

Farm Characteristics

CA-AB-6

Farm Description	A cow-calf operation producing predominantly homegrown feed in one of the most productive agricultural regions of the prairies.
Winter Feeding Ration (lbs/cow/day as fed)	35 days of swath grazing followed by 117 days winter feed with hay (28 lb), straw (11 lb), grain (2 lb), mineral and salt (100 g)
Retained Ownership/Replacement Ration (lb/head/day as fed)	n/a
Disclaimer:	This benchmark is based on 3 farms of data; outliers were excluded as required.

Environment	
Average Annual Temperature	1.5°C
Average Annual Precipitation (mm)	400–500 mm
Ecoregion	Aspen Parkland
Stocking Rate (Animal Unit days per acre)	17
Fertilize Hay (yes/no)	Yes
Fertilize Pasture (yes/no)	No
Typical Hay Yield (tonnes/acre)	1.7
Grassland Acres (owned+rented)	2,370
Crop Acres (includes hay) (owned+rented)	518
Bush and other acres	0

Physical Performance Indicators

Breed	Hereford, Angus
Cow:Bull Ratio	19:1
Bull Culling Rate (%)	4%
Mature Cow Weight (lb)	1,338
Heifer Retention for a steady herd (%)	9%
Cow Death Loss (%)	1.3%
Cow Culling Rate (%)	8.0%
Calves alive after 24hr/100 Cows exposed	96
Calf Death Loss (%) 24 hr to weaning	5%
Calves weaned per 100 cows exposed	90
Total Liveweight Sold per Cow (lb)	551
Weaning Weight (lb)	535
205 day adjusted Weaning Weight (lb)	623
Average Daily Gain pre-weaning (lb)	2.55
Weaning Weight as % of Cow Weight	40%

Production System

Herd size	152
Days on field feeding (e.g. swath grazing)	35
Days supplemented on pasture	0
Days on full winter feed	117
Calving Start date	April 04
Weaning date	October 21
Sale date	October 21
Retained ownership	Replacements
% of feed purchased	0.5%
% of land in crops	18%
Annual sales Retained Cattle (head)	N/A
Placement weight (lbs)	N/A
Sale Weight (lbs)	N/A
Days on feed	0
Days on grass	0

Footnotes:

Cost of Production: Cash Cost + Depreciation + Opportunity Costs

Cash Costs = Cash cost for purchased feed, fertiliser, seeds, fuel, maintenance, land rents, animal purchases, interest on liabilities, wages paid, veterinary costs plus medicine, water, insurance, accounting, etc (excl. Tax)

Depreciation = Linear depreciation on machinery and buildings, calculated on replacement values

Opportunity Costs = Calculated cost for using own production factors like labour (family working hours * wage for qualified local labour, land (own land * regional land rents) and capital (non-land equity * long-term government bonds interest rate)

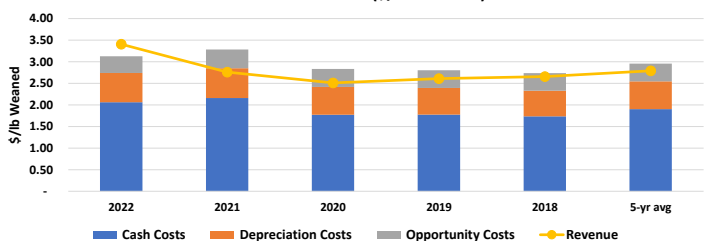
Whole Farm Profitability = Market returns (+ coupled payments) (+ decoupled payments) – whole-farm costs +/- changes in inventory +/- capital gains/losses.

Whole Farm Net Income = Whole farm profitability + depreciation + changes in inventory + capital gains/losses. Known as: 'Net farm income' (Agri Profits, 2018)

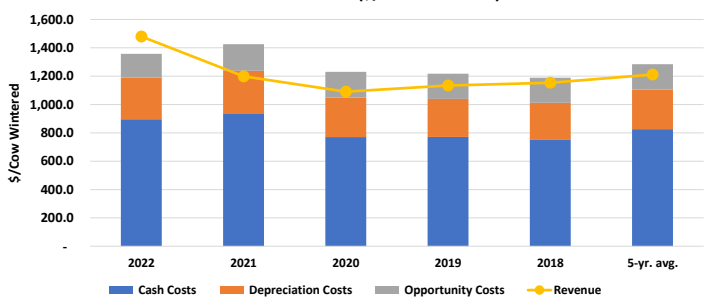
Revenue = sales of calves, cull cows, breeding stock, government payments and other revenue applicable to the specific enterprise

NOTE: Feed costs are based on cost of production if homegrown.

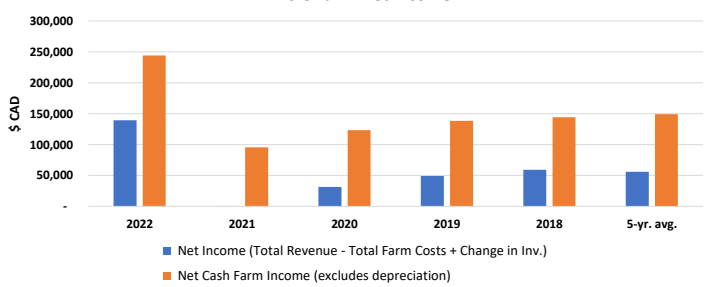
Cost of Production (\$/lb Weaned)



Cost of Production (\$/Cow Wintered)



Whole Farm Net income



Whole Farm Overview Page

Overview							
Operation Maturity	Mature						
Herd Size	152						
Paid Labour (livestock only) (hours)	322			Beef Animals Sold from Retained Ownership	N/A		
Unpaid Labour (livestock only) (hours)	729						
Average wages - paid and unpaid (\$/hr)	13.12						
Revenue		2022	2021	2020	2019	2018	5-yr. avg.
Market Revenue	5-yr avg	429,197	279,886	293,329	310,898	309,089	324,480
Cow-Calf	48%	208,870	167,944	165,779	172,420	175,360	178,075
Cash Crops	39%	220,327	111,942	127,550	138,478	133,729	146,405
Retained Ownership	0%	-	-	-	-	-	-
Government Payments	3%	21,947	20,123	5,835	5,835	5,835	11,915
Other Farm Revenue †	10%	37,385	37,368	37,368	37,370	37,370	37,372
Total Revenue	100%	488,529	337,377	336,532	354,102	352,293	373,767
Change in Inventory		-	-	-	-	-	-
Expenses		2022	2021	2020	2019	2018	5-yr. avg.
Depreciation		104,692	95,236	91,870	89,271	85,034	93,221
Machinery		73,257	65,843	63,574	61,455	57,905	64,407
Buildings		31,434	29,394	28,297	27,815	27,128	28,814
Quota econ. Accounting		-	-	-	-	-	-
Overhead costs		15,652	13,901	13,165	13,051	12,654	13,685
Land improvement		-	-	-	-	-	-
Machinery Maintenance		1,944	1,842	1,812	1,780	1,707	1,817
Buildings Maintenance		1,026	856	827	839	822	874
Contract labour		483	483	498	483	469	483
Diesel, Gasoline, Natural Gas		2,269	1,474	1,136	1,240	1,249	1,474
Electricity		994	603	443	434	398	574
Water		-	-	-	-	-	-
Farm insurance		1,829	1,737	1,675	1,625	1,554	1,684
Disability and accident insurance		-	-	-	-	-	-
Farm taxes and duties		68	65	63	61	58	63
Advisor costs		3,893	3,696	3,565	3,459	3,308	3,584
Accountant & legal fees		-	-	-	-	-	-
Phone & utilities		2,171	2,171	2,171	2,155	2,114	2,156
Other overhead costs		975	975	975	975	975	975
Wages, rent and interest payments		65,582	66,240	68,685	71,172	67,781	67,892
Paid Labour		9,439	8,961	8,645	8,387	8,021	8,690
Total land rents		47,694	47,187	47,011	46,735	46,587	47,043
Total Interest on debt		8,450	10,091	13,029	16,051	13,173	12,159
Cow-Calf		52,681	58,596	34,261	33,531	33,302	42,474
Animal purchases		1,167	1,167	1,167	1,167	1,167	1,167
Purchased feed		18,554	29,901	7,875	7,561	8,435	14,465
Other fixed and var. costs *		32,961	27,528	25,219	24,803	23,700	26,842
Retained Ownership		-	-	-	-	-	-
Animal purchases		-	-	-	-	-	-
Purchased feed		-	-	-	-	-	-
Other fixed and var. costs *		-	-	-	-	-	-
Crop and forage		110,522	103,161	97,133	97,918	94,368	100,620
Seed		23,242	23,898	21,064	22,417	20,824	22,289
Fertilizer		37,252	30,346	26,642	27,566	26,874	29,736
Herbicide		11,782	10,671	10,191	9,733	9,543	10,384
Fungicide & Insecticide		-	-	-	-	-	-
Irrigation		-	-	-	-	-	-
Contract labour		32,143	32,143	33,132	32,143	31,184	32,149
Fuel costs (crop & forage)		-	-	-	-	-	-
Other crop and forage		6,103	6,103	6,103	6,059	5,943	6,062
Total Farm Costs (excludes unpaid labour)		349,130	337,134	305,114	304,943	293,138	317,892
Cash Costs (Total Farm Costs - Depreciation)		244,438	241,898	213,244	215,672	208,104	224,671
Depreciation & Opportunity Costs (including unpaid labour)		114,254	104,798	101,432	98,833	94,596	102,783
Total Economic Costs (cash, depr, opportunity)		358,692	346,696	314,676	314,505	302,700	327,454
Profits		2022	2021	2020	2019	2018	5-yr. avg.
Net Income (Total Revenue - Total Farm Costs + Change in Inv.)		139,399	242	31,418	49,160	59,156	55,875
Net Cash Farm Income (excludes depreciation)		244,072	95,477	123,287	138,427	144,186	149,090

† Other Farm Revenue includes: Other enterprises, capital gains and losses as well as calculated interest on savings based on the models previous year profits.

*Other fixed and var. costs includes: veterinary, medicine, maintenance and spare parts, and other/miscellaneous



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Cow-Calf Enterprise (\$/Cow Wintered)	2022	2021	2020	2019	2018	5 yr. avg.
Cows Wintered *	152	152	152	152	152	152
Average male and female calf price (\$/head)	1,526	1,220	1,204	1,253	1,274	1,295
REVENUE						
Cow Calf	1,480	1,199	1,091	1,134	1,154	1,212
Cull animals and slaughter receipts	129	109	109	114	115	115
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	1,245	996	982	1,021	1,039	1,057
Government payments	106.0	94.0	-	-	-	40.0
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	1,480	1,199	1,091	1,134	1,154	1,212
VARIABLE COSTS						
Animal purchases	7.7	7.7	7.7	7.7	7.7	8
Feed (purchase feed, fertiliser, seed, pesticides)	207.9	272.8	119.7	120.0	123.0	169
Machinery (maintenance, depreciation, contractor)	319.3	326.0	310.0	297.9	286.7	308
Fuel, energy, lubricants, water	68.6	42.2	29.8	29.6	27.3	39
Vet & medicine	68.1	64.6	62.4	60.5	57.9	63
Other inputs cow calf enterprise	100.1	95.5	91.5	90.8	88.8	93
Labour						
Paid Labour	27.8	31.2	28.5	27.3	26.7	28
Unpaid Labour	56.8	63.8	58.2	55.8	54.6	58
Total Variable Costs	856.2	903.7	707.9	689.5	672.6	766
CAPITAL COSTS						
Insurance, taxes	16.2	16.3	15.4	14.9	14.4	15
Buildings (maintenance, depreciation)	64.5	64.2	60.5	59.2	58.3	61
Land Cost	-	-	-	-	-	-
Rented Land	284.7	281.8	280.7	279.1	278.2	281
Own Land	46.8	44.0	43.0	41.5	40.7	43
Capital Costs	-	-	-	-	-	-
Liabilities	25.6	35.9	43.0	52.3	43.9	40
Own capital	64.0	80.0	80.3	80.8	81.0	77
Total Capital Costs	501.8	522.2	522.9	527.7	516.4	518
COSTS						
Cash Costs	896.2	937.9	770.7	771.3	754.4	826
Depreciation Costs	294.3	300.2	278.6	267.9	258.3	280
Opportunity Costs	167.5	187.8	181.5	178.1	176.3	178
Total Production Costs	1,358.1	1,425.9	1,230.8	1,217.3	1,189.0	1,284
Profits						
	2022	2021	2020	2019	2018	5-yr. avg.
Short-term profit (cash costs)	583.9	261.0	320.0	363.1	399.3	385
Medium-term profit (cash + depreciation)	289.6	(39.2)	41.4	95.2	141.0	106
Long-term profit (cash + depreciation + opportunity)	122.1	(227.0)	(140.1)	(82.9)	(35.3)	(73)

*Model Maintains a stable herd size

Costs and revenue are reported for a calendar (e.g. January to December). It reflects revenue and expenses that a producer experiences over that period. Producers who want a cash flow analysis typically use a calendar or agricultural year. This method is often preferred by lenders when getting evaluated for a line of credit or a loan. The model maintains a stable herd, retention rates were adjusted to ensure that.

Cash Costs

Cash costs are the outlays over the course of the year, including machine repairs, paid labour, costs of feed production, and purchased feed. CDN COP Network bases cash costs on actual costs of production. Agri Profit\$ uses the market value for some cash costs, including feed.

The cost of producing the feed on-farm and the purchased feed costs as used in that year to reflect the experience and situation of producers. Production inputs, land and any purchased feeds utilized that year are included.

Rations for each type of animal and inventories are used to calculate total feed requirements. Any shortfall in production are assumed to be purchased at market value. Feed rations and yields are provided "as fed" to balance the model. Below are the included costs for feed production:

Feed: Calculated as feed cost (purchase feed + fertilizer, seed and pesticides for own feed production) + machinery cost (machinery maintenance + depreciation + contractor) + fuel, energy, lubricants and water + land cost (land rents paid + opportunity cost own land)

Land: separated into owned and rented land, includes both crop and pastureland. Land costs = Rents paid + calculated land rents for own land (opportunity cost).

By using the cost of land, the advantage that mature operations have is clearly shown as their cost structure is lower when land has been fully paid off.

Allocation

Generic allocation uses percent revenues from each commodity to cover overheads and utilizes accounting data for the overhead costs. This takes the approach that overheads and fixed costs will be covered by something grown on the farm and recognizes that there are commodity price cycles where grains and livestock tend to be opposite. It is not so much concerned about each enterprise paying their way as that all overheads are covered by the mix of commodities grown. It should be recognized that as commodity prices fluctuate and revenues to each enterprise fluctuate, the shifting shares will change the cost structure for each enterprise from year to year.

Depreciation

Depreciation on buildings and machinery is a non-cash cost that reveals the ability of the farm to continue operating if an asset needs replacement.

Differences in depreciation costs between AgriProfit\$ and the CDN COP Network primarily comes from the use of specific (AgriProfit\$) versus generic (CDN COP Network) allocation. Where generic allocation results in machinery depreciation used for feed production to show up in the cow-calf enterprise as that is where revenue is generated. In contrast, specific allocation removes that cost and since feed is treated at market value, machinery depreciation for feed production is treated as a cash cost. This results in the CDN COP Network typically having lower cash costs and higher depreciation costs than what is reported in AgriProfit\$.

Opportunity Costs

Opportunity costs are the non-cash costs that reveal the opportunity of using different resources. These costs can include Unpaid labour, renting out land, the opportunity of selling or buying feed production, and return to own capital.

Land: The Opportunity costs of land are the rents for new contracts if the farm rents out owned land. It reflects the future cost of renting land. If the producers' profits of utilizing the land outweigh the profits of renting the land, utilizing owned land for production should be preferred and vice-versa.

Labour: The opportunity costs of labour are the calculated wage for family labour, either off-farm salary or farm manager salary. It is important to note that the opportunity cost of labour reflects the income you can receive for the same type of labour.

Capital: The opportunity cost of capital is the interest rate for long-term government bonds multiplied by the equity without land (values of machines, buildings, livestock, circulating capital, less total loans). If the producers' return on capital through farm and ranch production of an enterprise is greater than investing elsewhere then, continuous production should be preferred.

Unit Reported

Often cow-calf COP is expressed as dollars per cow wintered (\$/cow wintered) which adjusts the calf price per head for the number of calves sold per 100 cows. When evaluating overall cost structure to identify areas for improvement, or comparing to a benchmark, this is sufficient.

However, a per unit cost provides producers with their break-even cost, allowing them to compare with posted market prices for their calves' average weight category. This break-even price will depend on the percentage of calves weaned that year from the cow herd. The higher percent weaned, the lower per pound the break-even price will be.



Cow-Calf Enterprise (\$/lb Weaned)	2022	2021	2020	2019	2018	5 yr. avg.
Pounds Weaned	66,039	66,039	66,039	66,039	66,039	66,039
Average male and female weaning weight (lbs)	535	535	535	535	535	
Average male and female calf price at weaning (\$/lb)	2.85	2.28	2.25	2.34	2.38	2.42
REVENUE						
Cow Calf Operation	3.41	2.76	2.51	2.61	2.66	2.79
Cull animals and slaughter receipts	0.30	0.25	0.25	0.26	0.26	0.26
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	2.87	2.29	2.26	2.35	2.39	2.43
Government payments	0.24	0.22	-	-	-	0.09
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	3.41	2.76	2.51	2.61	2.66	2.79
VARIABLE COSTS						
Animal purchases	0.02	0.02	0.02	0.02	0.02	0.02
Feed (purchase feed, fertiliser, seed, pesticides)	0.48	0.63	0.28	0.28	0.28	0.39
Machinery (maintenance, depreciation, contractor)	0.73	0.75	0.71	0.69	0.66	0.71
Fuel, energy, lubricants, water	0.16	0.10	0.07	0.07	0.06	0.09
Vet & medicine	0.16	0.15	0.14	0.14	0.13	0.14
Other inputs cow calf enterprise	0.23	0.22	0.21	0.21	0.20	0.21
Labour						
Paid Labour	0.06	0.07	0.07	0.06	0.06	0.07
Unpaid Labour	0.13	0.15	0.13	0.13	0.13	0.13
Total Variable Costs	2.0	2.1	1.6	1.6	1.5	1.8
CAPITAL COSTS						
Insurance, taxes	0.04	0.04	0.04	0.03	0.03	0.04
Buildings (maintenance, depreciation)	0.15	0.15	0.14	0.14	0.13	0.14
Land Cost						
Rented Land	0.66	0.65	0.65	0.64	0.64	0.65
Owned Land	0.11	0.10	0.10	0.10	0.09	0.10
Capital Costs						
Liabilities	0.06	0.08	0.10	0.12	0.10	0.09
Own capital	0.15	0.18	0.18	0.19	0.19	0.18
Total Capital Costs	1.2	1.2	1.2	1.2	1.2	1.2
COSTS						
Cash Costs	2.06	2.16	1.77	1.78	1.74	1.90
Depreciation Costs	0.68	0.69	0.64	0.62	0.59	0.64
Opportunity Costs	0.39	0.43	0.42	0.41	0.41	0.41
Total Production Costs	3.13	3.28	2.83	2.80	2.74	2.96
Profits	2022	2021	2020	2019	2018	5-yr. avg.
Short-term profit (cash costs)	1.34	0.60	0.74	0.84	0.92	0.89
Medium-term profit (cash + depreciation)	0.67	(0.09)	0.10	0.22	0.32	0.24
Long-term profit (cash + depreciation + opportunity)	0.28	(0.52)	(0.32)	(0.19)	(0.08)	(0.17)

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