

# The Saskatchewan Hay Report

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## **Editors' Note**

As we near the end of August, haying operations have, for the most part, been completed for another growing season and markets are showing some activity. This edition once again provides updates from across western Canada and the northern United States. Comments and feedback are always welcome – feel free to contact us.

We would like to take this opportunity to report on a number of forage management resources that have recently been completed by the Saskatchewan Forage Council and are now available for distribution. The *Successful Forage Crop Establishment* fact sheet highlights topics related to successful forage seeding while an interactive *Dryland Forage Species Adaptation CD* has been developed to assist land managers in selecting forage species. In addition, four plant identification *Field Guides*, including Plants of Southern Saskatchewan, Northern Saskatchewan, Riparian Plants and Common Seeded Plants for Forage and Reclamation, have been updated and revised. As well, two new fact sheets titled *Revegetation of Saline Soils Using Salt Tolerant Grasses* and *Growing Forage Legumes in Rotation with Annual Crops* will be available by the end of September. Contact the Saskatchewan Forage Council for free copies or visit our website at [www.saskforage.ca](http://www.saskforage.ca) to view online.



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## **Saskatchewan Agriculture and Food Crop Report #19 (For the week ending August 12, 2007)**

Ninety-four per cent of the first-cut hay crop and 18 per cent of the second-cut has been baled or put into silage. Quality is generally expected to be good. Over half of the crop reporters do not expect a second cut of hay in their respective districts. Topsoil moisture conditions on hay and pasture land improved from last week, and

were reported as adequate on 43 per cent of the total area. The southern regions continue to report the highest percentage of very short moisture conditions.

**South Eastern Saskatchewan:** Conditions improved on hay and pasture land, with 43% of land rated as having adequate topsoil moisture, compared to 11% last week. Farmers are trying to finish first cut haying operations in the southeast. Ninety-four percent has been baled or made into silage. Quality is generally expected to be good. Second cut haying has begun in some areas with 50% baled or put into silage across the region. Many reporters do not expect a second cut in their areas.

**South Western Saskatchewan:** Conditions improved on hay and pasture land, with 48% of the land rated as having very short topsoil moisture, compared to 69% last week. Hay operations are struggling to wind down in the southwest with 96% of the first-cut hay either baled or put into silage. Quality is expected to be good. Reporters do not expect to see a second cut in the area.

**East Central Saskatchewan:** Fifty-five percent of the hay and pasture land was rated as having adequate topsoil moisture, compared with 42% last week. First-cut haying operations are nearing completion, with 93% baled or silaged. Quality is generally expected to be good. Some progress has started on a second cut, with 5% reported baled or put into silage.

**West Central Saskatchewan:** Conditions also improved on hay and pasture land, with 26% of the land rated as having adequate topsoil moisture, compared to 18% last week. The rain stalled haying operations for the most part at 95% complete. Quality is generally expected to be good. Twenty-three percent of the second cut hay crop has been baled or put into silage.

**North Eastern Saskatchewan:** Top soil moisture conditions improved this past week, with 73% of the hay and pasture land rated as having adequate topsoil moisture, compared with about 52% last week. Haying operations are winding down with 97% of the first-cut baled or put into silage. Quality is generally expected to be good. Eleven percent of the second cut hay crop has been baled or made into silage.

**North Western Saskatchewan:** Thirty-seven percent of the hay and pasture land is reported as having adequate top soil moisture, compared with 23% last week. Haying operations are coming along in the northwest with 91% of the first cut baled or put into silage. Quality is expected to be good. Many reporters do not expect to see a second cut in their area.

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### **Northeast Forage Update (to August 16, 2007)**

*Al Foster, PAg*

*Forage Development Specialist – Tisdale, SK*

*Saskatchewan Agriculture and Food*

2007 has been a reasonably good year for hay producers in northeast Saskatchewan. A spring frost slowed growth over much of the region but significant late May and June rain and the warm weather resulted in above average yields for most producers. The hay crop generally came off in good condition. Scattered thundershowers throughout July would have reduced overall quality

only slightly. Regrowth on alfalfa fields has been good and a second cut will be an option for many producers.

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### **Alberta Forage Conditions**

*Gordon Hutton*

*Forage Specialist, Rural Services*

*Alberta Agriculture and Food*

In general, pasture conditions are good across central and northern Alberta. In the south, hot weather has led to a decline in pasture condition from good to poor. High temperatures and limited rainfall have really reduced forage growth.

First cut hay production is nearing completion across the province within most areas having above average hay yields. Humid conditions earlier in July along with showers delayed hay harvesting in northern and central regions. Few areas in northern Alberta (east of Edmonton) had poorer forage production this year due to drier soil conditions and some early spring frost that set crops back.

It is expected that we will have large supplies of hay and as a result soft prices for anyone with hay for sale. Prices likely similar to 2006.

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### **Manitoba Forage Report**

*Glenn Friesen*

*Business Development Specialist-Forages*

*Crops Knowledge Centre*

*Manitoba Agriculture, Food and Rural Initiatives*

#### **Hay**

Excessive rains during the first-cut tame hay delayed harvesting and resulted in above average yield but below average quality. First cut yield estimates range from 1.0 to 2.0 MT/ac for alfalfa/grass mixtures and 1.5 to 2.5 MT/ac for pure alfalfa stands. Harvesting delays may negate a second cut for many producers.



Hot and dry conditions during second cut harvest improved regrowth and feed quality on the 25% of acres that have been harvested to-date. However, alfalfa weevil populations reported in the Southwest region have reduced yields by up to 50% in localized areas.

Native and slough haying operations are well under way in all regions, with approximately 50% complete. Pending improvements in weather could potentially result in an average crop. High lake water levels are limiting the harvesting access to some areas. Cereal greenfeed and silage harvesting is underway with average yields and quality reported.

## Pastures

Pasture conditions were average to above average throughout the province during the first period of the growing season, with some exceptions primarily including pastures in extreme low lying areas that experienced excessive water problems. However, extreme heat and dry conditions in July have reduced pasture yield and quality potential in many areas of the province. These conditions have also increased grasshopper populations in some areas; the most affected being the Southwest area of the province.

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### **Production of Quality Hay in Central Alberta:**

*Allan Hay - Sylvan Lake, Alberta*

*Don Allan, Owner*

*www.AllanHay.com*

Since we at AllanHay.com primarily focus on producing hay that will meet the requirements and specifications of the equine industry, mold-free hay with minimal dust is an absolute necessity. That being said, weather is still the greatest challenge and determining factor in the quality of the final product.

The most distinguishing element that maintains the popularity of our hay with the horse people is the fact that we try to make sure that the hay is ready to bale before it is baled. By observation, there has been a lot of hay in our area baled before it is really ready this year. With a very high soil moisture level, high humidity and frequency of thundershowers the temptation is to get out there and bale to beat a shower. What was nice green hay now becomes moldy in the bale. We prefer to take a bit of bleaching from more sun and a shower than to end up with a poorer quality product due to premature baling. A bleached sample is better than a moldy one any day!

Most of our hay is baled between 12-15% moisture. We will bale straight grasses lower than that but try not to bale anything with alfalfa in it below 12% to minimize leaf shattering. All tedding and raking of alfalfa and alfalfa mixes is done when moisture content is over 20%. A minor percentage of our hay will have hay preservative added if the moisture content happens to go over 16%. This allows us to go through heavier low spots and along tree windbreaks or fence lines without running the risk of ending up with mold in those bales. If inclement weather is imminent we will bale up to 22% to beat a rain with the benefits of having an automatic moisture sensor and hay preservative applicator on the baler.

Being that we focus on the equine market, the mix in a forage blend needs to be suited for the average horse feeder. We have found that our alfalfa/timothy/brome blend has been very well received. On an average to better than average year we will get two cuttings. For those customers who want no alfalfa in their ration we have fields of basically straight timothy. Another popular forage mix for feedlots starting calves out on feed is our creeping red fescue/brome mix. This provides fine textured hay that meets the approval of cattlemen getting calves on feed.

With the recognition in the dairy industry of the benefits of low potassium hay for late gestation cows we are now tailoring our fertility program for more than just yield. On those fields of timothy that dairies have been buying from for this segment of their lactating herd we now are

watching our potassium levels more closely. While we may sacrifice some yield we are broadening our market base for our timothy hay.

Soil samples are professionally taken and analyzed through the services of our contracted agronomist. We try to have the recommendations reviewed and submitted to our fertilizer supplier shortly after the snow has gone. Timing of fertilizer application has been found to be critical. Ideally, we have the fertilizer floated on the day before an incoming rain system. With the loss of ammonium nitrate since 9-11 and the need to now use urea, the relationship between application and precipitation is more critical than ever. (Urea tends to be more volatile and gasses off much more readily.)

Cutting begins at first blossom in alfalfa. We try not to have too much on the ground at a time. Generally, we try not to go over 15% of our hay acreage base down at any one time. In our area a lot of storms come through in the month of July and we don't like to have too many eggs in any one basket. Once we get to mid-July we start cutting timothy and try to have some timothy and some alfalfa down simultaneously. The fields are spread out over a few miles so we try to have about three areas with hay down at any given time so that if there is a thunder shower in one area there is a possibility that one of the other two areas were missed and we can keep on haying.

We now have gone to only baling with a round baler and all bales are net-wrapped. With the use of a Haukaas Quick Pick 10 Bale Mover we row our bales in twin rows about 12 feet apart and running straight north and south. We have found that the weather loss in this method of storage is minimal. The spacing between the rows and the direction of the rows allows the sun and air movement to keep the bales dried out all the time. We group the bales in bunches of 34 which is the same size as one of our tractor/trailer loads. (Not having to do any tarping any more is a real blessing!)

For the buyers who still need or prefer small square bales we access the inventories of neighbours and friends in the area and help them move their product. The same is true when we sell out of our own round bales as well. In the fall we put up or buy straw locally to serve the demand for that commodity. The introduction of a 34 bale self unloading round bale trailer to our business last year has increased the demand for our product and services considerably.

We entered the forage market in Central Alberta in the 1970s. Originally located at Bentley, Alberta until 1987 we served the area primarily with small square bales delivered in 160 bale lots on a truck with a stack retriever. Having moved out of farming for a number of years from 1987 to 2002 it has been great to get back in the industry and establish mostly a new customer base from our new base of operations near Sylvan Lake, Alberta. We are now farming cooperatively with a friend and share the use of equipment and rent land together. Many things had changed in the ag industry during that 15 year time frame but the people haven't. Our business is primarily based on customer relations and service. Each customer is important to us whether they have one horse on their acreage or are milking 800 cows in their dairy. We have both types of customers in our clientele and everything in between. We try to give them all the same kind of care and attention.

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## Increased Effect of Phosphorus Fertilizer on Alfalfa using Coulter-type Disc Drill

Dr. S.S. Malhi

Agriculture and Agri-Food Canada

Melfort, SK

Alfalfa is an important forage crop in western Canada, but many soils contain insufficient amounts of plant-available phosphorus (P) to support optimum crop production. Several field experiments have shown increased alfalfa forage yield from P fertilization. Traditionally, surface-broadcasting is used to apply fertilizers on established forage stands for convenience in application. Phosphorus is relatively immobile in soil and our previous research shows that the majority of fertilizer P remains in top 5-cm layer, even after long-term annual applications to alfalfa or grass. This suggests that P fertilizer is less effective when surface broadcast as compared to subsurface banding. P fertilizer must be located where roots can intercept it so placement becomes very important.

A field experiment was initiated in 1992 on the existing alfalfa stands on a P-deficient soil at Ponoka, Alberta to compare the effects of surface-broadcasting versus subsurface banding of annual (10, 20, 30 and 40 kg P/ha) and one-time initial (50, 100, 150 and 200 kg P/ha) applications of P on forage yield. Triple superphosphate was applied in early spring (mid to late April). Subsurface applications were banded in rows 15 cm apart at about 5 cm depth, using a coulter-type disc opener. The plots were harvested for dry matter yield twice during the growing season in early July and mid-September.

### Results

There was a substantial increase in forage yield from P applications (*Tables 1 and 2*). The soil in this experiment was very deficient in plant-available P, which resulted in marked yield response to applied P. Table 1 shows that banding had a greater effect on forage yield than surface-broadcasting when averaged across P rates.



Table 1. Influence of method of placement on dry matter yield (DMY) of alfalfa from annual and single initial phosphorus (P) applications (averaged across P rates)

Year	Control*	DMY (kg/ha)			
		Annual applications		Single applications	
		Broadcast	Disc-Band	Broadcast	Disc-band
1992	2928	6088	6710	7939	7666
1993	1026	6095	6774	7082	8246
1994	1429	5118	6249	5108	6067
1995	2407	5523	6351	4799	5209
1996	3031	8082	9591	6626	8071
<b>Mean</b>	<b>2164</b>	<b>6181</b>	<b>7135</b>	<b>6310</b>	<b>7052</b>

\*Control treatment included all field passes but no added phosphorus fertilizer

Over the five years, banded applications produced about 15% (or 954 kg/ha) more dry matter than broadcast applications when the P fertilizer was applied annually and 12% (or 742 kg/ha) more dry matter when the fertilizer was applied only at the beginning of the study. The dry matter yield differences between the two methods of placement, shown in Table 2, were greater at lower application rates.

Table 2. Influence of method of placement on dry matter yield (DMY) of alfalfa from annual and single initial phosphorus (P) applications at different rates (averaged across 5 years)

Rate of P (kg P/ha)	DMY (kg/ha)		Rate of P (kg P/ha)	DMY (kg/ha)	
	<u>Annual applications</u>			<u>Single applications</u>	
	Broadcast	Disc-band		Broadcast	Disc-band
10	4156	5578	50	4574	5757
20	6036	7192	100	6344	6877
30	7234	7530	150	6484	7709
40	7297	8238	200	7838	7863

Several reasons may explain the increase in forage yield with subsurface banding. Phosphorus fertilizer, applied to the soil surface in established forage stands, remains near the surface and does not move into the root zone where it can be fully utilized. On the other hand, P fertilizer placed below the surface is immediately available to the roots in the moist zone where roots uptake is most active. In addition, subsurface banding reduces the contact between P fertilizer and the soil, reduces the potential for conversion of fertilizer P to less soluble P compounds that are unavailable for uptake and/or P fixation in soil, thus leaving more fertilizer P for crop uptake.

The success of subsurface banding also depends on the equipment used to band the fertilizer. A “hoe drill” type damages the superficial roots and causes loss of moisture, particularly in a dry situation. In the present study, the coulter-type disc drill apparently caused little disturbance to soil and plant roots.

### **Summary**

There was a marked increase in forage yield from P applications in all the five years. Disc-banding at 15 cm spacing produced greater forage yield than surface-broadcasting, regardless whether P was applied annually (by 954 kg DMY/ha) or as single initial application (by 742 kg DMY/ha). On the average of five years, there was no additional economic benefit from annual applications as compared to one-time initial applications.

### **Conclusion**

Forage productivity can be increased by using a special disc-banding technique on alfalfa stands. Banding, especially with narrowly spaced openers, is more expensive than surface-broadcasting (by about \$7/ha). But, even at a low alfalfa price of \$40/t, additional returns of \$30 to \$38/ha from subsurface banding are more than enough to cover the additional cost of the operation. Subsurface banding may also reduce the potential for P loss due to surface runoff and will be safer for the environment.

## National Sustainable Grazing Mentorship Project - Enhancing Profits and the Environment through Grazing Management

### What is a Grazing Mentor?

A respected *producer peer* with extensive grazing management experience and knowledge. He/she can suggest grazing management options to help you improve your profits, your forage productivity and your land and water resources.

### How does it work?

The mentors visit the ranch/farm to discuss grazing resources, opportunities and challenges. The mentors may make suggestions for grazing system design/modification and helpful tips for implementation. Mentors will provide peer support and continued communication to aide in decision making and implementation of grazing management choices. Each mentor will be available for approximately 16 hours of mentoring.



### Cost?

You pay \$100 and the Program tops up the rest for the mentor's time and travel expenses (approx. \$600/mentorship)

### To become involved?

Contact the **Saskatchewan Forage Council** at **306.966.2148** or visit [www.saskforage.ca](http://www.saskforage.ca) for more details.

*Partners include the Canadian Cattleman's Association with financial support provided by Agriculture and Agri-Food Canada's Greencover Canada Program.*

## Saskatchewan Hay Market Report

*Saskatchewan Agriculture and Food*

[www.agr.gov.sk.ca/feedforage](http://www.agr.gov.sk.ca/feedforage)

### Baled Forage Prices (dollars per ton) to August 16, 2007

	Listings	Listings Priced	Tons Listed	Tons Priced	Lowest Price/ton	Highest Price/ton	Weighted Average Price/ton
<b>Alfalfa</b>	21	18	9,347	8,971	25	65	42
<b>Brome/Alfalfa</b>	12	8	2,235	1,300	44	100	53
<b>Clover</b>	3	2	959	819	37	40	38
<b>Straw</b>	1	1	150	150	20	20	20



**Vold Jones & Vold Auction Co. Ltd. - Market Report (August 8, 2007)***Ponoka, Alberta**Telephone: (403) 783-5561***Hay:**

Small Square Bales	1.00-4.25
Round Bales	None on offer

**Straw:**

Square Bales	None on offer
Round Bales	None on offer

**Greenfeed:**

Square Bales	None on offer
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**USDA Market News Service Hay Reports***August 10, 2007**Dennis Widga and Justin Lumpkin*[www.ams.usda.gov/mnreports/to\\_gr310.txt](http://www.ams.usda.gov/mnreports/to_gr310.txt)**Wyoming, Western Nebraska, and Western South Dakota Weekly Hay Summary**

Trade moderate this past week. Demand good. Buying interests reported from Kansas to Texas. Second cutting underway or completed in some areas, with few starting on third cutting.

**Weekly Montana Hay Report**

Compared to last week: Prices remain steady, and comments have been made that prices are unusually good for August compared to recent years. Supply continues to be hauled out of state, as this is where demand remains the best. Comments have been made that there is also an increasing interest coming from the mid-west. Some areas received rain, which hampered field work and caused haying to be set back. Concerns rise about the fires in the western part of the state, as Montana has been declared as an emergency relief area

*All prices in U.S. dollars per ton FOB stack in medium to large square bales and rounds unless other wise noted.*

	<b>Eastern Wyoming</b>	<b>Central &amp; Western Wyoming</b>	<b>Western South Dakota</b>	<b>Montana</b>
<b>Alfalfa</b>				
Supreme	140.00	120.00-130.00		120.00-130.00
Premium	120.00-130.00	110.00-125.00	90.00-100.00	
Good to Premium				100.00-120.00
Good	90.00-115.00	90.00-110.00	70.00-85.00	80.00-90.00
Fair -Good	95.00-110.00	60.00-85.00		
<b>Mixed Grass</b>		110.00-120.00	80.00	
<b>Timothy- Premium</b>	210.00			110.00-130.00
<b>Alfalfa/Grass</b>	165.00	100.00	60.00-90.00	

### 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 mold. RFV: <130

*Source:* USDA NE Dept of Ag Market News, Kearney, NE (308) 237-7579  
Keith L Williams Market Reporter [www.ams.usda.gov/mnreports/sc\\_gr310.txt](http://www.ams.usda.gov/mnreports/sc_gr310.txt)

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