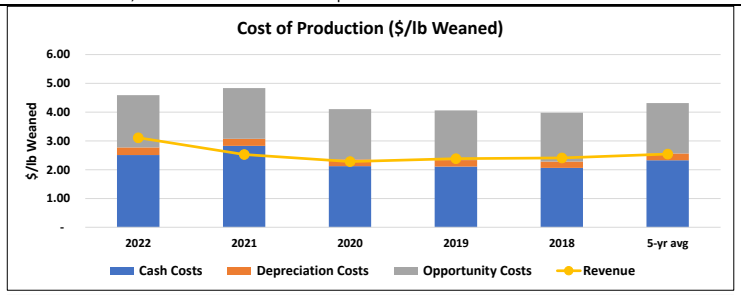
Farm Summary

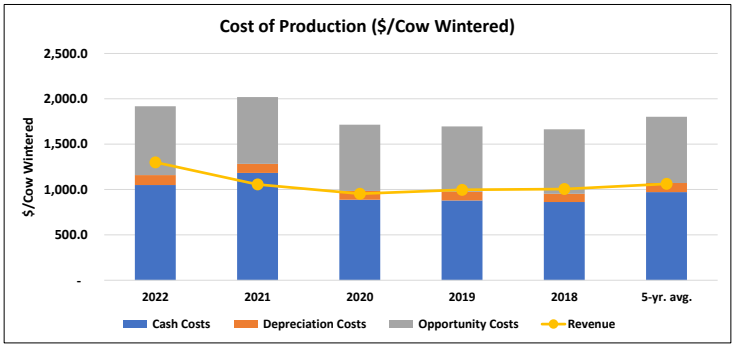
Farm Characteristics	*CA-SK-3*
Farm Description	A cow-calf operation producing homegrown feed located in a semi-arid shortgrass region of SW Saskatchewan with high proportion of native pasture.
Winter Feeding Ration (lbs/cow/day as fed)	30 days (Nov-Dec) half ration of grass hay (15 lb) fed with field grazed cereal crop residue, followed by 150 days of hay (31 lb) combined with lentil, barley or malt pellets (3 lb), 210 days of free choice mineral (100 g) and year round salt (50 g).
Retained Ownership/Replacement Ration (lb/head/day as fed)	150 days of hay (16 lb) combined with lentil, barley or malt pellets (4 lb), and 210 days of mineral (60 g), and year round salt (30 g).
Disclaimer:	This benchmark is based on 5 farms of data; outliers were excluded as required.

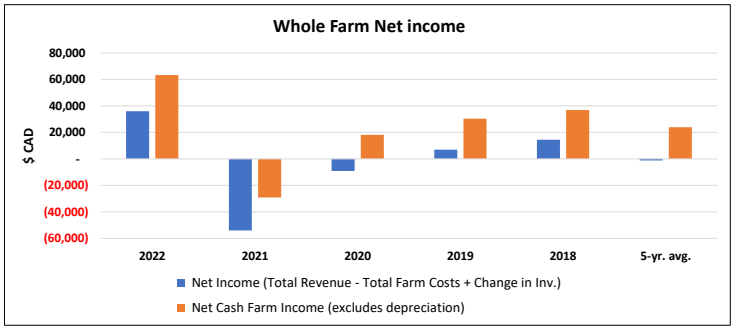
Environment	
Average Annual Temperature	3.5°C
Average Annual Precipitation (mm)	250 - 350 mm
Ecoregion	Mixed grassland
Stocking Rate (Animal Unit days per acre)	8
Fertilize Hay (yes/no)	No
Fertilize Pasture (yes/no)	No
Typical Hay Yield (tonnes/acre)	1.2
Grassland Acres (owned+rented)	8,167
Crop Acres (includes hay) (owned+rented)	556
Bush and other acres	0

Physical Performance Indicators	
Breed	Angus
Cow:Bull Ratio	27:1
Bull Culling Rate (%)	17%
Mature Cow Weight (lb)	1,300
Heifer Retention for a steady herd (%)	13%
Cow Death Loss (%)	1.3%
Cow Culling Rate (%)	12.0%
Calves alive after 24hr/100 Cows exposed	92
Calf Death Loss (%) 24 hr to weaning	3%
Calves weaned per 100 cows exposed	89
Total Liveweight Sold per Cow (lb)	589
Weaning Weight (lb)	558
205 day adjusted Weaning Weight (lb)	621
Average Daily Gain pre-weaning (lb)	2.57
Weaning Weight as % of Cow Weight	43%

Production System	
Herd size	245
Days on field feeding (e.g. swath grazing)	30
Days supplemented on pasture	0
Days on full winter feed	150
Calving Start date	March 25
Weaning date	October 15
Sale date	October 20
Retained ownership	Replacements
% of feed purchased	11.0%
% of land in crops	6%
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.

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Whole Farm Overview Page

Overview							
Operation Maturity	Medium						
Herd Size	245	Beef Animals Sold from Retained Ownership			N/A		
Paid Labour (livestock only) (hours)	-						
Unpaid Labour (livestock only) (hours)	2,713						
Average wages - paid and unpaid ($/hr)	25.48						

Revenue		**2022**	**2021**	**2020**	**2019**	**2018**	**5-yr. avg.**
Market Revenue	***5-yr avg***	***294,109***	***234,362***	***233,726***	***244,282***	***246,431***	***250,582***
Cow-Calf	95%	294,109	234,362	233,726	244,282	246,431	*250,582*
Cash Crops	0%	-	-	-	-	-	-
Retained Ownership	0%	-	-	-	-	-	-
Government Payments	4%	***24,500***	***24,500***	-	-	-	***9,800***
Other Farm Revenue ǂ	1%	2,480	2,480	2,480	2,480	2,480	2,480
Total Revenue	***100%***	***321,089***	***261,342***	***236,206***	***246,762***	***248,910***	***262,862***
Change in Inventory		-	-	(3,261)	-	-	(652)

Expenses	**2022**	**2021**	**2020**	**2019**	**2018**	**5-yr. avg.**
Depreciation	***27,254***	***24,904***	***24,016***	***23,381***	***22,360***	***24,383***
Machinery	15,993	14,374	13,879	13,416	12,641	*14,060*
Buildings	11,262	10,531	10,138	9,965	9,719	*10,323*
Quota econ. Accounting	-	-	-	-	-	-
Overhead costs	***87,912***	***74,324***	***66,065***	***69,046***	***68,063***	***73,082***
Land improvement	8,182	8,427	7,944	7,976	7,857	*8,077*
Machinery Maintenance	4,486	4,701	4,318	4,297	4,228	*4,406*
Buildings Maintenance	13,599	12,468	12,071	12,225	12,057	*12,484*
Contract labour	2,997	2,997	2,891	2,804	2,682	*2,874*
Diesel, Gasoline, Natural Gas	17,994	12,201	8,491	12,095	12,974	*12,751*
Electricity	14,503	8,797	6,472	6,333	5,805	*8,382*
Water	-	-	-	-	-	-
Farm insurance	8,525	8,094	7,808	7,575	7,244	*7,849*
Disability and accident insurance	3,222	3,059	2,951	2,863	2,738	*2,967*
Farm taxes and duties	5,821	5,527	5,332	5,172	4,947	*5,360*
Advisor costs	-	-	-	-	-	-
Accountant & legal fees	1,256	1,192	1,150	1,116	1,067	*1,156*
Phone & utilities	7,046	6,599	6,384	6,338	6,216	*6,517*
Other overhead costs	281	264	255	253	248	*260*
Wages, rent and interest payments	***85,770***	***80,738***	***79,847***	***80,892***	***78,989***	***81,247***
Paid Labour	-	-	-	-	-	-
Total land rents	62,091	61,418	61,091	60,866	60,621	*61,217*
Total Interest on debt	23,680	19,320	18,755	20,027	18,368	*20,030*
Cow-Calf	***66,442***	***118,191***	***55,558***	***50,346***	***49,447***	***67,997***
Animal purchases	8,700	8,700	8,700	8,700	8,700	*8,700*
Purchased feed	33,576	87,778	26,962	22,497	22,663	*38,695*
Other fixed and var. costs *	24,167	21,713	19,896	19,149	18,083	*20,602*
Retained Ownership	-	-	-	-	-	-
Animal purchases	-	-	-	-	-	-
Purchased feed	-	-	-	-	-	-
Other fixed and var. costs *	-	-	-	-	-	-
Crop and forage	***17,647***	***17,231***	***16,592***	***16,139***	***15,530***	***16,628***
Seed	474	488	463	493	458	*475*
Fertilizer	-	-	-	-	-	-
Herbicide	3,214	2,911	2,780	2,655	2,603	*2,832*
Fungicide & Insecticide	-	-	-	-	-	-
Irrigation	-	-	-	-	-	-
Contract labour	11,959	11,959	11,536	11,192	10,704	*11,470*
Fuel costs (crop & forage)	-	-	-	-	-	-
Other crop and forage	2,000	1,873	1,812	1,799	1,765	*1,850*
Total Farm Costs (excludes unpaid labour)	***285,025***	***315,389***	***242,078***	***239,805***	***234,388***	***263,337***
Cash Costs (Total Farm Costs - Depreciation)	257,771	290,484	218,062	216,424	212,028	238,954
Depreciation & Opportunity Costs (including unpaid labour)	96,384	94,035	93,146	92,511	91,490	93,513
Total Economic Costs (cash, depr, opportunity)	354,155	384,519	311,208	308,935	303,519	332,467

Profits	**2022**	**2021**	**2020**	**2019**	**2018**	**5-yr. avg.**
Net Income (Total Revenue - Total Farm Costs + Change in Inv.)	**36,064**	**(54,047)**	**(9,134)**	**6,957**	**14,522**	**(1,128)**
Net Cash Farm Income (excludes depreciation)	**63,318**	**(29,143)**	**18,143**	**30,338**	**36,882**	**23,908**

ǂ 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 ($/Cow Wintered)	2022	2021	2020	2019	2018	5 yr. avg.
Cows Wintered *	245	245	245	245	245	245
Average male and female calf price ($/head)	1,371	1,097	1,087	1,125	1,142	*1,165*
REVENUE						
Cow Calf	1,300	1,057	954	997	1,006	1,063
Cull animals and slaughter receipts	156	120	126	142	137	136
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	1,045	837	828	856	869	887
Government payments	100.0	100.0	-	-	-	40.0
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	1,300	1,057	954	997	1,006	1,063
VARIABLE COSTS						
Animal purchases	35.5	35.5	35.5	35.5	35.5	36
Feed (purchase feed, fertiliser, seed, pesticides)	193.7	414.2	163.1	144.6	144.3	212
Machinery (maintenance, depreciation, contractor)	144.6	138.9	133.2	129.4	123.5	134
Fuel, energy, lubricants, water	131.5	84.8	60.4	74.5	75.9	85
Vet & medicine	30.7	28.4	25.7	22.1	20.1	25
Other inputs cow calf enterprise	84.7	75.8	70.6	71.3	69.0	74
Labour						
Paid Labour	-	-	-	-	-	-
Unpaid Labour	282.6	267.7	258.2	250.7	239.8	260
Total Variable Costs	903.4	1,045.3	746.7	728.0	707.9	826
CAPITAL COSTS						
Insurance, taxes	89.2	84.6	81.6	79.2	75.8	82
Buildings (maintenance, depreciation)	100.6	92.9	89.7	89.7	88.0	92
Land Cost	-	-	-	-	-	
Rented Land	253.4	250.7	249.4	248.4	247.4	250
Own Land	470.7	465.6	463.1	461.4	459.5	464
Capital Costs	-	-	-	-	-	
Liabilities	95.9	78.1	75.7	80.9	74.2	81
Own capital	5.6	2.8	8.4	9.1	10.6	7
Total Capital Costs	1,015.4	974.6	967.9	968.7	955.6	976
COSTS						
Cash Costs	1,049.1	1,182.7	887.3	880.5	862.7	972
Depreciation Costs	110.9	101.2	97.6	95.0	90.9	99
Opportunity Costs	758.8	736.0	729.7	721.1	709.9	731
Total Production Costs	1,918.8	2,019.9	1,714.6	1,696.7	1,663.5	1,803
Profits	**2022**	**2021**	**2020**	**2019**	**2018**	**5-yr. avg.**
Short-term profit (cash costs)	251.3	(126.1)	66.7	116.5	143.1	90
Medium-term profit (cash + depreciation)	140.5	(227.3)	(30.9)	21.5	52.3	(9)
Long-term profit (cash + depreciation + opportunity)	(618.4)	(963.3)	(760.6)	(699.6)	(657.6)	(740)

*Model Maintains a stable herd size

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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.
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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.
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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 ($/lb Weaned)	2022	2021	2020	2019	2018	5 yr. avg.
Pounds Weaned	102,397	102,397	102,397	102,397	102,397	102,397
Average male and female weaning weight (lbs)	558	558	558	558	558	
Average male and female calf price at weaning ($/lb)	2.46	1.97	1.95	2.02	2.05	2.09
REVENUE						
Cow Calf Operation	3.11	2.53	2.28	2.39	2.41	2.54
Cull animals and slaughter receipts	0.37	0.29	0.30	0.34	0.33	0.33
Breeding livestock receipts	-	-	-	-	-	-
Calf Sales and transfer to retained ownership enterprise	2.50	2.00	1.98	2.05	2.08	2.12
Government payments	0.24	0.24	-	-	-	0.10
Other returns	-	-	-	-	-	-
Total Cow-Calf Revenue	3.11	2.53	2.28	2.39	2.41	2.54
VARIABLE COSTS						
Animal purchases	0.08	0.08	0.08	0.08	0.08	0.08
Feed (purchase feed, fertiliser, seed, pesticides)	0.46	0.99	0.39	0.35	0.35	0.51
Machinery (maintenance, depreciation, contractor)	0.35	0.33	0.32	0.31	0.30	0.32
Fuel, energy, lubricants, water	0.31	0.20	0.14	0.18	0.18	0.20
Vet & medicine	0.07	0.07	0.06	0.05	0.05	0.06
Other inputs cow calf enterprise	0.20	0.18	0.17	0.17	0.16	0.18
Labour						
Paid Labour	-	-	-	-	-	-
Unpaid Labour	0.68	0.64	0.62	0.60	0.57	0.62
Total Variable Costs	2.2	2.5	1.8	1.7	1.7	2.0
CAPITAL COSTS						
Insurance, taxes	0.21	0.20	0.20	0.19	0.18	0.20
Buildings (maintenance, depreciation)	0.24	0.22	0.21	0.21	0.21	0.22
Land Cost						
Rented Land	0.61	0.60	0.60	0.59	0.59	0.60
Owned Land	1.13	1.11	1.11	1.10	1.10	1.11
Capital Costs						
Liabilities	0.23	0.19	0.18	0.19	0.18	0.19
Own capital	0.01	0.01	0.02	0.02	0.03	0.02
Total Capital Costs	2.4	2.3	2.3	2.3	2.3	2.3
COSTS						
Cash Costs	2.51	2.83	2.12	2.11	2.06	2.33
Depreciation Costs	0.27	0.24	0.23	0.23	0.22	0.24
Opportunity Costs	1.82	1.76	1.75	1.73	1.70	1.75
Total Production Costs	4.59	4.83	4.10	4.06	3.98	4.31
Profits	**2022**	**2021**	**2020**	**2019**	**2018**	**5-yr. avg.**
Short-term profit (cash costs)	0.60	(0.30)	0.16	0.28	0.34	0.22
Medium-term profit (cash + depreciation)	0.34	(0.54)	(0.07)	0.05	0.13	(0.02)
Long-term profit (cash + depreciation + opportunity)	(1.48)	(2.30)	(1.82)	(1.67)	(1.57)	(1.77)

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