

AgriProfit\$

Benchmarks for Alberta Cattlemen

Economics & Competitiveness

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

Peace Lowland

Production Year - 2001

Nov-03



Foreword

This *AgriProfit\$ Cost & Returns Report* presents the productive, economic & financial performance of Alberta cow/calf producers in the Peace Lowland Region for the 2001 production year.

Field research was undertaken through Alberta Agriculture's *AgriProfit\$ Business Analysis & Research* program with the cooperation of producers in the region. Readers should be cautioned that the results for 2001 focused primarily on the Northern Alberta grass types (ecoregions) of "Peace Lowland", "Boreal Transition" & "Aspen Parkland". As such, they are not completely indicative of performance by cow/calf operations province-wide. Provincial level comparables are therefore noted as "N. Alta."

The intent of this report is to benchmark three specific management groupings:

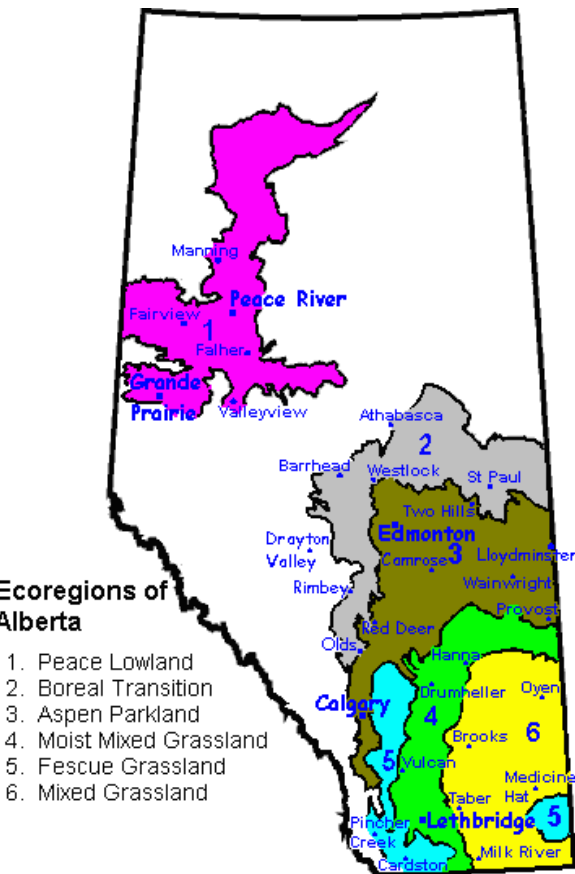
- a regional average including all participating producers in the Peace Lowland grass type.
- an average of the "top performers" within this region. These include the lower 50%* of producers in the region as ranked by unit costs.
- an average (or Northern Alberta Total) of all producers in the research 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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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 1/2 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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2001 Cow/Calf Enterprise Overview

Economic & Physical Performance Comparisons

Benchmark Comparables: Peace Lowland Average & Low Cost Groups; Northern Alberta Total

Enterprise Type: Weaned-Calf

Economic Performance Indicators:

	<i>\$ / Lb. Weaned</i>		
	Grass Type	Low Cost	N.Alta Total
Production Stock Sales	1.409	1.444	1.368
Value of Production	1.400	1.441	1.297
Winter Feed Costs	0.444	0.382	0.498
Bedding Costs	0.027	0.026	0.023
Pasture Costs	0.302	0.284	0.298
Labour Costs	0.121	0.114	0.119
Other Variable Costs	0.192	0.161	0.200
Depreciation & Capital Lease Payments	0.054	0.034	0.062
Other Fixed Costs	0.050	0.045	0.045
Total Cash Costs	1.025	0.906	1.098
Total Production Costs	1.190	1.047	1.245
Contribution Margin	0.314	0.474	0.159
Gross Margin	0.375	0.536	0.199
Return to Investment	0.247	0.428	0.081
Return to Equity & Management	0.210	0.394	0.051
Total Investment (\$ / cow wintered)	1,904	1,656	1,863

Physical Performance Indicators:

	Grass Type	Low Cost	N.Alta Total		Grass Type	Low Cost	N.Alta Total
Conception Rate (%)	93.4	93.1	90.9	Cows Wintered	175.1	212.3	217.6
Calving Rate (%)	96.7	98.4	98.3	Cows per Bull	24.7	25.6	26.4
Weaning Rate (%)	100.0	98.5	96.7	Labour Hours per Cow	6.1	5.4	6.3
Calf Crop (%)	90.0	89.5	86.0	AUM's/Cow Wintered	8.8	8.4	8.8
% Calved - 1st 2 Cycles	90.6	91.3	84.8	Feeding Season Days	186.0	179.2	186.2
Lbs. Weaned/Cow Exposed	467.9	454.9	484.2	Tonnes Fed per Cow			
Lbs. Weaned/Cow Wintered	498.3	479.1	531.8	- as-fed	5.0	4.6	5.5
Wean Wt as a % of Cow Wt.	42.0	40.5	45.2	- dry matter			
Weight per Day of Age (lbs.)	2.54	2.49	2.60				

	Grass Type	Low Cost	N.Alta Total
G rowth (weaning weight)	519.9	508.5	562.7
O pen Cows (%)	6.1	6.6	8.7
L ength of Calving Period	101.4	98.9	108.6
D eath Loss of Calves (%)	1.7	1.3	2.9

2001 Cow/Calf Enterprise Overview

Economic & Financial Performance Comparisons

Benchmark Comparables: Peace Lowland Average & Low Cost Groups; Northern Alberta Total

Enterprise Type: Weaned-Calf

Economic Performance Indicators:

	<i>\$ / Cow Wintered</i>		
	Grass Type	Low Cost	N.Alta Total
Production Stock Sales	702.05	691.77	727.34
Value of Production	697.68	690.47	689.56
Winter Feed Costs	221.29	183.13	265.05
Bedding Costs	13.25	12.22	12.06
Pasture Costs	150.57	136.17	158.23
Labour Costs	60.20	54.78	63.44
Other Variable Costs	95.81	77.19	106.16
Depreciation & Capital Lease Payments	26.99	16.36	33.07
Other Fixed Costs	24.89	21.76	24.15
Total Cash Costs	510.67	433.89	583.71
Total Production Costs	593.00	501.62	662.18
Contribution Margin	156.56	226.97	84.60
Gross Margin	187.01	256.58	105.84
Return to Investment	123.18	204.95	42.81
Return to Equity & Management	104.68	188.85	27.38

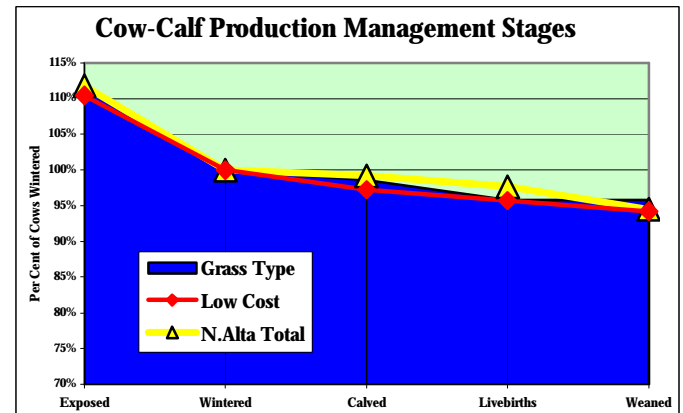
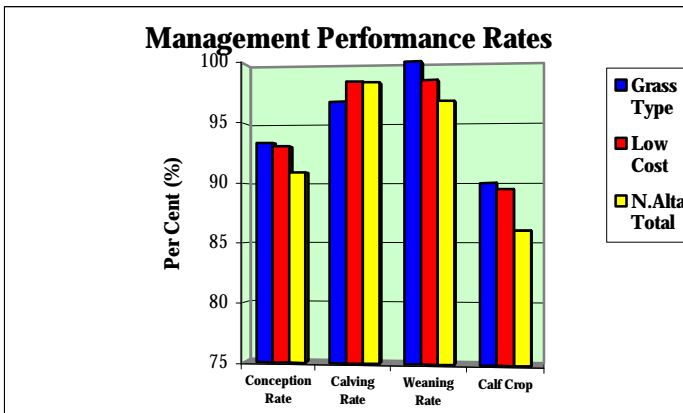
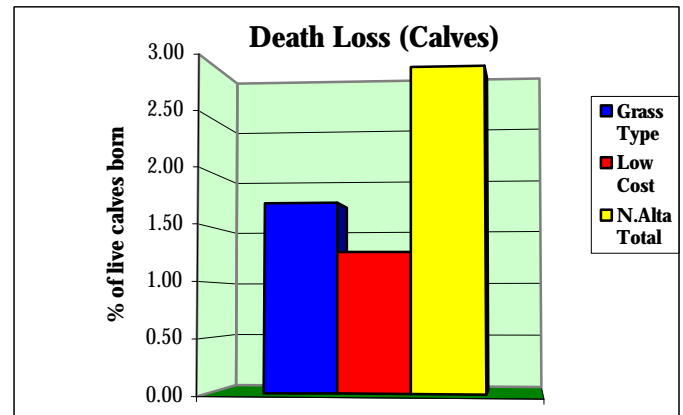
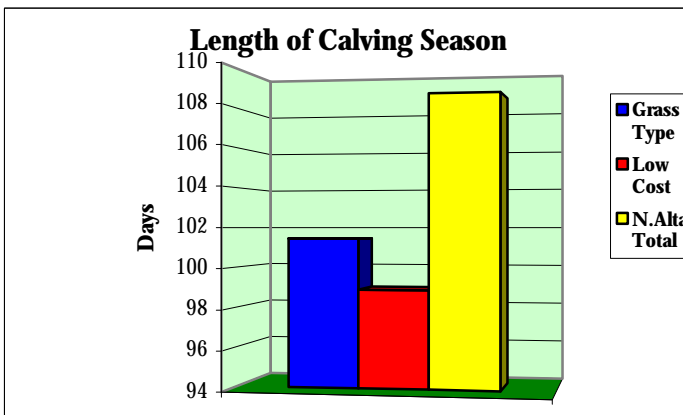
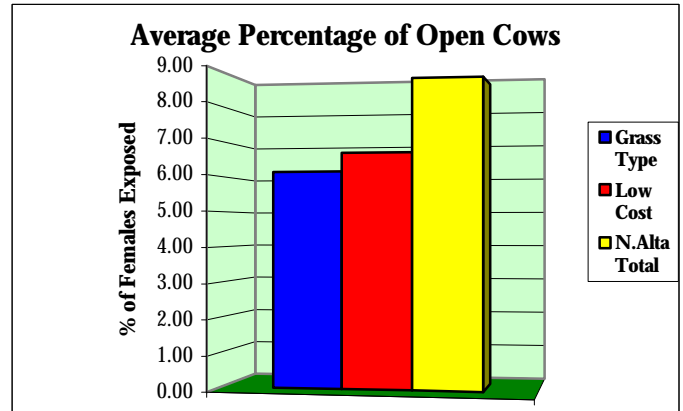
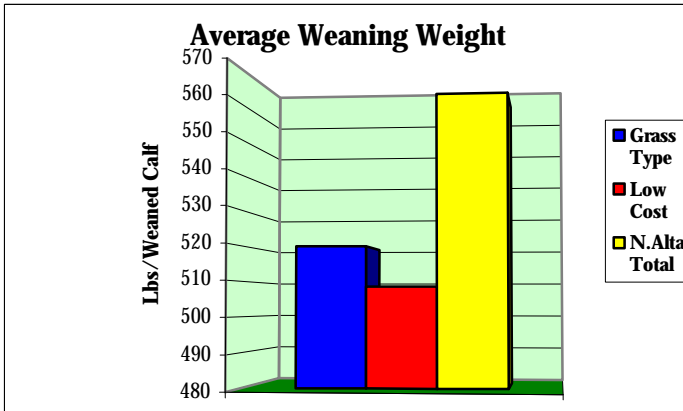
Farm Financial Performance Indicators:

ROAD to Profitability	Grass Type	Low Cost	N.Alta Total	
Risk (Debt to Asset Ratio)	0.25	0.29	0.21	= Total Liabilities / Total Assets
Operating Expense Ratio	0.48	0.50	0.56	= Operating Expenses / Value of Production
Asset Return	0.07	0.08	0.05	= Return on Assets / Total Farm Assets
Debt Payout	3.60	3.43	4.02	= Total Liabilities / Net Farm Income
to				
Profitability	97,135.16	111,971.50	97,941.22	= Net Farm Income
The "3-C's"				
Current Ratio	2.17	1.67	1.99	= Current Assets / Current Liabilities
Calif. Working Cap. Ratio	1.07	0.63	0.76	= Working Capital / Total Expenses
Capital Turnover Ratio	0.20	0.23	0.19	= Value of Production / Total Farm Assets
Farm Size (Acres)	2,164	1,975	3,578	= Total Acres in crops, forages & grazing (includes all acres owned, rented & leased)

2001 Cow/Calf Enterprise Overview

Physical Performance Comparisons

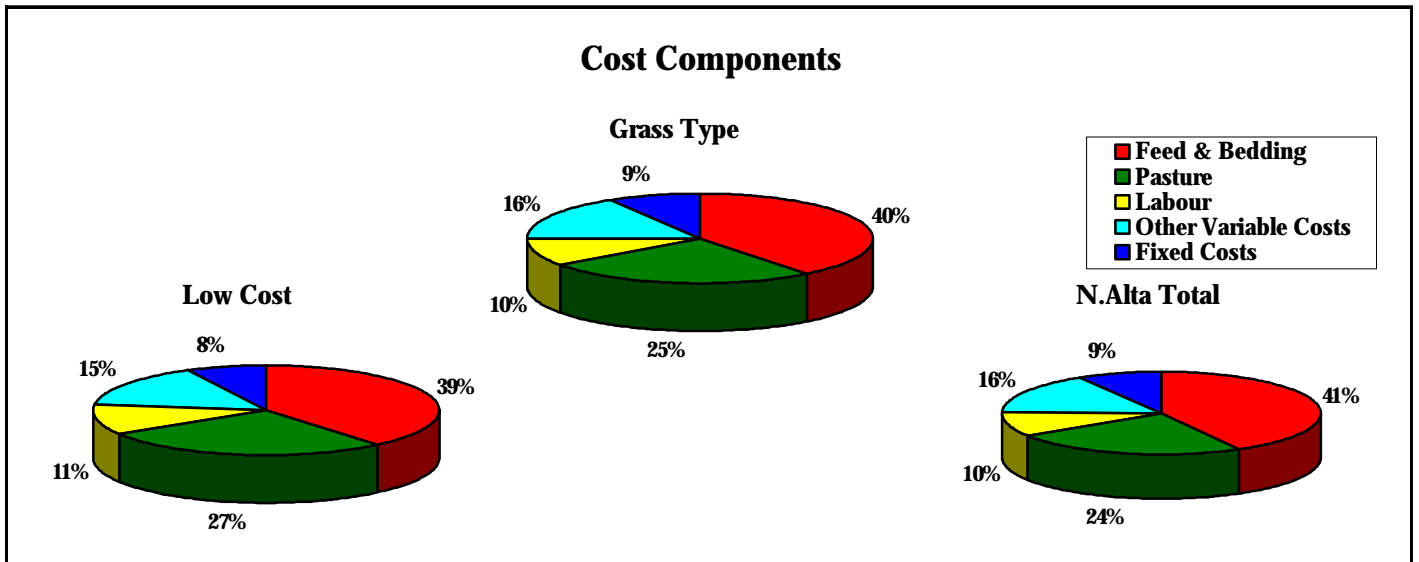
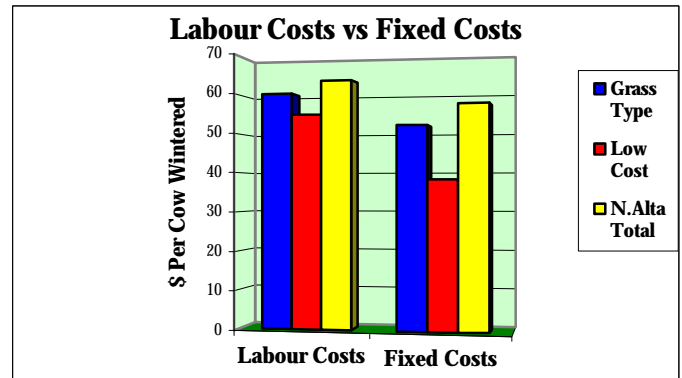
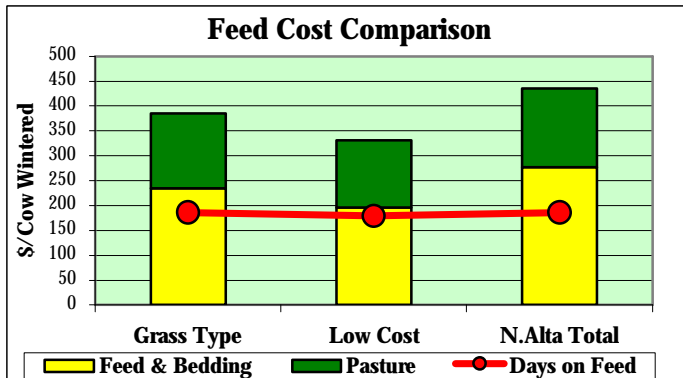
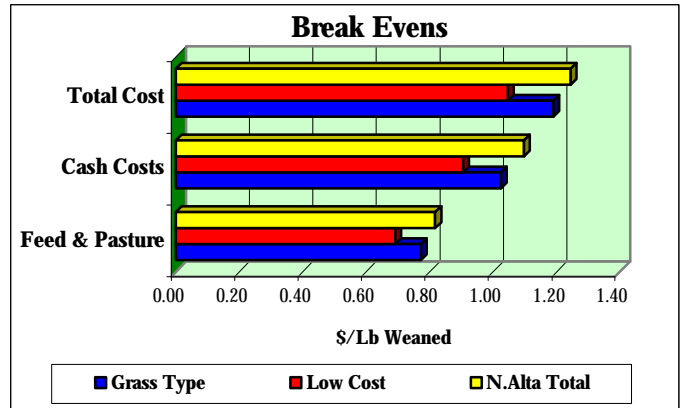
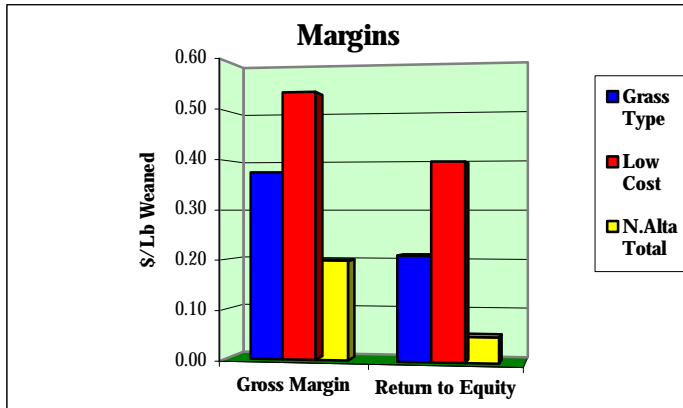
Benchmark Comparables: Peace Lowland Average & Low Cost Groups; Northern Alberta Total



2001 Cow/Calf Enterprise Overview

Economic Performance Comparisons

Benchmark Comparables: Peace Lowland Average & Low Cost Groups; Northern Alberta Total



2001 Cow/Calf Enterprise Unit Cost & Returns Detail**Economic Performance Comparisons**

	<u>Grass</u> <u>Type</u>	<u>Low</u> <u>Cost</u>	<u>N.Alta</u> <u>Total</u>
	----- \$/Lb Weaned -----		
(A)			
1. Weaned Calves	1.41	1.44	1.37
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	0.18	0.20	0.25
7. Bulls	0.03	0.02	0.04
8. Bred Cows/Bred Heifers	0.16	0.25	0.10
9. Miscellaneous Receipts	0.00	0.01	0.01
10. Government Programs	0.00	0.00	0.00
11. Inventory Adjustment	0.37	0.30	0.15
12. Less: Cattle Purchases	0.75	0.78	0.61
Value of Production	1.40	1.44	1.30
(B)			
1. Winter Feed	0.44	0.38	0.50
2. Bedding	0.03	0.03	0.02
3. Pasture	0.30	0.28	0.30
4. Veterinary & Medicine	0.03	0.03	0.04
5. Breeding Fees/Bull Rental	0.00	0.00	0.00
6. Trucking & Marketing Charges	0.04	0.05	0.03
7. Fuel	0.02	0.02	0.02
8. Repairs - Machine	0.03	0.01	0.03
9. Repairs - Corrals & Buildings	0.01	0.01	0.01
10. Utilities & Miscellaneous Expenses	0.04	0.02	0.04
11. Custom Work & Specialized Labour	0.01	0.01	0.01
12. Operating Interest Paid	0.01	0.00	0.01
13. Paid Labour & Benefits	0.01	0.01	0.03
14. Unpaid Labour	0.11	0.11	0.09
Variable Costs	1.09	0.97	1.14
(C)			
1. Share/Lease Cattle Payments	0.00	0.01	0.01
2. Taxes, Water Rates, Lic. & Insurance	0.01	0.01	0.01
3. Equipment & Building	0.05	0.03	0.06
a) Depreciation			
b) Lease Payments	0.00	0.00	0.01
4. Paid Capital Interest	0.04	0.03	0.03
Total Capital Costs	0.10	0.08	0.11
(D) Cash Costs	(B+C-B14-C3)	1.02	0.91
(E) Total Production Costs	(B+C)	1.19	1.05
(F) Gross Margin	(A-D)	0.38	0.54
Return to Unpaid Labour	(A-D+B14)	0.32	0.50
Return to Investment	(A-E+C4)	0.25	0.43
Return to Equity	(A-E)	0.21	0.39
Total Investment		3.82	3.46
		3.46	3.50

2001 Cow/Calf Enterprise Unit Cost & Returns Detail**Economic Performance Comparisons**

	<u>Grass</u>	<u>Low</u>	<u>N.Alta</u>
	<u>Type</u>	<u>Cost</u>	<u>Total</u>
	----- \$/Cow Wintered -----		
(A)			
1. Weaned Calves	702.05	691.77	726.33
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	1.01
6. Cull Cows/Open Heifers	87.37	96.53	131.88
7. Bulls	14.81	11.97	21.98
8. Bred Cows/Bred Heifers	78.83	119.33	51.06
9. Miscellaneous Receipts	2.17	3.48	2.82
10. Government Programs	0.00	0.00	0.00
11. Inventory Adjustment	185.11	142.26	77.84
12. Less: Cattle Purchases	372.67	374.88	323.35
Value of Production	697.68	690.47	689.56
(B)			
1. Winter Feed	221.29	183.13	265.05
2. Bedding	13.25	12.22	12.06
3. Pasture	150.57	136.17	158.23
4. Veterinary & Medicine	15.44	16.69	19.66
5. Breeding Fees/Bull Rental	0.32	0.52	2.57
6. Trucking & Marketing Charges	21.90	24.07	14.43
7. Fuel	12.06	8.55	12.93
8. Repairs - Machine	13.59	6.61	15.87
9. Repairs - Corrals & Buildings	5.26	2.95	7.44
10. Utilities & Miscellaneous Expenses	17.69	10.32	19.29
11. Custom Work & Specialized Labour	6.68	5.21	7.73
12. Operating Interest Paid	2.88	2.28	6.25
13. Paid Labour & Benefits	4.86	3.42	14.68
14. Unpaid Labour	55.34	51.37	48.76
Variable Costs	541.11	463.49	604.95
(C)			
1. Share/Lease Cattle Payments	1.53	2.52	4.10
2. Taxes, Water Rates, Lic. & Insurance	4.86	3.13	4.63
3. Equipment & Building	26.99	16.36	29.70
a) Depreciation			
b) Lease Payments	0.00	0.00	3.37
4. Paid Capital Interest	18.50	16.11	15.43
Total Capital Costs	51.88	38.13	57.22
(D) Cash Costs (B+C-B14-C3)	510.67	433.89	583.71
(E) Total Production Costs (B+C)	593.00	501.62	662.18
(F) Gross Margin (A-D)	187.01	256.58	105.84
Return to Unpaid Labour (A-D+B14)	160.02	240.21	76.14
Return to Investment (A-E+C4)	123.18	204.95	42.81
Return to Equity (A-E)	104.68	188.85	27.38
Total Investment	1,904.35	1,655.64	1,862.69

**2001 Forage & Pasture Enterprise Cost & Returns Analysis
Peace Lowland**

	----- Forages -----			----- Pastures -----		
	Alfalfa /Grass Hay	Greenfeed	Grain Silage	Alfalfa /Grass	Tame Grass	Tame /Native Mixed
Average field size (acres)	105.7	103.7	99.0	287.8	134.9	208.7
Number of Observations	14	6	5	18	32	14
	-----\$/Tonne-----			-----\$/AUM-----		
(A) 1. Crop Sales	68.63	87.05	25.00	18.11	14.41	16.14
2. Crop Insurance Receipts	0.00	0.00	0.00	0.00	0.00	0.00
3. Miscellaneous Receipts	0.00	0.00	0.00	0.55	0.59	0.85
4. Government Programs	0.00	0.00	0.00	0.00	0.00	0.00
5. Straw / Aftermath Grazing	1.13	1.40	0.08	0.00	0.00	0.00
Gross Return	69.76	88.45	25.08	18.66	15.00	16.99
(B) 1. Seed	0.00	6.27	1.74	1.57	0.35	0.00
2. Fertilizer	0.00	1.25	1.76	0.85	2.73	0.56
3. Chemicals	0.00	0.00	0.00	0.00	0.03	0.09
4. Crop Insurance Premiums	0.00	0.00	0.00	0.00	0.00	0.00
5. Trucking & Marketing	0.00	0.00	0.00	0.00	0.00	0.00
6. Fuel	4.24	5.81	2.26	0.35	0.43	0.49
7. Irrigation Fuel & Electricity	0.00	0.00	0.00	0.00	0.00	0.00
8. Repairs - Machinery	2.65	0.49	2.76	0.18	0.35	0.46
9. Repairs - Buildings	0.07	0.01	0.00	0.61	0.68	1.12
10. Utilities & Misc. Expenses	1.68	2.22	1.20	0.31	0.47	0.74
11. Custom Work & Specialized Labour	0.50	2.47	1.00	0.13	0.36	0.19
12. Operating Interest Paid	0.59	0.80	0.04	0.23	0.14	0.10
13. Paid Labour & Benefits	1.56	2.56	1.00	0.21	0.07	0.13
14. Unpaid Labour	3.79	4.06	1.60	1.37	1.26	0.88
Variable Costs	15.07	25.95	13.37	5.79	6.86	4.75
(C) 1. Cash/Share Rent & Land Lease	2.41	4.69	0.00	0.95	1.15	2.99
2. Taxes, Water Rates, Lic. & Insurance	1.65	1.63	0.73	0.67	0.71	0.53
3. Equip. & Bldg. a) Depreciation	11.62	8.34	4.27	0.78	0.70	1.08
b) Lease Payments	0.00	0.00	0.00	0.00	0.00	0.00
4. Paid Capital Interest	7.90	3.41	1.08	2.62	2.92	1.38
Total Capital Costs	23.57	18.07	6.08	5.03	5.48	5.98
(D) Cash Costs (B+C-B14-C3)	23.24	31.62	13.58	8.67	10.38	8.78
(E) Total Production Costs (B+C)	38.64	44.02	19.45	10.82	12.35	10.74
(F) Gross Margin (A-D)	46.52	56.83	11.50	9.99	4.61	8.22
Return to Unpaid Labour (A-E+B14)	34.91	48.49	7.23	9.20	3.91	7.14
Return to Investment (A-E+C4)	39.02	47.84	6.71	10.46	5.58	7.64
Return to Equity (A-E)	31.12	44.43	5.63	7.84	2.65	6.25
Return on Investment (%)	10.1	25.7	7.1	5.2	3.7	7.4
Total Investment (\$/acre)	511.10	336.44	657.25	276.58	289.45	135.63
Management						
Yield per Acre (tonnes or AUM's)	1.32	1.81	6.92	1.37	1.92	1.32
Expected Market Price (\$/unit)	68.63	87.05	25.00	18.11	14.41	16.14

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