

Canadian Beef Breeds Council



Purebred Producer Cost of Production (COP), Product Pricing and Benchmarking Workbook

User Manual

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Growing Forward, a federal-provincial-territorial initiative.

Cultivations l'avenir, une initiative fédérale-provinciale-territoire.

Canada

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Overview

This cost of production, pricing and benchmarking workbook is designed to be an interactive in providing key reporting functionality to purebred beef producers.

Unlike other agricultural operations, beef owners and producers must manage their herd to make the maximum profits from available resources while ensuring the long-term productivity of those same resources. Cost and/or production information allows a producer to make informed decisions, plan for the future and to evaluate the profitability of each aspect of their business. A key to long-term profitability in the cattle business is to understand and manage production cost. There is no greater risk to a producer than a lack of profitability; banks demand it and families need it.

Cost of production analysis and information allows:

- A grain/oilseeds producer to identify which crops are most profitable,
- A hog producer to decide at which point they can sell their hogs to maximize profits,
- A dairy producer to decide at what price they should purchase their quota,
- A beef producer with a feedlot to identify which cow-calf producer sells the most profitable animals.

The first goal of this program is to allow purebred beef producers to identify their own specific internal cost of production. This software program will lead a producer through the process of breaking down farm costs into their individual and separate purebred programs to understand where the profits and/or losses are occurring. This program will help producers recognize improvement areas and to plan for the long-term while remaining profitable in the short term.

Breaking down production costs is by definition a complex process and governed by a number of risk management protocols, both internal and external. As a result there is a certain level of complexity in order to produce the most reliable results for planning.

Secondly, asset pricing (i.e.: livestock planning) is directly related to identification of production costs. The selling price is the means by which a producer truly captures the value it has created by producing purebred livestock. Understanding the costs of raising purebred animals allows for the recognition of the minimum selling price required for livestock to recoup production costs. A pricing tool allows producers to quickly evaluate different pricing scenarios and quickly evaluate how a change in price affects profit.

The third and final purpose of this workbook is to provide benchmarking statistics for the producer and the Canadian purebred industry. The purpose of benchmarking is to stimulate and facilitate performance improvement and organizational change by identifying and analyzing specific and measurable performance gaps and establishing and achieving business performance improvement targets based on best or better practices. Together with the Canadian Beef Breeds Council, it will be possible to compare the individual producer's benchmark statistics with those of the industry, both nationally and provincially.

Benchmarking provides three key functions:

1. *Set Goals and Action Programs:* Benchmark ratios are inherently measurable and comparable, which makes them ideally suited for management-by-objective programs. They can help a producer focus attention on the most controllable aspects of the purebred operation business. Success and failure can be clearly evaluated.
2. *Monitor Business Performance:* Benchmark ratios provide an objective standard by which to measure performance. By tracking key measurements at regular intervals, producers can pay closer attention to those key factors that affect an operations performance.
3. *Share the Results:* Benchmark ratios enable your current and future stakeholders to objectively evaluate your farm's financial and operational position. Lenders, creditors, investors and employees can use them to better understand strengths and weaknesses.

Fundamentally, this is a spreadsheet and the more accomplished you are with spreadsheets the easier this template will be to use. However, this manual and the references provided with the workbook will allow for easy navigation to the end product: providing detailed cost of production statistics, an asset pricing reference and operational benchmarks.

Methodology's and Assumptions

This Cost of Production (COP) spreadsheet calculates the profitability of a purebred beef operation by valuing animals produced and determining a producer's COP for relevant programs. A completed COP template can be used as a pricing tool for producers once they understand the production costs of animals in each respective program. It will give producers a reference to the minimum price that needs to be received in order to recoup production costs. This template is able to provide valuable information to the producer including:

- Production costs of purebred bulls and breeding stock
- Efficiency criteria and statistics in raising and selling purebred stock
- Identifying areas of weakness in production and management through the breakdown of production costs between types of livestock programs.

Before continuing, there is some terminology that needs to be pre-defined. The most important are *purebred operation* and *purebred program*.

1. **Purebred Operation:** This refers to all purebred activities that occur on the farm.
2. **Purebred Program:** A purebred program refers to the specific activities that occur within the *purebred operation*. A purebred operation is broken down into a number of separate small programs that all contribute to the overall profitability of the operation. In this template, four separate programs have been identified as being the major cost or profit centers for the operation. These four programs include:

1. Purebred Breeding Herd Program

This program is composed of purebred breeding stock that is used for the sole purpose of producing purebred calves.

- a. Cows and Bred Heifers: the source of these animals is on-farm heifer retention or external purchases
- b. Breeding Herd Bulls: similar to cows and bred heifers, these bulls are either produced on farm or purchased externally

The bull and heifer calves produced from the breeding herd can either be retained for on-farm purebred programs for future sale or they can be sold as purebred calves or sold to the commercial feeding market at weaning. This program is classified as a cost centre for the purebred operation.

This program is based on an annual cycle and costs. Production would be based from breeding season through to the next breeding season (or weaning until next weaning). Costs are annualized through a typical winter, calving and grazing season.

2. Replacement Heifer Program

This program is composed of replacement heifers produced in-house or purchased and are used to replace culled purebred breeding cows, expand the herd or be sold as replacement heifers. Replacement heifers can also be purchased to expand the herd and introduce new genetics.

These program costs and production are based on an annual cycle, assuming it is one year from when these heifers are weaned and transferred to this program, and a year later when they are transferred or sold as bred heifers. Heifer calves can be sold out of this program and it is important to consider this when allocating costs to this program.

3. Yearling Bull Program

This program is composed of purebred bull calves that are born and raised to be sold as purebred yearling bulls or retained as 2 year old and/or herd bulls.

This program would likely be less than a year. (i.e. from weaning until spring when the bulls are sold or transferred to the 2 year old program.

4. Two Year Old Bull Program

This program is composed of bulls that are raised in-house to be sold as 2 year old herd bulls or kept as herd bulls. The inventory in this herd is a result of transfers from the yearling bull program.

This program would be about one year in length. Based from the spring when the yearling bulls are transferred into this program until the following spring when the two year old bulls are sold.

Identifying and properly recognizing revenues and costs for each program allows for a very fine look at and recognition of strengths, weaknesses and risk areas for a purebred operation. By identifying these areas, producers are able to focus on strategies to increase revenues, reduce costs and/or the variability around both, thus reducing risk.

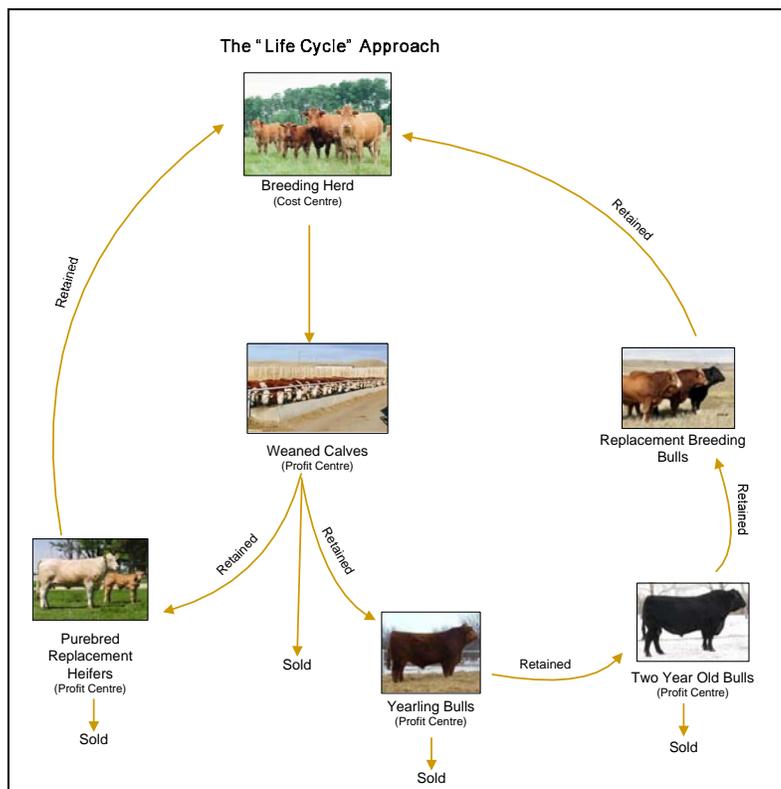
The major underlying assumption that must be remembered while completing this workbook is all calves are produced for the sole purpose of being sold as purebred livestock, whether they are purebred calves, purebred replacement heifers and/or purebred bulls.

Calves that are not transferred into purebred programs are sold after weaning to the feeder markets similar to the operations of a commercial cow-calf producer. No back-grounding and/or finishing is performed for commercial livestock within the purebred operation. Therefore costs associated with these other calves or a commercial cow-herd are to be allocated to "Other Farm" expenses.

"Life Cycle" Approach

The methodology behind identifying and tracking production costs of raising purebred livestock is termed the "Life Cycle" Approach. This approach is used to measure the complete input and animal flow associated with cattle production from birth to sale. The goal of this approach is to encourage "life cycle thinking"; to keep the entirety of the system in mind when considering the sustainability of certain components. Although it may be more than two years from breeding until a resulting two year old bull is sold, it is possible to create annualized costs for each program, as described in the program boxes in the previous section.

Here, a producer's input costs and production are based on a calf-crop cycle rather than a fiscal year. Essentially, a producer starts with a herd of breeding stock (bred heifers, cows and herd bulls); the resulting calf crop is followed through the herd until they are either:



- Sold as feeder/cull calves,
- Sold as purebred calves,
- Sold as purebred yearling bulls,
- Sold as purebred two year old bulls,
- Sold or retained as replacement heifers, or
- Die on farm.

Simply put, the idea behind this methodology can be explained as follows:

"Pretend a new purebred producer buys a breeding herd and follows the movement of the first calf crop until livestock are sold, die or used as herd replacements to see where the true profit and losses are generated"

With this program, producers allocate revenues and expenses associated with each program to allow for the recognition of the 'cost of production' for each of the four programs.

Expense allocation begins with the breeding herd and this program is considered a **cost centre** for the entire purebred operation. The costs associated with raising calves to weaning are transferred with those calves to their respective program. Since most purebred producers do not sell purebred weaned calves, revenues for the breeding herd will consist of just cull cows and bulls, along with “cull” calves. (Cull calves in this case are all calves sold as feeder cattle, for non-breeding purposes.) All costs that are accumulated to raise weaned calves must be recouped through livestock sales in other programs.

Figure 1 is a representation of the life-cycle approach that is used in this program. It shows the revenue streams available to producers that are used to make up for the costs accrued in the breeding herd. There is no recognition of fiscal year ends to analyze the performance of a purebred operation.

Profitability Measures

Most cost of production calculators report profitability or production statistics on a dollar per pound produced basis. These values are most appropriate for cow-calf producers and feeders whose goal is to raise and produce the most profitable animal at the minimum cost per pound gained. For purebred producers, the goal is to raise and market purebred animals that add value and profit to the entire beef chain from primary producer to retailer. Purebred producers aim to produce livestock with the greatest desired genetic traits and genetic potential.

For the purebred producer, costs and profits are calculated on per animal. This program includes performance measures such as cost per purebred calf retained or cost per purebred animal sold as well as dollar per pound weaned to compare to commercial cow-calf operations.

Cost performance results are given for the entire purebred operation as well as the individual programs found within the operation.

The Software Program

This program has been developed in order to provide a handy workbook for producers to understand their costs of production. This program forces purebred beef producers to think about how they manage costs and revenues in a way that they may not have before. It introduces them to individual farm program management in order to meet the goals of the entire purebred operation. If used to the fullest extent, the outputs of this program will allow the producer to identify the strengths and weaknesses found within the operation.

It is important that the user understands the advantages and limitations of this workbook. It is also important for the user to know that the software is designed to perform a number of tasks; however, the interpretation of the output results is entirely up to the user.

The main idea for the program is to be an effective performance reporting workbook while being straightforward and user friendly for inputting data and displaying results. The rest of this user manual will aid the user in identifying the data needed and correctly inputting that data.

Opening and Initiating the Workbook

To ensure that this program works properly, please follow the following steps. If the version of Microsoft Excel that is being using is Microsoft Office 1997/2003 suite then follow the steps on page 7 to 9. If the version of Microsoft Excel that is being using is from the Microsoft Office 2007 suite then follow the steps on page 10 and 11.

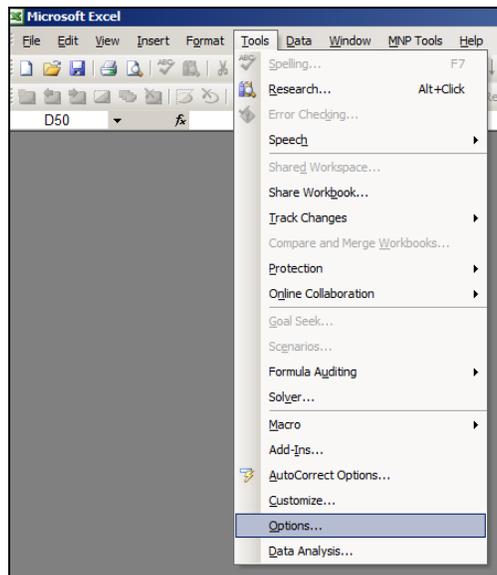
Users of Microsoft Office 1997/2003

Step 1: Updating Security Settings (Microsoft Office 1997 -2003)

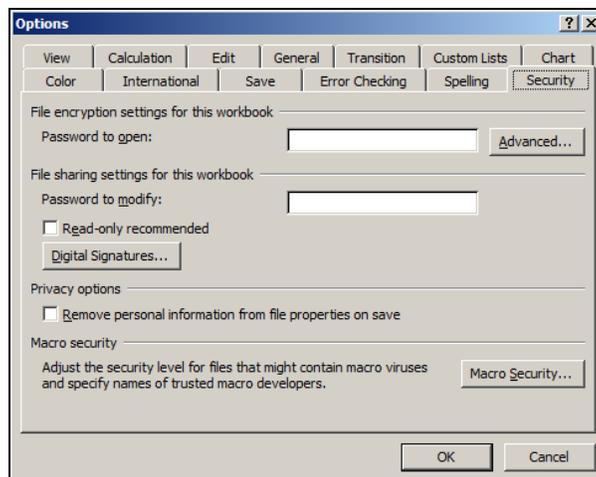
In some instances, depending upon the computer that is being used, defaulted security settings within Microsoft Excel will stop some excel programs from running. A high security level will not allow this program to run; therefore the security level must be reduced. **This will not make your computer susceptible to viruses.**

To change your security settings:

- a) Open Microsoft Excel
- b) On the toolbar at the top of your screen, click: *Tools: Options*



- c) An option box will open, find and click on the *Security* tab



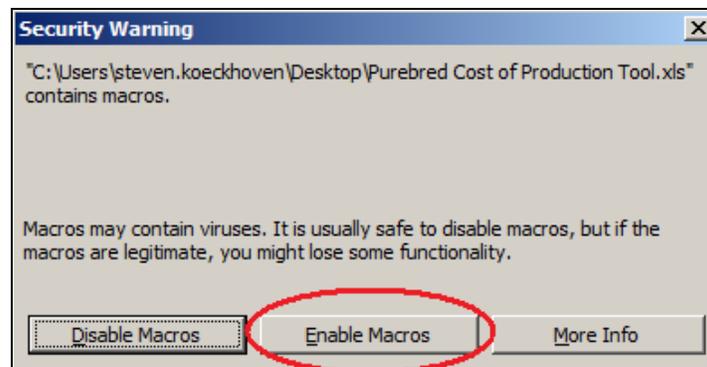
- d) In this tab, click the button *Macro Security*
- e) In *Macro Security*, click the button: *Medium*



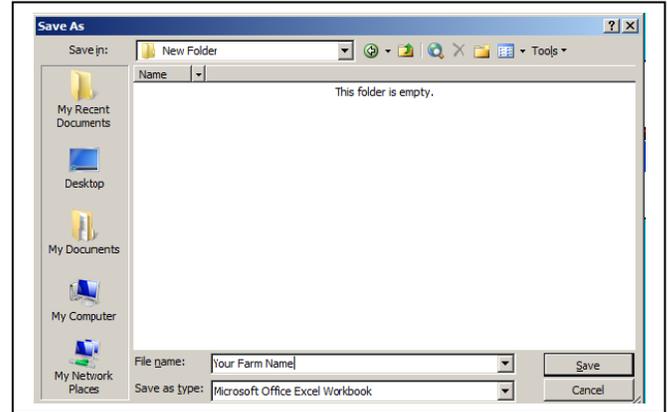
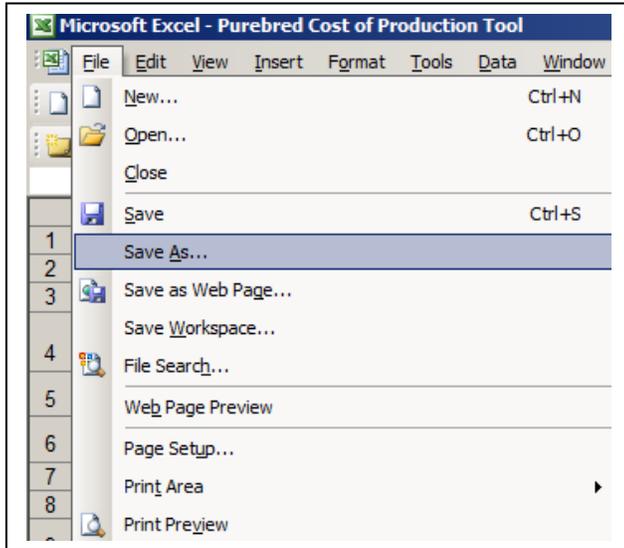
If the security level is already set to Medium, then Microsoft Excel is already able to run the workbook. Click *OK* to exit all screens. These steps only need to be performed once, if at all.

Step 2: Opening and Saving the Cost of Production File (Microsoft Office 1997 -2003)

- a) If you received this workbook through on a CD-ROM disc, insert the disk into your disk drive and open the disk. Click on the sheet "Purebred Cost of Production Tool.xls", the document will open.
- b) If you received this workbook by email, open the email attachment.
- c) A security warning pop-up as shown below will appear. *Enable Macros* must be clicked to continue with the worksheet.



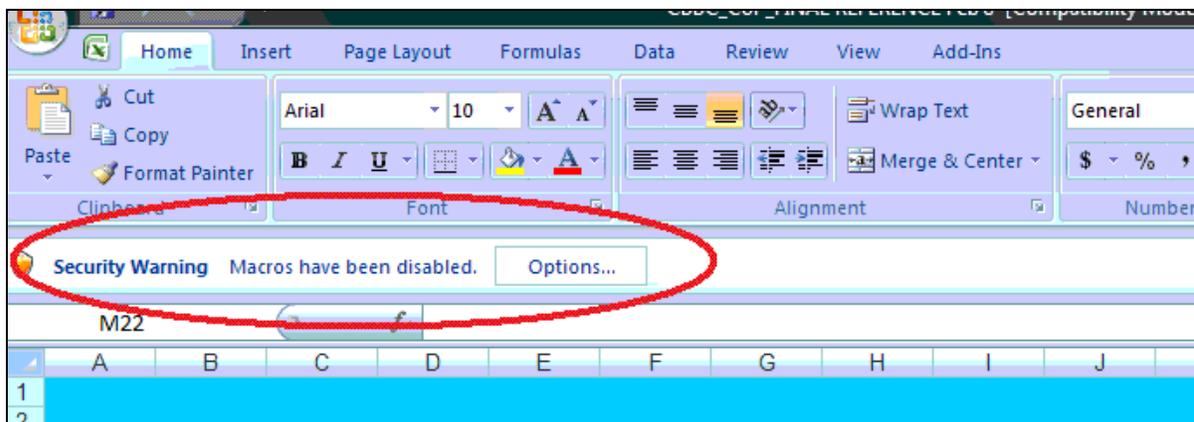
- d) The document then needs to be saved to your computer. In the excel spreadsheet click on “File” in the top left hand corner of the page and scroll to “Save As”.
- e) Once the “Save As” box is open, save the file to the area you prefer and title the workbook as your farm name. For example, for ABC Farms, the file name will be “ABCfarms2008” and then click “Save”. For easy file management and for CBBC use, make sure that the year is entered in the file name for the year that the workbook represents. For each year, a new workbook will need to be produced and saved.



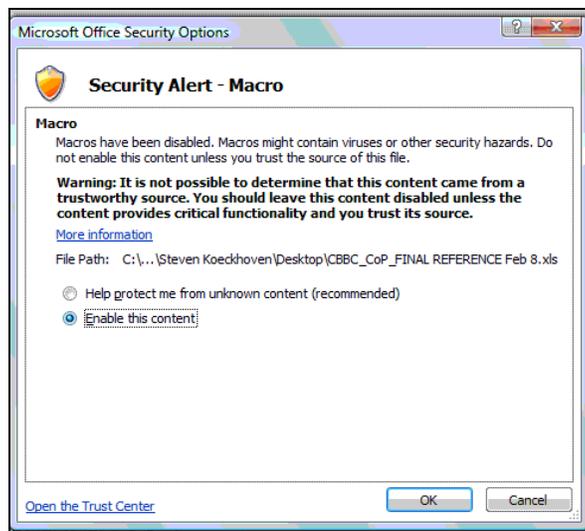
User of Microsoft Office 2007

Step 1: Opening and Saving the Cost of Production File (Microsoft Office 2007)

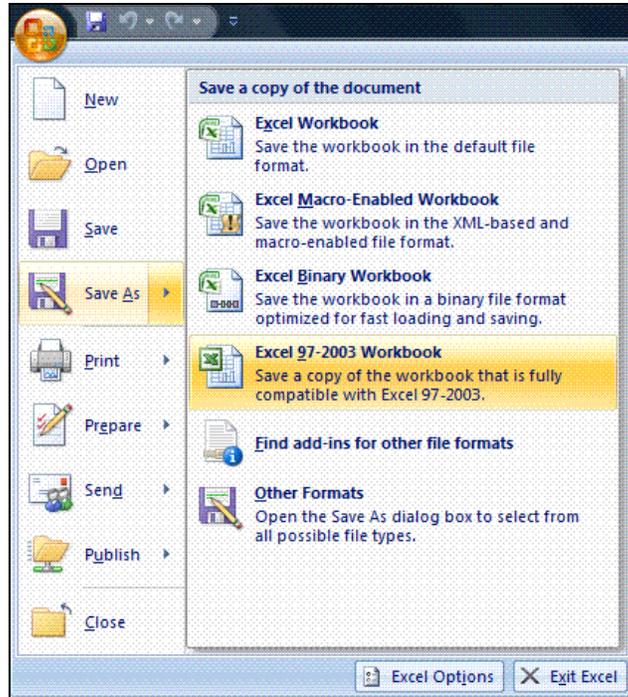
- If you received this workbook through on a CD-ROM disc, insert the disk into your disk drive and open the disk. Click on the sheet "Purebred Cost of Production Tool.xls", the document will open.
- If you received this workbook by email, open the email attachment.
- Before being able to continue, a security warning pop-up as shown below will appear. Click the *Options* button.



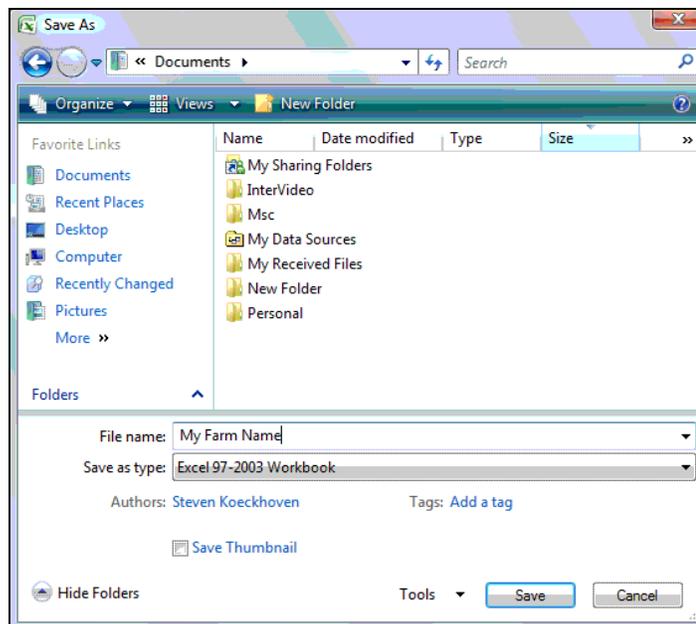
- In the *Options* window, click on *Enable this Content*. Then click *OK*.



- e) The document then needs to be saved to your computer. In the excel spreadsheet click the icon in the top left hand corner of the page and scroll to *Save As* and select *Excel 97-2003 Workbook*.



- f) Once the “Save As” box is open, save the file to the area you prefer and title the workbook as your farm name. For example, for ABC Farms, the file name will be “ABCfarms2008” and then click “Save”. For easy file management and for CBBC use, make sure that the year is entered in the file name for the year that the workbook represents. For each year, a new workbook will need to be produced and saved.



Purebred Cost of Production User Manual

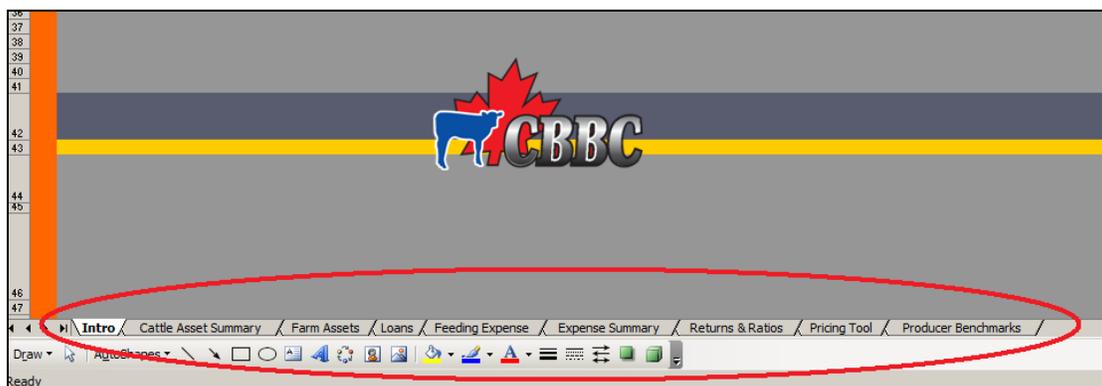
Once the excel file has been saved, click on the button “Click Here” to open up the input form that is shown at the bottom of the page.



There are two distinct parts to the Purebred Cost of Production, Product Pricing and Benchmarking Workbook. The first part includes all data *input* forms and the second includes all are the data *output* worksheets. Data inputs and outputs are separated in this workbook to ensure a clear division between what data inputs are needed by the user and what the resulting outputs are.

Data inputs are to be performed once the “Click Here” button is pressed. The steps to completing the input are described in the following sections. The data input forms are housed separate to the data outputs so there is no lack of confusion as to what is being viewed.

Data and information outputs and results are found in the Microsoft Excel worksheets found at the bottom of your screen. Once farm information and data are entered, the information will be transferred in to the respective output worksheets. The following sections will define the relationships between data inputs and data outputs.



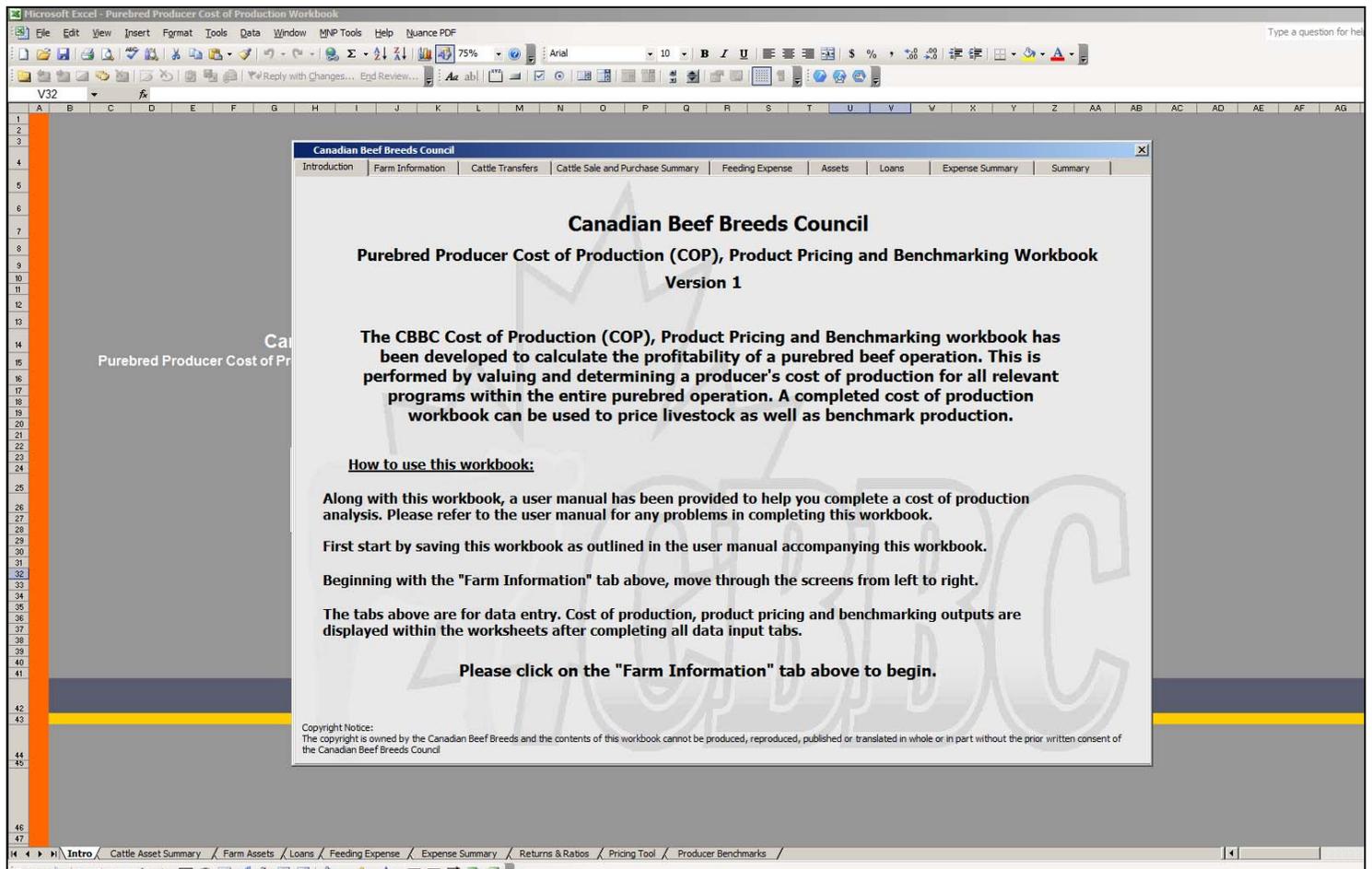
Moving through the Cost of Production Workbook

In the data input form, there are nine separate tabs that will be worked through. Each tab represents different aspects of the purebred operation.

The rest of the document will take you through each of the nine tabs which will be completed from left to right. You can move through the tabs by clicking on the headings at the top of the workbook when displayed.

These headings, in order from left to right are:

1. Introduction
2. Farm Information
3. Cattle Transfers
4. Cattle Sale and Purchase Summary
5. Feeding Expense
6. Assets
7. Loans
8. Expense Summary
9. Summary



The screenshot shows a Microsoft Excel spreadsheet with a central dialog box titled "Canadian Beef Breeds Council". The dialog box contains the following text:

Canadian Beef Breeds Council
Purebred Producer Cost of Production (COP), Product Pricing and Benchmarking Workbook
Version 1

The CBCB Cost of Production (COP), Product Pricing and Benchmarking workbook has been developed to calculate the profitability of a purebred beef operation. This is performed by valuing and determining a producer's cost of production for all relevant programs within the entire purebred operation. A completed cost of production workbook can be used to price livestock as well as benchmark production.

How to use this workbook:

Along with this workbook, a user manual has been provided to help you complete a cost of production analysis. Please refer to the user manual for any problems in completing this workbook.

First start by saving this workbook as outlined in the user manual accompanying this workbook.

Beginning with the "Farm Information" tab above, move through the screens from left to right.

The tabs above are for data entry. Cost of production, product pricing and benchmarking outputs are displayed within the worksheets after completing all data input tabs.

Please click on the "Farm Information" tab above to begin.

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The background of the dialog box features a large, faint watermark of the CBCB logo. The Excel interface shows the workbook name "Canadian Beef Breeds Council" and a tab bar with the following tabs: Introduction, Farm Information, Cattle Transfers, Cattle Sale and Purchase Summary, Feeding Expense, Assets, Loans, Expense Summary, and Summary. The "Introduction" tab is currently selected.

Tips and Hints

1. Worksheets included in the manual

For each of the tabs that will request different types of information, there are pages included in this manual that can be used as rough worksheets to help produce the required information. It is recommended that these pages be used before entering data into the Microsoft Excel program to minimize any input errors. These pages are found immediately after the explanations of each of the tabs.

2. Program outputs and results are only as valuable and representative as the quality of input data

This program involves an in depth analysis of purebred beef operations. It allows for the differentiation of revenues and expenses between various purebred programs within large and small purebred operations.

The more detailed and correct the input values are the, the more valuable the output will be in being a realistic representation of the purebred operation. The more realistic it is the greater use it will be in identifying the proper strengths and weaknesses of the overall purebred operation and the individual purebred programs. Identifying these strengths and weaknesses allows for efficiency in being able to focus on developing weaknesses to increasing the bottom line of the operation.

The first time this workbook is filled out will be the most time consuming, but once completed, updating and changing farm characteristic will be short and easy.

Before beginning the data input, it is recommended that the following resources be available as references to provide that most accurate input data:

1. Last three year of farm financial statements including
 - a. Statement of Farming Activities
 - b. Schedule 8: Capital Cost Allowance of farm assets
2. Feeding records of previous winter feeding regimes, pasture and extended grazing programs
3. List of cattle sales for the last two or three cattle cycles
4. List of farm machinery and building assets

3. How and where to start

The previously mentioned methodology of the life cycle approach explains that this model is developed around a calf crop cycle. Therefore, the starting point for this model in terms of input data would be the last calf crop cycle where all costs from birth to end point i.e.: heifer retention back to breeding herd as bred heifers or bull calves raised and sold as two year old bulls, etc. are available.

4. Identifying Important Points

This document has been produced in a way that allows the reader to pick out key and important points pertinent to the methodology and data inputs needed.

When there is an important point that must be made clear, this workbook contains visual identifiers to ensure points are read. These include:

NOTE: When this appears, there is an important point about the data requested or a reminder of things to remember when making calculations. It can also be an explanation of the method taken to clarify why certain data is asked for.

For example, this appears when an example is provided clarifying the data needed or the steps taken to input the data correctly.

5. Ease of Use

There are number of additional features that help make this workbook user friendly. The more comfortable and aware the user is with them, the easier this workbook will be to navigate.

1.

A rectangular button with a dark blue background and white text that reads "Save Farm Information".

Update Farm Information: After any data entry occurs, whenever this button

appears, it must be pressed to ensure that the data is captured by the program. **If this is not pressed after data entry, the information will not be saved and will need to be re-entered.**

2.



Help buttons: If there is ever any confusion as to what is being asked and this user

manual is not available, pressing these buttons will present the same information that is found in the manual. It is a quick and easy way to get the answers to any problems. The help buttons are mostly found beside data entry points and by clicking on it, a brief explanation of the data requested for each input box will be presented.

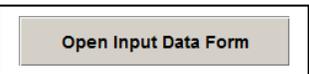
3.

A rectangular button with a dark blue background and white text that reads "Close Form to View Reports".

Close Form to View Reports Button: To close the input screen and view the

Microsoft Excel spreadsheet, click this button.

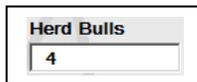
4.

A rectangular button with a light gray background and black text that reads "Open Input Data Form".

Open INPUT Form Button: If the input screen has been closed, click this button to

reopen the data input screen. This button is located in the top left hand corner of every Microsoft Excel worksheet.

5.

A rectangular input field with a white background and a gray border. The text "Herd Bulls" is written above the field, and the number "4" is entered inside the field.

Data Input Cells: When data is requested, the data is to be entered in the *white*

cells.

6.

A rectangular cell with a light gray background and a gray border. The text "Total Number of Animals Sold" is written above the cell, and the number "10" is displayed inside the cell.

Hard Coded Cells: Cells that automatically calculate and update numbers as data

are inputted into white cells are coloured *blue*. No data is able to be entered into these cells.

The rest of the user manual will take you through each tab in CBBC Cost of Production workbook.

Tab 1: Farm Information

Step 1: In this tab, please enter contact information along with some general characteristics of the farm operation.

NOTE: All personal information that is entered into this program will not be released by the CBBC. All information kept completely confidential and will only be used by the CBBC to compile industry information.

1. Production Year: The year that this cost of production workbook represents.
2. What herd programs that are running within the operation? *Check the appropriate boxes*
3. Does the farm have its own bull sale? *Check the box if the answer is Yes*
4. Does the farm actively show cattle? *Check the box if the answer is Yes*
5. What are the breeds are present on the farm? *Select from the drop down menus*

NOTE: If there is more than one breed, then select the other breeds in the “Secondary” and “Tertiary” drop down menus.

Step 2: Once completed, make sure you click the  button or else your information will be lost.

Step 3: Move onto the next tab: *Cattle Transfers*

Viewing Outputs

To view outputs to this point, click on the  button to take you to the output page where your farm information is shown on the worksheet named “Producer Benchmarks”.

To ensure that the farm information was saved before closing, the box seen to the right will appear. If farm information has not been saved, click NO, click NO to return to the input form, else click YES to continue.

Click on the  button to reopen the data input form.

FARM INFORMATION WORKSHEET

Farm Information: Input Form

Farm (Company) Name: _____

Main Contact: _____

Farm (Company) Address: _____

City/Town: _____

Province: _____

Postal Code: _____

Phone Number: _____

Production Year: _____

What purebred programs are present on within your purebred operation? *(Circle all that apply)*

Yearling Bull Program

Two Year Old Bull Program

Replacement Heifer Program

Semen/Embryo Program

Does your farm have its own production sale? *(Circle Yes or No)*

Yes

No

Does your farm show cattle at shows and fairs? *(Circle Yes or No)*

Yes

No

What are you farm breeds?

Primary Breed: _____

Secondary Breed: *(if applicable)* _____

Tertiary Breed: *(if applicable)* _____

Tab 2: Cattle Transfers

This page represents and will guide you through filling in the “Life Cycle” explained previously on page 5.

The screenshot shows a web-based form titled "Canadian Beef Breeds Council" with a navigation bar at the top containing tabs for "Introduction", "Farm Information", "Cattle Transfers", "Cattle Sale and Purchase Summary", "Feeding Expense", "Assets", "Loans", "Expense Summary", and "Summary". The main content area is organized into several sections, each with a numbered header (1-6) and input fields for data entry. Section 1, "Breeding Herd", includes fields for "Breeding Females" and "Deaths". Section 2, "Bull Calves", includes "Births", "Pre-weaning Deaths", "Bull Calves Transferred into the Yearling Bull Program", and "Bull Calves remaining to be sold (+) / purchased (-)". Section 3, "Heifer Calves", includes "Births", "Pre-weaning Deaths", "Heifer Calves Transferred into the Purebred Heifer Program", and "Heifer Calves remaining to be sold (+) / purchased (-)". Section 4, "Replacement Heifers", includes "Replacement Heifers Transferred into the Breeding Herd", "Deaths", and "Heifers remaining to be sold (+) / purchased (-)". Section 5, "Yearling Bull Program", includes "Yearling Bulls Transferred into the Two Year Old Bull Program", "Yearling Bulls Transferred into the Herd Bull Program", "Deaths", and "Yearling Bulls remaining to be sold (+) / purchased (-)". Section 6, "Two Year Old Bull Program", includes "Two Year Old Bulls Transferred into the Herd Bull Program", "Deaths", and "Two Year Old Bulls remaining to be sold (+) / purchased (-)". At the bottom of the form are two buttons: "Save Cattle Transfer Information" and "Close Form to View Reports".

Cattle Transfers refers to the “Life Cycle Approach” and the transfer of weaned calves from the calf crop throughout the relevant purebred programs that are present on the operation.

Please Read Carefully

The “Life Cycle” approach focuses on a “typical” calf crop and historical production records and data in looking forward at your upcoming marketing’s, rather than the exact representation of what is in your cattle inventories in each program today. This approach is used for several reasons:

- To be more useful as a planning tool
- To allow greater flexibility for analyzing different scenario’s
- To annualize the costs for each program in \$/head based on historical records
- To allow for a more accurate benchmarking tool for both production and costing

To complete the cattle transfer page in the template, you will start with the breeding herd. It is best to start with the number of females exposed in order to create your latest calf crop. From here you can enter how many were culled, sold, etc. Now, from this calf crop produced, you flow these animals forward, through the different programs. How many are kept as bulls, how many are typically sold as yearlings, culled, or transferred to the 2 year old program. Same for the heifers, how many are retained as purebred, how many are sold, bred and sold, or bred and transferred into the cow herd.

For livestock costing, this will be the annual overhead costs, to be allocated later in the template, along with the feed for these specific animals as they go through each program, which are also inputted later in the template.

For the cow-herd feed costs, it is easiest to use the costs of feeding over the past year, to get the cost of raising the weaned calf. For the bulls and breeding females going forward, it is likely best to use current feed prices and feed programs for these animals retained. If this is the first year using the template, using these current year prices will be a projection for the full cost of raising the yearling, two year old, and replacement heifer programs for this calf cycle, but can also be a proxy for the animals in inventory from a previous production cycle. If you wish, next year, you could go back to update actual costs and animal flows for the yearling bulls, and replacement heifers, to get an actual cost for these programs, and again the following year, further updates for the two year old bulls.

Assuming this is done in the fall/winter, this methodology would be beneficial as it will give you a good indication of your costs for your current heifer and bull calves/yearlings in inventory, and is focused on projecting to assist with your marketing plan.

Step 1: An explanation of each of the white boxes that needs to be filled in is found on the following two pages along with a worksheet that will be an aid in deriving the “Life Cycle” numbers for the operation. Use this as a guide to filling out the computer screen.

Step 2: Once all transfers and deaths are inputted, the values in the blue boxes should represent the number of head that were either sold out of the herd (positive number) or purchased into the herd (negative number) for the calf crop.

For example, in the above screenshot, of the 40 bull calves born: 2 died and 30 were transferred into the yearling bull program. This leaves 8 ($40 - 2 - 30$) bull calves that were sold.

NOTE: For easy reference regarding each of the input boxes, click on the  box for a guide as to what is being asked.

Step 3: Once completed, make sure to click the **lost**.



button or else the information will be

Step 4: Move onto the next tab: *Cattle Sale and Purchase Summary*

Viewing Outputs

To view outputs to this point, click on the



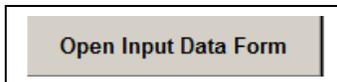
button to take you to the output page where

your farm information is shown on the worksheet named “Cattle Asset Summary”.

To ensure that the farm information was saved before closing, the box seen to the right will appear. If farm information has not been saved, click NO to return to the input form , else click YES to continue.



Click on the



button to reopen the data input form.

CATTLE TRANSFER WORKSHEET

1. Breeding Herd

A	Breeding Females: How many cows and/or heifers were exposed in the latest calving cycle?		Remaining cows in breeding herd after calving
B	Deaths: How many cows and/or replacement heifers exposed died in the last calving cycle? **This includes any animal that died pre/post calving that will need to be replaced by heifers.		
A - B = _____			
C	Herd Bulls: How many bulls are owned and used by your operations? **This does not include rented bulls or AI of cows/heifers. Simply the number of bulls found on the farm that are part of the breeding herd. Any bull share purchases are included here as well. For example, if a half share is owned, include that as one bull.		Remaining bulls in breeding herd after calving
D	Deaths: How many herd bulls died in the last calving cycle? **This includes any bull that died which will need to be replaced in the breeding herd.		
C - D = _____			

2. Bull Calves

E	Births: How many bull calves were born from the cows and/or heifers exposed?		Bull Calves to be sold
F	Pre-weaning deaths: How many bull calves died before weaning?		
G	Bull Calves Transferred into the Yearling Bull Program: Of the bull calves born and weaned, how many were transferred into the yearling bull program?		
E - F - G = _____			

3. Heifer Calves

H	Births: How many heifer calves were born from the cows and/or heifers exposed?		Heifer Calves to be sold
I	Pre-weaning deaths: How many heifer calves died before weaning?		
J	Heifer Calves Transferred into the Replacement Heifer Program: Of the heifer calves born and weaned, how many were transferred into the replacement heifer program?		
H - I - J = _____			

4. Replacement Heifer Program

K	Replacement Heifers Transferred into the Breeding Herd: Of the heifers calves transferred into the replacement heifer program, how many returned to the breeding herd as bred replacement heifers?		Replacement heifers to be sold
L	Deaths: How many animals died in the replacement heifer program?		
J - K - L = _____			

5. Yearling Bull Program

M	Yearling Bulls Transferred into the Two Year Old Program: How many bulls were not sold as yearling and transferred into the Two Year Old Program?		Yearling Bulls to be sold
N	Yearling Bulls Transferred into the Herd Bull Program: How many bulls were not sold as yearling but used as herd bulls in the breeding herd?		
O	Deaths: How many animals died in the yearling bull program?		
G - M - N - O = _____			

6. Two Year Old Program

P	Two Year Old Bulls Transferred into the Herd Bull Program: Of the yearling bulls transferred into the two year old bull program, how many were not sold but used as on-farm herd bulls?		Two Year Old bulls to be sold
Q	Deaths How many animals died in the two year old bull program?		
M - P - Q = _____			

New breeding herd for following cycle:
 Cows/Replacement Heifers = A - B + K = _____
 Herd Bulls = C - D + N + P = _____

Tab 3: Cattle Sale and Purchase Summary

In this screen, all sales and purchases of livestock will be inputted.

The screenshot shows a software window titled "Canadian Beef Breeds Council" with a tabbed interface. The active tab is "Cattle Sale and Purchase Summary". The interface includes a dropdown menu for "Choose Livestock Type" set to "Cows/Bred Heifers". Below this, there are input fields for "Enter Market Value for: Cows/Bred Heifers" with a value of "1" and "\$ / animal". There are also sections for "Program Purchases for: Cows/Bred Heifers" and "Embryo Sales", each with input fields for "Total Number of Purchases" and "Total Purchase Value (\$)" or "Total Sale Value (\$)". The "Program Sales for: Cows/Bred Heifers" section includes input fields for "Number of Purebred Animals Privately Sold", "Number of Purebred Animals Sold at Auction", and "Number of Feeder/Cull Animals Sold", each with a corresponding "Sale Weight Average (lbs/head)" field. At the bottom, there are summary fields for "Total Number of Animals Sold", "Total Number of Animals Available to be Sold", and "Difference". Two buttons are visible at the bottom: "Save Sale & Purchase Information" and "Close Form to View Reports".

Step 1: Select Livestock Type:

Livestock purchases and sales can be made for:

- Cows/Bred Heifers
- Herd Bulls
- Bull Calves
- Heifer Calves
- Replacement Heifers
- Purebred Yearling Bulls
- Purebred Two Year Old Bulls

There is a drop down menu that list the livestock types. Once the information has been entered for a specific livestock type, click the

Save Sale & Purchase Information button.

NOTE: the **Save Sale & Purchase Information** button must be pressed before moving onto the next livestock type or another tab. If this is not done then the information entered will not be saved.

Step 2: Enter the Market Value of Livestock:

For each respective livestock type, the market value must be entered on a dollar per head basis. The market value of livestock will be used to calculate the total asset value of the herd. The market value must be entered to move to the next livestock type or to switch tabs.

If “Bull Calves” or “Heifer Calves” are selected as the livestock type then make sure to enter the average weaning weight of calves that are intended for commercial sale or purebred sale.

Step 3: Enter Program Purchases:

Program purchases are any livestock purchases that are made. The following table outlines what program specific livestock type purchases are allocated to.

Cows/Bred Heifers	allocated to:	Breeding Herd
Herd Bulls	allocated to:	Breeding Herd
Bull Calves	allocated to:	Breeding Herd
Heifer Calves	allocated to:	Breeding Herd
Replacement Heifers	allocated to:	Replacement Heifer Program
Yearling Bulls	allocated to:	Yearling Bull Program
Two Year Old Bulls	allocated to:	Two Year Old Program

If there are no purchases for a livestock type, then leave the cells blank. Purchases are likely only relevant for the breeding herd and the replacement heifer program where new breeding stock is brought in.

- a. **Total Number of Purchases:** This is the actual number of animals purchased through private sale, auction or any other means of purchase for the livestock type.
- b. **Total Purchase Value (\$):** This is the total purchase cost.

For example, if 5 replacement heifers were bought for \$1,500 each, the total purchase cost would be \$7,500.

Step 4: Enter Semen and Embryo Sales:

If there are semen and/or embryo sales to be recognized, there are recognized in this tab.

1. **Embryo Sales:** Embryo sales and revenues are allocated to the breeding herd and can only be entered when “Cows/Bred Heifers” are selected as the livestock type. Enter the total dollar sale value of all embryo sales from the flushing of cow and/or heifers.
2. **Semen Sales:** Semen sales and revenues are allocated to the breeding herd and can only be entered when “Herd Bulls” are selected as the livestock type. Enter the total dollar sale value of all semen sales from on-farm bulls.

If other livestock types are selected, skip this step.

Step 5: Enter Program Sales:

There are three types of sale classifications, these include:

1. **Private Purebred Sales:** These sales include all livestock that are sold as purebred animals through private transactions or negotiations. These purebred animals could have been sold to other purebred producers or to commercial cow-calf producers as breeding herd replacements.
 - a. **Number of Purebred Animals Sold Privately:** This is the actual number of purebred animals sold through private sale for the livestock type.
 - b. **Sale weight average (lbs/animal):** This is average weight per head of those sold through private sales for the livestock type.
 - c. **Total Revenue from Private Purebred Sales (\$):** This is the total revenue generated from all purebred private sales.

For example, if 5 yearling bulls were sold for \$2,000 each, total revenues would be \$10,000 (5 x \$2,000)

2. Purebred Auction Sales: These sales include all livestock that are sold as purebred animals through on or off-farm purebred cattle auctions. These purebred animals could have been sold to other purebred producers or to commercial cow-calf producers as breeding herd replacements.
 - a. **Number of Purebred Head Sold as Auction:** This is the actual number of purebred animals sold through auctions sales in for the livestock type.
 - b. **Sale weight average (lbs/animal):** This is the average weight per head of those sold at auction for the livestock type.
 - c. **Total Revenue from Purebred Auction Sales (\$):** This is the total revenue generated from purebred auction sales.

For example, if 5 yearling bulls were sold for \$2,000 each, total revenues would be \$10,000 (5 x \$2,000).

3. Number of Feeder/Cull Head Sold: These sales include all livestock that are sold as feeder steers, bulls or heifers. These animals are those that are not retained on-farm in any purebred program. Also included in these sales are cull sales, including any cull cows, bull and other animal types that are culled.

NOTE: Even though the assumption is that any animals transferred into the purebred programs are intended to be sold as purebreds, at the end of the program cycle, some animals may not be sold as such either due to bad evaluations, testing or other reasons. This possibility is taken into account here.

- a. **Number of Feeder/Cull Head Sold:** This is the actual number of animals sold as feeder animals or as cull animals.
- b. **Sale weight average (lbs/animal):** This is the average weight per head of those sold to the feeder market or as cull animals.
- c. **Total Revenue from Feeder/Cull Sales (\$):** This is the total revenue generated from feeder market and cull sales.

For example, if 10 steers were sold for \$500 each and 10 cows were culled for a price of \$500 per head, total revenues would be \$10,000 (10 x \$500 + 10 x \$500)

NOTE: It is important to note that even if some feeder calves are not physically sold off the farm, but are kept as feeders/back-grounders; these calves should be transferred out of the purebred operation, and valued at market value. Also, any further costs with these feeder calves are independent of the purebred operation as well.

Step 6: Ensure Balancing Sales

The blue boxes at the bottom of the screen provide a check that the lifecycle numbers balance. The "Total Number of Head Sold" is the sum all sales. The "Total Number of Head Available to be Sold" is the value that was derived from completing the "Cattle Transfer" tab and/or the worksheet on page 18.

For all livestock types except cows/bred heifers and herd bulls, the blue box labelled "Difference" **must equal zero** before moving onto the next livestock type. In other words, the number of head sold or purchased for a specific livestock type entered in "Program Sales" must equal the head of that livestock type "remaining to be sold (+) of purchases (-)" in the "Cattle Transfers" tab. If the difference does not equal zero for a specific livestock type and the user tries to

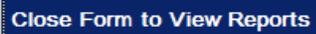


a warning appears asking to recalculate sales or purchase.

NOTE: This is not the case for cow/bred heifers and herd bulls as the breeding herd remains on farm as calf life cycles continue. The breeding herd could grow or shrink as time continues.

Viewing Outputs

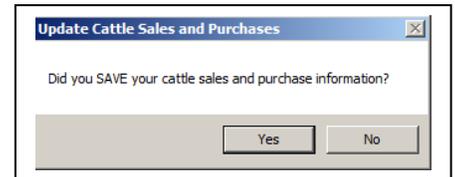
To view outputs to this point, click on the

A rectangular button with a blue background and white text that reads "Close Form to View Reports". The button has a thin black border and a slight shadow effect.

button to take you to the output page where

your farm information is shown on the worksheet named "Cattle Asset Summary".

To ensure that the farm information was saved before closing, the box seen to the right will appear. If farm information has not been saved, click NO to return to the input form, else click YES to continue.



Click on the

A rectangular button with a light gray background and black text that reads "Open Input Data Form". The button has a thin black border and a slight shadow effect.

button to reopen the data input form.

CATTLE SALE AND PURCHASE SUMMARY WORKSHEET

Cows/Bred Heifers			
Market Value of Livestock (\$/animal)			
Program Purchases	Total Number of Animals Purchased	Total Purchase Value	
Program Sales	Number of Purebred Animals Sold Privately	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Private Sales (\$)
	Number of Purebred Animals Sold at Auction	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Auction Sales (\$)
Program Sales	Number of Feeder/Cull Animals Sold	Sale Weight Average (lbs/animal)	Total Revenue from Feeder/Cull Sales (\$)
Total Embryo Sales (\$)			

Herd Bulls			
Market Value of Livestock (\$/animal)			
Program Purchases	Total Number of Animals Purchased	Total Purchase Value	
Program Sales	Number of Purebred Animals Sold Privately	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Private Sales (\$)
	Number of Purebred Animals Sold at Auction	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Auction Sales (\$)
Program Sales	Number of Feeder/Cull Animals Sold	Sale Weight Average (lbs/animal)	Total Revenue from Feeder/Cull Sales (\$)
Total Semen Sales (\$)			

Bull Calves			
Market Value of Livestock (\$/animal)			
Average weaning weight of purebred calves			
Average weaning weight of commercial calves			
Program Purchases	Total Number of Animals Purchased	Total Purchase Value	
Program Sales	Number of Purebred Animals Sold Privately	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Private Sales (\$)
	Number of Purebred Animals Sold at Auction	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Auction Sales (\$)
	Number of Feeder/Cull Animals Sold	Sale Weight Average (lbs/animal)	Total Revenue from Feeder/Cull Sales (\$)

Heifer Calves			
Market Value of Livestock (\$/animal)			
Average weaning weight of purebred calves			
Average weaning weight of commercial calves			
Program Purchases	Total Number of Animals Purchased	Total Purchase Value	
Program Sales	Number of Purebred Animals Sold Privately	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Private Sales (\$)
	Number of Purebred Animals Sold at Auction	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Auction Sales (\$)
	Number of Feeder/Cull Animals Sold	Sale Weight Average (lbs/animal)	Total Revenue from Feeder/Cull Sales (\$)

Replacement Heifer Program			
Market Value of Livestock (\$/animal)			
Program Purchases	Total Number of Animals Purchased	Total Purchase Value	
Program Sales	Number of Purebred Animals Sold Privately	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Private Sales (\$)
	Number of Purebred Animals Sold at Auction	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Auction Sales (\$)
	Number of Feeder/Cull Animals Sold	Sale Weight Average (lbs/animal)	Total Revenue from Feeder/Cull Sales (\$)

Yearling Bull Program

Yearling Bull Program			
Market Value of Livestock (\$/animal)			
Program Purchases	Total Number of Animals Purchased	Total Purchase Value	
Program Sales	Number of Purebred Animals Sold Privately	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Private Sales (\$)
	Number of Purebred Animals Sold at Auction	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Auction Sales (\$)
	Number of Feeder/Cull Animals Sold	Sale Weight Average (lbs/animal)	Total Revenue from Feeder/Cull Sales (\$)

Two Year Old Bull Program

Two Year Old Bull Program			
Market Value of Livestock (\$/animal)			
Program Purchases	Total Number of Animals Purchased	Total Purchase Value	
Program Sales	Number of Purebred Animals Sold Privately	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Private Sales (\$)
	Number of Purebred Animals Sold at Auction	Sale Weight Average (lbs/animal)	Total Revenue from Purebred Auction Sales (\$)
	Number of Feeder/Cull Animals Sold	Sale Weight Average (lbs/animal)	Total Revenue from Feeder/Cull Sales (\$)

Tab 4: Feeding Expense

The feeding expense tab may take that largest amount of time to complete but will provide valuable information and can be used as a feed regime planning guide. This screen requires information about the feeding regime for each program over the life cycle. It covers winter feeding (i.e. grains, silages, hay and concentrates/minerals), grazing (i.e. tame and native pastures), extended fall grazing (i.e. swath or standing corn grazing) and supplemental feeding regimes (i.e. silage or grain feeding over grazing season).

Step 1: Choose Livestock Type:

A feeding program can be inputted for:

- Breeding Cows
- Bred Heifers
- Herd Bulls
- Replacement Heifers
- Yearling Bulls
- Two Year Old Bulls

There is a drop down menu that lists the programs.

Step 2: Winter Feeding and Grazing

A summary of the length of the winter feeding, pasture grazing and any extended fall grazing needs to be inputted before moving into the specific feeding regimes.

- a. **Total Days on Winter Feed:** This is the approximate length of the winter feeding season for each program for a production cycle in days.
- b. **Total Grazing Days:** The total number of grazing days is automatically calculated as 365 less the total days on winter feed and includes extended fall grazing. (Except for yearling bulls since their cycle will only be in the winter from weaning until sale in spring or transfer to the two year old program. Enter zero for the grazing day values, unless there happens to be some sort of fall grazing, etc.)
- c. **Pasture Grazing Cost (\$/head/day):** This is the estimated market value of perennial grazing. i.e. grazing native or tame pastures. The cost of other supplemental feeding occurring over the grazing season (i.e. feeding grains or silages over summer) is not included here. It will be recognized in the following sections.

- d. **Extended Fall Grazing Days:** Extended Fall Grazing refers to any swath grazing or standing corn grazing that occurs in the fall and these days are included in total grazing days but needs to be recognized as there may be an added cost to this grazing.
- e. **Extended Fall Grazing Cost (\$/head/day):** This is the estimated market value per head of swath grazing, standing corn grazing, etc. This cost comes on top of, but does not include, the pasture grazing cost previously recognized. This will not be included as a winter feed cost, but rather as a grazing cost.

Once the grazing information has been entered for a specific program,



It be

clicked before moving onto the next program or the information entered will not be saved. This needs to be done for each purebred program.

Step 3: Grains

The specific winter and supplemental feeding regime will be inputted here for each program starting with grains. The grains included are wheat, barley, oats and corn. If there are other grains being fed they can be specified as well.

2	Grain	Total Winter Feed Usage		Other Supplemental			Price per lb	Total Cost
		lbs/head/day	Feeding Days	lbs/day	Feeding Days	# of head		
<input checked="" type="radio"/>	Wheat	0	0	0	0	0	\$0.000	\$0.00
<input type="radio"/>	Barley	0	0	0	0	0	\$0.000	\$0.00
<input type="radio"/>	Oats	0	0	0	0	0	\$0.000	\$0.00



Step 3.1: Click on a grain type and hit the



button. As an example, wheat is shown above as being selected. A new screen will pop up.

The dialog box titled "Feeding Expense - Grain" contains the following fields:

- Grain Information:** Grain Type (Wheat), Price (\$/lb) (0)
- Total Winter Feed Usage:** lbs (as fed)/head/day (0), Feeding Days (0)
- Other Supplemental:** lbs (as fed)/head/day (0), Feeding Days (0), # of Head (0)

Buttons: OK & Save, Cancel

Step 3.2: There are seven possible input boxes to fill in:

1. **Grain Type:** This box is frozen and cannot be changed as it refers to the feed that has been chosen.
2. **Price (\$/lb):** This is the price of the feed represented by dollars per pound. Whether the feed is produced on-farm or not, enter the market value of feed (the value of the feed if it was to be purchased, not produced). Valuing feed at market value is the most recognized and commonly used method to estimate feed costs.

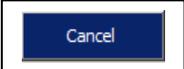
Total Winter Feed Usage:

3. **lbs(as fed)/head/day:** This is the amount of feed given in that program on an 'as fed' pound per head per day average.
4. **Feeding Days:** This is the number of days that this feed type was given over the winter feeding period.

Other Supplemental: This refers to any other supplemental feeding that occurs with this grain type and this purebred program.

For example, barley grains could be given for 30 days over the grazing season for conditioning, or for a group of cattle in the show string

5. **lbs(as fed)/head/day**: This is the amount of feed given in that program on a pound per head per day average.
6. **Feeding Days**: This is the number of days that this feed type was given over the winter feeding period.
7. **# of head**: This is the number of animals that this feed was given to as supplemental feed. This number may or may not be the same number of animals that are already in the program.

Step 3.3: Click  to close the window and move onto the next feed type or  to cancel and close the window. Any information that has been added or changed will be automatically updated.

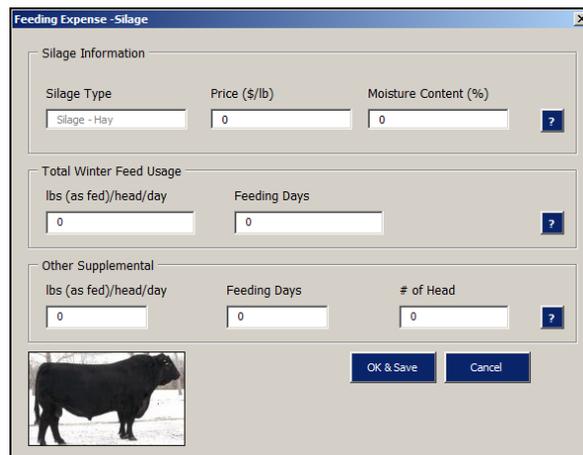
Step 4: If there are other grains that are being fed that are not wheat, barley, oats or corn, then click the down arrow and choose "Other (Enter)". When this feed box pops up you can manually enter the feed type in the box labelled 'Grain Type' that has otherwise been frozen for specified feed types.

4. Silages

The silages included are greenfeed, corn, and barley silages. If there are other silages being fed they can be specified as well.

3 Silage	Total Winter Feed Usage		Other Supplemental			Price per lb	Total Cost	Moisture (%)
	lbs/head/day	Feeding Days	lbs/day	Feeding Days	# of head			
<input checked="" type="radio"/> Silage - Hay	0	0	0	0	0	\$0.000	\$0.00	0%
<input type="radio"/> Silage - Corn	0	0	0	0	0	\$0.000	\$0.00	0%
<input type="radio"/> Silage - Barley	0	0	0	0	0	\$0.000	\$0.00	0%

Step 4.1: Click on a silage type and hit the  button. As an example, hay silage is shown above as being selected. A new screen will pop up.



The dialog box titled "Feeding Expense - Silage" contains the following fields:

- Silage Information:**
 - Silage Type: Silage - Hay
 - Price (\$/lb): 0
 - Moisture Content (%): 0
- Total Winter Feed Usage:**
 - lbs (as fed)/head/day: 0
 - Feeding Days: 0
- Other Supplemental:**
 - lbs (as fed)/head/day: 0
 - Feeding Days: 0
 - # of Head: 0

Buttons: OK & Save, Cancel. An image of a cow is shown at the bottom left.

Step 4.2: There are eight possible input boxes to fill in:

1. **Silage Type:** This box is frozen and cannot be changed as it refers to the feed that has been chosen.
2. **Price (\$/lb):** This is the price of the feed represented by dollars per pound. Whether the feed is produced on-farm or not, enter the market value of feed (the value of the feed if it was to be purchased, not produced). Valuing feed at market value is the most recognized and commonly used method to estimate feed costs.
3. **Moisture Content (%):** This is the moisture content of the silage. This is used to calculate the dry matter intake of the livestock ingesting this feed type.

Total Winter Feed Usage:

4. **lbs(as fed)/head/day:** This is the amount of feed given in that program on an 'as fed' pound per head per day average.
5. **Feeding Days:** This is the number of days that this feed type was given over the winter feeding period.

Other Supplemental: This refers to any other supplemental feeding that occurs with this silage type and this purebred program. For example, barley silage could be given for 30 days over the grazing season for conditioning.

6. **lbs/head/day:** This is the amount of feed given in that program on a pound per head per day average.
7. **Feeding Days:** This is the number of days that this feed type was given over the winter feeding period.
8. **# of head:** This is the number of animals that this feed was given too as supplemental feed. This number may or may not be the same number of animals that are already in the program.

Step 4.3: Click  to close the window and move onto the next feed type or  to cancel. Any information that has been added or changed will be automatically updated.

Step 4.4: If there are other silages that are being fed that are not greenfeed, corn, or barley silages, and then hit the down arrow on the right hand side of the list and choose "Other (Enter)". When this feed box pops up you can manually enter the feed type in the box labelled 'Silage Type' that has otherwise been frozen for specified feed types.

Step 5: Hay

The hay included here are low, medium and high quality hay and greenfeed as hay. If there are other types being fed they can be specified as well.

4	Hay	Ttl Winter Feed Usage		Other Supplemental			
	BALES	Bales	Bales	Total	Total Cost	Moisture (%)	Bale Weight (lbs)
<input checked="" type="radio"/>	Hay - Low Quality	0	0	0	\$0.00	0%	-
<input type="radio"/>	Hay - Medium Quali	0	0	0	\$0.00	0%	0
<input type="radio"/>	Hay - High Quality	0	0	0	\$0.00	0%	0

Step 5.1: Click on a hay type and hit the  button. As an example, low quality hay is shown above as being selected. A new screen will pop up.

Step 5.2: There are six possible input boxes to fill in:

1. **Hay Type:** This box is frozen and cannot be changed as it refers to the feed that has been chosen.
2. **Price (\$/bale):** This is the price of the hay represented as dollars per bale. Whether the hay is produced on-farm or not, enter the market value of feed (the value of the feed if it was to be purchased, not produced). Valuing feed at market value is the most recognized and commonly used method to estimate feed costs.
3. **Total Winter Feed Usage (# of bales):** This is the number of bales that were fed over the winter feeding season.
4. **Other Supplemental Bales (# of Bales):** This refers to any other supplemental feeding that occurs with this hay type and this purebred program. It is assumed that hays are given to the entire herd in the program rather than a specific number of them.
5. **Moisture Content (%):** This is the moisture content of the hay. This is used to calculate the dry matter intake of the livestock ingesting this feed type.
6. **Bale Weight (lbs):** This is the average weight of bales fed. This value will help calculate the total amount of hay given over the feeding period.

Step 5.3: Click  to close the window and move onto the next feed type or  to cancel. Any information that has been added or changed will be automatically updated.

Step 5.4: If there are other hay types that are being fed, then choose "Other (Enter)". When this feed box pops up on your screen, you can manually enter the feed type in the box labelled 'Bale Type' that has otherwise been frozen for specified bale types.

Step 6: Concentrates/Minerals

There are no pre-specified concentrate types. The concentrates that are used must be specified as they are inputted.

5 Concentrates							
CONCENTRATES	Total Winter Feed Usage		Other Supplemental			Price per lb	Total Cost
	lbs/head/day	Feeding Days	lbs/day	Feeding Days	# of head		
Minerals	0.00	0.00	0.00	0.00	0.00	\$0.000	\$0.00
Please Specify	0.00	0.00	0.00	0.00	0.00	\$0.000	\$0.00
Please Specify	0.00	0.00	0.00	0.00	0.00	\$0.000	\$0.00

Edit Feed

Step 6.1: Click on a row in the concentrate box and hit the  button. As an example, we have input 'Mixed' is shown above. A new screen will pop up.

Step 6.2: There are seven possible input boxes to fill in:

1. **Concentrate Type:** Manually enter the concentrate type in the box labelled 'Concentrate Type'
2. **Price (\$/lb):** This is the price of the feed represented by dollars per pound. Enter the market value of feed. Valuing feed at market value is the most recognized and commonly used method to estimate feed costs.

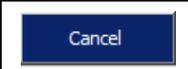
Total Winter Feed Usage:

3. **lbs(as fed)/head/day:** This is the amount of feed given in that program on an 'as fed' pound per head per day average.
4. **Feeding Days:** This is the number of days that this feed type was given over the winter feeding period.

Other Supplemental: This refers to any other supplemental feeding that occurs with this grain type and this purebred program.

For example, range minerals could be given for 30 days over the grazing season for conditioning.

5. **lbs/head/day:** This is the amount of feed given in that program on a pound per head per day average.
6. **Feeding Days:** This is the number of days that this feed type was given over and above regular winter feeding days.
7. **# of head:** This is the number of animals that this feed was given too as supplemental feed. This number may or may not be the same number of animals that are already in the program.

Step 6.3: Click  to close the window and move onto the next feed type or  to cancel. Any information that has been added or changed will be automatically updated.

Viewing Outputs

To view outputs to this point, click on the



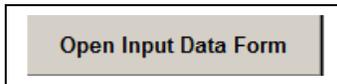
button to take you to the output page where

your farm information is shown on the worksheet named "Feeding Expense".

To ensure that the farm information was saved before closing, the box seen to the right will appear. If farm information has not been saved, click NO to return to the input form, else click YES to continue.



Click on the



button to reopen the data input form.

FEEDING WORKSHEET: Breeding Cows

	Winter Feeding		Additional Supplemental Feeding			Price (\$/lb) (6)	Total Cost (1 x 2 x 6) + (3 x 4 x 5 x 6)
	Lbs/head/day (1)	Feeding Days (2)	Lbs/head/day (3)	Feeding Days (4)	# of head (5)		
GRAINS							
Wheat							
Barley							
Oats							
Corn							
Total Grain Cost (7)							
SILAGE							
Hay							
Barley							
Corn							
Greenfeed							
Total Silage Cost (8)							
BALES							
Low Quality							
Mdm Quality							
High Quality							
Greenfeed							
Straw/Bedding							
Total Hay Cost (9)							
CONCENTRATES							
Total Concentrate Cost (10)							
Total Feed Cost for Program (7 + 8 + 9 + 10)							

FEEDING WORKSHEET: Herd Bulls

	Winter Feeding		Additional Supplemental Feeding			Price (\$/lb) (6)	Total Cost (1 x 2 x 6) + (3 x 4 x 5 x 6)
	Lbs/head/day (1)	Feeding Days (2)	Lbs/head/day (3)	Feeding Days (4)	# of head (5)		
GRAINS							
Wheat							
Barley							
Oats							
Corn							
Total Grain Cost (7)							
SILAGE							
Hay							
Barley							
Corn							
Greenfeed							
Total Silage Cost (8)							
BALES							
Low Quality							
Mdm Quality							
High Quality							
Greenfeed							
Straw/Bedding							
Total Hay Cost (9)							
CONCENTRATES							
Total Concentrate Cost (10)							
Total Feed Cost for Program (7 + 8 + 9 + 10)							

FEEDING WORKSHEET: Bred Heifers

	Winter Feeding		Additional Supplemental Feeding			Price (\$/lb) (6)	Total Cost (1 x 2 x 6) + (3 x 4 x 5 x 6)
	Lbs/head/day (1)	Feeding Days (2)	Lbs/head/day (3)	Feeding Days (4)	# of head (5)		
GRAINS							
Wheat							
Barley							
Oats							
Corn							
Total Grain Cost (7)							
SILAGE							
Hay							
Barley							
Corn							
Greenfeed							
Total Silage Cost (8)							
BALES							
Low Quality							
Mdm Quality							
High Quality							
Greenfeed							
Straw/Bedding							
Total Hay Cost (9)							
CONCENTRATES							
Total Concentrate Cost (10)							
Total Feed Cost for Program (7 + 8 + 9 + 10)							

FEEDING WORKSHEET: Replacement Heifers

	Winter Feeding		Additional Supplemental Feeding			Price (\$/lb) (6)	Total Cost (1 x 2 x 6) + (3 x 4 x 5 x 6)
	Lbs/head/day (1)	Feeding Days (2)	Lbs/head/day (3)	Feeding Days (4)	# of head (5)		
GRAINS							
Wheat							
Barley							
Oats							
Corn							
Total Grain Cost (7)							
SILAGE							
Hay							
Barley							
Corn							
Greenfeed							
Total Silage Cost (8)							
BALES							
Low Quality							
Mdm Quality							
High Quality							
Greenfeed							
Straw/Bedding							
Total Hay Cost (9)							
CONCENTRATES							
Total Concentrate Cost (10)							
Total Feed Cost for Program (7 + 8 + 9 + 10)							

FEEDING WORKSHEET: Yearling Bulls

	Winter Feeding		Additional Supplemental Feeding			Price (\$/lb) (6)	Total Cost (1 x 2 x 6) + (3 x 4 x 5 x 6)
	Lbs/head/day (1)	Feeding Days (2)	Lbs/head/day (3)	Feeding Days (4)	# of head (5)		
GRAINS							
Wheat							
Barley							
Oats							
Corn							
Total Grain Cost (7)							
SILAGE							
Hay							
Barley							
Corn							
Greenfeed							
Total Silage Cost (8)							
BALES							
Low Quality							
Mdm Quality							
High Quality							
Greenfeed							
Straw/Bedding							
Total Hay Cost (9)							
CONCENTRATES							
Total Concentrate Cost (10)							
Total Feed Cost for Program (7 + 8 + 9 + 10)							

FEEDING WORKSHEET: Two Year Old Bulls

	Winter Feeding		Additional Supplemental Feeding			Price (\$/lb) (6)	Total Cost (1 x 2 x 6) + (3 x 4 x 5 x 6)
	Lbs/head/day (1)	Feeding Days (2)	Lbs/head/day (3)	Feeding Days (4)	# of head (5)		
GRAINS							
Wheat							
Barley							
Oats							
Corn							
Total Grain Cost (7)							
SILAGE							
Hay							
Barley							
Corn							
Greenfeed							
Total Silage Cost (8)							
BALES							
Low Quality							
Mdm Quality							
High Quality							
Greenfeed							
Straw/Bedding							
Total Hay Cost (9)							
CONCENTRATES							
Total Concentrate Cost (10)							
Total Feed Cost for Program (7 + 8 + 9 + 10)							

Tab 5: Assets

This input page asks you to input all machinery and buildings and associated market values and depreciation rates. Due to the fact that machinery can be used for more than just the purebred operation (i.e. tractor used for grain and purebred production), an estimate of the percentage allocation of machinery use to the purebred operation on the farm is requested. This is the first time that an 'allocation percentage' is requested.

For example, if half of a tractor's use is related to the purebred operation and half for grain/oilseed production, then the allocation would be 50% to the purebred operation.

For example, if storage silos on farm are used only to hold cattle feed, then the allocation percentage would be 100%.

	Asset Value	Depreciation Rate	Allocation to Purebred Enterprise
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%
<input type="radio"/> Enter Asset	\$0	0%	0%

Depreciation Rate Reference
Below is a guide to the depreciation rates that can be assigned to various types of buildings and equipment. There are two types of rates that can be used, most commonly used are market values. Capital Cost Allowance (CCA) rates are also included for your reference to accounting standard depreciation rates

<u>Motorized Vehicles</u>	<u>Pull Equipment</u>	<u>Buildings</u>	<u>Feed Storage</u>
Including: Tractors, Skidsteers, etc Grain Trucks, Pickup Silage Harvesters,	Including: Feed Wagons Augers Cattle Trailers	Including: Cattle Shelters Barns Quonsets	Including: Silos Grain Bins
Market Value Rate: 10%	Market Value Rate: 7%	Market Value Rate: 4%	Market Value Rate: 4%
CCA Class 10 Rate: 30%	CCA Class 10 Rate: 30%	CCA Class 1 Rate: 4%	CCA Class 8 Rate: 20%

Step 1: Click the  button. A new screen will pop up.

Add Asset

Asset Information

Name

Depreciation Rate (%)

Fair Market Asset Value

Allocation to Purebred Program (%) ?



OK & Save Cancel

Step 2: There are four input boxes to fill in:

1. **Name:** Insert the name of the assets or asset class.

For example, it can be as specific as 'Chevrolet Pickup' for an asset name.

For example, if there are four separate cattle sheds that are used on-farm, the asset name can be 'cattle sheds'.

NOTE: Do not include those assets that are only used to produce feed for the cattle operations.

For example, a silage harvester. Since feed has been expensed at market value, even if feed has been produced on-farm, including the assets and the depreciation of those assets would be double counting.

2. **Depreciation Rate (%):** The depreciation rate is needed to calculate the farm's depreciation and amortization expense. As a reference, included in the workbook is a guide that lists the general depreciation rates for different asset classes. A 'market' depreciation rate as well as the Capital Cost Allowance (CCA) rate is included. The market rate is the status quo rate that is an estimation of depreciation rate. The CCA rates are rates used by accountants when producing financial statements and depreciation expenses. It is recommended that the market rate is used.

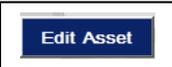
Asset Class	Asset Class includes:	Market Depreciation Rate	CCA Rate
Motorized Vehicles	Tractors, pick-ups, semi-trucks, etc.	10%	30%
Pull Equipment	Feed wagons, augers, cattle trailers, etc.	7%	30%
Buildings	Cattle shelters, barns, quonsets, feed troughs, etc.	4%	4%
Feed Storage	Silos, grain bins, etc.	4%	20%

3. **Asset Value (\$):** Enter the estimated fair market value of that asset or group of assets. Referring to the previous example, if four cattle shelters have been grouped together, the asset value is the total fair market value of the four cattle shelters.
4. **Purebred Allocation (%):** As mentioned previously, this is the first time that an 'allocation percentage' is requested. This value is used to allocate the correct amount of depreciation to the purebred operation.

For example, if 50% of the sheds' use is directed at the purebred operation, and 50% for commercial or feeder cattle, then only 50% of the depreciation should be allocated to the purebred operation.

Please perform the steps outlined above for all machinery and equipment that are used for the purebred operation. It is understood that this list can get long, but where possible, group assets (i.e.: cattle shelters) to reduce the number of inputs and time. The more representative the asset list, depreciation, and allocation values are, the more representative the program outputs will be in valuing expenses of the purebred operation.

Editing Assets

Once an asset has been entered, it can be edited at later times by selecting the asset or asset class and clicking the button.  A new screen will appear and the asset characteristics can be changed.

Deleting Assets

Once an asset has been entered, it can also be deleted if that asset is no longer used with the purebred operation by selecting the asset or asset class and clicking the  button. A prompt will appear to make sure that you'd like to delete the asset. Click 'Yes' to continue.

Once the asset window is closed, all information has entered, edited or deleted has been updated.

Viewing Outputs

To view outputs to this point, click on the

A rectangular button with a blue background and white text that reads "Close Form to View Reports". The button has a thin black border and a dotted inner border.

button to take you to the output page where

your farm information is shown on the worksheet named "Farm Assets".

Click on the

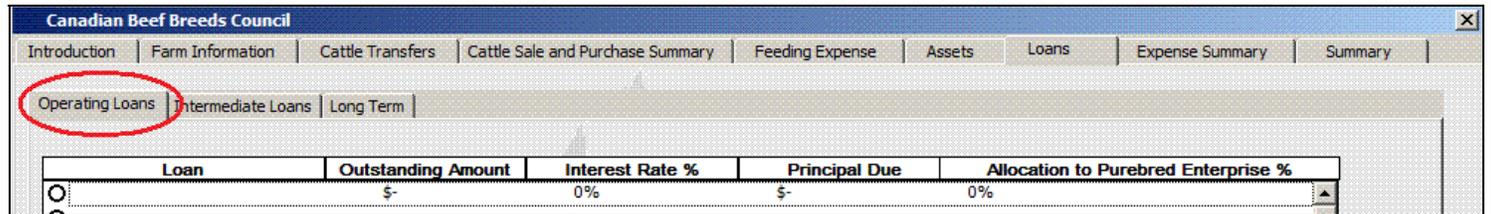
A rectangular button with a light gray background and black text that reads "Open Input Data Form". The button has a thin black border.

button to reopen the data input form.

Tab 6: Loans

This input page asks you to input all short, intermediate (medium) and long-terms loan information that are directly related to the purebred operation.

There are three separate tabs circled below. There is a tab for Operating Loans, Intermediate Loans (1 to 5 years terms) and Long-Term Loans (5+ year terms).

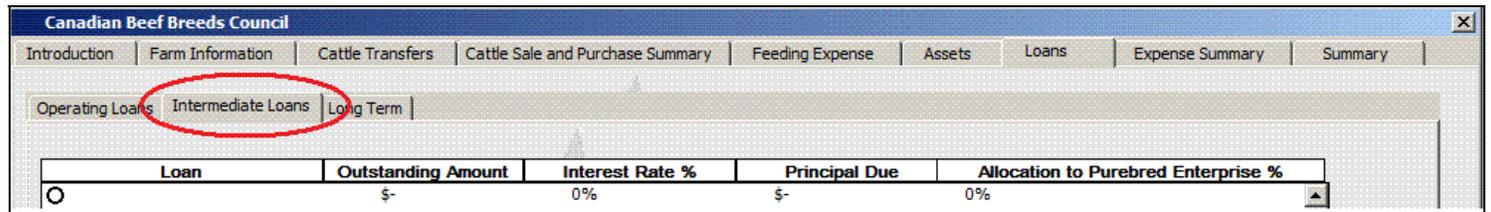


Canadian Beef Breeds Council

Introduction | Farm Information | Cattle Transfers | Cattle Sale and Purchase Summary | Feeding Expense | Assets | Loans | Expense Summary | Summary

Operating Loans | Intermediate Loans | Long Term

Loan	Outstanding Amount	Interest Rate %	Principal Due	Allocation to Purebred Enterprise %
○	\$-	0%	\$-	0%

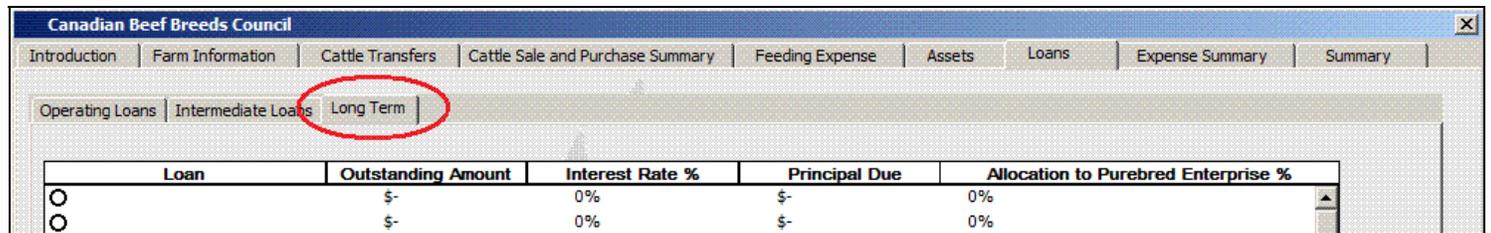


Canadian Beef Breeds Council

Introduction | Farm Information | Cattle Transfers | Cattle Sale and Purchase Summary | Feeding Expense | Assets | Loans | Expense Summary | Summary

Operating Loans | Intermediate Loans | Long Term

Loan	Outstanding Amount	Interest Rate %	Principal Due	Allocation to Purebred Enterprise %
○	\$-	0%	\$-	0%



Canadian Beef Breeds Council

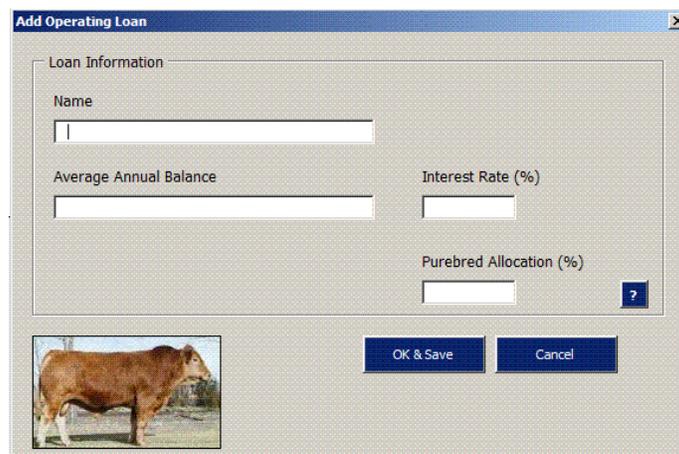
Introduction | Farm Information | Cattle Transfers | Cattle Sale and Purchase Summary | Feeding Expense | Assets | Loans | Expense Summary | Summary

Operating Loans | Intermediate Loans | Long Term

Loan	Outstanding Amount	Interest Rate %	Principal Due	Allocation to Purebred Enterprise %
○	\$-	0%	\$-	0%
○	\$-	0%	\$-	0%

For each of the three loans types:

Step 1: Click the **Add Loan** button and a new screen will pop-up.



Add Operating Loan

Loan Information

Name

Average Annual Balance

Interest Rate (%)

Purebred Allocation (%)
 ?



Step 2: There are four or five possible input boxes to fill in depending on the loan class.

1. **Name:** Enter the name of the loan. This could be as specific as the lending institution and loan number.

For example, (FCC – 123456) or as general as ‘Operating Loan 1’. It is recommended that the loan name allows for easy recognition if there is more than one loan in the loan class.

NOTE: Do not include those loans that have been drawn to pay for feed or purchase machinery for the production of feed for the cattle operations. An example is a silage harvester. Since feed has been expensed at market value, even if feed has been produced on-farm, including the loan and corresponding interest expense would be double counting.

2. **Outstanding Amount or Average Annual Balance:** For intermediate and long-term loans, the Outstanding Amount is the total value of the loan remaining to be paid. For operating loans, the Average Annual Balance is an estimation of what the loan balance is throughout the cattle cycle.
3. **Interest Rate (%):** this is the interest rate on the loan.

For example, if the interest rate is 5.9%, do not enter 0.059 in the input box, enter 5.9.

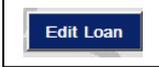
4. **Principal Due:** This only refers to intermediate and long-term loans. This is the principal payments that have to be made during the cattle cycle.
5. **Purebred Allocation (%):** This value is used to allocate the correct amount of depreciation to the purebred operation.

For example, if half of the operating line is used for purchases for the purebred operation, then 50% would be allocated. Therefore 50% of the loan value and loan interest expense would be allocated to the purebred operation.

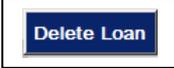
For example, if an intermediate loan was taken to buy feed troughs for the purebred operation, then 100% would be allocated.

NOTE: Do not enter land loans for pasture land. Pasture is like feed and entered at market value (opportunity cost) as a cost to the purebred operation, therefore interest expense would be double counting pasture costs.

Editing Loans

Once a loan has been entered, it can be edited later by selecting the loan and clicking the  button. A new screen will appear and the loan characteristics can be changed.

Deleting Loans

Once a loan has been entered, it can also be deleted if that loan if it can no longer be allocated to the purebred program or has been paid off by selecting the loan and clicking the  button. A prompt will appear to make sure that you’d like to delete the loan. Click ‘Yes’ to continue.

Once the asset window is closed, all information has entered, edited or deleted has been updated.

Viewing Outputs

To view outputs to this point, click on the  button to take you to the output page where your farm information is shown on the worksheet named “Loans”.

Click on the  button to reopen the data input form.

Tab 7: Expense Summary

This input page asks you to input variable and fixed expenses for the purebred operation.

Variable and fixed expenses have been pre-determined based on consultation with industry stakeholders and purebred producers as well as research performed on industry accepted standards. These expenses will be used to calculate contribution margins and income statements for each purebred program as well as the entire purebred operation.

Variable Expenses	Total Farm Cost	Breeding Herd %	PB/Rep.	Heifer %	Yearling Bull %	Two Year Old %	Other %
<input type="radio"/> Breeding Fees and Bull Rental	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Semen Purchases	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Semen Testing and Bull Evaluation	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Semen/Embryo Collection & Storage	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Veterinary Fees and Medicine	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Animal Supplies	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Advertising and Promotion	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Showing	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Sales Expenses	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Livestock Guarantees and Replacement	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Livestock Insurance	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Association and Membership Fees	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Trucking and Marketing Commissions	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Fuel/Oil	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Small Tools & Hardware Expense	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Machinery Repairs	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Building Repairs	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Utilities & Phone	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Bank Expenses	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Accounting/Legal	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Office/Travel	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Operating Loan Interest	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Paid Labour	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Unpaid Labour	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Custom work	\$-	0%	0%	0%	0%	0%	0%

Fixed Expenses	Total Farm Cost	Breeding Herd %	PB/Rep.	Heifer %	Yearling Bull %	Two Year Old %	Other %
<input type="radio"/> Building/Machinery Insurance	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Property Taxes	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Building/Machinery Depreciation	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Building/Machinery Lease Expense	\$-	0%	0%	0%	0%	0%	0%
<input type="radio"/> Fixed Capital Interest	\$-	0%	0%	0%	0%	0%	0%

Variable expenses include and are defined as:

Breeding Fees and Bull Rental: costs associated with renting bulls for breeding to bring new genetics into the herd.

Semen Purchases: Costs associated with semen purchases for AI purposes.

Semen Testing and Bull Evaluation: Costs associated with having purebred bulls tested and evaluated before auction sales or as a condition of a private sale.

Semen/Embryo Collection and Storage: Costs associated with collection and storage semen/embryos for selling purposes.

Veterinary Fees and Medicine: Costs associated with keeping livestock healthy and productive.

Animal Supplies: Purchase of livestock specific supplies.

Advertising and Promotion: One of the most significant differences between commercial and purebred production is the costs associated with marketing purebred animals. This cost represents all expenses associated with promoting livestock. This expense includes but is not limited to:

- Paper advertising (newspaper, etc.)
- Banner advertising (show banners, etc)
- Logos (Branding trucks, trailers, etc.)
- Sales visits and calls (Meals, Entertainment, etc.)

Showing Expense: These are all the costs associated with showing livestock at shows or fairs. Showing expense includes but is not limited to:

- Meals, Hotel and Entertainment
- Transportation Fuel, Repairs
- Entry fees and Marketing
- Labour Expenses for showing

NOTE: The expenses that are represented here are not to be included again in other expenses.

For example, fuel and oil expense related to showing is not to be added to the fuel and oil expense required below.

Sales Expense: These are all costs associated with the actual sale of purebred livestock. Sales methods include on-farm production sales, private treaty sales and consignment sales.

Production sale expenses include but are not limited to:

- Meals and Entertainment
- Labour expenses during show
- Purchase of extra supplies/materials to produce the show
- Auctioneer and sales management expenses
- Livestock trucking and delivery
- Office and travel

NOTE: The expenses that are represented here are not to be included again in other expenses.

For example, office and travel expenses related to the production sale are not to be added to the office and travel expenses required below.

Private treaty sale expenses include but are not limited to:

- Meals and Entertainment
- Livestock trucking and delivery
- Office and other travel
- Veterinary Fees

Consignment sale expenses include but are not limited to:

- Meals and Entertainment
- Auctioneer and sales management expenses
- Livestock trucking and delivery

Livestock Guarantee and Replacement Costs: Cost of guaranteeing purebred animals.

Livestock Insurance: Costs associated with insuring livestock.

Association Costs and Registration Fees: Any costs associated with being a member of a breed association and any other related fees.

Trucking and Marketing Commissions: Any costs incurred from trucking livestock to market or buyers as well as any commissions paid through selling purebred or feeder livestock.

Fuel/Oil Expense: On-farm fuel and oil expenses associated with the purebred operation.

Small Tool and Hardware Expense: Purchase cost of any small tools or other hardware for the purebred operation.

Machinery/Equipment Repairs: Costs associated with repairing machinery and equipment for the purebred operation.

Building Repairs: Costs associated with repairing and maintaining buildings for the purebred operation.

Utilities and Phone: Costs for utility and phone services.

Bank Expenses: Any banking fees.

Accounting and Legal: Cost of professional fees.

Office and Travel: Costs incurred by business travel related to the purebred operation as well as discretionary office costs.

Operating Loan Interest: Operating interest expense accrued from any operating loans.

NOTE: The 'Total Farm Cost' for Operating Loan Interest (Variable Expenses) has already been calculated when the *Loans* tabs was completed. The value of this expense is automatically inserted into the expense screen so it does not have to be recalculated.

Paid Labour: On-farm labour cost applicable to the purebred operation.

Unpaid Labour: An estimation of the cost of labour for individuals that do not receive a pay cheque. i.e. family labour.

Custom Work: Costs of hiring external contractors to perform on-farm work.

Fixed expenses include and are defined as:

Building and Machinery Insurance: The insurance expense for all buildings and/or machinery on-farm.

Property Taxes: Taxes charged to land and assets on-farm.

Building and Machinery Depreciation: Depreciation expense of buildings and/or machinery on-farm.

NOTE: The 'Total Farm Cost' for Building and Machinery Expense (Fixed Expenses) has already been calculated when the *Assets* tab was completed. The value of this expense is automatically inserted into the expense screen so it does not have to be recalculated.

Building and Machinery Lease Expense: Cost of leasing any buildings and/or machinery on-farm.

Fixed Capital Interest: Accrued interest expense on intermediate and long-term loans.

NOTE: The 'Total Farm Cost' for Fixed Capital Interest (Fixed Expenses) has already been calculated when the *Loans* tabs was completed. The value of this expense is automatically inserted into the expense screen so it does not have to be recalculated.

Step 1: Select an expense and click the



button or



button, a new screen

Step 2: There are seven input boxes that need to be filled in for each expense.

1. **Total Farm Cost:** To make this as easy and straight forward as possible, we recommend referring to historical financial statements if individual costs are not kept up to date. If historical statements are available, enter the 'Total Farm Cost', keeping in mind if there were any unusually large deviations in costs from a typical year. The financial statements will also include costs associated with non-livestock operations.
2. **Percentage Allocation Estimations:** A percentage expense must be allocated to the appropriate purebred programs as well as non purebred programs.

For example, total machinery repairs may be \$20,000, however, \$10,000 of that was to repair machinery for the grain and forage operations and the rest was used to repair machinery used for the purebred operation. Then only 50% of the total machinery repair expense should be allocated to the purebred operation.

The allocation to farm operations may not always be this clear but the best possible estimation needs to be made. Expenses need to be allocated to each of the purebred programs. (Also remember if you do not have a program, such as the two year old program, then no allocations are made to this program.)

For example, 100% of the \$20,000 of machinery repairs has to be allocated.

- How much of the repair bill should be allocated to each of the following programs:

- a. **Cows/Bred Heifers/Bulls (%)**: Percentage allocation of an expense to the breeding herd.
- b. **Replacement Heifers (%)**: Percentage allocation to the on-farm replacement heifer program.
- c. **Yearling Bulls (%)**: Percentage allocation to the yearling bull program.
- d. **Two Year Olds (%)**: Percentage allocation to the two year old bull program.
- e. **Other farm operations (%)**: Percentage allocation of expenses to non-livestock operations.
i.e. grain/oilseed operation

NOTE: The total allocation percentage must sum to 100% before being able to move onto the next expense. (In this example - a+b+c+d = 50%, and e = 50% for a total of 100%)

Step 3: Click  to close the window and move onto the next expense type or  to cancel

NOTE: The 'Total Farm Cost' for Operating Loan Interest (Variable Expenses), Building and Machinery Expense (Fixed Expenses) and Fixed Capital Interest (Fixed Expenses) has already been calculated when the *Assets* and *Loans* tabs were completed. The values of these expenses are automatically inserted into the expense screen so they do not have to be recalculated. These expenses represent the total allocations to the purebred operation. Therefore allocation percentages only need to be derived for breeding herd, replacement heifers, yearling bulls and two year old programs. These allocations must add up to 100% before moving on.

Once everything has been completed, move onto the *Summary* tab.

Viewing Outputs

To view outputs to this point, click on the  button to take you to the output page where your farm information is shown on the worksheet named "Expense Summary".

Click on the  button to reopen the data input form

EXPENSE WORKSHEET: Variable Expenses (excluding feed costs)

	Total Farm Expense	Breeding Herd		Replacement Heifers		Yearling Bulls		Two Year Old Bulls		Other Farm Operations	
		Allocation %	Expense (\$)	Allocation %	Expense (\$)	Allocation %	Expense (\$)	Allocation %	Expense (\$)	Allocation %	Expense (\$)
Breeding Fees and Bull Rental											
Semen Purchases											
Semen Testing and Bull Evaluation											
Semen/Embryo Storage and Collection											
Veterinary Fees and Medicine											
Animal Supplies											
Advertising and Promotion											
Showing											
Sales Expenses											
Livestock Guarantees and Replacement											
Livestock Insurance											
Association and Membership Fees											
Trucking and Marketing Commissions											
Fuel/Oil											
Small Tools and Hardware Expense											
Machinery Repairs											
Building Repairs											
Utilities and Phone											
Bank Expenses											
Accounting/Legal											
Office/Travel											
Operating Loan Interest											
Paid Labour											
Unpaid Labour											
Custom Work											
Total											

EXPENSE WORKSHEET: Fixed Expenses

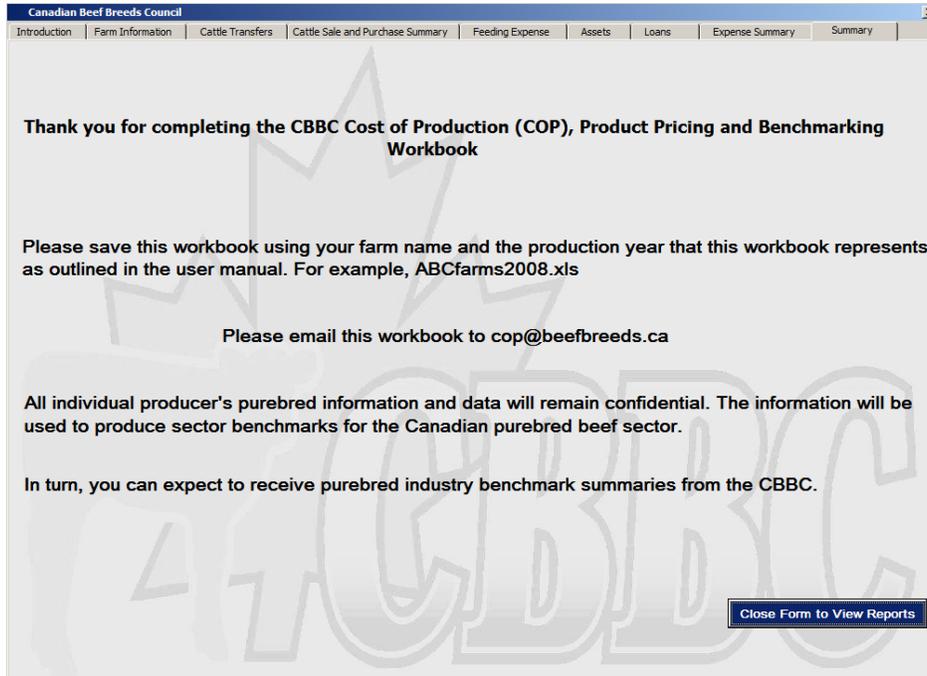
	Total Farm Expense	Breeding Herd		Replacement Heifer		Yearling Bull		Two Year Old Bull		Other Farm Operations	
		Allocation %	Expense (\$)	Allocation %	Expense (\$)	Allocation %	Expense (\$)	Allocation %	Expense (\$)	Allocation %	Expense (\$)
Building and Machinery Insurance											
Property Taxes											
Building and Machinery Depreciation											
Building and Machinery Lease Expense											
Fixed Capital Interest											
TOTAL											

Tab 8: Summary

Once this tab has been reached, then all the data entry is completed and the outputs can be viewed.

Click the  button to close the input screen.

Explanations of the key output pages are on the following pages.



Final Output

The final output of the Cost of Production workbook is found on the Returns and Ratio page, and further summarized on the Producer Benchmarks page. A detailed description of all the benchmarks and how to interpret them are summarized in the final section of this manual. Finally, the cost of production information flows directly into the pricing tool to determine break-even livestock selling prices.

Returns and Ratios

The Returns and Ratio page provides the detailed summary of all the information that was inputted throughout the workbook. The page is divided into columns of information, starting with a summary of the total operation in total dollars of revenues and expenses, followed by revenues and expenses on a \$/starting breeding female basis. The following columns are details for each program, breeding herd, replacement heifers, yearling bulls, and two year old bulls.

The breeding herd has 3 columns, one is for total dollars relating to the program, one column on a \$/breeding female, and one column for \$/calf weaned. This is done to show the impact of productivity on final output costs. Producers often calculate their costs on a \$/cow basis and this often gets equated to a \$/calf basis, because death loss and other production factors are forgotten. This \$/calf weaned is important since, as your production efficiency improves, the \$/calf weaned cost drops as you can spread costs over more calves produced.

The purebred replacement heifers, yearling bulls, and two year old bull programs are all laid out the same way. Showing the total dollar amount for revenues and costs attributed to that program, as well as \$/purebred animal sold. The second column is broken down to \$/"purebred" animal sold to again draw attention to how efficiently you run the program and how efficient you are at converting "selected" purebred breeding stock into actual "purebred sales"

Cattle Summary

The first section is a summary of the cattle movement through the purebred operation and in each program. It starts with how many animals were in each program throughout the production cycles, how many animals were transferred through the different programs in the purebred operation (for the total operation, it does double count animals which are transferred more than once). It details how many cattle were actually sold to external buyers, and from which program. It also summarizes cull sales, and total number of cattle sales.

Net Revenues

The next section summarizes the net revenues for the operation and each program. Net revenues is total sales from purebred sales, and "cull" sales, less the internal transfer cost, less the external purchases, plus any inventory adjustment. Note that only the breeding herd can have an inventory adjustment, as all the other programs, technically start and finish with zero animals using the life cycle approach.

NOTE: The revenue from purebred sales at the program level also includes the value of animals transferred to another program within the purebred operation.

Expenses

The next section of the page is all expenses for each program. The expenses are grouped as operating expenses, overhead and administration expenses, along with capital expenses.

NOTE: It is important to review all expenses on this page to ensure they look reasonable. The first time of completing the workbook, it is very important to ensure that allocations are done accurately; otherwise it can greatly distort costs at the program level. Here is the best place to catch any significant errors otherwise the value of the output of the workbook is diminished.

At the bottom of the expenses you will find total costs for the operation and each program, as well as the line for net profit. These numbers are summarized on the producer benchmarking page.

Efficiency Section

Finally the last section of the page lists some efficiency measurements for the purebred operation and each individual program. Again, these are summarized on the producer benchmarking page.

Pricing Tool

Program Summaries

The pricing tool page starts with a summary of the key margin numbers from the Returns and Ratios page. It lists gross and net revenues, as well as average selling price per purebred animal sold and average selling price per head sold for each program.

NOTE: It is important to note how average prices are interpreted. Although, you may have a high average price per purebred animal sold, if you are selling a significant number of “cull” animals from each program, this will greatly reduce your average selling price. This can have a significant impact on your profitability.

Profit Margin

Below the program summaries is a profit margin calculation. This calculation shows the percentage of revenue that is left over as profit. The higher this number the more efficiently you are converting your operation.

Return on Equity (ROE)

Below the profit margin is a Return on Equity for the entire purebred operation. This is to calculate the return you have generated on your equity from your purebred operation.

Equity is calculated as = Total Assets – Total Debts

Return on Equity = Net Profit/Owner’s Equity

This number is used to consider, for the “equity” in your purebred operation, how much return you are getting compared to alternative investments.

Target ROE

The following table on the pricing tool page outlines some target return on investments of 5%, 7.5%, and 10%. Given your equity in the operation, the Target Net Profit would be how much income the purebred operation would have to generate in order to meet the target ROE. The % difference then, is how much you would have to increase your prices, while holding everything else constant, in order to reach each specific target ROE.

Pricing Tool

The pricing tool chart on the bottom portion of the page is based on break-even selling prices for both the entire purebred operation, as well as the individual programs.

On the left side of the pricing tool, is the farm break-even selling prices. These break-evens are used to determine at what price animals must be sold in order for the purebred operation to break-even. These calculations have been divided into 4 different pricing points. They are:

1. **Break-even selling price of all purebred animals** This calculates what the average price would have to be for all purebred animals that are sold externally from the operation in order for the operation to break-even or have a profit of zero, while holding all other things constant (such as costs, productivity, etc.) It is important to remember this is for all purebred animals, whether it is heifers, yearling bulls, two year old bulls, calves, etc.
2. **Break-even selling price of purebred bulls and replacement heifers** is the same idea as the previous break-even for all animals except it eliminates the sale of purebred calves and cows.
3. **Breakeven selling price of purebred bulls** is the required average price that all the yearling and 2 year old bulls are sold for, in order for the purebred operation to break-even. Again, this break-even cost assumes all other factors are held constant, (costs, productivity, # of bulls sold, etc.) It is also important to note what this number means, because if there are very high costs in the main breeding herd, losses in the heifer program, and not very many bulls being sold in a year, this price could come back significantly higher than your current selling price.
4. **Feed break-even cost** is a break-even to determine what the total operation feed cost/cow has to be in order for the purebred operation to break-even. In some cases it may point out that no matter how much you reduce feed costs, you will not be able to break-even. Again, note that this break-even assumes that all other factors are held constant.

NOTE: This is the total operation’s feed costs across all programs divided by the number of cows, therefore it will be much higher than what the actual feed cost is for feeding cows in the breeding herd program.

Program Break-evens

This section of the pricing tool is to determine what the break-even selling price must be in order for each program to break-even.

The Replacement Heifer break-even price is the average price that heifers which are sold **Externally** must be sold for in order for the replacement heifer program to break-even, while holding all other factors in the operation constant.

The Yearling Bull breakeven price is the average price that yearling bulls(CALVES WEANED THAT ARE KEPT ON FARM) which are sold **Externally** must be sold for in order for the yearling bull program to break-even, while holding all other factors in the operation constant.

The Two Year Old Bull breakeven price is the average price that two year old bulls which are sold **Externally** must be sold for in order for the two year old bull program to break-even, holding all other factors in the operation constant.

NOTE: It is very important to note and understand that this break-even price is only for the animals which are sold **externally** (i.e. bulls or heifers transferred to the next program, are assumed to be transferred at the original market value you inputted). Therefore, if only very few heifers or yearling bulls are sold, and there are large losses in these programs, the break-even prices in these programs could be very high, because there are only a few animals to cover all the losses.

Break-even Bull Sales calculates how many more yearlings and two year-old bulls would have to be sold in order for each program to break-even. Again, this assumes that all costs and everything else are held constant.

Along with all of these break-evens, the percentage change is also calculated, so you can see how large of a change it is from what your current results are.

Program Summaries

	Total Purebred Operation		Breeding Herd			Replacement Heifer Program		Yearling Bull Program		Two Year Old Bull Program	
	Total \$	\$/Breeding female	Total \$	\$/Breeding Animal	\$/calf weaned	Total \$	\$/Heifer Sold	Total \$	\$/Bull Sold	Total \$	\$/Bull Sold
Gross Revenues	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Revenues	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Average Purebred Selling Price per head	#DIV/0!					#DIV/0!		#DIV/0!		#DIV/0!	
Average Selling Price Head of all Livestock Sales	#DIV/0!					#DIV/0!		#DIV/0!		#DIV/0!	
Operating Expenses	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contribution Margin	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Administration and Overhead Expenses	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Capital Expenses	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Expenses	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Profit (Net Loss)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Profit Margin	#DIV/0!	#DIV/0!				#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Return on Equity (ROE)	#DIV/0!										
Target ROE	5.0%	7.5%	10.0%								
Target Net Profit	\$0.00	\$0.00	\$0.00								
Target less Actual Profit	\$0.00	\$0.00	\$0.00								
% Difference	#DIV/0!	#DIV/0!	#DIV/0!								

Pricing Tool

Farm Break Even Selling Prices	
Break-even selling price of all purebred animals	#DIV/0!
Break-even selling price of purebred bulls and heifers	#DIV/0!
Break-even selling price of purebred bulls	#DIV/0!
Break-even selling price of replacement heifers	#DIV/0!
Feed Break-Even Costs per Breeding Animal	
Current Feed Cost	#DIV/0!
Break-Even Feed Cost	#DIV/0!
% change	#DIV/0!

Program Break-Even Selling Price per Purebred Animal						
	Replacement Heifers		Yearling Bulls		Two Year Old Bulls	
	#	\$/Heifer	#	\$/Bull	#	\$/Bull
Break-Even Price	#DIV/0!		#DIV/0!		#DIV/0!	
% change	#DIV/0!		#DIV/0!		#DIV/0!	
Break-Even Increase in Bull sales at Average Purebred Price						
	Yearling Bulls		Two Year Old Bulls			
	# of extra animals to sell	% change	# of extra animals to sell	% change		
	#DIV/0!		#DIV/0!			
	#DIV/0!		#DIV/0!			

Producer Benchmarks

What is Benchmarking?

In the case of the purebred beef industry, benchmarking is the collection of producer performance information and making comparisons between individuals and industry standards. It answers this question for an individual producer:

"What are the most important performance yardsticks and where do we rank, compared with other producers in the industry and the industry as a whole?"

The important characteristics of benchmarking are to focus on a number of key performance indicators covering a range of activities that producers perform by producers. Benchmarking allows for a form of comparison as data gathered by each individual producer is gathered and circulated in a report. While the identity of the producers as a group is known, each individual producer's data is masked within the aggregation of all producer information.

Why Benchmark?

The purpose of benchmarking is to stimulate and facilitate performance improvement and organizational change by identifying and analyzing specific and measurable performance gaps and establishing and achieving performance improvement targets based on best or better practices.

There are three strategic reasons to benchmark:

1. *Set Goals and Action Programs:* Benchmark ratios are inherently measurable and comparable, which makes them ideally suited for management-by-objective programs. They can help a producer focus attention on the most controllable aspects of the purebred operation business. Success and failure can be clearly evaluated.
2. *Monitor Performance:* Benchmark ratios provide an objective standard by which to measure performance. By tracking key measurements at regular intervals, producers can pay closer attention to those key factors that affect an operation's performance.
3. *Share the Results:* Benchmark ratios enable your current and future stakeholders to objectively evaluate an operation's condition. Lenders, creditors, investors, and employees can use them to better understand strengths and weaknesses.

What do the benchmark statistics mean?

The benchmark outputs represent a number of statistics for the industry.

There are production statistics including herd size average, feeding statistics, weaning weights and more. Financial statistics and ratios are also included from average program revenues to program selling percentages to asset turnover.

These statistics are presented for the entire purebred program as well as each program (i.e. breeding females, yearling bull program, etc.)

Once the cost of production workbook is complete, production benchmarks can be applied to each livestock type. These are breeding females, herd bulls, replacement heifers, yearling bulls and two year old bulls. Production benchmarks are differentiated for each livestock type.

Financial benchmarks are split up by program type but are also summarized and calculated for the entire purebred operation.

Financial benchmarks are produced on a dollar per head basis for the operation and within each program. For the purebred operation, benchmarks are shown on a dollar per breeding female basis. Using the yearling bull program as an example, benchmarks are shown on a dollar per yearling bull sold basis.

NOTE: Benchmarking your operation is effective when there are industry benchmarks to compare to. An objective of for the CBBC, through the collection of purebred cost of production data from farms across Canada, will benchmark purebred breed and provincial purebred industries. In the end, this will allow for a comparison of your farms performance and industry performance.

Benchmark Definitions

Production Benchmarks

Herd Size: The starting number of head in each program for the life cycle.

Cull Percentage: Cull refers to the livestock sold to commercial markets as feeders and/or backgrounders. Cull percentage represents the number of animals *not* sold as breeding stock to other purebred or commercial herds but sold as feeder or cull livestock. In the breeding herd, the cull percentage relates to the number of cull cows and cull bulls sold as a proportion of females exposed, or starting bull numbers.

Total Winter Days on Feed: The number of winter feeding days for each program. Feeding days and total feed use are very important to manage the cost of production and profitability.

Tonnes Fed per Head over Season:

Grains: Total grain fed per head over one cycle. This includes regular winter feeding rations as well as supplemental grains fed to each program.

Silage (Dry Matter): Total silage fed per head over one cycle on a dry matter basis. This includes regular winter feeding rations as well as supplemental silages fed to each program.

Hay (Dry Matter): Total hay fed per head over the winter feeding season on a dry matter basis. This includes regular winter feeding rations as well as supplemental hay fed to each program.

Total Forages (Dry Matter): Sum of total silage and hay fed on a dry matter basis.

Concentrates: Total concentrates fed per head over the winter feeding season. This includes regular winter feeding rations as well as supplemental concentrates fed to each program.

Death Loss: Percentage of deaths within each program.

Calving Percentage: The percentage of calves born to the number of cows exposed to herd bulls.

Weaning Percentage: The percentage of calves born less pre-weaning deaths to the number of cows exposed to herd bulls.

Average Weaning Weight of Bull Calves (lbs): Average weaning weight of bull calves sold as commercial and purebred stock in pounds.

Average Weaning Weight of Heifer Calves (lbs): Average weaning weight of heifer calves sold as commercial and purebred stock in pounds.

Financial Benchmarks

The financial benchmarks are created for the entire purebred operation as well as each individual purebred program. The applicable benchmarks for the overall operation are on a \$/breeding female. This allows producers to see how efficient their overall operation is to other operations, and allows them to compare themselves, year over year. It allows them to compare their ability to generate revenue from their purebred operation, their overall cost structure, as well as to analyze the profitability of their entire purebred operation.

Benchmarks are also generated for each individual program, on a \$/purebred animal sold basis. This allows a direct comparison for each program in an operation, as to how they perform in terms of profitability, efficiency, and costs.

NOTE: In each of the programs, when referring to animals sold, this includes animals transferred to another purebred program. Although a yearling bull may not be sold externally, he is still produced, and therefore his costs are included in the yearling bull program. To account for this, he is then “sold” from the yearling program to the two year old program. (At the market value entered on the “Cattle Sales and Summary Page”.) The same methodologies applies to bulls and heifers transferred into the breeding herd.

Gross Revenues: Total gross revenues for each purebred program. This is calculated for the entire purebred operation and for each purebred program.

= Revenues from Purebred Sales + Revenues from Commercial Sales

Gross Purebred Revenues: Total revenues from selling purebred livestock per breeding female or per purebred animal sold.

Gross Feeder/Cull Revenues: Total revenues from selling feeder/cull livestock per breeding female or per purebred animal sold.

Net Revenues: For the purebred operation this calculation is the total net revenues/breeding female. This calculation is:
= (Gross revenues – livestock purchases + inventory adjustment)/(starting inventory of breeding females)

For each purebred program, the formula is:

$$= (\text{Gross revenues} - \text{internal transfers in} - \text{livestock purchases} + \text{inventory adjustment})$$

The internal transfer cost is the cost or market value of the animals transferred into the program.

Total Feed Cost: This is calculated for the entire purebred operation and for each purebred program. This does not include pasture costs. This is based on either \$/breeding female or \$/purebred animal sold.

Total Grazing Cost: This is calculated for the entire purebred operation and for each purebred program. This includes regular and extended grazing costs.

NOTE: Remember this is the market value of grazing based on the \$/head grazing cost entered on the feed expense page (and also includes extended grazing costs). This is the opportunity cost of grazing which may be more or less than your actual production costs to graze these cattle.

Total Sales Costs: These are all costs associated with the actual sale of purebred livestock. Sales methods include on-farm production sales, private treaty sales and consignment sales.

Total Veterinary & Medicine Cost: Total of veterinary and medicine costs for the entire operation and each purebred program.

Total Advertising and Promotion Expenses: One of the most significant differences between commercial and purebred production is the costs associated with marketing purebred animals. This cost represents all expenses associated with promoting livestock. These expenses include but are not limited to:

- Paper advertising (newspaper, etc.)
- Banner advertising (show banners, etc)
- Logos (Branding trucks, trailers, etc.)
- Sales visits and calls (Meals, Entertainment, etc.)

Total Operating Expenses: Total operating expenses for the entire operation and each purebred program.

Total Admin/Overhead Expenses: Total admin/overhead expenses for the entire operation and each purebred program.

Total Fixed Expenses: Total fixed expenses for the entire operation and each purebred program.

Total Expenses (Break-Even): Total expenses for the entire operation and each purebred program. This is essentially the gross revenues needed for the each program to break even.

Contribution Margin: Net Revenues – Operating Expenses.

Net Income: Net Revenues – Total Expenses. This is the profit for the total operation and each program.

Efficiency Ratio (Operating Expenses/Net Revenues): Otherwise know as *business efficiency*. In simple terms it is defined as operating expenses as a percentage of revenues. A lower efficiency ratio is better as it means you are generating a larger amount of revenue per dollar of operating expense. (i.e. getting more bang for your buck).

Profitability Ratio (Net Profit/Net Revenues): Assesses the ability to generate earnings as compared to expenses and other relevant costs incurred during a specific period of time. The larger this ratio, the larger the proportion of your revenues that you have retained as profit or to invest.

Program Selling Percentage: Determines how effective purebred producers are at selling purebred animals.

Total Purebred Operation: The ratio of the number of animals sold as 'purebred' either through auction or through private sale in a production cycle to the number of breeding herd females.

Replacement Heifer/Yearling Bull/Two Year Old Bull Program: Determines how effective purebred producers are at selling purebred animals. The number of animals sold as 'purebred' animals or transferred to another program on the farm to the total number animals in that program.

For example, if 8 yearling bulls are sold as purebred bulls out of 10 yearling bulls in the program, the yearling bull program selling percentage equals 80%.

Auction Sale Percentage: The total number of head sold through auction to the total number of purebred livestock sold.

For example, if 10 yearling bulls are sold through auction out of a total of 20 yearling bulls sold in that cycle, then the auction sale percentage is 50% (10/20).

Private Sale Percentage: The total number of purebred animals sold through private treaty to the total number of purebred livestock sold.

For example, if 10 yearling bulls are sold privately out of a total of 20 yearling bulls sold in that cycle, then the private sale percentage is 50% (10/20).

Showing Costs: Showing cost as \$/head for each program.

Showing Margin (Gross Revenues/Total Showing Costs): This ratio measures the amount of revenue generated from each dollar spent on showing purebred livestock. Is the showing and marketing leading to increased bull values? This ratio may take into account the reputation value of an individual producer over time. For example, if a producer has a really low ratio (meaning show costs are high relative to revenues), then the producer either needs to increase revenues of bulls or decrease the marketing/showing costs.

Yardage (per head per day on feed): Included in yardage are the following costs:

- Animal supplies
- Fuel/oil
- Small Tools and Hardware Expense
- Machinery Repairs
- Building Repairs
- Utilities and Phone
- Accounting/Legal
- Office/Travel
- Paid Labour
- Unpaid labour
- Custom work
- Building/Machinery Insurance
- Property Taxes
- Building/Machinery Depreciation
- Building/Machinery Lease Expense

Cost to Raise a Weaned Calf (\$/head): This is the production cost on a dollar per head weaned basis to raise all calves until weaning. This includes purebred calves and calves sold as feeder calves.

Cost to Raise a Weaned Calf (\$/lb weaned): This is the production cost on a dollar per pound weaned basis to raise the calves in the breeding herd. Again, this is based on all the calves weaned, and any losses resulting from the feeder calves sold, will have to be recouped by the other purebred programs, in order for the purebred operation to be profitable.

Total Bull Selling Percentage: Total number of purebred bulls sold for the entire operation to the number of breeding herd females. The higher the number, the more animals that are being sold as purebred than to feeder/cull markets. This measures your efficiency of raising purebred bulls.

Debt per Breeding Female: Total debt attributable to the purebred operation per breeding herd female. The lower the number the less risk you face.

Investment per Breeding Female: Total assets attributable to the purebred operation per breeding herd female. (Does not include land). This measures how efficiently you are managing your capital investment in the purebred operation.

Return on Assets (ROA): An indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment". This gives a producer a comparison for the purebred operation's return versus alternative investments.

Asset Turnover: The amount of sales generated for every dollar's worth of assets. It is calculated by dividing sales in dollars by assets in dollars. The higher this ratio, the more effectively you are generating revenue from the assets in your business.

PRODUCER BENCHMARKS

Production Benchmarks	Breeding Females	Herd Bulls	Replacement Heifer Program	Yearling Bull Program	Two Year Old Bull Program
Herd Size (# of animals)	0.00	0.00	0.00	0.00	0.00
Cull Percentage	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total Winter Days on Feed	0.00	0.00	0.00	0.00	0.00
Tonnes Fed per Head over season					
<i>Grains</i>	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<i>Silage (Dry Matter)</i>	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<i>Hay (Dry Matter)</i>	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<i>Total Forage (Dry Matter)</i>	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<i>Concentrates</i>	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Death Loss	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Calving Percentage	#DIV/0!				
Weaning Percentage	#DIV/0!				
Average Weaning Weight (Bulls)(lbs)	\$0.00				
Average Weaning Weight (Heifers)(lbs)	\$0.00				

Financial Benchmarks	Total Purebred Operation (\$/Breeding Female)	Breeding Herd (\$/Breeding Animal)	Replacement Heifer Program (\$/Replacement Heifer)	Yearling Bull Program (\$/Yearling)	Two Year Old Bull Program (\$/Two Year Old)
Gross Revenues	\$0.00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<i>Gross Purebred Revenues</i>	\$0.00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<i>Gross Feeders/Cull Revenues</i>	\$0.00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<i>Gross Semen/Embryo Revenues</i>	\$0.00	#DIV/0!			
Net Revenues (includes internal transfers)	#DIV/0!	#DIV/0!	#DIV/0!	\$0.00	\$0.00
Total Feed Cost	#DIV/0!	#DIV/0!	\$0.00	\$0.00	\$0.00
Total Grazing Cost	#DIV/0!	#DIV/0!	\$0.00	\$0.00	\$0.00
Total Sales Costs	#DIV/0!	#DIV/0!	\$0.00	\$0.00	\$0.00
Total Veterinary & Medicine Cost	#DIV/0!	#DIV/0!	\$0.00	\$0.00	\$0.00
Total Advertising and Promotion Expense	#DIV/0!	#DIV/0!	\$0.00	\$0.00	\$0.00
Total Operating Expenses	#DIV/0!	#DIV/0!	\$0.00	\$0.00	\$0.00
Total Admin/Overhead Expenses	#DIV/0!	#DIV/0!	\$0.00	\$0.00	\$0.00
Total Fixed Expenses	#DIV/0!	#DIV/0!	\$0.00	\$0.00	\$0.00
Total Expenses (Break-Even)	#DIV/0!	#DIV/0!	\$0.00	\$0.00	\$0.00
Contribution Margin	\$0.00	#DIV/0!	\$0.00	\$0.00	\$0.00
Net Income	\$0.00	#DIV/0!	\$0.00	\$0.00	\$0.00
Efficiency Ratio (operating expenses/revenues)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Profitability Ratio (net profit/total sales)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Program Selling Percentage	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Auction Sale Percentage	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Private Sale Percentage	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Showing Costs	#DIV/0!	#DIV/0!	\$0.00	\$0.00	\$0.00
Showing Margin (Gross Revenues/Total Showing Cost)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Yardage per head per day on feed	#DIV/0!	#DIV/0!			
Cost to Raise Weaned Calf (\$/Calf Weaned)	\$0.00				
Cost to Raise Weaned Calf (\$/lb Weaned)	#DIV/0!				
Total Bull Selling Percentage (Purebred Bulls sold/Breeding Female)	#DIV/0!				
Debt per Breeding Herd Female	#DIV/0!				
Investment per Breeding Female	#DIV/0!				
Return on Assets	#DIV/0!				
Asset Turnover (Revenue/Assets)	#DIV/0!				

Agriculture and Agri-Food Canada is pleased to participate in the production of this CD and is committed to working with our industry partners to increase public awareness of the importance of the agri-food industry to Canada. Findings, conclusions, and opinions expressed in the content included on this CD are those of Canadian Beef Breeds Council and do not necessarily reflect those of Agriculture and Agri-Food Canada or the Government of Canada.