



Farm Characteristics	CA-SK4
Farm Description	A cow-calf operation producing predominantly homegrown feed located in one of the most productive agricultural regions on the prairies
Winter Feeding Ration (lbs/cow/day as fed)	60 days of bale grazing at 3% body weight with 5-10% wasted (45 lb) followed by 60 days of corn grazing and then 45 days of greenfeed (30 lb) + hay (9 lb)
Retained Ownership/Replacement Ration (lb/head/day as fed)	140 days of 10 lb hay, 10 lb greenfeed, 5.5 lb oats
Disclaimer:	This benchmark is based on 5 farms of data; outliers were excluded as required

Environment	
Average Annual Temperature	1.5°C
Average Annual Precipitation (mm)	400–500 mm
Ecoregion	Aspen Parkland
Relief	plains
Stocking Rate (Animal Unit days per acre)	30
Fertilize Hay (yes/no)	Yes
Fertilize Pasture (yes/no)	No
Hay Yield (tonnes/acre)	1.80
Grassland Acres (owned+rented)	1239
Crop Acres (includes hay) (owned+rented)	190
Bush and other acres	0

Physical Performance Indicators	
Breed	Angus cross, Simmental
Cow:Bull Ratio	25:1
Bull Culling Rate (%)	20%
Mature Cow Weight (lb)	1,500
Heifer Retention for a steady herd (%)	9%
Cow Death Loss (%)	1.0%
Cow Culling Rate (%)	8.0%
Calves alive after 24hr/100 Cows exposed	96%
Calf Death Loss (%) 24 hr to weaning	3.6%
Calves weaned per 100 cows exposed	93
Total Liveweight Sold per Cow (lb)	632
Weaning Weight (lb)	598
205 day adjusted Weaning Weight (lb)	646
Average Daily Gain pre-weaning (lb)	2.70
Weaning Weight as % of Cow Weight	40%

Production System	
Herd size	120
Days on field feeding (e.g. swath grazing)	60
Days supplemented on pasture	60
Days on full winter feed	45
Calving Start date	March 15
Weaning date	October 25
Sale date	October 25
Retained ownership	Replacements
% of feed purchased	5.1%
% of land in annual crops	13%
Annual sales Retained Cattle (head)	N/A
Placement weight (lbs)	#N/A
Sale Weight (lbs)	N/A
Days on Feed	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

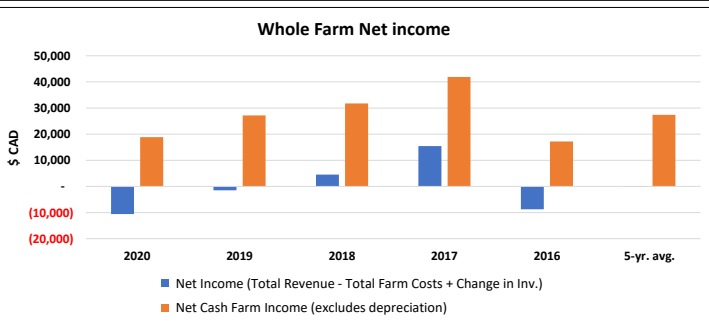
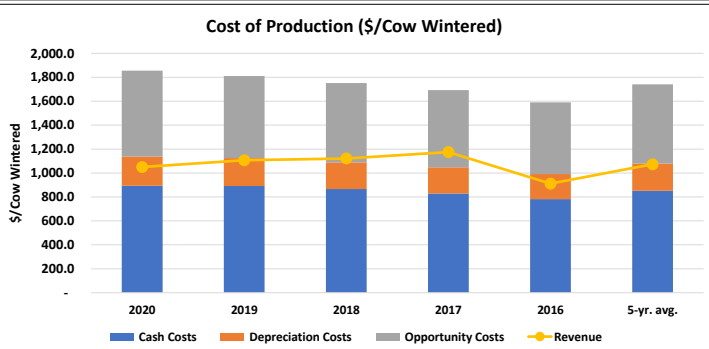
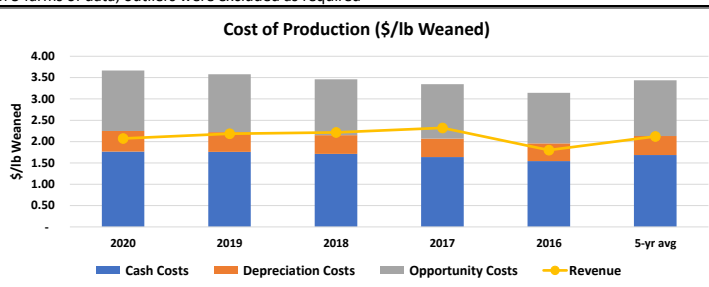
Opportunity Costs = Calculated cost for using own production factors like labour (family working hours * wage for qualified local labour, land (own land * regional land rents) and capital (non-land equity * long-term government bonds interest rate)

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.



Whole Farm Overview Page

Overview							
Operation Maturity	Start-up						
Herd Size	120		Beef Animals Sold from Retained Ownership		N/A		
Paid Labour (hours)	-						
Unpaid Labour (hours)	2,827						
Average wages - paid and unpaid (\$/hr)	25.00						
Revenue		2020	2019	2018	2017	2016	5-yr. avg.
Market Revenue	5-yr avg	126,135	135,305	136,589	141,544	112,656	130,446
Cow-Calf	99%	125,991	132,789	134,560	140,983	109,386	128,742
Cash Crops	1%	144	2,515	2,029	561	3,270	1,704
Retained Ownership	0%	-	-	-	-	-	-
Government Payments	0%	-	-	-	-	-	-
Other Farm Revenue †	0%	-	-	-	-	-	-
Total Revenue	100%	126,135	135,305	136,589	141,544	112,656	130,446
Change in Inventory		-	-	-	-	-	-
Expenses		2020	2019	2018	2017	2016	5-yr. avg.
Depreciation		29,447	28,607	27,236	26,471	25,961	27,544
Machinery		20,800	20,107	18,945	18,348	17,973	19,235
Buildings		8,647	8,500	8,290	8,123	7,988	8,310
Overhead costs		29,335	29,050	28,085	26,044	25,864	27,676
Land improvement		3,413	3,426	3,375	3,311	3,231	3,351
Machinery Maintenance		1,250	1,244	1,224	1,217	1,195	1,226
Buildings Maintenance		7,650	7,748	7,642	7,398	7,169	7,521
Contract labour		-	-	-	-	-	-
Diesel, Gasoline, Natural Gas		44	63	67	55	48	55
Electricity		3,641	3,563	3,266	2,027	2,399	2,979
Water		-	-	-	-	-	-
Farm insurance		5,010	4,860	4,648	4,450	4,368	4,667
Disability and accident insurance		263	255	244	233	229	245
Farm taxes and duties		2,820	2,736	2,616	2,505	2,458	2,627
Advisor costs		223	216	206	198	194	207
Accountant & legal fees		2,067	2,005	1,917	1,836	1,802	1,925
Phone & utilities		2,356	2,339	2,294	2,243	2,208	2,288
Other overhead costs		600	596	584	571	562	583
Wages, rent and interest payments		35,794	36,669	35,495	33,160	29,066	34,037
Paid Labour		-	-	-	-	-	-
Unpaid Labour		71,568	70,318	70,586	71,366	69,570	70,682
Total land rents		18,871	18,523	18,148	17,731	14,790	17,613
Total Interest on debt		16,923	18,146	17,347	15,429	14,275	16,424
Cow-Calf		16,861	16,414	16,196	15,673	15,735	16,176
Animal purchases		5,500	5,500	5,500	5,500	5,500	5,500
Purchased feed		4,649	4,132	4,072	3,885	4,119	4,171
Other fixed and var. costs *		6,713	6,783	6,624	6,287	6,115	6,504
Retained Ownership		-	-	-	-	-	-
Animal purchases		-	-	-	-	-	-
Purchased feed		-	-	-	-	-	-
Other fixed and var. costs *		-	-	-	-	-	-
Crop and forage		25,288	26,019	25,056	24,762	24,768	25,178
Seed		6,456	6,870	6,382	6,350	6,069	6,426
Fertilizer		13,444	13,937	13,571	13,414	13,772	13,628
Herbicide		3,484	3,327	3,262	3,204	3,161	3,288
Fungicide & Insecticide		-	-	-	-	-	-
Irrigation		-	-	-	-	-	-
Contract labour		284	276	264	252	248	265
Fuel costs (crop & forage)		-	-	-	-	-	-
Other crop and forage		1,620	1,608	1,577	1,542	1,518	1,573
Total Farm Costs (excludes unpaid labour)		136,726	136,759	132,068	126,109	121,393	130,611
Cash Costs (Total Farm Costs - Depreciation)		107,278	108,152	104,832	99,638	95,432	103,066
Depreciation & Opportunity Costs (including unpaid labour)		101,016	98,925	97,821	97,837	95,531	98,226
Total Economic Costs (cash, depr, opportunity)		208,294	207,077	202,653	197,475	190,963	201,292
Profits		2020	2019	2018	2017	2016	5-yr. avg.
Net Income (Total Revenue - Total Farm Costs + Change in Inv.)		(10,591)	(1,454)	4,522	15,434	(8,737)	(165)
Net Cash Farm Income (excludes depreciation)		18,857	27,153	31,758	41,905	17,224	27,379

† 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)	2020	2019	2018	2017	2016	5 yr. avg.
Cows Wintered *	120	120	120	120	120	120
Average male and female calf price (\$/head)	1,132	1,186	1,208	1,260	953	1,148
REVENUE	-	-	-	-	-	-
Cow Calf	1,050	1,107	1,121	1,175	912	1,073
Cull animals and slaughter receipts	87	98	93	103	100	96
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	963	1,009	1,029	1,071	812	977
Government payments	-	-	-	-	-	-
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	1,050	1,107	1,121	1,175	912	1,073
VARIABLE COSTS	-	-	-	-	-	-
Animal purchases	45.8	45.8	45.8	45.8	45.8	46
Feed (purchase feed, fertiliser, seed, pesticides)	275.5	276.5	267.9	264.0	264.1	270
Machinery (maintenance, depreciation, contractor)	185.9	176.9	167.8	164.5	157.2	170
Fuel, energy, lubricants, water	30.7	29.6	27.4	17.3	19.8	25
Vet & medicine	28.0	27.2	26.0	24.9	24.4	26
Other inputs cow calf enterprise	71.6	71.5	70.3	67.8	65.1	69
Labour	-	-	-	-	-	-
Paid Labour	-	-	-	-	-	-
Unpaid Labour	596.4	568.5	545.8	528.3	505.4	549
Total Variable Costs	1,233.9	1,196.1	1,150.9	1,112.6	1,081.9	1,155
CAPITAL COSTS	-	-	-	-	-	-
Insurance, taxes	67.4	64.3	61.7	59.7	57.2	62
Buildings (maintenance, depreciation)	135.7	132.9	130.8	128.8	122.6	130
Land Cost	-	-	-	-	-	-
Rented Land	157.1	151.9	149.3	147.2	120.1	145
Own Land	120.5	117.7	117.0	116.9	93.2	113
Capital Costs	-	-	-	-	-	-
Liabilities	140.9	148.4	142.4	128.1	115.5	135
Own capital	0.0	0.0	0.0	0.0	0.0	0
Total Capital Costs	621.5	615.1	601.1	580.7	508.7	585
COSTS	-	-	-	-	-	-
Cash Costs	893.4	891.1	865.7	828.4	781.8	852
Depreciation Costs	245.1	234.0	223.6	219.7	210.1	226
Opportunity Costs	716.9	686.2	662.7	645.2	598.6	662
Total Production Costs	1,855.4	1,811.2	1,752.0	1,693.3	1,590.5	1,740
Profits	2020	2019	2018	2017	2016	5-yr. avg.
Short-term profit (cash costs)	156.6	215.5	255.6	346.5	129.7	221
Medium-term profit (cash + depreciation)	(88.6)	(18.4)	32.0	126.8	(80.4)	(6)
Long-term profit (cash + depreciation + opportunity)	(805.5)	(704.6)	(630.7)	(518.4)	(679.0)	(668)

*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\$.

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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)	2020	2019	2018	2017	2016	5 yr. avg.
Pounds Weaned	60,743	60,743	60,743	60,743	60,743	60,743
Average male and female weaning weight (lbs)	598	598	598	598	598	
Average male and female calf price at weaning (\$/lb)	1.89	1.98	2.02	2.11	1.59	1.92
REVENUE						
Cow Calf Operation	2.07	2.19	2.22	2.32	1.80	2.12
Cull animals and slaughter receipts	0.17	0.19	0.18	0.20	0.20	0.19
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	1.90	1.99	2.03	2.12	1.60	1.93
Government payments	-	-	-	-	-	-
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	2.07	2.19	2.22	2.32	1.80	2.12
VARIABLE COSTS						
Animal purchases	0.09	0.09	0.09	0.09	0.09	0.09
Feed (purchase feed, fertiliser, seed, pesticides)	0.54	0.55	0.53	0.52	0.52	0.53
Machinery (maintenance, depreciation, contractor)	0.37	0.35	0.33	0.32	0.31	0.34
Fuel, energy, lubricants, water	0.06	0.06	0.05	0.03	0.04	0.05
Vet & medicine	0.06	0.05	0.05	0.05	0.05	0.05
Other inputs cow calf enterprise	0.14	0.14	0.14	0.13	0.13	0.14
Labour						
Paid Labour	-	-	-	-	-	-
Unpaid Labour	1.18	1.12	1.08	1.04	1.00	1.08
Total Variable Costs	2.4	2.4	2.3	2.2	2.1	2.3
CAPITAL COSTS						
Insurance, taxes	0.13	0.13	0.12	0.12	0.11	0.12
Buildings (maintenance, depreciation)	0.27	0.26	0.26	0.25	0.24	0.26
Land Cost						
Rented Land	0.31	0.30	0.29	0.29	0.24	0.29
Owned Land	0.24	0.23	0.23	0.23	0.18	0.22
Capital Costs						
Liabilities	0.28	0.29	0.28	0.25	0.23	0.27
Own capital	0.00	0.00	0.00	0.00	0.00	0.00
Total Capital Costs	1.2	1.2	1.2	1.1	1.0	1.2
COSTS						
Cash Costs	1.76	1.76	1.71	1.64	1.54	1.68
Depreciation Costs	0.48	0.46	0.44	0.43	0.41	0.45
Opportunity Costs	1.42	1.36	1.31	1.27	1.18	1.31
Total Production Costs	3.67	3.58	3.46	3.35	3.14	3.44
Profits	2020	2019	2018	2017	2016	5-yr. avg.
Short-term profit (cash costs)	0.31	0.43	0.50	0.68	0.26	0.44
Medium-term profit (cash + depreciation)	(0.17)	(0.04)	0.06	0.25	(0.16)	(0.01)
Long-term profit (cash + depreciation + opportunity)	(1.59)	(1.39)	(1.25)	(1.02)	(1.34)	(1.32)

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