

Farm Characteristics	LL_05
Farm Description	A cow-calf operation with 246 cows, utilizing mostly homegrown feed.
Winter Feeding Ration (lbs/cow/day as fed)	200 days on hay (13 lb) and silage (56 lb)
Retained Ownership/Replacement Ration (lb/head/day as fed)	Replacements: 213 days on hay (8 lb), silage (33 lb) and grain (5 lb)

This benchmark is based on 3 farms of data; outliers were excluded as required. Canfax Research Services (CRS) tries to provide quality information, but we make no claims, promises, or guarantees about the accuracy, completeness, or adequacy of the information. CRS does not guarantee and accepts no legal liability arising from or connected to, the accuracy, reliability, or completeness of any material contained in our publications. Reproduction and/or electronic transmission of this publication, in whole or in part, is strictly forbidden without written consent from CRS.

Disclaimer:

Environment	
Average Annual Temperature	1.5° C
Average Annual Precipitation (mm)	400-500
Ecoregion	Aspen Parkland
Stocking Rate (Animal Unit days per acre)	86
Fertilize Hay (yes/no)	Yes
Fertilize Pasture (yes/no)	No
Typical Hay Yield (tonnes/acre)	1.6
Grassland Acres (owned+rented)	761
Crop Acres (includes hay) (owned+rented)	460
Bush and other acres	0

Physical Performance Indicators	
Breed	-
Cow:Bull Ratio	21:1
Bull Culling Rate (%)	8%
Mature Cow Weight (lb)	1,400
Heifer Retention for a steady herd (%)	15%
Cow Death Loss (%)	1.3%
Cow Culling Rate (%)	13.7%
Calves alive after 24hr/100 Cows exposed	93
Calf Death Loss (%) 24 hr to weaning	5%
Calves weaned per 100 cows exposed	89
Total Liveweight Sold per Cow (lb)	737
Weaning Weight (lb)	679
205 day adjusted Weaning Weight (lb)	568
Average Daily Gain pre-weaning (lb)	2.36
Weaning Weight as % of Cow Weight	48%

Production System	
Herd size	246
Days on field feeding (e.g. swath grazing)	0
Days supplemented on pasture	0
Days on full winter feed	200
Calving Start date	January 22
Weaning date	October 21
Sale date	October 21
Retained ownership	Replacements
% of feed purchased	0.6%
% of land in crops	38%
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)

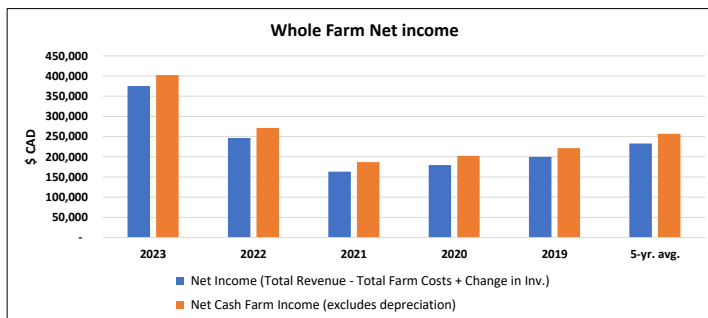
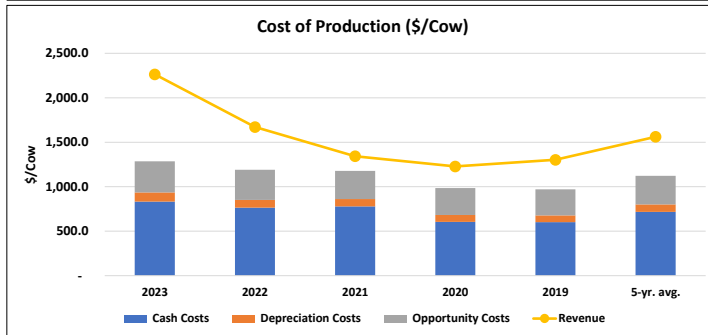
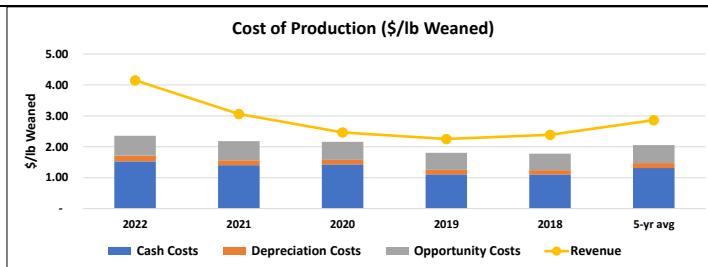
Depreciation = Linear depreciation on machinery and buildings, calculated on replacement values

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



Whole Farm Overview Page

Overview							
Operation Maturity	Medium						
Herd Size	246		Beef Animals Sold from Retained Ownership		N/A		
Paid Labour (livestock only) (hours)	191						
Unpaid Labour (livestock only) (hours)	2,271						
Average wages - paid and unpaid (\$/hr)	15.48						
Revenue		2023	2022	2021	2020	2019	5-yr. avg.
Market Revenue	5-yr avg	546,076	385,030	307,361	302,168	320,459	372,219
Cow-Calf	84%	546,076	385,030	307,361	302,168	320,459	372,219
Cash Crops	0%	-	-	-	-	-	-
Retained Ownership	0%	-	-	-	-	-	-
Government Payments	3%	10,824	26,076	23,124	-	-	12,005
Other Farm Revenue †	13%	56,601	56,333	56,378	56,449	56,614	56,475
Total Revenue	100%	613,500	467,439	386,863	358,617	377,072	440,698
Change in Inventory		-	-	-	-	-	-
Expenses		2023	2022	2021	2020	2019	5-yr. avg.
Depreciation		27,554	24,839	23,653	22,824	21,903	24,155
Machinery		16,120	14,015	13,532	13,081	12,325	13,815
Buildings		11,434	10,824	10,121	9,743	9,578	10,340
Quota econ. Accounting		-	-	-	-	-	-
Overhead costs		66,049	66,025	56,339	51,968	52,498	58,576
Land improvement		5,861	5,410	4,882	4,703	4,690	5,109
Machinery Maintenance		13,817	12,952	12,271	12,071	11,862	12,595
Buildings Maintenance		728	661	567	534	541	606
Contract Labour		14,833	15,321	14,546	14,032	13,613	14,469
Diesel, Gasoline, Natural Gas		14,552	17,633	12,579	10,277	11,696	13,347
Electricity		7,693	5,321	3,229	2,374	2,323	4,188
Water		-	-	-	-	-	-
Farm insurance		3,546	3,662	3,477	3,354	3,254	3,459
Disability and accident insurance		-	-	-	-	-	-
Farm taxes and duties		1,094	1,130	1,073	1,035	1,004	1,067
Advisor costs		1,378	1,423	1,351	1,303	1,265	1,344
Accountant & legal fees		842	870	826	797	773	822
Phone & utilities		1,706	1,642	1,538	1,488	1,477	1,570
Other overhead costs		-	-	-	-	-	-
Wages, rent and interest payments		43,048	43,815	39,813	32,289	31,233	38,040
Paid Labour		-	-	-	-	-	-
Total land rents		40,657	39,308	37,422	32,127	31,096	36,122
Total interest on debt		2,392	4,507	2,392	163	137	1,918
Cow-Calf		64,819	47,593	69,230	39,596	38,666	51,981
Animal purchases		4,143	4,143	4,143	4,143	4,143	4,143
Purchased feed		28,006	10,105	35,248	7,649	6,664	17,534
Other fixed and var. costs *		32,669	33,345	29,840	27,804	27,859	30,303
Retained Ownership		-	-	-	-	-	-
Animal purchases		-	-	-	-	-	-
Purchased feed		-	-	-	-	-	-
Other fixed and var. costs *		-	-	-	-	-	-
Crop and forage		36,904	38,791	34,540	32,264	32,813	35,062
Seed		6,898	6,048	5,725	5,482	5,834	5,997
Fertilizer		15,529	16,871	14,680	13,454	13,764	14,860
Herbicide		3,434	4,270	3,867	3,694	3,527	3,758
Fungicide & Insecticide		-	-	-	-	-	-
Irrigation		-	-	-	-	-	-
Contract labour		5,311	5,486	5,208	5,024	4,874	5,181
Fuel costs (crop & forage)		2,266	2,780	1,936	1,589	1,813	2,077
Other crop and forage		3,466	3,336	3,124	3,023	3,001	3,190
Total Farm Costs (excludes unpaid labour)		238,374	221,063	223,575	178,941	177,113	207,813
Cash Costs (Total Farm Costs - Depreciation)		210,820	196,224	199,922	156,117	155,210	183,659
Depreciation & Opportunity Costs (including unpaid labour)		62,722	60,006	58,821	57,992	57,071	59,322
Total Economic Costs (cash, depr, opportunity)		273,542	256,230	258,743	214,109	212,281	242,981
Profits		2023	2022	2021	2020	2019	5-yr. avg.
Net Income (Total Revenue - Total Farm Costs + Change in Inv.)		375,126	246,376	163,287	179,675	199,959	232,885
Net Cash Farm Income (excludes depreciation)		402,380	271,182	186,863	202,351	221,549	256,865

† 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)	2023	2022	2021	2020	2019	5 yr. avg.
No. of Cows*	246	246	246	246	246	246
Average male and female calf price (\$/head)	2,463	1,726	1,383	1,349	1,428	1,670
REVENUE						
Cow Calf	2,264	1,671	1,343	1,228	1,303	1,562
Cull animals and slaughter receipts	220	162	126	133	143	157
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	2,000	1,403	1,124	1,095	1,159	1,356
Government payments	44.0	106.0	94.0	-	-	48.8
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	2,264	1,671	1,343	1,228	1,303	1,562
VARIABLE COSTS						
Animal purchases	16.8	16.8	16.8	16.8	16.8	17
Feed (purchase feed, fertiliser, seed, pesticides)	256.9	187.2	274.5	154.5	152.4	205
Machinery (maintenance, depreciation, contractor)	186.6	172.3	159.8	154.7	150.5	165
Fuel, energy, lubricants, water	91.2	92.7	62.2	49.8	55.8	70
Vet & medicine	50.5	52.2	49.5	47.8	46.4	49
Other inputs cow calf enterprise	96.8	97.3	84.5	77.5	79.0	87
Labour						
Paid Labour	-	-	-	-	-	-
Unpaid Labour	150.1	149.2	137.2	132.0	129.2	140
Total Variable Costs	848.8	767.7	784.6	633.2	630.2	733
CAPITAL COSTS						
Insurance, taxes	17.5	17.6	16.3	15.7	15.3	16
Buildings (maintenance, depreciation)	44.8	40.7	36.7	35.2	35.0	38
Land Cost	-	-	-	-	-	-
Rented Land	165.3	159.8	152.1	130.6	126.4	147
Own Land	122.2	115.6	106.4	99.6	94.6	108
Capital Costs	-	-	-	-	-	-
Liabilities	8.8	16.1	8.3	0.6	0.5	7
Own capital	78.5	73.7	73.2	70.2	68.3	73
Total Capital Costs	437.1	423.5	393.1	351.8	340.1	389
COSTS						
Cash Costs	833.6	764.6	779.6	605.0	602.4	717
Depreciation Costs	101.5	88.1	81.3	78.2	75.7	85
Opportunity Costs	350.8	338.5	316.9	301.8	292.1	320
Total Production Costs	1,286.0	1,191.1	1,177.7	985.0	970.2	1,122
Profits	2023	2022	2021	2020	2019	5-yr. avg.
Short-term profit (cash costs)	1,430.2	906.6	563.9	623.3	700.3	845
Medium-term profit (cash + depreciation)	1,328.6	818.5	482.6	545.1	624.5	760
Long-term profit (cash + depreciation + opportunity)	977.9	480.0	165.7	243.4	332.4	440

*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)	2023	2022	2021	2020	2019	5 yr. avg.
Pounds Weaned	134,161	134,161	134,161	134,161	134,161	134,161
Average male and female weaning weight (lbs)	679	679	679	679	679	679
Average male and female calf price at weaning (\$/lb)	3.63	2.54	2.04	1.99	2.10	2.46
REVENUE						
Cow Calf Operation	4.15	3.06	2.46	2.25	2.39	2.86
Cull animals and slaughter receipts	0.40	0.30	0.23	0.24	0.26	0.29
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	3.67	2.57	2.06	2.01	2.13	2.49
Government payments	0.08	0.19	0.17	-	-	0.09
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	4.15	3.06	2.46	2.25	2.39	2.86
VARIABLE COSTS						
Animal purchases	0.03	0.03	0.03	0.03	0.03	0.03
Feed (purchase feed, fertiliser, seed, pesticides)	0.47	0.34	0.50	0.28	0.28	0.38
Machinery (maintenance, depreciation, contractor)	0.34	0.32	0.29	0.28	0.28	0.30
Fuel, energy, lubricants, water	0.17	0.17	0.11	0.09	0.10	0.13
Vet & medicine	0.09	0.10	0.09	0.09	0.08	0.09
Other inputs cow calf enterprise	0.18	0.18	0.16	0.14	0.14	0.16
Labour						
Paid Labour	-	-	-	-	-	-
Unpaid Labour	0.28	0.27	0.25	0.24	0.24	0.26
Total Variable Costs	1.6	1.4	1.4	1.2	1.2	1.3
CAPITAL COSTS						
Insurance, taxes	0.03	0.03	0.03	0.03	0.03	0.03
Buildings (maintenance, depreciation)	0.08	0.07	0.07	0.06	0.06	0.07
Land Cost						
Rented Land	0.30	0.29	0.28	0.24	0.23	0.27
Owned Land	0.22	0.21	0.20	0.18	0.17	0.20
Capital Costs						
Liabilities	0.02	0.03	0.02	0.00	0.00	0.01
Own capital	0.14	0.14	0.13	0.13	0.13	0.13
Total Capital Costs	0.8	0.8	0.7	0.6	0.6	0.7
COSTS						
Cash Costs	1.53	1.40	1.43	1.11	1.10	1.31
Depreciation Costs	0.19	0.16	0.15	0.14	0.14	0.16
Opportunity Costs	0.64	0.62	0.58	0.55	0.54	0.59
Total Production Costs	2.36	2.18	2.16	1.81	1.78	2.06
Profits	2023	2022	2021	2020	2019	5-yr. avg.
Short-term profit (cash costs)	2.62	1.66	1.03	1.14	1.28	1.55
Medium-term profit (cash + depreciation)	2.44	1.50	0.88	1.00	1.15	1.39
Long-term profit (cash + depreciation + opportunity)	1.79	0.88	0.30	0.45	0.61	0.81

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.

