

Farm Characteristics	CA-ON-2
<b>Farm Description</b>	A spring and fall calving operation producing cash crops and predominantly homegrown feed around Lake Simcoe-Rideau.
<b>Winter Feeding Ration (lbs/cow/day as fed)</b>	180 days on free choice (28 lbs) Hay, 5 lbs of corn distiller solubles with free choice mineral
<b>Retained Ownership/Replacement Ration (lb/head/day as fed)</b>	180 days on 6 lbs hay (good quality), 6.5 lb barley grain, 1.5 lb corn distiller soluble and 1 lb protein supplement
<b>Disclaimer:</b>	This benchmark is based on 6 farms of data; outliers were excluded as required.

Environment	
Average Annual Temperature	4.9-7.8°C
Average Annual Precipitation (mm)	759 -1087 mm
Ecoregion	Lake Simcoe-Rideau
Stocking Rate (Animal Unit days per acre)	0.24 cows/acre
Fertilize Hay (yes/no)	Yes
Fertilize Pasture (yes/no)	No
Typical Hay Yield (tonnes/acre)	2.8
Grassland Acres (owned+rented)	667
Crop Acres (includes hay) (owned+rented)	111
Bush and other acres	0

Physical Performance Indicators	
Breed	Angus
Cow:Bull Ratio	24:1
Bull Culling Rate (%)	14%
Mature Cow Weight (lb)	1,200
Heifer Retention for a steady herd (%)	15%
Cow Death Loss (%)	1.7%
Cow Culling Rate (%)	13.8%
Calves alive after 24hr/100 Cows exposed	92
Calf Death Loss (%) 24 hr to weaning	9%
Calves weaned per 100 cows exposed	85
Total Liveweight Sold per Cow (lb)	603
Weaning Weight (lb)	557
205 day adjusted Weaning Weight (lb)	586
Average Daily Gain pre-weaning (lb)	2.42
Weaning Weight as % of Cow Weight	46%

Production System	
Herd size	160
Days on field feeding (e.g. swath grazing)	0
Days supplemented on pasture	0
Days on full winter feed	180
Calving Start date	15-Mar/1-Sept
Weaning date	21-Oct/9-Apr
Sale date	15-Jun/15-Jan
Retained ownership	Replacements
% of feed purchased	16.5%
% of land in crops	14%
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)

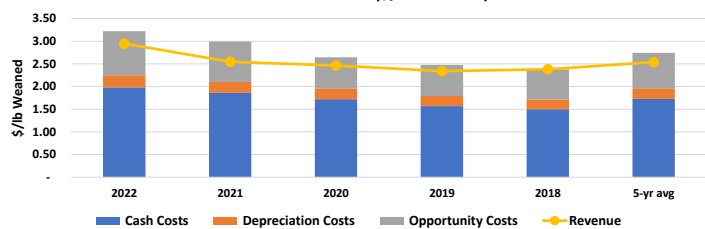
Whole Farm Profitability = Market returns (+ coupled payments) (+ decoupled payments) – whole-farm costs +/- changes in inventory +/- capital gains/losses.

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

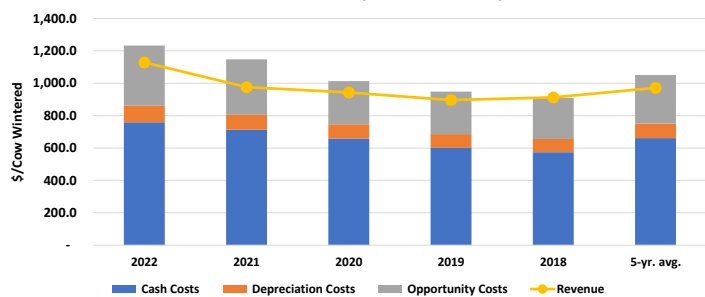
Revenue = sales of calves, cull cows, breeding stock, government payments and other revenue applicable to the specific enterprise

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

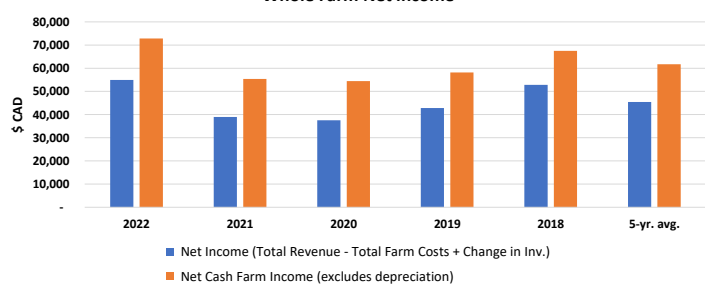
Cost of Production (\$/lb Weaned)



Cost of Production (\$/Cow Wintered)



Whole Farm Net income



# Whole Farm Overview Page

Overview							
Operation Maturity	Medium						
Herd Size	160						
Paid Labour (livestock only) (hours)	640			Beef Animals Sold from Retained Ownership	N/A		
Unpaid Labour (livestock only) (hours)	1,117						
Average wages - paid and unpaid (\$/hr)	21.56						
Revenue		2022	2021	2020	2019	2018	5-yr. avg.
<b>Market Revenue</b>	<b>5-yr avg</b>	<b>180,559</b>	<b>156,091</b>	<b>150,874</b>	<b>143,319</b>	<b>145,956</b>	<b>155,360</b>
Cow-Calf	90%	180,559	156,091	150,874	143,319	145,956	155,360
Cash Crops	0%	-	-	-	-	-	-
Retained Ownership	0%	-	-	-	-	-	-
<b>Government Payments</b>	<b>0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Other Farm Revenue †</b>	<b>10%</b>	<b>18,114</b>	<b>18,108</b>	<b>18,109</b>	<b>18,109</b>	<b>18,112</b>	<b>18,110</b>
<b>Total Revenue</b>	<b>100%</b>	<b>198,672</b>	<b>174,199</b>	<b>168,982</b>	<b>161,429</b>	<b>164,068</b>	<b>173,470</b>
Change in Inventory		-	-	(1,121)	-	-	(224)
Expenses		2022	2021	2020	2019	2018	5-yr. avg.
<b>Depreciation</b>		<b>17,953</b>	<b>16,402</b>	<b>15,818</b>	<b>15,398</b>	<b>14,723</b>	<b>16,059</b>
Machinery		10,616	9,541	9,213	8,906	8,391	9,333
Buildings		7,337	6,861	6,605	6,493	6,332	6,726
Quota econ. Accounting		-	-	-	-	-	-
<b>Overhead costs</b>		<b>31,869</b>	<b>27,804</b>	<b>26,422</b>	<b>26,698</b>	<b>26,179</b>	<b>27,794</b>
Land improvement		1,074	991	961	965	950	988
Machinery Maintenance		6,140	5,998	5,901	5,799	5,560	5,880
Buildings Maintenance		3,405	2,982	2,851	2,870	2,799	2,982
Contract labour		-	-	-	-	-	-
Diesel, Gasoline, Natural Gas		4,446	2,760	1,867	2,605	2,901	2,916
Electricity		6,335	5,151	5,269	5,142	5,027	5,385
Water		-	-	-	-	-	-
Farm insurance		4,153	3,943	3,803	3,690	3,529	3,824
Disability and accident insurance		-	-	-	-	-	-
Farm taxes and duties		3,824	3,631	3,503	3,398	3,250	3,521
Advisor costs		355	337	325	315	302	327
Accountant & legal fees		721	684	660	640	612	663
Phone & utilities		1,231	1,153	1,115	1,107	1,086	1,138
Other overhead costs		185	173	168	167	163	171
<b>Wages, rent and interest payments</b>		<b>29,462</b>	<b>29,058</b>	<b>28,873</b>	<b>26,866</b>	<b>24,085</b>	<b>27,669</b>
Paid Labour		14,989	14,231	13,728	13,318	12,737	13,801
Total land rents		7,788	6,522	5,337	5,098	4,778	5,905
Total Interest on debt		6,685	8,305	9,808	8,450	6,570	7,964
<b>Cow-Calf</b>		<b>56,583</b>	<b>55,110</b>	<b>52,962</b>	<b>43,122</b>	<b>39,975</b>	<b>49,550</b>
Animal purchases		5,175	5,175	5,175	5,175	5,175	5,175
Purchased feed		30,778	32,470	32,589	23,468	19,991	27,859
Other fixed and var. costs *		20,630	17,465	15,198	14,479	14,809	16,516
<b>Retained Ownership</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Animal purchases		-	-	-	-	-	-
Purchased feed		-	-	-	-	-	-
Other fixed and var. costs *		-	-	-	-	-	-
<b>Crop and forage</b>		<b>7,897</b>	<b>6,833</b>	<b>6,253</b>	<b>6,543</b>	<b>6,305</b>	<b>6,766</b>
Seed		2,492	2,374	2,295	2,412	2,223	2,359
Fertilizer		3,195	2,582	2,252	2,334	2,273	2,527
Herbicide		-	-	-	-	-	-
Fungicide & Insecticide		-	-	-	-	-	-
Irrigation		-	-	-	-	-	-
Contract labour		-	-	-	-	-	-
Fuel costs (crop & forage)		609	378	256	357	398	399
Other crop and forage		1,600	1,499	1,450	1,439	1,412	1,480
<b>Total Farm Costs (excludes unpaid labour)</b>		<b>143,764</b>	<b>135,208</b>	<b>130,327</b>	<b>118,628</b>	<b>111,267</b>	<b>127,839</b>
Cash Costs (Total Farm Costs - Depreciation)		125,811	118,806	114,510	103,229	96,544	111,780
Depreciation & Opportunity Costs (including unpaid labour)		42,037	40,486	39,901	39,482	38,807	40,143
Total Economic Costs (cash, depr, opportunity)		167,848	159,292	154,411	142,712	135,351	151,923
Profits		2022	2021	2020	2019	2018	5-yr. avg.
<b>Net Income (Total Revenue - Total Farm Costs + Change in Inv.)</b>		<b>54,908</b>	<b>38,991</b>	<b>37,534</b>	<b>42,801</b>	<b>52,801</b>	<b>45,407</b>
<b>Net Cash Farm Income (excludes depreciation)</b>		<b>72,856</b>	<b>55,393</b>	<b>54,472</b>	<b>58,198</b>	<b>67,520</b>	<b>61,688</b>

† 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



<b>Cow-Calf Enterprise (\$/Cow Wintered)</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>5 yr. avg.</b>
Cows Wintered *	160	160	160	160	160	160
Average male and female calf price (\$/head)	1,273	1,138	1,121	1,066	1,094	1,138
<b>REVENUE</b>						
Cow Calf	1,128	976	943	896	912	971
Cull animals and slaughter receipts	232	178	173	163	158	181
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	897	798	770	733	754	790
Government payments	-	-	-	-	-	-
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	1,128	976	943	896	912	971
<b>VARIABLE COSTS</b>						
Animal purchases	32.3	32.3	32.3	32.3	32.3	32
Feed (purchase feed, fertiliser, seed, pesticides)	244.6	249.5	247.2	191.4	167.8	220
Machinery (maintenance, depreciation, contractor)	95.2	87.0	84.3	81.6	77.6	85
Fuel, energy, lubricants, water	73.7	52.9	46.9	51.3	52.9	56
Vet & medicine	49.2	44.8	41.4	40.5	39.7	43
Other inputs cow calf enterprise	85.2	71.3	60.7	56.2	58.6	66
Labour						
Paid Labour	85.1	79.7	76.5	73.9	70.8	77
Unpaid Labour	154.8	144.9	139.2	134.4	128.8	140
Total Variable Costs	820.2	762.4	728.5	661.7	628.5	720
<b>CAPITAL COSTS</b>						
Insurance, taxes	47.5	44.8	43.1	41.7	39.9	43
Buildings (maintenance, depreciation)	61.0	55.1	52.7	52.0	50.8	54
Land Cost	-	-	-	-	-	-
Rented Land	48.7	40.8	33.4	31.9	29.9	37
Own Land	189.5	172.7	106.2	103.0	98.7	134
Capital Costs	-	-	-	-	-	-
Liabilities	38.0	46.5	28.0	33.4	35.8	36
Own capital	28.0	24.9	20.7	24.6	26.8	25
Total Capital Costs	412.6	384.8	284.1	286.5	281.8	330
<b>COSTS</b>						
Cash Costs	758.6	712.8	658.4	600.8	574.2	661
Depreciation Costs	102.0	91.9	88.2	85.4	81.9	90
Opportunity Costs	372.3	342.5	266.0	261.9	254.2	299
Total Production Costs	1,232.9	1,147.2	1,012.6	948.2	910.3	1,050
<b>Profits</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>5-yr. avg.</b>
Short-term profit (cash costs)	369.9	262.7	284.6	294.9	338.1	310
Medium-term profit (cash + depreciation)	267.9	170.9	196.4	209.5	256.2	220
Long-term profit (cash + depreciation + opportunity)	(104.4)	(171.6)	(69.6)	(52.4)	1.9	(79)

\*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.



<b>Cow-Calf Enterprise (\$/lb Weaned)</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>5 yr. avg.</b>
<b>Pounds Weaned</b>	61,252	61,252	61,252	61,252	61,252	61,252
Average male and female weaning weight (lbs)	557	557	557	557	557	
Average male and female calf price at weaning (\$/lb)	2.29	2.04	2.01	1.91	1.96	2.04
<b>REVENUE</b>						
Cow Calf Operation	2.95	2.55	2.46	2.34	2.38	2.54
Cull animals and slaughter receipts	0.61	0.46	0.45	0.42	0.41	0.47
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	2.34	2.08	2.01	1.92	1.97	2.06
Government payments	-	-	-	-	-	-
Other returns	-	-	-	-	-	-
<b>Total Cow-Calf Revenue</b>	<b>2.95</b>	<b>2.55</b>	<b>2.46</b>	<b>2.34</b>	<b>2.38</b>	<b>2.54</b>
<b>VARIABLE COSTS</b>						
Animal purchases	0.08	0.08	0.08	0.08	0.08	0.08
Feed (purchase feed, fertiliser, seed, pesticides)	0.64	0.65	0.65	0.50	0.44	0.57
Machinery (maintenance, depreciation, contractor)	0.25	0.23	0.22	0.21	0.20	0.22
Fuel, energy, lubricants, water	0.19	0.14	0.12	0.13	0.14	0.15
Vet & medicine	0.13	0.12	0.11	0.11	0.10	0.11
Other inputs cow calf enterprise	0.22	0.19	0.16	0.15	0.15	0.17
Labour						
Paid Labour	0.22	0.21	0.20	0.19	0.18	0.20
Unpaid Labour	0.40	0.38	0.36	0.35	0.34	0.37
<b>Total Variable Costs</b>	<b>2.1</b>	<b>2.0</b>	<b>1.9</b>	<b>1.7</b>	<b>1.6</b>	<b>1.9</b>
<b>CAPITAL COSTS</b>						
Insurance, taxes	0.12	0.12	0.11	0.11	0.10	0.11
Buildings (maintenance, depreciation)	0.16	0.14	0.14	0.14	0.13	0.14
Land Cost						
Rented Land	0.13	0.11	0.09	0.08	0.08	0.10
Owned Land	0.50	0.45	0.28	0.27	0.26	0.35
Capital Costs						
Liabilities	0.10	0.12	0.07	0.09	0.09	0.09
Own capital	0.07	0.07	0.05	0.06	0.07	0.07
<b>Total Capital Costs</b>	<b>1.1</b>	<b>1.0</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.9</b>
<b>COSTS</b>						
Cash Costs	1.98	1.86	1.72	1.57	1.50	1.73
Depreciation Costs	0.27	0.24	0.23	0.22	0.21	0.23
Opportunity Costs	0.97	0.89	0.69	0.68	0.66	0.78
<b>Total Production Costs</b>	<b>3.22</b>	<b>3.00</b>	<b>2.65</b>	<b>2.48</b>	<b>2.38</b>	<b>2.74</b>
<b>Profits</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>5-yr. avg.</b>
<b>Short-term profit (cash costs)</b>	0.97	0.69	0.74	0.77	0.88	0.81
<b>Medium-term profit (cash + depreciation)</b>	0.70	0.45	0.51	0.55	0.67	0.58
<b>Long-term profit (cash + depreciation + opportunity)</b>	(0.27)	(0.45)	(0.18)	(0.14)	0.01	(0.21)

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#### 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.

