



Baseline Data Collection

Checklist & Helper Questions

Collecting baseline data to develop a COP benchmark for a “typical farm” requires the willing participation of 4-6 similar operations in a focus group session. Each operation will be sharing data about their operation. Through group discussion we select a value that best represents a “typical farm” for all the data points required for COP analysis. Individual data shared during the focus session is not to be shared with anyone outside of the session.

We have grouped operations based on the information each operation provided on the intake form completed when they initially signed up to be part of the Canadian Cow-Calf Cost of Production (COP) network. While the operations in a focus group session will be similar, there will be differences among them. We expect there will be certain aspects of your operation that may make an operation feel like an outlier. For example, your operation may be the only one in the focus group that calves in March, or your operation may be the only one in the group that backgrounds.

This document can act as a checklist for the type of information that needs to be shared during the focus group sessions. In addition, it provides ‘helper questions’ to guide you in gathering the data that will be needed for the baseline data collection.

INVENTORY AND PERFORMANCE FOR THE COW-CALF ENTERPRISE

Table 1. Breeds and number of cows

Breeds of the cattle herd	
Number of cows	

Table 2. Breeding

Cow: bull ratio	
Conception Rate (%) Cows and Heifers	
% Artificial insemination	
% Embryo Transfer	

*Conception at preg-checking or # of calves born (dead or alive) per 100 cows exposed.

Table 3. Calving season

Calving season start date			Calving season end date	
	1 cycle	2 cycle	3 cycle	4 cycle
% of calves born per cycle (each 21 days)				

Table 4. Death loss by class

Calf death loss (within 24 hours of birth) per year	
Calf death loss (after 24 hours of birth) per year	
Cow death loss (%)	
Bull death loss per year	

Table 5. Weaning

	Steer	Heifers
Weaning Date		
Average weaning weight (lbs)		

If sell at weaning, are calf prices at provincial average, premium or discount? _____

Breeding Animals

Male calves castrated _____%

OR What is the percentage of male calves that are retained for breeding? _____%

% of bred heifers retained per year		<u>OR</u>	# of bred heifers retained per year	
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Table 6. Purchase of breeding animals (if applicable)

	# purchased per year	Avg Purchase price (\$/hd)
Replacement Heifers		
Bred Heifers		
Bred Cows		
Bulls		

Table 7. Cull animals

	% culled per year	Weight (lbs)	Date (typical month sold)	Sale price (avg, discount, premium)
Cull Cows				
Cull Bulls				
Replacement Heifers (<12 months old)				
Heifers (12-24 months old)				

Table 8. Sales of breeding stock (if applicable)

	# of head sold	Sale Price (\$)	Age sold
Bulls			
Heifer calves			
Bred Heifers			
Cows			

VARIABLE COSTS PER COW FOR THE COW-CALF ENTERPRISE

This covers cows and replacement heifers only. Variable costs for the retained ownership group are captured in Table 14.

Table 9. Variable Costs for the cow herd

Cost	\$/year	\$/cow
Vet services (<i>preg-checking, bull test, c-section</i>)		
Medical products (<i>vaccines, antibiotics</i>)		
Miscellaneous vet (<i>syringes, taggers, etc.</i>)		
Growth hormones (<i>are they used or not</i>)		
Bedding (<i>only if purchased</i>)		
Sales Commissions, Auction Fees (<i>insurance at auction</i>)		
Check-off		
Brand inspection		
Transport / hauling (<i>e.g. to auction or summer grass</i>)		
Insurance (<i>e.g. WLPIP</i>)		
RFID tags		
Management tags		
Water (<i>only if paid for with a monthly bill</i>)		
Fees for pedigree records		
Other _____		
Other _____		

FEED RATIONS FOR THE COW-CALF ENTERPRISE

Tables 10, 11 and 12 ask for winter feed rations for different management groups in the cow-calf enterprise (e.g. cows and replacement heifers). If groups are fed and managed the same, please just fill out the information for the cows in table 10. If young heifers and bred heifers are fed differently, there is space to provide those different rations in tables 11 and 12.

Table 10. Cow Ration

Type of winter feed	Cows (lbs/animal/day as fed)	Cows (# of days fed)	DM%	% feed type purchased

What minerals are fed, and how much per cow per day (e.g. grams/animal/day), and for how many days?

Do you provide supplemental feed on pasture for cows throughout the winter? If so, What type of supplemental feed is provided?

How much supplemental feed is provided per cow per day as fed?

For how many days do you supplement on pasture?

Table 11. Replacement heifers **less than 12 months old** (if fed separately from cows)

Type of winter feed	Heifers (lbs/animal/day as fed)	Heifers (# of days fed)	DM%	% feed type purchased

What minerals are fed, and how much per animal per day (e.g. grams/animal/day), and for how many days?

Do you provide supplemental feed on pasture for the young heifers (less than 12 months) throughout the winter? If so,

What type of supplemental feed is provided?

How much supplemental feed is provided per young heifer per day as fed?

For how many days do you supplement on pasture?

Table 12. Bred Heifers (12-24 months old) if fed separately from cows

Type of winter feed	Bred heifers (lbs/animal/day as fed)	Bred heifers (# of days fed)	DM%	% feed type purchased

What minerals are fed, and how much per animal per day (e.g. grams/day), and for how many days?

Do you provide supplemental feed on pasture for the bred heifers (12-24 mo) throughout the winter? If so,

What type of supplemental feed is provided?

How much supplemental feed is provided per bred heifer per day as fed?

For how many days?

RETAINED OWNERSHIP (after weaning)

COMPLETE THIS SECTION ONLY IF YOU RETAIN OWNERSHIP AFTER WEANING (e.g. pre-conditioning, backgrounding, yearling grassers or retain through to slaughter weight), otherwise skip to table 17.

Table 13. Production Details

# Head sold per year		# of different management groups (# hd per group)	
Start/End Feeding Date		Days on Feed	
Starting Weight, lbs		End Weight, lbs	
Shrink %		Death Loss, %	
Origin of animals (Homegrown or Purchased)?		Prices paid, if purchased	
Sale Date		Sale price (avg, premium, discount)	

Table 14. Variable cost for retained ownership

Cost	\$/year	\$/head retained
Vet services (<i>preg-checking, bull test, c-section</i>)		
Medical products (<i>vaccines, antibiotics</i>)		
Miscellaneous vet (<i>syringes, taggers, etc.</i>)		
Growth hormones (<i>are they used or not</i>)		
Bedding (<i>only if purchased</i>)		
Sales Commissions, Auction Fees (<i>insurance at auction</i>)		
Check-off		
Brand inspection		
Transport / hauling (<i>e.g. to auction or summer grass</i>)		
Insurance (<i>e.g. WLPIP</i>)		
RFID tags		
Management tags		
Water (<i>only if paid for with a monthly bill</i>)		
Fees for pedigree records		
Other _____		
Other _____		

Table 15. Feed Rations for GROUP 1

There is space for one feeding groups in Table 18 and another feeding group in Table 19. If you have more than two feeding groups, please be prepared to provide similar info for all your feeding groups during the focus group session.

Type of winter feed	Retained Ownership (group 1) (lbs/animal/day as fed)	Retained Ownership (group 1) (# of days fed)	DM%	% purchased

What minerals are fed to the group, and how much per animal per day (e.g. grams/animal/day), and for how many days?

Table 16. Feed Ration for GROUP 2

Type of winter feed	Retained Ownership (group 2) (lbs/animal/day as fed)	Retained Ownership (group 2) (# of days fed)	DM%	% purchased

What minerals are fed, and how much per animal per day (e.g. grams/animal/day), and for how many days?

EMISSIONS AND ANIMAL MANAGEMENT

Table 17. Confinement

	Cows	Calves	Replacement Heifers (<12 mo)	Bred Heifers (12-24 mo)	Backgrounders
Days per year in confinement in small pen/barn (e.g. # days/yr)					
During which months are they confined?					

What type of bedding do you use (e.g. straw, sawdust)? Is it the same for all groups?

Table 18. Bedding

	Cows	Calves	Replacement Heifers (<12 mo)	Bred heifers (12-24 mo)	Backgrounders
Days with bedding					
Total Amount bedding/year (lbs)*					

*If you don't know the amount of bedding used per group, please just provide total bedding used (below) and write in an estimated percent allocation of bedding to each group in table 18 above.

Total bedding amount per year (lbs): _____

Manure Management

Manure storage: solid storage, covered, bulking agent, additives, dry lot, deep bedding, composting.

Manure handling: season, method?

Land Use Change

Have acres of land changed uses in the last 20 years (e.g. woodland to pasture, pasture to annual crops, etc.)? Please specify the land use change and how many acres.

WHOLE FARM DATA

1. Sole Proprietorship or Corporation? _____

Asset Value & Depreciation Rates

2. What is the **current fair market value for all machinery and equipment (excluding passenger vehicles)**? \$ _____

a. The fair market value of all equipment/machinery can be found on a Net Worth Statement.

i. It should exclude small power tools

b. This would be the amount all machinery and equipment is insured for.

c. When completing your individual COP analysis, it can be helpful to report the equipment/machinery by type (tractors, tillage, harvest/transport, haying, etc.) along with year of purchase, purchase price, expected years of use, salvage value.

d. Machinery depreciation will be set at 10% and used for all farms in the COP Network.

i. The [Capital Cost Allowance](#) (aka depreciation rate) used for tax purposes is 20% for equipment and 30% for passenger vehicles.

ii. Rates used by AB's AgriProfit\$ are 11.5% for non-powered equipment, 8% for powered and 5% for equipment.

iii. Rates used by SK Ministry of Agriculture's *Crop Planning Guide* are 10.7% for machinery.

3. What is the **current fair market value for buildings and facilities (excluding the house)**? \$ _____

a. The fair market value of all buildings and facilities, can be found on a Net Worth Statement.

b. This would be the amount all buildings and facilities are insured for.

c. A steel chute is considered part of the facilities and should be included here. Portable steel panels expensed as purchases are excluded.

- d. When completing your individual COP analysis, it can be helpful to report buildings and facilities individually along with year of purchase, purchase price, expected years of use, salvage value.
 - e. Building and facilities depreciation will be set at 5% and used for all farms in the COP Network.
 - i. The Capital Cost Allowance used for tax purposes: 10% buildings.
 - ii. Rates used by AB's AgriProfit\$ is 5% for buildings.
 - iii. Rates used by SK Ministry of Agriculture's *Crop Planning Guide* is 5% for buildings.
4. What is the **current fair market value for the house/dwelling that is located on-farm?**
\$ _____
5. What is the % of the house allocated to farm business? _____%
- a. If the dwelling is on the farm, separate it from the number reported.
 - i. If the dwelling is off-farm (e.g. in town); exclude it.
 - ii. In AgriProfit\$ up to 25% of the house can be attributed to the farm operations for office use and is separate by enterprise.

Paid & Unpaid Labour

We are interested in your family, hired and casual labour. Custom operators (i.e. silage crew, custom combining) is captured in another section.

If there are multiple individual workers and multiple enterprises, they should be listed on separate rows to more easily allocate to each enterprise on the operation.

Either wages per hour or total wages per year will work, whichever is easier to compile.

Table 19. Labour hours and wages

Labour Category	Hours (per year)	Wages \$/hr	Total Wages \$/year
Family Member 1: _____			
Family Member 2: _____			
FT Hired			
Part-time/Casual			

To estimate family labour you can breakdown each season. For example, during calving (March-April) X hours per week, during haying (June-July) X hours per week, etc.

For unpaid labour we will be looking for the value of those hours if that person was injured and someone else had to do those tasks. Consider the percentage of time and value (\$/hr) for physical tasks vs. the percentage of time and value (\$/hr) for management tasks.

Table 20. Allocation of labour to enterprises (% of time)

Labour Category	Cow-Calf	Cash Crops	Forage Production	Other:
Family Member 1:				
Family Member 2:				
FT Hired				
Part-time/Casual				

Liabilities & Interest Rates

6. Would you classify your operation as a: **Start-up** **Medium** **Mature**

Note: The 'typical farm' that we are creating the benchmarks for will have to be classified as one of these as well. It is recognized that the liabilities a farm carried is related to its stage.

Table 21. Liabilities & interest rates

Loans/Accounts	Interest Rate (%)	Outstanding Balance (Remaining total loan)
Short-term (1-3 years)		
Medium-term (4-8 years)		
Long-term loans (>8 years)		

Loan definition is, in general, matched with asset life and therefore, depreciation rates (see above).

Short-term – operating loan Medium-term – livestock and machinery Long-term – land

Fixed Costs (Overhead for Whole Farm)

Note: Fixed costs do not fluctuate based on the number of head, acres or crop rotation.

Table 22. Fixed costs

Cost Category	\$CAD/year
Land improvements (<i>land clearing/drainage 9796, fencing, water development, etc.</i>)	
Machinery Maintenance	
Building and Facilities Maintenance	
Contract Labour (e.g. manure hauling; crop production included elsewhere)	
Fuel	
Diesel – <i>Includes Pick-up trucks, farm vehicles, NOT tractors for crop and forage production (var. cost per ha)</i>	
Diesel - Heating, Irrigation	
Gasoline – <i>Includes Pick-up trucks, farm vehicles, NOT tractors for crop and forage production (var. cost per ha)</i>	
Utilities (Natural Gas, Electricity, water)	
Water rights/access	
Insurance	
Farm (Buildings, Machinery, Vehicles)	
Disability, accident, life insurance	
Advisor costs (feed tests, soil test, nutritionist)	
Farm Tax and Fees (e.g. property tax, not personal) 9810	
Accounting, Legal Fees (9809)	
Office Expenses (Phone, Cell, Internet, Subscriptions – portion allocated to the farm) 9808/9807/9824 †	
Bank fees	
Rental/Lease Payments (on cattle)	
Grazing fees for community pasture*	
Marketing (set fees only)	
Other	

† With utilities (i.e. natural gas/propane, electricity) and office supplies, AgriProfit\$ separates and allocated to farm vs. non-farm use and by enterprise.

*Community pasture costs are captured under variable costs for the cow if breeding fees apply, and under fixed costs for grazing fees (must confirm if grazing fees are itemized and included in other places to avoid double counting).

Other Income

This is revenue that comes from the farm assets such as contract work using farm machinery or revenue that comes from the land.

Table 23. Other income

Other Farm Income	\$CAD/year
Agricultural contract work	
Leases (gas, oil, well, surface)	
Sales of gravel, sand, etc.	
Ecosystem services	
Other _____	

See lines 9540-9600 in Statement A of the AgriStability Form

7. What percent of net farm revenue comes from off-farm income? _____%
 = Off-farm income / (annual net farm cash income + off-farm income)

Land Use

Stocking rate on grazing land will be calculated by CRS team during the focus group session based on Table 24. The stocking rate used will be based on the aggregate for the baseline farm, and will be calculated on grazing acres, grazing days, cow inventories. Inventory of replacement heifers will be calculated by the model for a steady herd.

Table 24. Grazing Land

	Mature Cows	Replacement Heifers (less than 12 months old)	Bred Heifers (12 to 24 months old)	Yearling Grassers	Bulls
Weight					
Number of head					
Grazing days					
Total Grazing acres (Native, Tame and bush)					

As an option, you can calculate your stocking rate yourself using the guidance below.

- a. What is the average stocking rate you use on grazing lands (exclude lands on community pasture)? _____ AU/ac (optional - check).

Stocking rate calculation: Acres should equal total grazing acres, both owned and rented.

- b. Example 1. Animal Unit for 1300 lb cow = 1.3 AU X 100 head = 130 AU
 - i. If you have other groups, calculate the animal units for those groups next (e.g. 700 lb heifer = 0.8 AU X 100 head = 80 AU
 - ii. Add the animal units together: 130 + 80 = 210 AU
 210 AU for 156 grazing days = 32,760 AUD
 32,760 AUD / 676 acres of grassland = 49 AU/acre
- c. Example 2. 20 cows/quarter, where 1.3 AU x 20 cows x 156 grazing days / 160 acres of grazing land = 25.35 AU/acre

Animal Type	Animal Unit Equivalent
Cow, dry (1,000 lb)	1.0
Cow, 1,300 lb with calf to 4 months	1.3
Cow, 1,400 lb with calf to 4 months	1.4
Yearling steer	0.85
Yearling heifer	0.8
Bulls, mature (1,700 lb average)	1.7

Source : BCRC <https://www.beefresearch.ca/research/carrying-capacity.cfm>

8. What % of grassland is native (never broken)? _____%
9. Is rotational grazing used? _____ If yes, how frequently are the moves? _____
10. Is grass fully utilized? Or Under-utilized? _____

Table 25. Land

Land Use	Cropland (includes hay)	Grasslands (includes tame and native)	Other (e.g. Woodland, Bush)
Owned Land (ac)			
Rented Land (ac)			
Rental Price (\$/acre)			
Market Value for owned land (\$/acre)			

NOTE: Crown land (if it is at a different rate from private rental) go into "Other" in order to estimate the land base needed to support the cow herd and capture grazing costs.

Community pasture costs are captured under variable costs for the cow if breeding fees apply, and under fixed costs for grazing fees (must confirm if grazing fees are itemized and included in other placed to avoid double counting).

Yields and Prices

Provide a breakout of the various crops (e.g. barley grain, canola) and forages (e.g. pasture, hay) grown on land base – acreage, yield (provide unit), report cash crops separate from annuals grown for feed. Indicate which enterprises use the land.

Table 26. Acres, Yields and Use by Enterprise

Acreage Use	# Acres	Yield	% Cow-calf Enterprise	% Retained Cattle Enterprise	% Cash Crops Enterprise	DM%
Hay						
Silage						
Barley						
Wheat						
Canola/Corn						
Other Crops						

Table 27. Cash Crop Sales

11. Do you have surplus production of hay or other feedstuffs? Details are needed for homegrown feed production as many regions do not have a publicly traded market price for feeds (e.g. hay).

Crops sold	Price (\$/unit)	% of Production

Table 28. Variable costs on crop and forage production

Cost	Hay	Crop _____	Crop _____	Crop _____
Frequency of re-seeding (years)				
Seed (\$/acre)				
Fertilizer (\$/acre)				
Herbicide (\$/acre)				
Fungicide, Insecticide (\$/acre)				
Contract Labour (\$/acre)				
Fuel (\$/acre)				
Other (e.g. crop insurance, netwrap/plastic, irrigation)				

NOTE: crop insurance is a variable expense because producers have options each year on the crop grown.

Table 29. Land Inputs

Land/crop type (list below)	Fertilizer name/blend e.g. Super U <u>OR</u> 20-5-5 NPK	lbs/acre applied	Frequency (Annual)

12. What are the lbs per acre of lime, urea, dolomite or limestone applied, if any?

13. What is the percentage of residue harvested by crop type?

14. Is there leaching on the land (y/n)? _____

15. Is there drainage on the land (y/n)? _____

16. Is the land burned (y/n)? _____

Table 30. Purchased Feed

Purchased	Price	Unit (ton, tonne, lb)
Hay		
Straw		
Grain _____		
Other _____		
Supplement _____		
Mineral		
Salt		

Note: A decision will be made as to what percentage of the 'Typical Farm's' feed requirements are met from homegrown vs. purchased feed. And the percentages may differ from your situation.