AgriProfit$

Newsletter for Alberta Cattlemen

Economics Unit

Editor's Corner

Previous issues of the AgriProfit$ newsletter focused on broader management, economics and marketing topics. By now, you probably have plenty of questions about how to apply some of this material on your farm. So, in this issue's feature, I sketch out a practical application for evaluating a change to a feeding system.

In this month's *"So What ...?"* column, Darren Chase provides a summary of Harlan Hughes' recent presentations on the relationship between management systems and unit production costs.

In upcoming issues we'll go in search of the "silver bullet" ... looking for key management areas to focus on to improve the profitability of your cow/calf enterprise.

Dale A. Kaliel,
Editor

Let's Sharpen Our Pencils!

Dale A. Kaliel
Sr. Economist: Production Economics

Over this fall and winter, I've had many opportunities to speak with Alberta cow/calf producers about strategies they can use to manage their cow herds for profit. Sooner or later, the discussion turns to the question, "What's that one key thing we should focus on to ensure profitability?"

Some of the analyses we've been doing, using the AgriProfit$ program data, suggests that there isn't a specific production or cost item we should single out. Many factors combine to make each producer's cost and returns profile unique to his own operation. If there is to be one key theme, it is to manage the herd to reduce the total cost of production per lb. of calf weaned.

If we're to focus on managing an individual input or cost area within the cow/calf profit center, the most likely place to start is with winter feed costs. In this article, I'll step through:

- a description of the range of feed costs we see across Alberta,
- statistical analysis of winter feed cost relationships, and
- a process to assess changes to feeds and feeding systems for your cow herd.

Industry Statistics

From the AgriProfit$ benchmark reports, (at www.agric.gov.ab.ca/economic/product/cow_calf/index.html) I've summarized a few production and economics statistics to show the importance of feed costs in the overall cow/calf cost and returns profile.

Table 1: Alberta Cow/Calf Enterprise Economic Statistics - 1999 by Grass Type & Provincial Totals for the Average & "Top Profits" Groups

		Average	"Top Profits"
Feed & Bedding Costs ($/Cow)	Min	$139 (FG)	$134 (MG)
	Max	269 (PL)	262 (PL)
	Alberta	204	171
% Feed & Bedding of Total Production Costs	Min	26%	28%
	Max	37%	38%
	Alberta	35%	35%
Feed, Bedding & Pasture Costs ($/Cow)	Min	$279 (MG)	$262 (MG)
	Max	358 (BT)	340 (PL)
	Alberta	320	288
Feeding Season (days)	Min	155 (MG)	152 (MG)
	Max	201 (BT)	203 (BT)
	Alberta	179	175
Tonnes Fed per Cow (as - fed)	Min	2.0 (MG)	1.9 (MG)
	Max	5.1 (BT)	4.5 (BT)
	Alberta	3.6	2.9
Labour Hours per Cow	Min	6.4 (MMG)	5.8 (MMG)
	Max	12.8 (PL)	12.3 (PL)
	Alberta	8.4	6.3

Regions / Grass-Types:
MG = Mixed Grassland
FG = Fescue Grassland
MMG = Moist Mixed Grassland
AP = Aspen Parkland
BT = Boreal Transition
PL = Peace Lowland

Source: Economics Unit, AFRD, AgriProfit$ Cost & Returns Program, 1999

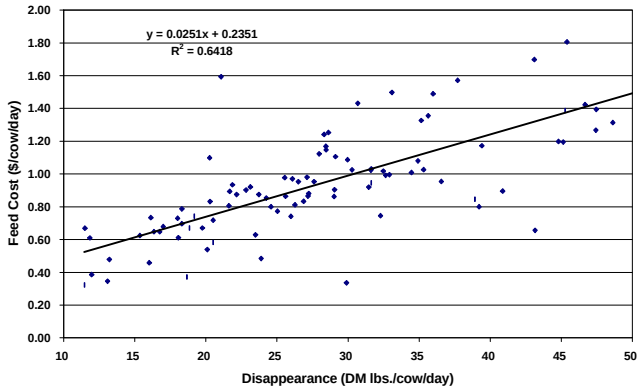
From these reports, we can see that:
< there's up to $130 difference in average winter feed and bedding costs per cow across Alberta,
< feed and bedding costs constitute from one quarter to one third of total production costs,
< feeding seasons differ, on average, by up to 45 days from one corner of Alberta to the next,
< tonnes of feed provided to the cow herd, albeit stated in as-fed quantities, vary significantly, and
< labour use differs by about 4 hours per cow in different production locales.

The variation within the province in these few factors is considerable. **And** ... where there's variation, there's opportunity to fine tune ... which means a few extra dollars in producers' pockets.

What Does the Research Say?

This past fall, Jeff Millang (Beef Specialist, Olds) and I took a more in-depth look at some of the 1999 Alberta and Saskatchewan herd data. Our focus was winter feed costs and "disappearance" of feeds. Figure 1 shows one of the relationships we developed from the statistical analysis.

Figure 1: Winter Feed Cost vs. Feed Disappearance (Dry Matter)



AgriProfit$ producers estimate total feed amounts given to their herds for the year. "Disappearance", then, includes both what was consumed and amounts wasted. Feed costs are the total value of feed divided by tonnes provided and days fed.

Eye-balling the statistical relationship, a saving of 1 lb. of feed dry matter/cow/day equates to roughly $0.025/cow/day. Over a 170 day feeding season, this amounts to $4.25 per cow. But how do we turn this analysis into a practical application?

Take a Hard Look

The statistical analysis shows that cost savings are available. The magnitude of potential savings gives us incentive to take a hard look at our operations to find sources of "slippage".

Where these "savings" opportunities lie is specific to each individual cow/calf operation. Is it:
< wastage,
< over-feeding,
< driven by our feeding facilities or equipment, or
< some combination or another source?

If you've got good estimates of the feed you use, you can examine opportunities to change what, how, and how much you feed your herd.

Get a Pencil - Do the Budget

Let's assume that you've found an area where you think that you can reduce your feed disappearance. How do you evaluate it? If it's an incremental change, or even a large change to your feeding system, it's likely that you'll find the "partial budget" a useful tool.

Dean Dyck (Farm Management Specialist, Red Deer) has provided a good overview of the partial budgeting process in AFRD's "Alberta Feedlot Management Guide". It involves objectively estimating the advantages (reduced costs or increased revenues) of a change in your operation compared to its disadvantages (increased costs or decreased revenues). If the difference is in favor of the change, you can move on to weigh other operational concerns and risks. Then, if you're satisfied with the benefits and decide to proceed, all that remains is to implement the change.

I've set up an example to illustrate the use of a partial budget to assess a feeding system change. The proposal is to use round bale feeders instead of feeding on the ground. Begin by detailing the current situation, specifying what will change.

The current situation is as follows:
< feeding 120 cows over a 170 day season,
< feeding 1,200 lb. round bales daily (at $60/ton)
< bales rolled out on the ground,
< feed amounts -- 10 bales every 3 days (3, 3 & 4)
< time to roll out bales -- 10 minutes each

What will change?

< require 3 bale feeders at $1,100 each (total present value considering salvage = $3,147)
< feed amounts -- 9 bales fed every third day (approx. 3 lbs. DM/cow/day saved)
< labour -- expect to spend 15 minutes/feeder/day forking in hay pulled out and left on the ground.

Each of the advantages and disadvantages, presented in Figure 2, are calculated out to an annual equivalent. The net advantage works out to $10/cow. Are we done? Not quite yet.

Why Would You Say "No"?

Figure 2: Partial Budget Feeding System Changes
Purchase Round Bale Feeders and Feed Every Third Day

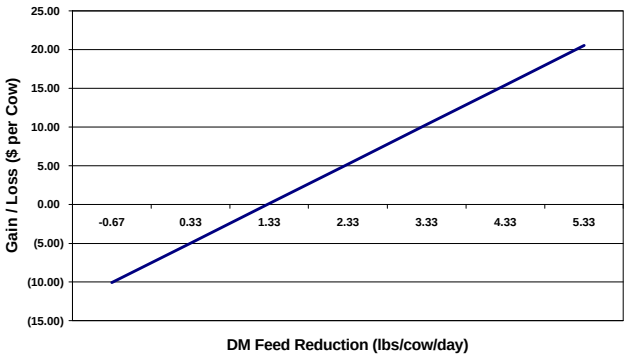
Added Revenues		Reduced Revenues	
n/a		n/a	
Reduced Costs		**Added Costs**	
Feed:		**Investment Cost:**	
34.0 tons @	$60 / ton = $2,040	$3,147 over	10 years @ 8% = $469
Labour:		**Labour:**	
0.6 hrs/day @	170 days @ $10 /hour = $944	0.8 hrs/day @	170 days @ $10 /hour = $1,275
	Total Advantages $2,984		Total Disadvantages $1,744

Net Advantage (Disadvantage) = $1,240
Per Cow = $10.34

Before you "leap" into the investment, there's the matter of risks and "other considerations". These are the things that don't show up on your budget but could have an impact on your decision to proceed.

For instance, what if you don't get the feed savings you originally estimated? The sensitivity of the proposal to the amount of feed saved is illustrated in Figure 3. Valuing hay at $60/ton, your room for error, and to cover any other unaccounted for costs lies in the range of 1.3 to 3.3 lbs of DM/cow/day.

Figure 3: Partial Budget Sensitivity Analysis
Varying Feed "Savings"



What about the impact of the change on your machinery operating costs for the feeding season? No change has been pencilled into the budget, even though the proposal calls for running the tractor every third day instead of every day.

Another longer term consideration relates to taking on more "rustables", or depreciable assets (ie. the bale feeders). We know that over the long term, cow/calf enterprises struggle with the burden of covering their overheads. By adding depreciable assets you saddle youself with an added long term cost.

These are just a few examples of the pro's and con's that should enter into your consideration of the budgeted change. The partial budget is a focused tool that gives a focused result. You need to keep sight of the external impacts of the budgeted change on your cow/calf enterprise and the farm as a whole.

Home Stretch

If you do decide to proceed, you need to take one further step. Given that you've made the investment in changing the system, follow up by monitoring the performance to see that it has done as well as expected and that it was worth the dollars and time spent. This step is as important as doing the original budget.

The partial budget can be a valuable tool to assess many changes you can undertake on your farm. Combined with your records, expertise and the information available from many sources, the challenge is to employ this management tool to give your cow/calf operation the competitive edge.

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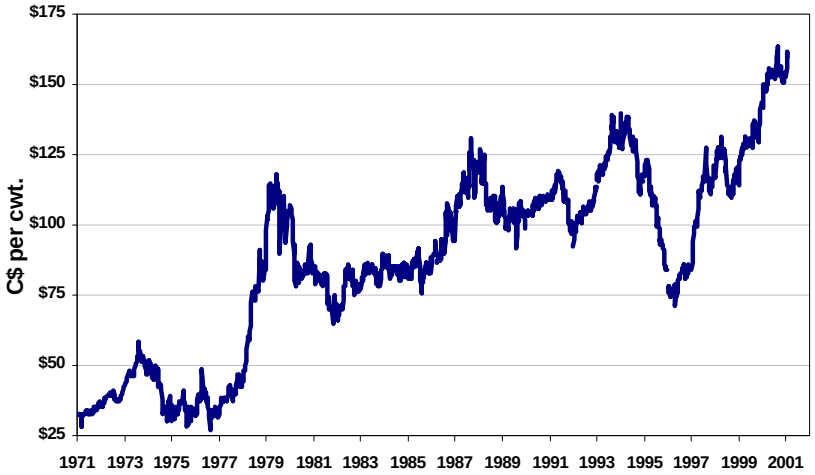
5-600 lb. Steer Calves

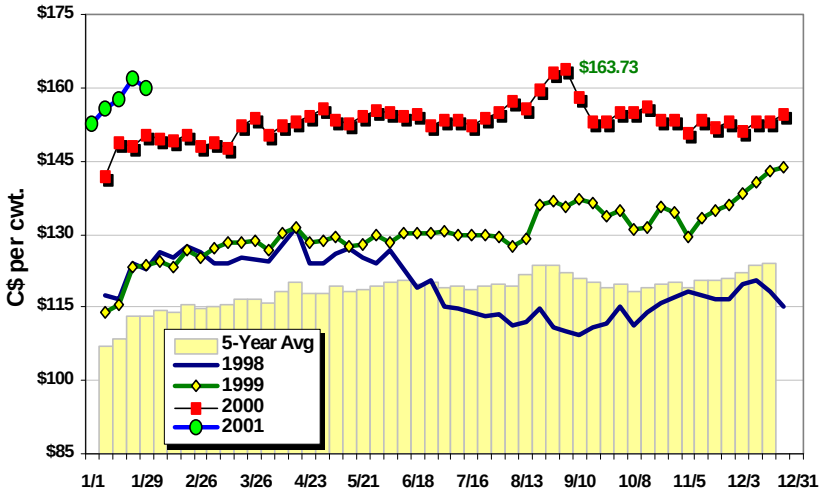
Weekly Average Northern Alberta Feeder Price



Source: Canfax Economics & Competitiveness Division, AAFRD

Northern Alberta 5-600 lb. Feeders

Weekly Average Steer Price



Source: Canfax; Economics & Competitiveness Division, AAFRD

We'd like your comments and questions about the articles featured in this newsletter. Suggestions for future issues are also welcome. Please contact me at:

E-Mail: dale.kaliel@gov.ab.ca Phone: (780) 427-5390
or, by mail at: 302, 7000-113 Street, Edmonton, Alberta T6H 5T6

AgriProfit$ If you'd like to learn more about and/or participate in our research program, please contact me at the above.

If you're interested in the CowProfit$ software, training or seminars, contact:
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So What .. Did Harlan Have to Say?

Harlan Hughes recently did a tour of producer workshops in Southern Alberta, finishing off as a feature speaker at the Western Canadian Grazing Conference in Red Deer. The focus of his presentations in Alberta was the economics of the cow/calf business on the prairies and his vision of the industry into the future.

Based upon his many years of experience working with northwestern US cow/calf producers, Harlan identified some evolving industry characteristics. In the not too distant future, the industry will:

- be driven by unit production costs,
- have information-driven management systems,
- involve a high degree of management intensity, and
- be information-based.

Within this context, Harlan described four basic management systems he observed in cow/calf operations. These revolve around creation and use of production and economic information for management. Information collected at each level was included in the next level. The following chart shows the relationship between management intensity and unit production costs.

The first level of management, Harlan described as "I just run cows". Sales receipts were the extent of records kept.

The second level was, "I weigh calves". In addition to sales receipts, records of calf weights (average or individual) were kept.

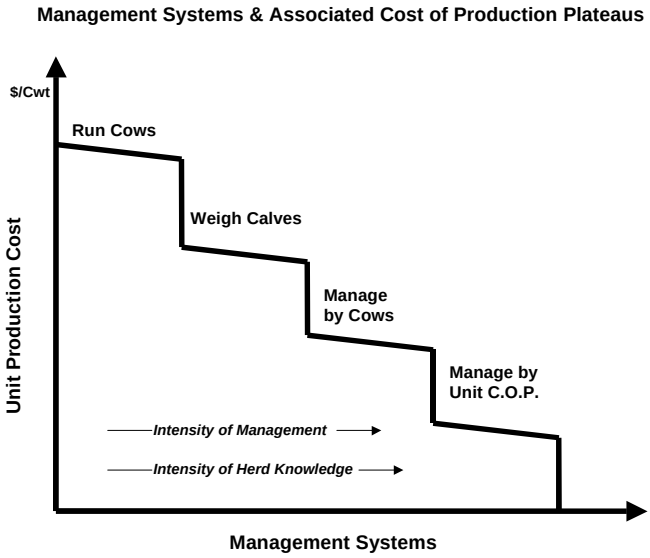
The third management level was "manage by cows", ie. cows were individually identified. Production information was compiled and used to measure and rank cow productivity over time.

Harlan's fourth management level was "managing by unit cost of production". Records are maintained, analyzed and used in management decisions -- driving at managing costs per cwt. of calf produced, both at an individual cow and herd level.

The key messages from Harlan's material are:

- producers tend to get locked in at a "management level", not recognizing that the "next step" is to increase the information they collect and use in their management,
- as intensity of management and herd knowledge increases, management control increases,
- cost identification leads to reduction in unit costs of production, and
- low cost herds are typically high profit herds.

So what level are you at in managing your cow/calf profit center?



A more detailed discussion of this topic can be found on Harlan's web-site at:
www.ag.ndsu.nodak.edu/cow/lsmanews/03-02-00.htm

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