

Farm Characteristics

CA-BC-3

Farm Description	A cow-calf operation with 418 head of beef cows, producing predominantly homegrown feed.
Winter Feeding Ration (lbs/cow/day as fed)	60 days supplemented feeding on pasture with protein tubs (0.25 lb intake per head per day), followed by 130 days of full winter feed with mixed grass hay (35 lb)
Retained Ownership/Replacement Ration (lb/head/day as fed)	Replacement heifers: 130 days on mixed grass hay (18 lb) and protein grain mix pellets (3 lb)
Disclaimer:	This benchmark is based on 3 farms of data; outliers were excluded as required.

Environment	
Average Annual Temperature	3°C
Average Annual Precipitation (mm)	250-600
Ecoregion	Fraser Plateau Ecoregion
Stocking Rate (Animal Unit days per acre)	27
Fertilize Hay (yes/no)	No
Fertilize Pasture (yes/no)	No
Typical Hay Yield (tonnes/acre)	2.1
Grassland Acres (owned+rented)	1,969
Crop Acres (includes hay) (owned+rented)	544
Bush and other acres	0

Physical Performance Indicators	
Breed	Herefords and Angus
Cow:Bull Ratio	21:1
Bull Culling Rate (%)	21%
Mature Cow Weight (lb)	1,375
Heifer Retention for a steady herd (%)	14%
Cow Death Loss (%)	2.0%
Cow Culling Rate (%)	11.7%
Calves alive after 24hr/100 Cows exposed	88
Calf Death Loss (%) 24 hr to weaning	2%
Calves weaned per 100 cows exposed	86
Total Liveweight Sold per Cow (lb)	542
Weaning Weight (lb)	496
205 day adjusted Weaning Weight (lb)	491
Average Daily Gain pre-weaning (lb)	1.99
Weaning Weight as % of Cow Weight	36%

Production System	
Herd size	418
Days on field feeding (e.g. swath grazing)	0
Days supplemented on pasture	60
Days on full winter feed	130
Calving Start date	March 13
Weaning date	October 26
Sale date	October 26
Retained ownership	Replacements
% of feed purchased	0.0%
% of land in crops	22%
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)

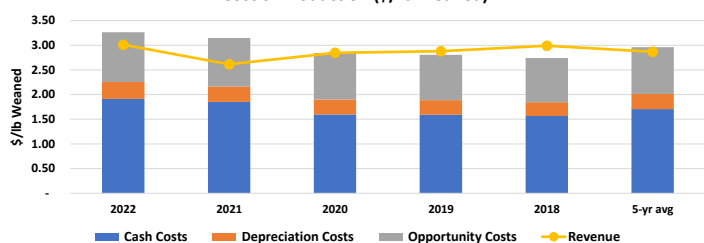
Whole Farm Profitability = Market returns (+ coupled payments) (+ decoupled payments) - whole-farm costs +/- changes in inventory +/- capital gains/losses.

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

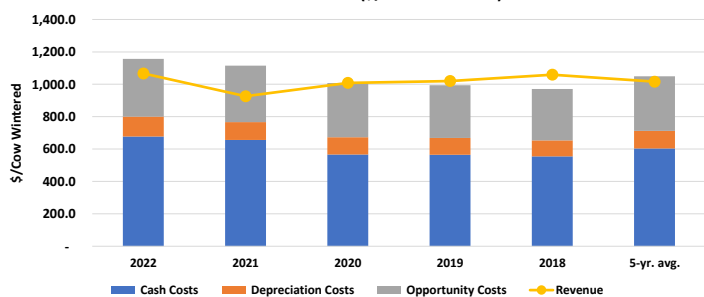
Revenue = sales of calves, cull cows, breeding stock, government payments and other revenue applicable to the specific enterprise

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

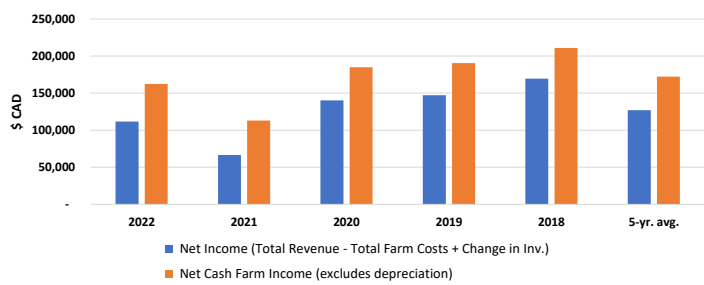
Cost of Production (\$/lb Weaned)



Cost of Production (\$/Cow Wintered)



Whole Farm Net income



Whole Farm Overview Page

Overview							
Operation Maturity	Medium						
Herd Size	418						
Paid Labour (livestock only) (hours)	3,632			Beef Animals Sold from Retained Ownership	N/A		
Unpaid Labour (livestock only) (hours)	2,288						
Average wages - paid and unpaid (\$/hr)	20.00						
Revenue		2022	2021	2020	2019	2018	5-yr. avg.
Market Revenue	5-yr avg	445,803	372,335	421,615	426,476	442,811	421,808
Cow-Calf	99%	445,803	372,335	421,615	426,476	442,811	421,808
Cash Crops	0%	-	-	-	-	-	-
Retained Ownership	0%	-	-	-	-	-	-
Government Payments	1%	-	14,878	-	-	-	2,976
Other Farm Revenue †	0%	27	8	25	40	44	29
Total Revenue	100%	445,830	387,221	421,640	426,517	442,855	424,813
Change in Inventory		-	-	-	-	-	-
Expenses		2022	2021	2020	2019	2018	5-yr. avg.
Depreciation		50,870	46,283	44,647	43,386	41,333	45,304
Machinery		35,391	31,808	30,712	29,689	27,974	31,115
Buildings		15,479	14,475	13,934	13,697	13,359	14,189
Quota econ. Accounting		-	-	-	-	-	-
Overhead costs		114,706	97,223	87,007	92,417	92,458	96,762
Land improvement		6,606	6,265	6,019	6,005	5,859	6,151
Machinery Maintenance		24,146	24,053	23,275	23,011	22,650	23,427
Buildings Maintenance		5,992	5,423	5,173	5,208	5,037	5,367
Contract labour		-	-	-	-	-	-
Diesel, Gasoline, Natural Gas		40,450	26,962	19,512	25,779	27,493	28,039
Electricity		4,601	2,790	2,053	2,008	1,841	2,659
Water		-	-	-	-	-	-
Farm insurance		13,535	12,850	12,396	12,026	11,501	12,462
Disability and accident insurance		-	-	-	-	-	-
Farm taxes and duties		3,055	2,900	2,798	2,714	2,596	2,812
Advisor costs		-	-	-	-	-	-
Accountant & legal fees		3,687	3,500	3,376	3,276	3,133	3,394
Phone & utilities		1,100	1,030	997	989	970	1,017
Other overhead costs		11,534	11,450	11,410	11,401	11,378	11,435
Wages, rent and interest payments		79,037	76,403	72,914	70,192	66,859	73,081
Paid Labour		71,139	67,540	65,153	63,208	60,450	65,498
Total land rents		1,576	1,576	1,576	1,576	1,576	1,576
Total Interest on debt		6,322	7,287	6,185	5,408	4,832	6,007
Cow-Calf		85,036	96,454	72,849	69,365	68,708	78,482
Animal purchases		17,800	17,800	17,800	17,800	17,800	17,800
Purchased feed		37,072	52,181	30,541	27,215	27,343	34,870
Other fixed and var. costs *		30,164	26,473	24,508	24,350	23,565	25,812
Retained Ownership		-	-	-	-	-	-
Animal purchases		-	-	-	-	-	-
Purchased feed		-	-	-	-	-	-
Other fixed and var. costs *		-	-	-	-	-	-
Crop and forage		4,611	4,204	4,057	4,010	3,968	4,170
Seed		3,402	3,072	2,962	2,923	2,901	3,052
Fertilizer		-	-	-	-	-	-
Herbicide		-	-	-	-	-	-
Fungicide & Insecticide		-	-	-	-	-	-
Irrigation		-	-	-	-	-	-
Contract labour		-	-	-	-	-	-
Fuel costs (crop & forage)		-	-	-	-	-	-
Other crop and forage		1,209	1,132	1,095	1,087	1,066	1,118
Total Farm Costs (excludes unpaid labour)		334,260	320,567	281,473	279,371	273,325	297,799
Cash Costs (Total Farm Costs - Depreciation)		283,390	274,284	236,826	235,985	231,992	252,496
Depreciation & Opportunity Costs (including unpaid labour)		96,636	92,049	90,413	89,152	87,099	91,070
Total Economic Costs (cash, depr, opportunity)		380,026	366,334	327,239	325,137	319,091	343,566
Profits		2022	2021	2020	2019	2018	5-yr. avg.
Net Income (Total Revenue - Total Farm Costs + Change in Inv.)		111,572	66,654	140,167	147,146	169,530	127,014
Net Cash Farm Income (excludes depreciation)		162,415	112,929	184,789	190,491	210,819	172,289

† 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 *	418	418	418	418	418	418
Average male and female calf price (\$/head)	1,220	1,030	1,172	1,182	1,240	1,169
REVENUE						
Cow Calf	1,067	926	1,009	1,020	1,059	1,016
Cull animals and slaughter receipts	187	149	162	166	165	166
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	880	742	847	854	895	843
Government payments	-	35.6	-	-	-	7.1
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	1,067	926	1,009	1,020	1,059	1,016
VARIABLE COSTS						
Animal purchases	43.0	42.6	42.6	42.6	42.6	43
Feed (purchase feed, fertiliser, seed, pesticides)	116.0	149.9	97.2	89.1	88.9	108
Machinery (maintenance, depreciation, contractor)	142.0	133.6	129.2	126.1	121.1	130
Fuel, energy, lubricants, water	116.0	75.8	54.9	69.7	73.1	78
Vet & medicine	25.0	23.5	22.7	22.0	21.1	23
Other inputs cow calf enterprise	79.0	73.4	70.4	70.5	69.4	73
Labour						
Paid Labour	170.0	161.6	155.9	151.2	144.6	157
Unpaid Labour	115.0	109.5	105.6	102.5	98.0	106
Total Variable Costs	806.0	769.9	678.4	673.6	658.8	717
CAPITAL COSTS						
Insurance, taxes	40.0	37.7	36.3	35.3	33.7	37
Buildings (maintenance, depreciation)	51.0	47.6	45.7	45.2	44.0	47
Land Cost	-	-	-	-	-	-
Rented Land	4.0	3.8	3.8	3.8	3.8	4
Own Land	184.0	180.2	171.8	168.4	166.3	174
Capital Costs	-	-	-	-	-	-
Liabilities	15.0	17.4	14.8	12.9	11.6	14
Own capital	57.0	58.6	57.0	55.1	53.4	56
Total Capital Costs	351.0	345.2	329.4	320.8	312.7	332
COSTS						
Cash Costs	678.0	656.2	566.6	564.6	555.0	604
Depreciation Costs	122.0	110.7	106.8	103.8	98.9	108
Opportunity Costs	357.0	348.2	334.4	326.0	317.6	337
Total Production Costs	1,157.0	1,115.1	1,007.8	994.4	971.5	1,049
Profits	2022	2021	2020	2019	2018	5-yr. avg.
Short-term profit (cash costs)	389.0	270.2	442.1	455.7	504.4	412
Medium-term profit (cash + depreciation)	267.0	159.4	335.3	351.9	405.5	304
Long-term profit (cash + depreciation + opportunity)	(90.0)	(188.8)	0.8	25.9	87.9	(33)

*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	148,116	148,117	148,117	148,117	148,117	148,116
Average male and female weaning weight (lbs)	496	497	497	497	497	
Average male and female calf price at weaning (\$/lb)	2.46	2.07	2.36	2.38	2.50	2.35
REVENUE						
Cow Calf Operation	3.01	2.61	2.85	2.88	2.99	2.87
Cull animals and slaughter receipts	0.53	0.42	0.46	0.47	0.46	0.47
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	2.48	2.09	2.39	2.41	2.52	2.38
Government payments	-	0.10	-	-	-	0.02
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	3.01	2.61	2.85	2.88	2.99	2.87
VARIABLE COSTS						
Animal purchases	0.12	0.12	0.12	0.12	0.12	0.12
Feed (purchase feed, fertiliser, seed, pesticides)	0.33	0.42	0.27	0.25	0.25	0.31
Machinery (maintenance, depreciation, contractor)	0.40	0.38	0.36	0.36	0.34	0.37
Fuel, energy, lubricants, water	0.33	0.21	0.15	0.20	0.21	0.22
Vet & medicine	0.07	0.07	0.06	0.06	0.06	0.06
Other inputs cow calf enterprise	0.22	0.21	0.20	0.20	0.20	0.20
Labour						
Paid Labour	0.48	0.46	0.44	0.43	0.41	0.44
Unpaid Labour	0.32	0.31	0.30	0.29	0.28	0.30
Total Variable Costs	2.3	2.2	1.9	1.9	1.9	2.0
CAPITAL COSTS						
Insurance, taxes	0.11	0.11	0.10	0.10	0.10	0.10
Buildings (maintenance, depreciation)	0.14	0.13	0.13	0.13	0.12	0.13
Land Cost						
Rented Land	0.01	0.01	0.01	0.01	0.01	0.01
Owned Land	0.52	0.51	0.48	0.48	0.47	0.49
Capital Costs						
Liabilities	0.04	0.05	0.04	0.04	0.03	0.04
Own capital	0.16	0.17	0.16	0.16	0.15	0.16
Total Capital Costs	1.0	1.0	0.9	0.9	0.9	0.9
COSTS						
Cash Costs	1.91	1.85	1.60	1.59	1.57	1.70
Depreciation Costs	0.34	0.31	0.30	0.29	0.28	0.31
Opportunity Costs	1.01	0.98	0.94	0.92	0.90	0.95
Total Production Costs	3.27	3.15	2.84	2.81	2.74	2.96
Profits	2022	2021	2020	2019	2018	5-yr. avg.
Short-term profit (cash costs)	1.10	0.76	1.25	1.29	1.42	1.16
Medium-term profit (cash + depreciation)	0.75	0.45	0.95	0.99	1.14	0.86
Long-term profit (cash + depreciation + opportunity)	(0.25)	(0.53)	0.00	0.07	0.25	(0.09)

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