

Farm Characteristics

CA-MT-2

Farm Description	A cow-calf operation producing homegrown feed with some direct farm-gate cow sales of boxed beef
Winter Feeding Ration (lbs/cow/day as fed)	Bale grazing 220 days on haylage (35 lb) and dry hay (15 lb), with mineral (77 g) and salt (64 g).
Retained Ownership/Replacement Ration (lb/head/day as fed)	Bale grazing 220 days on haylage (25 lb) and barley (5 lb), with mineral (65 g) and salt (54 g).
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)	1100-1400 mm
Ecoregion	New Brunswick Uplands
Stocking Rate (Animal Unit days per acre)	0.50 cows/acre
Fertilize Hay (yes/no)	No
Fertilize Pasture (yes/no)	No
Typical Hay Yield (tonnes/acre)	2.3
Grassland Acres (owned+rented)	72
Crop Acres (includes hay) (owned+rented)	128
Bush and other acres	0

Physical Performance Indicators	
Breed	Charolais, Simmental, Galloway
Cow:Bull Ratio	23:1
Bull Culling Rate (%)	33%
Mature Cow Weight (lb)	1,540
Heifer Retention for a steady herd (%)	6%
Cow Death Loss (%)	1.0%
Cow Culling Rate (%)	7.0%
Calves alive after 24hr/100 Cows exposed	96
Calf Death Loss (%) 24 hr to weaning	5%
Calves weaned per 100 cows exposed	91
Total Liveweight Sold per Cow (lb)	639
Weaning Weight (lb)	599
205 day adjusted Weaning Weight (lb)	565
Average Daily Gain pre-weaning (lb)	2.37
Weaning Weight as % of Cow Weight	39%

Production System	
Herd size	35
Days on field feeding (e.g. swath grazing)	0
Days supplemented on pasture	0
Days on full winter feed	220
Calving Start date	January 01
Weaning date	September 01
Sale date	September 05
Retained ownership	Replacements
% of feed purchased	0.9%
% of land in crops	64%
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)

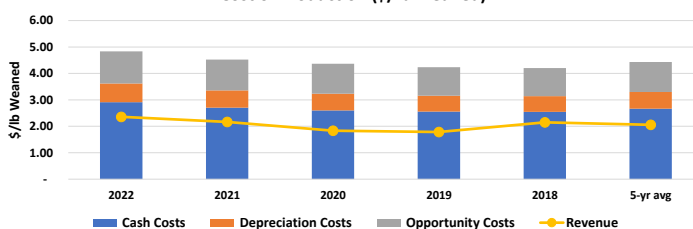
Whole Farm Profitability = Market returns (+ coupled payments) (+ decoupled payments) - whole-farm costs +/- changes in inventory +/- capital gains/losses.

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

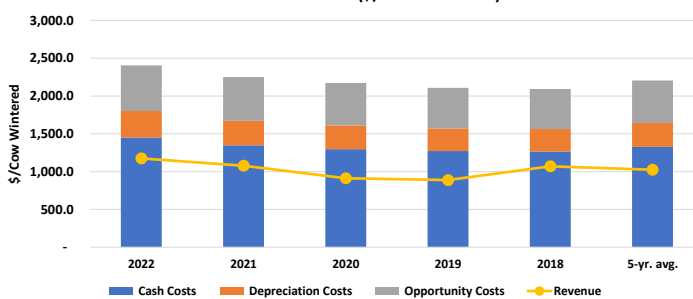
Revenue = sales of calves, cull cows, breeding stock, government payments and other revenue applicable to the specific enterprise

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

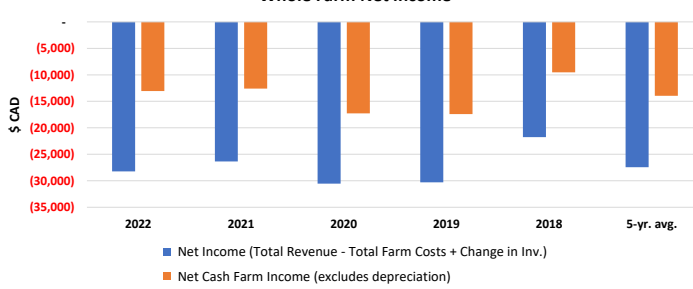
Cost of Production (\$/lb Weaned)



Cost of Production (\$/Cow Wintered)



Whole Farm Net income



Whole Farm Overview Page

Overview							
Operation Maturity	Medium						
Herd Size	35						
Paid Labour (livestock only) (hours)	300			Beef Animals Sold from Retained Ownership	N/A		
Unpaid Labour (livestock only) (hours)	1,001						
Average wages - paid and unpaid (\$/hr)	18.43						
Revenue		2022	2021	2020	2019	2018	5-yr. avg.
Market Revenue	5-yr avg	50,766	45,913	38,497	38,301	44,411	43,577
Cow-Calf	82%	41,103	37,734	31,908	31,081	37,463	35,858
Cash Crops	18%	9,662	8,179	6,588	7,220	6,948	7,720
Retained Ownership	0%	-	-	-	-	-	-
Government Payments	0%	-	-	-	-	-	-
Other Farm Revenue †	0%	24	14	15	21	23	19
Total Revenue	100%	50,789	45,927	38,512	38,322	44,433	43,597
Change in Inventory		-	-	-	-	-	-
Expenses		2022	2021	2020	2019	2018	5-yr. avg.
Depreciation		15,197	13,784	13,300	12,907	12,263	13,490
Machinery		11,754	10,564	10,200	9,860	9,291	10,334
Buildings		3,444	3,220	3,100	3,047	2,972	3,157
Quota econ. Accounting		-	-	-	-	-	-
Overhead costs		26,509	22,388	20,131	21,127	20,789	22,189
Land improvement		3,437	3,193	3,030	3,044	2,989	3,139
Machinery Maintenance		3,495	3,452	3,344	3,322	3,265	3,376
Buildings Maintenance		1,192	1,047	974	989	971	1,035
Contract labour		-	-	-	-	-	-
Diesel, Gasoline, Natural Gas		7,782	4,630	3,045	4,255	4,382	4,819
Electricity		-	-	-	-	-	-
Water		-	-	-	-	-	-
Farm insurance		2,666	2,531	2,442	2,369	2,266	2,455
Disability and accident insurance		1,570	1,490	1,438	1,395	1,334	1,445
Farm taxes and duties		1,733	1,645	1,587	1,539	1,472	1,595
Advisor costs		87	83	80	78	74	80
Accountant & legal fees		1,474	1,399	1,350	1,310	1,253	1,357
Phone & utilities		1,812	1,697	1,642	1,630	1,599	1,676
Other overhead costs		1,261	1,220	1,200	1,196	1,185	1,212
Wages, rent and interest payments		22,886	23,083	23,457	22,543	21,395	22,673
Paid Labour		6,363	6,041	5,827	5,653	5,407	5,858
Total land rents		1,808	1,579	1,448	1,426	1,273	1,507
Total Interest on debt		14,716	15,463	16,182	15,463	14,716	15,308
Cow-Calf		7,085	6,607	6,273	6,019	5,974	6,392
Animal purchases		1,254	1,254	1,254	1,254	1,254	1,254
Purchased feed		2,261	1,888	1,624	1,412	1,428	1,723
Other fixed and var. costs *		3,571	3,465	3,395	3,352	3,291	3,415
Retained Ownership		-	-	-	-	-	-
Animal purchases		-	-	-	-	-	-
Purchased feed		-	-	-	-	-	-
Other fixed and var. costs *		-	-	-	-	-	-
Crop and forage		7,344	6,421	5,897	6,012	5,777	6,290
Seed		1,471	1,419	1,357	1,384	1,254	1,377
Fertilizer		3,974	3,212	2,801	2,904	2,827	3,144
Herbicide		114	103	99	94	93	101
Fungicide & Insecticide		247	247	247	247	247	247
Irrigation		-	-	-	-	-	-
Contract labour		-	-	-	-	-	-
Fuel costs (crop & forage)		-	-	-	-	-	-
Other crop and forage		1,537	1,440	1,393	1,383	1,356	1,422
Total Farm Costs (excludes unpaid labour)		79,022	72,283	69,059	68,608	66,198	71,034
Cash Costs (Total Farm Costs - Depreciation)		63,825	58,499	55,759	55,700	53,935	57,544
Depreciation & Opportunity Costs (including unpaid labour)		33,645	32,232	31,748	31,355	30,710	31,938
Total Economic Costs (cash, depr, opportunity)		97,470	90,731	87,507	87,055	84,645	89,482
Profits		2022	2021	2020	2019	2018	5-yr. avg.
Net Income (Total Revenue - Total Farm Costs + Change in Inv.)		(28,233)	(26,356)	(30,548)	(30,286)	(21,764)	(27,437)
Net Cash Farm Income (excludes depreciation)		(13,059)	(12,586)	(17,263)	(17,399)	(9,525)	(13,966)

† 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 *	35	35	35	35	35	35
Average male and female calf price (\$/head)	1,229	1,155	926	927	1,156	1,079
REVENUE						
Cow Calf	1,174	1,078	912	888	1,070	1,025
Cull animals and slaughter receipts	148	111	135	111	103	122
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	1,026	967	777	777	967	903
Government payments	-	-	-	-	-	-
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	1,174	1,078	912	888	1,070	1,025
VARIABLE COSTS						
Animal purchases	35.8	35.8	35.8	35.8	35.8	36
Feed (purchase feed, fertiliser, seed, pesticides)	242.2	215.2	197.9	193.2	189.6	208
Machinery (maintenance, depreciation, contractor)	352.7	329.1	320.7	305.6	302.6	322
Fuel, energy, lubricants, water	180.0	108.7	72.1	98.7	105.6	113
Vet & medicine	38.5	36.5	35.3	34.2	32.7	35
Other inputs cow calf enterprise	170.7	165.8	162.9	159.3	160.4	164
Labour						
Paid Labour	147.2	141.8	138.0	131.1	130.3	138
Unpaid Labour	553.0	533.0	518.5	492.5	489.6	517
Total Variable Costs	1,720.2	1,566.0	1,481.3	1,450.4	1,446.7	1,533
CAPITAL COSTS						
Insurance, taxes	141.5	135.7	131.7	125.9	123.7	132
Buildings (maintenance, depreciation)	107.2	100.2	96.5	93.6	95.0	99
Land Cost	-	-	-	-	-	-
Rented Land	45.3	39.6	36.3	35.8	31.9	38
Own Land	51.2	46.7	44.1	43.7	40.7	45
Capital Costs	-	-	-	-	-	-
Liabilities	340.3	363.0	383.1	358.3	354.5	360
Own capital	0.0	0.0	0.0	0.0	0.0	0
Total Capital Costs	685.5	685.2	691.7	657.3	645.8	673
COSTS						
Cash Costs	1,449.9	1,347.9	1,295.4	1,272.2	1,266.7	1,326
Depreciation Costs	351.6	323.7	315.0	299.3	295.5	317
Opportunity Costs	604.2	579.6	562.6	536.2	530.3	563
Total Production Costs	2,405.7	2,251.2	2,173.0	2,107.6	2,092.5	2,206
Profits						
Short-term profit (cash costs)	(275.6)	(269.8)	(383.7)	(384.2)	(196.3)	(302)
Medium-term profit (cash + depreciation)	(627.1)	(593.4)	(698.7)	(683.4)	(491.8)	(619)
Long-term profit (cash + depreciation + opportunity)	(1,231.3)	(1,173.1)	(1,261.3)	(1,219.6)	(1,022.1)	(1,181)

*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	17,421	17,421	17,421	17,421	17,421	17,421
Average male and female weaning weight (lbs)	599	599	599	599	599	
Average male and female calf price at weaning (\$/lb)	2.05	1.93	1.55	1.55	1.93	1.80
REVENUE						
Cow Calf Operation	2.36	2.17	1.83	1.78	2.15	2.06
Cull animals and slaughter receipts	0.30	0.22	0.27	0.22	0.21	0.24
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	2.06	1.94	1.56	1.56	1.94	1.81
Government payments	-	-	-	-	-	-
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	2.36	2.17	1.83	1.78	2.15	2.06
VARIABLE COSTS						
Animal purchases	0.07	0.07	0.07	0.07	0.07	0.07
Feed (purchase feed, fertiliser, seed, pesticides)	0.49	0.43	0.40	0.39	0.38	0.42
Machinery (maintenance, depreciation, contractor)	0.71	0.66	0.64	0.61	0.61	0.65
Fuel, energy, lubricants, water	0.36	0.22	0.14	0.20	0.21	0.23
Vet & medicine	0.08	0.07	0.07	0.07	0.07	0.07
Other inputs cow calf enterprise	0.34	0.33	0.33	0.32	0.32	0.33
Labour						
Paid Labour	0.30	0.28	0.28	0.26	0.26	0.28
Unpaid Labour	1.11	1.07	1.04	0.99	0.98	1.04
Total Variable Costs	3.5	3.1	3.0	2.9	2.9	3.1
CAPITAL COSTS						
Insurance, taxes	0.28	0.27	0.26	0.25	0.25	0.26
Buildings (maintenance, depreciation)	0.22	0.20	0.19	0.19	0.19	0.20
Land Cost						
Rented Land	0.09	0.08	0.07	0.07	0.06	0.08
Owned Land	0.10	0.09	0.09	0.09	0.08	0.09
Capital Costs						
Liabilities	0.68	0.73	0.77	0.72	0.71	0.72
Own capital	0.00	0.00	0.00	0.00	0.00	0.00
Total Capital Costs	1.4	1.4	1.4	1.3	1.3	1.4
COSTS						
Cash Costs	2.91	2.71	2.60	2.56	2.54	2.66
Depreciation Costs	0.71	0.65	0.63	0.60	0.59	0.64
Opportunity Costs	1.21	1.16	1.13	1.08	1.07	1.13
Total Production Costs	4.83	4.52	4.37	4.23	4.20	4.43
Profits	2022	2021	2020	2019	2018	5-yr. avg.
Short-term profit (cash costs)	(0.55)	(0.54)	(0.77)	(0.77)	(0.39)	(0.61)
Medium-term profit (cash + depreciation)	(1.26)	(1.19)	(1.40)	(1.37)	(0.99)	(1.24)
Long-term profit (cash + depreciation + opportunity)	(2.47)	(2.36)	(2.53)	(2.45)	(2.05)	(2.37)

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

Open 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.

