

Farm Characteristics	CA-AB-12
Farm Description	Mixed operation with 236 cows and cash crops (canola and wheat), sell at weaning. About half of the crop land is for forage production, half is for cash crop.
Winter Feeding Ration (lbs/cow/day as fed)	194 days on cereal silage (36 lb) and hay (24 lb)
Retained Ownership/Replacement Ration (lb/head/day as fed)	Replacement heifers: 194 days on silage (20 lb), hay (8 lb) and grain (2 lb)
Disclaimer:	This benchmark is based on 4 farms of data; outliers were excluded as required.

Environment	
Average Annual Temperature	1° C
Average Annual Precipitation (mm)	450-550
Ecoregion	Boreal Transition
Stocking Rate (Animal Unit days per acre)	24
Fertilize Hay (yes/no)	No
Fertilize Pasture (yes/no)	No
Typical Hay Yield (tonnes/acre)	1.0
Grassland Acres (owned+rented)	2,791
Crop Acres (includes hay) (owned+rented)	1,524
Bush and other acres	0

Physical Performance Indicators	
Breed	Red Angus, Simmental, Charolais
Cow:Bull Ratio	20:1
Bull Culling Rate (%)	16%
Mature Cow Weight (lb)	1,300
Heifer Retention for a steady herd (%)	12%
Cow Death Loss (%)	0.7%
Cow Culling Rate (%)	11.0%
Calves alive after 24hr/100 Cows exposed	88
Calf Death Loss (%) 24 hr to weaning	3%
Calves weaned per 100 cows exposed	85
Total Liveweight Sold per Cow (lb)	659
Weaning Weight (lb)	679
205 day adjusted Weaning Weight (lb)	629
Average Daily Gain pre-weaning (lb)	2.69
Weaning Weight as % of Cow Weight	52%

Production System	
Herd size	263
Days on field feeding (e.g. swath grazing)	0
Days supplemented on pasture	0
Days on full winter feed	194
Calving Start date	March 01
Weaning date	October 24
Sale date	October 24
Retained ownership	Replacements
% of feed purchased	0.8%
% of land in crops	35%
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)

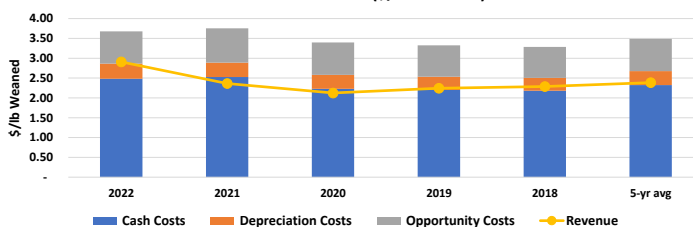
Whole Farm Profitability = Market returns (+ coupled payments) (+ decoupled payments) – whole-farm costs +/- changes in inventory +/- capital gains/losses.

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

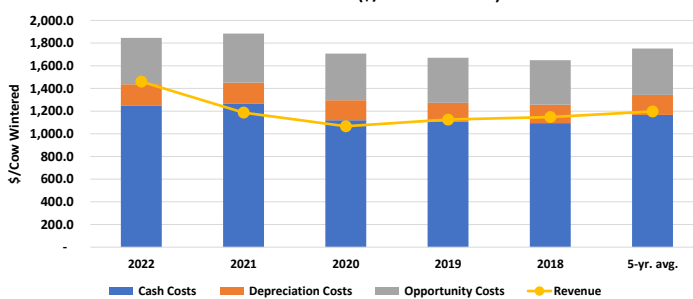
Revenue = sales of calves, cull cows, breeding stock, government payments and other revenue applicable to the specific enterprise

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

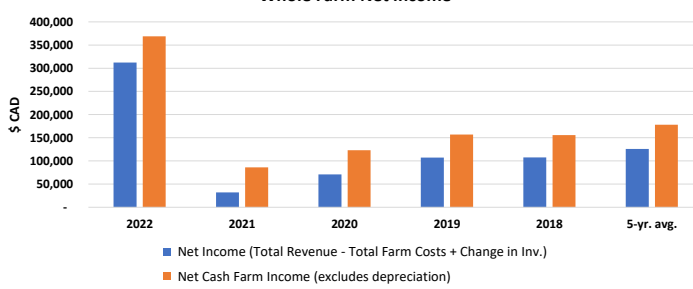
Cost of Production (\$/lb Weaned)



Cost of Production (\$/Cow Wintered)



Whole Farm Net income



Whole Farm Overview Page

Overview							
Operation Maturity	Medium						
Herd Size	263						
Paid Labour (livestock only) (hours)	928			Beef Animals Sold from Retained Ownership	N/A		
Unpaid Labour (livestock only) (hours)	2,712						
Average wages - paid and unpaid (\$/hr)	18.96						
Revenue		2022	2021	2020	2019	2018	5-yr. avg.
Market Revenue	5-yr avg	862,374	547,114	561,938	592,800	582,132	629,272
Cow-Calf	48%	356,137	287,531	280,483	296,094	301,910	304,431
Cash Crops	51%	506,237	259,583	281,455	296,706	280,222	324,840
Retained Ownership	0%	-	-	-	-	-	-
Government Payments	2%	27,878	24,722	-	-	-	10,520
Other Farm Revenue †	0%	60	126	156	269	297	181
Total Revenue	100%	890,312	571,962	562,094	593,068	582,429	639,973
Change in Inventory		-	-	-	-	-	-
Expenses		2022	2021	2020	2019	2018	5-yr. avg.
Depreciation		56,835	54,285	52,404	50,089	48,627	52,448
Machinery		37,411	36,122	34,918	32,901	31,864	34,643
Buildings		19,424	18,164	17,486	17,188	16,764	17,805
Quota econ. Accounting		-	-	-	-	-	-
Overhead costs		130,229	110,636	103,076	104,808	103,830	110,516
Land improvement		6,774	6,113	6,113	6,113	6,113	6,245
Machinery Maintenance		7,725	7,318	7,199	7,074	6,783	7,220
Buildings Maintenance		29,700	25,464	23,957	24,300	23,813	25,447
Contract labour		-	-	-	-	-	-
Diesel, Gasoline, Natural Gas		25,595	17,823	14,628	16,697	17,601	18,469
Electricity		13,813	8,383	6,164	6,031	5,529	7,984
Water		-	-	-	-	-	-
Farm insurance		8,133	7,721	7,449	7,226	6,911	7,488
Disability and accident insurance		-	-	-	-	-	-
Farm taxes and duties		7,340	6,969	6,723	6,522	6,237	6,758
Advisor costs		-	-	-	-	-	-
Accountant & legal fees		-	-	-	-	-	-
Phone & utilities		4,817	4,511	4,511	4,511	4,511	4,572
Other overhead costs		26,333	26,333	26,333	26,333	26,333	26,333
Wages, rent and interest payments		175,859	156,551	146,584	141,451	136,868	151,463
Paid Labour		48,859	46,387	44,748	43,412	41,518	44,985
Total land rents		89,432	84,880	83,298	80,811	79,487	83,582
Total Interest on debt		37,569	25,284	18,538	17,228	15,864	22,897
Cow-Calf		87,415	101,820	78,110	75,870	75,419	83,727
Animal purchases		13,767	13,767	13,767	13,767	13,767	13,767
Purchased feed		17,952	35,922	12,922	11,068	11,249	17,823
Other fixed and var. costs *		55,696	52,131	51,422	51,035	50,403	52,138
Retained Ownership		-	-	-	-	-	-
Animal purchases		-	-	-	-	-	-
Purchased feed		-	-	-	-	-	-
Other fixed and var. costs *		-	-	-	-	-	-
Crop and forage		127,831	116,693	111,150	113,613	110,248	115,907
Seed		36,647	34,688	33,213	35,346	32,835	34,546
Fertilizer		48,008	41,772	38,282	39,166	38,543	41,154
Herbicide		14,228	12,886	12,308	11,754	11,524	12,540
Fungicide & Insecticide		-	-	-	-	-	-
Irrigation		-	-	-	-	-	-
Contract labour		18,404	17,473	17,473	17,473	17,473	17,659
Fuel costs (crop & forage)		-	-	-	-	-	-
Other crop and forage		10,544	9,874	9,874	9,874	9,874	10,008
Total Farm Costs (excludes unpaid labour)		578,169	539,986	491,324	485,831	474,994	514,061
Cash Costs (Total Farm Costs - Depreciation)		521,334	485,700	438,921	435,742	426,366	461,613
Depreciation & Opportunity Costs (including unpaid labour)		108,259	105,709	103,828	101,513	100,051	103,872
Total Economic Costs (cash, depr, opportunity)		629,593	591,410	542,748	537,255	526,418	565,485
Profits		2022	2021	2020	2019	2018	5-yr. avg.
Net Income (Total Revenue - Total Farm Costs + Change in Inv.)		312,143	31,976	70,770	107,238	107,435	125,912
Net Cash Farm Income (excludes depreciation)		368,918	86,135	123,018	157,058	155,766	178,179

† 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



Cow-Calf Enterprise (\$/Cow Wintered)	2022	2021	2020	2019	2018	5 yr. avg.
Cows Wintered *	263	263	263	263	263	263
Average male and female calf price (\$/head)	1,602	1,286	1,252	1,323	1,350	1,363
REVENUE						
Cow Calf	1,460	1,187	1,066	1,126	1,148	1,198
Cull animals and slaughter receipts	157	133	133	139	141	141
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	1,197	960	933	987	1,007	1,017
Government payments	106.0	94.0	-	-	-	40.0
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	1,460	1,187	1,066	1,126	1,148	1,198
VARIABLE COSTS						
Animal purchases	52.3	52.3	52.3	52.3	52.3	52
Feed (purchase feed, fertiliser, seed, pesticides)	234.0	287.8	194.4	191.2	187.9	219
Machinery (maintenance, depreciation, contractor)	241.6	231.6	226.6	218.4	213.4	226
Fuel, energy, lubricants, water	61.9	52.4	39.5	43.2	45.6	48
Vet & medicine	61.6	58.5	56.4	54.7	52.3	57
Other inputs cow calf enterprise	199.1	201.4	197.6	197.9	200.1	199
Labour						
Paid Labour	76.7	92.7	84.9	82.4	81.9	84
Unpaid Labour	140.3	169.5	155.3	150.7	149.7	153
Total Variable Costs	1,067.5	1,146.2	1,007.0	990.9	983.2	1,039
CAPITAL COSTS						
Insurance, taxes	36.6	38.0	36.0	34.9	33.9	36
Buildings (maintenance, depreciation)	121.9	108.3	102.8	103.0	100.7	107
Land Cost	-	-	-	-	-	-
Rented Land	290.2	275.4	270.3	262.2	257.9	271
Own Land	240.1	224.8	219.6	211.2	206.8	220
Capital Costs	-	-	-	-	-	-
Liabilities	61.6	52.5	35.2	32.7	31.3	43
Own capital	28.6	39.2	36.1	35.2	35.7	35
Total Capital Costs	779.0	738.2	699.9	679.2	666.3	713
COSTS						
Cash Costs	1,247.1	1,268.5	1,119.9	1,105.2	1,094.6	1,167
Depreciation Costs	190.4	182.4	176.2	167.8	162.8	176
Opportunity Costs	409.0	433.5	410.9	397.2	392.2	409
Total Production Costs	1,846.5	1,884.4	1,707.0	1,670.2	1,649.5	1,752
Profits						
	2022	2021	2020	2019	2018	5-yr. avg.
Short-term profit (cash costs)	213.0	(81.3)	(53.4)	20.6	53.4	30
Medium-term profit (cash + depreciation)	22.6	(263.7)	(229.6)	(147.2)	(109.4)	(145)
Long-term profit (cash + depreciation + opportunity)	(386.4)	(697.2)	(640.5)	(544.3)	(501.6)	(554)

*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	132,072	132,072	132,072	132,072	132,072	132,072
Average male and female weaning weight (lbs)	679	679	679	679	679	
Average male and female calf price at weaning (\$/lb)	2.36	1.89	1.84	1.95	1.99	2.01
REVENUE						
Cow Calf Operation	2.91	2.36	2.12	2.24	2.29	2.38
Cull animals and slaughter receipts	0.31	0.27	0.27	0.28	0.28	0.28
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	2.38	1.91	1.86	1.96	2.01	2.02
Government payments	0.21	0.19	-	-	-	0.08
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	2.91	2.36	2.12	2.24	2.29	2.38
VARIABLE COSTS						
Animal purchases	0.10	0.10	0.10	0.10	0.10	0.10
Feed (purchase feed, fertiliser, seed, pesticides)	0.47	0.57	0.39	0.38	0.37	0.44
Machinery (maintenance, depreciation, contractor)	0.48	0.46	0.45	0.43	0.42	0.45
Fuel, energy, lubricants, water	0.12	0.10	0.08	0.09	0.09	0.10
Vet & medicine	0.12	0.12	0.11	0.11	0.10	0.11
Other inputs cow calf enterprise	0.40	0.40	0.39	0.39	0.40	0.40
Labour						
Paid Labour	0.15	0.18	0.17	0.16	0.16	0.17
Unpaid Labour	0.28	0.34	0.31	0.30	0.30	0.30
Total Variable Costs	2.1	2.3	2.0	2.0	2.0	2.1
CAPITAL COSTS						
Insurance, taxes	0.07	0.08	0.07	0.07	0.07	0.07
Buildings (maintenance, depreciation)	0.24	0.22	0.20	0.21	0.20	0.21
Land Cost						
Rented Land	0.58	0.55	0.54	0.52	0.51	0.54
Owned Land	0.48	0.45	0.44	0.42	0.41	0.44
Capital Costs						
Liabilities	0.12	0.10	0.07	0.07	0.06	0.08
Own capital	0.06	0.08	0.07	0.07	0.07	0.07
Total Capital Costs	1.6	1.5	1.4	1.4	1.3	1.4
COSTS						
Cash Costs	2.48	2.53	2.23	2.20	2.18	2.32
Depreciation Costs	0.38	0.36	0.35	0.33	0.32	0.35
Opportunity Costs	0.81	0.86	0.82	0.79	0.78	0.81
Total Production Costs	3.68	3.75	3.40	3.33	3.28	3.49
Profits	2022	2021	2020	2019	2018	5-yr. avg.
Short-term profit (cash costs)	0.42	(0.16)	(0.11)	0.04	0.11	0.06
Medium-term profit (cash + depreciation)	0.04	(0.53)	(0.46)	(0.29)	(0.22)	(0.29)
Long-term profit (cash + depreciation + opportunity)	(0.77)	(1.39)	(1.28)	(1.08)	(1.00)	(1.10)

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