Saskatchewan Hay & Pasture Report

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Inside This Issue:

Note from the Saskatchewan Forage Council

Haying season is now underway in Saskatchewan as many parts of the Province have experienced warmer weather after a rainy and cool June. According to the Saskatchewan Ministry of Agriculture Crop Report, haying has progressed this week to 6% of the hay crop cut in Saskatchewan and 1% baled whereas only 1% was reported to have been cut as of the last report on July 3. Reports indicate that forage crops in many parts of the Province are behind their typical stage of development for early July, while overland flooding and crop damage have been a severe setback for producers in central and south-eastern areas of Saskatchewan after heavy rains last week.

In this second edition of the 2014 Hay and Pasture Report you will find articles on the trace mineral status of Saskatchewan pastures, sainfoin and alfalfa as feeds, as well as economic advice on grazing management, pricing standing hay and buying versus making hay. Every issue of the Report also contains the most recent Saskatchewan Agriculture Crop Report and a summary of forage market information from Saskatchewan and surrounding jurisdictions.

As always, we welcome your feedback and encourage anyone interested in being placed on our email distribution list to contact the SFC at office@saskforage.ca. You may also want to visit our website www.saskforage.ca for regular news and information related to the forage industry.

Saskatchewan Agriculture Crop Report

(For the period ending July 7, 2014)

Warm weather in much of the province has helped with crop development and haying. Livestock producers now have six per cent of the hay crop cut and one per cent baled or put into silage, according to Saskatchewan Agriculture's weekly Crop Report.

Many producers on the east side of the province continue to deal with localized flooding and saturated fields. Although weather conditions have improved, many crops in these regions have been significantly affected by the excess moisture. Early estimates suggest that between two million to three million acres have been flooded and are unlikely to produce a crop.

Topsoil moisture conditions are improving for many areas. Across the province, topsoil moisture on cropland is rated as 34 per cent surplus, 64 per cent adequate and two per cent short. Hay land and pasture topsoil moisture is rated as 25 per cent surplus, 71 per cent adequate, three per cent short and one per cent very short.

Crop damage this week is attributed to excess moisture, localized flooding, hail, wind and insects such as the cabbage seedpod weevil. Root rots and leaf spot diseases have also caused some damage. There is adequate water available for livestock, and pasture conditions are rated as 27 per cent excellent, 62 per cent good, 10 per cent fair and one per cent poor.

Farmers are busy controlling pests and haying. View the full Crop Report here.

Trace Mineral Status of Saskatchewan Pastures: Effect of Location, Season and Forage Species

Saskatchewan Forage Council and partners: Saskatchewan Ministry of Agriculture, University of Saskatchewan and Western Beef Development Centre

The Saskatchewan Forage Council recently completed a study looking at the trace mineral status of pastures across Saskatchewan. Trace minerals are essential for animal growth, maintenance and reproduction. Although required in the diet at less than 100 parts per million (ppm), when deficient, these minerals can have significant impacts on animal health and productivity resulting in reduced economic returns for livestock producers.

The objectives of this project were to sample and analyze forage plants for trace mineral levels from Saskatchewan pastures located in the four soil zones of the province (Brown, Dark Brown, Black and Gray) as well as collecting water quality data to assess the overall nutrients available to cattle on those pastures. Forages were sampled and forage quality analyzed in both the spring and fall of 2012 and 2013. Statistical analysis was performed to identify trends in effect of season, location, and forage species on mineral content and nutritional quality of forages. The information collected from this project is being shared at learning events around the province and will be valuable to producers, nutritionists and extension staff in developing pasture mineral supplementation programs for cattle.

Season had a significant impact on mineral content ($p<0.001$). Calcium, magnesium, iron, manganese and molybdenum levels tended to increase in fall as compared to spring, while phosphorus, potassium, sulfur, zinc and copper decreased in fall. The Cu:Mo ratio decreased from spring to fall as copper decreased and molybdenum increased during this same time period.

General trends for trace mineral concentrations were identified based on soil zones. While iron concentrations were numerically highest in forage sampled in the

gray soil zone during fall, levels appeared to be adequate for grazing animals across all soil zones, forage types and seasons. There was not a significant difference between soil zones for manganese or zinc. Copper tended to be lowest in the brown and dark brown soil zones during the fall. In all soil zones, both zinc and copper were inadequate in all sample periods and in all soil zones to meet the requirements of either a beef cow (dry or lactating) or growing beef calf. Molybdenum was highest in the gray soil zone during fall and lowest in the dark brown soil zone during spring. Following this trend, the Cu:Mo ratio was lowest in the gray soil zone in both spring and fall although not significantly lower than the black, brown or dark brown during fall. Due to the interaction of copper and molybdenum, attention should be paid to these two mineral levels particularly in the gray soil zone. Selenium levels were highest in the brown soil zone and similar across the dark brown, black and gray soil zones.

Forage species also had a significant impact ($p<0.001$) on trace mineral content. Iron and selenium levels were at or near adequate (>83% of samples) across all forage species sampled in both seasons. Manganese was adequate (based on dry cow requirements) in over 80% of meadow brome, smooth brome and western wheatgrass in both spring and fall and was lowest (only 13% adequate) in crested wheatgrass during the spring. Zinc was lowest in meadow bromegrass, but was well below adequate levels across all species sampled (0-28% adequate). Copper was lowest in crested wheatgrass, Kentucky bluegrass, and western wheatgrass, but again was well below adequate levels across all species sampled (0-39% adequate). Alfalfa showed slightly higher levels of copper in fall compared to spring while the opposite trend was noted for the grasses. Molybdenum was adequate in at least 89% of forages sampled across all species. Molybdenum tended to decrease the most during the fall for Kentucky bluegrass, meadow brome and smooth brome. Mean Cu:Mo ratio was lowest for Kentucky bluegrass, and smooth bromegrass during the fall.

Iron levels of over 0.3ppm can cause problems with zinc, copper, and selenium absorption. Iron levels of over 0.3ppm were found in several of the water sources sampled during this project (range 0.19 – 0.55ppm) with no significant difference between soil zones or season.

In addition to the forage samples, water samples were collected in each of the pastures. Minerals in water sources can affect the absorption of minerals in feed. Iron levels of over 0.3ppm can cause problems with zinc, copper, and selenium absorption. Iron levels of over 0.3ppm were found in several of the water sources sampled during this project (range 0.19 – 0.55ppm) with no significant difference between soil zones or season. Levels of over 0.3ppm of iron in the water can interfere with the absorption of copper, zinc and selenium and further contribute to the deficit of these trace minerals in forages. Sulfate levels of over 1000ppm are considered a problem tying up dietary copper, zinc, manganese and selenium. However, water samples from this study were well below this level in all soil zones during both spring and fall (range 19.07 – 374.02ppm). While there is no recommendation tied to salinity in water for livestock, high salinity can reduce the intake of “salt” based mineral supplements. Testing of water sources utilized by grazing animals is recommended to identify water quality issues specific to a location.

Results from this project will be of great value to beef producers, nutritionists and extension staff. This study suggests that in developing a trace mineral supplementation program, season, forage species and soil zone should all be taken into account to ensure that trace mineral deficiencies in grazing animals are avoided. Testing both pasture forages and water sources will provide a more complete picture of the nutrients a herd is consuming. Producers should use the results of this project as a guide to understanding of the trends in their own soil zone but to provide a balanced ration feed and water testing is recommended.

The full report and trace mineral factsheets will soon be available on the Saskatchewan Forage Council website. Contact us at office@saskforage.ca for more information.

Funding for this project was provided by the Saskatchewan Ministry of Agriculture and the Canada-Saskatchewan Growing Forward bi-lateral agreement.

Making Hay: When Does It Pay For Livestock Producers?

Hay and Forage Grower eHay Weekly publication July 1, 2014

Beef and dairy producers trying to decide whether it's smart financially to grow or buy their hay can get some help from Travis Meteer, commercial ag educator with University of Illinois Extension.

Even though the answer depends on a number of individual factors, he developed a checklist of pros and cons to offer decision-making help.

Producers may want to buy hay if:

- They have limited land resources to use for hay production.
- They have limited time to devote to hay production.
- Labor is in short supply.
- Buying or updating equipment is cost-prohibitive.
- Their operations aren't set up to handle alternative feeds or by-products.
- A reliable source of hay is available.
- The market for selling excess hay is limited.
- They aren't able to store and carry over hay with little or no waste.
- Hay acreage would be so small that it wouldn't pay to invest in the needed equipment.

Producers may want to grow hay if:

- Land is readily available for hay production.
- They have a flexible schedule and adequate time to spend on hay production.
- They need to have control of hay quality and harvest timing.
- Labor is available and affordable.
- Equipment costs can be shared with other enterprises.
- Their operations lack flexibility in their feeding set-ups or their current systems are geared toward hay.
- They're located in areas with a good demand for hay, and they're looking for ways to diversify their revenue streams.
- They have the ability to store and carry over hay stocks.
- Their hay acreages are able to support equipment payments and the regular updating of equipment.

"Even in cases where some aspects of the farm may support growing your own hay," Meteer says, "the opportunity cost is too high and buying hay can allow better use of time and equipment to focus on more profitable portions of the farming operation."
Diverting hay ground to managed pastures can be another option, he adds.
"Managed pastures allow longer grazing seasons, can allow increased herd size or stocking rates and can result in lower fertilizer and fuel needs to support the cattle operation."

The Economics of Grazing Management

Leanne Thompson, Saskatchewan Forage Council

Does it "pay" to pay attention to grazing management? This is a basic question that producers often grapple with. The Forage Industry Analysis project published by the Saskatchewan Forage Council can be used to provide information to assist answering these types of questions. The final report is available on the Saskatchewan Forage Council website http://www.saskforage.ca. The example provided below is based on the pasture valuation section of this report.

Good grazing management is all about maintaining productivity of your grass stands at the best possible level. If you are able to maintain grass stands in excellent condition, the carrying capacity of the stand is at its highest. On the other hand, forage stands in poor or fair condition have a reduced carrying capacity. Carrying capacity of the stand will have a direct effect on the number of livestock you can graze and the performance of animals grazing on the forage.

To demonstrate the economics of this idea, you can apply recommended stocking rates and custom grazing rates to look at the effect on economic returns. Recommended stocking rates are set based on the pasture condition as follows (% of good condition pasture):

Excellent – 133%
Good – 100%
Fair – 66%
Poor – 33%

In a recent survey of grazing rates, it was determined that custom grazing rates in Saskatchewan were in the $0.75 per pair per day range (approximately $22.50/AUM) for forage only (i.e. no other services included). This means that if the recommended stocking rate for your pasture in good condition is 1.3 AUM/acre, the stocking rate can be increased to 1.7 AUM/acre if it is in excellent condition. This will translate into another $9/acre (based on the $22.50 AUM rate) for pasture in excellent condition.

On the flip side, pasture in poor condition will have a reduced stocking rate of 0.4 AUM/acre and pasture in fair condition a stocking rate of 0.9AUM/acre. These stocking rates will translate into a loss of $20.25/acre for poor pasture and $9/acre for fair pasture (compared to good condition).

Good grazing management that aims to maintain or improve pasture condition will clearly translate into economic returns for the grazier.

Dry Matter and Nitrogen Degradation in the Rumen in Relation to Condensed Tannin and Protein Molecular Structures in Sainfoin *(Onobrychis viciifolia) and alfalfa (Medicago sativa)*

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Summary
Researchers at INRA-France in collaboration with University of Saskatchewan recently carried out a study to investigate differences among three sainfoin varieties which were sown at the same site and harvested at different dates, in terms of ruminal protein degradability. Sainfoin contains condensed tannins (CT), which reduce the incidence of bloat. Alfalfa was used as a non-CT containing legume and was sown at the same site. The objective was to compare the ruminal degradability of three sainfoin varieties and alfalfa and explore the relationship between CT content and structure and with protein secondary structure. This article will present the main findings of this study with complete results published in The Journal of Agricultural Science (Volume 152/Issue 02/April 2014 pp 333-345).

Introduction
There is renewed interest in forage legumes because they can contribute to more sustainable feeding systems as they are able to fix atmospheric nitrogen and have a high feed value for ruminants. Alfalfa is one of the most nutritious forages available, and is used widely in diets for ruminants, however, its proteins are often poorly utilised by ruminants as they are quickly and extensively degraded in the rumen, which leads to nitrogen losses via urinary urea excretion. The use of forage legumes that contain tannins (i.e. sainfoin) could improve protein utilization by ruminants. Condensed tannins (CT) are plant secondary compounds that are able to bind proteins and reduce their degradation in the rumen which may lead to an increase in amino acid flow to the small intestine. The variability of CT composition among tannin containing forages gives rise to different nutritive values for forages and the effects of CT in the rumen and the intestine differ according to their content and structure as well as the nature of the proteins.

Materials and Methods Three varieties of sainfoin (*Onobrychis viciifolia*) (var. Esparcette from Ukraine, Ambra from France and Villahoz from Spain) were studied in comparison with alfalfa (*Medicago sativa*) (var. Aubigny). They were sown in August 2008 and cultivated on the INRA Clermont-Ferrand-Theix site, France in a full factorial design with three replicate blocks. Samples of the three replicates were harvested at two different dates in 2009 during the first growth cycle and at one date during the second growth cycle. The harvest dates and estimated phenological stage for the

first growth cycle, P1, were on 5 May (mid vegetative stage for Ambra (1.99) and early vegetative stage for Villahoz (1.29), Esparcette (1.29) and alfalfa (1.00)); 2 June (early bud stage for Ambra and Villahoz and late vegetative stage for Esparcette and alfalfa) for P2 and on 2 June (early bud stage for Ambra and Villahoz, mid vegetative stage for Esparcette and early vegetative stage for alfalfa) for P3 for the second growth cycle (4 weeks after cutting on 5 May). The loss of dry matter (DMDeg) and nitrogen (NDeg) in polyester bags suspended in the rumen was measured using rumen-fistulated cows. Sainfoin and alfalfa samples were analysed for chemical composition, CT content and protein structure. The protein molecular structures were identified using Fourier transform/infrared-attenuated total reflectance (FT/IR-ATR) spectroscopy.

Results

Chemical composition

For both sainfoin and alfalfa, leaf-to-whole-plant ratio, N content and pepsin-cellulase digestibility decreased during the first growth cycle (Table 1). In the second growth cycle (P3) the same parameters had intermediate values. Alfalfa and sainfoin showed similar trends of NDF and ADF during both growth cycles.

Characteristics of condensed tannins

The content of CT was higher at the more advanced maturity (P2 and P3 in relation to P1). This contrasts with all other chemical composition parameters, which were intermediate during the second growth cycle compared to the two harvest dates of the first growth cycle. Esparcette had consistently higher CT contents ($P < 0.001$) than Ambra or Villahoz.

The mean degree of polymerization increased from the first (P1) to the second date (P2) during the first growth cycle and was intermediate at the second growth cycle (P3) between the first growth cycle dates ($P < 0.001$). Differences were observed among the three varieties ($P < 0.05$) and according to the date (var × date, $P < 0.01$). Prodelphinidin : procyanidin ratios increased from the first to the second growth cycle ($P < 0.001$) and varied among varieties with date (var × date, $P < 0.05$). During the first growth cycle the proportion of *cis*-flavanols also increased. Proportions were intermediate at the second cycle compared to the first growth cycle dates and varied among the three varieties ($P < 0.001$).

In situ dry matter and nitrogen disappearance in the rumen

The DMDeg was higher for the less mature forage (P1), decreased with plant maturity (P2) and the regrowth (P3) was intermediate between P1 and P2. No effects between species (alfalfa and sainfoin) and among the three sainfoin varieties were observed for the DMDeg but significant differences were found between alfalfa and sainfoin according to harvest date ($P < 0.001$) (Table 2). The pattern of *a* fraction changes differed between both species ($P < 0.001$) and harvest dates (sp × date, $P < 0.001$) and also between varieties and harvest dates ($P < 0.01$).

In contrast to the DMDeg results, there were differences between species for NDeg ($P < 0.001$, Table 2) and differences among sainfoin varieties (Fig. 1). Alfalfa NDeg did not vary greatly, while sainfoin NDeg decreased drastically between the P2 and P3 dates. Consequently, the interaction between species and date had a significant effect on the fraction and NDeg ($P < 0.001$). Moreover, the decrease in NDeg of Esparcette with forage maturity was significantly stronger than for the other two sainfoin varieties (var × date, $P < 0.001$).

Protein molecular structure

A significant effect of date ($P < 0.001$) was observed on all parameters of protein structure (amide I, amide II, ratio of amide I: amide II, α-helix, ß-sheet, and ratio of α-helix: ß-sheet). The interaction of species × date was significant ($P < 0.05$) for all parameters while no significant differences were found between varieties within the same species.

Table 1. Leaf to-whole-plant ratio (g/g), nitrogen concentration (total N; g/kg DM), neutral detergent fibre (NDF; g/kg DM), acid detergent fibre (ADF; g/g DM), acid detergent lignin (ADL; g/kg DM) and pepsin-cellulase digestibility (PCD g/g DM) of three sainfoin varieties (Ambra (Amb), Villahoz (Vil) and Esparcette (Esp)) and a Alfalfa (Aubigny (Aub)) at 2 different dates during the first growth cycle (5 May : mid vegetative stage for Amb and early vegetative stage for Vil, Esp and alfalfa (P1)), 2 June: early bud stage for Amb and Vil and late vegetative stage for Esp and alfalfa) (P2)) and at one date during the second growth cycle : 2 June (early bud stage for Amb and Vil, mid vegetative stage for Esp and early vegetative stage for alfalfa) (P3) (4 weeks after cutting on 5 May).

	First Growth Cycle								Second Growth Cycle			
	P1				P2				P3			
	Alfalfa	Sainfoin			Alfalfa	Sainfoin			Alfalfa	Sainfoin		
	Aub	Amb	Vil	Esp	Aub	Amb	Vil	Esp	Aub	Amb	Vil	Esp
Leaf/whole plant	0.54	0.72	0.71	0.73	0.35	0.34	0.34	0.28	0.49	0.57	0.47	0.73
Total N	35.2	36.7	39.8	30.6	25.2	16.3	16.0	14.6	37.8	26.4	28.7	30.7
NDF	262	200	202	223	443	424	451	454	297	278	279	231
ADF	180	145	148	160	335	330	349	357	212	204	208	172
ADL	35	17	21	22	71	59	64	68	41	35	34	29
PCD	0.80	0.84	0.85	0.81	0.62	0.65	0.64	0.60	0.80	0.78	0.78	0.79

Table 1. Part 2 Statistical Analysis

			P			
	S.E.M.*	SP	Var	Date	SpxDate	VarxDate
Leaf/whole plant	0.180	NS	<0.05	<0.001	<0.001	<0.001
Total N	0. 97	<0.01	<0.05	<0.001	<0.001	<0.001
NDF	7.8	<0.001	NS	<0.001	<0.01	<0.01
ADF	7.0	<0.05	NS	<0.001	NS	<0.05
ADL	1.5	<0.001	NS	<0.001	NS	<0.05
PCD	0.008	<0.001	<0.05	<0.001	<0.001	<0.05

*Standard Error of Mean, SP=species; Var=variety; NS=not significant

Table 2. ***In situ*** **rumen disappearance of dry matter (DMDeg) and nitrogen (NDeg) of three sainfoin varieties and one alfalfa at 2 different dates during the first growth cycle (5 May : mid vegetative stage for Ambra and early vegetative stage for Villahoz, Esparcette and alfalfa (P1)), 2 June: early bud stage for Ambra and Villahoz and late vegetative stage for Esparcette and alfalfa) (P2)) and at one date during the second growth cycle : 2 June (early bud stage for Ambra and Villahoz, mid vegetative stage for Esparcette and early vegetative stage for alfalfa) (P3) (4 weeks after cutting on 5 May).**

	First growth cycle				Second growth cycle			*P*				
	P1		P2		P3		S.E.M.*	Sp†	date	Var‡	Sp×date	Var×date
	Alfalfa	Sainfoin	Alfalfa	Sainfoin	Alfalfa	Sainfoin						
a	0.38	0.43	0.37	0.37	0.32	0.38	0.009	<0.001	<0.001	NS	<0.001	<0.01
b	0.55	0.56	0.39	0.41	0.56	0.54	0.010	NS	<0.001	<0.05	NS	<0.001
c	0.15	0.11	0.12	0.09	0.13	0.09	0.006	<0.001	<0.01	NS	NS	NS
DMDeg	0.77	0.79	0.63	0.61	0.71	0.71	0.005	NS	<0.001	NS	<0.01	NS
a	0.36	0.34	0.44	0.28	0.31	0.26	0.019	<0.001	<0.001	<0.001	<0.001	NS
b	0.62	0.67	0.46	0.58	0.67	0.73	0.017	<0.001	<0.001	<0.001	NS	NS
c	0.15	0.11	0.17	0.10	0.15	0.09	0.006	<0.001	<0.05	<0.05	NS	NS
NDeg	0.80	0.77	0.78	0.65	0.79	0.70	0.006	<0.001	<0.001	<0.001	<0.001	<0.001

*SEM=standard error of mean ;† Sp: species;‡ Var: variety;NS: not significant; a, rapidly degradable fraction; b, slowly degradable fraction; c, degradation rate of b fraction; DMDeg or NDeg, *in situ* ruminal degradability of DM or N calculated with a passage rate of 0.06/h

Conclusion

The current research demonstrated the importance not only of the quantitative and qualitative characteristics of CT but also of the need to take into account molecular features of proteins for interpreting the nutritional effects of tannin-containing animal feeds. A better understanding of these tannin-protein interactions and their biological effects will improve our appreciation of their contribution to the nutritive value of forages.

References

Aufrere J, Theodoridou K, Mueller-Harvey I and Yu P and Andueza D. 2013. Ruminal dry matter and nitrogen degradation in relation to condensed tannin and protein molecular structures in sainfoin and alfalfa. Journal of Agricultural Science. (Cambridge).152, 333-345.

Determining the Standing Price of Hay

Saskatchewan Ministry of Agriculture-Forage Harvesting and Marketing FAQ's

How do I determine the price of standing hay?
The price of hay varies from year to year and depends entirely on the supply available and demand requested. The simplest way to determine the price of standing hay is to calculate the cost of cutting and baling and subtract it from the baled price. At times, the sales agreement will also include a risk deduction of five to 15 per cent.

Find the price of hay in local papers or use the Feed Grain and Forage Listing Service to find the asking prices in your area. The listing may also have some standing hay advertised in your area. The cost of cutting and baling hay depends on yield of the hay as well as the equipment being used. It's generally agreed that hay costs between $35.00 to $40.00 / ton ($39.00 to $44.00 / tonne) to cut and bale. Some operators may charge more or less. Check out the Custom and Rental Rate Guide and Calculating Hay Rental Agreements to help get started.

For producers who need higher quality, such as feedlots or dairy operations, the optimum time to cut alfalfa may be just before flowering.

For cow/calf producers, protein and forage yield is maximized at 10% to 25% flowering. At this stage, the balance between forage and quality are maximized.

What is my hay worth?
The price of hay is strictly based on supply and demand. When hay is plentiful, the price tends to be depressed while the price rises as supplies drop. The simplest way is to watch the newspapers and compare quality. Saskatchewan Agriculture maintains a Forage, Feed Grain and Custom Services Listing.

At what stage should I cut alfalfa?
Deciding when to cut alfalfa is based on three factors, desired harvest quality, the expectation of a second cut and the weather.

The quality of an alfalfa crop is at its highest just before flowering. At this stage, however, the forage yield hasn't been maximized. For producers who need the higher quality, such as feedlots or dairy operations, the optimum time may be just before flowering. For cow/calf producers, protein and forage yield is maximized at 10% to 25% flowering. At this stage, the balance between forage and quality are maximized. If you're expecting a second cut from your alfalfa, consider that alfalfa needs about six weeks of good growing conditions before a second cut and six weeks before the first killing frost. Generally, the first killing frost occurs in late September (earlier in the north and later in the south). Therefore, the second cut should occur sometime in early to mid-August and first cut in late June or early July.

If the alfalfa isn't staged properly for the first cut by the first week of July, decide whether to wait to cut later, and forget the second cut; or, cut the alfalfa at the earlier stage and hope for sufficient growth for a second cut. (Cutting Alfalfa? Think About It).

The weather should also be considered in your decision. Perfect harvest timing is fruitless if drying conditions aren't favourable. The advantage of optimum forage quality at the desired harvest stage can be lost if the windrow gets an inch of rain. Watch the long-term forecast and try to find a reasonable harvest window.

At what stage should I cut my grass hay?
Like alfalfa, grass hay quality is at its highest during the vegetative stage and decreases once flowering begins. Once flowering initiates, crude protein can decrease by 25 to 50 per cent. Often, however, the yield hasn't reached its potential

by the flowering stage and yield may be lost at the expense of quality. For many grasses, maximum yield is at, or immediately after, the bloom stage.

When harvesting all hay, consider the weather in your decisions. Good quality hay can quickly deteriorate after a rain. Watch the weather forecast and try to find a reasonable harvest window. Poor hay put up dry is better than good hay put up wet.

Can I graze my alfalfa after my bales are removed?
To reduce the chance of winterkill, alfalfa can be grazed any time before mid-August and after the first killing frost (October 1st). It's important to allow alfalfa six weeks to replenish its root reserves before the first killing frost. However, consider that bloat is still an issue late in the season.

Links and further reading:
Forage, Feed Grain and Custom Services Listing
Custom and Rental Rate Guide
Calculating Hay Rental Agreements
Foragebeef.ca
Alberta Agriculture, Food and Rural Development
Manitoba Agriculture, Food and Rural Initiatives
Montana State University Extension Service
North Dakota State University Extension Service
For more information, please contact the Agriculture Knowledge Centre at 1-866-457-2377.

Saskatchewan Hay Market Report

Saskatchewan Ministry of Agriculture
www.agriculture.gov.sk.ca/FeedForageListing

For the week ending July 11, 2014 there are limited listings for baled and standing forages. Large square bales are on offer at $88/ metric tonne for alfalfa hay and $77/ metric tonne for alfalfa/brome hay. Small square bales of approximately 50 pounds are also offered at $3.50-$4.00 per bale. There are three listings for pasture available, with total pasture capacity for 170 animals. Prices listed for pasture are $180/head/season and $1.00 to $1.10/head/day/season. There are two listings for standing alfalfa, one priced at $25/acre and the other with no price listed.

USDA Market News Service Hay Report

For the week ending July 11, 2014
The United States Department of Agriculture (USDA) collects a wide variety of information from hay markets across the country. Presented below is information from those jurisdictions closest to Saskatchewan. For complete USDA hay market listings, please visit the USDA Market News webpage.

Weekly Montana Hay Report

Compared to last week: Lower quality alfalfa, rained on/weedy, hay steady, higher quality alfalfa no comparison available as this is the first reported trade as first cutting was very delayed this year. Demand has lessened a bit as some of those areas that were short on hay supplies have met their immediate needs for the time being. Alfalfa hay growers busy trying to put up their first cutting in between rain showers. Pre-bloom alfalfa very hard to find as growers waited out the rain to put up dry hay.

Not much hay reported sold yet overall. All prices are dollars per ton and FOB unless otherwise noted.

Wyoming, Western Nebraska, and Western South Dakota Hay Report

Compared to last week: All classes traded steady on very light demand. Central and Western Wyoming and Western South Dakota are beginning to cut. Rain, Weevils, and hail have been plaguing areas making for later starts or reduced quality of hay. All prices dollars per ton FOB stack in large square bales and rounds, unless otherwise noted. Most horse hay sold in small squares. Prices are from the most recent reported sales.

Prices are for the week ending July 11, 2014

	Eastern Wyoming	Central & Western Wyoming	Western Nebraska & South Dakota	Montana
Alfalfa				
Premium	$225-230*†	-	-	
Good	$130-140* $180***	$150	$125* $160**	$150-160 $200**
Fair	$140	-	$100	$100-135
Standing		$100		-
Alfalfa-Grass	-	$250 $175-285**	$90*	-
Grass	$150**	$125	$65-100*	-

All prices in U.S. dollars per ton FOB stack in large square bales unless otherwise noted.
Most horse hay sold in small squares.
**large rounds **small squares ***new crop †delivered*

Hay Quality Designations - Physical Descriptions:

Supreme: Very early maturity, pre bloom, soft fine stemmed, extra leafy - factors indicative of very high nutritive content. Hay is excellent colour and free of damage. Relative Feed Value (RFV): >185

Premium: Early maturity, i.e., pre-bloom in legumes and pre head in grass hays; extra leafy and fine stemmed - factors indicative of a high nutritive content. Hay is green and free of damage. RFV: 170-185

Good: Early to average maturity, i.e., early to mid-bloom in legumes and early head in grass hays; leafy, fine to medium stemmed, free of damage other than slight discoloration. RFV: 150-170

Fair: Late maturity, i.e., mid to late-bloom in legumes and headed in grass hays; moderate or below leaf content, and generally coarse stemmed. Hay may show light damage. RFV: 130-150

Utility: Hay in very late maturity, such as mature seed pods in legumes or mature head in grass hays, coarse stemmed. This category could include hay discounted due to excessive damage and heavy weed content or mould. RFV: <130

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