower returns per acre. Age, composition, fertilization and use/management of hay stands are all things forage producers can control. In their 2007 research, Jefferson and Selles paper analyzed the annual decline in forage yields from 1973 to 2003 and found the accurate long-term yield loss was 0.5 ton/acre. While field crop yields increased, forage yields dropped. Their conclusion was "Precipitation during AMJ was positively correlated to hay yield, but the difference between maximum and minimum temperatures (Δ temperature) was negatively correlated. Fertilizer Price Index was negatively correlated to hay yield, suggesting that producers are reducing fertilizer input to this crop resulting in lower yields. Step-wise regression analysis suggested that fertilizer cost was the most important variable, which explained 38% of the yield variation. When fertilizer price was combined with Δ temperature, the Value of Land and Buildings and AMJ precipitation, 65% of the yield variation could be explained". This research begs the questions, If management improvements would be made, would yields be higher? and would Saskatchewan be looking at lower forage prices or would demand just have increased to use up all production?*



A strong push to seed new forage stands has not been seen notably due to the potential risks associated with the spring droughts. Marginal annual cropland provincially is being seeded to greenfeed to fill the perennial forage 'gap' instead of being seeded to new perennial stands. As soil moisture and spring conditions improve forage seed companies and forage specialists are anticipating the same uptake in perennial forage seeding as a normal year.

As demonstrated in Figure 3, hay and pasture topsoil conditions are very favourable nearly province-wide going into the spring. Pastures provincially will need rest, heat and additional moisture to begin drought recovery. Forage users are still preparing for the case of a spring drought and need of forage production, but overall producers plan to stay the course with annuals providing needed forage.

Figure 3. Hay and Pasture Topsoil Moisture Conditions as at Final 2019 Crop Report -November 18, 2019 (Source: Saskatchewan Ministry of Agriculture, 2019³)



7. Current Alternative Feedstuff Prices

The use of silage, straw, salvaged 'unplanned' greenfeed, and planned greenfeed as a primary forage source is high within Saskatchewan. These feedstuffs often are paired with feed grain or alternatives to balance livestock rations. Poor corn silage conditions (moisture leaching nutrients) has also resulted in a need for higher protein alternatives as noted out of the northwest region. Quality of forages elsewhere in Saskatchewan is good to fair, resulting in no significant extra demand on alternatives due to poorer forage quality. The feed grains and barley used in producing many alternatives are readily available.

Those producing alternative feeds provided valuable feedback on what indications they are receiving about the forage supply/demand through winter 2020. Most are reporting the clientele base is mainly existing customers. Less inquiries from new customers are coming in as compared to winter 2019.

Table 8 lists average prices for a variety of alternative feed sources in Saskatchewan. Unless otherwise specified, they are reported as picked up at the plant (FOB).

Feed grain prices can impact forage and livestock prices. Feed grains of decent quality are readily available province wide due to precipitation during harvest and movement from the higher-grade grain markets to the feed market. Additionally, late seeded feed barley was used on fields that had the initial crop fail by early June. Barley is sitting in the \$165/tonne range (January 8, 2020), as compared to \$202/tonne in 2019 and \$173/tonne in 2018. Current feed wheat prices are at \$163.50/ tonne compared to \$207.60/tonne last year. Feed grains do go into the pelleting and DDGS process. Forage users are adding feed grains to cow rations and silage rations that had lower crude protein or energy. Feedlots are staying the course on feedlot rations.

Grain screenings include cracked or broken grain and pulse seeds as well as chaff, weed and other crop seeds. Many grain handling facilities contract their screenings out ahead of time to existing customers and unprocessed screenings are usually moved out quickly. Pelleters indicate that the supply of good quality screenings is good once again this year and there is no trouble securing pulse screenings.



Table 8. Alternative Feedstuff Prices and Availability as at January 20, 2019

| Commodity | Winter 2020 Price | Details | Demand; Availability | Winter 2019 Price |
|--|--------------------------|--|---|---|
| Barley Pellets | \$220-239 | Barley pellets, up to 20% CP, fortified with vitamin, minerals and Rumensin | Very low demand; companies are phasing out of producing this | \$264.50/tonne average |
| Canola Meal | \$285-357/ tonne | Loose | Good; 1 week wait | \$345-375/tonne |
| Canola Meal | Not produced locally | Pellets | NA | Not produced locally currently |
| Alfalfa Pellets | \$350/tonne | 16-17% CP – dehydrated | Sold out- until summer 2020 | \$285/tonne |
| Alfalfa Pellets | \$322/ tonne | 15% CP – suncured | Sold out- until summer 2020 | \$265/tonne |
| Alfalfa Cubes | \$600/tonne | Cow 7/8" cubes; produced in Legal | good | \$560/tonne |
| Oat Hulls (ground) | \$25-30/tonne | Hulls ground. 31MT/ superB | Good; 1+ week wait | \$30-35/tonne |
| Organic Oat Hulls (ground) | \$50-60/tonne | Hulls ground. 31MT/ superB | Available as needed | \$50/tonne |
| Grain and Grain Screening Pellets | \$185-260/tonne average | 12-14% CP, bare with no add-ins | Good; 1 week wait. Most use pulse screenings with feed grains. | \$170-215/tonne average |
| Fortified Grain and Grain Screening Pellets | \$210-317/ tonne average | 12-13% CP, fortified with Rumensin, vitamin/mineral (backgrounder type) | Good-Average; 1-2 wks wait; wide range in pricing between plants. | \$227-273/tonne average |
| Fortified Grain and Grain Screening Pellets | \$210-313/ tonne average | 14% CP, fortified with Rumensin, vitamin/mineral mix (range/cow type) | Good-Average; 1-2 wks wait plant dependant; wide range in pricing between plants. | \$250-316/tonne average |
| Fortified Grain and Grain Screening Pellets | \$245-436/tonne | <u>High Energy</u> , fortified with Rumensin, vitamin/mineral mix Suited for heifer development or other high energy uses. | High demand; Produced special order. High price variance. | No demand- produced for special orders. No price currently. |
| Fortified Grain and Grain Screening Pellets | \$244-379/tonne average | Bull Development and Show Rations, 12-20% CP, with Rumensin, vitamin & mineral | Average; 1-2 wks wait. | \$228-374/tonne average |
| Corn Dried Distillers Grains | \$225-340/tonne | | Fair; 1 -4 week wait | \$260/tonne |
| Wheat Dried Distillers Grains | \$225-260/tonne | | Short supply; 1 to 3 months wait for forward pricing for delivery. | \$245-265/tonne |

Grain and grain screening pellets are available to producers from numerous retailers across Saskatchewan. Pellets may be used in feedlot, backgrounding, cow-calf, range or finishing operations. Although there is variability in product consistency, amount of grain present and guaranteed percentage of crude protein (CP), standardization is being seen- likely as buyers look to compare products. Pellets may be fortified with vitamins, minerals and an ionophore additive (such as Rumensin™), which accounts for about \$20/tonne of the cost (was \$40/tonne in 2018). Current prices for a variety of different types of pellets are listed in Table 8. The higher usage by cow-calf producers in winter 2019 has been followed by steady usage in 2020 with very little price change. Demand is noted as good and steady, with a one to two week wait for pellets once ordered. Little change is expected into the spring.

Canola meal is the protein-dense product left remaining after canola is crushed for oil. There are several canola crushing facilities across Saskatchewan. As of January 15, 2020, the Saskatchewan Ministry of Agriculture reported canola trading for \$440.00/tonne down year-over-year \$10-15/tonne over the previous three years. Canola meal price has decreased significantly this past year- back to 2018 levels (up to \$60/tonne less than 2019). Demand is moderate with regular clientele making up nearly all of the purchases.

Alfalfa pellets include dehydrated alfalfa or suncured alfalfa pellets. Saskatchewan product is currently sold out with only current contracts being filled. The 2020 prices of \$322-350/tonne are significantly higher than the 2019 prices of 265-\$285/tonne currently. Long-term alfalfa supply agreements at \$35/tonne in-field remain for pelleters. Diesel prices continue to be a major input through the production chain. The USDA Kansas City Ag Market News (2020) is reporting a good supply of alfalfa pellets valued at \$270-330 USD/ton (\$388-475 CDN/tonne) and suncured alfalfa pellets at \$245/ton (\$352 CDN/tonne). While Kansas City priced dehy pellets are \$40/ton higher than the year previous, suncured pellets are about \$10/ton cheaper. Little change is being seen.

Distillers grain products are the by-products remaining following ethanol production. Different distillers' products that can be used as livestock feed supplements include wet distillers grains, distillers syrup, and dried distillers grains (DDG). DDG is the only one readily available. Current customers use up majority of supply. The demand is always high for DDG at this time of year resulting in a one to three month forward contracting. The price of \$225-260/tonne is steady from the year previous.

8. Forage Price Trends in Neighbouring Jurisdictions

While forage production was a challenge in Manitoba, quantity and quality were less of a concern stateside. Alberta faces quality concerns with lower protein and energy.

Currently, Alberta has a plentiful number of forage listings from across the province which move off the market quickly if affordably priced and of good quality. Montana and North Dakota have a decent number of forage listings, while listings and trades are sparse in Manitoba. The listings in Table 9 were collected December 1, 2019 through January 11, 2020.

Table 9. Forage (Asking) Prices in Adjacent Provinces and States (Winter)

| 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 (1 st cut) | \$118-132/T | \$125 | NA | \$188 | \$115-151/T | \$137 | \$113-155/T | \$124 |
| Alfalfa (2 nd cut) | NA | \$147 | - | - | - | \$158 | \$119-172/T | \$144 |
| Alfalfa/Grass | \$74-264/T | \$144 | \$97-220/T | \$178 | \$94-201/T | \$129 | \$89-203/T | \$137 |
| Grass | \$88-236/T | \$154 | \$128-236/T | \$182 | \$91-115/T | \$107 | \$91-156/T | \$124 |
| Cereal Straw | \$55-81/T | \$65 | \$51-88/T | \$69 | \$57-78/T | \$70 | \$57-104/T | \$84 |
| Pulse Straw | \$55-77/T | \$65 | - | \$73 | - | - | - | - |
| Green-feed | \$74-144/T | \$122 | \$90-197/T | \$148 | \$115-123/T | \$119 | \$65-134/T | \$101 |

*American prices have been converted to week average January 7-14, 2020 current CDN currency values at \$1USD = \$1.3046CDN

Alberta

Alberta experienced poor early growing conditions which were followed by difficult harvest conditions. Forage and field crops left unharvested has entered the market as a cheap feed source. Additionally, some crop remains out. Quality is the greatest factor for Alberta forage producers this year. The value of forages has dropped significantly from one year ago. Prices sit at a much more sustainable price point. Less than \$0.08/lb is the price point for most cow/calf producers to break even currently. Silage bales (haylage) from grain crops or perennial forage was an option for many forage growers this year. Numerous listing can be found for an average of \$91.50/ ton (\$100/tonne). Supplementation to ensure rations are balanced is being seen across all livestock classes. Moving forwards, if harvest conditions prove difficult for producers again, silage bales may continue to be an option.

Manitoba

Manitoba is continuing to experience a tough year. Pockets of the western areas received more timely rains, resulting in a bit higher supply. The eastern areas and even north west areas are in a tough position with really no supply of extra feed. Producers are supplemental feeding. Provincial Specialists note that high culling rates are in effect as well with 20-30% being culled in some herds due to lack of summer and winter forage and poor conception.

Manitoba most often does not have a significant number of public trades. While more trades are current than generally are seen in the fall, listings are still limited. This limitation is likely due to a limited supply and users sourcing needed forages early this fall. Currently, mixed hay is averaging \$178/ tonne, compared to \$153/tonne in January 2019 and \$93/tonne in January 2018. Straw price has backed off from the strong price average of \$88/tonne in 2019 to \$69/tonne. However, this price is still 1.5 times higher than what it was trading for in January 2018 (\$40/tonne).

Montana

The Livestock Marketing Information Center reported and analyzed the USDA December 1st hay stock survey results (Jan 13, 2020). Their insightful analysis reads:

For the U.S. in total, stocks were above a year earlier (rising 5.4 million tons or by 6.9%). Still, stocks were 4.0% (3.5 million tons) below the forecast of the LMIC. The national stock was similar to two years ago (December 1, 2018). National hay disappearance between May 1, 2019 (beginning of the new crop-year) and December 1 was 59.3 million tons, that was 0.6 million tons (1.0%) less than a year earlier.

*The year-over-year changes in state-level stocks largely reflected their 2019 growing season. Of the 48 reported states, as of December 1, 2019, two were unchanged from the prior year, 18 posted increases, and 28 declined. States with annual percentage increases in hay stocks of 20% or larger were Arizona, Arkansas, Kansas, Louisiana, Missouri, **Montana**, Nevada, New Mexico, and Utah.*

Montana's prices and feed supply have normalized throughout the state. Demand remains moderate to good. Quality alfalfa supplies are nearly allocated for the year, while other forages are being traded on an as-needed basis. Many forage offerings are available and movement is decent on reasonably priced forages (United States Department of Agriculture, January, 2020²). Little forage is being moved to southern Saskatchewan from northern Montana, despite reasonable prices. This is an indication supply

is adequate and adequately priced in Saskatchewan relative to trucking costs and prices in northern Montana.

North Dakota

Average priced forage continues to trade (via online listings) at a normal pace. The winter prior to the New Year was relatively warm and open, which helped to normalize forage prices with lighter demand. Little demand from North Dakota into southern Saskatchewan is expected. Spring rains and good early pasture growth will be needed in the northern areas of North Dakota to address the poorer growing season conditions seen over the past two years.

The CDN and USD continue to be far apart in value- as has been seen more often than not for the past number of years. For the week ending January 14, 2020 the CDN was trading at \$0.7665 USD (\$1 USD= \$1.3046 CDN), near identical to 2019. Demand from the US in winter 2020 is not a significant factor playing into Saskatchewan forage prices.



9. Forage Seed Prices

The average retail price of commonly purchased and seeded forage species in Saskatchewan is presented in Table 10. This information is meant to reflect general forage seed prices at the current time. Prices represent certified #1 seed, unless otherwise specified.

Table 10. Forage Seed Prices in Saskatchewan as at January 10, 2020

| Class | Species | 2019 Average Price \$/lb | 2020 Average Price \$/lb |
|---------------------------|-----------------------------------|---|---|
| Grasses | Certified Smooth Brome **** | \$4.69 | \$4.63 |
| | Smooth Brome (Common)**** | \$4.79 | \$3.91 |
| | Certified Meadow Brome **** | \$5.18 | \$5.08 |
| | Meadow Brome (Common)*** | \$4.68 | \$4.25 |
| | Hybrid Brome**** | \$5.95 | \$5.47 |
| | Russian Wildrye *** | \$8.50 | \$9.00 |
| | Tall Fescue ***** | \$3.33 | \$3.45 |
| | Fairway Crested Wheatgrass**** | \$6.01 | \$5.88 |
| | Kirk Crested Wheatgrass *** | \$5.42 | \$5.32 |
| | Crested Wheatgrass (Common)*** | \$5.02 | \$4.88 |
| | Intermediate Wheatgrass ***** | \$4.31 | \$4.42 |
| Pubescent Wheatgrass **** | \$6.35 | \$5.91 | |
| Legumes | Alfalfa - hay variety ***** | \$4.75 | \$5.17 |
| | Alfalfa - creeping root ***** | \$4.81 | \$5.06 |
| | Alfalfa (Common) ***** | \$4.08 | \$4.18 |
| | Cicer Milk Vetch ***** | \$6.06 | \$6.06 |
| | Sainfoin ***** | \$3.80 | \$3.89 |
| | Alsike Clover **** | \$4.32 | \$4.20 |
| | Norgold Sweet Clover***** | \$2.83 | \$2.83 |
| | Common Sweet Clover *** | \$2.51 | \$2.32 |
| Hairy Vetch**** | \$3.37 | \$3.17 | |
| Native | Western Wheatgrass *** | \$13.07 | \$10.57 |
| | Northern Wheatgrass *** | \$15.90 | \$12.48 |
| | Slender Wheatgrass **** | \$4.85 | \$4.74 |
| | Green Needlegrass *** | \$20.17 | \$19.52 |
| | June Grass *** | \$36.03 | \$33.45 |
| | Canada Wildrye*** | \$16.43 | \$13.51 |
| | Purple Prairie Clover (legume)*** | \$61.56 | \$46.45 |

Producers should contact seed companies or distributors for specific information related to product attributes and availability as well as any guarantees of quality, certification or other parameters that are specific to that company, species or variety.

Native seed prices listed are current January 2020 prices as per the major forage retailers. However, prices fluctuate regularly for these species depending on demand and availability. There are several native seed growers who harvest and market seed directly across western Canada. A listing of native seed producers may be found through the Native Plant Society of Saskatchewan at <https://www.npss.sk.ca/native-plant-sources>.

Tame forage seed prices have continued to stay within the same range as the last 2-3 years, including the most recent of 2019. Slight increases and decreases have been seen. The 2019 growing season was an extremely tough year for seed production. Lack of seed set and then light seed has been noted. Russian wildrye stands out as a forage seed that is unavailable or in very short supply for the coming year once again after the same issues in 2019. Alfalfa seed prices have seen slight increases also. Overall, seed prices have remained consistent as demand is expected to be relatively steady. Demand may not be solid enough to withstand an increase in price even if forage seed availability is tight.

Native seed prices have dropped noticeably from 2019. Demand from the oil and gas reclamation sectors for seed is indeed less than it has been in recent history. Seed set and harvest conditions were challenging for native seed producers also.

Novel or 'cocktail' mixes of annuals/biennials are being seeded at a staggering rate for soil improvement and livestock feed on cropland. Hairy vetch, with a similar price to 2019, is the only novel annual currently included in the price survey. Demand for these forage seeds has increased significantly but seed is available from production in Eastern Canada or the United States. Production research is being carried out in numerous locations across western Canada.

10) References

- Alberta Agriculture and Forestry, 2019.** Alberta Crop Report, November 2019. Available online at: [http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/All/sdd4191](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/All/sdd4191)
- Bank of Canada, 2019.** Bank of Canada Daily Exchange Rate. Available online at: <http://www.bankofcanada.ca/rates/exchange/>
- Canadian Cattlemen's Magazine, 2019.** Canfax Alberta Silage prices September 2019, December 2019.
- Jefferson, Paul & Selles, Fernando. 2007.** The decline in hay yields: A Saskatchewan perspective. Canadian Journal of Plant Science. 87. 1075-1082.
- Livestock Marketing Information Center. 2020.** Current Situation and Analysis- Hay DECEMBER 1 U.S. HAY STOCKS UP YEAR-OVER-YEAR. Available at: <https://www.lmic.info/node/2560#story2>
- Manitoba Agriculture, 2019.** Final Crop Report 2019: Seasonal Summary. Available online at: <https://www.gov.mb.ca/agriculture/crops/seasonal-reports/crop-report-archive/index.html>
- National Weather Service Climate Prediction Center, 2019.** One Month Outlook. Available online at: http://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead14/
- Native Plant Society of Saskatchewan, 2013.** Native Plant Materials and Services Supplier List. Available online at: http://npss.sk.ca/docs/2_pdf/Native_Plant_Source_List_2013_-_revised.pdf
- Natural Resources Canada, 2019.** Current weekly consumer prices for diesel in 45 Canadian cities plus the average Canada pump price. Available online at: <https://www.nrcan.gc.ca/energy/fuel-prices/4797>
- North American Drought Monitor. 2019.** University of Lincoln Nebraska. North American Drought Monitor June 30 and November 30, 2019 maps. Accessed at <https://droughtmonitor.unl.edu/nadm/Home.aspx>
- SARM, 2018.** Carbon tax on diesel Available: <https://sarm.ca/+pub/File/Workshop%20Notes/2018/Carbon%20Tax.pdf>
- Saskatchewan Forage Council, 2019.** September 2019 Forage Market Price Discovery – Saskatchewan. Available online at: <http://saskforage.ca>
- Saskatchewan Forage Council, 2019.** Forage Market Price Discovery – Saskatchewan, January, 2019. Available online at: <http://saskforage.ca>
- Saskatchewan Ministry of Agriculture, 2019¹.** Crop Report for the week ending August 18, 2019. Available online at: <http://www.publications.gov.sk.ca/deplist.cfm?d=20&c=4549>
- Saskatchewan Ministry of Agriculture, 2019².** 2020 Grasshopper Forecast. Available through the Agriculture Knowledge Centre.
- Saskatchewan Ministry of Agriculture, 2020².** Ministry of Agriculture AGR Market Trends ending January 13 & 21, 2020. Available online at: <http://applications.saskatchewan.ca/agrmarketrends>
- Saskatchewan Ministry of Agriculture, 2019³.** Hay and Pasture Top Soil Moisture Conditions (November 18, 2019). Available online at: <http://www.publications.gov.sk.ca/deplist.cfm?d=20&c=4549>
- Statistics Canada, 2020.** Estimated areas, yield, production and average farm price of principal field crops, in metric units. Generated custom table, available online at: <http://www5.statcan.gc.ca/cansim/>
- United States Department of Agriculture, 2020¹.** Kansas City Daily Feed for the week ending January 21, 2020. Available online at: <https://www.ams.usda.gov/market-news/feedstuffs-reports>
- United States Department of Agriculture, January, 2019².** USDA Market News Weekly Montana & South Dakota Hay Reports December, 2019-January, 2020. Available online at: <https://www.ams.usda.gov/market-news/hay-reports>