Ontario

OMAFRA *Virtual Beef*

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More Forage From The Land, Rather Than More Land!

Nancy Noecker, Cow-Calf Specialist
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With the renewed optimism in corn and other cash crops there is more pressure on each acre of land to produce. More corn acres are being grown, with little of this increase coming at the expense of soybean and wheat acreage. The additional cash crop acres are coming from ground formerly used for hay and pasture production, which is putting pressure on livestock farmers to improve forage productivity on a diminishing land resource. An opportunity to grow more forage for your livestock is to double crop after a cereal, using a cover crop such as oats. Research has shown that oats seeded after winter wheat harvest can yield 1 to 3.5 tonnes per acre where manure is applied. Even in fields without manure, oats can yield ½ to 1 ½ tonnes per acre for forage. At hay prices of $85.00 per tonne, cover crops give a good return in addition to the cereal crop harvested!

Figure 1. Strip Grazing For Efficient Utilization

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Farmers have used a variety of species for cover crops, such as barley or mixed grain, oats, rye, turnip-cereal mix, peas, or triticale. Figure 2 shows the results of a 2005 Cover Crop Study comparing oats, oilseed radish, peas, red clover, annual ryegrass and sudan grass. In this study, oats produced the most forage yield, with the exception of red clover with no manure or annual ryegrass with manure applied. This study and others have shown that volunteer cereals yield only 50 to 75% of the oat forage yield.

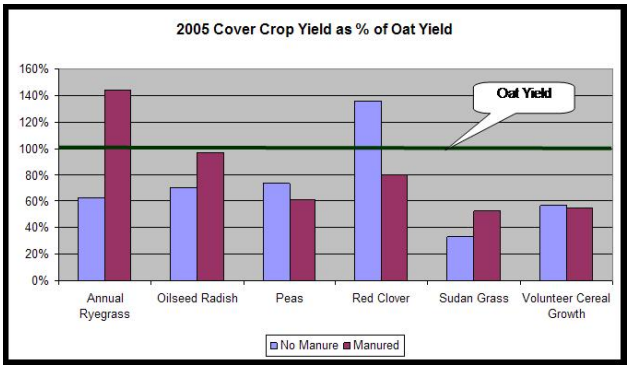

Figure 2: 2005 Cover Crop Study comparing Oats, Oilseed Radish, Peas, Red Clover, Annual Ryegrass and Sudan Grass

It may seem early to be thinking about August seeding, but now is the time to start planning. Establishing a cover crop can be done using a no-till drill or by broadcasting the seed on the field followed by a light tillage pass such as a cultivator or rotary harrow to incorporate the seed. Ideally the seed should be planted at 1 ½ inch depth. Some tillage can reduce disease pressure from the preceding cereal crop. Under dry conditions, following with a packer will firm up the seed to soil contact and help retain moisture for better emergence. Manure can be applied immediately at planting and incorporation will capture more of the readily available nitrogen in the manure.

Strip grazing by cattle or sheep can be as efficient or even better than cutting and baling the cover crop. Cereal crops seeded as a cover or second crop are usually ready to begin grazing about 45 to 60 days after planting. They should be grazed before the cereals reach the head stage as forage quality will then begin to decline.

Does late fall/winter grazing compact the soil?

Research from Nebraska with beef cattle showed winter grazing crop residues had no significant effect the following year on grain crop yields, and additional tillage was not required. However, spring grazing increased the soil's bulk density and decreased water infiltration rate, therefore cattle should not graze crop residues in March.

Figure 3: A Cover Crop Can Yield a Significant Amount Of Forage

There are several benefits to using cover crops following a cereal crop. They protect the soil from wind and heavy rains in the fall months before freeze up, build soil organic matter, and the livestock component improves nutrient cycling. With crops like red clover, nitrogen can be fixed for the following crop. It also gives the livestock farmer a place to spread manure in the late summer and reduces the nitrogen that could be lost to the environment. The direct economic benefit to the livestock farmer is the extra feed produced from the same land base. This allows the producer to get more forage from the land, rather than using more land!

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Branded Beef Programs From Gencor Foods

Alain Lajeunesse
Procurement Manager, Gencor Foods Inc.

Gencor Foods Inc. (GFI), formed in 2003, is a division of Gencor, a farmer directed AI cooperative based in south western Ontario. Gencor purchased the former MGI processing facility in Kitchener (now Gencor Foods Inc.) for two reasons: to provide an Ontario solution to the cull cow crisis resulting from BSE export bans, and to establish an integrated link in the meat industry from the farmer's gate to the consumer's plate. The operation of this federally inspected beef processing plant helped producers get more value for their animals during the cull cow crisis and continues to be a critical element in the cow processing sector.

GENCOR FOODS INC.

Figure 1: Gencor Foods Inc. logo

After concentrating on the processing and marketing of cull cows, Gencor Foods is now undertaking initiatives in the fed cattle sector to enable the plant to run at full capacity and also diversify the business. Development of the "gate to plate" production/marketing concept has culminated in Gencor Foods offering three unique fed cattle branded beef programs to producers:

1) GFI Premium Angus Beef
2) Laura's Lean Beef (A and AA focus)
3) GFI Natural Harvest Beef (AAA focus).

GFI Fed Cattle (UTM) Lease Hook Program

GFI developed the lease hook program as a way to establish a relationship between the plant and committed producers. The hook fee, which the plant uses to offset borrowing and market development costs, is considered an operational expense for producers. GFI pledges to treat lease hook holders as if they are 'owners' of the business. Producers have the option to use a treasury hook ($17/hd) or purchase a 3 year UTM (under thirty months of age) hook for $15/hd/year (total $45). The ultimate goal for GFI is to run a long-term successful producer directed business.

GFI Premium Angus Beef Program

This program has been running successfully since the fall of 2006. The GFI Premium Angus Beef brand is designed to consistently provide a tender and flavourful product for consumers. We are pleased that this product has replaced US Choice beef in some retail outlets.

Figure 2: GFI Premium Angus Beef

Program Criteria (in brief):

1. All cattle must be at least 51% Angus breed purity (black or red). This will be evaluated by visual assessment and/or genotype testing by Gencor Foods.
2. This program excludes the use of these specific growth implants: Component TE-S/TE-H (Elanco Animal Health), Synovex Plus (Wyeth Animal Health) and Revalor S/H/200 (Intervet). All other implants are allowed, but must be used according to label recommendations.
3. All animals to be fed a minimum of 500 IU of Vitamin E per head per day for at least 100 days before slaughter.

4. Base rail price established weekly. Target carcass weight 600-900 lbs with no discounts for heifers.
5. 3 cent premium for AA YC 1, AA YC 2, AAA YC 3 carcasses; 6 cent premium for AAA YC 1, AAA YC 2 and all Prime carcasses.
6. A $17 or $15/hd hook fee will be deducted.

Laura's Lean Beef Program

Laura's Lean Beef (LLB) is the largest 'Natural' Beef brand in the US market. LLB has been in business for over 20 years and in 2006 had retail beef sales over 110 million. LLB has been active in Western Canada for the past two years. Gencor Foods will provide federal processing and act as the supply agent for Eastern Canada. We are very excited to work with an established brand such as Laura's Lean Beef!

LLB is looking for high yielding, lean cattle to grade A or AA for their program. Cattle that work well generally have at least ¾ continental genetics in their breed makeup. Breeds that do well in their program include: Limousin, Charolais, Piedmontese, Simmental, Gelbvieh and Blonde d'Aquitaine. GFI and/or LLB procurement staff will be available to inspect all cattle before they begin the finishing phase.

Laura's Lean Cattle Specification (in brief):

1. Excludes the use of antibiotics, ionophores and growth hormones for the entire life of the animal.
2. Excludes the use of animal byproducts in the feeding program.
3. Cattle must be age and source verified to birth. Affidavits will be used to track and certify animals on the program.
4. Cattle must be fed 500 IU of vitamin E/hd/day for 100 days prior to slaughter.
5. Cattle must be under 30 months of age at slaughter.
6. Cattle must be fed Tasco-14 ™ at 2% ration DMI for the last 10 days before slaughter. Tasco is a seaweed product that has been shown to reduce E. coli shedding in manure.

Laura's Lean Beef Premium Potential for Producers

LLB recognizes the importance of cow/calf producers to this program. Cow/calf producers supplying a minimum of 35 calves qualifying for the LLB program will receive 35% of the finisher's bonus grid on those calves. The cow/calf producer will also get a detailed carcass report of the calves supplied.

- Weekly rail price for both steers and heifers. LLB will add a premium of 10 cents/lb over the base price.
- LLB will also apply the finisher's bonus carcass grid. The grid is designed to reward A and AA carcasses with high meat yield.
- LLB will also pay up to $30/hd trucking to Gencor Foods.
- LLB will pay the GFI hook fee of $17/hd.

Gencor Foods will begin processing cattle for LLB once we acquire a minimum of 20 head of finished cattle per week. GFI will work with producers to help facilitate arrangements to supply LLB cattle.

Figure 3: Processed Carcasses

GFI Natural Harvest Beef Program

GFI Natural Harvest has very similar criteria as Laura's Lean, but the desired carcass grade is AAA. This program does not have specific genetic requirements for continental breeds. GFI will automatically take all AAA carcasses out of the LLB program and market them in the Natural Harvest Program.

GFI Natural Harvest Cattle Specification (in brief):

1. Excludes the use of antibiotics, ionophores and growth hormones for the entire life of the animal. Note: Deccox® (Alpharma) will be allowed to be used as a coccidiostat.

2. Excludes the use of animal byproducts in the feeding program.
3. Cattle must be age and source verified to birth. Affidavits will be used to track and certify animals on the program.
4. Cattle must be fed 500 IU of vitamin E/hd/day for 100 days prior to slaughter.
5. Cattle must be under 30 months of age at slaughter.
6. Producers must attend the OCA Quality Starts Here/VBP training workshop. Prior to shipping cattle into Gencor Foods producers must successfully complete the on-farm audit from OCA Quality Starts Here/VBP.

GFI Natural Harvest Premium Potential for Producers

The desired carcass grade is AAA with a hot dressed weight range of 600-900 lbs.

- Weekly rail price for both steers and heifers.
- Premium of 10 cents/lb over the base price.
- A $17 or $15/hd hook fee will be deducted.

We will begin processing cattle for the Natural Harvest program at the same time as we begin processing cattle for LLB. GFI Natural Harvest is designed to compliment LLB and to help provide producers with better returns on these 'natural' AAA carcasses. GFI will work hard to develop the Natural Harvest brand and increase the premium potential for producers.

For additional information or complete program details visit our website www.gencorfoods.ca or call the GFI Procurement Department 1-866-744-7182.

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Combating Chilled Calf Syndrome

Tom Hamilton
Beef Program Lead, Production Systems
OMAFRA

How was your calving season? It's the most exciting time of the year on most Ontario beef cow-calf farms! When calving is in full swing and the crop of wobbly calves struggling to keep up with the herd, the mood on the farm is positive. With good momma cows, good management and good weather, your production season was off to a great start. Oh, did I say good weather? Excellent point … while we know our cows and are confident in our management ability, the weather remains remarkably unpredictable. While we expect extremely cold temperatures in February, March should give us a break. However this year, the first week of March brought -30C in north eastern Ontario, while in Walkerton, in the south central part of the province, overnight lows touched -25C! These were much colder than the normal overnight lows for these locations for this time of the year, which are -12C and -9C respectively.

With this kind of cold snap, if calving occurs outside of a warm structure, the calf will die of hypothermia if it is not quickly retrieved and warmed up. Cattle have not evolved to calve in these frigid conditions. Wild populations of similar animals such as moose, deer and bison, would not even think about calving in March (or even April) under our climatic conditions! They wait until May and June, when temperatures are warm and feed is plentiful and nutritious. As well, their births are not attended by obstetrical staff. Even so, they are usually able to deliver their newborn and get it mothered up without help.

Back to the barn. If we choose to calve in winter or early spring, we have to be prepared. Sheltered, well bedded calving barns or pens are a must (warmed with at least cattle body heat). This is especially true when the conditions turn ugly, like extremely cold temperatures, strong wind chill values, freezing rain, or the dreaded liquid rain at +1C. Why are these conditions so devastating? The answers lie in physiology, geometry and the physics of heat flow.

Compared with adult cattle, calves are relatively small animals. Due to the mathematical relationship between volume and surface area, small animals have a much greater surface area relative to their volume than do large animals. Heat loss is directly related to surface

area, but heat production is related to body volume. This means that small animals are at an extreme disadvantage in cold conditions.

Compared to large animals, they lose heat to the environment at a much faster rate, relative to their ability to produce heat from normal metabolism. When wind becomes a factor, heat loss is exaggerated as the constant stream of cold air pulls heat away from the calf's surface. When it rains in cold weather, the effect doubles. A wet hair coat loses its insulative properties, and moisture evaporating from the calf consumes a remarkable amount of body heat in the process. Combine any two of: cold air temperature, wind, or a wet calf and you have the recipe for hypothermia and death.

Since calves are born covered with fluid, they are already prone to chilling. Attentive mothers will immediately lick their calf to dry it off, stimulate blood flow, and encourage it to get up and start nursing. Any time lag between birth and drying puts the calf at risk … and even the best mom can't deal with -30C or severe wind chill.

So what can you do to combat chilled calf syndrome? Researchers at the University of Alberta[1] conducted experiments to determine the best methods of warming a chilled calf. The calves were experimentally chilled to a rectal temp. of 28C. Then the calves were placed in a 20C room, and rewarmed using one of four-methods. These included: a warm water bath; vigorously rubbing the calf dry and wrapping it in a blanket; or vigorously rubbing the calf dry and warming it with two 250 watt heat lamps. They found that the warm water bath was the most effective treatment, taking about 1 hour and 20 minutes to bring rectal temperature back to normal (38C). Both the blanket method and the heat lamps were effective at raising the calves' body temperature, but these methods were slower, taking about 2 hours and 20 minutes.

Although the water bath method was most effective, it is also the most difficult to manage. You need to start off with cool water and gradually add warm water to achieve a water temperature of 38C. The calf needs constant attention to make sure it doesn't drown. The researchers recommend the water bath method for severely hypothermic calves or for those born prematurely and mildly chilled. For mildly hypothermic calves, the blanket or heat lamp methods should be adequate.

Many variations of "calf warming boxes" have been tried over time, with variable results. Extension specialists at the University of Nevada[2] reviewed a number of studies and concluded that in order to be safe and effective, these devices need to have a circulating fan, a thermostatically controlled heat source, and a ventilation port in the top which allows super humid air to escape. Without these features there is a significant risk of scorching the calf, overheating the calf and subjecting the calf to high humidity, which predisposes it to pneumonia.

Saskatchewan experts[3] suggest using a rectal thermometer to help pick out mildly hypothermic calves. They note that chilled calves are not able to effectively absorb fluids, so warming the calf before feeding is a must. With a mildly hypothermic calf, feed warmed colostrum when it is alert and able to suck. With severely chilled calves, you may have to tube feed them with an esophageal feeder even after they are well on the way to warming up. They may also benefit from a commercial oral electrolyte designed to counteract acidosis.

Always consult your veterinarian for recommendations specific to your situation.

Happy Calving !

1 University of Alberta, Dairy Research Center publication, Rewarming Chilled Calves, by Barry Robinson, Ph.D., Great Northern Livestock Consulting Ltd. [with Dr. Bob Christopherson and Dr. Bruce Young, University of Alberta]

2 Adapted with permission of University of Nevada Cooperative Extension from its publication, Care of Hypothermic (Cold Stressed) Newborn Beef Calves by Ron Torell, Bill Kvasnicka, Ph.D.; and Ben Bruce, Ph.D., University of Nevada Cooperative Extension specialists, CL 788.

3 Adapted with permission of the Farm Animal Council of Saskatchewan from its publication, Cattle FACS: Calf Scours Overview, General Principles.

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Beef Cow-Calf Analysis Highlights For 2005

Brian Lang, Veal Specialist, OMAFRA

The 2005 Beef Cow Summary from the Ontario Farm Management Analysis Program (OFMAP) summarizes income and expenses as well as some production data for 49 cow-calf farms in Ontario. The results show wide variation amongst beef cow farms in scale of enterprise, net income per farm and net revenue per cow (Table 1). While the overall average for Net Farm Income (NFI) was negative (a loss of $305), the top 1/3 group of farms had an average NFI of $35,131, while the bottom 1/3 had an average NFI of -$33,219.

Why the large difference between these groups? An overview of the numbers highlights a few of the probable reasons. As shown in Table 2, the high NFI group had more cows (119) compared to the average (81) and the low NFI group (60 cows). With about twice the number of cows, the high NFI group sold about twice the value of market and feeder animals as the low NFI group. The high NFI group also sold a greater value of breeding livestock, other livestock and other sales. All of these factors contributed to the advantage in NFI associated with the larger scale operations. Interestingly, the number of calves weaned per cow was almost identical for the three groups, indicating that reproductive efficiency and calf survival rate were likely not important factors influencing the differences in NFI among the groups.

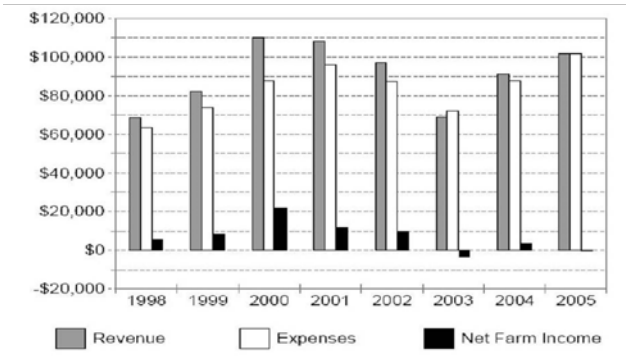

Figure 1: Expenses, Revenue and Net Farm Income, Ontario Beef Cow Farms, 1998 – 2005*

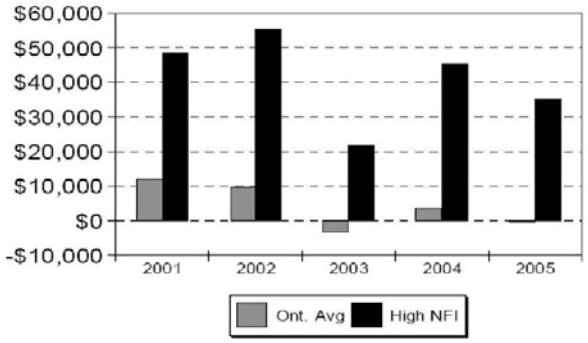

Figure 2: Average Net Farm Income Compared to Highest 1/3 NFI Farms, 2001 – 2005*

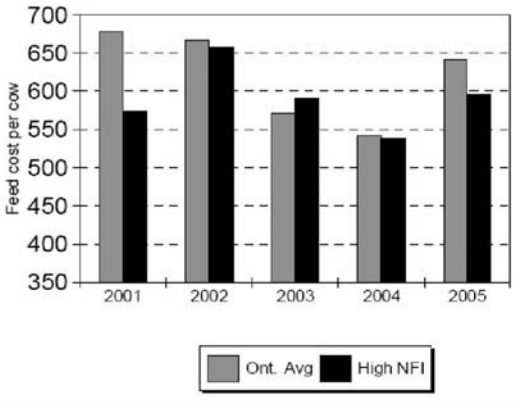

Figure 3: Feed Cost Per Cow, Average Net Farm Income Compared To Highest 1/3 NFI Farms, 2001 – 2005*

*Data from the Ontario Farm Management Enterprise Analysis Program

The high NFI group generated $106 more per cow in cattle revenues than the average, and $293 more than the low NFI group. In addition to having higher income per cow, the high NFI group also had lower expenses. They had $50 less per cow in variable expenses than the average NFI group, and $158 less than the low NFI group. Feed costs were the biggest single reason for these differences. As well, the fixed expenses for the high NFI group were $8 and $50 per cow lower than the average and low NFI groups respectively.

On the crops side of the operations (Table 3), there was very little difference among groups in expenses per tillable acre. However, the high NFI group produced $27 more per acre than the average group and $47 per acre more than the low group. Most of the crops were fed to the livestock on the farm for all 3 groups.

It's always interesting to look at trends over time. Figure 1 shows a graphical summary of average revenue, expenses and net farm income for OFMAP data collected for 1998 to 2005. Figures 2 and 3 compare the High NFI group with the Ontario average for NFI income and feed costs per cow, respectively for the years 2001 to 2005.

The complete report can be found on the OMAFRA website at:
http://www.omafra.gov.on.ca/english/busdev/download/ofmap.htm

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Table 1: Summary Of Farm Management Data For Ontario Beef Cow Farms, Beef Cow Enterprise Basis, 2005*

Net Farm Income Category	Low 16 Farms	Avg 49 Farms	High 16 Farms
Average Number of Cows	60.1	81.2	118.9
Calves Weaned	52.8	70.5	102.2
Cows per Person (whole farm)	60.1	81.2	99.1
		$ per Cow	
Cattle Sales less Purchases	595	624	648
Change in Inventory & Receivables	-98	60	141
Feed Costs including Home Grown	713	641	595
Other Variable Expenses	327	291	288
Total Fixed Costs	165	133	126
Beef Enterprise Net Revenue	-708	-382	-219

*Data from the Ontario Farm Management Enterprise Analysis Program

Table 2. Summary Of Farm Management Data For Ontario Beef Cow Farms, Whole Farm Basis, 2005*

Net Farm Income Category	Low 16 Farms	Average 49 Farms	High 16 Farms
REVENUE			
Market Livestock	3,300	11,690	12,322
Feeder Livestock	26,770	39,282	63,850
Breeding Livestock	4,050	4,998	11,142
Cull Livestock	2,928	1,686	1,107
Other Livestock	9,518	17,887	37,619
Crop Sales	4,143	5,623	6,578
Other Sales	7,156	13,613	27,898
Total Cash	57,762	94,779	160,516
Changes in Inventory and Receivables	-5,995	6, 755	19,059
Total Farm Revenue	**51,767**	**101,534**	**179,575**
EXPENSES			
Purchased Livestock	5,776	9,682	14,126
Purchased Feed	6,613	7,227	10,957
Animal Health & Breeding	2,386	2,697	3,913
Other Livestock Expenses	1,033	4,019	10,968
Seed	2,790	2,239	1,716
Fertilizer & Lime	6,190	5,743	5,675
Other Crop Expenses	1,584	2,316	1,943
Marketing & Transportation	3,454	4,779	8,009
Custom Work & Equipment Rent	2,913	4,187	7,975
Hired Labour	874	1,958	2,870
Machinery & Equipment - Fuel	6,554	7,688	10,654
Machinery & Equipment - Repairs	6,924	6,894	7,974
Motor Vehicle Expenses	1,586	1,801	1,818
Building, Fence Repairs	1,505	2,967	5,310
Electricity & Telephone	2,958	3,126	4,282
Accounting, Office Expenses	2,074	1,650	1,866
Property Taxes, Fire & Liab Insurance	3,688	4,196	6,254
Lease & Rent Payments	2,027	2,835	4,712
Interest	4,973	5,657	8,417
Other Cash Operating Expenses	1,989	3,610	7,177
Depreciation	16,825	16,528	17,828
Total Farm Expenses	84,986	101,839	144,444
NET FARM INCOME	-$ 33,219	-$ 305	$ 35,131

*Data from the Ontario Farm Management Enterprise Analysis Program

Table 3: Summary Of Farm Management Data For Ontario Beef Cow Farms, Crops Enterprise Basis, 2005*

Net Farm Income Category	Low 16 Farms	Avg 49 Farms	High 16 Farms
Tillable Acres	397	435	487
$ per Tillable Acre			
Crops Fed to Livestock	99	110	135
Crop Sales & Inventory Change	8	16	19
Crop Variable Expenses	58	59	62
Crop Fixed Expenses	41	39	40
Crop Enterprise Net Income	9	29	52

*Data from the Ontario Farm Management Enterprise Analysis Program