

AgriProfit\$

Benchmarks for Alberta Cattlemen

Economics & Competitiveness

Economic, Productive
& Financial Performance
Of Alberta
Cow/Calf Operations

Boreal Transition

Production Year - 2002

Jan. / 04



Foreword

This *AgriProfit\$ Cost & Returns Report* presents the productive, economic & financial performance of Alberta cow/calf producers in the Boreal Transition Region for the 2002 production year.

Field research was undertaken through Alberta Agriculture's *AgriProfit\$ Business Analysis & Research* program with the cooperation of producers in the region. The intent of this report is to benchmark three specific management groupings:

- a regional average including all participating producers in the Boreal Transition grass type.
- an average of the "top performers" within this region. These include the lower 50%* of producers in the region as ranked by unit costs.
- an average (or Provincial Total) of all producers in the research pool.

The primary value of this report is to enable producers to gauge their productive, economic and financial performance relative to their peers locally and provincially. Benchmark analysis, comparing to one's own detailed cost and returns analysis, is the first critical step in identifying operational strengths and weaknesses in a cow/calf operation.

Cost and returns profiles for common forage and grazing crops in the grass type / region are included in this benchmark report in order to put these profit centers into context with the cow herd profiles they support. A list of definitions for common terms employed in this benchmark report is also appended.

The map above illustrates the location of each grass type region within Alberta. This package only reports the results of one specific grass type region, along with comparisons to the provincial total. If you are interested in obtaining information on other regions, please contact the Economics Unit at:

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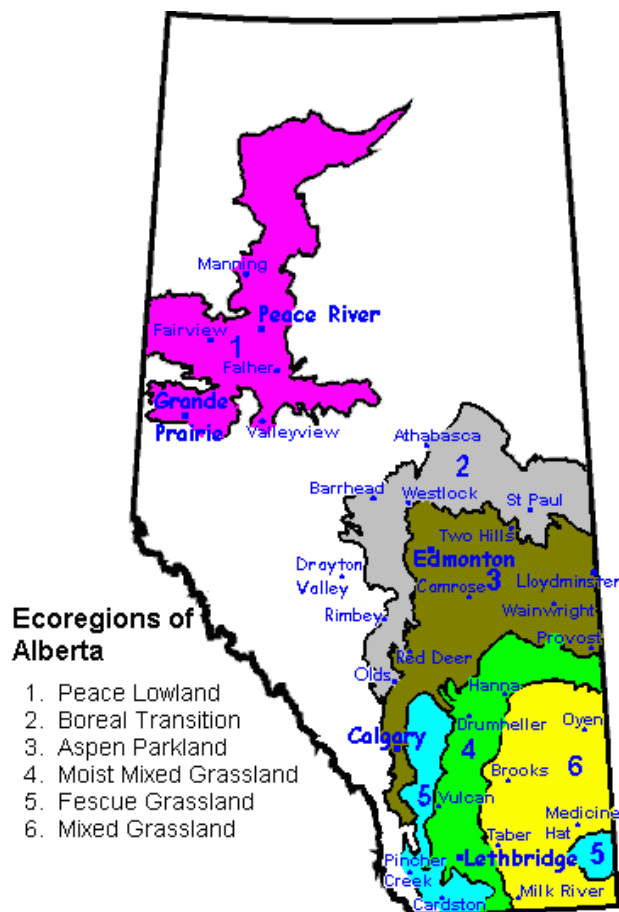
* For this analysis, total production cost per lb. weaned was the sole criteria for identifying the top management ("**Low Cost**") herds within the region. It should be noted, however, that there are several other factors that may contribute to the success of a cow/calf operation.

****Note:** The bulk of each of the regional and top 1/3rd group provided sufficient information to develop the farm financial benchmarks ... only these are used in the summary of farm financial performance. The productive & economic information is developed based upon the whole regional sample.

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Alberta Agriculture, Food & Rural Development
January-04



2002 Cow-Calf Enterprise Overview

Economic & Physical Performance Comparisons

Benchmark Comparables: Boreal Transition Average & Low Cost Groups; Alberta Total

Enterprise Type: Weaned-Calf

Economic Performance Indicators:

	\$ / Lb. Weaned		
	Grass Type	Low Cost	Alberta Total
Production Stock Sales	1.179	1.177	1.195
Value of Production	0.871	0.931	1.007
Winter Feed Costs	0.715	0.590	0.618
Bedding Costs	0.040	0.035	0.037
Pasture Costs	0.292	0.249	0.355
Labour Costs	0.128	0.120	0.126
Other Variable Costs	0.222	0.171	0.223
Depreciation & Capital Lease Payments	0.062	0.048	0.067
Other Fixed Costs	0.045	0.052	0.048
Total Cash Costs	1.351	1.124	1.323
Total Production Costs	1.504	1.264	1.475
Contribution Margin	(0.525)	(0.234)	(0.352)
Gross Margin	(0.480)	(0.193)	(0.316)
Return to Investment	(0.602)	(0.295)	(0.442)
Return to Equity & Management	(0.633)	(0.334)	(0.468)
Total Investment (\$ / cow wintered)	1,543	1,514	1,695

Physical Performance Indicators:

	Grass Type	Low Cost	Alberta Total		Grass Type	Low Cost	Alberta Total
Conception Rate (%)	90.0	91.8	90.6	Cows Wintered	270.5	286.4	238.7
Calving Rate (%)	99.4	100.1	97.8	Cows per Bull	27.4	28.2	20.7
Weaning Rate (%)	96.1	95.4	96.7	Labour Hours per Cow	6.7	6.7	6.2
Calf Crop (%)	86.1	87.7	85.5	AUM's/Cow Wintered	6.9	6.4	8.4
% Calved - 1st 2 Cycles	83.6	86.9	85.7	Feeding Season Days	212.4	213.1	181.5
Lbs. Weaned/Cow Exposed	491.3	520.9	463.5	Tonnes Fed per Cow			
Lbs. Weaned/Cow Wintered	531.1	548.0	505.5	- as-fed	5.8	5.0	4.7
Wean Wt as a % of Cow Wt.	45.3	48.3	43.4	- dry matter			
Weight per Day of Age (lbs.)	2.69	2.85	2.65				

	Grass Type	Low Cost	Alberta Total
G rowth (weaning weight)	570.3	594.1	542.2
O pen Cows (%)	9.0	7.9	8.6
L ength of Calving Period	119.2	119.3	107.8
D eath Loss of Calves (%)	3.2	3.7	3.3

2002 Cow-Calf Enterprise Overview

Economic & Financial Performance Comparisons

Benchmark Comparables: Boreal Transition Average & Low Cost Groups; Alberta Total
Enterprise Type: Weaned-Calf

Economic Performance Indicators:

	<i>\$ / Cow Wintered</i>		
	Grass Type	Low Cost	Alberta Total
Production Stock Sales	625.93	645.03	604.31
Value of Production	462.72	509.97	509.09
Winter Feed Costs	379.82	323.08	312.37
Bedding Costs	21.10	19.07	18.46
Pasture Costs	155.10	136.35	179.55
Labour Costs	68.05	65.66	63.93
Other Variable Costs	117.74	93.84	112.65
Depreciation & Capital Lease Payments	33.05	26.28	34.08
Other Fixed Costs	24.10	28.58	24.48
Total Cash Costs	717.47	615.79	668.74
Total Production Costs	798.96	692.86	745.52
Contribution Margin	(279.10)	(128.03)	(177.88)
Gross Margin	(254.75)	(105.83)	(159.65)
Return to Investment	(319.62)	(161.40)	(223.61)
Return to Equity & Management	(336.25)	(182.89)	(236.43)

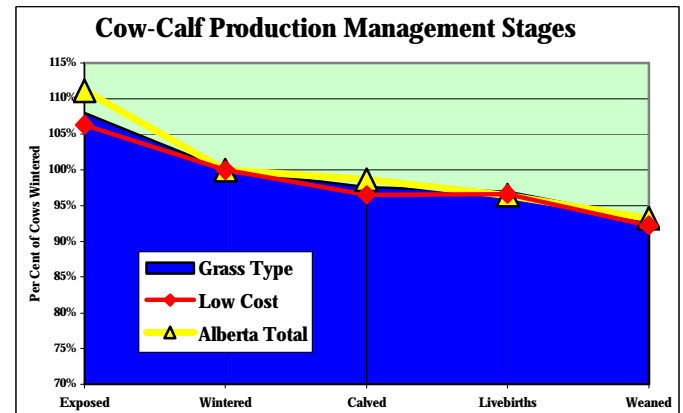
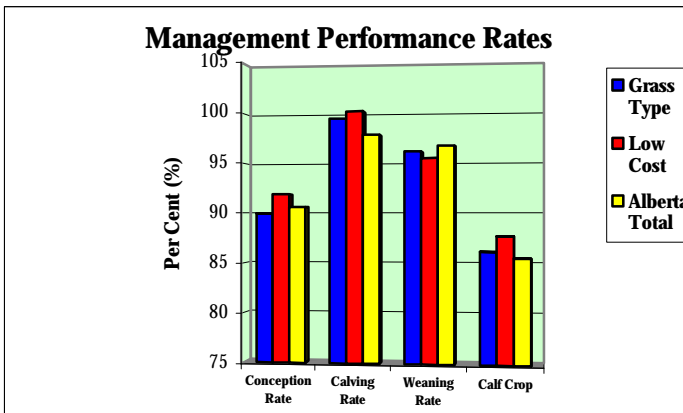
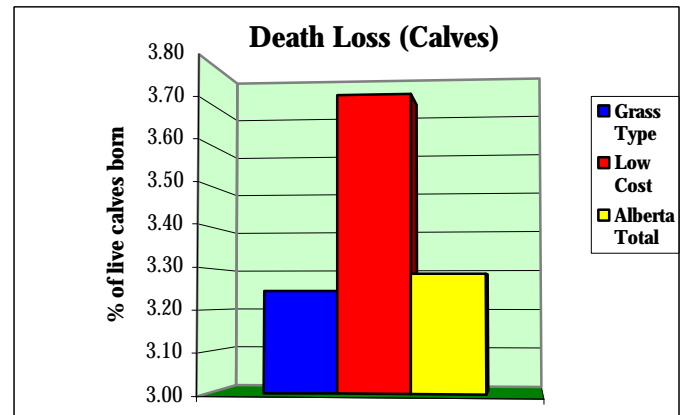
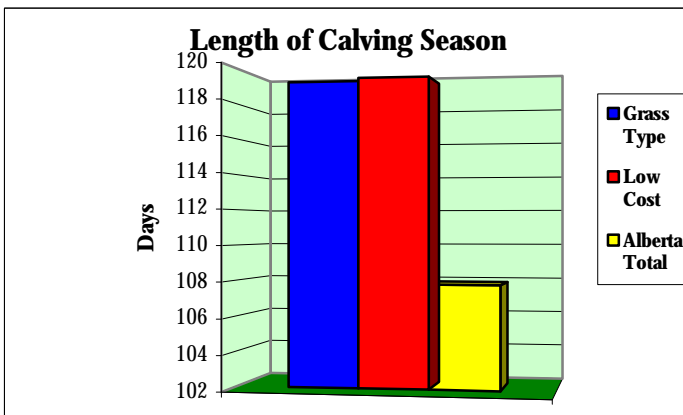
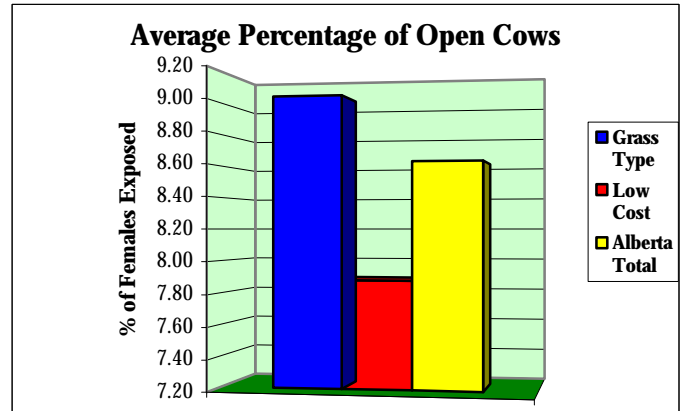
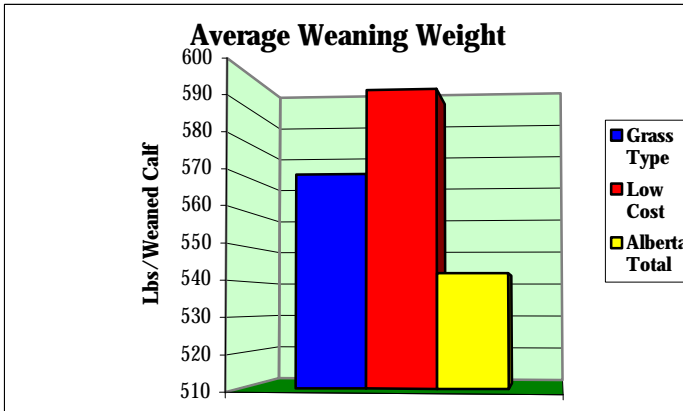
Financial Performance Indicators:

ROAD to Profitability	Grass Type	Low Cost	Alberta Total	
Risk (Debt to Asset Ratio)	0.18	0.25	0.18	= Total Liabilities / Total Assets
Operating Expense Ratio	0.91	0.75	0.73	= Operating Expenses / Value of Production
Asset Return	(0.02)	0.00	0.01	= Return on Assets / Total Farm Assets
Debt Payout	(13.48)	42.43	11.76	= Total Liabilities / Net Farm Income
to Profitability	(37,480.82)	15,561.98	40,954.83	= Net Farm Income
The "3-C's"				
Current Ratio	1.83	1.41	1.86	= Current Assets / Current Liabilities
Calif. Working Cap. Ratio	0.52	0.32	0.56	= Working Capital / Total Expenses
Capital Turnover Ratio	0.12	0.14	0.14	= Value of Production / Total Farm Assets
Farm Size (Acres)	5,438	3,518	5,422	= Total Acres in crops, forages & grazing (includes all acres owned, rented & leased)

2002 Cow-Calf Enterprise Overview

Physical Performance Comparisons

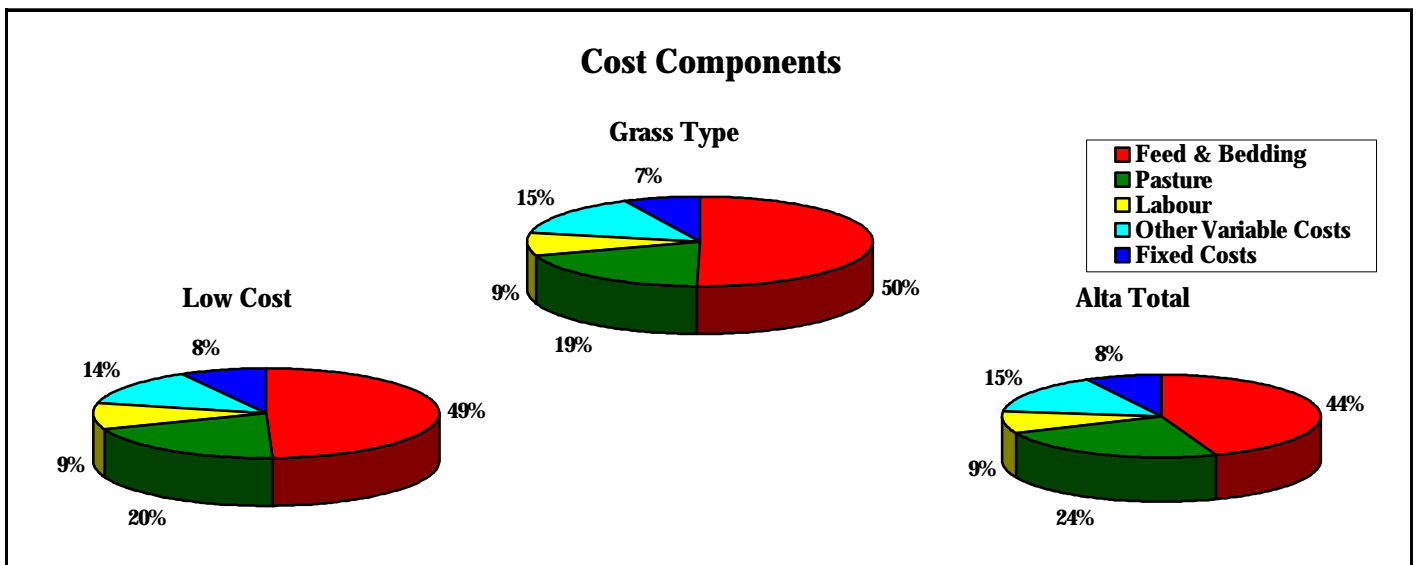
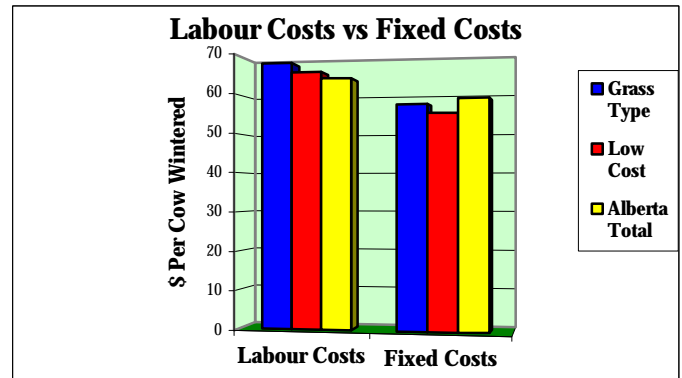
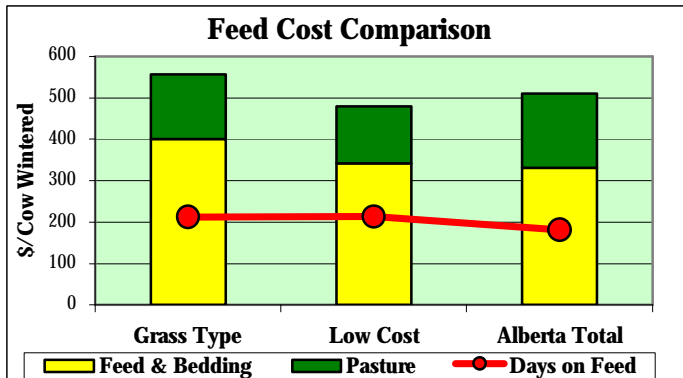
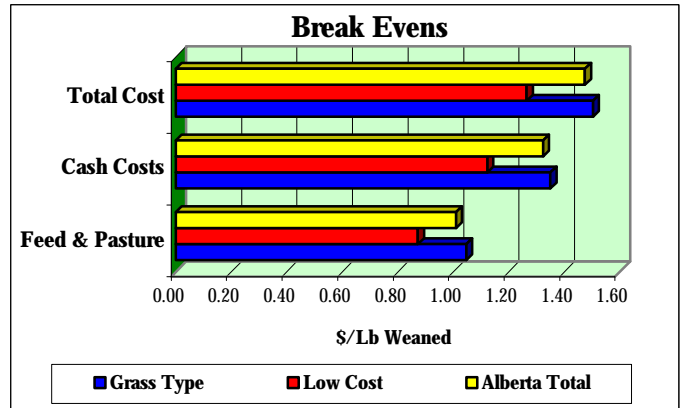
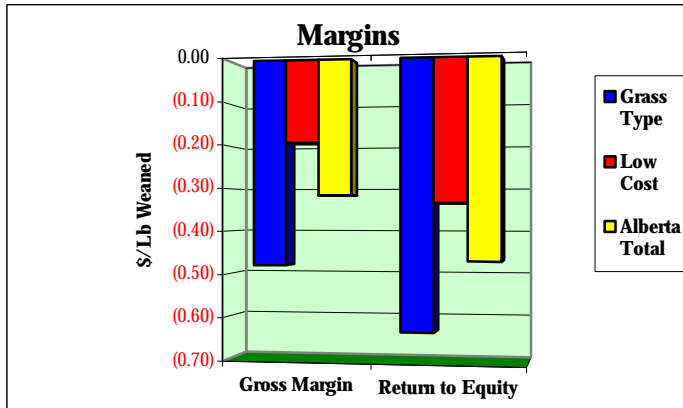
Benchmark Comparables: Boreal Transition Average & Low Cost Groups; Alberta Total



2002 Cow-Calf Enterprise Overview

Economic Performance Comparisons

Benchmark Comparables: Boreal Transition Average & Low Cost Groups; Alberta Total



Cow-Calf Enterprise Unit Cost & Returns Detail**Economic Performance Comparisons**

	<u>Grass</u> <u>Type</u>	<u>Low</u> <u>Cost</u>	<u>Alberta</u> <u>Total</u>
	----- \$/Lb Weaned -----		
(A)			
1. Weaned Calves	1.18	1.18	1.19
2. Feeder Calves	0.00	0.00	0.00
3. Slaughter Cattle	0.00	0.00	0.00
4. Purebred Calves	0.00	0.00	0.00
5. Baby Calves	0.00	0.00	0.00
6. Cull Cows/Open Heifers	0.19	0.16	0.21
7. Bulls	0.03	0.03	0.03
8. Bred Cows/Bred Heifers	0.12	0.15	0.08
9. Miscellaneous Receipts	0.00	0.00	0.01
10. Government Programs	0.00	0.00	0.00
11. Inventory Adjustment	(0.36)	(0.30)	(0.09)
12. Less: Cattle Purchases	0.30	0.29	0.42
Value of Production	0.87	0.93	1.01
(B)			
1. Winter Feed	0.72	0.59	0.62
2. Bedding	0.04	0.03	0.04
3. Pasture	0.29	0.25	0.36
4. Veterinary & Medicine	0.05	0.04	0.04
5. Breeding Fees/Bull Rental	0.00	0.00	0.00
6. Trucking & Marketing Charges	0.03	0.02	0.03
7. Fuel	0.03	0.02	0.03
8. Repairs - Machine	0.03	0.02	0.03
9. Repairs - Corrals & Buildings	0.02	0.02	0.02
10. Utilities & Miscellaneous Expenses	0.04	0.03	0.04
11. Custom Work & Specialized Labour	0.02	0.01	0.03
12. Operating Interest Paid	0.01	0.01	0.01
13. Paid Labour & Benefits	0.03	0.03	0.03
14. Unpaid Labour	0.10	0.09	0.09
Variable Costs	1.40	1.16	1.36
(C)			
1. Share/Lease Cattle Payments	0.00	0.00	0.01
2. Taxes, Water Rates, Lic. & Insurance	0.01	0.01	0.01
3. Equipment & Building	0.05	0.05	0.06
a) Depreciation			
b) Lease Payments	0.01	0.00	0.01
4. Paid Capital Interest	0.03	0.04	0.03
Total Capital Costs	0.11	0.10	0.12
(D) Cash Costs	(B+C-B14-C3)	1.35	1.12
(E) Total Production Costs	(B+C)	1.50	1.26
(F) Gross Margin	(A-D)	(0.48)	(0.19)
Return to Unpaid Labour	(A-D+B14)	(0.53)	(0.24)
Return to Investment	(A-E+C4)	(0.60)	(0.29)
Return to Equity	(A-E)	(0.63)	(0.33)
Total Investment		2.91	2.76
		3.35	

Cow-Calf Enterprise Unit Cost & Returns Detail
Economic Performance Comparisons

	<u>Gross</u>	<u>Low</u>	<u>Alberta</u>
	<u>Type</u>	<u>Cost</u>	<u>Total</u>
	-----	-----	-----
	\$/Cow Wintered		
(A)			
1. Weaned Calves	625.27	644.47	603.48
2. Feeder Calves	0.00	0.00	0.02
3. Slaughter Cattle	0.00	0.00	0.00
4. Purebred Calves	0.00	0.00	0.00
5. Baby Calves	0.66	0.56	0.81
6. Cull Cows/Open Heifers	102.58	88.48	103.84
7. Bulls	16.37	15.01	16.11
8. Bred Cows/Bred Heifers	63.76	80.70	41.26
9. Miscellaneous Receipts	2.59	1.81	2.68
10. Government Programs	0.00	0.00	0.00
11. Inventory Adjustment	(189.18)	(162.98)	(45.65)
12. Less: Cattle Purchases	159.32	158.07	213.46
Value of Production	462.72	509.97	509.09
(B)			
1. Winter Feed	379.82	323.08	312.37
2. Bedding	21.10	19.07	18.46
3. Pasture	155.10	136.35	179.55
4. Veterinary & Medicine	24.09	22.99	20.80
5. Breeding Fees/Bull Rental	0.03	0.06	0.21
6. Trucking & Marketing Charges	14.14	9.81	12.73
7. Fuel	14.20	9.31	16.21
8. Repairs - Machine	17.25	12.96	15.26
9. Repairs - Corrals & Buildings	10.88	10.25	7.76
10. Utilities & Miscellaneous Expenses	21.22	14.17	20.16
11. Custom Work & Specialized Labour	8.79	7.87	14.81
12. Operating Interest Paid	7.13	6.41	4.72
13. Paid Labour & Benefits	14.52	13.74	17.46
14. Unpaid Labour	53.53	51.92	46.47
Variable Costs	741.82	638.00	686.97
(C)			
1. Share/Lease Cattle Payments	2.32	1.71	5.01
2. Taxes, Water Rates, Lic. & Insurance	5.15	5.37	6.64
3. Equipment & Building	27.97	25.15	30.31
a) Depreciation			
b) Lease Payments	5.08	1.13	3.77
4. Paid Capital Interest	16.63	21.50	12.82
Total Capital Costs	57.15	54.86	58.55
(D) Cash Costs (B+C-B14-C3)	717.47	615.79	668.74
(E) Total Production Costs (B+C)	798.96	692.86	745.52
(F) Gross Margin (A-D)	(254.75)	(105.83)	(159.65)
Return to Unpaid Labour (A-D+B14)	(282.72)	(130.97)	(189.96)
Return to Investment (A-E+C4)	(319.62)	(161.40)	(223.61)
Return to Equity (A-E)	(336.25)	(182.89)	(236.43)
Total Investment	1,543.30	1,513.65	1,694.93

2002 Forage & Pasture Enterprise Cost & Returns Analysis Boreal Transition

----- Forages -----				----- Pastures -----					
				Tame					
				Tame	/Native	Native			
				Grass	Mixed	/Bush			
				/Grass Hay	Greenfeed	Grain Silage			
Average field size (acres)				120.7	88.5	95.7	111.6	430.7	2,324.5
Number of Observations				31	13	66	93	56	22
				-----\$/Tonne-----			-----\$/AUM-----		
(A)	1.	Crop Sales		147.28	83.58	41.41	23.16	23.13	20.51
	2.	Crop Insurance Receipts		40.79	57.19	13.92	1.15	0.00	0.00
	3.	Miscellaneous Receipts		3.35	4.35	0.45	1.69	2.96	1.47
	4.	Government Programs		0.00	0.00	0.00	0.00	0.00	0.00
	5.	Straw / Aftermath Grazing		14.58	0.00	2.16	0.00	0.00	0.00
Gross Return				206.00	145.13	57.96	26.00	26.10	21.98
(B)	1.	Seed		4.10	16.74	4.16	0.17	0.01	0.00
	2.	Fertilizer		9.34	19.20	7.85	3.31	3.46	0.22
	3.	Chemicals		1.76	7.25	1.78	0.68	0.33	0.13
	4.	Crop Insurance Premiums		6.25	5.77	1.30	0.28	0.09	0.00
	5.	Trucking & Marketing		0.21	0.45	0.08	0.98	1.01	1.01
	6.	Fuel		5.99	9.63	3.26	0.95	0.97	1.44
	7.	Irrigation Fuel & Electricity		0.00	0.00	0.00	0.00	0.00	0.00
	8.	Repairs - Machinery		10.71	14.33	3.76	0.71	0.64	0.58
	9.	Repairs - Buildings		2.85	1.63	0.16	1.98	2.55	1.81
	10.	Utilities & Misc. Expenses		6.29	5.47	1.47	0.73	0.59	0.64
	11.	Custom Work & Specialized Labour		3.27	18.21	5.57	0.88	0.63	0.06
	12.	Operating Interest Paid		2.57	1.10	0.70	0.24	0.41	0.40
	13.	Paid Labour & Benefits		3.94	7.32	1.62	0.65	0.46	1.40
	14.	Unpaid Labour		13.39	6.61	2.57	1.70	1.83	2.86
Variable Costs				70.67	113.71	34.28	13.27	12.98	10.55
(C)	1.	Cash/Share Rent & Land Lease		12.79	3.93	4.01	5.38	8.16	3.84
	2.	Taxes, Water Rates, Lic. & Insurance		4.37	4.16	0.87	1.27	0.56	0.78
	3.	Equip. & Bldg. a) Depreciation		30.41	13.91	4.91	1.09	0.79	0.88
		b) Lease Payments		0.64	0.97	0.52	0.04	0.12	0.69
	4.	Paid Capital Interest		13.26	3.75	1.74	1.99	1.24	1.93
Total Capital Costs				61.47	26.71	12.05	9.76	10.87	8.12
(D)	Cash Costs (B+C-B14-C3)			88.35	119.91	38.85	20.25	21.23	14.93
(E)	Total Production Costs (B+C)			132.14	140.42	46.33	23.03	23.86	18.67
(F)	Gross Margin (A-D)			117.65	25.22	19.11	5.76	4.87	7.06
	Return to Unpaid Labour (A-E+B14)			87.24	11.32	14.20	4.67	4.08	6.18
	Return to Investment (A-E+C4)			87.12	8.46	13.37	4.96	3.48	5.24
	Return to Equity (A-E)			73.86	4.71	11.63	2.97	2.24	3.31
Return on Investment (%)				6.6	2.0	8.5	0.7	0.7	0.6
Total Investment (\$/acre)				792.17	453.44	515.01	784.49	310.29	70.66
Management									
Yield per Acre (tonnes or AUM's)				0.60	1.05	3.26	1.10	0.62	0.08
Expected Market Price (\$/unit)				147.28	83.58	41.41	23.16	23.13	20.51

* Cost and returns profiles include/combine all tenure types ... owned, rented & leased.

Definitions & Explanations to Accompany the Cow/Calf Enterprise Overview

Production Stock Sales - revenues associated with the sale of weaned calves & other **non-breeding stock** related sales.

Value of Production (VOP) - the value of what was produced by the cow/calf enterprise over the course of the production year. Includes cash & non-cash values of:

- g** cull & breeding stock sales, revenues from miscellaneous sources (eg. program payments, patronage refunds, etc.) as allocated to the cow/calf enterprise,
- g** inventory adjustments relating changes in the number & value of stock included in the enterprise,
- g** an adjustment for livestock purchases (value is added only from the point of purchase forward)

Winter Feed Costs - the cost of all feeds used by the cow/calf enterprise, purchased or homegrown, based on the market value of these feeds (**not** the cost of raising the feeds).

Pasture Costs - the value of grazing used by the cow/calf enterprise (exclusive of any other retained ownership/backgrounding uses). Pasture is valued into the cow/calf enterprise at market value (**not** cost) & is treated as a "cash" cost.

Labour Costs - a sum of paid & contributed labour, as allocated to the cow/calf enterprise. Paid labour is valued at cost, while unpaid labour is valued at a standard or base cost.

Depreciation & Capital Lease Payments - sum of depreciation & mach./equip't/ bldg. lease payments on assets allocated to the cow/calf enterprise.

Other Fixed Costs - total cash overheads, as allocated to the cow/calf enterprise (share/lease cattle payments, property taxes, insurances, licences & term loan interest).

Total Cash Costs - sum of enterprise cash costs, considering home grown feeds, bedding & pasture as cash costs.

Total Production Costs - sum of all variable & fixed production costs.

Contribution Margin - VOP less Variable Costs

Gross Margin - VOP less Total Cash Costs

Return to Investment - VOP less Total Production Costs plus Term (Capital) Interest Paid

Return to Equity & Management - VOP less Total Production Costs

Investment - sum of assets allocated to the enterprise. includes: breeding stock, machinery, equipment, buildings/facilities & building site (only).

Breeding Performance Rates

(adjusted for sales & purchases of bred cattle)

Conception Rate (%) - # Bred / # Exposed

Calving Rate (%) - # Livebirths / # Bred Females

Weaning Rate (%) - # Weaned / # Livebirths

Calf Crop (%) - # Weaned / # Exposed

Calved in 1st 2 Cycles (%) - $\frac{\# \text{ Calved Cycle 1 \& 2}}{\text{Total Calved}}$

Lbs. Weaned/Cow Exposed - $\frac{\text{Total Lbs. Weaned}}{\# \text{ Females Exposed}}$

Lbs. Weaned/Cow Wintered - $\frac{\text{Total Lbs. Weaned}}{\# \text{ Bred Females Wintered}}$

Wean Wt. as % of Cow Wt. - $\frac{\text{Avg. Lbs. Weaned}}{\text{Avg. Mature Cow Wt.}}$
(adjusting bred heifer wts.)

Weight per Day of Age (lbs.) - $\frac{\text{Avg. Lbs. Weaned}}{\text{Wtd Avg Wean Age}}$

Cows Wintered - Open Inventory of Bred Cows & Heifers

Cows / Bull - # Cows & Heifers Exposed / # Bulls Used

Labour Hours / Cow - Total Labour Hrs. / Cows Wintered

AUM's / Cow Wintered - $\frac{\text{Total Enterprise AUM's}}{\text{Cows Wintered}}$

Feeding Season Days - Days Fed (in yard)

Tonnes Fed per Cow -

as-fed $\frac{\text{Tonnes Total Feed (As-Fed)}}{\# \text{ Cows Wintered}}$

dry matter $\frac{\text{Tonnes Total Feed (Dry Matter)}}{\# \text{ Cows Wintered}}$

GOLD Indicators

Growth (wean wt.) - $\frac{\text{Total Lbs. Weaned}}{\# \text{ Calves Weaned}}$

Open Cows (%) - $\frac{\# \text{ Open Cows \& Heifers}}{\# \text{ Exposed}}$

Length of Calving Period - Days from 1st to last calf

Death Loss of Calves (%) - $\frac{\# \text{ Calves Died}}{\# \text{ Livebirths}}$