

## Farm Characteristics

CA-MB-1

|   |   |
|---|---|
| <b>Farm Description</b>   | A cow-calf and backgrounding operation with predominantly homegrown feed in the Aspen Parkland of Manitoba.   |
| <b>Winter Feeding Ration (lbs/cow/day as fed)</b>                 | Starting late October, 30 days of 20 lb alfalfa hay supplemented on pasture, followed by 110 days of 30 lb dry matter intake of standing corn with 10 lb of alfalfa hay silage (65% DM), followed by 60 days of 34 lb alfalfa hay and 5 lb oat/pea straw with 57 g of mineral |
| <b>Retained Ownership/Replacement Ration (lb/head/day as fed)</b> | 146 days of 25 lb corn silage (53% moisture), 6 lb alfalfa silage (65% moisture), 3 lb wholegrain corn, 10 g mineral  |
| <b>Disclaimer:</b>  | This benchmark is based on 4 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 |
| Stocking Rate (Animal Unit days per acre) | 17             |
| Fertilize Hay (yes/no)                    | Yes            |
| Fertilize Pasture (yes/no)                | No             |
| Typical Hay Yield (tonnes/acre)           | 2.1            |
| Grassland Acres (owned+rented)            | 4,082          |
| Crop Acres (includes hay) (owned+rented)  | 482            |
| Bush and other acres                      | 0              |

## Physical Performance Indicators

|  |                            |
|--|----------------------------|
|  | Angus, Simmental, Hereford |
| Breed                                    |                            |
| Cow:Bull Ratio                           | 24:1                       |
| Bull Culling Rate (%)                    | 23%                        |
| Mature Cow Weight (lb)                   | 1,300                      |
| Heifer Retention for a steady herd (%)   | 13%                        |
| Cow Death Loss (%)                       | 2.0%                       |
| Cow Culling Rate (%)                     | 11.0%                      |
| 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)       | 584                        |
| Weaning Weight (lb)                      | 530                        |
| 205 day adjusted Weaning Weight (lb)     | 569                        |
| Average Daily Gain pre-weaning (lb)      | 2.33                       |
| Weaning Weight as % of Cow Weight        | 41%                        |

## Production System

|  |             |
|--|-------------|
| Herd size                                  | 320         |
| Days on field feeding (e.g. swath grazing) | 110         |
| Days supplemented on pasture               | 30          |
| Days on full winter feed                   | 60          |
| Calving Start date                         | April 01    |
| Weaning date                               | November 01 |
| Sale date                                  | February 25 |
| Retained ownership                         | Background  |
| % of feed purchased                        | 10.7%       |
| % of land in crops                         | 11%         |
| Annual sales Retained Cattle (head)        | 239         |
| Placement weight (lbs)                     | 534         |
| Sale Weight (lbs)                          | 720-760     |
| Days on feed                               | 116         |
| 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)

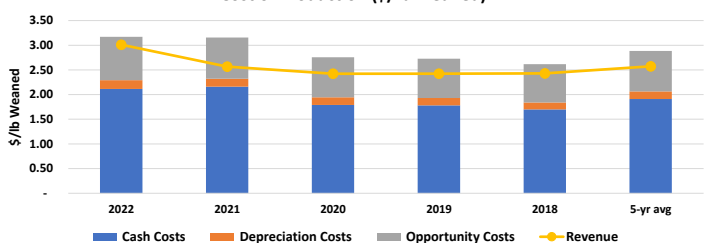
Whole Farm Profitability = Market returns (+ coupled payments) (+ decoupled payments) - whole-farm costs +/- changes in inventory +/- capital gains/losses.

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

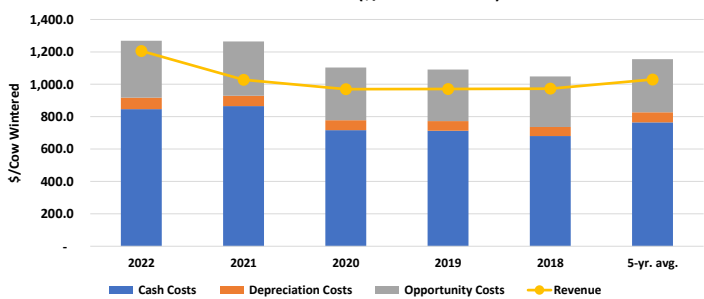
Revenue = sales of calves, cull cows, breeding stock, government payments and other revenue applicable to the specific enterprise

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

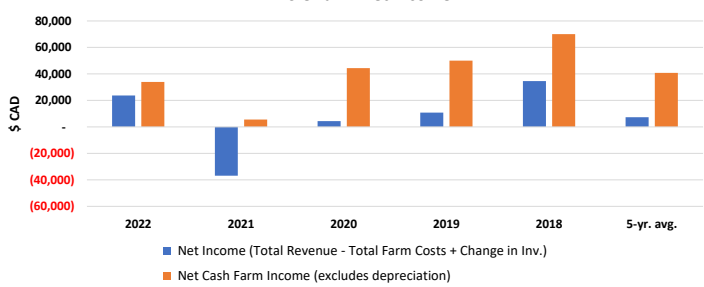
Cost of Production (\$/lb Weaned)



Cost of Production (\$/Cow Wintered)



Whole Farm Net income



# Whole Farm Overview Page

| Overview  |                 |                |                 |   |                |                |                |
|---|-----------------|----------------|-----------------|---|----------------|----------------|----------------|
| Operation Maturity  | Medium          |                |                 |   |                |                |                |
| Herd Size   | 320             |                |                 |   |                |                |                |
| Paid Labour (livestock only) (hours)                                  | 2,310           |                |                 | Beef Animals Sold from Retained Ownership | 239            |                |                |
| Unpaid Labour (livestock only) (hours)                                | 2,838           |                |                 |   |                |                |                |
| Average wages - paid and unpaid (\$/hr)                               | 23.42           |                |                 |   |                |                |                |
| Revenue   |                 | 2022           | 2021            | 2020                                      | 2019           | 2018           | 5-yr. avg.     |
| <b>Market Revenue</b>   | <b>5-yr avg</b> | <b>742,903</b> | <b>616,157</b>  | <b>629,612</b>                            | <b>633,626</b> | <b>639,286</b> | <b>652,317</b> |
| Cow-Calf  | 49%             | 385,845        | 303,578         | 310,369                                   | 310,692        | 311,412        | 324,379        |
| Cash Crops  | 2%              | 36,531         | -               | 9,134                                     | 16,467         | 15,508         | 15,528         |
| Retained Ownership  | 47%             | 320,527        | 312,579         | 310,109                                   | 306,467        | 312,366        | 312,410        |
| <b>Government Payments</b>  | <b>1%</b>       | <b>-</b>       | <b>31,255</b>   | <b>-</b>                                  | <b>-</b>       | <b>-</b>       | <b>6,251</b>   |
| <b>Other Farm Revenue †</b>   | <b>0%</b>       | <b>-</b>       | <b>-</b>        | <b>-</b>                                  | <b>-</b>       | <b>-</b>       | <b>-</b>       |
| <b>Total Revenue</b>  | <b>100%</b>     | <b>742,903</b> | <b>647,412</b>  | <b>629,612</b>                            | <b>633,626</b> | <b>639,286</b> | <b>658,568</b> |
| Change in Inventory   |                 | 35,524         | (1,037)         | -   | (472)          | 1,482          | 7,099          |
| Expenses  |                 | 2022           | 2021            | 2020                                      | 2019           | 2018           | 5-yr. avg.     |
| <b>Depreciation</b>   |                 | <b>45,692</b>  | <b>41,444</b>   | <b>39,988</b>                             | <b>38,808</b>  | <b>36,870</b>  | <b>40,560</b>  |
| Machinery   |                 | 35,320         | 31,745          | 30,651                                    | 29,630         | 27,918         | 31,053         |
| Buildings   |                 | 10,372         | 9,699           | 9,337                                     | 9,178          | 8,951          | 9,507          |
| Quota econ. Accounting  |                 | -              | -               | -   | -              | -              | -              |
| <b>Overhead costs</b>   |                 | <b>98,316</b>  | <b>89,544</b>   | <b>84,329</b>                             | <b>83,588</b>  | <b>81,463</b>  | <b>87,448</b>  |
| Land improvement  |                 | 3,117          | 2,972           | 2,847                                     | 2,860          | 2,815          | 2,922          |
| Machinery Maintenance   |                 | 13,564         | 13,528          | 13,093                                    | 13,042         | 12,840         | 13,213         |
| Buildings Maintenance   |                 | 5,279          | 4,825           | 4,577                                     | 4,635          | 4,561          | 4,776          |
| Contract labour   |                 | 2,123          | 2,016           | 1,944                                     | 1,886          | 1,804          | 1,955          |
| Diesel, Gasoline, Natural Gas   |                 | 9,648          | 8,256           | 7,175                                     | 7,654          | 7,973          | 8,141          |
| Electricity   |                 | 9,068          | 5,502           | 4,045                                     | 3,958          | 3,628          | 5,240          |
| Water   |                 | -              | -               | -   | -              | -              | -              |
| Farm insurance  |                 | 12,769         | 12,123          | 11,695                                    | 11,346         | 10,850         | 11,756         |
| Disability and accident insurance                                     |                 | 1,594          | 1,514           | 1,460                                     | 1,417          | 1,355          | 1,468          |
| Farm taxes and duties   |                 | 15,809         | 15,010          | 14,479                                    | 14,047         | 13,434         | 14,556         |
| Advisor costs   |                 | -              | -               | -   | -              | -              | -              |
| Accountant & legal fees   |                 | 4,897          | 4,649           | 4,485                                     | 4,351          | 4,161          | 4,509          |
| Phone & utilities   |                 | 3,413          | 3,196           | 3,092                                     | 3,070          | 3,011          | 3,156          |
| Other overhead costs  |                 | 17,036         | 15,954          | 15,436                                    | 15,323         | 15,030         | 15,756         |
| <b>Wages, rent and interest payments</b>                              |                 | <b>120,309</b> | <b>112,852</b>  | <b>111,841</b>                            | <b>110,715</b> | <b>105,067</b> | <b>112,157</b> |
| Paid Labour   |                 | 46,427         | 44,078          | 42,521                                    | 41,251         | 39,451         | 42,746         |
| Total land rents  |                 | 47,660         | 46,612          | 45,770                                    | 45,474         | 45,158         | 46,135         |
| Total Interest on debt  |                 | 26,222         | 22,162          | 23,551                                    | 23,989         | 20,457         | 23,276         |
| <b>Cow-Calf</b>   |                 | <b>67,515</b>  | <b>91,857</b>   | <b>52,246</b>                             | <b>50,702</b>  | <b>47,514</b>  | <b>61,967</b>  |
| Animal purchases  |                 | 13,500         | 13,500          | 13,500                                    | 13,500         | 13,500         | 13,500         |
| Purchased feed  |                 | 31,912         | 59,384          | 21,782                                    | 21,558         | 19,574         | 30,842         |
| Other fixed and var. costs *  |                 | 22,103         | 18,973          | 16,964                                    | 15,644         | 14,440         | 17,625         |
| <b>Retained Ownership</b>   |                 | <b>346,181</b> | <b>280,119</b>  | <b>274,750</b>                            | <b>274,657</b> | <b>273,915</b> | <b>289,924</b> |
| Animal purchases  |                 | 326,378        | 253,781         | 260,062                                   | 260,084        | 260,438        | 272,149        |
| Purchased feed  |                 | 9,353          | 16,879          | 5,789                                     | 5,866          | 5,222          | 8,622          |
| Other fixed and var. costs *  |                 | 10,450         | 9,459           | 8,899                                     | 8,707          | 8,256          | 9,154          |
| <b>Crop and forage</b>  |                 | <b>76,673</b>  | <b>67,428</b>   | <b>62,101</b>                             | <b>63,896</b>  | <b>61,327</b>  | <b>66,285</b>  |
| Seed  |                 | 20,274         | 19,190          | 18,374                                    | 19,554         | 18,165         | 19,112         |
| Fertilizer  |                 | 37,500         | 30,306          | 26,428                                    | 27,397         | 26,677         | 29,662         |
| Herbicide   |                 | 3,035          | 2,749           | 2,626                                     | 2,507          | 2,458          | 2,675          |
| Fungicide & Insecticide   |                 | -              | -               | -   | -              | -              | -              |
| Irrigation  |                 | -              | -               | -   | -              | -              | -              |
| Contract labour   |                 | 7,073          | 6,715           | 6,478                                     | 6,285          | 6,010          | 6,512          |
| Fuel costs (crop & forage)  |                 | 5,579          | 5,460           | 5,285                                     | 5,264          | 5,183          | 5,354          |
| Other crop and forage   |                 | 3,211          | 3,007           | 2,910                                     | 2,889          | 2,833          | 2,970          |
| <b>Total Farm Costs (excludes unpaid labour)</b>                      |                 | <b>754,686</b> | <b>683,244</b>  | <b>625,255</b>                            | <b>622,366</b> | <b>606,155</b> | <b>658,341</b> |
| Cash Costs (Total Farm Costs - Depreciation)                          |                 | 708,994        | 641,800         | 585,267                                   | 583,558        | 569,285        | 617,781        |
| Depreciation & Opportunity Costs (including unpaid labour)            |                 | 112,176        | 107,928         | 106,472                                   | 105,292        | 103,354        | 107,044        |
| Total Economic Costs (cash, depr, opportunity)                        |                 | 821,170        | 749,728         | 691,739                                   | 688,850        | 672,639        | 724,825        |
| Profits   |                 | 2022           | 2021            | 2020                                      | 2019           | 2018           | 5-yr. avg.     |
| <b>Net Income (Total Revenue - Total Farm Costs + Change in Inv.)</b> |                 | <b>23,741</b>  | <b>(36,869)</b> | <b>4,357</b>                              | <b>10,788</b>  | <b>34,613</b>  | <b>7,326</b>   |
| <b>Net Cash Farm Income (excludes depreciation)</b>                   |                 | <b>33,910</b>  | <b>5,612</b>    | <b>44,345</b>                             | <b>50,068</b>  | <b>70,001</b>  | <b>40,787</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 *  | 320         | 320         | 320         | 320         | 320         | 320               |
| Average male and female calf price (\$/head)             | 1,328       | 1,033       | 1,062       | 1,060       | 1,062       | 1,109             |
| <b>REVENUE</b>   |             |             |             |             |             |                   |
| Cow Calf   | 1,206       | 1,028       | 970         | 971         | 973         | 1,029             |
| Cull animals and slaughter receipts                      | 186         | 156         | 157         | 158         | 159         | 163               |
| Breeding livestock receipts                              | -           | -           | -           | -           | -           | -                 |
| Calf Sales and transfer to retained ownership enterprise | 1,020       | 793         | 813         | 813         | 814         | 850               |
| Government payments                                      | -           | 79.0        | -           | -           | -           | 15.8              |
| Other returns  | -           | -           | -           | -           | -           | -                 |
| Total Cow-Calf Revenue                                   | 1,206       | 1,028       | 970         | 971         | 973         | 1,029             |
| <b>VARIABLE COSTS</b>                                    |             |             |             |             |             |                   |
| Animal purchases   | 42.2        | 42.2        | 42.2        | 42.2        | 42.2        | 42                |
| Feed (purchase feed, fertiliser, seed, pesticides)       | 275.5       | 337.2       | 207.3       | 212.1       | 199.5       | 246               |
| Machinery (maintenance, depreciation, contractor)        | 96.7        | 89.5        | 86.4        | 83.9        | 79.5        | 87                |
| Fuel, energy, lubricants, water                          | 52.9        | 39.4        | 33.0        | 33.4        | 32.5        | 38                |
| Vet & medicine   | 33.7        | 31.1        | 28.3        | 24.5        | 22.3        | 28                |
| Other inputs cow calf enterprise                         | 52.4        | 48.2        | 46.0        | 45.4        | 43.5        | 47                |
| Labour   |             |             |             |             |             |                   |
| Paid Labour  | 75.1        | 68.0        | 66.4        | 64.8        | 61.3        | 67                |
| Unpaid Labour  | 119.1       | 112.5       | 108.4       | 104.7       | 99.2        | 109               |
| Total Variable Costs                                     | 747.4       | 768.0       | 618.0       | 611.1       | 580.1       | 665               |
| <b>CAPITAL COSTS</b>                                     |             |             |             |             |             |                   |
| Insurance, taxes   | 79.6        | 75.4        | 72.8        | 70.5        | 67.2        | 73                |
| Buildings (maintenance, depreciation)                    | 24.2        | 22.4        | 21.4        | 21.2        | 20.5        | 22                |
| Land Cost  | -           | -           | -           | -           | -           | -                 |
| Rented Land  | 144.4       | 141.0       | 138.5       | 137.6       | 136.6       | 140               |
| Own Land   | 199.2       | 189.9       | 182.7       | 180.2       | 177.5       | 186               |
| Capital Costs  | -           | -           | -           | -           | -           | -                 |
| Liabilities  | 40.6        | 35.2        | 36.3        | 36.8        | 31.1        | 36                |
| Own capital  | 33.7        | 32.2        | 33.6        | 33.9        | 35.0        | 34                |
| Total Capital Costs                                      | 521.8       | 496.2       | 485.3       | 480.2       | 467.9       | 490               |
| <b>COSTS</b>   |             |             |             |             |             |                   |
| Cash Costs   | 846.5       | 865.6       | 716.9       | 713.0       | 680.4       | 764               |
| Depreciation Costs                                       | 70.8        | 63.9        | 61.6        | 59.5        | 56.0        | 62                |
| Opportunity Costs  | 351.9       | 334.7       | 324.8       | 318.9       | 311.6       | 328               |
| Total Production Costs                                   | 1,269.2     | 1,264.2     | 1,103.3     | 1,091.3     | 1,048.0     | 1,155             |
| <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)                           | 359.3       | 162.1       | 253.0       | 258.0       | 292.8       | 265               |
| Medium-term profit (cash + depreciation)                 | 288.5       | 98.1        | 191.4       | 198.4       | 236.8       | 203               |
| Long-term profit (cash + depreciation + opportunity)     | (63.5)      | (236.5)     | (133.4)     | (120.4)     | (74.8)      | (126)             |

\*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>  | 128,119     | 128,119     | 128,119     | 128,119     | 128,119     | 128,119           |
| Average male and female weaning weight (lbs)                | 530         | 530         | 530         | 530         | 530         |                   |
| Average male and female calf price at weaning (\$/lb)       | 2.51        | 1.95        | 2.00        | 2.00        | 2.00        | 2.09              |
| <b>REVENUE</b>  |             |             |             |             |             |                   |
| Cow Calf Operation  | 3.01        | 2.57        | 2.42        | 2.43        | 2.43        | 2.57              |
| Cull animals and slaughter receipts                         | 0.46        | 0.39        | 0.39        | 0.40        | 0.40        | 0.41              |
| Breeding livestock receipts                                 | -           | -           | -           | -           | -           | -                 |
| Calf Sales and transfer to retained ownership enterprise    | 2.55        | 1.98        | 2.03        | 2.03        | 2.03        | 2.12              |
| Government payments   | -           | 0.20        | -           | -           | -           | 0.04              |
| Other returns   | -           | -           | -           | -           | -           | -                 |
| <b>Total Cow-Calf Revenue</b>                               | <b>3.01</b> | <b>2.57</b> | <b>2.42</b> | <b>2.43</b> | <b>2.43</b> | <b>2.57</b>       |
| <b>VARIABLE COSTS</b>                                       |             |             |             |             |             |                   |
| Animal purchases  | 0.11        | 0.11        | 0.11        | 0.11        | 0.11        | 0.11              |
| Feed (purchase feed, fertiliser, seed, pesticides)          | 0.69        | 0.84        | 0.52        | 0.53        | 0.50        | 0.62              |
| Machinery (maintenance, depreciation, contractor)           | 0.24        | 0.22        | 0.22        | 0.21        | 0.20        | 0.22              |
| Fuel, energy, lubricants, water                             | 0.13        | 0.10        | 0.08        | 0.08        | 0.08        | 0.10              |
| Vet & medicine  | 0.08        | 0.08        | 0.07        | 0.06        | 0.06        | 0.07              |
| Other inputs cow calf enterprise                            | 0.13        | 0.12        | 0.11        | 0.11        | 0.11        | 0.12              |
| Labour  |             |             |             |             |             |                   |
| Paid Labour   | 0.19        | 0.17        | 0.17        | 0.16        | 0.15        | 0.17              |
| Unpaid Labour   | 0.30        | 0.28        | 0.27        | 0.26        | 0.25        | 0.27              |
| <b>Total Variable Costs</b>                                 | <b>1.9</b>  | <b>1.9</b>  | <b>1.5</b>  | <b>1.5</b>  | <b>1.4</b>  | <b>1.7</b>        |
| <b>CAPITAL COSTS</b>  |             |             |             |             |             |                   |
| Insurance, taxes  | 0.20        | 0.19        | 0.18        | 0.18        | 0.17        | 0.18              |
| Buildings (maintenance, depreciation)                       | 0.06        | 0.06        | 0.05        | 0.05        | 0.05        | 0.05              |
| Land Cost   |             |             |             |             |             |                   |
| Rented Land   | 0.36        | 0.35        | 0.35        | 0.34        | 0.34        | 0.35              |
| Owned Land  | 0.50        | 0.47        | 0.46        | 0.45        | 0.44        | 0.46              |
| Capital Costs   |             |             |             |             |             |                   |
| Liabilities   | 0.10        | 0.09        | 0.09        | 0.09        | 0.08        | 0.09              |
| Own capital   | 0.08        | 0.08        | 0.08        | 0.08        | 0.09        | 0.08              |
| <b>Total Capital Costs</b>                                  | <b>1.3</b>  | <b>1.2</b>  | <b>1.2</b>  | <b>1.2</b>  | <b>1.2</b>  | <b>1.2</b>        |
| <b>COSTS</b>  |             |             |             |             |             |                   |
| Cash Costs  | 2.11        | 2.16        | 1.79        | 1.78        | 1.70        | 1.91              |
| Depreciation Costs  | 0.18        | 0.16        | 0.15        | 0.15        | 0.14        | 0.16              |
| Opportunity Costs   | 0.88        | 0.84        | 0.81        | 0.80        | 0.78        | 0.82              |
| <b>Total Production Costs</b>                               | <b>3.17</b> | <b>3.16</b> | <b>2.76</b> | <b>2.73</b> | <b>2.62</b> | <b>2.89</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>                       | 0.90        | 0.40        | 0.63        | 0.64        | 0.73        | 0.66              |
| <b>Medium-term profit (cash + depreciation)</b>             | 0.72        | 0.25        | 0.48        | 0.50        | 0.59        | 0.51              |
| <b>Long-term profit (cash + depreciation + opportunity)</b> | (0.16)      | (0.59)      | (0.33)      | (0.30)      | (0.19)      | (0.31)            |

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.



| RETAINED OWNERSHIP   |         | 2022 | 2021 | 2020 | 2019 | 2018 | 5-yr. avg. |
|--|---------|------|------|------|------|------|------------|
| No. of beef cattle sold per year                                 |         | 239  | 239  | 239  | 239  | 239  | 239        |
| <i>Note: breeding stock sales are in the cow-calf enterprise</i> |         |      |      |      |      |      |            |
| Placement weight (lbs)   | 534     |      |      |      |      |      |            |
| Sale Weight (lbs)  | 720-760 |      |      |      |      |      |            |
| Days on Feed   | 116     |      |      |      |      |      |            |
| Average Daily Gain (lbs/day)                                     | 1.80    |      |      |      |      |      |            |

| REVENUE (\$/head Sold)                           | 2022            | 2021            | 2020            | 2019            | 2018            | 5-yr. avg.      |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Market Returns from Retained Ownership           | 1,389.76        | 1,355.30        | 1,344.59        | 1,328.80        | 1,354.37        | 1,354.56        |
| Other Returns (Government payments, by-products) | -               | 25.91           | -               | -               | -               | 5.18            |
| <b>Total Revenue</b>                             | <b>1,389.76</b> | <b>1,381.20</b> | <b>1,344.59</b> | <b>1,328.80</b> | <b>1,354.37</b> | <b>1,359.74</b> |

| Costs (\$/head Sold)                               | 2022            | 2021            | 2020            | 2019            | 2018            | 5-yr. avg.      |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>VARIABLE COSTS</b>                              |                 |                 |                 |                 |                 |                 |
| Animal purchases                                   | 1,415.13        | 1,100.36        | 1,127.59        | 1,127.69        | 1,129.22        | 1,180.00        |
| Feed (purchase feed, fertiliser, seed, pesticides) | 87.77           | 115.33          | 62.50           | 63.98           | 60.22           | 77.96           |
| Machinery (maintenance, depreciation, contractor)  | 107.33          | 110.03          | 103.46          | 99.04           | 95.88           | 103.15          |
| Fuel, energy, lubricants, water                    | 45.94           | 39.32           | 32.67           | 32.94           | 33.21           | 36.82           |
| Vet & medicine                                     | 8.13            | 7.58            | 7.06            | 6.34            | 5.88            | 7.00            |
| Other inputs                                       | 84.28           | 82.69           | 77.74           | 76.25           | 74.37           | 79.07           |
| Labour   |                 |                 |                 |                 |                 |                 |
| Paid Labour  | 96.16           | 96.80           | 92.01           | 88.52           | 85.66           | 91.83           |
| Unpaid Labour                                      | 152.44          | 160.26          | 150.34          | 143.11          | 138.71          | 148.97          |
| <b>Total Variable Costs</b>                        | <b>1,997.17</b> | <b>1,712.35</b> | <b>1,653.37</b> | <b>1,637.87</b> | <b>1,623.14</b> | <b>1,724.78</b> |

|                                       |               |               |               |               |               |               |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>CAPITAL COSTS</b>                  |               |               |               |               |               |               |
| Insurance, taxes                      | 33.74         | 35.05         | 33.00         | 31.48         | 30.47         | 32.75         |
| Buildings (maintenance, depreciation) | 31.04         | 31.90         | 29.71         | 28.95         | 28.70         | 30.06         |
| <b>Land Cost</b>                      |               |               |               |               |               |               |
| Rented Land                           | 6.28          | 6.49          | 6.29          | 6.20          | 6.23          | 6.30          |
| Owned Land                            | 8.67          | 8.74          | 8.29          | 8.12          | 8.09          | 8.38          |
| <b>Capital Costs</b>                  |               |               |               |               |               |               |
| Liabilities                           | 52.00         | 47.20         | 50.30         | 50.27         | 43.44         | 48.64         |
| Own capital                           | 42.39         | 45.01         | 46.00         | 45.74         | 48.35         | 45.50         |
| <b>Total Capital Costs</b>            | <b>174.13</b> | <b>174.38</b> | <b>173.59</b> | <b>170.75</b> | <b>165.28</b> | <b>171.63</b> |

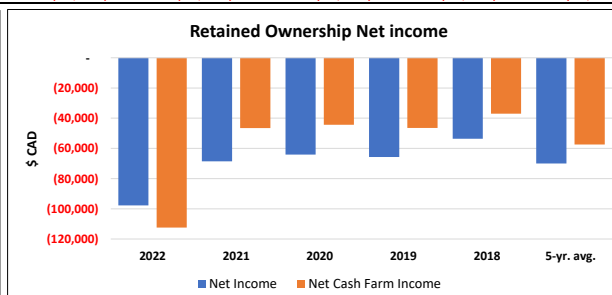
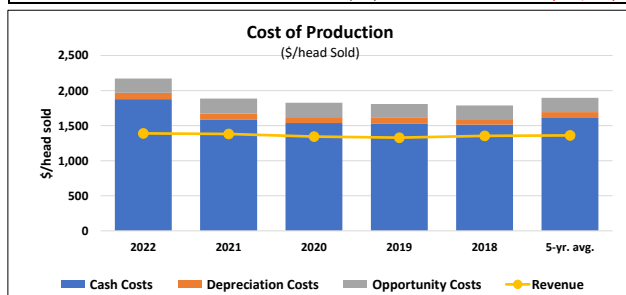
|  |                 |                 |                 |                 |                 |                 |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>TOTAL COSTS</b>                                   |                 |                 |                 |                 |                 |                 |
| Cash Costs   | 1,877.19        | 1,581.72        | 1,536.94        | 1,530.33        | 1,514.97        | 1,608.23        |
| Depreciation Costs                                   | 90.62           | 91.01           | 85.40           | 81.32           | 78.30           | 85.33           |
| Opportunity Costs                                    | 203.50          | 214.00          | 204.63          | 196.97          | 195.16          | 202.85          |
| <b>Total Production Costs (excludes own capital)</b> | <b>2,171.31</b> | <b>1,886.73</b> | <b>1,826.96</b> | <b>1,808.62</b> | <b>1,788.43</b> | <b>1,896.41</b> |

|  |          |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|----------|
| <b>Profits</b>                                       |          |          |          |          |          |          |
| Short-term profit (cash costs)                       | (487.43) | (200.52) | (192.35) | (201.53) | (160.60) | (248.48) |
| Medium-term profit (cash + depreciation)             | (578.05) | (291.53) | (277.75) | (282.85) | (238.90) | (333.81) |
| Long-term profit (cash + depreciation + opportunity) | (781.55) | (505.53) | (482.38) | (479.82) | (434.05) | (536.67) |

|                                  |          |          |          |          |          |          |
|----------------------------------|----------|----------|----------|----------|----------|----------|
| <b>Net Income (\$/head sold)</b> |          |          |          |          |          |          |
| Net Income                       | (424.02) | (297.49) | (277.75) | (284.90) | (232.47) | (303.32) |
| Net Cash Farm Income             | (487.43) | (201.98) | (192.35) | (201.53) | (160.60) | (248.78) |

| Labour                              |                |        |       |       |       |       |       |
|-------------------------------------|----------------|--------|-------|-------|-------|-------|-------|
| Paid Labour                         | hours per year | 1,089  | 1,154 | 1,137 | 1,128 | 1,141 | 1,130 |
| Unpaid Labour                       | hours per year | 1,328  | 1,470 | 1,430 | 1,403 | 1,422 | 1,411 |
| Return to labour input              | \$/hour        | (50.9) | (22)  | (22)  | (23)  | (19)  | (27)  |
| Average wages (paid and calculated) | \$/hour        | 24     | 23    | 22    | 21    | 20    | 22    |

| Net Income (annual total) |             | 2022      | 2021     | 2020     | 2019     | 2018     | 5-yr. avg. |
|---------------------------|-------------|-----------|----------|----------|----------|----------|------------|
| Net Income                | \$ per year | (97,794)  | (68,611) | (64,058) | (65,708) | (53,616) | (69,957)   |
| Net Cash Farm Income      | \$ per year | (112,418) | (46,584) | (44,362) | (46,480) | (37,039) | (57,377)   |



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



| RETAINED OWNERSHIP                                   | \$/lb LW Sold | \$/hd sold  | \$/lb gain  |
|--|---------------|-------------|-------------|
| <b>REVENUE</b>                                       | <b>2021</b>   | <b>2021</b> | <b>2021</b> |
| Market Returns from Retained Ownership               | 1.87          | 1,389.76    | 6.43        |
| Other Returns (Government payments, by-products)     | -             | -           | -           |
| Total  | 1.87          | 1,389.76    | 6.43        |
| <b>Costs (\$/lb LW Sold)</b>                         | <b>2021</b>   | <b>2021</b> | <b>2021</b> |
| <b>VARIABLE COSTS</b>                                |               |             |             |
| Animal purchases                                     | 1.91          | 1,415.13    | 6.55        |
| Feed (purchase feed, fertiliser, seed, pesticides)   | 0.12          | 87.77       | 0.41        |
| Machinery (maintenance, depreciation, contractor)    | 0.14          | 107.33      | 0.50        |
| Fuel, energy, lubricants, water                      | 0.06          | 45.94       | 0.21        |
| Vet & medicine                                       | 0.01          | 8.13        | 0.04        |
| Other inputs   | 0.11          | 84.28       | 0.39        |
| Labour   |               |             |             |
| Paid Labour  | 0.13          | 96.16       | 0.44        |
| Unpaid Labour  | 0.21          | 152.44      | 0.71        |
| Total Variable Costs                                 | 2.69          | 1,997.17    | 9.24        |
| <b>CAPITAL COSTS</b>                                 |               |             |             |
| Insurance, taxes                                     | 0.05          | 33.74       | 0.16        |
| Buildings (maintenance, depreciation)                | 0.04          | 31.04       | 0.14        |
| Land Cost  |               |             |             |
| Rented Land  | 0.01          | 6.28        | 0.03        |
| Owned Land   | 0.01          | 8.67        | 0.04        |
| Capital Costs  |               |             |             |
| Liabilities  | 0.07          | 52.00       | 0.24        |
| Own capital  | 0.06          | 42.39       | 0.20        |
| Total Capital Costs                                  | 0.23          | 174.13      | 0.81        |
| <b>TOTAL COSTS</b>                                   |               |             |             |
| Cash Costs   | 2.53          | 1,877.19    | 8.68        |
| Depreciation Costs                                   | 0.12          | 90.62       | 0.42        |
| Opportunity Costs                                    | 0.27          | 203.50      | 0.94        |
| Total Production Costs (excludes own capital)        | 2.92          | 2,171.31    | 10.04       |
| <b>Profits</b>                                       | <b>2021</b>   | <b>2021</b> | <b>2021</b> |
| Margin over operating costs                          | (0.03)        | (0.11)      | (0.00)      |
| Short-term profit (cash costs)                       | (0.66)        | (487.43)    | (2.25)      |
| Medium-term profit (cash + depreciation)             | (0.78)        | (578.05)    | (2.67)      |
| Long-term profit (cash + depreciation + opportunity) | (1.05)        | (781.55)    | (3.62)      |
| <b>Net Income</b>                                    | <b>2021</b>   | <b>2021</b> | <b>2021</b> |
| Net Income   | (0.57)        | (424.02)    | (1.96)      |
| Net Cash Farm Income                                 | (0.66)        | (487.43)    | (2.25)      |

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