OMAFRA Virtual Beef

VOLUME NO. 11 ISSUE NO. 33 May 2012

IN THIS ISSUE

A Smooth Healthy Transition to Feedlots?

Nancy Noecker, Beef Cow-Calf Specialist, OMAFRA

Have you heard the latest? There is a new procedure out there that significantly drops the pull rate for new calves in the feedlot, and also drops the death rate. I know it seems a little early to be planning your marketing strategy for 2012. But consider what a feedlot would think of your calves and pay for them if you can offer pull rates less than 3% and calves that step up to the bunk and start eating!

Applying this "new procedure" involves you planning to wean the calves at least 1 month prior to sale, similar to the requirements for pre-conditioning back in the Red Meat Program of the 1980's.

Work in the Ontario calf market by Dr. Ken Bateman and team, from the University of Guelph in 1999, looked at treatment rates for vaccinated, vaccinated-pre-weaned, and regular calves in the Ontario marketplace, as shown in the table below. If results like this came in a needle we would consider it the new wonder treatment!

Figure 1. Fenceline weaning reduces stress on calves and cows.

OMAFRA Virtual Beef is a technology transfer vehicle of the Ontario Ministry of Agriculture, Food and Rural Affairs.

This publication is available in electronic format at www.omafra.gov.on. ca/ english/livestock/ beef/ news.html

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

Direct general questions and suggestions to:
Tom Hamilton
tom.hamilton@ontario.ca
705-647–2087

For inquiries regarding content of a specific article contact the author.

Table 1: University of Guelph Study 1999 Ontario Calf Sales			
	Calf Management Prior to Sale		
	Pre-vaccinated	PreVac/Pre-weaned	Regular
# calves	2,902	428	4,520
% treated	16%	3%	23%

Those results are nice but weaning is “hard—impossible--not doable on my farm”, is the first thing calf producers come out with when weaning is suggested. Or the other famous quote is “feedlot guys tell me that you ruin the calf by weaning it”. And that would be correct if you yank the calf off the cow and shove him in a dark, dank airless barn with very little bedding and over feed grain.

However, fence-line weaning (Fig. 1) and 2-step weaning (Fig. 2) are two newer methods that can turn out heavier, healthier, bunk broke calves. This also creates calves that shrink less if you are transporting them any distance to market and the feedlot. These methods of weaning don’t require a new set of buildings, but perhaps a new way of thinking and a little forward planning. Good pastures and or a well balanced creep feed will help the calves gain to their best potential without ruining the rumen or getting them fat, and allows you to prepare them for the feedlot.

Figure 2. Calf nose flaps offer another means of reducing weaning stress

Calves get sick when the immune system isn’t working the way it should. The immune system quits when it gets completely overwhelmed or the nutrition isn’t there to support its functioning. When the calf gets over stressed by too many changes at once it quits eating just when it’s immune system needs more groceries to put up a defence against all the new challenges being thrown at it. This sets up a vicious circle both for the calf and for our industry.

These types of weaning allow you to control the amount of stress the calf deals with at any one time. The result is calves that move through weaning and marketing with less pulls, sickness and drug costs. With both methods of weaning we change the diet first, then we change the social structure then we change the environment.

For fence-line weaning you need a good pasture and a good hot wire or page or rail fence. Ideally, you will put the whole herd in for a day to get the calves used to the pasture, then move the cows out to the pasture beside the calves. Both groups will camp up or stand across the fence from each other for the first 2 or so days. However, the calves will go out and graze and then come back to the fence. The cows will do the same and there will be some bawling. Over the course of the week the calves will show less interest in the cows and can then be moved on in a grazing rotation, with or without other feeds depending on the quality of your pasture.

The 2-step or nose tag weaning starts with running the calves through the chute and installing the light plastic nose tag that prevents the calf sucking. Then the calves go back out with the cows for 4-7 days. The calf can’t nurse but can graze or eat feed with the cow. His diet changes over this time but he still has Mom close for comfort. After a few days calves will stop trying to suck. Then the calves are removed from the cows to a new pasture or feedlot and the nose tag is removed.

In both cases if the calves have a chance to eat wrapped haylage with their mothers they will transition to silage in the feedlot easily. As the calves still won’t gain as well during weaning, the cow calf producer needs to plan on weaning at least a month prior to marketing and feed well to allow the calf to make those extra gains. Also, if calves are going to show sickness it often happens about 10 days after weaning. Ask any feedlot operator what those pretty baby bloom fresh weaned calves look like 10 days later in his feedlot. This is often when we hear the word “wreck” applied. On the home farm you probably won’t see the same affect as calves don’t face all the challenges at once.

As one producer who has tried the nose tags 2 years running said "*We used the flaps on all our calves this year with great result. Picked the WORST WEEK EVER to wean ..crappy weather RAIN up and down temps ,,,,had BIG bottles of drugs on hand only treated a few..1% of the bunch!*"

So even though your cows are just calved or calving, now is the time to start planning on how to market the 2012 calves for the most money and performance ! Consider fence line or 2 step weaning to give your calves that extra weight and health for a smooth transition to feeding.

Figure 3. Preweaned and vaccinated calves make a smooth transition into the feedlot.

------------------ VB ------------------

Nancy Noecker
Beef Cow-Calf Specialist
Ontario Ministry of Agriculture, Food and Rural Affairs
Nancy.Noecker@ontario.ca

------------------ VB ------------------

How Is Your Cow Herd Spending Its Money?

John Molenhuis, Business Analysis and Cost of Production Program Lead, OMAFRA

No one needs to be told that input costs have been increasing over time. It has many asking where they should be looking for cost savings and how they can trim costs.

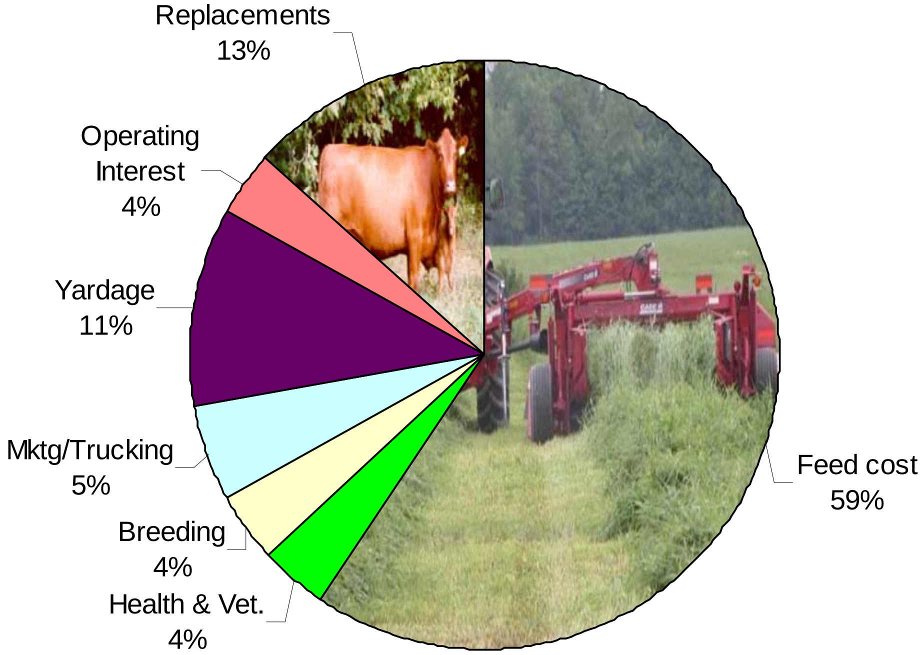
Looking at where money is being spent can give an indication of where to start for cost savings. Chart 1 presents a breakdown of the main expense areas for the beef cow herd. You can rightly conclude that if you want to concentrate on an area of your costs that will yield the biggest bang for your management buck that it would be feed costs. Feed costs at almost 60% should demand a lot of time and attention and most likely already does.

With respect to feed costs, controlling them is easy to say, but how do you do it? The first question you need to ask is what am I feeding now; not just the different components of the ration but how much of each of these components. How many of you can accurately say how much you are feeding to your cow herd each year? Hopefully a lot of you can, but the reality for many is their records are not in good enough shape to tease that information out.

The beef producers in the Benchmark Beef study conducted by the University of Guelph reported a wide range of actual dry matter amount fed to their cattle. The average in the group fed 4.0 tonnes of dry matter (grain and forages) per cow per year. The range was 1.0 tonne to 6.0 tonnes. It would be safe to say the farm reporting only 1.0 tonne of dry matter fed per cow per year may not have accurately recorded the amount fed. A 5.0 tonne range is huge and knowing where you are on that range is important.

Effective record keeping is the key to getting the right information you need to make effective business decisions. With today's access to handheld technology it would not take much effort to record amounts as they happen. There may even be an 'app' for that. Even the tried and true pen and paper method can be effective as long as you are diligent in recording and transferring the information in your complete records. Knowing where slippages or wastage may be happening can give you some of those early wins in making sure the feed you have is managed effectively. As you enter the cropping season start recording now so you are not trying to do it by memory next winter.

Chart 1: Where does the cow herd spend its money?



If you are considering farm software, Alberta Agriculture and Rural Development maintain an extensive listing of financial as well as production recordkeeping software. Agricultural Software Listing – http://www.agric.gov.ab.ca/app68/agsoft. Also a search of the apps available for the smart phone platform you have may yield some handy tools as well.

Chart 1 was based on cost estimates in the Beef Cow Cost of Production Calculator which was recently updated and is available online at OMAFRA's Ontario Enterprise Budgets: http://www.omafra.gov.on.ca/english/busdev/bear2000/Budgets/oeb.htm

Use the calculator to estimate your costs and it also allows you to test those "what ifs" for different production and expense factors to see what has the greatest impact on your bottom line.

Feed is your biggest expense; the place to start is knowing how much you are feeding. This is not to say you should ignore the other costs but management time should be devoted to the areas that will have the most impact first.

------------------ VB ------------------

John Molenhuis
Business Analysis and Cost of Production Program Lead
Ontario Ministry of Agriculture, Food and Rural Affairs
John.Molenhuis@ontario.ca

------------------ VB ------------------

Evaluating Rations for Predicted Gain

Brian Bell, Agriculture Development Advisor
OMAFRA, North Region, Gore Bay

Targeting an average daily gain (ADG) is an important aspect of beef cattle nutritional programs. For example, replacement beef heifers should gain approximately 1.5-1.8 pounds/day to achieve breeding weight standards by 13 - 15 months of age. Dietary corrections are made for frame type, body condition, breed make up, reproductive status, health status, muscling characteristics and other factors. Charts of nutrient requirements for beef cattle are available; the basis for these is the Nutrient Requirements of Beef Cattle, seventh revised edition, 2000. Embedded in ration balancing software are the sophisticated modeling formulae from this publication. One example of this kind of computer program is Cowbytes 4.6 from the Government of Alberta, Agriculture and Rural Development. Contact information for Cowbytes is available at: http://www1.agric.gov.ab.ca/$department/newslett.nsf/all/agnw18733

Ration balancing is an important management tool in achieving ADG targets, as deficiencies or imbalance in energy, protein, minerals and vitamins will hamper animal performance. Forages need to be analyzed for nutrient content as they may vary greatly in digestibility, fibre and protein content based on species composition and cutting date.

Nutritional tables may be utilized for standard grains and protein sources. Non-standard feed sources should be analyzed for nutrient content. Nutrient content of feeds sourced from commercial suppliers may be available upon request.

With this arsenal of nutrient information, how should one go about evaluating a diet for a specific gain target at best cost? The following example demonstrates steps taken to evaluate a diet:

Assumptions

Cattle factors:

- 600 pound steer calf, exotic cross, expected to be backgrounded for 6 months
- Body condition score of 3.5/5
- Health status is good
- Target average daily gain (ADG) is 2 pounds, based on frame type
- No implants or ionophores

Feed factors:

- Calf coming off pasture mid October
- Mixed dry hay available free choice
- Bale weight 800 pounds
- Coarse rolled barley fed at 1% of body weight
- Higher energy feed available as an option
- Appropriate mineral fed free choice
- Cobalt-Iodized salt fed free choice
- Water quality is good and available in troughs
- Ration balanced and costed with Cowbytes Beef Ration Balancer version 4.6
- NEg=net energy gain
- NEm=net energy maintenance

Housing and environmental factors:

- Adequate bunk space for all cattle to eat at one time
- Adequate number of bale feeders
- Barn available and windbreak in drylot
- Yard is scraped as required
- Concrete yard

Table 1-Nutrient content of feeds, dry matter basis

Nutrient	Dry Hay	Barley	Corn Grain	Mineral
Dry Matter	86.5	88.5	89	99
Crude Protein	10.8	11.8	12	
NEm Mcal/LB	.58	.92	.99	
NEg Mcal/LB	.32	.62	.69	
Calcium	.75	.07	.06	18
Phosphorus	.2	.38	.34	18
Unit type/size	Rnd bale 800 LB	Tonne	Tonne	Bag 55 LB
Cost per unit	$25	$315	$355	$28

Here is the output of the Cowbytes program for this scenario:

Ration Report-1

COWBYTES 4.6 AAFRD			
STEER 600 POUNDS 1% BW BARLEY			
Nutrient(DM basis)	**Supplied Feed Only**	**Recommended**	
DM Intake	**14.9**	**14.2**	**Lbs**
NEmTot	**5.83**	**5.83**	**Mcal**
NEg	**2.60**	**2.79**	**Mcal**
Protein	**766**	**768**	**g**
Calcium	**40**	**31**	**g**
Phos.	**20**	**17**	**g**
Target Gain LB/Day	**2.00**		
Predicted Gain LB/Day	**1.92**		
Cost per LB gain	**$0.62**		

Feed conversion **7.7/1**

NEm is the net energy for maintenance in Mcal/kg or Mcal/lb of feed. Net energy (NE) is the metabolizable energy less the heat increment of feeding (heat lost during the digestive process). When formulating a diet, the NEm recommendation is met first. NEmTot (Net Energy Total for Maintenance) is the total energy needed to meet demands for NE maintenance, NE pregnancy, NE milk, NE cold stress, NE heat stress and NE activity. It is the accumulated energy to meet all NE requirements except growth. NEg is the net energy value of the feed for growth. The NEg supplied does not accumulate until the maintenance recommendation is met.

A quick evaluation of the ration report 1 shown above reveals that the barley grain, which has 0.62 Mcal of NEg/LB and is fed at 1% of body weight along with mixed hay, meets the NEm requirements. Upon close scrutiny of the ration, however, it appears we are slightly low on our target ADG of 2.00 pounds. The Cowbytes program determined that while protein and NEm intake were adequate, NEg requirement was deficient. Increasing our grain source energy to 0.69 Mcal of NEg/LB from 0.62 Mcal NEg/LB fixed the problem. The following ration report 2 indicates the correction.

Figure 1: Net energy needs for both maintenance and gain have to be met.

Ration Report-2

COWBYTES 4.6 AAFRD			
STEER 600 POUNDS 1% BW Corn Grain			
Nutrient(DM basis)	**Supplied Feed Only**	**Recommended**	
DM Intake	**14.9**	**14.2**	**LB**
NEmTot	**5.83**	**5.83**	**Mcal**
NEg	**3.00**	**2.79**	**Mcal**
Protein	**767**	**768**	**g**
Calcium	**38**	**31**	**g**
Phos.	**19**	**17**	**g**
Target Gain	**2.00**		
Predicted Gain LB/Day	**2.16**		
Cost per LB gain	**$0.65**		

Feed conversion **6.8/1**

What about cost differences? The barley cost $315/tonne and the corn cost $355/tonne. That's a $40/tonne difference- can we justify this higher priced feed? We met our target gain with the more expensive feed, with a feed conversion of 6.8/1 and cost per pound of gain of $.65/LB. The barley ration gives us a feed conversion of 7.7/1 and cost per pound of gain of $.62/LB.

RESULT: The cost per tonne of a feed reflects quality and performance aspects. A higher feed conversion ratio means more days on feed to achieve your performance targets. In our example, while the more expensive feed cost slightly more per pound of gain, ($.03/LB) the target gain was met with a lower feed conversion ratio. Evaluate your grain and feed purchases carefully for expected results instead of focusing on a price/tonne basis. Your beef cattle nutritionist may assist with these calculations.

------------------ VB -----------------

Brian Bell
Agricultural Development Advisor
Ontario Ministry of Agriculture, Food and Rural Affairs
Brian.Bell@ontario.ca

------------------ VB -----------------

PracticalCrossbreeding for Ontario Herds

Brian Pogue, Beef Program Lead – Genetics, OMAFRA

Genetic improvement of cattle can only be made in 2 ways:

1. **Selection**
2. **Crossbreeding**

Commercial herds have the opportunity to use both. Most of the improvement through selection will be made by means of bull selection by seedstock producers and ultimately by commercial producers by their purchases of genetics.

So why is crossbreeding so important? Crossbreeding results in hybrid vigour, which is simply the added performance for any trait above the average of the parents' performance. It is most evident on the traits with low heritability such as fertility and longevity. Compared to straight-bred cows, crossbred cows will produce 15% more weaning weight per cow exposed to breeding because of:

- √ Higher pregnancy rates
- √ Higher calving rate
- √ Higher calf survival

On average, crossbred cows will wean an additional 600 lbs of calf in their lifetime compared to straight-bred cows.

That's the equivalent of getting an extra calf over the life of the cow!

Developing a crossbreeding program can appear to be complicated but there are 2 very simple systems which have application to the average Ontario herd.

Purchase crossbred/hybrid cows and breed them to a terminal bull.

An example of this would be Hereford x Red Angus cows bred to a Charolais bull. All of those tan calves are marketed at whatever stage makes the most economic sense for your farm. Any cull cows are replaced with Hereford x Red Angus heifers. Be sure to pick a good bull - in this system he can breed for years. This is an easy system to maximize hybrid vigour as the cow is crossbred and bred to a sire of a 3rd breed. The calf is a 3way cross, so no hybrid vigour is lost, as it would be if the cows were backcrossed to a Hereford or Red Angus bull. This approach has been successfully used in pork production for many years.

The key to a terminal system is being able to consistently source crossbred females that have been carefully selected and managed for optimum performance. It is recommended that you contract a herd for a number of females each year.

Use composite/hybrid bulls.

These would be bulls with at least 2 breeds in their parentage, and ideally 4 or more. These multi-breed bulls can add hybrid vigour to your herd to both male and female calves. Most Ontario herds retain their own replacement heifers, and using composite bulls provides that opportunity while at the same time increasing production through crossbreeding. Heifers from composite bulls would simply be mated to composite bulls. A simple example would be to use Simmental X Angus bulls on Simmental X Angus cows - keeping heifers from your own herd and being confident that they will work like their mothers.

Figure 1. Crossbred calves benefit from hybrid vigour.

The level of hybrid vigour will be lower than the terminal system, but still significantly higher than a purebred system. The amount of hybrid vigour will depend on the number of breeds used in the composite. Research has shown that a 4 breed composite will maintain 75% of the hybrid vigour compared to a 4 breed rotational crossbreeding system.

Bull selection then becomes the critical investment and management decision. There are seedstock producers in Ontario as well as other provinces and states who are producing composite bulls.

Two other important factors need to be considered in a breeding program:

Calf uniformity is always important, no matter if selling weaned calves or finished cattle.
Breed complementarity is very important, so with the selection of individual bulls for your program, a lot more than just the breed of the bull must be evaluated.

Conclusion

It is important for commercial herds to take advantage of the boost in productivity that can be accomplished with crossbreeding systems. For the average small Ontario herd, these two systems are both simple and practical.

------------------ VB -----------------

Brian Pogue
Beef Program Lead– Genetics
Ontario Ministry of Agriculture, Food and Rural Affairs
Brian.Pogue@ontario.ca

------------------ VB -----------------

Pasture Planting Decisions

Jack Kyle, Grazier Specialist, OMAFRA

What are you going to plant this spring for your pasture program? The first thing to plant is fence posts. By far the biggest gains in pasture management come from a rotational grazing system and fence allows you to do that effectively and conveniently. Cattle should be trained to electric fence and once trained they will respect it and allow you to conveniently mange your pastures. A one or two wire electric fence should reliably contain livestock provided you are providing palatable quality forage in sufficient quantity to meet their needs.

Managed pastures will provide significantly more forage for your livestock over the grazing season and will allow you to minimize the impact of a dry summer on pasture growth. Once you have a rotational grazing system in place which benefits your livestock by increasing the forage productivity there are other steps that you can implement to enhance your grazing program.

Over seeding existing pastures with a legume will help to increase forage production and forage quality. Clovers (white clover 1-2 lbs/ac, red clover 3-5 lbs/ac) and trefoil (2-3 lbs/ac) are the preferred species for Ontario situations. They can be broadcast early in the spring and should establish reasonably well provided there is good seed to soil contact and there is sufficient soil moisture to grow the seedling plants. Mixing some trefoil seed in the salt or mineral is another easy way to increase the legume content in a pasture.

If you are planting a new pasture consider how you are going to graze it – type of livestock, do you want early pasture, full grazing season or late fall for stockpile pasture?
Orchardgrass and meadow brome are excellent choices for early grazing through to early fall. Reed Canary grass is an excellent grazing species that does better than most species in moist soil and also does well in dry soils because of its large spreading root system. If you want to emphasize late fall grazing or even stockpiling for use into November and December then tall fescue would be the better choice.

Including legumes in the pasture mix is essential to get maximum production; alfalfa provides high quality forage and has good tolerance of summer heat and dry soil conditions. White clover is an excellent grazing species that also has the capability to spread through the pasture. The clovers and alfalfa run the risk of causing bloat if they make up more than half of the animals diet, although with proper management you can go well beyond this level. If you can provide a long rest period for the pasture consider Birdsfoot trefoil as the legume. Trefoil has high tannin levels that act to prevent bloat. Trefoil does need to flower and set seed at some point during the year if you want the stand to last, so at some point you need to provide a long rest period for this to happen.

Annual crops may have a place in your pasture program, depending on when you want extra pasture consider sorghum sudan grass for July to early September grazing, summer seeded oats for September /October grazing and turnips or other brassicas for late September to November grazing. Corn is an option that works well for some producers; corn is very productive and can provide grazing from August through to mid winter. The corn will need to be strip grazed with a fresh strip given every 1-2 days and there is no re-growth with corn.

Soil fertility is critical for good plant growth. Soil tests should be taken every 3 years to give you a bench mark of soil fertility. Ideally, the pH will be above 6; if it is below 6 then follow the soil report recommendations for applying lime to correct the pH. Both the phosphorous and potassium soil tests should be in the medium range (P 15-20 ppm with the sodium bicarbonate test and K 100-120 ppm). If the soil fertility is below these levels you will see a response to additional fertility. If the pasture is predominately grass or contains less that 30% legume you will see a significant response to nitrogen. Applying 40-50 kg/ha of actual nitrogen will increase grass growth. This amount should be applied in early June and again in early July to get maximum response from the grasses.

Planting fence posts will provide the best opportunity to increase the yields from your pastures this year and in the coming years. A pasture system with a sufficient number of pastures or paddocks and quality perennial and annual forage will provide excellent returns to the livestock producer.

------------------ VB ------------------

Jack Kyle
Grazier Specialist
Ontario Ministry of Agriculture, Food and Rural Affairs
Jack.Kyle@ontario.ca

------------------ VB ------------------

Extended Season Grazing versus Stored Feed for Beef Cows

Tom Hamilton, Beef Program Lead – Production Systems, OMAFRA

Beef producers strive to reduce costs while maintaining or improving productivity. Since feed is the single largest cost in cow-calf production, strategies to reduce feed costs are of high importance to the economic success of these farms. One of the trends which has become popular in recent years is extending the grazing season. Keeping cows outside past the traditional end of the grazing season (late summer/early fall) can significantly reduce costs. Savings are found by having the animals do their own feed harvesting and manure spreading, saving machinery costs and labour, and by reducing or eliminating the amount of bedding used.

Four of ways to extend the grazing season are:

1. stockpiling perennial forages
2. planting annual crops such as corn or small grains, and grazing them as standing crops
3. planting annual crops which are swathed, then left on the field for grazing
4. planting annual crops which are cut and baled, with bales left on the field for cattle to eat

Research Trial

A study conducted at the Agriculture and Agri-food Brandon Research Center by Legesse et al compared 6 cow-calf production systems over 5 years. The British x Continental cows and their calves (288 pairs/year)were rotationally grazed for the summer on either grass or alfalfa-grass pastures. From Oct – Jan, the weaned pregnant cows (240 head/year) were allocated amongst 2 pasture and 3 drylotfeeding strategies:

1. Pasture - stockpiled perennial forage
2. Pasture - swathed annual crop
3. Drylot – hay
4. Drylot – barley silage/oat straw
5. Drylot – barley grain/oat straw

Stockpiled perennial forages included

a. Oats (swathed)
b. Siberian millet (swathed)
c. Corn (standing or left baled)
d. Triticale (swathed)

After the winter feeding period, but before turn out, cows which had calved at least once were placed on a common diet, in the dry lot. This diet consisted of free choice grass hay and 2.2 lbs/day of a barley based supplement. Females about to calve for the first time were fed separately on a diet formulated to meet National Research Council standards. Calving occurred Feb-Apr, in a barn, with post calving cow-calf pairs held in a shed lot for 1-2 weeks prior to turn out on pasture. Cow-calf pairs were rotationally grazed on grass or alfalfa pastures until the end of the traditional pasture season. After this cows were either sent to a dry lot and fed on stored feed, or assigned to one of the extended season grazing groups, for the October – January period. Cows stayed in the same feeding system during each year of the trial.

Cow Performance

Cows on the extended grazing regimes gained less weight from mid to late gestation, and weighed less prior to calving.Weaning time cow body conditionscores (BCS) were similar among the winter feed groups. However,pre-calving cow BCS was significantly lower for extended grazing cows than dry lot cows, although the size of difference was small (BCS of 5.14 vs 5.06).

Calf Performance

Extended season grazing of dry, pregnant cows had no negative effect on the growth rate of subsequent calves, relative to those from cows which had been dry lotted and fed hay, barley silage and oat straw or barley grain and oat straw - the weaning weights of calves and their gain on pasture were similar amongst all winter feeding strategies.

Reproduction

Reproductive performance is a critical component of cow-calf production. Pregnancy rate to fixed time AI was similar among feeding groups, as was calving interval and the number of calves born. Also, the prevalence of dystocia, abnormal calf presentation and the number of calves born did not differ. This showed that beef cows can be grazed well into the fall and early winter without compromising their reproductive performance.

Herd Productivity

Overall herd productivity was similar when comparing winter drylot feeding versus extended season grazing. Calf weaning weights were similar, as were calving interval, % calves born, and % assisted births. Although extended grazing cows were somewhat lighter at calving time, this did not negatively impact their productivity or that of their calves. Interestingly, extended grazing cows had a lower culling rate prior to turn out, and a higher rate of calf survival to weaning.

Impact of Weather

Moisture is a critical factor in the growth of all crops, including perennials and annuals planted for extending the grazing season. During years when growing seasons experienced average to above average precipitation, the extended grazing cows were among the heaviest of all feeding groups (Fig.1). However, during below average precipitation years extended grazing cows were among the lightest of all feeding groups. The authors also point out that after this study, drought resulted in crop failure of planted annual crops, preventing the extended grazing of annuals trial to continue.

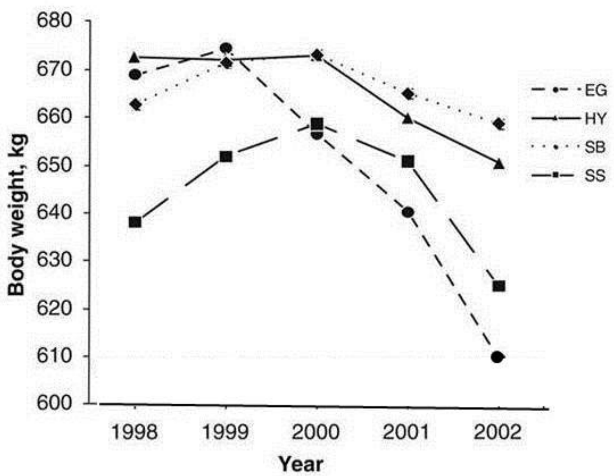


Figure 1. Pre-calving weight of cows on various winter feeding programs[a].
EG= extended season grazing
HY = hay in drylot
SB = oat straw and barley grain in drylot
SS = barley silage and oat straw in drylot
[a]adapted from Legesse et al [1]

Snow cover can impact the ability of cows to access feed during late season grazing. In this study monthly total snowfall ranged from 20.9 cm to 9.2cm. Daily snow on the ground ranged from 9.2 cm to 21.7 cm. Research in Ontario has found that snow in excess of 25 cm can restrict the intake of grazing cows. This may be a more important consideration in snowier climates such as found in much of Ontario, compared to the drier regimes found in much of the prairies and parklands of the west.

Summary

Extending the grazing season using stockpiled perennials or annual crops can reduce feed costs and reduce the labour and bedding needed for beef cows. When adequate forage is available, cows on extended seasons grazing perform as well as those fed in conventional dry lot winter systems fed stored feed. However, extended grazing season is subject to weather risk, and producers should plan alternative feeding strategies in case lack of rain or excess snow have major impacts.

Legesse, G., Small, M., J.A., Scott, S.L., Kebreab, E., Crow, G.H., Block, H.C., Robins, C.D., Khakbazan, M. and McCaughey, W.P. 2012. Bioperformance evaluation of various summer and winter feeding strategies for cow-calf production. Can. J. Anim. Sci. 92: 89-102.
National Research Council, Beef Cattle Nutrient Requirements.1996.

------------------ VB ----------------

Tom Hamilton
Beef Program Lead-Production Systems
Ontario Ministry of Agriculture, Food and Rural Affairs
Tom.Hamilton@ontario.ca

------------------ VB ----------------

Timely Information

Watch a short video on Fenceline Weaning at http://www.omafra.gov.on.ca/english/livestock/beef/facts/fencelinevideo.htm

Grazing Management: Introducing Livestock to Pasture

Pasture Improvement: Weed Control

AgPal is a web-based discovery tool to help producers and others in the agriculture and agri-business sector find the federal, provincial and territorial programs and services that specifically apply to them.

Click here for back issues of Virtual Beef.

------------------ VB ----------------