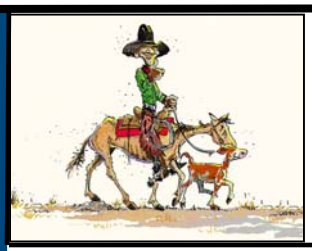

Swath Grazing
Interesting Concept, But Does It Pay?

Economics & Competitiveness

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Swath grazing isn't new. Some producers have been using this feeding technique for years and swear by it. Others aren't so convinced. Whether or not it will work for an individual boils down to answering the question, "does it pay?"

Until now, the economics surrounding swath grazing have not been clear. During the winter of 2001, an ***AgriProfit$*** analysis was undertaken to get a few harder numbers for beef producers to ponder. Working with a group of producers located in Central Alberta (basically along Highway 2 between Calgary and Edmonton), the analysis formed a realistic snapshot of the dollars and cents of swath grazing cattle.

Getting the Numbers

Since swath-grazed forages range from perennial forages to barley to corn, for clarity, the analysis focused on the more common practice of grazing annual crops. Perennial forages were excluded.

Also, only intensively managed operations were considered. Each of the producers involved in the project actively moved electric fences every few days to control access to swaths. Simply turning cattle out onto swaths did not fit the definition of swath grazing for the purposes of the analysis.

How Much Does It Cost?

A cost profile for swath grazing annual cereal crops is provided in Table 1. This is a group average of 11 swath grazing fields averaging 53.82 acres in size. It includes a mixture of annual cereal crops, including barley, oats, wheat, rye, and Italian rye grass. As the objective of swath grazing is to feed cattle (ie. reduce the number of drylot feeding days), costs were measured not only on a per acre basis, but also by AUM (Animal Unit Month) and by AUD (Animal Unit Day).

An AUM is the standard unit for measuring grazing production. It is defined as the amount of dry matter required to sustain a 1,000 lb. cow (with or without calf) for one month. Similarly, an AUD refers to the amount of dry matter required to sustain the same cow for one day. It's equivalent to a head-day adjusted for animal weight.

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Table 1

2000 Swath Grazing Economic Costing Profile

Enterprise Summary

Crop Seeded: Dryland Annual Cereals

Acres Grazed: 53.82

Observations: 11

	$/Acre	$/AUM	$/AUD
(B) Variable Costs:			
1. Seed	9.53	1.25	0.04
2. Fertilizer	22.56	2.96	0.09
3. Chemicals	7.69	1.01	0.03
4. Crop Insurance Premiums	0.00	0.00	0.00
5. Supplemental Feed & Bedding	15.10	1.98	0.06
6. Fuel	10.73	1.41	0.04
7. Repairs - Machinery	5.80	0.76	0.02
8. Repairs - Buildings	0.48	0.06	0.00
9. Miscellaneous	2.55	0.33	0.01
10. Custom Work	3.90	0.51	0.02
11. Operating Interest	0.00	0.00	0.00
12. Paid Labour & Benefits	18.37	2.41	0.08
13. Unpaid Labour	16.59	2.17	0.07
Variable Costs	**113.31**	**14.85**	**0.47**
(C) Capital Costs:			
1. Opportunity Cost of Land	30.00	3.93	0.12
2. Lic. & Insurance	1.07	0.14	0.00
3. Equip. & Bldg. a) Depreciation	13.84	1.81	0.06
b) Lease Payments	2.46	0.32	0.01
4. Capital Interest Paid	2.62	0.34	0.01
Total Capital Costs	**49.99**	**6.55**	**0.21**
(D) Cash Costs (B+C-B13-C1-C3a)	**102.87**	**13.48**	**0.43**
(E) Total Production Costs (B+C)	**163.30**	**21.40**	**0.68**
Non-land Capital Investment:			
Buildings	9.34	1.22	0.04
Machinery	143.63	18.82	0.60
Total	**152.96**	**20.04**	**0.64**

Management Summary

Yield per Acre:		**Cattle Grazed:**	
Tons Grown (in swath)	3.19	Average herd size	208
AUM's Harvested	7.63	Average weight (lbs.)	1,350
AUD's Harvested	240.38	Average Grazing Days	46.17
Estimated Waste (% of original swath)	8%		

But Does It Pay?

The premise of swath grazing is to substitute a lower cost grazing system for higher cost drylot feeding the cow herd. Simply looking at a swath grazing cost profile will not show if it's a worthwhile venture. It's also necessary to contrast the swath grazing costing with the costs associated with drylot feeding.

Table 2

2000 Cow-Calf Winter Feeding Economic Cost Profile

Control Group for Swath Grazing Project

Cows Wintered: 169.31

Observations: 16

	$/Cow Wintered	$/AUD	$/day on feed
(A) Variable Costs:			
1. Feed & Bedding (@ total cost)	221.55	0.77	1.05
2. Fuel	12.51	0.04	0.06
3. Repairs - Machinery	14.62	0.05	0.07
4. Repairs - Buildings	13.66	0.05	0.06
5. Utilities (natural gas & electricity)	6.60	0.02	0.03
6. Custom Work	9.08	0.03	0.04
7. Operating Interest	8.65	0.03	0.04
8. Paid Labour & Benefits	2.81	0.01	0.01
9. Unpaid Labour	28.34	0.10	0.13
Total Variable Costs	**317.82**	**1.11**	**1.51**
(B) Capital Costs:			
1. Equip. & Bldg a) Depreciation	32.51	0.11	0.15
b) Lease Payments	1.63	0.01	0.01
2. Capital Interest Paid	9.84	0.03	0.05
Total Capital Costs	**43.98**	**0.15**	**0.21**
(C) Total Cash Costs (A+B-A9-B1a)	**300.95**	**1.05**	**1.43**
(D) Total Production Costs (A+B)	**361.80**	**1.26**	**1.72**

Investment:	$/cow wintered
Buildings	231.73
Machinery	233.95
Total Investment	465.68

Labour Summary:	hrs./day
Grinding/Mixing Feed	0.09
Feeding & Bedding	1.58
Manure Disposal	0.05
Repairs & Maintenance	0.75
Total	2.47

Management:	
Days on Feed	210.50
Average Cow Size (lbs.)	1,363
AUD's/Cow Wintered	286.49

Table 2 provides a costing profile for (conventional) drylot feeding in the same study region. Comparing these two profiles using a common denominator ($/AUD), it soon becomes clear that swath grazing can indeed cut feeding costs. According to these benchmark averages, at cost, swath grazing lowered the cow herd's winter feeding costs by $0.58/AUD in 2000.

So What's My Return Per Acre?

Reducing costs influences a farm's profitability just as effectively as increasing gross revenue. On one hand, consider that the benefit provided to a farm by the swath grazing enterprise is not the amount of crop grown; rather, it's the amount of money saved by using this feeding strategy.

Table 3 shows the cost-savings on a $/AUD basis for using swath grazing rather than feeding cows in a conventional drylot setting. Multiplying net benefits by the number of AUD's yielded per acre via swath grazing gives a return of $139.42/acre.

Table 3

Net Benefit of Swath Grazing vs Drylot Feeding

	Costs/AUD		Cost-Savings by Swath Grazing	
	Drylot Feeding	Swath Grazing	$/AUD	$/Acre
Variable Cost	1.11	0.47	0.64	153.84
Cash Costs	1.05	0.43	0.62	149.04
Total Cost	1.26	0.68	0.58	139.42

Swath Grazing Yield: 240.38 AUD's/acre

This brings up the "other hand", ie. consideration of the revenues that could be generated by raising a crop instead of taking the cost savings. In other words, if the land is paid "cost" for the swath grazing, then the best it can do is break even. The cow herd costing is artificially lower by paying less than market price for a feed source. But, as long as the reduced costs outweigh the reduced revenues for a harvested crop, then the farm, as a whole, has improved profitability. As land prices continue to move higher, getting the best return on the land base is crucial. Are returns per acre on barley better than $140/acre?

Too Good to Be True?

Swath grazing worked out extremely well during the 2000 season. With virtually no snow to limit access to swaths and only mild temperatures to contend with, estimated wastage was held to less than 10%. Also, the crops used for swath grazing averaged 3.19 tons/acre (hay equivalent) in the swath. These were by no means poor crops to begin with. Finally, the net benefit realized depends on how high drylot feeding costs are. If you can feed a cow in the pen for less than $1.72/AUD, then swath grazing will not yield as large a benefit to your farming operation.

So Now What?

Before jumping into swath grazing, it's imperative to estimate your own production costs ... both for swath grazing and drylot feeding. Consider, as well, the risks associated with severe weather conditions. What forage yield can you realistically expect? How much wastage will there be? What are the cash flow implications of not being able to graze the swaths at all?

Swath grazing has potential as a cost-saving feeding strategy. Knowledge of production costs and risks, put into a budget analysis, will help determine if it's the right strategy for you.

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