

Farm Characteristics

CA-ON-3

Farm Description	A cow-calf operation with 50 beef cows, producing predominantly homegrown feed.
Winter Feeding Ration (lbs/cow/day as fed)	165 days on hay (30 lb) and oat/pea silage (15 lb)
Retained Ownership/Replacement Ration (lb/head/day as fed)	Replacement heifers: 165 days on hay (15 lb), oat/pea silage (8 lb) and protein lick tub (0.15 lb)
Disclaimer:	This benchmark is based on 5 farms of data; outliers were excluded as required.

Environment	
Average Annual Temperature	4.9 to 7.8°C
Average Annual Precipitation (mm)	759-1087 mm
Ecoregion	Lake Simcoe-Rideau
Stocking Rate (Animal Unit days per acre)	50
Fertilize Hay (yes/no)	Yes
Fertilize Pasture (yes/no)	No
Typical Hay Yield (tonnes/acre)	2.5
Grassland Acres (owned+rented)	316
Crop Acres (includes hay) (owned+rented)	96
Bush and other acres	45

Physical Performance Indicators	
Breed	Angus, Hereford, Charolais, Limousine
Cow:Bull Ratio	25:1
Bull Culling Rate (%)	32%
Mature Cow Weight (lb)	1,425
Heifer Retention for a steady herd (%)	10%
Cow Death Loss (%)	1.2%
Cow Culling Rate (%)	8.0%
Calves alive after 24hr/100 Cows exposed	94
Calf Death Loss (%) 24 hr to weaning	2%
Calves weaned per 100 cows exposed	94
Total Liveweight Sold per Cow (lb)	609
Weaning Weight (lb)	538
205 day adjusted Weaning Weight (lb)	531
Average Daily Gain pre-weaning (lb)	2.18
Weaning Weight as % of Cow Weight	38%

Production System	
Herd size	50
Days on field feeding (e.g. swath grazing)	0
Days supplemented on pasture	0
Days on full winter feed	165
Calving Start date	April 11
Weaning date	November 20
Sale date	November 20
Retained ownership	Replacements
% of feed purchased	1.4%
% of land in crops	21%
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)

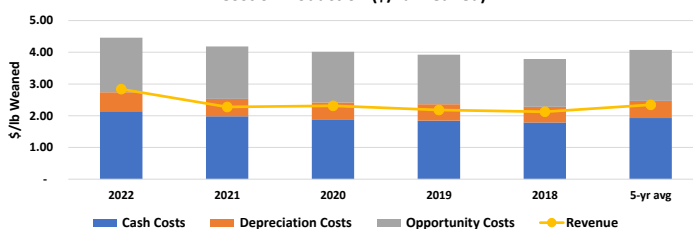
Whole Farm Profitability = Market returns (+ coupled payments) (+ decoupled payments) – whole-farm costs +/- changes in inventory +/- capital gains/losses.

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

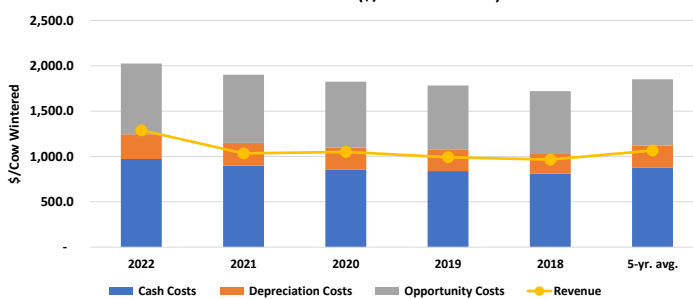
Revenue = sales of calves, cull cows, breeding stock, government payments and other revenue applicable to the specific enterprise

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

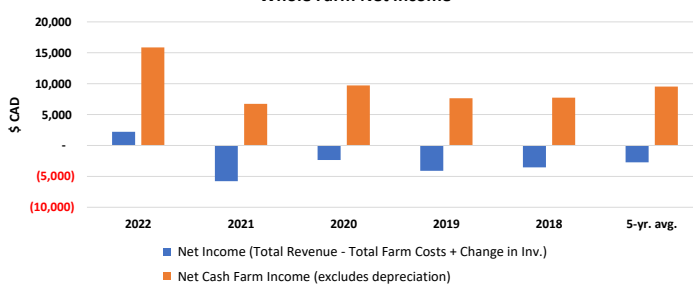
Cost of Production (\$/lb Weaned)



Cost of Production (\$/Cow Wintered)



Whole Farm Net income



Whole Farm Overview Page

Overview							
Operation Maturity	Medium						
Herd Size	50						
Paid Labour (livestock only) (hours)	257			Beef Animals Sold from Retained Ownership	N/A		
Unpaid Labour (livestock only) (hours)	1,163						
Average wages - paid and unpaid (\$/hr)	22.12						
Revenue		2022	2021	2020	2019	2018	5-yr. avg.
Market Revenue	5-yr avg	64,477	51,701	52,520	49,583	48,261	53,308
Cow-Calf	100%	64,477	51,701	52,520	49,583	48,261	53,308
Cash Crops	0%	-	-	-	-	-	-
Retained Ownership	0%	-	-	-	-	-	-
Government Payments	0%	-	-	-	-	-	-
Other Farm Revenue †	0%	1	-	0	0	0	0
Total Revenue	100%	64,478	51,701	52,520	49,583	48,261	53,308
Change in Inventory		-	-	-	-	-	-
Expenses		2022	2021	2020	2019	2018	5-yr. avg.
Depreciation		13,647	12,511	12,062	11,759	11,277	12,251
Machinery		6,895	6,197	5,984	5,784	5,450	6,062
Buildings		6,752	6,314	6,078	5,974	5,827	6,189
Quota econ. Accounting		-	-	-	-	-	-
Overhead costs		20,099	18,694	17,761	17,685	17,166	18,281
Land improvement		1,946	1,899	1,842	1,827	1,768	1,856
Machinery Maintenance		1,698	1,871	1,841	1,809	1,734	1,790
Buildings Maintenance		1,290	1,130	1,080	1,082	1,056	1,128
Contract labour		-	-	-	-	-	-
Diesel, Gasoline, Natural Gas		1,754	1,089	737	1,030	1,145	1,151
Electricity		-	-	-	-	-	-
Water		-	-	-	-	-	-
Farm insurance		5,466	5,190	5,006	4,857	4,645	5,033
Disability and accident insurance		-	-	-	-	-	-
Farm taxes and duties		3,960	3,760	3,627	3,519	3,365	3,646
Advisor costs		421	400	386	374	358	388
Accountant & legal fees		1,475	1,401	1,351	1,311	1,254	1,358
Phone & utilities		1,234	1,155	1,118	1,110	1,088	1,141
Other overhead costs		853	799	773	767	753	789
Wages, rent and interest payments		12,680	12,276	11,391	10,942	10,321	11,522
Paid Labour		5,688	5,400	5,209	5,054	4,833	5,237
Total land rents		3,221	2,814	2,433	2,356	2,253	2,615
Total Interest on debt		3,772	4,062	3,749	3,532	3,235	3,670
Cow-Calf		11,231	9,774	9,657	9,153	9,123	9,788
Animal purchases		3,400	3,400	3,400	3,400	3,400	3,400
Purchased feed		4,413	3,209	3,209	2,727	2,779	3,267
Other fixed and var. costs *		3,419	3,165	3,048	3,027	2,944	3,120
Retained Ownership		-	-	-	-	-	-
Animal purchases		-	-	-	-	-	-
Purchased feed		-	-	-	-	-	-
Other fixed and var. costs *		-	-	-	-	-	-
Crop and forage		4,604	4,224	4,006	4,155	3,919	4,182
Seed		2,670	2,544	2,459	2,585	2,381	2,528
Fertilizer		1,267	1,056	942	971	950	1,037
Herbicide		-	-	-	-	-	-
Fungicide & Insecticide		-	-	-	-	-	-
Irrigation		-	-	-	-	-	-
Contract labour		-	-	-	-	-	-
Fuel costs (crop & forage)		-	-	-	-	-	-
Other crop and forage		667	625	604	600	588	617
Total Farm Costs (excludes unpaid labour)		62,262	57,479	54,876	53,695	51,806	56,024
Cash Costs (Total Farm Costs - Depreciation)		48,614	44,968	42,815	41,936	40,529	43,773
Depreciation & Opportunity Costs (including unpaid labour)		39,369	38,232	37,783	37,480	36,999	37,973
Total Economic Costs (cash, depr, opportunity)		87,983	83,201	80,598	79,416	77,528	81,745
Profits		2022	2021	2020	2019	2018	5-yr. avg.
Net Income (Total Revenue - Total Farm Costs + Change in Inv.)		2,216	(5,778)	(2,357)	(4,112)	(3,546)	(2,715)
Net Cash Farm Income (excludes depreciation)		15,862	6,733	9,705	7,647	7,731	9,536

† 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 *	50	50	50	50	50	50
Average male and female calf price (\$/head)	1,313	1,065	1,085	1,024	1,003	1,098
REVENUE						
Cow Calf	1,290	1,034	1,050	992	965	1,066
Cull animals and slaughter receipts	165	126	124	115	110	128
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	1,124	908	927	877	856	938
Government payments	-	-	-	-	-	-
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	1,290	1,034	1,050	992	965	1,066
VARIABLE COSTS						
Animal purchases	68.0	68.0	68.0	68.0	68.0	68
Feed (purchase feed, fertiliser, seed, pesticides)	219.3	186.7	181.1	174.2	169.3	186
Machinery (maintenance, depreciation, contractor)	171.9	161.4	156.5	151.9	143.7	157
Fuel, energy, lubricants, water	45.2	29.1	21.2	27.9	30.3	31
Vet & medicine	26.6	25.3	24.4	23.6	22.6	24
Other inputs cow calf enterprise	93.0	88.4	85.9	84.6	82.4	87
Labour						
Paid Labour	113.8	108.0	104.2	101.1	96.7	105
Unpaid Labour	514.4	488.4	471.1	457.1	437.1	474
Total Variable Costs	1,252.1	1,155.2	1,112.4	1,088.3	1,050.1	1,132
CAPITAL COSTS						
Insurance, taxes	206.8	196.4	189.4	183.8	175.8	190
Buildings (maintenance, depreciation)	160.8	148.9	143.2	141.1	137.7	146
Land Cost	-	-	-	-	-	-
Rented Land	64.4	56.3	48.7	47.1	45.1	52
Own Land	181.7	176.7	172.1	171.2	169.9	174
Capital Costs	-	-	-	-	-	-
Liabilities	75.4	81.2	75.0	70.6	64.7	73
Own capital	83.7	86.2	83.6	80.1	76.8	82
Total Capital Costs	772.9	745.7	711.9	694.0	669.9	719
COSTS						
Cash Costs	972.3	899.4	856.3	838.7	810.6	875
Depreciation Costs	272.9	250.2	241.2	235.2	225.5	245
Opportunity Costs	779.8	751.3	726.8	708.4	683.9	730
Total Production Costs	2,025.0	1,900.9	1,824.3	1,782.3	1,720.0	1,851
Profits						
Short-term profit (cash costs)	317.2	134.7	194.1	152.9	154.6	191
Medium-term profit (cash + depreciation)	44.3	(115.6)	(47.1)	(82.2)	(70.9)	(54)
Long-term profit (cash + depreciation + opportunity)	(735.5)	(866.9)	(773.9)	(790.6)	(754.8)	(784)

*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	22,709	22,709	22,709	22,709	22,709	22,709
Average male and female weaning weight (lbs)	538	538	538	538	538	
Average male and female calf price at weaning (\$/lb)	2.44	1.98	2.02	1.90	1.86	2.04
REVENUE						
Cow Calf Operation	2.84	2.28	2.31	2.18	2.13	2.35
Cull animals and slaughter receipts	0.36	0.28	0.27	0.25	0.24	0.28
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	2.48	2.00	2.04	1.93	1.88	2.07
Government payments	-	-	-	-	-	-
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	2.84	2.28	2.31	2.18	2.13	2.35
VARIABLE COSTS						
Animal purchases	0.15	0.15	0.15	0.15	0.15	0.15
Feed (purchase feed, fertiliser, seed, pesticides)	0.48	0.41	0.40	0.38	0.37	0.41
Machinery (maintenance, depreciation, contractor)	0.38	0.36	0.34	0.33	0.32	0.35
Fuel, energy, lubricants, water	0.10	0.06	0.05	0.06	0.07	0.07
Vet & medicine	0.06	0.06	0.05	0.05	0.05	0.05
Other inputs cow calf enterprise	0.20	0.19	0.19	0.19	0.18	0.19
Labour						
Paid Labour	0.25	0.24	0.23	0.22	0.21	0.23
Unpaid Labour	1.13	1.08	1.04	1.01	0.96	1.04
Total Variable Costs	2.8	2.5	2.4	2.4	2.3	2.5
CAPITAL COSTS						
Insurance, taxes	0.46	0.43	0.42	0.40	0.39	0.42
Buildings (maintenance, depreciation)	0.35	0.33	0.32	0.31	0.30	0.32
Land Cost						
Rented Land	0.14	0.12	0.11	0.10	0.10	0.12
Owned Land	0.40	0.39	0.38	0.38	0.37	0.38
Capital Costs						
Liabilities	0.17	0.18	0.17	0.16	0.14	0.16
Own capital	0.18	0.19	0.18	0.18	0.17	0.18
Total Capital Costs	1.7	1.6	1.6	1.5	1.5	1.6
COSTS						
Cash Costs	2.14	1.98	1.89	1.85	1.78	1.93
Depreciation Costs	0.60	0.55	0.53	0.52	0.50	0.54
Opportunity Costs	1.72	1.65	1.60	1.56	1.51	1.61
Total Production Costs	4.46	4.19	4.02	3.92	3.79	4.07
Profits	2022	2021	2020	2019	2018	5-yr. avg.
Short-term profit (cash costs)	0.70	0.30	0.43	0.34	0.34	0.42
Medium-term profit (cash + depreciation)	0.10	(0.25)	(0.10)	(0.18)	(0.16)	(0.12)
Long-term profit (cash + depreciation + opportunity)	(1.62)	(1.91)	(1.70)	(1.74)	(1.66)	(1.73)

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