

Forage Facts

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Site Management: What do we need to know?

By: Jen Allen

Well, winter may not officially be here just yet, but the weather definitely is! With that being said, it is good time to start thinking about strategies for managing manure and wintering sites.

As producers, it is essential to make plan on our operations for the short and long term, while also leaving wiggle room for possible future expansion. This is especially important when considering site management. With improper management, surroundings, such as water quality, can easily be affected and altered.

The first step for site selection is site evaluation. Things to evaluate would be the environmental risks, will/how will it affect neighbours, and legal obligations. With open-discussion to our neighbours, we can usually keep good relations and avoid conflict situations. It is also a good idea to be up to date on any relevant legislation. Environmental risks can be evaluated by looking at the site's landscape, including topography, soil, and distance to any surface water or groundwater source. Nutrients (such as phosphorus and nitrogen) are able to move with water through a number of ways: runoff, erosion, seepage, and upslope drainage (run-on). Therefore, it is necessary to look at slope, soil type/drainage, vegetative cover, precipitation/climate, flood hazard, and surface water entering feeding area (see Table 1 on pg. 2).

There are five points we need to remember when considering site management: site location, cattle density, runoff, run-on, and groundwater seepage.

Site location

For wintering site selection, using bedding and feeding strategies will allow for fewer risks. You'll want to locate your wintering site in an area that's the least likely to cause contamination. And remember, wintering sites are only short-term – an extended grazing program will need to be used in combination with a wintering site.

When thinking about short-term (under 7 months before spreading) solid manure storage location, it should not be located near any water source. If necessary, water drainage pathways can be diverted by constructing a berm to divert contaminated water away from the valuable water sources.

Cattle density

As I am sure we are all aware, a higher cattle density poses a higher risk in terms of runoff, as more manure and nutrients have the opportunity to accumulate at a higher rate. Manure buildup can be alleviated by dispersing cattle over a larger area of land. Changing feeding sites regularly, having multiple bedding areas in the winter (rotated yearly), moving salt and mineral blocks, and moving portable watering systems can help with this. Clearing snow before spreading bedding, or clearing snow on forage stubble with no extra bedding



Temporary Part-Time Hours for High Prairie Office

Due to current PCBFA Staff changes, our High Prairie Office will temporarily have posted part-time hours: **Fridays from 12pm-3pm**. We'll still be offering services out of this office, but for immediate assistance please contact the Fairview office. We sincerely apologize in advance for any inconvenience.

Thank you!

Important Notice



Site Management: What do we need to know? (continued)

Table 1. Site Evaluation

(derived from Alberta AF's *BMP: Environmental Manual for Alberta Cow/Calf Producers*, 2004)

Slope	The steeper the slope, the more unstable the soil will be. On a steep slope, the velocity of runoff water increases and the water carries more material. Open, south facing slopes will also have a higher potential for runoff through snowmelt.
Soil Type/Drainage	Fine (clay) to medium (silt) textured soils are more prone to erosion than coarser (sand) soils. Alternatively, fine (clay) to medium (silt) textured soils are less prone to leaching than coarser (sand) soils.
Vegetative Cover	Soils covered by plants and plant residues will be less susceptible to water erosion than bare soil. Vegetative matter slows the flow of runoff, and acts as a filter.
Precipitation/Climate	The greater the amount and intensity of rainfall and snowmelt, the greater the risk of water erosion
Flood Hazard	Locating wintering sites in high flood risk areas increases the changes of contaminated runoff
Surface Water Entering Feeding Area	Clean water flowing from areas upslope of the site will increase the volume of manure runoff

material added (bedding in forages with a thatch cover layer is favoured) is further beneficial for bedding cattle. Placing shelters and windbreaks away from water supplies also assists in dispersing manure.

Runoff

Surface runoff, water that moves across land, can be managed by altering or containing the flow (i.e. constructed wetland), or by using vegetative covers and buffers. This will lessen the risk of contamination from manure and nutrients, as vegetation acts as a filter and trapping system. Phosphorus in particular generally poses risk to the environment through movement in surface runoff.

Run-on

Run-on, the surface water flowing from an upslope location onto a given area, needs to be considered in management practices as melting in the spring can cause water to run into a wintering site, and continue to run off and contaminate surface water. Higher volumes of run-on can also cause wet, muddy conditions which could further cause possible livestock health problems and affect bedding. Constructing a ditch or dyke upslope can minimize run-on into wintering sites, further minimizing runoff.

Groundwater seepage

Seepage, the slow movement of water through soil, can be hazardous to groundwater if the water leaching through is contaminated. Wintering

sites present a high risk for nutrient seepage in the spring when the once frozen bedding and feeding sites melt, leaching nutrients, such as nitrogen or phosphorus, into the soil and groundwater. In order to minimize the risk for groundwater seepage, it is ideal to remove winter bedding piles before spring thaw, and store at a temporary storage pile site, to reduce the movement of nutrients. This decreases contamination and also potential for the spreading of disease if the same site is used every year. After spring thaw, the piles can then be spread as fertilizer. Spring is the most ideal time for manure application, since the high nutrient availability counterparts with the crop uptake. Manure may also be applied in the fall; however, the longer lag time there is between application and crop uptake, there is a higher potential for nutrient loss.

In order to manage seepage further, avoid areas with a high water table, coarse soils, and groundwater recharge areas. Furthermore, moving the feeding and bedding sites in the winter and harrowing these sites in the spring will assist to disperse the manure and straw.

Overall, implementing vegetative cover, vegetative buffers, and/or constructed wetlands can greatly help in reducing water contamination from nutrients. Furthermore, proper management of manure application, feeding, and bedding techniques are also essential to lessen impacts and improve the wellbeing of the environment, as well as our livestock.

(Alberta Agriculture & Forestry, 2004)

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We are always looking for ideas!
Give us a call!

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- Scale & Tag Reader available for member use
- Soil & Livestock Water Quality Testing

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County of Grande Prairie

Preview: East Peace Beef Cattle Day



By: Jen Allen

Mark your calendars, East Peace Beef Cattle Day is happening on November 30th! The day will include topics geared towards beef cattle producers, including Holistic Management, Corn Forage in the Peace, and Cost of Production. Registration will be at 9:30am at Triangle Hall, 15km west of High Prairie. The cost to attend East Peace Beef Cattle Day is \$20/member, and \$30/non-member, which will also include a delicious lunch and refreshments throughout the day. Special Guest Speakers:

- Kelly Sidoryk, Holistic Management Canada, will be talking on the 3 holistic management topic areas: Healthy Land, Healthy Communities, and Healthy Economics. This will be an excellent lead up for those interested in the Holistic Management Course with Kelly that PCBFA is hosting in Rycroft in the New Year (see page 4 for dates).
- Dr. Akim Omokanye, PCBFA, will be speaking on his research and findings on Corn Forage in the Peace Country. A local Peace Country producer will also be present to share and comment on his experience with corn forage and grazing. PCBFA is excited to announce that the first official release of our Corn Manual will be happening on November 30th as well!
- Herman Simons, Agriculture & Forestry's Farm Business Specialist, will be touching on the Cost of Production, why it is important for producers to do cost of production, and how to efficiently structure financials.

Sound interesting?

**Register with PCBFA today at
780-835-6799 or jallen@gprc.ab.ca!**

We Want to Hear from You!

Attached to this month's Forage Facts you will find PCBFA's *2016 Needs Assessment*.



With your help by filling out this quick survey by November 30th, we will be able to make improvements to the delivery of our current and future programs. We greatly appreciate your input!

EAST PEACE BEEF CATTLE DAY

Wednesday, November 30th, 2016

9:30am Registration, 10:00am start time

Triangle Hall (15 km west of High Prairie)

Cost: \$20/member, \$30/non-member

Lunch & Refreshments included

Topics that will be covered include: **Holistic Management, Corn Forage in the Peace Country, and Cost of Production!**

With Special Guest Speakers:

Kelly Sidoryk,
*Holistic Management
Canada*

Dr. Akim Omokanye,
PCBFA

Herman Simons,
*Farm Business Specialist,
GoA*



To register or for more information, please contact Jen with PCBFA at
780-835-6799 ext. 3 or jallen@gprc.ab.ca





Upcoming Events

Ration Balancing Workshop	November 22nd 4:00pm registration	Valleyview Ag. Society Hall
Ration Balancing Workshop	November 23rd 9:30am registration	Centennial Hall, Spirit River
Dugout Workshop	November 24th 12:30pm registration	Grimshaw Legion
East Peace Beef Cattle Day	November 30th 9:30am registration	Triangle Hall, High Prairie
GF2 & EFP Workshops	December 6th December 8th 1 pm registration	Hines Creek Eaglesham
<i>Alberta Young Farmers & Ranchers</i> Lead the Farm	Nov/Dec 2016 Details TBA	Grande Prairie
Peace Agronomy Update	January 18th Details TBA	DMI in Fairview
Farm Transition	January 19th & February 16th	Grande Prairie
Winter Watering Systems Tour	January 21st Details TBA	M.D. of Peace
Holistic Management Course	January 26th-28th & February 2nd-4th	Rycroft Ag. Society Hall
Peace Country Beef Cattle Day	February 7th Details TBA	DMI in Fairview

For more information or to register for any of these great events, please call the Fairview office at 780-835-6799 or email Jen at jallen@gprc.ab.ca

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