

THE SASKATCHEWAN

# LIVESTOCK & FORAGE GAZETTE



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Backgrounding calves? See page 3 for article.

*This publication can be downloaded from the following websites:*

[www.wbdc.sk.ca](http://www.wbdc.sk.ca)

[www.saskforage.ca](http://www.saskforage.ca)

[www.swa.ca](http://www.swa.ca)

[www.pcap-sk.org](http://www.pcap-sk.org)

[www.saskatchewanstockgrowers.com](http://www.saskatchewanstockgrowers.com)

*Who was this year's winner of  
The Environmental Stewardship Award?  
(Turn to page 11 for the answer.....)*



Our feature producer is a bale-grazing pioneer, see page 10.

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**Greetings!** Recent international events in the livestock sector have necessitated new approaches to livestock production. Many producers will be looking at backgrounding their calves this winter; others are also exploring whether dormant season grazing of native range might be a way to reduce their wintering costs. For those without native range, other options such as bale grazing exist. I think you will find this issue's articles both interesting and relevant.

Once again, if you are able to receive this newsletter by email, you will be helping us to lower our costs, plus enable another producer to receive the Livestock & Forage Gazette. Just contact Sheila at the SSGA office and we will adjust our mailing list. You can contact her at [ssga@sasktel.net](mailto:ssga@sasktel.net) if you are interested in this option. Photo credits for this issue go to Lorne Klein, Trevor Lennox and Heather Beierbach - thank you all!

-Chris Nykoluk, P Ag, Newsletter Editor

# Weaning Options for Cow-Calf Producers

By: Dr. Bart Lardner, PhD, P Ag, Western Beef Development Centre

**Considerations.** The goal at weaning is to minimize stress on the calf as much as possible since studies have indicated that stressors such as feed changes, surgeries, comingling etc. at the time of weaning increase stress and incidence of Bovine Respiratory Disease (BRD). Stress related diseases cost the beef industry more than \$100 million annually in reduced performance, death loss, medicine costs, labour and reduced carcass value. Even in a complete pre-conditioned program, calves will still have two stressors, (i) separation from their dams and (ii) cessation of nursing.

Nobody wants to deal with sick cattle, yet, unweaned, unvaccinated calves are still available from multiple sources. Two reasons why such calves are abundant and cheap are (i) a belief that vaccination of calves is not economical for the producer, (ii) some producers lack the facilities and/or the feedstuffs to wean and pre-condition their calves properly. These “cheap” calves ultimately end up costing the buyer more than pre-conditioned calves. Recognizing that marketing fully pre-conditioned calves is the goal of most cow-calf owners, the following are several options for the fall weaning period.

**Early Weaning.** In some situations it may be necessary to sell early weaned calves. Although early weaning is certainly not advocated for all producers all of the time, it can provide an attractive alternative in situations such as drought, poor cow condition or market downturns. Weaning calves earlier than the normal 6 to 7 months of age can be considered when pastures are short or quality is poor. Research has demonstrated that early weaning will allow cows to increase body condition prior to the winter months and may allow a longer winter grazing period requiring less supplemental feed. Advantages include the possibility of improved pasture health due to decreased individual cow intake, and reducing the daily nutrient requirement for the cow (making it easier to match forage quality and quantity). Early weaning may positively impact cow reproductive

performance in both the wean year and the following year. Disadvantages are the need for increased labour, feed and facilities for the calves. Early weaned calves may also be more susceptible to stress and disease and they may have lower carcass weights.

**Weaning on Grass.** Research has shown that weaning calves onto grass with fence line contact to their dams can be an excellent option for producers who lack facilities or the necessary feeds. Past studies have reported less than 1% sick calves among 4500 preconditioned calves over a twenty year period. This technique is certainly a viable option for many producers in fall.

**Limit Nursing Option.** Another method of reducing weaning stress is to allow calves to nurse once daily for one week before weaning. This method is impossible for large operations but smaller herds may successfully adjust this into their operation. The calves are limit fed a complete ration which allows normal rumen function to take place prior to them entering a feedlot.

**Anti-Nurse Devices.** An anti-nurse device can be used to eliminate one of the two forms of stress, because the calf is left on its dam during weaning. In one study, Haley (2002) reported that calves fitted with anti-nurse devices were either eating or lying down chewing their cud 12 hours after weaning, and their mothers were out grazing. Meanwhile control cows bellowed at the fence line while their calves bellowed and walked the fence. The stress level difference was very dramatic. The recommended protocol is 2 weeks pre-wean vaccinate for BRD, 1 week pre-wean, place the anti-nurse (nose paddle) device on the calf, then on weaning day repeat the BRD vaccination, deworm and remove anti-nurse device. (*For more information on the anti-nurse device, please see [www.quietwean.com](http://www.quietwean.com)*).

## References

- Apley, M. 2000. Iowa State University. Agriculture Bulletin.
- Guyer, P. 1996. Management of early weaned calves. University of Nebraska-Lincoln Bulletin.
- Haley, D. 2002. Two step weaning. Canadian Cattlemen Magazine.
- Hilton, W.M. 2001. Purdue University.



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# Looking at Backgrounding Calves this year??

By: Jim Graham, P Ag, and Trevor Lennox, P Ag, Saskatchewan Agriculture, Food & Rural Revitalization

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*Note: It is important to realize that the recommendations in this article are to be used in a 'general sense', and that a livestock nutritionist should be consulted to put together a ration for your specific situation, realizing that rations can vary due to parameters such as feed quality, amount of daily gain required, frame size and sex of animal.*

Due to the uncertainty in the market for calves this fall, it is anticipated that more producers will be looking at backgrounding their calves through the winter.

It is important to work through your individual scenario to put together a feeding plan. You need to know what the current weight of the animals are (i.e. 500 lbs) and what their target weight will be (i.e. 800 lbs), and how many days you want to accomplish this weight gain over (i.e. 200 days). This allows an average daily gain (i.e. 1.5 lbs/day averaged over the 200 days) to be determined, which will influence the type of feeding program you will use.

If there is considerable size differences between the calves, there will need to be separate pens for different sized animals. As well, some producers may want to separate the females from the males.

A feed test is recommended to determine the nutrition of your various feeds. This will allow you to put together a ration which makes optimal use of feed resources. Without a feed test a producer doesn't know if he is either overfeeding or underfeeding a particular nutrient, which could result in added feed costs due to the reduced efficiency of such a feeding program.



## Nutrition

When backgrounding animals in the 500-800 lb range, a rough rule of thumb is to provide 0.5-1% of body weight in grain or screenings, with the rest of the ration coming from good quality hay. A feed test is recommended in order to make sure that the animals are getting the desired level of nutrition. Along with their daily ration each animal should consume 1-2 ounces of mineral.

### *How to get animals started on feed??*

When introducing any new feed, it is important to accustom the animals to the new feed slowly in order to avoid digestive upsets.

### *Energy and Protein requirements*

The backgrounding ration should contain 11-13% protein, with younger animals requiring higher protein feed than more mature animals. The energy for a backgrounding ration should be around 65% TDN\*, however this can vary from 62%-70% TDN depending upon the type of animal being fed. The following ration examples were put together to illustrate the feed requirements for a 500 pound steer under different weight gain scenarios.

## Ration examples assuming a 500 lb moderately framed steer

*Note: when calculating the daily cost of these rations, alfalfa grass hay was priced at \$65/ton, barley grain at \$2.20/bushel, 32% beef supplement at \$220/ton, and 12:10 mineral at \$0.35/lb.*

### *Assuming 1 lb average daily gain*

12 lbs of alfalfa/grass hay, 1.5 lbs of barley grain, 1/4 – 1/2 lb of 32% beef supplement, and 1 - 2 oz of mineral. The cost/day of this ration will be approximately \$0.52/day.

### *Assuming 1.5 lbs average daily gain*

11 lbs of alfalfa/grass hay, 3 lbs of barley grain, 1/4 – 1/2 lb of 32% beef supplement and 2-3 oz of mineral. The cost/day of this ration will be approximately \$0.55/day.

*(Please turn to page 4 for rest of article...)*



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# The Saskatchewan Crop Improvement Association

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The Saskatchewan Crop Improvement Association (SCIA) is a non-profit organization committed to on-farm, field scale assessment of forage crop varieties obtained under license through its business arm, the Saskatchewan Plant Materials Center (SPMC).

SCIA was established in 1998 to gain access to new crop varieties, especially forages. The SCIA has signed an agreement with the Utah Crop Improvement Association (UCIA), obtaining access to three forage varieties for seed increase, evaluation and sale in Canada. This agreement is unique in that these varieties are being released to SCIA for production of foundation seed.

At present SCIA is increasing NewHy, a quackgrass - bluebunch wheatgrass hybrid; Vavilov, a Siberian crested wheatgrass; and Douglas, a wide-leaved crested wheatgrass, to ensure a contaminant-free source of foundation and certified seed. SCIA is also evaluating these species for both seed and forage potential in Canada. Future plans are to identify other varieties from all available sources that would contribute to improved forage production in this province.

The three varieties received by SCIA from UCIA, will be offered on a non-exclusive basis to qualified forage producers, grower processors and seed trade organizations that have good production track records. As part of the agreement with UCIA, foundation and certified seed from SCIA will be available to both wholesale and retail markets.

Dale Pocock is the managing director of the SCIA and chairman of the Plant Materials Center. Dale is donating land and expertise to manage the initial seed increases. He has 43 years of seed production experience with over 30 different forage crops and nearly 25 years of experience with forage seed conditioning and processing, plus a lifetime as a cow-calf producer.

The SCIA is a non profit organization funded through the collection of levies on seed sales. This fall will be the first year the association will have seed available for sale. A small amount of initial funding has come from provincial and federal government programs. SCIA has also recently applied for charitable donation registration. Full cost recovery through seed sales and donations is the future goal of the SPMC.

*More information on the work of the SCIA can be obtained by contacting Dale Pocock at (306) 862-9184.*

*(Editor's note: Since early June, Dale Pocock has been hospitalized, recovering from major surgery. Dale is hoping to be back at the farm by late October. All of us that know and have worked with Dale wish him a speedy recovery).*



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***(Backgrounding: Article con't from page 3)***

*Assuming 2 lbs average daily gain*  
9 lb of alfalfa/grass hay, 5.5 lbs of barley,  
1/4 – 1/2 lb of 32% beef supplement, and 2-3 oz  
of mineral. The daily cost of this ration will be  
approximately \$0.64/day.

## **Facilities**

For information on facility design, refer to the publication 'Beef Cattle Housing and Feedlot Facilities' published by Saskatchewan Agriculture, Food and Rural Revitalization. The publication can be picked up at your local Rural Service Centre, or under the Livestock category on the SAFRR website: <http://www.agr.gov.sk.ca>.

\* TDN = Total Digestible Nutrients



# Feed Testing and Analysis

By Bryan Doig, P Ag, Saskatchewan Agriculture, Food & Rural Revitalization

You cannot tell the quality of a feed by looking at it. Yet, a significant portion of winter feeding programs utilize feeds that have never been analyzed for nutrient quantity or quality.

The first step to accurate feed analyses and properly balanced livestock rations is feed sampling. To determine the actual nutritional value of your feeds, a truly representative sample must be taken. Forages, such as hay, require samples taken from at least 12 to 15 sites throughout the entire stack of bales. Forage samples can be taken with a pair of scissors and a five gallon pail but the use of a forage probe will make the process easier. Forage probes cut deep into a bale and give a uniform cut-length for easy mixing. Probes can be borrowed from any SAFRR Rural Service Centre. Take enough samples to fill a two-litre plastic bag and mix the forage samples thoroughly when filling the bag. Submit separate samples for different types of forages.

Samples of cured silage should be taken from 15 to 20 locations in the silo, pit or tube, but never from a surface that has been exposed to air. A two-litre bag should be filled and, after all air is squeezed out, securely sealed to ensure that no air can re-enter. The presence of air in the sample will allow spoilage to occur giving an inaccurate analysis at the lab.

Grain should be sampled from 15 to 20 different locations in the bin using a granary probe or when augering, a tailgate sample. A one-litre sample of grain is required.

Deciding on the type of analysis depends on the class of animal and rations that will be formulated. Special analyses can also be performed if moulds and mycotoxins are a concern. Producers should contact a livestock nutritionist or feed test laboratory for specific information.

The cost of basic feed analyses ranges from \$30 to \$50 per sample, depending on the type of nutrients and minerals to be measured. The cost

of mould, mycotoxin and water analyses ranges from \$50 per sample or more. A water analysis should also be considered. Dissolved minerals in water combine with minerals contained in the feed. Mineral imbalances can and do occur.

What happens after the analyses are returned? The results of the analyses are entered into ration balancing software, such as Cowbytes (available from Alberta Agriculture, Food and Rural Development). Accurate rations are formulated based on the animal's specific nutrient requirements for the various stages of pregnancy or development. Significant cost savings can be realized by reducing over and under feeding, minimizing feed waste and maximizing feed efficiency. Formulated rations help determine the type and amounts of feed supplements, vitamins and minerals that will need to be purchased.

*The bottom line* – feed testing and ration balancing can provide significant cost savings in any winter feeding program. Deficiency problems are virtually eliminated and animal performance is increased.

For more information you can call the author at (306) 446-7477.

**Trivia Question:** What amount (lbs/ac) of Nitrogen, Phosphate, Potash and Sulphur is removed in a ton of alfalfa hay? (Answer will be in next issue.....)

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**Answer** to Trivia Question in

**March 2003 issue:** The Saskatchewan 2002 benchmark production cost to produce one pound of calf was \$1.26/lb (Please see the September 2003 Stockgrower issue for a full explanation of this cost, as determined over 67 Saskatchewan herds).



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# Producer Needs Survey

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The Livestock & Forage Gazette is a cooperative publication developed by 7 organizations. In order to ensure that this publication provides information of interest to you, please consider completing and returning this survey. This information will also be used by participating agencies and the Saskatchewan Green Cover Technical Assistance Committee to prioritize extension activities. Please check off the answers that apply to you and return. Thank you in advance for your input!

**1. How do you currently access information on technical aspects of pasture, range, riparian or shelterbelt management?**

- phone closest SAFRR extension agrologist or PFRA office
- internet
- producer related publications (ie. Cattlemen's Magazine, Western Producer)
- coffee row (friends)
- radio
- local agribusiness service provider (ie. seed dealer)
- local grazing clubs
- grazing and forage conferences
- SAFRR extension meetings
- other \_\_\_\_\_

**2. What topics have been difficult to find information on?**

- cost of production
- herd record keeping
- extending the grazing season
- agronomics of forage production
- grazing management
- fencing and facilities
- marketing
- haying/silage making
- annual forages
- other \_\_\_\_\_

**3. What kinds of activities do you prefer for learning about new management options?**

- indoor workshops
- outdoor field workshops/tours
- tours to producer's farms/ranches
- printed materials
- radio
- videos
- trade shows (ie. Farm Progress, Agribition etc..)
- Other \_\_\_\_\_

**4. What duration of learning opportunities do you prefer most?**

- half day
- one day
- 2 days
- longer
- Other \_\_\_\_\_

**5. In terms of attending information sessions, which months suit your needs best?**

**Thank you for your input. Please clip and return this survey to:**

**Michel Tremblay, Forage Specialist  
Saskatchewan Agriculture, Food and Rural  
Revitalization (SAFRR)  
3085 Albert Street  
Regina, SK  
S4S 0B1**



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## GRAZING NATIVE RANGE DURING THE DORMANT SEASON

By: Chris Nykoluk, P. Ag, AAFC - PFRA

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An increasing number of producers are experimenting with fall and winter grazing on native range. Ross Macdonald, a range agrologist with the Saskatchewan Watershed Authority and Ducks Unlimited Canada in Weyburn, says that many producers mistakenly believe that native range cannot be damaged by fall and winter grazing. However, studies show that this practice can affect future pasture production when improperly applied. In fact, many of the same principles that promote optimum productivity on native pastures during the growing season also apply to fall and winter grazing.

***Producers graze their cattle during the dormant season for a number of reasons:***

- to reduce cow wintering costs,
- to reduce workload during the fall months,

Some producers calve in March and can pasture cattle until January 15<sup>th</sup>. For producers who can calve later in May, the dormant season grazing period could be even longer, leaving a very short feeding period, indeed.

**Carry over and pasture production:**

Macdonald says producers need to work at maintaining a minimum amount of carry over (ie. old plant litter) at all times to maximize pasture productivity. In the Missouri Coteau region, which angles across southern Saskatchewan, precipitation ranges from 10 to 14 inches annually. While less than one per cent goes into groundwater recharge, only four per cent becomes runoff. This means that 95 per cent returns to the atmosphere through evaporation and transpiration through plants. Oddly enough, adequate carry over is almost as important to production as rainfall. "A lot of guys might say that's wasted grass," said Macdonald.

**Carry over, plant growth and temperature:**

Monthly mean temperatures below 0C are too low for active plant growth. Low air temps during the late and early portions of the growing season and high temps after mid-summer can greatly limit plant growth. Producers should maintain adequate carry over year-round to insulate soil and plant crowns from extremes in temperatures.

Noting the "amazing" difference in ground temperature and moisture beneath clipped and unclipped grass in summer, Macdonald said, "We measured it last year and found a temperature difference of 10 degrees C. When the sun is beating down in the middle of July and August, that leaf litter is providing insulation for the soil down there. The key is leaf matter, since it provides both insulation and shade for the soil. Studies have shown that native grass leaf matter acts like a sponge and retains water at the site." The same principles are at work during the winter months, when carry over is playing an important role in snow trapping.

**Carry over and runoff:**

"First of all, that physical barrier of litter helps to slow the runoff from your pastures," he said, noting moisture retention is especially important on "moisture limiting hillsides." Ensuring adequate carry over helps plants use the precipitation accumulated during the next summer's active plant growing period. It also feeds the organic matter cycling process that is critical to maintaining productivity on native range.



To achieve optimum litter cover and prevent overgrazing, Macdonald said producers should be aware of any livestock distribution problems. In some cases, producers will use snow cover as the water source for livestock. In other cases, developing remote watering sites will help producers move their animals more effectively within a pasture system, thus promoting better overall conservation of carry over.

*(Editor's note: For an estimate of minimum amounts of litter required to conserve your native range, see the January 2002 issue of Cattleman's magazine).*

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## RESEARCH ROUNDUP:

# NUTRIENT CHANGES IN COMPOSTED BEEF MANURE

By: Dr. Bart Lardner, P Ag, Western Beef Development Centre

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### Objective

During the winter of 2001-2002 the Western Beef Development Centre (WBDC) initiated a composting project to demonstrate to cow-calf producers the economics and opportunities in composting fresh cattle manure. The objective of this project was to determine changes in moisture, carbon (C), nitrogen (N) and phosphorous (P) levels in composted beef cattle manure during winter and spring conditions in east central Saskatchewan.

Composted manure offers several benefits including: improved handling, increased bulk density, an excellent soil conditioner (through transport of more nutrients than in fresh manure) and reduced risk of pollution and nuisance complaints. As well, weed seeds and pathogens are destroyed and stable organic compounds are released slowly which provides plants with a more sustained source of nutrients.

### Results

Active winter composting resulted in changes to carbon, nitrogen and phosphorous content. During the active composting phase, carbon content was reduced by 19%. Moisture content of fresh manure was 70% (wet weight basis) which was within the optimal range for composting. During the active composting phase in winter the moisture content was reduced to 42%.

Curing the compost during winter reduced the carbon content by 22% of that originally present in the fresh manure. The nitrogen concentration of fresh manure was 0.49 %, which means 1 m<sup>3</sup> contained 0.5 kg N. The nitrogen concentration of compost was 1.41 %, therefore 1 m<sup>3</sup> contained 5.6 kg N or 11 times more N than fresh manure.

The quantity of nutrients transported to the field is a key factor in determining the economics of hauling manure and compost. Costs associated with this project are at the value of cost per pound of nitrogen.

A comparative value can be assessed between fresh manure and compost. Fresh manure has 10 lbs N/ton and N valued at \$0.45 per pound represents a value of \$4.50/ton. The compost had a concentration of 28 lbs N/ton, therefore a ton of compost can be valued at \$12.60/ton. Average N application on perennial forages is 50 lb N/acre, therefore only 1.8 tons of compost needs to be applied per acre to meet requirements, compared to 5 ton/acre fresh manure. However this increased fertilizer value must be weighed against the custom rates for windrowing equipment of \$75/hour including travel expenses.



### Conclusions

In conclusion, composting beef cattle manure reduced the carbon mass during the winter trial. Active composting also increased bulk density, allowing more nutrients to be transported in cured compost than in fresh manure. Finally, composting may have an advantage when compared to spreading fresh manure on crops, due to concentrated crop nutrients, reduced weight and volume when transporting to the field and fewer weed problems due to non-viable weed seeds in the composted material.

For more information call Dr. Bart Lardner, Research Coordinator, WBDC at (306) 933-5700.

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# PCAP Launches 2003-2008 Plan!

By: Allen Patkau (Chair) and Karyn Scalise (Manager)

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The 2003 –2008 Saskatchewan Prairie Conservation Action Plan (PCAP) has been launched! This 18 month-long renewal process involved 19 of our 25 Partner Groups and each share the Vision that:

*“the native prairie be sustained in a healthy state in which natural and human values are respected”*

The renewed Plan contains 25 Objectives and 78 Action items that are tied to our five Goals:

- Goal One: To sustain a healthy native prairie grazing resource**
- Goal Two: To conserve the remaining native prairie resource**
- Goal Three: To maintain native prairie biological diversity**
- Goal Four: To promote complementary sustainable uses of native prairie**
- Goal Five: To increase awareness and understanding of native prairie and its values**

The SK-PCAP is chaired by the Saskatchewan Stock Growers Association (SSGA) and driven by a diverse partnership with representation from industry, federal and provincial government agencies, various NGOs, including Nature Saskatchewan, and Saskatchewan’s two Universities.

One of our roles over the next five years will be to promote the SK PCAP as a model for prairie conservation across the Great Plains and to increase understanding of the vital role played by the livestock industry in the conservation and management of prairie landscapes.

## **Big Muddy Badlands Summer Tour**

The PCAP/Society for Range Management’s (SRM) “Discovering the Big Muddy Badlands” workshop and field tour that was held in conjunction with Native Prairie Appreciation Week (NPAW) 2003 was a great success. The event was attended by approximately 130 participants including ranchers, naturalists, range management students, and resource agency specialists. NPAW- 2004 will run from June 20-26<sup>th</sup> and the workshop and field tour will be held in the Moose Mountain area.

## **Youth Stewardship Programming**

We are gearing up for another busy and exciting year of stewardship education programs for elementary school students, featuring PCAP’s “Cows, Fish, Cattle Dogs and Kids Game Show” (on riparian stewardship) and the Saskatchewan Burrowing Owl Interpretive Centre’s (SBOIC’s) “Owls On Tour Program”. We will be delivering this “Owls and Cows Tour” to grade 3 - 6 classes at schools roughly bounded by the communities of Lloydminster, Quill Lake and Melfort. The “Eco-X” show will be delivered to grade K-6 students in the Swift Current area.



**For more information on the PCAP or to receive a copy of the new Plan you can call Karyn at (306) 352-0472, or Allen Patkau, SSGA PCAP Chair, at (306) 544-2778.**

*The PCAP gratefully acknowledges funding and in-kind support from Agriculture and Agri-Food Canada (AAFC) through PFRA, the National Soil and Water Conservation Program and the Canadian Adaptation & Rural Development Fund in Saskatchewan (CARDS) Program, Canada Millennium Partnership Program (CMPP), Cattle Marketing Deductions Fund (CMDf), Ducks Unlimited Canada (DUC), Environment Canada (EC) through the Canadian Wildlife Service (CWS) and the Habitat Stewardship Program (HSP), Fisheries and Oceans Canada (DFO), Nature Conservancy of Canada (NCC), Nature Saskatchewan, Nexen Canada Ltd., Parks Canada - Grasslands National Park (PC-GNP), Saskatchewan Agriculture, Food and Rural Revitalization (SAFRR), Saskatchewan Burrowing Owl Interpretive Centre (SBOIC), Saskatchewan Environment (SE), SEs Fish and Wildlife Development Fund (FWDF), Saskatchewan Stock Growers Association (SSGA), Saskatchewan Watershed Authority (SWA), SaskEnergy, SaskPower, and the University of Regina’s Canadian Plains Research Centre (UofR – CPRC).*



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## Producer Perspective: Neil and Barbara Dennis, Wawota, Saskatchewan

*By: Neil and Barbara Dennis and Lorne Klein, P Ag, Saskatchewan Agriculture, Food & Rural Revitalization*

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Neil and Barbara Dennis call themselves grazers. In November, 2001, a quarter section of swath grazing became unusable due to 4 inches of rain followed by a foot of snow. Their son, who was involved in an Holistic Resource Management (HRM) mentoring program suggested bale grazing. The ease of doing so and the subsequent results convinced them it was the way to go in future. Pioneers of the practice of bale grazing in southeast Sask., the Dennis's were prepared to bale graze 470 head for the entire 2002-2003 winter season.

Graduates themselves of the Holistic Resource Management course, Neil and Barbara have converted the 1843 acres under their control to forage for pasture. The property is divided into over 120 paddocks where livestock are intensively grazed, normally from spring thaw to mid December. Then, in winter, the livestock are grazing bales.

Bale grazing is a winter feeding method where bales are placed in a pasture ahead of when they are scheduled to be used. A conservative method is to place a one or two week supply of bales just prior to when they will be used. However, the Dennis family is comfortable with bale grazing, and they place the entire winter feed supply prior to winter. Twine is removed in fall before it becomes iced with rain or melting snow. Using sisal twine negates the need to remove the twine at all.

Neil recommends that bales within a row be spaced about 20 feet apart so that livestock access to each bale is not restricted. Also, rows should be at least 20 feet apart to allow adequate space for electric fence between the rows. Electric fence is the essential tool. It is easy to move and it enables effective metering of the bales.

It is essential to know the weights and nutritional quality of the bales being offered. This enables the producer to ensure adequate nutrition for the livestock being fed. In the past, Neil has set a ratio of two alfalfa/grass bales with one cereal or pea straw bale. This may be supplemented with a protein pellet.

Each row of bales, or each electric fence "move" should contain enough feed to last for about two days. Neil has experimented with allowing access to four and five days of bales, but

finds that feed waste is higher. With a two day move, all cows have access to the better feed on the first day. On the second day the remaining feed is cleaned up before fouling becomes excessive. Depending upon cow size and bale weight, a two day supply is about one bale per 20 cows.

Snow buildup between the bales has not been a concern so far. Neil has had 30 inches of snow between the bales; cattle did not have problems accessing the feed.

### **Advantages that Neil and Barbara have experienced are:**

- 1) Cost saving by not starting a tractor in winter to move snow and haul bales.
- 2) For spring and summer calving herds, corral cleaning costs are eliminated.
- 3) Less wear and tear on corrals.
- 4) Control encroachment of trees and shrubs, and reduces deadfall litter.
- 5) Specific areas can be targeted to make soil improvements (through increased manure deposit with strategic placement of bales).
- 6) Forage production on the land where bale grazing takes place has doubled.
- 7) The litter left behind helps conserve moisture.
- 8) Nutrients from urine and manure are spread in the field and not the corral.
- 9) You can take a holiday. By giving more bales you are able to get off the farm for 3-4 days and feel confident your animals are being fed.
- 10) Outside chore time is greatly reduced.
- 11) Problems with white-tailed deer are no longer a concern, as they do not climb on individual bales and foul them with urine.



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Bale grazing has the potential to leave dead spots where the bale is placed if a thick layer of forage is left uneaten. Bunch grasses (crested wheat, meadow brome, Russian wild rye) and legumes (alfalfa) are more susceptible to damage than are rhizomatous grasses (smooth brome, Kentucky bluegrass, quack grass). Rhizomatous grasses will normally grow back in the patches within a year or two, and production will be significantly greater than the surrounding area. Bunch grasses and alfalfa may not grow back in these spots.

Bale grazing can be targeted on areas of low soil fertility. The area can be monitored and bales should likely not be grazed on the same spot for a period of years to avoid excessive nutrient buildup.

With portable windbreaks, bale grazing can take place on parcels of land without natural shelter. The windbreaks can be moved routinely to avoid snow and manure buildup. If there is sufficient snow for a water source, bale grazing can also take place on land without dugouts or wells.

As herd sizes grow and as more producers switch to spring and summer calving, bale grazing is one of the winter feeding options that will be used more in the future. Neil and Barbara believe bale grazing is a very useful tool in their holistic approach to cattle feeding. They say that to get the increased production following bale grazing, the grass plants should be headed before being grazed. By adopting a holistic approach to cattle feeding their costs have been reduced, their production has increased and they will leave the land healthier than when they started.



### Rancher Wins Award for Good Stewardship



Raymond and Donna Prefontaine, of Lesieux, Saskatchewan, were this year's winners of "The Environmental Stewardship Award" (TESA) for Saskatchewan. Along with his brother Robert, Raymond raises 400 Red Angus-Simmental cross cows, the quality of which have been recognized by the Red Angus Promotions Society. Ray believes that good management requires a three-dimensional thinking approach and that the health of livestock are directly linked to the health of the land. Over the years Raymond has come to appreciate the value of low-input native range over the uncertainty of tame forages. The Prefontaine's focus is on managing for healthy native range, tame pastures, and riparian systems, as well as for abundance of wildlife. They are able to graze for about 9 months each year on nearly 10,000 acres. Hand in hand with his land stewardship is his desire to produce an economically sustainable cattle herd, one that can be passed on to his son.

*This publication can be downloaded from the following websites:*

[www.wbdc.sk.ca](http://www.wbdc.sk.ca)  
[www.saskforage.ca](http://www.saskforage.ca)  
[www.swa.ca](http://www.swa.ca)  
[www.pcap-sk.org](http://www.pcap-sk.org)  
[www.saskatchewanstockgrowers.com](http://www.saskatchewanstockgrowers.com)



## Upcoming Events

**LIFE ON THE PRAIRIES: *Dealing with Water Realities and Climate Change - National Conference of the Canadian Society of Environmental Biologists***

Location: Ramada Hotel, Regina, SK  
Date: October 19-21st, 2003  
Contact: [bbitter@serm.gov.sk.ca](mailto:bbitter@serm.gov.sk.ca)

**WESTERN CANADIAN FORAGE & GRAZING CONFERENCE**

Location: Radisson Inn, Saskatoon, SK  
Date: December 3 - 5th, 2003  
Contact: Sheila Fishley, SSGA  
Phone: (306)757-8523  
Email: [ssga@sasket.net](mailto:ssga@sasket.net)



**WESTERN CANADIAN FORAGE & TURF SEED CONFERENCE**

Location: Saskatoon, SK  
Date: Jan 12-14th, 2004  
Contact: Michel Tremblay, SAFRR  
Phone: (306)787-7712  
Email: [mtremblay@agr.gov.sk.ca](mailto:mtremblay@agr.gov.sk.ca)

**SSGA SEMI-ANNUAL MEETING**

Location: Regina Inn, Regina, SK  
Date: January 23rd, 2004  
Contact: Sheila Fishley  
Phone: (306)757-8523  
Email: [ssga@sasket.net](mailto:ssga@sasket.net)

**7TH PRAIRIE CONSERVATION AND ENDANGERED SPECIES CONFERENCE**

Location: Coast Plaza Hotel, Calgary, AB  
Date: February 26-29th, 2004  
Contact: [www.pcesc.ca](http://www.pcesc.ca) or Ph (403)283-2025

### The Livestock & Forage Gazette Committee

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**Western Beef  
Development Centre**



Saskatchewan Stock Growers Association



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and Rural  
Revitalization



Ducks Unlimited Canada  
CANADA'S CONSERVATION COMPANY



Agriculture and  
Agri-Food Canada

Agriculture et  
Agroalimentaire Canada



*The Committee thanks the contributors and funders that made this issue possible. Please contact committee members if you have ideas for future articles - the next issue will be published in January 2004.*