

Farm Characteristics

CA-SK-9

Farm Description	A mixed cow-calf and cash crop operation with 85 head of beef cows, utilizing predominantly homegrown feed.
Winter Feeding Ration (lbs/cow/day as fed)	205 days on hay (19 lb), straw (8 lb) and barley grain (6 lb)
Retained Ownership/Replacement Ration (lb/head/day as fed)	Replacement heifers: 205 days on hay (13 lb), straw (6.5 lb) and barley grain (4 lb)
Disclaimer:	This benchmark is based on 3 farms of data; outliers were excluded as required.

Environment	
Average Annual Temperature	2.5°C
Average Annual Precipitation (mm)	350-400mm
Ecoregion	Mixed Grassland
Stocking Rate (Animal Unit days per acre)	37
Fertilize Hay (yes/no)	No
Fertilize Pasture (yes/no)	No
Typical Hay Yield (tonnes/acre)	1.6
Grassland Acres (owned+rented)	620
Crop Acres (includes hay) (owned+rented)	316
Bush and other acres	0

Physical Performance Indicators

Breed	Angus, Simmental
Cow:Bull Ratio	25:1
Bull Culling Rate (%)	20%
Mature Cow Weight (lb)	1,450
Heifer Retention for a steady herd (%)	15%
Cow Death Loss (%)	1.6%
Cow Culling Rate (%)	14.3%
Calves alive after 24hr/100 Cows exposed	90
Calf Death Loss (%) 24 hr to weaning	1%
Calves weaned per 100 cows exposed	87
Total Liveweight Sold per Cow (lb)	576
Weaning Weight (lb)	495
205 day adjusted Weaning Weight (lb)	523
Average Daily Gain pre-weaning (lb)	2.11
Weaning Weight as % of Cow Weight	34%

Production System

Herd size	85
Days on field feeding (e.g. swath grazing)	0
Days supplemented on pasture	0
Days on full winter feed	205
Calving Start date	March 10
Weaning date	October 08
Sale date	October 08
Retained ownership	Replacement
% of feed purchased	0.7%
% of land in crops	34%
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)

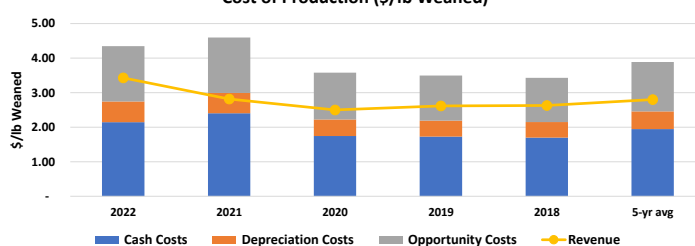
Whole Farm Profitability = Market returns (+ coupled payments) (+ decoupled payments) - whole-farm costs +/- changes in inventory +/- capital gains/losses.

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

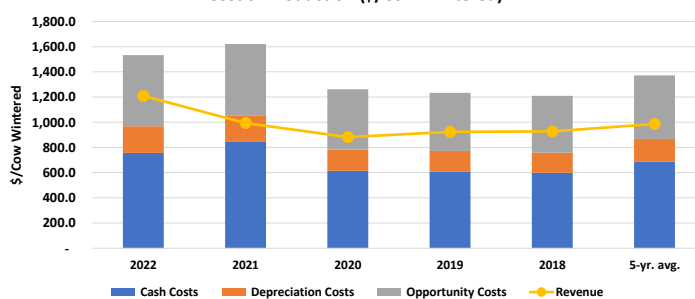
Revenue = sales of calves, cull cows, breeding stock, government payments and other revenue applicable to the specific enterprise

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

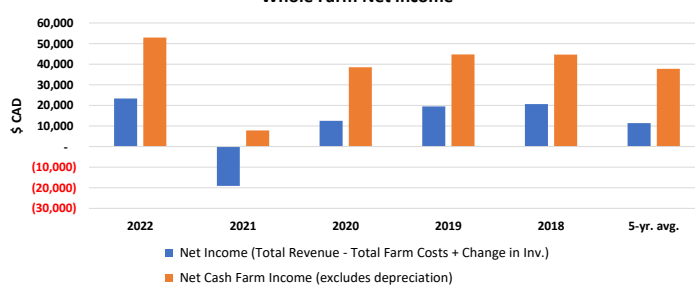
Cost of Production (\$/lb Weaned)



Cost of Production (\$/Cow Wintered)



Whole Farm Net income



Whole Farm Overview Page

Overview							
Operation Maturity	Medium						
Herd Size	85						
Paid Labour (livestock only) (hours)	-			Beef Animals Sold from Retained Ownership	N/A		
Unpaid Labour (livestock only) (hours)	1,280						
Average wages - paid and unpaid (\$/hr)	26.33						
Revenue		2022	2021	2020	2019	2018	5-yr. avg.
Market Revenue	5-yr avg	155,372	115,816	136,032	143,384	140,034	138,128
Cow-Calf	57%	94,313	75,959	74,972	78,485	78,793	80,504
Cash Crops	41%	61,059	39,857	61,059	64,899	61,241	57,623
Retained Ownership	0%	-	-	-	-	-	-
Government Payments	2%	8,500	8,500	-	-	-	3,400
Other Farm Revenue †	0%	1	-	0	2	2	1
Total Revenue	100%	163,874	124,316	136,032	143,386	140,036	141,529
Change in Inventory		-	-	-	-	-	-
Expenses		2022	2021	2020	2019	2018	5-yr. avg.
Depreciation		29,594	26,923	25,971	25,237	24,041	26,353
Machinery		20,648	18,558	17,919	17,322	16,321	18,154
Buildings		8,945	8,365	8,052	7,915	7,720	8,199
Quota econ. Accounting		-	-	-	-	-	-
Overhead costs		45,488	39,742	35,471	37,638	36,679	39,004
Land improvement		2,095	2,000	1,887	1,935	1,906	1,964
Machinery Maintenance		12,600	12,552	11,529	11,986	11,792	12,092
Buildings Maintenance		1,947	1,785	1,728	1,749	1,725	1,787
Contract labour		-	-	-	-	-	-
Diesel, Gasoline, Natural Gas		9,208	6,431	4,618	6,676	6,679	6,723
Electricity		4,812	2,919	2,148	2,101	1,926	2,781
Water		-	-	-	-	-	-
Farm insurance		7,513	7,133	6,881	6,676	6,385	6,918
Disability and accident insurance		-	-	-	-	-	-
Farm taxes and duties		3,827	3,633	3,505	3,400	3,252	3,523
Advisor costs		-	-	-	-	-	-
Accountant & legal fees		1,883	1,788	1,725	1,673	1,600	1,734
Phone & utilities		1,602	1,500	1,451	1,441	1,413	1,481
Other overhead costs		-	-	-	-	-	-
Wages, rent and interest payments		19,779	19,631	18,577	16,957	15,876	18,164
Paid Labour		-	-	-	-	-	-
Total land rents		7,213	6,608	6,314	6,111	5,891	6,428
Total Interest on debt		12,566	13,023	12,262	10,847	9,985	11,737
Cow-Calf		16,064	24,786	13,856	13,161	13,030	16,180
Animal purchases		6,333	6,333	6,333	6,333	6,333	6,333
Purchased feed		5,065	14,314	3,684	3,130	3,190	5,877
Other fixed and var. costs *		4,665	4,139	3,839	3,698	3,507	3,970
Retained Ownership		-	-	-	-	-	-
Animal purchases		-	-	-	-	-	-
Purchased feed		-	-	-	-	-	-
Other fixed and var. costs *		-	-	-	-	-	-
Crop and forage		29,650	32,331	29,650	30,878	29,778	30,457
Seed		9,613	10,121	9,613	10,482	9,819	9,929
Fertilizer		16,813	18,834	16,813	17,317	16,940	17,343
Herbicide		3,224	3,376	3,224	3,079	3,019	3,185
Fungicide & Insecticide		-	-	-	-	-	-
Irrigation		-	-	-	-	-	-
Contract labour		-	-	-	-	-	-
Fuel costs (crop & forage)		-	-	-	-	-	-
Other crop and forage		-	-	-	-	-	-
Total Farm Costs (excludes unpaid labour)		140,574	143,413	123,525	123,872	119,404	130,158
Cash Costs (Total Farm Costs - Depreciation)		110,981	116,490	97,554	98,635	95,363	103,804
Depreciation & Opportunity Costs (including unpaid labour)		63,292	60,622	59,670	58,936	57,740	60,052
Total Economic Costs (cash, depr, opportunity)		174,273	177,112	157,224	157,571	153,103	163,857
Profits		2022	2021	2020	2019	2018	5-yr. avg.
Net Income (Total Revenue - Total Farm Costs + Change in Inv.)		23,299	(19,097)	12,507	19,515	20,631	11,371
Net Cash Farm Income (excludes depreciation)		52,892	7,826	38,478	44,750	44,671	37,723

† 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 *	85	85	85	85	85	85
Average male and female calf price (\$/head)	1,221	978	968	1,002	1,017	1,037
REVENUE						
Cow Calf	1,210	994	882	923	927	987
Cull animals and slaughter receipts	223	183	179	197	189	194
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	887	711	703	726	738	753
Government payments	100.0	100.0	-	-	-	40.0
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	1,210	994	882	923	927	987
VARIABLE COSTS						
Animal purchases	74.5	74.5	74.5	74.5	74.5	75
Feed (purchase feed, fertiliser, seed, pesticides)	140.9	254.5	122.5	118.3	116.9	151
Machinery (maintenance, depreciation, contractor)	237.4	240.0	190.9	188.7	186.1	209
Fuel, energy, lubricants, water	111.0	78.6	48.5	61.1	61.1	72
Vet & medicine	36.0	34.2	33.0	32.0	30.6	33
Other inputs cow calf enterprise	32.9	33.4	28.1	27.0	26.4	30
Labour						
Paid Labour	-	-	-	-	-	-
Unpaid Labour	411.5	422.1	342.2	329.7	324.1	366
Total Variable Costs	1,044.2	1,137.4	839.8	831.3	819.8	935
CAPITAL COSTS						
Insurance, taxes	92.2	91.6	79.9	77.2	75.0	83
Buildings (maintenance, depreciation)	77.8	78.3	63.4	62.2	62.5	69
Land Cost	-	-	-	-	-	-
Rented Land	72.6	66.5	63.5	61.5	59.3	65
Own Land	127.0	116.8	111.8	108.4	104.7	114
Capital Costs	-	-	-	-	-	-
Liabilities	92.7	104.1	79.5	69.8	66.1	82
Own capital	26.6	26.9	24.1	22.6	22.1	24
Total Capital Costs	488.8	484.2	422.2	401.8	389.7	437
COSTS						
Cash Costs	756.7	848.1	615.6	609.9	599.4	686
Depreciation Costs	211.3	207.7	168.4	162.5	159.1	182
Opportunity Costs	565.1	565.8	478.1	460.7	450.9	504
Total Production Costs	1,533.1	1,621.6	1,262.0	1,233.1	1,209.5	1,372
Profits	2022	2021	2020	2019	2018	5-yr. avg.
Short-term profit (cash costs)	452.9	145.6	266.5	313.5	327.6	301
Medium-term profit (cash + depreciation)	241.6	(62.2)	98.1	151.0	168.4	119
Long-term profit (cash + depreciation + opportunity)	(323.5)	(628.0)	(380.0)	(309.8)	(282.5)	(385)

*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	29,989	29,989	29,989	29,989	29,989	29,989
Average male and female weaning weight (lbs)	495	495	495	495	495	
Average male and female calf price at weaning (\$/lb)	2.47	1.97	1.96	2.02	2.05	2.09
REVENUE						
Cow Calf Operation	3.43	2.82	2.50	2.62	2.63	2.80
Cull animals and slaughter receipts	0.63	0.52	0.51	0.56	0.54	0.55
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	2.51	2.01	1.99	2.06	2.09	2.13
Government payments	0.28	0.28	-	-	-	0.11
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	3.43	2.82	2.50	2.62	2.63	2.80
VARIABLE COSTS						
Animal purchases	0.21	0.21	0.21	0.21	0.21	0.21
Feed (purchase feed, fertiliser, seed, pesticides)	0.40	0.72	0.35	0.34	0.33	0.43
Machinery (maintenance, depreciation, contractor)	0.67	0.68	0.54	0.53	0.53	0.59
Fuel, energy, lubricants, water	0.31	0.22	0.14	0.17	0.17	0.20
Vet & medicine	0.10	0.10	0.09	0.09	0.09	0.09
Other inputs cow calf enterprise	0.09	0.09	0.08	0.08	0.07	0.08
Labour						
Paid Labour	-	-	-	-	-	-
Unpaid Labour	1.17	1.20	0.97	0.93	0.92	1.04
Total Variable Costs	3.0	3.2	2.4	2.4	2.3	2.6
CAPITAL COSTS						
Insurance, taxes	0.26	0.26	0.23	0.22	0.21	0.24
Buildings (maintenance, depreciation)	0.22	0.22	0.18	0.18	0.18	0.20
Land Cost						
Rented Land	0.21	0.19	0.18	0.17	0.17	0.18
Owned Land	0.36	0.33	0.32	0.31	0.30	0.32
Capital Costs						
Liabilities	0.26	0.30	0.23	0.20	0.19	0.23
Own capital	0.08	0.08	0.07	0.06	0.06	0.07
Total Capital Costs	1.4	1.4	1.2	1.1	1.1	1.2
COSTS						
Cash Costs	2.14	2.40	1.74	1.73	1.70	1.94
Depreciation Costs	0.60	0.59	0.48	0.46	0.45	0.52
Opportunity Costs	1.60	1.60	1.36	1.31	1.28	1.43
Total Production Costs	4.35	4.60	3.58	3.50	3.43	3.89
Profits	2022	2021	2020	2019	2018	5-yr. avg.
Short-term profit (cash costs)	1.28	0.41	0.76	0.89	0.93	0.85
Medium-term profit (cash + depreciation)	0.68	(0.18)	0.28	0.43	0.48	0.34
Long-term profit (cash + depreciation + opportunity)	(0.92)	(1.78)	(1.08)	(0.88)	(0.80)	(1.09)

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