

DAIRY GOAT ENTERPRISE BUDGET

SUGGESTIONS for USE (Version 1.15)

Introduction

Welcome to the *DAIRY GOAT ENTERPRISE BUDGET (version 1.15, December 2003)*. This computer program was written in Microsoft Excel 2000 for the Wisconsin Department of Agriculture, Trade and Consumer Protection. The program format and methodologies used are the outgrowth of a long series of enterprise budgets and other budgeting work carried on at the University of Wisconsin–Madison by Cooperative Extension farm management specialists over the past four decades. Cooperative Extension farm management and other subject matter specialists along with College of Agricultural and Life Sciences faculty members were involved in this budgeting work.

General Suggestions

It is **strongly suggested** that the user first read these “Suggestions for Use” very carefully. Then a copy of the program should be made and stored in a safe place. The program can then be installed on the hard disk or alternately kept as a working copy on another floppy disk. This working copy can be used to enter example input data to see how the program operates. Be sure to keep at least one extra blank copy of the program to use as a current working copy.

An example budget is shown on the worksheet entitled *Dairy Goat Example*. To become better acquainted with the program, it is suggested that the user put the example entries into the worksheet entitled *Dairy Goat Budget Test*. In that way users can better see how the program handles the input data and how this data looks in the output data format. **Important: Input data should only be entered in the yellow shaded areas of the worksheet.**

The budget format as well as the entry section might seem very long and complex at first. However, it is not! The reason for all the potential entries is that the program has been designed to serve varying kinds of dairy goat enterprises. Several kinds of entries and output sections must be made available to serve this broad group of potential users. Each user can select the entries that best fit his or her situation. Most users will only use a fraction of the program input cells.

Contents of the Program

The program was written using Microsoft Excel 2000 with the Workbook format using a separate worksheet for each budget. Access these sheets by clicking on the appropriate worksheet tabs. The sheets and tabs are as follows:

Intro. This is a brief statement that directs the user to this “Suggestions for Use” publication

on how to best use the program.

Dairy Goat Budget Example. Clicking on this tab brings up an example budget for users to study and help them understand the program.

Dairy Goat Budget Test. Clicking on this tab brings up a blank budget so that users can make entries (preferably from the example budget) to become familiar with the program input and output. They then can enter their first version of their own budget here.

Dairy Goat Budget #1. Clicking on this tab brings up a blank budget format so that users can make their own entries and build their own budgets. Users may want to test variations of their “test budget” here.

Dairy Goat Budget #2. Clicking on this tab brings up another blank budget format so that users can build a second budget for comparison.

Having extra blank budget formats enables users to build more than one budget so that comparisons can be easily made. Also, users can change a crucial variable(s) so that they can readily measure the impact of specific change(s) on the results. This helps answer the “what if?” questions so important in budgeting.

Enterprise Budgets

An enterprise is a single business undertaking for the purpose of making a **profit** to help enhance the **solvency** and **liquidity/cash flow** characteristics of a business so as to provide funds for adequate family living and savings over time as well as to maintain the physical plant of the business. Enterprise budgets are the building blocks of a total farm budget. An enterprise budget is a way to examine both the physical and economic characteristics of a specific enterprise. **Note:** the enterprise budget will use the *accrual basis*—that is **both cash and non-cash** costs and returns will be used.

The enterprise budget is not a substitute for a detailed record system or farm business analysis. It is not designed to make any income tax, business arrangement or estate planning recommendations. Nor should it be viewed as a guide to social or environmental policy. An enterprise budget is not a partial budget and is not designed to be used in that way, but may provide data for a partial budget and ultimately test the effectiveness of a partial budget decision. Enterprise budgets are an aid to short-run, long-run and transitional budgeting, along with helping users analyze the economic and physical characteristics of a specific enterprise. An enterprise budget should help users make better informed business decisions about managing their overall farm business.

In the budgets, the term “slaughter goats” is used for goats raised primarily for meat purposes, primarily for consumer table use or direct consumption. The terms “breeder” or “production” goats are used for goats used primarily for furnishing breeding stock. The term “cull”

refers to dairy goats that have reached the end of their productive lives. These “breeder” or “production” type goats are sometimes referred to as “capital” goats as opposed to the “slaughter” or “meat” type goats.

Selecting Enterprises to Fit your Farm

Selecting appropriate enterprises is one of the most important planning tasks for a farm business manager. Most production dairy goatherds are located near a raw milk-hauling route or close to a product (such as cheese) processing plant. According to Penn State University sources, “Dairy goat production is an alternative livestock enterprise suitable for many small-scale or part-time livestock operations. Some dairy goat producers have been successful in pasteurizing goat milk and building an on-farm judging business; others have ventured into processed milk products for retail distribution. The potential also exists for selling milk to processors, usually on a regional basis. Although fluid milk and processed products are important markets, dairy goat producers should also consider the potential for selling animals to hobbyists and youth involved in vocational agriculture livestock projects.”¹

There are three general types of enterprises—*competitive*, *complementary*, and *supplementary*. Most enterprises are *competitive* ones. That is they *compete* for resources. *Competitive* enterprises, including most farm enterprises, *compete* for economic resources such as land, labor, capital and management. Increasing the level of one enterprise reduces the resources available to another *competing* enterprise. For example, raising market hogs *competes* for the corn needed to feed out market wether kids. Raising capons *competes* for corn that can be fed to growing ducks. In crops, corn grain *competes* for the acres required for a soybean enterprise. Labor used for milking goats is not available for shearing mohair from angora goats.

A *complementary* enterprise adds to another enterprise when resources are limited. A *complementary* enterprise is one that increases its output while at the same time increases the output of another enterprise within the same farming system. The addition of legume hay into a crop rotation that includes corn is an example of a *complementary* enterprise if corn production either increases or remains constant. *Complementary* enterprises are extremely rare and only exist for a very few combinations.

A *supplementary* enterprise neither competes with nor adds to the production of another enterprise. Typically, supplementary enterprises utilize resources with low **opportunity costs** (explained below). For example, a small flock of sheep or a few beef cows might use some small pasture acreage that has no alternative use. These *supplementary* enterprises may have use for some existing facilities and labor that would otherwise go unutilized or at least underutilized. Similarly, a few dairy goats might supply some food for the table. Much of their feed requirements could be met by scavenging feed. They would only require minimum additional feed and would *supplement* the farm income and not compete for any resources that might be profitably used in another

¹ Paragraph from Agricultural Alternatives, Dairy Goat Production – Penn State College of Ag. Sciences, Cooperative Extension, 1998

enterprise. Resources not utilized by other enterprises are still treated as inputs in the supplementary enterprise. But the opportunity cost of these inputs would be low or zero. The supplementary relationship ends as that enterprise becomes larger and starts competing for farm resources.

The budget format in this program allows users to show any of the three types of enterprises for a specific dairy goat enterprise. Most enterprise budgets will turn out to be competitive.

Opportunity Cost

Opportunity cost is a very important economic concept. Briefly, it is defined as the value of the output that was not produced because inputs were used for different purposes. In other words, opportunity cost is the value of a product not realized because resources were shifted to an alternative use. Managers can look at the opportunity cost concept in other ways. If a grower borrows money at an interest rate of 8%, that is the cost of capital. However, if the manager has an existing supply of capital that could be invested in the business and earn 15%, then the opportunity cost of that capital is 15%. Similarly, skilled labor during peak labor times has a much higher opportunity cost than during slack times. Opportunity cost is the value of a scarce resource in its best alternative use.

Structure of an Enterprise Budget

The enterprise budget has several distinct parts. The first part is a description of the enterprise. This is followed by six sections. The first section shows the “Receipts” (both cash and non-cash) from the enterprise including any multiple products. These include such things as milk from a dairy goat enterprise or meat sales and cull doe sales from a Boer goat enterprise. This is followed by the two parts of the second section entitled “Variable Costs” that includes (1) “Feed Costs” and (2) “Dairy Goat Costs” for all non-feed variable costs. Note that these costs can also be viewed as ongoing operational costs that are incurred when production takes place and can include both cash and non-cash costs. The third section shows the “Fixed Costs” for the buildings and equipment as well as for the capital (dairy or brood) goats used in the enterprise. “Total Costs (excluding labor and management)” are shown in the fourth section. The fifth section shows “Total Costs excluding and including a management charge.” The sixth section, “Returns,” looks at the returns over feed costs, returns over all variable costs, returns to labor and management, and returns to management on a per goat (the producing unit), and per pound basis (the unit of production).

Building an Enterprise Budget

Here are the steps in building an enterprise budget. We will go into much more detail about actual entries in the next section.

Describing the enterprise

The first step is to develop a detailed description of the enterprise. This description could

include the breed of dairy goat involved, the size or scale of the enterprise, the buildings and equipment used, the health system to be used, the feeding regime to be followed, the technology used, any specific production practices followed, the source of the labor supply and the time period of the budget. Special care must be given to selecting the appropriate time period for the budget. Some enterprises such as a dairy goat herd will have a budget that encompasses a time period less than a whole year. Other enterprise budgets, such as feeding out a herd of wethers, will be substantially more than a year. See the directions for making these entries in the “Making the Input Entries” section below.

Selecting coefficients of production

The second step is to select the appropriate coefficients of production. These coefficients could include such things as pounds of gain per animal, amount of feed disappearance per pound of gain, rate of gain, cwt. of milk per doe, death losses, etc. Budget makers need to consider the level of production coefficients used consistent with the type of technology described. If new technologies are expected to be used, then the coefficients of production consistent with those technologies are the appropriate ones to be used.

Selecting prices

The next step is to select the appropriate *absolute* and *relative* prices for the inputs put into the enterprise and the outputs obtained from the enterprise. Absolute prices pay the bills; relative prices aid in the selection of appropriate enterprises and/or enterprise combinations. If the absolute price of corn is \$0.07 per pound and the absolute price of a cwt. of goat’s milk is \$30.00, producers will want to produce corn and not milk goats. The relative price of corn vs. goat’s milk guides enterprise selection between corn production and goat milk production. If the prices of corn and goat’s milk both fall to less than the variable cost of production over several production periods, then producers might elect to go out of both the corn and goat milk business because the absolute prices of their outputs will not allow them to recover their variable costs let alone their fixed costs. Great care must be used in making assumptions about price levels and relationships while building a budget.

Income

Income from all sources must be entered. This includes both cash and non-cash income. All sources of income must be used to obtain a valid budget. Some enterprises are multiple product enterprises. All those sources of income should be entered. This could also include “other” and “miscellaneous” non-specific items of income such as government subsidies, refunds, or any other income items not listed in the specified income sources.

Costs—Fixed and Variable

The cost part of the budget is divided into two parts—“Variable” and “Fixed.” The variable

costs can be broken into two main parts—“Feed Costs” and “Dairy Goat Costs.” Variable costs are only incurred when production takes place. Fixed costs go on regardless if production takes place. The fixed cost sections show the ownership costs of “Production Permanent Buildings,” “Portable Production Buildings,” “Production Equipment,” “Processing Buildings,” “Processing Equipment” and “Capital (purchased and raised) Dairy goats.” Remember *capital* goats are the replacement does and bucks, and the milking goats whose primary purpose is milk production. It is crucial to distinguish between the variable and fixed cost parts of the budget as that will affect budget interpretation.

Some costs might fall into either or both categories. Labor is an example. If the labor already exists on the farm, it is a fixed cost to the business. For example, if the operator is at the production unit all the time, that person’s labor is “fixed” to that operation. If, however, that person could be (or is) gainfully employed at some other location, then that labor resource becomes a variable cost. Labor hired in is a variable cost.

Fixed costs generally are **D**epreciation (wear and tear along with functional and/or economic obsolescence), **I**nterest, non-use related **R**epairs, **T**axes and **I**nsurance—the **DIRTI** five! Poor spelling, but a good way to remember these very important costs. Those five DIRTI costs go on regardless if production takes place. The fixed costs of depreciation and interest are handled in the budget as the **Capital Recovery Charge (CRC)** using the **Capital Recovery Factor (CRF)**. The **CRF** is a combination of depreciation and interest, taking into consideration the time value of money. The **CRF** is also called an amortization factor. This is all laid out for users at the bottom of the input section. All that needs to be done is to follow the instructions on what to enter and where to enter it.

Calculating fixed costs using the capital recovery charge

Calculating the fixed costs is the most difficult part of the budgeting process! It is a two-step process. The program does all the calculations for the user. To help the user better understand the process, we will describe the method used in making these calculations.

The first step consists of placing a value on the **capital** asset such as a building, a piece of equipment, a capital herd of dairy goats, etc. The second step consists of calculating the **annual** cost for each of the fixed assets. Several pieces of information are required to do this. The user will need to supply the: (1) current *beginning value* of the asset as it enters the business; (2) the expected *salvage value* (if any) for the asset when it exits the business; (3) the expected *useful life* of the asset in the business and; (4) the *opportunity cost of capital* (e.g., an interest rate). **All of these variables (except salvage value) must be used in the program!** Placing the beginning value on equipment, livestock and new facilities is relatively easy. But many producers use older facilities. These values are more difficult to determine. The dollar amount to use for an older building can be determined by using an estimate of its value. That value might approximate the cost of the recent and/or expected improvements plus the cost of remodeling or other repairs to put the building in the needed functional condition. Some users may want to use the amount the building contributes to the market

value of the farm real estate.

Fixed assets are divided into two groups. The first group is those assets that generally depreciate in value over time due to wear and tear as well as functional and economic obsolescence. This includes most buildings, laying and breeding poultry, dairy and breeding livestock, and equipment. The depreciating fixed asset's costs consist of an allowance for the loss in value, an opportunity charge for the cost of capital invested (interest—the cost of renting money), and annual charges for repairs (non-use related such as roof replacement), taxes and insurance.

The second classification of assets—typically land—appreciates in value. In the case of an appreciating asset, the interest rate selected would be the regular cost of capital minus the percent annual estimated appreciation rate of the asset. For example, if the cost of capital was 8% and the asset was expected to appreciate at the rate of 3% per year, the interest rate selected would be 5% (8% - 3% = 5%).

The capital recovery charge can only be computed after (1) the beginning value of the asset, (2) the opportunity cost of capital, the expected lifetime and (3) expected salvage value of the fixed assets are determined. The opportunity cost of capital will depend on the user's liability/asset or debt/equity position. If the fixed asset is financed by borrowing money, users should take the interest rate being paid to the lender as the cost of capital. If the users are supplying their own capital, an interest rate equal to that of a return from relatively risk free investments such as Treasury bills could be used.

The capital recovery charge (**CRC**) is found by first computing the annualized loss in value of the fixed asset. This is accomplished by multiplying the loss in value of the fixed asset (its beginning value minus salvage value) by the capital recovery factor (**CRF**). This factor is also called an amortization factor and can be found in tables. The capital recovery factor or amortization factor formula is as follows: Capital Recovery Factor or Amortization Factor = $i(1+i)^n / (1+i)^{n-1}$ where i = the interest rate or opportunity cost of capital and n = the number of years or length of the planning horizon. The capital recovery charge is the sum of the annualized loss in value and the interest charge.

Here is an example of how the calculation works. Suppose there is a fixed asset with a beginning value of \$12,000 and a salvage value \$2,000 resulting in a depreciable balance of \$10,000. Also, suppose the selected interest rate is 8% and the estimated useful life is 10 years. By going to the table or using the capital recovery factor (**CRF**) formula above, a **CRF** of 0.149 is determined. That factor times \$10,000 equals a \$1,490 **annual** charge to cover *depreciation and interest* costs every year for the ten-year life of the asset. An annual interest charge on the \$2,000 salvage value is added to the \$1,490. At 8%, that interest amounts to \$160 (8% * \$2,000) annually for a total of \$1,650 (\$1,490 + \$160) for annual interest and depreciation. Therefore, \$1,650 / \$12,000 = 13.75% is an annual percentage charge. To that amount a percentage of beginning cost is added to cover non-use related repairs, taxes and interest—the **RTI** of the **DIRTI** 5 fixed costs. Suppose the total of the

repair, taxes and insurance annual costs amount to 3.5% of the beginning value. This 3.5% is added to the 13.75% for a total of 17.25% (3.5% + 13.75%). Thus, the annual fixed charge for the **DIRTI 5** for the \$12,000 fixed asset is \$2,070 ($\$12,000 * 17.25\%$). This is the annual fixed cost charge.

The program does all these calculations when the appropriate beginning value, salvage value, interest rate and expected length of life are entered along with the RTI percentages. The final percentage is then calculated and automatically taken to the fixed cost section of the budget.

Returns

The returns section shows the return (cash and non-cash) over feed costs, return over all variable costs, return to labor and management, and return to management on a per goat, per pound and per gallon basis. In the long run, the manager wants to recover all costs and have a return to management. In the short run, the manager wants a positive return over all variable costs. If variable costs cannot be recovered, there is no use in producing!

The budget returns section shows the monetary returns to the basic production unit—the milking goat (production and slaughter), and to the unit of production—gallons of milk or pounds of meat produced. Also, percentages of costs and returns are shown. This can aid users in the interpretation of the budget results.

Making notes about assumptions

The final step is to make appropriate notes as to the methods and assumptions used in constructing the budget. These assumptions used are crucial for the final results of the budget.

Making Input Entries Into The Budget

General suggestions

First, read through this part of these directions to get an idea of what is required for the many entries. Then scroll down to the input entries section at the bottom of page two of the program. Only make input entries in the **yellow shaded areas** of the input section. Users should be careful to only use those assumptions that are realistic and appropriate for their specific situation. On some cells, users will notice a small red triangle in the upper right corner. By putting the cursor on the triangle, a small dialog box will appear with a message specific to that cell. These messages will help users interpret and better understand the budget. We strongly advise users to make use of this feature.

There are two general columns in the Input form: “Assumptions Used in the Budget” and “Suggestions for Entering Data.” The titles of these columns should give users some general direction as what would go in these columns. The ‘suggestions’ column should help users obtain the information they need to make appropriate entries for their situation.

Take extreme caution to make sure that **all** costs and returns (cash and non-cash) are entered. Also, do not make the mistake of entering things twice. The program has been designed to help users avoid these problems, but it is possible to enter things twice or not at all.

Description of enterprise (Lines 100-109)

This description could include the kind of dairy goat herd involved, the size or scale of the enterprise, the buildings and equipment used, the feeding regime followed, the technology used, any specific production practices followed, source of the labor supply, the time period of the budget, or any other appropriate enterprise descriptors. It should give the user and/or the reader of the budget a good, basic understanding of what kind of goat enterprise the budget describes. Readers should be able to easily understand the scope of the budget and the methods of production. In some cases, a separate detailed explanation should be prepared.

Capital items (Lines 110-125)

In this section, enter the requested information about the various capital items used in the enterprise. These would include such capital (fixed) assets as buildings, machinery, equipment and production (milking and brood) goats. Enter the monetary value (opportunity cost) of raised goats. This can be estimated by using the “farm gate value” (what the goat could be sold for on the farm) of these goats. The percentage of death for the **capital** goats is calculated in line 124. Do **not** enter any slaughter goat information in this section. This section should only be used for **capital** items used in the enterprise. Fixed cost information in the budget is generated from this input material.

Time period of the enterprise budget (special instructions for Line 122)

Some dairy goat enterprises may not fit neatly into a calendar year. Therefore, figuring the fixed costs might seem to be a complicated procedure. However, setting up some general rules and procedures can make the task easier and should help the user to better interpret the program output.

If the enterprise budget period is more or less than one year, try following these suggestions. In the input section “capital items,” after the “description of the enterprise,” note the line: “Time period of the budget (in years).” This is **line 122**. **A number must be entered in this cell (B122)!!** Many users will want to enter “1” in that cell until they decide on a better or more appropriate entry.

Here are some ideas to help users decide the length of the budget period they will want to have in their specific enterprise budget. Always remember that fixed costs go on no matter if the fixed asset is used or not. If you have an enterprise that lasts for 9 months or 0.75 of a year, the use of 1 year would be the appropriate length of time **unless** those fixed assets would be **used** by and could be **charged** to another enterprise for the remaining 3 months or 0.25 of a year. Dairy goat enterprises such as milking and meat herds that involve capital type goats will generally have enterprise periods of over one year. In that case a number greater than “1” should be used. Another example would be a batch of feeder kids that would terminate in several months. Be careful to

include the down time the fixed assets have until another enterprise picks up their use and costs. If a dairy goat herd will use the fixed asset facilities for one lactation period of 284 days and then be moved to a dry lot, with the barn used for another enterprise, then the length of the budget period is 284 days or 0.78 years for that dairy goat enterprise. In most cases, the dairy goat barn will be used all year for sheltering the goat herd and a 1-year period will be used.

So, there are three main time period scenarios users need to consider for their enterprise budgets. They are: (1) less than one year (for those using fixed assets that will be used by another enterprise for the remaining part of the year), (2) one year (for those that are one year long or do not have an alternative use for the fixed facilities for the rest of the year) and (3) over one year (for those that have a use for the fixed assets for more than a year, including down time until another enterprise takes over the use of the fixed assets). Users will have to select which of these time frame scenarios best fits their situation.

Capital items and worksheet for the calculation of the capital recovery *factor* (CRF) and the capital recovery *charge* CRC) (Lines 199-218)

Budgeting capital items and calculating fixed costs is generally the most difficult part of the budgeting process, so we will start with it and get it out of the way! Users would be well advised to read up on the time value of money, interest rates, the concepts of value and money, the capital recovery *charge* and capital recovery *factor*, economic (not income tax) depreciation due not only to wear and tear but also functional and economic obsolescence, as well as the characteristics of fixed costs. It is not the function of these “Suggestions for Use” to present these important economic concepts in any detail. Many farm management publications can provide this background information. We will try to guide the user through the process of making appropriate entries.

There are five kinds of fixed costs: (1) depreciation, (2) interest, (3) repairs–non-use related, (4) taxes–property, and (5) insurance. These costs are incurred even if no production takes place. These are not “nice” costs—they are “dirty” costs and sometimes called the DIRTI 5. Remember that these costs go on even if the asset is not used at all or only for a fraction of the year. See the above discussion on “Time Period of the Enterprise Budget.”

To calculate the fixed costs, users should supply the following information: (1) the beginning value of the fixed asset, (2) the estimated salvage value if any, (3) the estimated years of useful life in the enterprise, (4) the interest rate to be charged on the fixed asset, (5) the interest rate to be charged on the salvage value, (6) the average annual percentage of beginning asset value to be charged for non-use related repairs, (7) the average annual percentage of beginning asset value to be charged for property taxes and (8) the average annual percentage of beginning asset value to be charged for insurance. **Note 1: Items 1, 3, and 4 must be entered** for any capital asset that is entered for the program to properly work. Use item (2), salvage value, only when appropriate. If salvage value is used, then item 5 or the interest charge on the salvage value must also be used. *Items 6, 7, and 8* should be used if costs will be associated with these variables. Remember item 6 is for non-use related repairs to the fixed asset. All use related repairs are to be entered in the repair and maintenance section of the variable operating costs.

Enter the beginning capital asset values in the “Capital Items” section on the first several input lines (lines 110-125). Be sure to use realistic values and prices appropriate for the budget and farm situation. Enter the beginning and ending numbers of capital goats (purchased and raised) along with the appropriate beginning cost and/or value per goat. Report the income from any sales of capital goats in the “Income Items” section below. Any death losses are accounted for by either lack of income and/or the costs associated with those goats that were lost.

The time period of the budget (line 122) should also be entered as discussed in “Time Period of the Enterprise Budget” above. In some cases this will be more or less than a full year. Enter this information as a decimal, not a fraction. For example, 12 weeks is 0.2308 years ($12/52 = 0.230769$). The worksheet automatically calculates percent of death loss for you.

The other required capital item information is at the end of the input section in the “Worksheet for Calculating the CRC (Capital Recovery Factor) and RTI (Repairs, Taxes and Insurance),” lines 199-218. The beginning values (Col. B, Lines 210—216) have been automatically brought down based on the above information. Next, enter the “Salvage Value” (Col. C), if any. Remember this is **not** an income tax program, but an economic program. Estimate if there will be any marketable alternative use for the asset when it leaves the business. In many cases, salvage value will be small or nonexistent. The “Years of Life” (Col. D) is the user’s best estimate of how long the asset will be useful in their business before it is disposed of and/or replaced due to wear and tear and/or economic and functional obsolescence. The next two columns call for an interest rate entry. “Interest rate Charged” (Col. E) should reflect the interest being paid or desired for any dollars invested. This enables the program to calculate the capital recovery *factor* or *amortization factor*. That factor recognizes both depreciation and the time value of money. The second interest rate (Col. F) is used **only** to compute the capital use charge for any money remaining in the salvage value.

The next column, “Percent Non-use Related Repairs” (Col. A Lines 211—215) calculates the ongoing repairs that a fixed asset requires, whether or not it is used. Repairing foundations, re-roofing buildings, painting exteriors, etc. are examples of this. Note the red triangle in the upper right corner of these cells. It is there to help users find the correct line matching the asset information entered directly above. The “Percent Insurance” (Col. B) and “Percent Property Taxes” (Col. C) columns are used for entering the percent of “Beginning Value” that these two items will require. One could take last year’s insurance bill and divide it by the “beginning value” amounts to come up with a percentage. Do **not** enter these values in the operating expense section, as we want to keep the fixed and variable cost information separate.

Percentage repair costs for buildings might range from 3%-15% of beginning value, while the figure on machinery and equipment might fall in the range of 5%-20%. These percentages will be highly dependent on the original condition of the assets, and the level of use along with the care the asset receives over its useful life. For the tax and insurance percentages, it is best to average the last 2-3 years property tax and insurance bills and divide those numbers by the beginning value to arrive at an appropriate percentage rate.

From this information, the program will calculate the fixed costs that are shown in Section III, “Fixed Costs.” The CRC (capital recovery charge) and RTI (repairs, taxes, insurance) data is automatically moved to that section. Also, the percent death loss for capital goats is calculated. We are now finished with the fixed cost section.

Feed costs and (BIPP minus EIS) (Lines 136—153)

The feed section of the variable cost section is to be used exclusively for home grown and purchased feed. The home-grown feed inputs should be valued at their opportunity cost to reflect only the economic impact of the specific enterprise under consideration. For example, home-grown corn should be priced at its “farm gate value” or opportunity cost. If the corn could be sold at the farm for \$0.035 per pound, the dairy goat enterprise using that corn should be charged that price. Corn obtained from others should be priced at its purchase price. Pasture should be charged at the going annual rental rate. Harvested forage can be estimated by weighing sample bales or making cubic measurements of the storage facility.

Base assumptions about feed consumption on actual feed disappearance, not on estimates based on feeding trials or other types of measured experiments. **Disappearance** is the crucial word for budgeting purposes. ***Disappearance = (BIPP - EIS) or Disappearance equals (Beginning Inventory + Production + Purchases) minus (Ending Inventory + Sales).*** This is a vital equation! Disappearance of feed includes what the cats, rats, wind, or goats receive. We want to measure what disappeared, not just what the goats actually consumed. Remember an enterprise budget is **not** a ration balancing program, nor a nutrition study. The budget only measures physical disappearance and the value or cost of that disappearance.

The feed section is set up to allow the user maximum flexibility in entering feed information. There are several lines (specify) that allow the user to enter his or her own titles for feeds. These flexible lines, along with the titled lines, should cover most situations. In Column A, users can enter the specific feeds being used. Most users will only use a few of the available lines.

Income Items (Lines 154—164)

Enter all cash and non-cash income and physical amounts sold in this section. All sources of income must be used to obtain a valid budget. Some enterprises are multiple product output enterprises. Enter all of those several sources of income. This would include “miscellaneous” and “other” non-specific items of income. Most users will only be using 2-4 lines of this section. A dairy goat producer will have milk sales and may also have sales of culled does, slaughter goats, wool, etc. Be sure to enter both the “Price per Unit” and “No. of Units” information.

Physical information (Lines 126—135)

This section collects information concerning only the **slaughter** or **non-capital** goats. Users

should enter relevant numbers concerning the beginning and ending number of goats, cost of purchased goats, or value for raised goats and the beginning weight of these goats. The number of purchased slaughter goats, cost of purchased slaughter goats, market value (opportunity cost) of raised slaughter goats, information on goat sales (number of goats and weight) and the monetary value of goats sold and/or consumed are to be entered in this section. The only monetary values entered in this section are the beginning cost of purchased goats (cell B127) and the value (opportunity cost) of raised goats (cell B129).

In cell B127, enter the per goat cost of goats, such as feeders, purchased for slaughter purposes. In cell B128, enter the number of these goats. In cell C128, enter the per goat weight (in decimals) of these purchased goats. The per goat market value (opportunity cost) of raised slaughter type goats should be entered in cell B129. The number of raised slaughter goats should be entered in cell B130 while the per goat weight (in decimals) of these raised goats should be entered in cell C130. These slaughter goats should be viewed as “feeder goats” or goats that are brought into the enterprise for the growing out to a marketable weight. The number of goats “sold” or “consumed” is a calculated number based on the number purchased or raised on the farm, and the number of goats reported as sold, consumed or remaining in inventory. In cells B131 and B132, enter the numbers of raised and/or purchased goats that were sold, consumed, or remain in inventory.

In cells B131 and B132, enter the data for goats remaining in inventory. For slaughter goat enterprises it is highly unlikely that there will be goats left in inventory. Most slaughter enterprise budgets start and end with zero inventory. The slaughter goats are brought into the feeder/grower enterprise as kids and fed out and then sold (or consumed) by the completion of the enterprise. Thus, there likely would only be sales (or consumption) of raised goats and/or purchased goats reported on these lines. Be sure to include the number of goats sold along with the consumed and remaining inventory goats in this ending inventory number. In cell B133, enter the average weight for the goats that were sold, consumed, or left in inventory.

Reporting the number of goats can be a bit tricky. It will depend on the size of the enterprise! By carefully thinking through the number of goats entering the enterprise, the number of goats actually sold (or consumed) and the number of goats left (if any) at the end of the enterprise, users should be able to make the appropriate goat number entries.

The percentage death loss of the non-capital or slaughter goats is automatically calculated and reported in cell B134.

Labor information (Lines 165—179)

The labor information includes both *paid* and *unpaid* labor and divides labor into three distinct categories--*production, processing, and marketing labor*. Labor used for producing milk or meat is considered “production labor” while labor used for processing milk or meat is called “processing labor.” “Marketing labor” hours (not marketing cost items), if applicable, could be entered here if not included in the “production” labor hours above or in the “overhead labor” calculation.

Some labor is paid or “hired” labor. Enter all costs associated with that labor including perquisites (fringe benefits) on the hired labor lines. Unpaid labor charges are the “opportunity cost” of labor (generally family) that is available but not on the regular payroll. The local going farm wage rate is a good guide as to what to use for this estimate. On farms that have more formally organized business arrangements, it is safe to assume much or all of the labor is “hired” by the “farm organization” and thus is called “hired labor.” Also, on many farms, family members are paid a wage and therefore should be treated as hired labor. The number of labor hours used can be gathered from the wage statement given to hired workers. Estimate unpaid labor hours based on a daily time log. Do not forget to enter some time for “overhead” labor hours. This would include professional reading, attending meetings, writing advertising, record keeping, filing taxes, tending to legal matters, making selling and purchasing decisions, etc. In many cases, 10%-15% of the regular labor hours can be added to the total labor use to cover these items.

Generally, professional farm managers charge a percentage rate (generally 2-5%) of the farm gross and/or the calculated “value of farm production” for managing the farm business. Therefore, there is a line to enter that percentage management charge **not** represented in any of the labor charges. Some users may want to account for the management input in the labor entries. Recognition of management costs should be made someplace in the budget.

Other operating expenses (Lines 180—197)

“Other Operating Expenses” are all the *non-feed* variable costs associated with a specific dairy goat enterprise. The line titles and suggestions for use statements should guide users in making appropriate entries. Also, use the “balloon” suggestions from the red triangle in the upper right hand corner of the cell involved for some extra guidance.

Every user has their favorite terminology for the cost items involved in any specific enterprise. We could not fit every one of them in because of space limitations. But we are sure that innovative and creative budgeters will find an unused category in the list. They then can use that line to enter their own favorite category, recognizing that the line title would be incorrect. The correct title could be noted in the budget footnotes.

Utility, power and fuel costs, especially milk house expenses, are a significant cost for many producers. Lines 189 and 195 accommodate these costs. Users can decide where they wish to include these costs. Line 191 is for “use-related” repairs only. These are variable costs that only occur if production takes place. The “non-use related” repairs are to be entered in the fixed costs section.

Some guidance might be helpful as it relates to the slaughter goats. Most of the data for these goats is captured on lines 126-135 and is carried to the appropriate parts of the budget automatically. Note that cell B192—“slaughter goats purchased”—is a calculated number. That cell is **not** shaded yellow and no entry should be made there. The “raised slaughter goats” data also comes from lines

126-135 and is transferred automatically to the appropriate parts of the budget.

The cost and number of the beginning (purchased and raised) slaughter goats is calculated from information gathered directly from lines 127, 128, 129, and 130. It is then shown in the completed budget under “Dairy Goat Costs (other variable costs)” on the lines entitled “slaughter goats (purchased) cost” and “slaughter goats (raised) cost.”

While it is not necessary to make an entry in cell B197, it is important that most users make an entry here. A certain amount of the business working capital is tied up in the production of the enterprise and therefore the business should be charged for the use of that capital. The interest rate to be used for the operating capital (that is, the interest charged for the dollars of variable costs used in the production process) should be entered in this section in cell B197. If the money is borrowed, use the interest rate being paid. In other cases, use the “opportunity cost” of the capital being used.

The death loss information needs some further explanation. The percentage death losses have been computed and shown as percentage numbers in the entry part of the budget in the “Capital Item” and “Physical Information” sections. These losses are reflected in the costs incurred while there is no corresponding income stream. Thus, by including the costs with no income stream, the cost of the death losses are accounted for in the budget. The death loss percentage computation allows users to see the death loss percentages.

Footnotes to the budget (lines 219-226)

This space should be used to enter any explanatory information relating to the budget. In some cases, additional pages might be useful in explaining the budget.

Using the enterprise budget

The enterprise budget shows the farm manager several things. It shows the **profitability** characteristics of that enterprise and assists the manager in enterprise selection. Obviously, managers do not want to select enterprises for their farm businesses that are not profitable over the long run. The budget can also show the **liquidity/cash flow** characteristics of the enterprise. If the enterprise is profitable, it has the potential to improve the manager’s **solvency** position over time. Most important, it shows if the enterprise can have a positive return over variable costs in the short run. If an enterprise cannot cover variable costs, it should not be attempted. If an enterprise has good profitability characteristics over the long run and can cover something over variable costs in the short run, it might be a good idea to continue it. Enterprise budgets can be used to build total farm budgets and to help construct partial and transitional budgets. They also can help guide record keeping.

The percent costs and returns shown in the budget should help the user analyze the enterprise cost and return characteristics of each budget item. Three crucial questions to be asked about each cost and return item are: Is it important? Is it controllable? Can something be done about it quickly; what about the timeliness of the action? For example, labor fits these criteria. It is the single largest

cost in most dairy goat operations. The manager controls the milking regime. A change in milking will quickly show itself in performance. This analysis can help managers improve profitability.

Returns are shown on a production unit (per goat) basis and a unit of production (per gallon or pound) basis. The returns are grouped into several categories: (1) total or gross receipts; (2) return over feed cost; (3) return over all variable costs; (4) returns to labor and management; (5) returns to management. With the assembled data, the manager can easily make other calculations and let the residual returns flow to some other variable that was important to their operation.

It should be noted that the returns per goat data used the beginning number of capital goats in the dairy goat operation. The returns per gallon of output were calculated using actual production numbers based on the number of gallons of milk sold.

Summary

Enterprise budgets are the building blocks of a total farm budget and are also useful as an analytical tool. The budgets can be used for many purposes to help the farm manager make better decisions about effective, efficient management of a dairy goat enterprise. Careful use of enterprise budgets can provide data for better farm business decision making.

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This publication and computer program has been reviewed by the following people:

Robert A. Luening, Professor Emeritus, Farm Management Cooperative Extension, was involved in some of the early enterprise budget work upon which this general budget format was based and served as a reviewer of this budget.

Cris Carusi, and *Ruth McNair*, CIAS editors

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