

AgriProfit\$

Benchmarks for Alberta Cattlemen

Economics & Competitiveness

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

Southern Alberta

Fescue Grassland, Mixed Grassland
& Moist Mixed Grassland

Production Year - 2002

Jan. / 04



Foreword

This *AgriProfit\$ Cost & Returns Report* presents the productive, economic & financial performance of Alberta cow/calf producers in Southern Alberta 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 Fescue Grassland, Mixed Grassland & Moist Mixed Grassland grass types.
- 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.

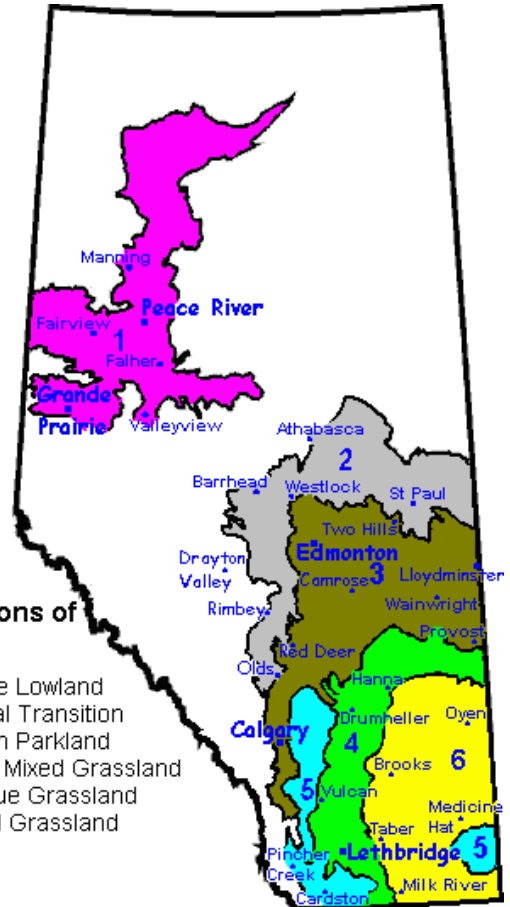
Cost and returns profiles for common forage and grazing crops in the grass type / region are included in this benchmark report in order to put these profit centers into context with the cow herd profiles they support. A list of definitions for common terms employed in this benchmark report is also appended.

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:

J.G. O'Donoghue Building
#302, 7000 - 113 Street
Edmonton, Alberta
T6H 5T6

Ecoregions of Alberta

1. Peace Lowland
2. Boreal Transition
3. Aspen Parkland
4. Moist Mixed Grassland
5. Fescue Grassland
6. Mixed Grassland



* 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.

Dale A. Kaliel
Sr. Economist: Production Economics

Brian Perillat
Production Economist: Livestock & Forages

2002 Cow-Calf Enterprise Overview

Economic & Physical Performance Comparisons

Benchmark Comparables: South Alta. Average & Low Cost Groups; Alberta Total

Enterprise Type: Weaned-Calf

Economic Performance Indicators:

	\$ / Lb. Weaned		
	Grass Type	Low Cost	Alberta Total
Production Stock Sales	1.207	1.230	1.195
Value of Production	1.114	1.138	1.007
Winter Feed Costs	0.373	0.263	0.618
Bedding Costs	0.007	0.001	0.037
Pasture Costs	0.455	0.434	0.355
Labour Costs	0.120	0.092	0.126
Other Variable Costs	0.248	0.266	0.223
Depreciation & Capital Lease Payments	0.061	0.054	0.067
Other Fixed Costs	0.051	0.041	0.048
Total Cash Costs	1.177	1.045	1.323
Total Production Costs	1.315	1.152	1.475
Contribution Margin	(0.089)	0.081	(0.352)
Gross Margin	(0.062)	0.093	(0.316)
Return to Investment	(0.190)	(0.004)	(0.442)
Return to Equity & Management	(0.201)	(0.014)	(0.468)
Total Investment (\$ / cow wintered)	1,566	1,499	1,695

Physical Performance Indicators:

	Grass Type	Low Cost	Alberta Total		Grass Type	Low Cost	Alberta Total
Conception Rate (%)	90.9	90.1	90.6	Cows Wintered	240.0	344.2	238.7
Calving Rate (%)	96.6	95.8	97.8	Cows per Bull	11.7	24.1	20.7
Weaning Rate (%)	94.3	95.6	96.7	Labour Hours per Cow	5.4	4.3	6.2
Calf Crop (%)	82.4	82.1	85.5	AUM's/Cow Wintered	10.2	10.7	8.4
% Calved - 1st 2 Cycles	92.0	92.1	85.7	Feeding Season Days	95.3	76.1	181.5
Lbs. Weaned/Cow Exposed	440.5	438.9	463.5	Tonnes Fed per Cow			
Lbs. Weaned/Cow Wintered	476.7	476.1	505.5	- as-fed	1.5	1.0	4.7
Wean Wt as a % of Cow Wt.	43.9	44.5	43.4	- dry matter			
Weight per Day of Age (lbs.)	2.53	2.54	2.65				

	Grass Type	Low Cost	Alberta Total
G rowth (weaning weight)	534.6	534.9	542.2
O pen Cows (%)	8.4	8.9	8.6
L ength of Calving Period	70.2	70.6	107.8
D eath Loss of Calves (%)	4.5	4.1	3.3

2002 Cow-Calf Enterprise Overview

Economic & Financial Performance Comparisons

Benchmark Comparables: South Alta. 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	575.16	585.77	604.31
Value of Production	531.18	541.72	509.09
Winter Feed Costs	177.94	125.39	312.37
Bedding Costs	3.35	0.52	18.46
Pasture Costs	216.71	206.55	179.55
Labour Costs	57.03	44.02	63.93
Other Variable Costs	118.44	126.85	112.65
Depreciation & Capital Lease Payments	29.23	25.76	34.08
Other Fixed Costs	24.20	19.44	24.48
Total Cash Costs	560.88	497.64	668.74
Total Production Costs	626.90	548.53	745.52
Contribution Margin	(42.30)	38.39	(177.88)
Gross Margin	(29.70)	44.08	(159.65)
Return to Investment	(90.75)	(1.86)	(223.61)
Return to Equity & Management	(95.72)	(6.81)	(236.43)

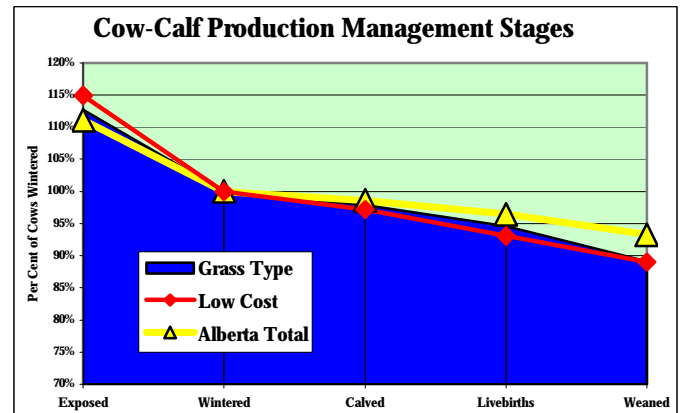
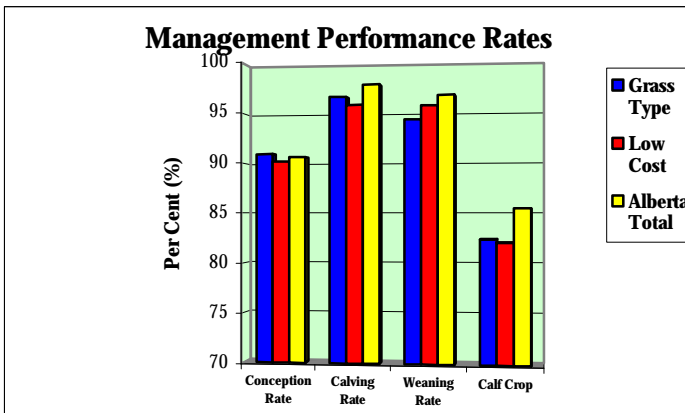
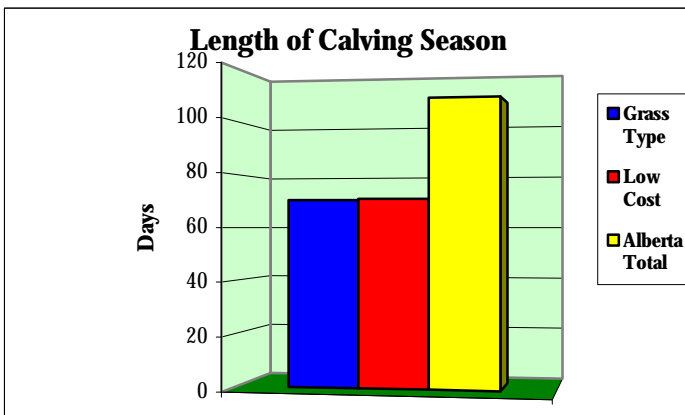
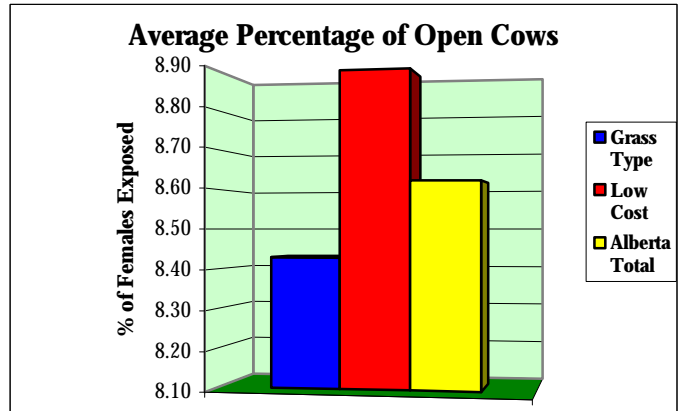
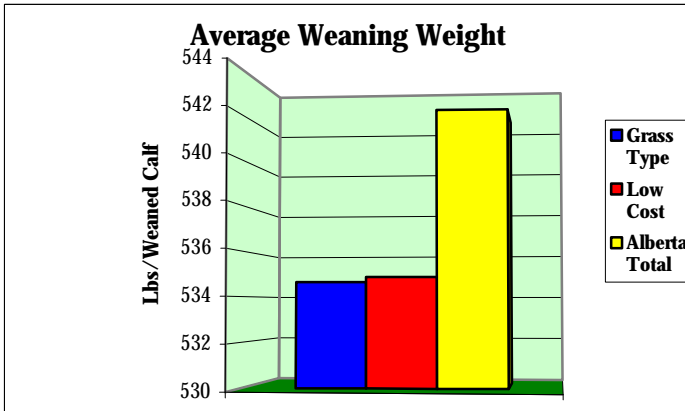
Financial Performance Indicators:

ROAD to Profitability	Grass Type	Low Cost	Alberta Total	
Risk (Debt to Asset Ratio)	0.07	0.09	0.18	= Total Liabilites / Total Assets
Operating Expense Ratio	0.51	0.48	0.73	= Operating Expenses / Value of Production
Asset Return	0.03	0.05	0.01	= Return on Assets / Total Farm Assets
Debt Payout	1.78	1.91	11.76	= Total Liabilities / Net Farm Income
to Profitability	111,804.72	190,072.43	40,954.83	= Net Farm Income
The "3-C's"				
Current Ratio	5.70	4.70	1.86	= Current Assets / Current Liabilities
Calif. Working Cap. Ratio	1.32	1.39	0.56	= Working Capital / Total Expenses
Capital Turnover Ratio	0.10	0.11	0.14	= Value of Production / Total Farm Assets
Farm Size (Acres)	11,180	19,095	5,422	= Total Acres in crops, forages & grazing (includes all acres owned, rented & leased)

2002 Cow-Calf Enterprise Overview

Physical Performance Comparisons

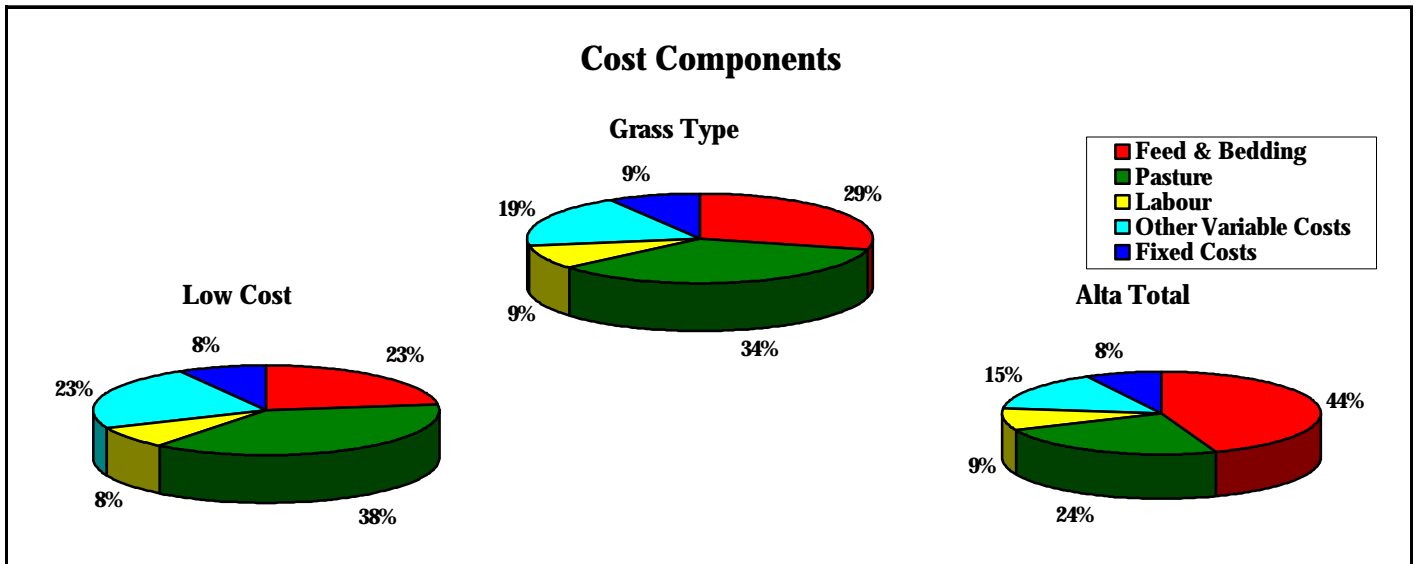
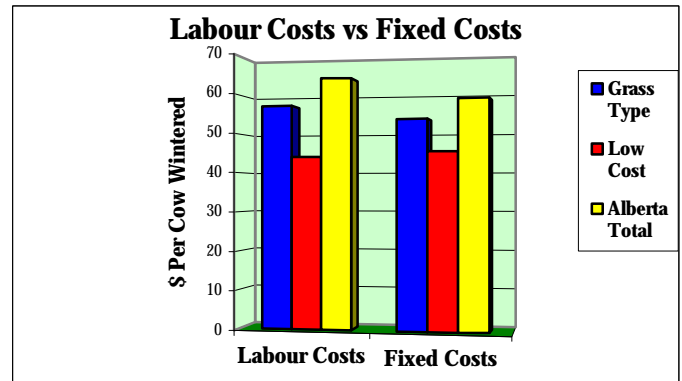
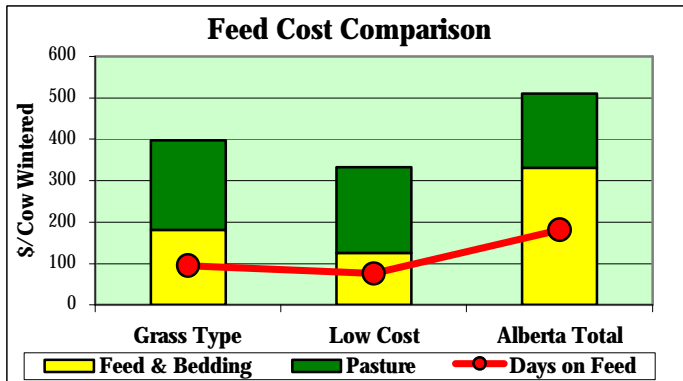
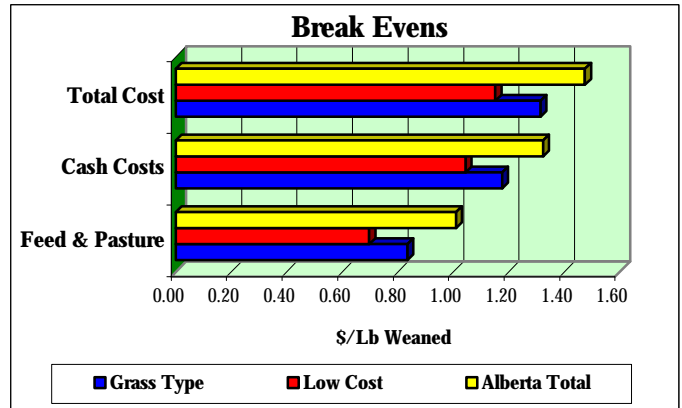
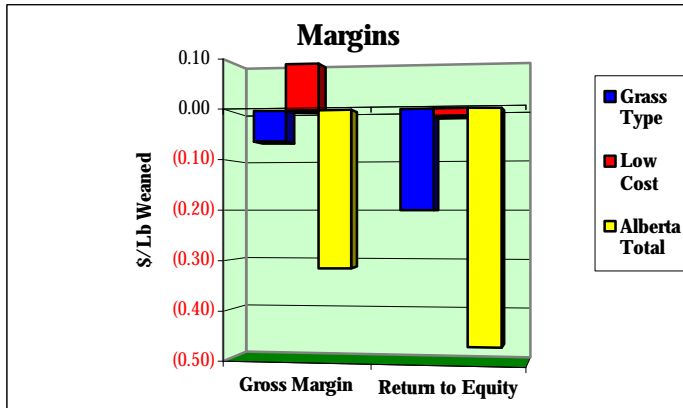
Benchmark Comparables: South Alta. Average & Low Cost Groups; Alberta Total



2002 Cow-Calf Enterprise Overview

Economic Performance Comparisons

Benchmark Comparables: South Alta. 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	1.20	1.23	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	0.01	0.00	0.00
6. Cull Cows/Open Heifers	0.24	0.28	0.21
7. Bulls	0.04	0.04	0.03
8. Bred Cows/Bred Heifers	0.08	0.06	0.08
9. Miscellaneous Receipts	0.00	0.00	0.01
10. Government Programs	0.00	0.00	0.00
11. Inventory Adjustment	(0.06)	(0.03)	(0.09)
12. Less: Cattle Purchases	0.39	0.44	0.42
Value of Production	1.11	1.14	1.01
(B)			
1. Winter Feed	0.37	0.26	0.62
2. Bedding	0.01	0.00	0.04
3. Pasture	0.45	0.43	0.36
4. Veterinary & Medicine	0.03	0.03	0.04
5. Breeding Fees/Bull Rental	0.00	0.00	0.00
6. Trucking & Marketing Charges	0.03	0.04	0.03
7. Fuel	0.03	0.03	0.03
8. Repairs - Machine	0.01	0.01	0.03
9. Repairs - Corrals & Buildings	0.02	0.01	0.02
10. Utilities & Miscellaneous Expenses	0.04	0.05	0.04
11. Custom Work & Specialized Labour	0.09	0.11	0.03
12. Operating Interest Paid	0.00	0.00	0.01
13. Paid Labour & Benefits	0.03	0.03	0.03
14. Unpaid Labour	0.09	0.06	0.09
Variable Costs	1.20	1.06	1.36
(C)			
1. Share/Lease Cattle Payments	0.02	0.01	0.01
2. Taxes, Water Rates, Lic. & Insurance	0.02	0.02	0.01
3. Equipment & Building	0.05	0.04	0.06
a) Depreciation			
b) Lease Payments	0.01	0.01	0.01
4. Paid Capital Interest	0.01	0.01	0.03
Total Capital Costs	0.11	0.09	0.12
(D) Cash Costs	(B+C-B14-C3)	1.18	1.05
(E) Total Production Costs	(B+C)	1.32	1.15
(F) Gross Margin	(A-D)	(0.06)	0.09
Return to Unpaid Labour	(A-D+B14)	(0.12)	0.05
Return to Investment	(A-E+C4)	(0.19)	(0.00)
Return to Equity	(A-E)	(0.20)	(0.01)
Total Investment		3.28	3.15
		3.15	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	572.34	585.77	603.48
2. Feeder Calves	0.13	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	2.69	0.00	0.81
6. Cull Cows/Open Heifers	115.52	131.19	103.84
7. Bulls	20.10	19.40	16.11
8. Bred Cows/Bred Heifers	36.33	30.17	41.26
9. Miscellaneous Receipts	0.74	0.59	2.68
10. Government Programs	0.00	0.00	0.00
11. Inventory Adjustment	(29.95)	(14.72)	(45.65)
12. Less: Cattle Purchases	186.72	210.68	213.46
Value of Production	531.18	541.72	509.09
(B)			
1. Winter Feed	177.94	125.39	312.37
2. Bedding	3.35	0.52	18.46
3. Pasture	216.71	206.55	179.55
4. Veterinary & Medicine	14.16	12.49	20.80
5. Breeding Fees/Bull Rental	0.25	0.34	0.21
6. Trucking & Marketing Charges	14.89	17.14	12.73
7. Fuel	12.31	11.92	16.21
8. Repairs - Machine	5.73	2.83	15.26
9. Repairs - Corrals & Buildings	8.11	6.16	7.76
10. Utilities & Miscellaneous Expenses	21.11	22.09	20.16
11. Custom Work & Specialized Labour	40.94	53.69	14.81
12. Operating Interest Paid	0.93	0.18	4.72
13. Paid Labour & Benefits	16.35	13.47	17.46
14. Unpaid Labour	40.68	30.55	46.47
Variable Costs	573.47	503.33	686.97
(C)			
1. Share/Lease Cattle Payments	10.41	5.23	5.01
2. Taxes, Water Rates, Lic. & Insurance	8.81	9.26	6.64
3. Equipment & Building	25.34	20.34	30.31
a) Depreciation			
b) Lease Payments	3.89	5.42	3.77
4. Paid Capital Interest	4.97	4.95	12.82
Total Capital Costs	53.42	45.20	58.55
(D) Cash Costs (B+C-B14-C3)	560.88	497.64	668.74
(E) Total Production Costs (B+C)	626.90	548.53	745.52
(F) Gross Margin (A-D)	(29.70)	44.08	(159.65)
Return to Unpaid Labour (A-D+B14)	(55.04)	23.75	(189.96)
Return to Investment (A-E+C4)	(90.75)	(1.86)	(223.61)
Return to Equity (A-E)	(95.72)	(6.81)	(236.43)
Total Investment	1,565.79	1,498.56	1,694.93

2002 Forage & Pasture Enterprise Cost & Returns Analysis
South Alberta (Fescue Grassland, Mixed Grassland, Moist Mixed Grassland)

	----- Forages -----		----- Pastures -----		
	Alfalfa /Grass Hay	Greenfeed	Tame Grass	Tame /Native Mixed	Native Grassland
Average field size (acres)	110.7	92.1	137.8	204.2	1,304.7
Number of Observations	18	14	9	17	67
	-----\$/Tonne-----		-----\$/AUM-----		
(A) 1. Crop Sales	128.68	44.14	24.70	21.99	20.63
2. Crop Insurance Receipts	1.21	52.99	1.77	0.00	14.81
3. Miscellaneous Receipts	0.20	1.92	0.00	1.92	0.35
4. Government Programs	0.00	0.00	0.00	0.00	0.00
5. Straw / Aftermath Grazing	2.44	0.00	0.00	0.00	0.00
Gross Return	132.54	99.04	26.47	23.91	35.79
(B) 1. Seed	0.00	6.55	1.63	0.00	0.00
2. Fertilizer	3.50	12.30	9.77	0.00	0.00
3. Chemicals	0.89	4.33	0.00	0.00	0.18
4. Crop Insurance Premiums	2.94	3.81	0.34	0.00	2.93
5. Trucking & Marketing	0.51	0.32	0.00	0.00	0.00
6. Fuel	5.84	3.83	0.04	0.37	0.24
7. Irrigation Fuel & Electricity	0.00	0.00	0.00	0.00	0.00
8. Repairs - Machinery	6.55	2.31	0.04	0.30	0.04
9. Repairs - Buildings	0.29	1.27	0.38	0.82	1.01
10. Utilities & Misc. Expenses	3.37	2.80	0.24	0.33	0.26
11. Custom Work & Specialized Labour	22.09	7.33	0.00	0.00	0.18
12. Operating Interest Paid	0.04	0.14	0.00	0.09	0.01
13. Paid Labour & Benefits	4.32	1.57	0.00	0.02	0.36
14. Unpaid Labour	7.85	3.82	1.38	2.75	0.97
Variable Costs	58.19	50.37	13.82	4.67	6.19
(C) 1. Cash/Share Rent & Land Lease	1.55	8.15	5.23	4.61	4.46
2. Taxes, Water Rates, Lic. & Insurance	5.37	1.46	0.69	1.52	1.19
3. Equip. & Bldg. a) Depreciation	19.08	6.01	0.46	1.02	0.74
b) Lease Payments	0.00	0.00	0.00	0.00	0.04
4. Paid Capital Interest	6.01	1.81	1.39	7.24	1.29
Total Capital Costs	32.01	17.43	7.77	14.39	7.73
(D) Cash Costs (B+C-B14-C3)	63.28	57.96	19.75	15.29	12.20
(E) Total Production Costs (B+C)	90.20	67.79	21.59	19.06	13.91
(F) Gross Margin (A-D)	69.26	41.08	6.72	8.62	23.60
Return to Unpaid Labour (A-E+B14)	50.18	35.07	6.26	7.60	22.85
Return to Investment (A-E+C4)	48.35	33.06	6.26	12.08	23.17
Return to Equity (A-E)	42.33	31.25	4.88	4.85	21.88
Return on Investment (%)	6.3	12.2	0.5	1.1	3.6
Total Investment (\$/acre)	744.24	422.36	777.37	548.77	145.11
Management					
Yield per Acre (tonnes or AUM's)	0.96	1.55	0.59	0.51	0.23
Expected Market Price (\$/unit)	128.68	44.14	24.70	21.99	20.63

* 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 (%) - $\frac{\# \text{ Calves Died}}{\# \text{ Livebirths}}$