OMAFRA Virtual Beef

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In This Issue

Embrace Change

Brian Pogue, Beef Program Lead - Genetics, OMAFRA

There are few things to be sure of in life but death, taxes and change. Who would have ever thought we would see what occurred in 2008? – the Canadian dollar worth more than the American, fertilizer prices skyrocketing, the fall of the stock market …….. Generally, people hate change. We resist it, we're afraid of it. Change is uncomfortable, so we just don't like it! In agriculture, it can take years for people to make simple changes. But change is inevitable and is both a normal and necessary part of life. Change can provide opportunities?

Conduct a performance appraisal on your operation:

- what has gone really well?
- what can be improved? It can always be better.

As you reflect on what you are doing with your cow-calf operation, what do you need to change in order to be more profitable?

Figure 1. Maximizing Grazing Days Reduces Overall Feed Cost

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Single paper copies may be obtained by calling 1-877-424-1300

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Ministry of Agriculture, Food and Rural Affairs

Ontario

Here are some changes to consider:

1. Marketing

a. Are you involved in some sort of marketing alliance? If not, then why not? Groups of producers which have come together to market calves with a consistent vaccination protocol have marketed calves at a significant premium. Imagine what you could do if you were involved in a group that marketed calves with the same genetics, grouped by age and with a standard health program!

b. Do your calves fit the requirements of one or more of the brand label beef programs now being marketed in the province? If not … make that happen!

c. Compare prices of feeder cattle in the spring compared to the fall and you will generally see that spring prices are higher. Are you taking advantage of this?

D. Do you follow prices on the OCA website and/or the Ontario Farmer? Benchmark results show that producers who spend more time on marketing, sell their calves for a better price.

2. Calving Season

a. Several studies have shown that winter calving is more costly and less profitable spring or summer calving.

b. Straw costs are significantly different depending on the time of calving season and generally producers with less straw costs are shown to be more profitable.

c. There are fewer calf losses and less sickness when calves are born on grass rather then in a barn

d. Could calving in the fall work for you? The industry does need a consistent supply of feeder cattle year round.

e. Calves have smaller birth weights and fewer calving difficulties when born on grass

3. Feed Costs

a. The Benchmark program once again showed that the most profitable operations were those with lower feed costs

b. How has the weight of your cows changed over the years and how about the amount of hay consumed per cow? Does the sale weight of the calves and the price per head show the same trends?

C. Is there a way to increase the amount of time cattle are out on grass, cornstalks, turnips or whatever as a means to decrease your feed costs?

4. Genetics

a. Take a look over your calves to evaluate how consistent they are for age, weight, colour and quality. Would a new bull improve this?

b. Would you be farther ahead to buy a uniform group of crossbred heifers rather than retaining your own replacements?

c. What about all the members of your calf alliance using the same AI bull on all of your heifers to provide uniformity and consistency in calving results? Buy the semen as a group and share in the discount price. Remember to keep the female calves from these heifers as your herd replacements to help build more consistency among your herds.

5. Health Protocol

a. The use of modified live vaccines on the cowherd and calves prior to breeding has shown great results in the feedlots. It is past time to change from the old standard killed vaccine administered in the fall, as new vaccines have been developed along with more successful programs.

b. The most profitable herds have more calves born per cow exposed as well as wean a higher percentage of calves. Management, genetics and a health program will all contribute to this.

Generally, the sooner we embrace change, the better off we are. Identify just three changes that you can make which will make you more profitable.

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Black Market Medicine…Is It Really A Deal?

Craig Richardson, Animal Care Specialist and
Nancy Noecker, Cow Calf Specialist, OMAFRA

With the current cost squeeze, sometimes a "deal" on pharmaceuticals may sound like a good thing. However, the selling of medicines for treating livestock is regulated in Ontario. Only a veterinarian, pharmacist or licensed livestock medicine vendor may sell products to livestock owners. If you are purchasing medicines from someone other than a vet or pharmacist, check to see if they hold a *Livestock Medicine* licence. Getting a "deal" out of the back of a truck may seem attractive based on the price of the product but consider the total cost.

Think About The Real Cost

All livestock medicines sold in Canada should have a DIN or Drug Identification Number on the label. The DIN is your assurance of Canadian government approval of the use of this

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product under the conditions for use, stated on the label. The product has passed the test to be used in Canada, in Canadian conditions and has all the necessary Cautions and Warnings on the label. Using a medicine without a DIN on the label, sold by someone not licensed to sell over-the-counter livestock medicines in Ontario, means you put your business, your animals and your industry at risk. If the product fails to work or causes a residue problem you are on your own, as it's doubtful the manufacturer will stand behind their product. When you risk the high quality standards set by your industry you risk losing the markets your industry works so hard to develop and keep. Canadian food safety and quality assurance begins on the farm. Consumers expect producers to use approved medicines in approved methods.

How Do You Know You Are Getting the Real McCoy?

Producers have been buying medicines from unlicensed vendors only to discover down the road that they didn't get what they paid for. So called "American bargains" for parasite control turned out to contain much lower concentrations of the active ingredient than products sold in Canada. Instead of being packaged in containers that protect the product from sunlight degradation, the bargains come in clear containers and degrade from exposure to light. Products have been re-packaged and sold as the original medicine, but unfortunately the contents have become contaminated during the basement re-packaging process. Black market medicines are hauled to Ontario in livestock trucks, pickups or trailers, and exposed to the elements with no regard to the label storage directions. All these issues affect the effectiveness of the medicine, withdrawal times, and possible residues and may contribute to drug resistance if not used in the right concentration.

Making Choices

You probably wouldn't buy medicine for your children off the back of a truck, so why buy livestock medicine that way? Your children and other people's children eat what you produce. Maintain high standards of quality assurance for everything you add to your product in the value chain of your commodity.

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Organic Beef Production In Ontario

Tom Hamilton, Beef Program Lead, OMAFRA

Introduction

In the recent past, some Ontario beef producers have implemented production systems designed to add value to their products through marketing beef with specific attributes (or product branding), which may command a premium or ensure market share. These systems include producing meat from animals which have been raised under one or more of the following criteria: not received antibiotics; not received exogenous hormonal implants; been fed a feedlot diet of predominantly corn; fed a feedlot diet which is predominately forage; had unlimited access to the outdoors; been finished on pasture; not been fed any animal products; not been fed any chemical feed additives; been raised in an organic manner. In addition, some production systems have been described as "natural", "pasture raised", or "farm raised".

One challenge in these systems is to preserve the identity and integrity of the product throughout the production system. Since beef production tends to be composed of many independently owned and managed segments within a single supply chain, integration across supply chains has been a challenge. Specific criteria required to meet these various branding initiatives have been developed and implemented by various groups. This has led to confusion among consumers about what is meant by the terms used in product descriptions.

Organic producer organizations have developed criteria which proscribe unacceptable practices and describe accepted practices. A consensus version of these criteria has become accepted at the national level through the adoption of a federally regulated certification system for organic production, including beef.

Organic Production Defined

The Federal Government through the Canadian Food Inspection Agency has legislation which provides a legal context for certified organic agricultural production in Canada. Under the legislation, production practices which are acceptable in an organic system are defined. Product which meets all of the applicable national organic standards may be eligible for certification by an approved third party certification body, and sold as "Certified Organic". The regulations are being updated and are to come into effect fully on June 30, 2009.

The acceptable production practices which must be followed for Canadian Certification are detailed in *Organic Production Systems General Principles and Management Standards*, published by the Canadian National Standards Board.

Certification

Over time, many organic industry groups developed production and processing standards, and in conjunction with these, certification standards. Effective June 30, 2009, Canadian producers or processors who wish to produce, process and/or market agricultural products or foods as "Certified Organic", and identify them with the Canada Organic label must engage the services of an accredited certification body to review their system and provide inspector oversight.

[1] http://www.inspection.gc.ca/english/fssa/orgbio/orgbioe.shtml
[2] http://www.organicagcentre.ca/Docs/Cdn_Stds_Principles2006_e.pdf

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In order to be certified as organic producers they must meet the relevant federal regulations including those contained in: *Organic Production Systems General Principles and Management Standards; Organic Feed Standards;* and *Organic Production Systems Permitted Substances List.*

Production Standards

The following are some of the production standards which must be met for beef to be marketed as Certified Organic (see the full regulations for additional detail)

Feeds and Feeding

- Must be provided with organic feed
  - Permitted substances list of soil amendments for organic crop production
    - ⇒ Fertilizer produced from petroleum is not permitted
    - ⇒ Fertilizer from naturally occurring substances is generally permitted
    - ⇒ For young animals natural milk
    - ⇒ A substantial proportion of the feed shall consist of roughage, fresh/drier fodder or silage
    - ⇒ When silages are fed, dry roughage must be offered

Prohibited

- Shall not provide feed or feed additives or supplements that contain substances not in accordance with the Organic Feed Standards
- Feed medications or veterinary drugs including hormones and prophylactic antibiotics to promote growth
- Approved feed ingredients at levels greater than that required for adequate nutrition and health
- Feeds chemically extracted or defatted with a prohibited substance
- Mammalian or avian slaughter byproducts
- Synthetic preservation agents, colouring agents, appetite enhancers or flavour enhancers

Feed formulas containing manure or other animal waste

Breeding

- Use natural methods; breeding by A.I. is permitted
- Do not use reproductive hormones to trigger or synchronize estrus
- Do not use embryo transfer techniques or breeding techniques using genetic engineering or related techniques

Production and Health Practices

- Ear tagging, branding and castration (including banding) are permitted
- Tail docking of cattle is prohibited unless necessary for veterinary treatment of injured animals
- Vaccines are permitted when it has been documented that the disease can be transmitted to other livestock on the premises and cannot be combated by other means
- The use of pharmaceuticals, antibiotics, hormones and steroids for preventative treatments is prohibited
- If permitted, treatments are unlikely to be effective in the treatment of illness or injury, veterinary drugs or antibiotics may be administered under supervision of a veterinarian; the meat animals so treated are considered non-organic
- Hormonal treatments shall be used only for therapeutic reasons and under veterinary supervision. The meat from animals so treated shall not be sold as organic meat.
- Veterinary products allowed as a last resort as per regulations in 32.311
- Access to the outdoors suitable to the animals stage of production, climate and environment
- Access to pasture, weather permitting.

Is Organic Production For You?

Becoming a Certified Organic beef producer brings potential rewards along with challenges. The Certified Organic designation will give you the opportunity to market a differentiated product which meets published standards and is backed by 3rd party certification. You may be able to link up with an already established production chain which preserves product identity to the consumer level. Consumers may be willing to pay a premium for your product. Challenges to becoming an organic producer include higher production costs and a two to three year phase in period as you convert crop production to organic methods. Do some market research to find out if you will have access to a suitable outlet where your organic product will command a premium. Explore what changes you will have to make to your production system to become Certified Organic, and what extra costs or reductions in productivity these will entail. Then compare the potential benefits, costs and risks associated with changing over to organic production.

Resources For Organic Production

Canadian Food Inspection Agency
http://www.inspection.gc.ca/english/fssa/orgbio/orgbioe.shtml

Canadian Organic Growers
http://www.cog.ca/buyorganic.htm

Ecological Farmers Association of Ontario
http://www.efao.ca/index.html

Ontario Ministry of Agriculture, Food and Rural Affairs
http://www.omafra.gov.on.ca/english/crops/organic/

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[3] http://www.omafra.gov.on.ca/english/crops/organic/certification.htm

[4] http://www.techstreet.com/cgi-bin/joint.cgi/cgsb/cgi-bin/detail?product_id=1596185

[5] http://www.organicagcentre.ca/Docs/Cdn_Stds_Substances2006_e.pdf

organic.html

ON Organic Newsletter http://www.omafra.gov.on.ca/english/crops/organic/news/news-organic.html
Organic Agriculture Centre of Canada http://www.organicagcentre.ca/index_e.asp
Organic Council of Ontario http://www.organiccouncil.ca/
Organic Federation of Canada http://www.organicfederation.ca/index.html

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Thinking About Marketing Makes You Money

Barry Potter, Livestock Specialist, OMAFRA

Thinking about marketing makes you money. The recent Benchmark Beef study conducted by the University of Guelph demonstrated that producers who spend time on marketing were among the most profitable producers.

What kind of marketing decisions were these producers thinking about? There is a whole range of decisions to make around how and when to market your calves. Do you consider retained ownership? Do you participate in a value added sale which features age verification and audited vaccination protocols? How do special sales compare to regular weekly sales for price?

There are many aspects of marketing to think about. One thing you may not be sure about is how much your calves cost you to produce. OMAFRA has several excellent interactive spreadsheet tools to assist you with evaluating various aspects of your farm, including calculating your cost of production on a per cow basis. With this knowledge, you can then estimate the revenue required on a $/lb of beef produced basis to at least cover your costs. A screen shot of the cow calf budget is shown in Figure 1 on the page 6.

The example below looks at a 100 cow herd which is marketing 600 lb calves through a regular weekly sale for $1.00 per lb. If the producer were to package those calves in a value added sale, he or she could potentially increase returns by 10 %, and sell those calves at $1.10 (a review of special sales over the last few years have shown them to consistently be 10 % higher than other sales held during the same time period). Selling at a special sale and being paid a premium for the work you are likely already doing (like vaccination and age verification) would provide an additional $60 per calf, or in this case $5160 more dollars for the 85 calves marketed (Table 1). By increasing our revenue by 10 % we can change the net return per calf from a negative to a positive value.

Item	Regular Sale	Special Value Added Sale
# of Cows	100	100
# of calves Marketed	85	85
Calf Sale Weight (lbs)	600	600
Calf Sale Price ($/lb)	$ 1.00	1.10
Gross Revenue From Calves	$ 51,000	$56,100

Table 1. Comparison of Regular Sale With Value Added Sale

Sale Price	Cost per lb of calf produced		
	10% Below Expected	Expected	10%Above Expected
10% Above Expected	**0.16**	**0.05**	**-0.06**
Expected	**0.07**	**-0.04**	**-0.15**
10% Below Expected	**-0.02**	**-0.13**	**-0.24**

Table 2. Net Return ($/lb) of Calf Produced

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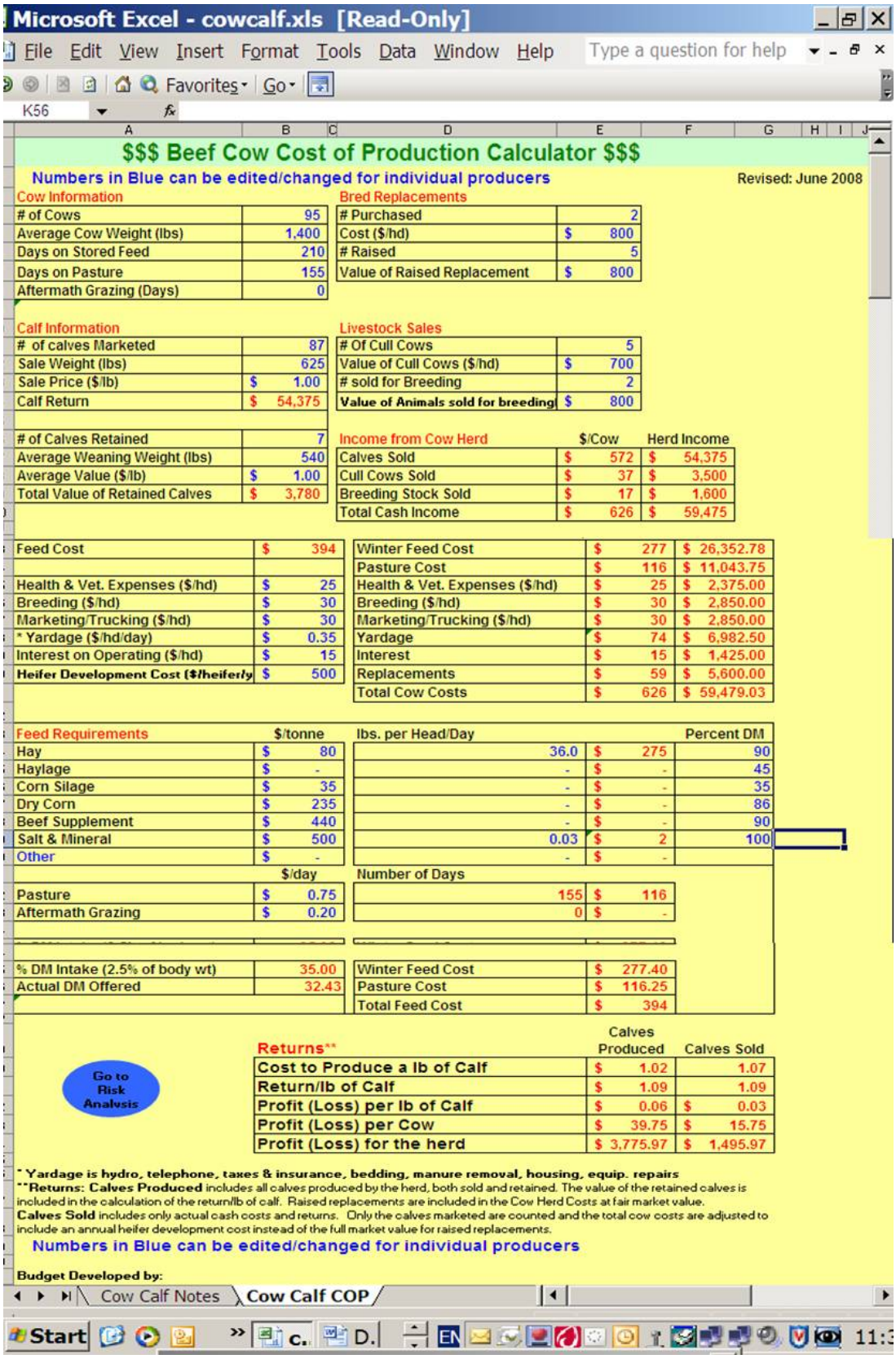

Figure1. Screen Shot of Beef Cow Cost of Production Calculator

Another major factor impacting profitability is cost of production. Knowing your costs is a critical component of evaluating and improving any economic enterprise. Table 2 shows the combined effect of three levels of market price and three levels of cost of production on net return per calf.

The Benchmark Study showed that farmers who think about where and how they are going to market their calves actually received more dollars for their product. As your calf crop grows this summer, spend some time to focus on what you can do to increase the return for your calves this year.

Various OMAFRA farm business management tools can be accessed free of charge on line at:
http://www.omafra.gov.on.ca/english/busdev/bear2000/Budgets/budgettools.htm
The cow-calf budget can be accessed directly at:
http://www.omafra.gov.on.ca/english/busdev/bear2000/Budgets/livestock/cattle/cowcalf.xls.

If you prefer, you may request a cd copy of these excel spreadsheet files by phoning OMAFRA at 1-877-424-1300.

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Newborn Calf Jeopardy

Tom Hamilton, Beef Program Lead – Production Systems, OMAFRA

This high fibre substance links the summer of 2008 with poor doing new born calves in 2009. If you answered "what is poor hay quality", you are probably one of many Ontario beef farmers having a frustrating calving season (and give yourself 100 pts.). What is behind the disturbing number of calves which lack the vigour to get up and find a teat, who are acting like "dummies" and seem to lack the will to survive? In many instances, the problem comes in the form of round bales of hay which have filled the feeders during the winter. But these calves were actually placed in jeopardy due to events which occurred 7 or 8 months previously.

The haying weather of 2008 is something many farmers would like to forget. Lengthy stretches of wet weather kept delaying hay cutting and often interrupted the baling of the crop once it was finally in the swath. When 1st cut and 2nd cut are being baled the same week, you know you are in trouble! The negative effects of delayed harvest and rain on the cut crop combined to produce hay that is both low in nutrients and unappetizing to cows.

Delayed Harvesting

As forage plants mature, the concentrations of precious nutrients decrease and the overall digestibility of the whole plant decreases. Recent research by AAFC scientists shows that for timothy after the late heading stage, for each 1 week delay in harvesting, dry matter digestibility decreases by 7%, and digestibility of neutral detergent fibre (NDF) decreases 10%. At the same time, %NDF content of the forage increases by 5% per week.[1] Higher %NDF means a "bulkier' forage, and is negatively related to the cow's feed intake. We also know that %protein decreases as plants mature and the leaf:stem ratio decreases. And accompanying these changes is a decrease in mineral concentrations in the plant. All of these factors combine to dramatically decrease the nutritional value of forage plants as they grow and mature; the cow will eat less of the poorer feed, amplifying the effect of lower nutrient concentrations. This is reflected in the dramatic decline in net energy content of alfalfa and timothy as they mature, illustrated in Fig. 1. And since rain does not slow down the plants' growth, feed quality continues to decline as we sit at the window listening for a weather forecast for "3 or 4 dry days".

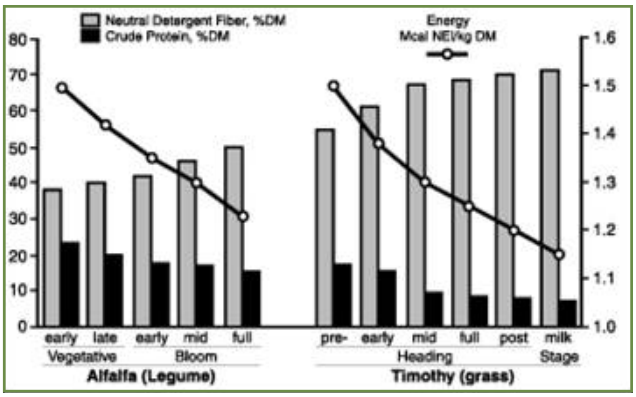

Figure 1. Effect of Stage of Maturity on Nutritive Value of Forages[2]

Effect of Rain on Swathed Hay

And now for the really bad news: rain on swathed hay makes the hay quality even worse! Delays in dry down means that the hay plant continues to respire, using up its energy. And nutrients like protein, mineral and sugars are water soluble, and get leached out of the cut hay each time it gets rained on. It doesn't take much rain to do damage … as little as 1.25 mm of rain will cause significant nutrient loss in hay that is partly cured! For a final insult, raking rained on hay can cause significant leaf loss, further reducing feed value. What's left in this hay? At its worst, it approximates the straw that would normally be used for bedding.

Cow Nutritive Deficit Impacts The Calf

Pregnant beef cows that have kept the fetus for three months are physiologically committed to carry it to term. As fetal growth starts to accelerate in mid gestation, the demand for

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energy, protein, minerals and vitamins ramps up. The cow needs to consume these nutrients in adequate amounts to grow a healthy calf and maintain her own health. If nutrient intake is significantly below requirements, she will deplete her own body resources, including fat, her muscle protein and her stores of minerals and vitamins. As a result, she may lack sufficient muscle tone and endurance to deliver the calf quickly and efficiently. Long deliveries put stress on both the cow and her calf. In severe cases of under nutrition of protein and energy, calves are born weak and "stupid". They may be suffering from acute Vitamin E/selenium deficiency (White Muscle Disease), leading to extreme muscle weakness. Overall, calves from malnourished cows lack the muscular strength and coordination to get mobile, and lack the mental alertness and drive to bond with the cow and fulfill their instinctive urge to find the udder and suckle vigourously. Without help many of these calves will die. Those that survive will be at risk from infectious disease, as they may not obtain adequate colostrum volume, and these cows will likely produce low quality colostrum which is deficient in immunoglobulins.

Figure 2. Vigourous Calves Consume Adequate Colostrum

Calves born into this whirlpool of negativity may succumb early, or they may struggle through calfhood after suffering setbacks from diarrhea and other diseases. They will likely be smaller at weaning due to lowered maternal milk production and the impact of disease. Cows in this situation will be slow to cycle and breed back, and are at risk of coming up open in the fall.

Paying Down The Nutrient Deficit

While all of this may seem a little overwhelming to accept as being the result of summer rainy spells, there are actions we can take to make things better.

If an alarming number of weak calves are born in a calving season:

- Get your vet out. The cause may be due to an infectious disease such as BVD. Swift action is needed to find out if pathogens are the culprit and mount an effective campaign against them.
- Get dead calves necropsied.
- Inject newborns with Vitamin E/selenium, and Vitamins A and D. Discuss with your Vet the idea of injecting the cows with Vitamin E/selenium
- Provide supplemental colostrum (fresh or frozen) or artificial colostrum products to calves which did not strongly suckle within the first 12 hrs, or whose dams who do not appear to be milking well
- During cold or rainy weather, get weak calves dried off and warmed up, then started on the cow or fed supplemental colostrum
- Put the cows on your best forage. If you don't have good quality forage, then feed each cow a few lbs per day of an energy/protein concentrate
- Provide cows with a salt/mineral mix which contains the right levels of calcium and phosphorous, and adequate levels of trace minerals and vitamins

After the calving season:

- Ensure cows are gaining weight going into breeding
- Keep them on good quality pasture or supplement with an energy/protein concentrate
- Provide a salt/mineral mix that has the right Ca and P levels to match the feed, and contains adequate levels of selenium and other trace minerals such as zinc, iodine, copper, manganese and cobalt

Fall/Winter:

- Get lab analyses done on your stored forages
- Feed a salt/mineral mix to match the calcium and phosphorous in your feed, and which contains adequate levels of all of the trace minerals and vitamins
- Body condition score cows and group them for feeding – thinnest cows get the best forage
- Supplement with energy and protein as needed
- Monitor cows over the winter and make adjustments to the feeding program if necessary

References

[1]Pelletier, S., etal. 2008. Delayed Harvest Effects Mineral and NDF Concentrations, and Digestibility of Timothy. Can. J. Anim. Sci. 88: 325 – 329.
[2]University of Wisconsin. 1994. Nutrition and Feeding Technical Guide

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Food m*eets* Function Conference Scheduled for June 2009

Food *meets* Function
June 17-18, 2009
London, Ontario

Don’t Miss the Upcoming Functional Food Conference, June 17 & 18, 2009
Early Bird Deadline May 15th

Nature’s elixir to health may be today’s functional foods and beverages. More than 30 speakers from research, production, processing and retail will share the latest discoveries and consumer trends in functional foods.

Pre-conference tour of functional food producers and processors on June 16

This conference will deliver the latest information on human nutritional science and the healthfulness of functional foods that will be of particular interest for registered dieticians and health professionals. As well, there will be sessions intended for those wanting to learn more about the production, retail and processing aspects of the functional food value chain. Expert speakers will provide key information from the Canadian as well as the international functional food perspective. This conference will examine the exciting advances in this field that support healthy living and put that information into the hands of Registered Dieticians, while the value chain innovators can make use of the information to develop beneficial products and capture new markets.

For more information and to register, go to:
http://www.foodmeetsfunction.ca/

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