

Farm Characteristics CA-QC-5

Farm Description A cow-calf operation with 60 beef cows that purchases all replacement heifers and produces predominantly homegrown feed.

Winter Feeding Ration (lbs/cow/day as fed) 45 days supplemented hay (19 lb) on pasture, followed by 182 days on hay (39 lb) and corn grain (0.5 lb)

Retained Ownership/Replacement Ration (lb/head/day as fed) N/A

Disclaimer: This benchmark is based on 6 farms of data; outliers were excluded as required.

Environment	
Average Annual Temperature	5°C
Average Annual Precipitation (mm)	800-1000
Ecoregion	10. St. Lawrence Lowland
Stocking Rate (Animal Unit days per acre)	0.53 cows/acre
Fertilize Hay (yes/no)	Yes
Fertilize Pasture (yes/no)	No
Typical Hay Yield (tonnes/acre)	1.7
Grassland Acres (owned+rented)	111
Crop Acres (includes hay) (owned+rented)	175
Bush and other acres	237

Physical Performance Indicators	
Breed	Mixed
Cow:Bull Ratio	20:1
Bull Culling Rate (%)	8%
Mature Cow Weight (lb)	1,300
Heifer Retention for a steady herd (%)	12%
Cow Death Loss (%)	1.7%
Cow Culling Rate (%)	10.0%
Calves alive after 24hr/100 Cows exposed	93
Calf Death Loss (%) 24 hr to weaning	4%
Calves weaned per 100 cows exposed	90
Total Liveweight Sold per Cow (lb)	650
Weaning Weight (lb)	541
205 day adjusted Weaning Weight (lb)	528
Average Daily Gain pre-weaning (lb)	2.17
Weaning Weight as % of Cow Weight	42%

Production System	
Herd size	60
Days on field feeding (e.g. swath grazing)	0
Days supplemented on pasture	45
Days on full winter feed	182
Calving Start date	March 15
Weaning date	October 11
Sale date	October 11
Retained ownership	N/A
% of feed purchased	2.6%
% of land in crops	33%
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)

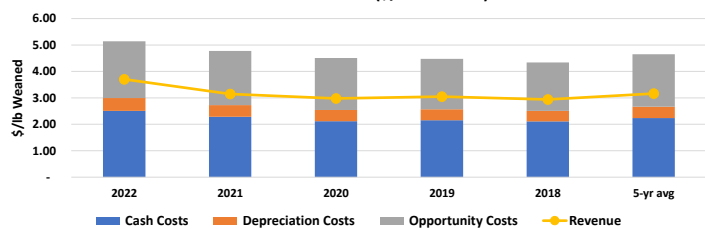
Whole Farm Profitability = Market returns (+ coupled payments) (+ decoupled payments) - whole-farm costs +/- changes in inventory +/- capital gains/losses.

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

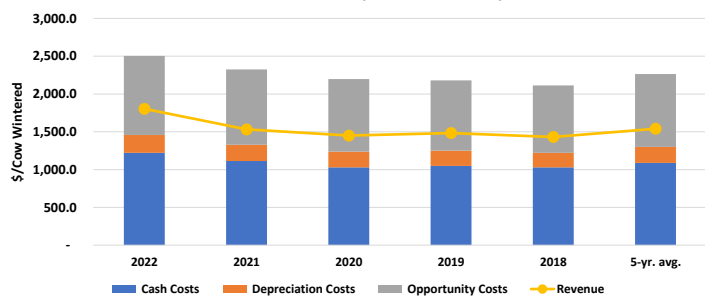
Revenue = sales of calves, cull cows, breeding stock, government payments and other revenue applicable to the specific enterprise

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

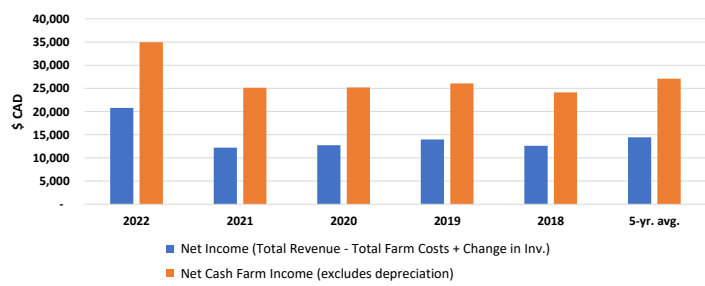
Cost of Production (\$/lb Weaned)



Cost of Production (\$/Cow Wintered)



Whole Farm Net income



Whole Farm Overview Page

Overview							
Operation Maturity	Medium						
Herd Size	60						
Paid Labour (livestock only) (hours)	300			Beef Animals Sold from Retained Ownership	N/A		
Unpaid Labour (livestock only) (hours)	1,505						
Average wages - paid and unpaid (\$/hr)	25.28						
Revenue		2022	2021	2020	2019	2018	5-yr. avg.
Market Revenue	5-yr avg	76,230	64,776	63,167	62,328	60,932	65,486
Cow-Calf	71%	76,230	64,776	63,167	62,328	60,932	65,486
Cash Crops	0%	-	-	-	-	-	-
Retained Ownership	0%	-	-	-	-	-	-
Government Payments	29%	32,033	27,167	23,837	26,708	24,965	26,942
Other Farm Revenue †	0%	37	5	14	20	15	18
Total Revenue	100%	108,300	91,947	87,018	89,055	85,913	92,447
Change in Inventory		-	-	-	-	-	-
Expenses		2022	2021	2020	2019	2018	5-yr. avg.
Depreciation		14,227	12,929	12,473	12,115	11,530	12,655
Machinery		10,317	9,272	8,953	8,655	8,155	9,070
Buildings		3,911	3,657	3,520	3,461	3,375	3,585
Quota econ. Accounting		-	-	-	-	-	-
Overhead costs		32,620	27,528	24,758	26,285	25,943	27,427
Land improvement		512	483	461	458	447	472
Machinery Maintenance		6,896	6,335	6,138	6,056	5,947	6,274
Buildings Maintenance		3,650	3,541	3,336	3,324	3,230	3,416
Contract labour		3,038	3,132	3,038	2,906	2,782	2,979
Diesel, Gasoline, Natural Gas		10,432	6,426	4,425	6,336	6,635	6,851
Electricity		731	636	627	655	615	653
Water		-	-	-	-	-	-
Farm insurance		3,478	3,302	3,186	3,090	2,956	3,202
Disability and accident insurance		-	-	-	-	-	-
Farm taxes and duties		1,016	964	930	902	863	935
Advisor costs		675	641	618	599	573	621
Accountant & legal fees		1,192	1,132	1,092	1,059	1,013	1,097
Phone & utilities		1,000	937	906	900	883	925
Other overhead costs		-	-	-	-	-	-
Wages, rent and interest payments		9,947	10,382	9,284	8,976	8,422	9,402
Paid Labour		6,320	6,000	5,788	5,615	5,370	5,819
Total land rents		-	-	-	-	-	-
Total Interest on debt		3,628	4,382	3,496	3,361	3,052	3,584
Cow-Calf		25,392	24,139	23,326	23,202	23,012	23,814
Animal purchases		15,650	15,650	15,650	15,650	15,650	15,650
Purchased feed		3,824	2,983	2,406	2,242	2,136	2,718
Other fixed and var. costs *		5,918	5,506	5,271	5,309	5,225	5,446
Retained Ownership		-	-	-	-	-	-
Animal purchases		-	-	-	-	-	-
Purchased feed		-	-	-	-	-	-
Other fixed and var. costs *		-	-	-	-	-	-
Crop and forage		5,337	4,751	4,444	4,501	4,387	4,684
Seed		372	355	344	363	333	353
Fertilizer		2,463	2,053	1,833	1,887	1,846	2,016
Herbicide		-	-	-	-	-	-
Fungicide & Insecticide		-	-	-	-	-	-
Irrigation		-	-	-	-	-	-
Contract labour		-	-	-	-	-	-
Fuel costs (crop & forage)		-	-	-	-	-	-
Other crop and forage		2,502	2,343	2,267	2,250	2,207	2,314
Total Farm Costs (excludes unpaid labour)		87,524	79,729	74,286	75,078	73,294	77,982
Cash Costs (Total Farm Costs - Depreciation)		73,296	66,799	61,812	62,963	61,764	65,327
Depreciation & Opportunity Costs (including unpaid labour)		52,272	50,974	50,518	50,160	49,575	50,700
Total Economic Costs (cash, depr, opportunity)		125,568	117,774	112,330	113,123	111,339	116,027
Profits		2022	2021	2020	2019	2018	5-yr. avg.
Net Income (Total Revenue - Total Farm Costs + Change in Inv.)		20,777	12,219	12,732	13,977	12,619	14,465
Net Cash Farm Income (excludes depreciation)		34,967	25,143	25,192	26,072	24,134	27,101

† 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 *	60	60	60	60	60	60
Average male and female calf price (\$/head)	1,215	1,044	1,015	998	991	1,052
REVENUE						
Cow Calf	1,804	1,532	1,450	1,484	1,432	1,540
Cull animals and slaughter receipts	177	140	140	141	124	144
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	1,093	940	913	898	892	947
Government payments	533.9	452.8	397.3	445.1	416.1	449.0
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	1,804	1,532	1,450	1,484	1,432	1,540
VARIABLE COSTS						
Animal purchases	260.8	260.8	260.8	260.8	260.8	261
Feed (purchase feed, fertiliser, seed, pesticides)	161.2	136.9	121.8	120.0	116.2	131
Machinery (maintenance, depreciation, contractor)	337.5	312.3	302.2	293.6	281.4	305
Fuel, energy, lubricants, water	186.0	117.7	84.2	116.5	120.8	125
Vet & medicine	34.4	32.3	30.9	30.0	28.8	31
Other inputs cow calf enterprise	107.5	100.3	96.4	97.1	95.5	99
Labour						
Paid Labour	105.3	100.0	96.5	93.6	89.5	97
Unpaid Labour	739.8	702.3	677.5	657.3	628.6	681
Total Variable Costs	1,932.5	1,762.7	1,670.3	1,668.9	1,621.7	1,731
CAPITAL COSTS						
Insurance, taxes	79.5	75.4	72.8	70.6	67.5	73
Buildings (maintenance, depreciation)	126.0	120.0	114.3	113.1	110.1	117
Land Cost	-	-	-	-	-	-
Rented Land	-	-	-	-	-	-
Own Land	208.1	195.0	184.1	176.8	170.7	187
Capital Costs	-	-	-	-	-	-
Liabilities	60.4	73.0	58.3	56.0	50.9	60
Own capital	97.1	99.6	96.9	94.5	92.2	96
Total Capital Costs	571.2	563.0	526.4	511.0	491.4	533
COSTS						
Cash Costs	1,221.6	1,113.3	1,030.2	1,049.4	1,029.4	1,089
Depreciation Costs	237.1	215.5	207.9	201.9	192.2	211
Opportunity Costs	1,045.0	996.9	958.6	928.6	891.5	964
Total Production Costs	2,503.7	2,325.7	2,196.7	2,179.9	2,113.1	2,264
Profits						
Short-term profit (cash costs)	582.8	419.1	419.9	434.5	402.2	452
Medium-term profit (cash + depreciation)	345.7	203.6	212.0	232.6	210.1	241
Long-term profit (cash + depreciation + opportunity)	(699.3)	(793.3)	(746.6)	(695.9)	(681.4)	(723)

*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	29,225	29,225	29,225	29,225	29,225	29,225
Average male and female weaning weight (lbs)	541	541	541	541	541	
Average male and female calf price at weaning (\$/lb)	2.24	1.93	1.87	1.84	1.83	1.94
REVENUE						
Cow Calf Operation	3.70	3.15	2.98	3.05	2.94	3.16
Cull animals and slaughter receipts	0.36	0.29	0.29	0.29	0.25	0.30
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	2.24	1.93	1.87	1.84	1.83	1.94
Government payments	1.10	0.93	0.82	0.91	0.85	0.92
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	3.70	3.15	2.98	3.05	2.94	3.16
VARIABLE COSTS						
Animal purchases	0.54	0.54	0.54	0.54	0.54	0.54
Feed (purchase feed, fertiliser, seed, pesticides)	0.33	0.28	0.25	0.25	0.24	0.27
Machinery (maintenance, depreciation, contractor)	0.69	0.64	0.62	0.60	0.58	0.63
Fuel, energy, lubricants, water	0.38	0.24	0.17	0.24	0.25	0.26
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	0.22	0.21	0.20	0.19	0.18	0.20
Unpaid Labour	1.52	1.44	1.39	1.35	1.29	1.40
Total Variable Costs	4.0	3.6	3.4	3.4	3.3	3.6
CAPITAL COSTS						
Insurance, taxes	0.16	0.15	0.15	0.14	0.14	0.15
Buildings (maintenance, depreciation)	0.26	0.25	0.23	0.23	0.23	0.24
Land Cost						
Rented Land	-	-	-	-	-	-
Owned Land	0.43	0.40	0.38	0.36	0.35	0.38
Capital Costs						
Liabilities	0.12	0.15	0.12	0.11	0.10	0.12
Own capital	0.20	0.20	0.20	0.19	0.19	0.20
Total Capital Costs	1.2	1.2	1.1	1.0	1.0	1.1
COSTS						
Cash Costs	2.51	2.29	2.12	2.15	2.11	2.24
Depreciation Costs	0.49	0.44	0.43	0.41	0.39	0.43
Opportunity Costs	2.15	2.05	1.97	1.91	1.83	1.98
Total Production Costs	5.14	4.77	4.51	4.48	4.34	4.65
Profits	2022	2021	2020	2019	2018	5-yr. avg.
Short-term profit (cash costs)	1.20	0.86	0.86	0.89	0.83	0.93
Medium-term profit (cash + depreciation)	0.71	0.42	0.44	0.48	0.43	0.49
Long-term profit (cash + depreciation + opportunity)	(1.44)	(1.63)	(1.53)	(1.43)	(1.40)	(1.49)

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