Custom Grazing Profit$

Agdex FS420/821-2

. . . profit planning tools in an Alberta intensive grazing enterprise

Business Summary

This fact sheet provides economic information on establishing and operating a custom grazing enterprise beef cattle. The information was generated by a group of beef producers who arrived at consensus on investment, production, costs and revenues.

This enterprise is an intensive grazing enterprise handling 150 head on 160 acres.

This information is intended as a business planning tool. Managers will have to assess all of the key production and financial variables that would influence the success of their enterprise.

Production Targets

Average daily gain[1] (pounds/day)	1.75
Days on feed	120

The production program would custom manage beef cattle in an eight paddock system. No one grazing scheme is best for all situations. Stock density and frequency of grazing are more important than the kind of grazing schedule developed. Stock density refers to the number of animal units per acre at any one time and frequency, the length of grazing period and rest interval.

Rotational (short duration) grazing is the most versatile way to manage pasture production and control feed quality. The success of this system is related to having the stocking rate and forage production in balance plus allowing a sufficient regrowth period (three to five weeks) before re-grazing. Rotational grazing requires a high stocking intensity for a short period. If stock remain in a field too long, the more palatable regrowth is grazed prematurely, which decreases subsequent production.

If fields cannot be grazed uniformly, stock density should be increased either by increasing the number of animals or dividing the field. Fields are best divided according to topography, soil type and forage species present rather than by simply cross fencing the field into neat squares. Fencing is especially necessary to separate woodland from cultivated land, tame from native pastures and wetland from highland areas.

Capital Investment

This enterprise can be developed on either owned or rented land. Land leases should be a minimum of three years particularly when the pasture is established in the first year. Short term leases should require the land owner to pay a portion of the cost of grass seed based on a sliding scale. For example, a one year lease would have the owner pay 100% of the seed costs; a two year term would require the owner to pay 50% of the seed costs; a three year term would require the owner to pay 25% of the seed costs.

	Total
Facilities & Improvements	
Perimeter fence	$ 700
Cross fencing	$ 980
Fencer	$ 400
Batteries	$ 70
Voltage tester	$ 100
Hardware	$ 100
Total Facilities & Improvements	$ 2,350
Equipment	
Water system	$ 1,500
"Stock Doctor" dart gun	$ 500
Total Equipment	$ 2,000
Total Capital Investment	**$ 4,350**

Market Factors

Clients would own the cattle and be responsible for all marketing decisions as well as the risks inherent in the cattle market. At any time of year calf and feeder cattle prices vary for the different sexes, weight, types, frame sizes and conditions of livestock. Each class of livestock will have a different price range as it relates to the current demand for that class. Clients should research trends in the cattle market prior to selling cattle.

Financial Benchmarks

Total investment per head	$ 29.00
Return to labour & management[2] per head (5 year average)	$308.03

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Cash Flow Projections
Intensive Grazing Operation - 150 head

Cash flow must be looked at separately from revenue and expenses to assess the viability of the enterprise. Year to year variability in prices and costs will affect cash flow.

	Year 1	Year 2	Year 3	Year 4	Year 5
Cash Outflows					
Total Capital Investment	$ 4,350				
Total Cash Operating Costs	$15,938	$ 8,450	$ 8,450	$ 8,450	$ 8,450
Establishment Costs	$12,880				
Personal Withdrawls	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Annual Debt Payments	$ 0	$ 0	$ 0	$ 0	$ 0
Total Cash Outflows	$34,168	$ 9,450	$ 9,450	$ 9,450	$ 9,450
Cash Inflows					
Borrowed Capital	$ 0				
Equity Capital	$ 4,350				
Total Revenues	$18,270	$12,600	$12,600	$12,600	$12,600
Total Cash Inflows	$22,620	$12,600	$12,600	$12,600	$12,600
Net Cash Revenues	($11,548)	$ 3,150	$ 3,150	$ 3,150	$ 3,150
Cumulative Cash Flows	($11,548)	($ 8,398)	($ 5,248)	($ 2,098)	$ 1,052

A detailed annual production plan and inventory is available in the publication "A Consensus of Costs and Returns - A 150 Head Intensive Grazing Operation in Central Alberta". This publication will be released in fall 2002 from Alberta Agriculture, Food and Rural Development.

Critical Cost Factors

A well planned fencing system and grass establishment are important management factors for intensive grazing enterprises.

Fencing System

There are three key requirements when planning a fencing system:

- Loading facilities are necessary, particularly for loading the cattle off the pasture. Most operators rent portable facilities for approximately $500 per year rather than incur the cost of constructing these facilities.
- Access to some type of training pen is advisable so cattle going to pasture can be conditioned to respect the electric fence. This conditioning process should take place in corrals or pens before the cattle are turned out on the grass. Cattle can be conditioned by renting portable panels or taking the electric fencing unit to the corrals where the cattle are kept prior to being put out on grass.
- Yearling beef cattle will require seven gallons of water per head per day. An effective system to provide this amount of water is a necessity. This could include using an existing water source on the pasture, developing a pipe-line to run the water source to a central watering area, developing a dugout or hauling water.

Grass Establishment Costs

A grass stand is expected to be productive for 5 years. Total establishment costs must be prorated over this time period.

Item	$/acre	Acres	Total Cost
Zero till drill (custom)	$ 11.50	160	$ 1,840
Grass seed	$ 35.00	160	$ 5,600
Starter fertilizer	$ 30.00	160	$ 4,800
Roll (custom)	$ 4.00	160	$ 640
Total Establishment Costs			$12,880
			$ 2,576 per year

Snapshot Enterprise Budget
Intensive Grazing Enterprise - 150 head (year 3)

Projected Revenues	Days	ADG (lb/hd/day)	$/lb gain	**Revenues**	**Your Snapshot**
Grazing Revenues	120	1.75	$0.40	$ 12,600	
Total Projected Revenues				**$ 12,600**	
Projected Direct Costs					
Fuel				$ 200	
Repairs & upkeep				$ 25	
Cash rent				$ 5,600	
Panel rental				$ 500	
Truck cost				$ 1,800	
Interest on operating [3]				$ 325	
Annual establishment cost				$ 2,576	
Total Projected Direct Costs				**$ 11,026**	
Projected Indirect Costs					
Land taxes, licences & insurance				$ 0	
Operator labour[4] (860 hours at $15/hour)				$ 10,400	
Depreciation[5] of facilities & improvements				$ 479	
Depreciation of equipment				$ 314	
Total Projected Indirect Costs				**$ 11,194**	
Total Projected Direct & Indirect Costs				**$ 22,220**	
Gross Operating Profit				**($ 9,620)**	
Interest on Investment[7]					
Facilities & improvements				$ 59	
Equipment				$ 50	
Total Interest on Investment				**$ 109**	
Total Projected Economic Costs				**$ 22,328**	
Return To Management[8]				**($ 9,728)**	

Sensitivity Analysis

The profitability of a custom grazing operation will be strongly influenced by the average daily gain of the cattle and the price charged per pound of gain.

The following table shows the effect of the return to labour and management with changes to the average daily gain and price per pound of gain.

Average Daily Gain	Price per Pound of Gain $0.35	$0.40	$0.45
1.50	($2,369)	($1,019)	$ 330
1.60	($1,739)	($ 299)	$1,140
1.75	($ 794)	$ 780	$2,355
1.85	($ 164)	$1,500	$3,165
2.00	$ 780	$2,580	$4,380

Definitions

[1] Average daily gain: The gain in weight over a period of time divided by the time span in days.
[2] Return to Labour & Management: The amount remaining to compensate the owner-operator for labour, risk and management.
[3] Interest on operating: The interest on an operating loan, estimated to be $8,125 at 8% for 6 months.
[4] Operator labour: Labour contributed by the owner-operator, valued at $20/hour. Not a cash cost.
[5] Depreciation: The reduction in the value of an assets over its lifetime.
[6] Gross operating profit: The amount remaining after paying direct and indirect costs.
[7] Interest on Investment: The cost of investing in capital assets rather than in a financial investment. Valued at 5% on all asset categories.
[8] Return to Management: An amount left to compensate the owner-operator for risk and management.

Risk Factors

Individual operators must address the following risk factors:

- Variability in feed prices
- Variability in the cattle numbers
- Variability in average daily gain

Management Strategies

Key management strategies for an effective custom grazing agreement:

- The agreement should be in writing and specify when payment will be made. Monthly payments together with an up front deposit is the most effective.
- The type, weight and stocking rate of the cattle should be established before the cattle arrive on the pasture.
- Issues such as the number of days that the cattle will be on grass, responsibility for death loss, an acceptable quality of cattle, dealing with shrink and alternate arrangements if the grazer runs out of grass must be specified in the agreement.

For more information, contact:

Alberta Agriculture, Food and Rural Development
Production, Marketing, Economics and Business Planning - Contact the Alberta Ag-Info Centre at 1-866-882-7677 or visit our website at http://www.agric.gov.ab.ca

Publications

Alberta Forage Manual Agdex 120/20-4
Alberta Agriculture, Food & Rural Development

Beef Cow-Calf Manual Agdex 420/10
Alberta Agriculture, Food and Rural Development

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