OSU Enterprise Budget Software Advanced User's Guide

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OSU
OKLAHOMA COOPERATIVE EXTENSION SERVICE

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Table of Contents

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INTRODUCTION

The OSU Enterprise Budget software is designed to facilitate the development of budgets that are appropriate to a geographic region. Users are allowed to override defaults with their own values to totally customize the budget if their experience and farm records indicate different values and production practices. Our intent is to provide software that is flexible and user-friendly, with default values that are reasonable for items that are difficult to calculate, for example, per acre machinery costs for a specific crop. Additionally, the software is to serve as an educational tool and resource. Links to many references are provided, such as OSU fact sheets and current reports, Oklahoma Agricultural Statistics Service data, and, in some cases, expert opinion. Where possible, web-links are built into the spreadsheets to provide users who have Internet access direct links.

The farm size, cropping plan, and machinery inventory are important determinants of crop budget costs. Eight production regions were developed (Figure 1) and a "typical" farm unit for three sizes of farms (small, medium, and large) was specified to use in developing budget default values. Each production region contains comparable soils, cropping mixes, yield potential, and cultural practices. Farm sizes were defined from 1997 Agricultural Census data. Cultural practices and tillage operations were developed through several sources, including consultations with state and area Extension specialists, and a machinery survey of producers. MACHSEL (Kletke and Sestak), a machinery selection spreadsheet template, was used to estimate the costs for a particular machinery complement on a given size farm in a region. Machinery cost estimation is based on equations (some in modified form) from the American Society of Agricultural Engineers (ASAE).

In the spreadsheets, numbers can be entered specified with many values to the right of the decimal point (for example, 1/3 could be entered as 33.33333333%). However, some cells are formatted so that zero, one or two values to the right of the decimal place appear in the form (exact values may still be viewed in the cell label at the top of the screen). Calculations in the spreadsheets will be based on the exact value entered whether or not it appears in the form. For the summary page, values are rounded to the nearest two decimal places and/or cents.

Three descriptions will be used in this guide to emphasize the appropriate use of the software and repercussions of misuse of the software:

> **Warning:** Information concerning a procedure or computer setting that may cause software/hardware problems if not followed correctly.

> **Caution:** Information about a procedure that may cause inaccurate data to be introduced into the financial estimates if not used correctly.

> **Note:** Information that requires other special emphasis.

Figure 1 - Flow of enterprise budget

Specify county which
determines Region:

    1 - Panhandle
    2 - West-Northwest
    3 - North-Central
    4 - Northeast
    5 - East-Northeast
    6 - Southwest
    7 - South-Central
    8 - Southeast

Specify Land Tenure

Owner   Cash Rent   Crop Share

Specify Production Type

Dryland   Irrigated

Determines Farm Size

Large   Medium   Small

Specify Crop Organization

Diversified   Specialized

Specify Machinery Complement Size

Large   Medium   Small

Specify Tillage System

Conventional or Conservation

(All Choices Same As Dryland, Large, Diversified, Medium Complement)

User specifications above are used to set-up the initial budget

User modifies budget

Save budget

SOFTWARE INSTALLATION

We recommend that you copy the Enterprise Budget files to the hard drive of your computer for use. This will ensure that any customized budgets will not be saved over the original budget templates.

Paid and Complementary Users

Budget software inquiries can be made via the contact information listed on the cover page and the software will be provided via email. Simple budget summaries are available to the public at the enterprise budget website at no charge.

GETTING STARTED

The OSU Enterprise Budgets are Excel-based spreadsheets. Each budget is an Excel workbook with multiple worksheets within the workbook. To use a budget, you will need Excel 2010 (or a later version). Open Excel by clicking on the Excel icon. When opening the file, users may see a warning that the file includes macros, asking if the user wants to enable macros. Select *Enable Macros* to fully utilize the features of the budgeting tool. Alternatively, at the top of your Excel screen you may see a message *SECURITY WARNING Macros have been disabled*. Select the box "Enable Content" to use the Excel sheet.

Terminology

Figure 2 shows the tabs for worksheets in the wheat budget and identifies terms used in this guide.

Figure 2. Terms Used in User's Guide

Command button fonts are color-coded. A blue font indicates a decision task via popup form. Orange fonts are information references and black fonts are generally location links.

SOFTWARE OPERATION

The Start-Up Form

When a budget file (or workbook) is opened, a form appears which allows you to specify information used to calculate the base budget. A wheat budget start-up form is shown below:

An indication of the size of farm (crop and pasture) and enterprise is needed to estimate non-harvest and harvest default machinery and equipment costs. And, in the alfalfa budget, estimated stand-life must be entered for use in determining the number of years over which establishment costs are prorated.

For small grain budgets, the way the wheat is to be used must be identified, for example, wheat for grain and winter grazing, wheat for grain only, or wheat for grazing only. Specifying the county determines the initial yield based on Oklahoma Agricultural Statistics Service reported averages for the county or region.

Note: *Other County* is the appropriate choice for operations outside of Oklahoma. The statewide average yield for Oklahoma and the north-central production region (defines the machinery cost structure) are the default settings. *Other State* and *Other Country* are additional choices in the goat budgets. The user may edit the red label in the budget summary header to a specific county, state or country if desired.

5

The user may specify whether the crop will be on land they own, cash rent, or share rent. This selection is reversible only by choosing Restart. If the land arrangement is cash rent, the input sheet allows the producer to enter the cash rent amount per acre. If share rent is chosen, the user specifies the percent of the crop they receive, which will be used as the default output share throughout the budget. Defaults for other input and output share amounts are based on customary arrangements in Oklahoma (OSU CR-216, "Oklahoma Pasture Rental Rates", and CR-230, "Oklahoma Cropland Rental Rates"), but may be changed as appropriate.

Default machinery costs are determined by farm organization and the size of the tractor complement employed. The user may specify whether the farm's total acreage is devoted primarily to the enterprise budget crop or composed of several crops typical of the region specified. A choice of three tractor complements (each containing up to three tractors needed to perform field operations satisfactorily) may be selected where each is defined by the largest PTO horsepower (hp) unit available: small – 95 hp, medium – 160 hp, and large – 270 hp.

On selected crop budgets, a choice of production systems that impact seed costs, fertilizer and chemical usage, and field operations are also available. Conventional tillage systems may be compared to conservation tillage practices that maintain higher levels of soil surface residues.

The user may specify whether the budget is for dryland or irrigated crops. If irrigated is chosen, the user will be able to view the default irrigation cost information and make changes; otherwise, no direct link from the budget sheet to the irrigation sheet is shown. On forage budgets, once a choice is made as to whether the forage is for hay or pasture, the choice is not reversible during the session unless restarting a customized budget as discussed later.

> **Caution**: If an enterprise budget scenario is changed in size dramatically (for instance, total acres farmed changes from 50 to 300), a new budget should be started because the start-up form specifies machinery and equipment defaults that match farm size and acreage. To evaluate a different size enterprise after new information has been entered in budget forms (for instance, pesticides), the user may wish to save the budget file (choose *File, Save As,* and specify a name) prior to reopening the budget via the *Restart* button. Annual and perennial forage budgets alert the user to save the current session before switching to a different forage selection. In general, default values and/or customized settings may be erased when different information is specified in the start-up form.

> **Note:** Disabled tractor complement choices may appear due to infeasibility concerns (e.g., tractor is required to used than hours available). The user may choose the next available size and perform revisions later in the non-harvest machinery cost summary.

> **Note:** You may add forages for future reference in the annual and perennial forage grass budgets. Scroll through the forage type(s) using the scroll bar (or arrow keys) and select *Add New Forage*. Enter the new forage properties and click on *OK*. The new item will be added to the bottom of the forage list. To use the item, scroll to the bottom of the list and select it.

> **Note:** On various pop-up forms, buttons with a ? (question mark) label are available to assist the user with entry items and/or provide additional information as to the general use of the form.

Once the start-up form is completed, click on *OK*. A budget summary sheet will appear (see below). Values in budgets are specified on a per unit basis--per acre for crop budgets, per

head in livestock budgets. The budget may be further customized by clicking on the budget items in blue (hyperlinks) which link to supporting sheets. The hyperlinks change color once they have been used, allowing the user to note items they have visited and ones they may still need to view. You may also click on the tabs at the bottom of the sheet to move to a specific sheet within the workbook.

Note: It is important to follow through and check all supporting sheets to ensure that the assumptions match the budget specified. Some modification may be needed on many or all sheets.

Dryland Wheat Enterprise Budget - Grain and Graze
1000 acres farmed, 160 acres for this budget

Name
Farm Description

OKLAHOMA COOPERATIVE
EXTENSION SERVICE

PRODUCTION	Units	Price		Quantity		Total $/Acre
Wheat	Bu.	$	7.00	40.00	$	280.00
Small Grain Pasture	Acre	$	82.50	1	$	82.50
Other Income	Acre	$	-	0	$	-
Total Receipts					**$**	**362.50**

OPERATING INPUTS	Units	Price		Quantity		$/Acre
Wheat Seed	Bu./acre	$	16.80	1.50	$	25.20
Fertilizer	Acre	$	94.74	1	$	94.74
Custom Harvest	Acre	$	-	0	$	-
Pesticide	Acre	$	28.28	1	$	28.28
Crop Insurance	Acre	$	15.00	1	$	15.00
Annual Operating Capital	Dollars		7.75%	96.81	$	7.50
Machinery Labor	Hrs.	$	18.25	0.61	$	11.13
Custom Hire	Acre	$	12.96	1	$	12.96
Machinery Fuel, Lube, Repairs	Acre	$	44.19	1	$	44.19
Other Expense	Acre	$	5.00	1	$	5.00
Total Operating Costs					**$**	**244.00**
Returns Above Total Operating Costs					**$**	**118.50**

FIXED COSTS	Units	Rate			$/Acre
Machinery/Irrigation	$/value				
Interest at	Dollars	8.00%		$	12.13
Taxes at	Dollars	1.00%		$	2.45
Insurance	Dollars	0.85%		$	1.40
Depreciation	Dollars			$	20.32
Land	$/acre	$	-		
Interest at	Dollars	0.00%		$	-
Taxes at	Dollars	0.00%		$	-
Total Fixed Costs				**$**	**36.30**
Total Costs (Operating + Fixed)				**$**	**280.30**
Returns Above All Specified Costs				**$**	**82.20**

Garfield County - North-Central OK   Owner-Operator
Owned equipment

View Grain Break-Even Analysis
View Grain Sensitivity Analysis
View Pasture Break-Even Analysis
Restart
Print Reports
Generate Cash Flow

Tabs: Budget | Yield | Pasture | Other Inc | Seed | Fertilizer | Harvest | Ins | Pesticide | Parameters | Machinery

The advanced user's guide for describes information in each tabbed sheet. In crop budgets, the tabs may include Yield, Hay, Pasture, Other Inc(ome), EstNew (Establishment Costs), Seed, Fertilizer, Harvest, Ins(urance), Pesticide, Disease, Insects, Weeds, Parameters,

Machinery, Irrig(ation), C(ash) Rent, Other Exp(enses), and IFFS. In livestock budgets, common tabs include Prod(uction), Pasture, Other Inc(ome), Hay, Grain, Protein, Salt, VetMed1(Veterinary Medicine), VetSupplies, Marketing, Parameters, Machinery, Equip(ment), Other Exp, and IFFS. In the cattle budgets, additional tabs are Minerals and Additives. Cat(tle) Inv(entory) and Inventory sheets are available for cow-calf and meat goat budgets respectively.

> **Note:** If you use the tabs at the bottom of the sheet to move from worksheet to worksheet within a budget, your cursor will return to the spot where you last left it on the previous worksheet.

Worksheet Data Entry

All budgets initially include default values, such as average prices, yields, livestock weights, etc. To change the default values to match a particular farm operation, click on the hyperlink item in the budget summary or select the worksheet tab located near the bottom of the screen. This accesses a second, specific worksheet. For example, let's say that you are interested in changing the default data for Pesticide use in the Wheat budget. On the wheat budget under OPERATING INPUTS, click on *Pesticide* (blue input link), and the following worksheet will appear:
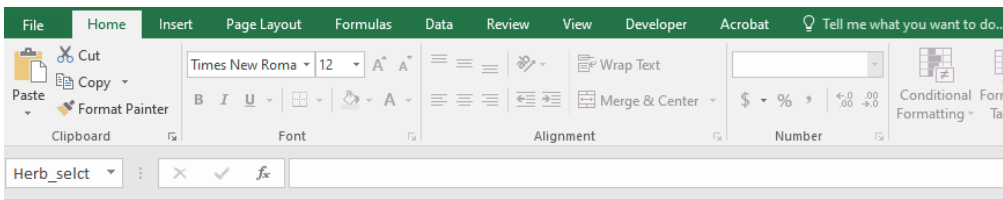
Default pesticide practices have been specified. You can use the defaults or specify your own pesticide applications. Double-click anywhere in the pesticide table yellow cells to access a list of default pesticides.

Pesticide	Month to Apply	Application Unit	Units per Acre	Acreage Applied	Cost per Unit	Custom App. Charge	Cost of Chemical	Total App. Cost
Axial XL	11	Ounce	10.00	160	$ 1.28	$ -	$ 12.80	$ 12.80
2, 4-D	2	Pint	1.50	160	$ 3.71	$ -	$ 5.57	$ 5.57
Dimethoate	3	Pint	0.50	160	$ 6.45	$ 6.48	$ 3.23	$ 9.71
Headline	5	Fl. Oz.	1.50	160	$ 4.46	$ 6.48	$ 6.69	$ 13.17
							$ -	$ -
							$ -	$ -
							$ -	$ -
							$ -	$ -
					Total cost per budget acre		$ 28.28	$ 41.24

Budget

For more information:
EPP-322 Pesticide Recordkeeping Requirements for Crop Production
AGEC-601 Do not Cheat Yourself: Cheat Control is not a Cost
CR-7194 Management of Insect and Mite Pests of Small Grains
EPP-7661 Major Foliar Fungal Wheat Diseases in Oklahoma

Data can be modified in entry cells colored in light yellow or green. Pop-up forms are available by double-clicking on the block of yellow cells to the left of the formula column(s) highlighted in blue. Tan cells contain default information. Do not try to replace information directly in blue formula or tan default cells as they are protected. Use numbers for months

(January = 1, February = 2, etc.) unless a pop-up menu allows you to select the name of the month. Lists of default items in pop-up forms are in alphabetic order.

To move from one cell to another, use the arrow keys or click with the mouse on the next cell. Within a form, the Tab key moves your cursor one cell to the right. The Enter key moves your cursor down one row. Enter numbers as decimals in worksheets; fractions are not allowed. For example, 1/3 should be entered as 0.33. You can make changes to the default data by placing the cursor in one of the yellow cells and double-clicking. If you double-click on a line containing information from a prior session and make changes, your data will be updated on this line. For instance, in the Pesticide worksheet (shown above), if you double-click on a blank line and select a pesticide, it will be added to the existing entry. Double-clicking on the line with 2,4-D will bring up the following form:

Select Pesticide

Pesticide Information
2, 4-D
Amber
Axial XL

Pesticide Name: 2, 4-D
Month to Apply: 2
Application Unit(s):   Pint
Units/Acre: 1.5
Number of Acres   160
Cost/Unit ($):   3.06
Custom App. Cost ($):   0.00

Additional Information

Pest/Weeds Controlled:

Broadleaf

Apply before the joint stage

Reset Defaults   OK   Cancel

Using this pop-up form, you can change the application month, unit or rate, acreage applied, cost per unit, and custom application cost. You may scroll through the Pesticide list at top using the scroll bar (or arrow keys) and choose another pesticide. You may also add a new pesticide for future reference. Scroll to the bottom of the list and click on *Add New Pesticide*. Type in the new name, month to apply, etc. Click on *OK*. The new item will be added to the bottom of the list. To use the item, scroll to the bottom of the list and select it.

The pop-up forms summarize information either specified by the user or OSU-specified default data. Use of the pop-up form is recommended if you would like to retain item changes for future sessions.

> **Note:** Changes made in the worksheet without the use of the pop-up form does not change information stored in the user's database. Consequently, the item's contents as shown in the worksheet may not match the form's contents for that same item.

> At any time, the user may access default (OSU specified) information by clicking on *Reset Defaults*. This may be especially useful after a database update as discussed later.

Note: In addition to Pesticide, new items may be added in Fertilizer, (Disease, Insects, and Weeds for peanuts, Growth Regulators/Harvest Aids for cotton, Equipment Inventory and Fence System for annual and perennial forage) in crop budgets. In livestock budgets new items may be added in Pasture, Hay, Grain, Protein Supplement, Additives, Salt, Minerals, Equipment Inventory, Parasite Control, Vaccines, Medication, Implants, Other Processing, and Vet Supplies. The process for adding and modifying items in these sheets is similar.

Not all changes require the use of pop-up forms. If, for example, you want to change the wheat price in the wheat budget, go to the budget, click on *Wheat* (highlighted in blue), and then make the change in the appropriate green cell on the Yield worksheet.

Erasing Default Information

If default information is not relevant to your operation, highlight the cells to be erased, choose *Edit* from the main menu bar, *Clear*, *Contents*. Or, you may highlight the cells to be erased and press the Delete key. Type in a zero or use the Delete key to clear the contents of individual cells. Only erase yellow or green input cells. A cell protection message appears if the user attempts to erase protected tan or blue cells.

Warning: Using the space bar to clear contents may result in a #Value! sign or a Visual Basic for Applications (VBA) Error.
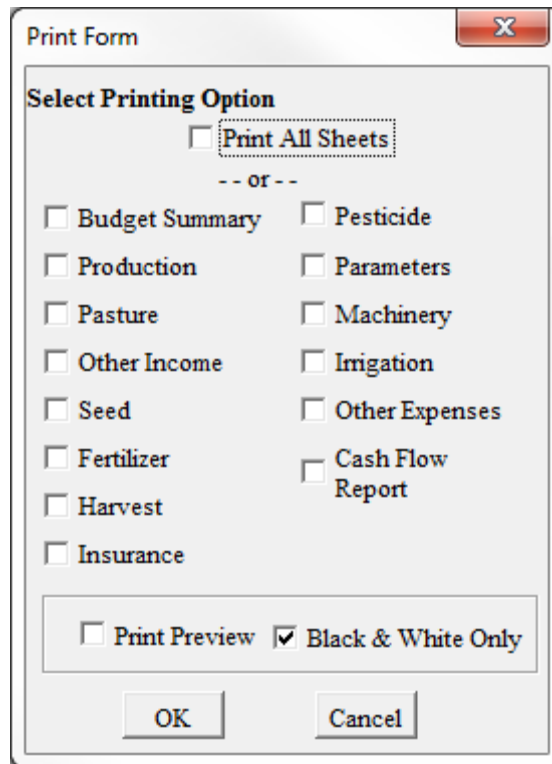
Breakeven and Sensitivity Analysis

The enterprise budget provides information on break-even prices and yields for grains and pasture given the budget specifications. In a summary table at the bottom of the Budget sheet, two breakeven yields and prices are shown: one above operating costs, the other above total costs (both operating and fixed). The breakeven yield above operating costs is the yield needed to cover costs given the expected price and other income. The breakeven price is the price needed to cover costs given the expected yield and other income.

Sensitivity tables display the return per acre over operating costs and above all specified costs. The sensitivity tables allow the user to adjust the percentage change in crop yields and/or percent change in crop price. In forage budgets, the user is provided break-even hay prices and yields that would offset the value of pasture less fertilizer costs given the pasture's nitrogen requirements.

Print Reports

Summary sheets are available for each worksheet tab in the budget (wheat is shown here).

The user may choose to print all or individual reports. Clicking on *Print Preview* will allow all selected reports to be viewed prior to printing. Choose *Close* (or *Next* in the case of a multiple page report) to view reports while in the print preview mode. You may then print selected reports by deactivating *Print Preview* and clicking on <u>OK</u>. *Black and White Only* is the default setting. To preview and/or print with shading or in color, de-select *Black and White Only*.

> **Warning:** Make sure a printer is currently installed prior to opening up a budget file. Failure to do so will not allow the print module to function properly and may also result in the removal of screen color formats if *Black and White Only* is selected. The user is encouraged to close out the budget session without saving and a printer should be installed prior to the next budget session.

Generate Cash Flow Report

Cash flow files may be generated by clicking on the *Generate Cash Flow* button. If *OK* is selected, the cash flow report is automatically updated and the user is asked to specify a filename. The cash flow content can be viewed later for reference purposes using the IFFS tab along the bottom of the Excel screen. The output sheet is essentially a "snapshot" of the cash flow file.

      Purchased feed or rented pasture will be included in the appropriate operating expense line in the report. Raised inputs such as hay or pasture are included in livestock cash flow as a "Contribution of Other Enterprise" (bottom of report). In similar fashion, retained stocker calves from the cow herd or stocker goats from the meat goat operation are also a "Contribution of Other Enterprise". In all cash flow reports, tax and insurance allocations may be specified as operating expenses or included in "Land or Other Fixed Charges". Leased pasture income is a cash transaction and is shown as cash income. In cow-calf and meat goat budgets, weaned offspring that are retained for an additional production phase (e.g., stockers) are shown as a "Contribution to Other Enterprise".

> **Note:** The box containing Days on Feed, Avg. Daily Gain and calculated sell weight are components used in the cash flow report and are not tied to or used by the stocker enterprise budget.

> **Note:** If a budget is modified, the *Generate Cash Flow* button must be used to update the report before the numbers shown in the IFFS tab or printed in a report will be accurate.

Saving a Customized Budget

To save a 2010 or later version formatted budget file**,** click *File* on the upper left-hand corner of the screen, *Save As*, and give the budget a new name so as not to replace the original budget template.

> **Note:** You may want to save a customized budget before printing it so that the correct file name will print at the bottom of the page.

Restarting a Customized Budget

To evaluate a different enterprise budget scenario, press the *Restart* button. A pop-up menu confirms your intention before you access a start-up screen containing the information previously entered. If you do not want to modify information on this screen, click *Cancel*. If you want to modify the start-up data, make the appropriate changes and click on *OK*. Pressing *OK* will save information in this start-up form as new defaults.

> **Caution:** In general, various inputs automatically increase or decrease if a different budget acreage or stocker herd size is specified. The notable exception applies to the cow-calf budget where it is important to update the appropriate number of head shown in supporting worksheets to correspond with the new scenario.

Re-opening a Customized Budget

When you re-open a budget that you have saved from a prior session, you will get a start-up screen that contains the information previously entered. If you do not want to modify information on this screen, click *Cancel*. If you want to modify the start-up data, make the appropriate changes and click on *OK*. Pressing *OK* will modify new defaults to match the start-up data.

Error Messages

All budget workbooks were developed in Microsoft Excel and utilize VBA to handle data manipulation and provide the user interface. If you encounter a VBA error, you will receive pop-up message similar to this:

Microsoft Visual Basic

Run-time error '13':

Type mismatch

| Continue | End | Debug | Help |
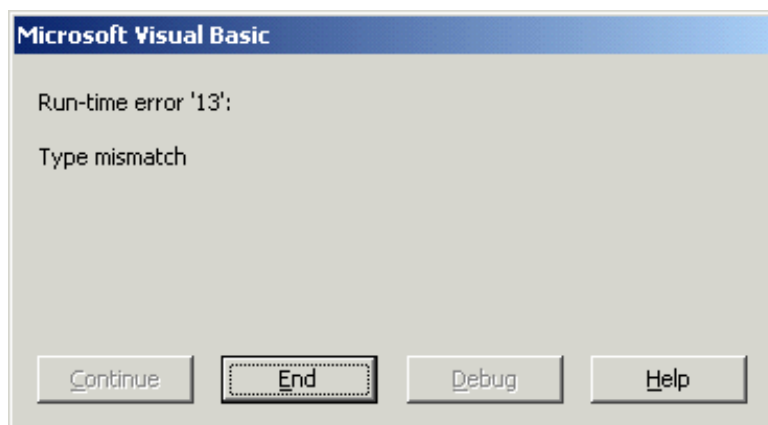
Press *End* to ignore the code error and continue running the program. However, there may be errors in logic and/or calculations as a result. The user should document the series of steps leading to the error message, save the file, and notify:

Roger Sahs, Extension Associate
520 Ag Hall
Oklahoma State University
(405) 744-7075
roger.sahs@okstate.edu

CROP AND FORAGE BUDGET WORKSHEETS

Production

All crop production information is located on the Yield sheet. Default yields are determined by the user's county selection that is linked to the area of the state and production type (irrigated or dryland). The default price is based on a 10-year annual average. An input row, "Your Value", below the default specification allows the user to enter changes.

In most budget settings, clicking on the *Month(s)* button brings up a form allowing the producer to specify month(s) of crop sales as well as monthly sale prices. The default values reflect the historical seasonal price index adjusted to the 10-year annual average price. The user may adjust any sale months and/or prices in the form. If the sale month is changed from harvest, a message will remind the user to adjust the annual capital month in the Parameters section to match the first month of sales. This allows the budget's operating interest to calculate accurately. If multiple sale months are specified, a weighted average price will be used in the budget summary.

If you first enter specific prices in specific months but later want to reset the price series back to a seasonally indexed default, use the *Reset Default Prices* button. The resulting price series reflects the default estimated harvest price (or user-specified price if an entry was made in "Your Value") with seasonal variation. There are several crop budgets that do not contain seasonal price indices, resulting in equal monthly default prices in the sales form. To restore the initial default price and distribution, the user must also delete the contents of "Your Value" under "Estimated Harvest Price".

Note: Resetting the price does not reset the distribution of sales to 100 percent at harvest.

The *Averages* button provides a 10-year average statewide price history plus data on the 10-year average yield by production region. Production regions correspond to crop reporting districts and the user may view their location in Oklahoma by pressing the *View Reporting Districts* button. *Budget* buttons return the user to the Budget sheet.

Note: Cotton yields are based on a 5-year average due to recent advances in boll weevil eradication efforts that have improved production levels.

There are two methods of revising yield in annual and perennial forage hay budgets. The first method is to customize default values. The user may make additional production adjustments by pressing first, the *Forage Info* button and second, the *Adjust Forage Production* button to access a pop-up Forage Production Adjustments form allowing changes to be made in hay production (shown below). Area adjustments are made according to the county specified in the start-up screen and are disabled in the form. Land quality adjustments may be changed in the form, but the default setting is average (100%). Area and land quality adjustments are disabled for new forages. The user may always override the calculated forage production by entering a value for "Your Forage Production" within the form. The user may also reset production levels back to the original defaults (OSU data for default forages, user data specified at start-up for added forages) by clicking on the *Reset Defaults* button.

The second method is specifying production in the "Your Value" input row. The user may press the *Field Info* button as a reference to determine yield and price levels based on historical records. Again, "Your Value" input cells always override default information.

>   **Note:** In annual and perennial forage budgets where pasture is selected, additional forage adjustments are made in utilization and harvest efficiency in order to determine annual usable production.

Pasture – Small Grain Budgets

Click on *Small Grain Pasture* in the budget summary (refer to Figure 2) to proceed to a small grains pasture screen in the Pasture sheet. Choose grazing options - *grain and winter graze* (November-March) or *grazeout only* (November-May) and indicate whether the pasture will be grazed by operator's livestock or leased out. *Grain and winter graze* implies a grain and forage production situation where the default assumption is that the pasture will be owned by the livestock operator, grazed with stockers from November through March on a per pound of gain basis, and at a stocking rate of 3 acres per head. To modify the estimated pasture value, click on the *Determine Winter Grazing Pasture Value* button (do not attempt to directly enter values in the Small Grain Pasture Value summary). Choose from three options: *$/lb. of gain*, *$/head/month*, and *$/cwt/month*. Then specify the livestock in-weight when placed on pasture, date placed on pasture, estimated weight when removed, date removed from pasture, stocking rate, and rental price.   Default rental prices are based on data from OSU CR-216. Press *Reset Defaults* to return to the original default settings.
>   A grazeout situation does not include grain production and consists of two grazing periods, one during the winter as described above and an additional spring grazing timeframe. The default assumption if grazeout is selected is that spring pasture will be owned by the livestock operator, grazed with stockers from March to May on a per pound of gain basis with a stocking rate of 1 acre per head. To modify the estimated spring pasture value, click on the *Determine Grazeout Pasture Value* button. The values from this additional grazing period plus the winter grazing period comprise the total pasture value from grazeout.

Note: If *grain only* is selected, the pasture revenue is zero. The oats budget contains two options – grazing or grain production. A spring grazing period is assumed for spring-seeded oats as well as a late fall grazing season for fall-seeded oats.

Grazing pasture by the landowner's livestock or via a leasing agreement with a tenant does not impact the pasture value shown in the budget summary. However, leasing income is a cash transaction and is used if exported to a cash flow file. For leased out pasture, the user will need to specify the month(s) payments are received by clicking on the *Adjust Month(s)* button. For pasture grazed by the landowner's livestock, grazing is a non-cash transaction and is, in effect, a contribution to other enterprises. Clicking on the *Adjust Month(s)* button allows the user to specify the percent grazed by month. Allocations of forage use will be entered as Contributions to Other Enterprises in the forage cash flow report. In either case, the total allocation must equal 100 percent and the distinction between the grazed or leased setting will be shown only on the IFFS sheet.

The *Rental Rate Information* button provides typical small grain pasture rental rates for prior years and other sources of rental rates. The *Suggested Removal Dates* button provides useful information about stocker removal dates for different areas of Oklahoma if grain production is desired.

Pasture – Annual Forage, Perennial Forage Grass Budgets

During a pasture setting as specified via the start-form form, click on *Pasture* from the budget summary to proceed to a production summary for the specified forage. Determine the useable (e.g., available for grazing) production per year using the Forage Production Adjustments form via the *Adjust Forage Production* button. As mentioned in the hay production discussion, area adjustments are made according to the county specified in the start-up screen and are disabled in the form. Land quality adjustments may be changed in the form, but the default setting is average (100%). Area and land quality adjustments are disabled for new forages. The user may always override the calculated forage production by entering a value for "Your Forage Production" within the form. Additional revisions may be made in utilization and the type of grazing system. The user may also reset production levels back to the original defaults (OSU data for default forages, user data specified at start-up for added forages) by clicking on the <u>Reset Defaults</u> button.

Next, the user is provided two livestock grazing options, cow-calf pairs or stockers. An indication of whether the pasture will be grazed by operator's livestock or leased out should be made. To estimate pasture value, click on the *Determine Pasture Value* button (do not attempt to directly enter values in the Pasture Value summary). Choose from five options: *$/head/season, $/acre/season, $/lb of gain, $/head/month, and $/cwt/month*. If cow-calf is selected, choose from *$/head/season, $/acre/season, and $/head/month*. Next, specify the livestock in-weight, date placed on pasture, estimated weight when removed, date removed from pasture, stocking rate (if desired), and rental price on the pasture valuation form.

Dollars per Acre per Season

Date placed on pasture (mm/dd/yy)	5/1/14
Weight when placed on pasture (Lbs.)	1200
Date removed from pasture (mm/dd/yy)	9/28/14
Estimated weight when removed (Lbs.)	1300

Calculate Stocking rate and ADG

Stocking Rate and ADG

Estimated Stocking rate (acres/head)	6.32
Your Stocking rate (acres/head)	6.32
Average Daily Gain	0.67

Value: Dollars per Acre per Season — 18.64

Reset Defaults   OK   Cancel

Output fields such as estimated stocking rate and average daily gain (ADG) are based on usable forage production (as shown in the production summary), grazing periods, and livestock weights. Default rental prices are based on data from OSU CR-216. If the user makes changes in weights or grazing periods within the pasture valuation form, the *Calculate stocking rate and ADG* button should be clicked to update estimates for these output fields (if not, the user is reminded when pressing *OK)*. The user may specify a stocking rate as opposed to the calculated value and is prompted to confirm prior to exiting the form. Press *Reset Defaults* to return to the original default settings. Table 2 provides a summary of default pasture valuation settings.

Table 2. Default Pasture Valuation Settings for Annual and Perennial Forage.

Budget Template	Perennial Forage		Annual Forage	
Forage Type	Bermuda		Sudan	
Enterprise Category	Cow-calf	Stockers	Cow-calf	Stockers
Valuation Method	$/Head/Season	$/lb. of Gain	$/Head/Season	$/lb. of Gain
Date Placed	May 1	May 1	June 1	June 1
In-Weight (lbs.)	1200	500	1200	500
Date Removed	September 28	September 28	October 1	October 1
Out-Weight (lbs.)	1300	725	1300	725

As with small grains, the selection of grazed or leased out does not impact the pasture value shown in the budget summary. However, leasing income is a cash transaction and is used if exported to a cash flow report. For leased out pasture, the user will need to specify the month(s) payments are received by clicking on the *Adjust Month(s)* button. For grazed pasture, grazing is a non-cash transaction and is, in effect, a contribution to other enterprises. Clicking on

the *Adjust Month(s)* button allows the user to specify the percent grazed by month. Allocations of forage use will be entered as Contributions to Other Enterprises in the forage cash flow report. In either case, the total allocation must equal 100 percent and the distinction between the grazed or leased setting will be shown only on the IFFS sheet.

With annual forage, the *Rental Rate Information* button provides a reference for Oklahoma rental rates. In perennial forage, a similar link provides typical pasture rental rates by forage type grown in various Oklahoma regions.

> **Note:** On forage budgets, the choice of hay or pasture can be made only in the start-up form. If the acreage is both hayed and grazed during the year, two separate budgets should be developed using the same acreage with costs split between the production types. For instance, pesticide and fertilizer expense could be prorated depending on the percentage of total forage production allocated for pasture and hay.

Other Income

The Other Income sheet allows the user to specify any other income generated (for example, government payments, straw or seed sales), the month received, and the amount per acre. Two lines are reserved for government payments in selected crop budgets.

Establishment – Alfalfa and Perennial Forage

In multiyear budgets, establishment (also known as preproductive) expenses are prorated as a fixed cost in the enterprise budget summary. Preproductive cost determination and allocation are based on the cost recovery method where annual costs are accrued to a future value at the end of each preproductive period (AAEA Task Force). The total cost is then amortized over the specified stand life of the enterprise

Establishment costs are prorated in the enterprise budget, but the full cost of establishment may be transferred to a cash flow report if it is expected to be a cash cost in a planning year. Establishment cost may be determined by clicking on the *Establishment* link in the budget summary, transferring the user to a cost summary of production practices. Clicking on a production item link allows the user to make revisions.

> **Note:** In forage budgets with multiple forage types, the user is prompted whether to save the current session when choosing a different forage since the settings related to the current forage type will not be preserved in their entirety.

Seed

Use this sheet to specify seeding rate, seed price, and planting month. In selected crop budgets, the *More Info* button provides additional information on statewide planting dates, seeding rates, and other specifics.

Fertilizer

Up to eight fertilizer applications may be specified in the Fertilizer sheet. Data needed includes the fertilizer type, month of application, pounds applied per acre, acreage applied, percent nitrogen (N), percent phosphorus (P), percent potassium (K), percent sulfur (S – canola only),

fertilizer price per ton, and custom application charge. Default fertilizer applications are specified but can be modified. Alternatively, another fertilizer can also be entered directly in the worksheet by double-clicking within the yellow cells. A pop-up form of available fertilizers, the acreage applied (default is the user-specified budget acreage), the percent N, P, and K, the price per ton, and custom rates are provided. The worksheet automatically calculates the price per pound of the fertilizer. The user may indicate the pounds of P and K needed for fertilizer requirements, residual soil nitrogen (default is zero), and adjust application practices to meet those needs.

> **Note:** An automatic computation of nitrogen is provided on most crop budgets to meet yield and pasture requirements. The exceptions are peanuts, soybeans, maintenance of new forages (annual and perennial), and the establishment of new perennial forages where the user may indicate the pounds of N required.

The *Fertilizer Rates* button provides N, P, and K recommendations based on Oklahoma State University (OSU) field tests. Use the *Lime Application* button to enter lime cost. The input sheet for lime is similar to that of fertilizer. Entries include month of application, tons applied per acre, acreage applied, percent Effective Calcium Carbonate Equivalent (ECCE), the price per ton, and years over which the costs should be prorated. Any custom application cost is also prorated and included in the *Custom Hire* budget item. In the case of alfalfa and perennial forage, custom lime application costs are included in the establishment budget. An input sheet for zinc is available for peanuts.

The *Fertilizer Calc* button is used to toggle on or off the automatic computation of nitrogen to meet yield and pasture requirements. The default mode automatically calculates the amount of the fertilizer shown in the first line of the form to meet the yield and/or pasture goals. Manual adjustments in the type and amount applied can be made with the fertilizer calculator turned off. A message appears below the fertilizer table if applied nitrogen does not meet the yield and pasture requirements. Similarly, if the nitrogen level in the soil matches or exceeds nitrogen requirements, a message suggests a potential reduction of nitrogen application(s). The nitrogen message appears only if the application is 10 pounds over or under the amount required. Phosphorus, potassium or sulfur messages appear only if the application is 5 pounds over or under the amount as specified by the user.

> **Note:** A fertilizer calculator is not included in the alfalfa budget since regular applications of nitrogen fertilizer are unnecessary.

Custom Harvest

The *Custom Harvest* link in the budget summary allows the user to specify harvest operations and costs for owned or custom work in the Harvest sheet. If owned machinery is selected, all operating costs will be included in the *Machinery Fuel, Lube, Repairs* budget item and *Custom Harvest* costs will be zero. Budgets assume that the operator is using owned harvest machinery and equipment unless the user clicks on the *Custom* option button. Default custom rates are based on data from OSU CR-205 that roughly correspond with the production regions defined in the budget template.

Note: If used machinery is specified at start-up in the livestock budgets, then a used machinery default cost structure is shown in the Machinery Cost Calculator section. If you change any or all of the items to "new", the budget summary header does not change.

Clicking on the *View Owned Equipment* button allows the user access to the Owned Harvest Machinery Cost summary section for further analysis. Total variable and fixed costs are calculated only if the *Owned Harvest* option button is active. The user may make changes in the default cost structure by entering values directly into the "Your Value" column or clicking on the *Combine Cost Estimator* (*Harvester Cost Estimator* for cotton, *Forage Harvester Cost Estimator* for corn silage) button. Harvest costs on a per acre basis are shown in the Cost Estimator section. The user may change green cells to alter harvesting costs from owned machinery.

Although the budget software does not have a *Machinery Leasing* option button, the user may incorporate the costs of a leased harvest machine by following these steps:

1. Activate *Owned Harvest* option button.
2. Adjust fixed cost to zero if appropriate (all harvest machinery and equipment is leased) in the "Your Value" column of the Owned Harvest Machinery Costs summary; otherwise, lower fixed costs to omit the item(s) leased.
3. Adjust variable costs if necessary. Since fuel, lubricant, and labor costs are the same whether a machine is owned or leased, these operating items may not need adjustment. Repair costs for leased machines may need to be lowered, because short-term leased combines would have a considerably lower hourly repair cost than a combine owned for its complete useful life.
4. Enter the lease or rental cost in the Other Expense section. Since there are various types of leasing arrangements (per day, week, month, etc.), the user will need to convert the rental amount (including any delivery costs) to an acre basis given the specified budget acreage.

In hay forage budget situations, the user is referred to a harvest operations summary table that details the number and type of haying operations as well as total costs per acre, per ton, and per bale on the Harvest sheet. The user may revise costs by clicking on *Forage Operations*. Custom or owned equipment alternatives are available for each haying operation. Total custom costs may be tailored to fit an individual's situation by revising custom rates or the number of operations. Default custom rates are based on data from OSU CR-205 that roughly correspond with the production regions in the budget template.

In cutting operations, default costs are based on whether equipment is new or used, the annual acres of use for all forage types and the selection from two types of forage cutting implements: a self-propelled windrower and a pull-type 14-foot mower-conditioner matched with a 75 PTO hp tractor. The tractor is assumed to have 500 annual hours from all farm operations. If a self-propelled windrower is specified, cost estimates may be viewed for further analysis by pressing on the *Cost Detail* button that appears in the lower left-hand corner of the form. A breakeven acreage calculation illustrating the harvested acreage needed to justify ownership is provided as an additional analytical tool.

Default harvest costs for a self-propelled windrower may be revised in the greens cells with user-provided information such as list prices, field capacity, usage in years, and other cost parameters. The new or used selection as well as annual acres of use can be specified only via the Cutting tab in the Forage Operations pop-up form. The frequency and timing of cutting operations should reflect the cultural practices on the farm. The number of hay cuttings is

20

limited to six.   The percentage of annual production cut per operation is required to determine baling and hauling costs, since tonnage per operation impact these costs. The user may override any calculated cost in the Your Value column within the form. Since depreciation and repair coefficients are based on ASAE formulas, they cannot be changed. The resulting variable and fixed cost determinations are available on an acre basis.

> **Note:** The annual acres of use may exceed the acres of use estimated in the budget (number of operations times the acreage specified in the budget) since the budget may represent only a fraction of the total use of the machinery or equipment (it may be used with other crops or for custom work).   However, if the annual acres of use specified is less than the annual acres calculated from the budget acreage, the user is reminded to adjust either the number of operations or the annual acres of use. Failure to make the adjustment results in an automatically calculated value that is equal to acres of use from the budget acreage specified.

Raking default costs are based on whether the equipment is new or used, annual acres of use for all forage types, and the selection from two types of rakes: an 8.5-foot side-delivery rake or 21- foot 10-wheel rake. Again, the annual acres of use may exceed the acres of use in this budget for raking operations. The frequency and timing of raking operations should reflect the cultural practices on the farm. The number of operations is limited to six.   The user may override any calculated cost in the Your Value column.

Baling default costs are based on the selection from three types of balers (small square or large round matched with 75 PTO hp tractor or large square matched with 140 PTO hp tractor), new or used, annual acres of use for all forage types, and estimated bale weight in pounds. The note above regarding annual acres of use also applies to baling operations. The frequency and timing of baling operations mirrors the choices made in the cutting operation menu. Although this may not reflect forage practices in some situations (for example, hay could be cut one month and baled the following month due to adverse weather), it would be normal for the two to correspond. The software verifies that the number of baling operations does not exceed cuttings. The bale weight determines the number of bales per acre and assists in custom baling and hauling cost calculations. The user may override any calculated cost in the Your Value column.

Default hauling costs on a per bale basis are not available for owned machinery operations since they vary widely depending on the hauling implement utilized and labor intensity. The user may refer to the default custom rates as a guide for owned machinery entries in the Your Value input field since owned hauling values do not change automatically given different bale packages.

Pesticide

The Pesticide sheet allows for up to eight pesticide applications. Data entries include the pesticide name, month of application, application unit, unit(s) per acre to apply, acreage applied, cost per unit, and charge for custom application. One or more default pesticide applications have been specified, but as with the fertilizer sheet, the user can modify them. By double-clicking in the pesticide table yellow cells, a pop-up form of typical pesticides, rates, and prices is shown. The user can choose a pesticide from the provided list or build a list of customized pesticides for future reference. This is accomplished via the *<Add New Pesticides>* at the bottom of the pesticide scroll list. The pesticide sheet also calculates the cost of chemical (cost per unit times

units per acre) and the cost of application (cost of chemical plus any custom application charges) per budget acre.

>   **Note:** To remove the costs associated with a default pesticide, you must delete both the cost of the pesticide as well as the custom application cost, if any.

In the peanut budget, the applications and associated costs incurred for various pesticide programs including weed, insect, and disease control are provided on separate screens. In addition, disease control measures such as seedling, foliar, sclerotinia blight, southern blight, nematodes, and pod rots may be entered individually or as a combined cost for all items. Select the *Itemized* option button to enter detailed cost information. Click on *OK* to proceed with your choice. A cost summary of practices is shown with links to each disease control. Data may be entered directly or by double-clicking within each disease control table. To specify a total value that summarizes all disease control information, select *Combined* and click on *OK* to proceed. This choice will override all individual settings with a value reflecting all controls. Use of *Combined* does not allow custom costs associated with disease control to be included in custom hire calculations shown in the machinery sheet or budget summary.

Crop Insurance

Use this sheet to enter the cost per acre of crop insurance. You may also record some descriptive information about the policy (approved APH yield, yield coverage level, crop price election, the value of coverage). Only the cost per acre value is used in any budget calculations.

Annual Operating Capital

The cash needed to pay monthly bills may be borrowed from an agricultural lender where interest is charged based on the interest rate and duration money is borrowed. Or, money may be "borrowed" from farm or family savings to cover shortfalls, resulting in foregone interest income. Operating capital requirements are estimated on an annual basis by determining how long each expense is invested in the enterprise before it is recovered through the sale of all or part of the enterprise's production. The annualized capital needs for a given month are the difference between receipts and expenses for the month divided by 12 plus the previous month's annualized capital requirements. If the balance for any month is zero or less, the annualized capital balance is set to zero as a base for the following months. Monthly capital needs are totaled to obtain the annual capital requirements, and hence the annual operating capital charge. The user can make changes to the default interest rate charged on operating capital by adjusting the percentage on the Parameters sheet.

The annual capital month is the month when outstanding interest charges on annual capital are terminated and is generally assumed to coincide with the month of production. The default annual capital month in the crop budgets generally assumes that the sales month coincides with the harvest month. For budgets with hay production, the annual capital month follows the last harvest month (100% of annual production sold in one month). And, for livestock budgets, the annual capital month is when calves or stockers are sold. As mentioned earlier, if the user does not employ the default budget sales month, a message will prompt the user to adjust the annual capital month in the Parameters sheet to reflect the revised sale month (or the first month of sale in the case of multiple months). This will allow the budget's operating interest to calculate accurately.

Parameters

Parameters are items such as wage rates, fuel prices, tax rates and interest rates used in determining the opportunity cost on investments. Several variables listed in the Parameters sheet are used in all budget calculations: labor wage rates, fuel prices, annual operating and machinery loan interest rates, tax and insurance rates for machinery, harvest month, opportunity interest on owned land, ad valorem tax rate on land, value of land per acre, and the percent of overhead costs to be allocated to the enterprise. In default budgets, land is a residual claimant against the returns shown in the budget summary. However, the opportunity cost of land and real estate taxes may be included through data entry in the Parameters sheet. If such costs are included, returns above all specified costs are defined as returns to management, risk, and overhead in the budget summary.

Machinery

Non-harvest machinery costs are summarized in the Machinery sheet with links to non-harvest operations and other details. The default assumes non-harvest machinery is owned. Non-harvest costs are representative for the farm size/organization, machinery complement, and tillage system initially specified at start-up, the level of custom service selected, and the operations based on information in the Non-Harvest Operations section. The non-harvest machinery cost sheet has buttons to *View Parameters*, *Non-Harvest Operations*, and *More Information*.
    The user has three machinery selections available in the effort to build a cost scenario that best represents the field operations performed using owned machinery and/or custom operators.

1. If *Use Owned Equipment Only* is selected, the machinery cost structure assumes, as mentioned above, the farm size/organization and the machinery complement initially specified at start-up and the default operations shown in the Non-Harvest Operations section. With this choice, the Non-Harvest Operations section is primarily available for reference purposes only. A 0.5 times over means that half the budget acreage is covered (for instance, with a spraying operation) annually or all the acres are covered every two years. Modifying the Non-Harvest Operations section will not change the default cost calculation for owned machinery (any frequency or timing revisions may influence the allocation of such costs if exported to a cash flow report, however). The user may enter cost revisions concerning owned machinery in the "Your Value" column in the Non-Harvest Machinery Cost summary. For assistance in calculating costs for a farm's machinery complement, refer to MACHSEL[2]. If the user changes any settings in the Parameters sheet via *View Parameters* (e.g., fuel prices), automatic fuel cost revisions are made in the default column. Custom applications that are listed in the fertilizer or pesticide sections are included in total custom machinery costs within the Non-Harvest Machinery Cost summary.
2. If *Use Custom Work Only* is selected, the user may revise custom costs per acre by specifying the operations performed, frequency, and custom rate per acre in the Non-Harvest Operations section. The default custom rate data is based on OSU CR-205.

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[2] Kletke, D and R. Sestak, "The Operation and Use of Machsel: A Farm Machinery Selection Template," Computer Software Series CSS-53, Agricultural Experiment Station, Oklahoma State University, 1991.

Average custom rates for the Oklahoma reporting regions in the publication were selected to roughly correspond with the production regions in the budget template.

Caution: To prevent cost duplication, fertilizer and pesticide operations listed within the Non-Harvest Operations section are eliminated from cost calculations if custom applications in the Fertilizer and Pesticide sheets are also provided. It is recommended that further adjustments be performed separately in the fertilizer or pesticide information tables by identifying the custom operations with a custom application charge.

3. If *Use Owned Equipment and Custom Work* is selected, four categories of field operations (*Fertilizer, Pesticide, Planting, and All Other*) may be divided between either choice. If a category is identified as custom performed, a pop-up message reminds the user as to the operations that fall under the selection. As more field operation categories are custom performed, the costs for owned machinery decline accordingly. This may be a useful cost comparison when analyzing owned machinery and custom operations. For small operations or new machinery complements, the cost of custom work may be lower. If so, a choice to use the lower custom cost may be specified.

Caution: As mentioned with *Use Custom Work Only*, additional revisions may be made in the Non-Harvest Operations section. In addition, specified custom operations are identified as checked boxes at the left-hand side of the Non-Harvest Operations section. The user may make additional refinements as to the number of operations custom performed by checking or un-checking items. The user should press the *Recalculate Selected Custom Cost* button to update cost calculations if revisions are made. The user should make any necessary adjustments in the fertilizer or pesticide sections to avoid duplication in custom operations.

Note: While the user may make numerous revisions in the custom cost structure, automatic adjustments in owned machinery costs are limited by field operation category selections and parameter revisions.

Renting tractors and other farm equipment is another means of acquiring machinery services. The user may include non-harvest rental practices in the machinery section by following these steps:

1. Adjust fixed costs to zero in the "Your Value" column within the Non-Harvest Machinery Cost summary if all non-harvest machinery and equipment is rented; otherwise, lower fixed costs to omit the leased item(s).
2. Adjust variable costs if necessary. Since fuel, lubricant, and labor costs are the same whether a machine is owned or leased, these operating items may not need further adjustment. Repair costs for leased machines may need to be lowered, however. For example, short-term rental tractors have a considerably lower hourly repair cost than a tractor owned for its complete useful life.
3. Enter the rental cost in the Other Expense section. Since there are many arrangement variations (per day, week, month, etc.), the user will need to convert the rental (including any delivery costs) amount to an acre basis given the specified budget acreage.

Machinery operating costs only occur when a machine is used. Budget examples include fuel, lubrication, and repairs. Only implements with engines incur a fuel cost and the rate of fuel consumption depends on the PTO hp.

$$\text{Annual Fuel Cost} = \text{PTO hp} * \text{FCM} * \text{Fuel Price Per Gallon} * \text{HOURS}$$

FCM is the Fuel Consumption Multiplier and HOURS is the number of hours the power unit is used. The Fuel Consumption Multiplier is the rate of fuel usage in gallons per hour and is assumed to be 0.048.

Repair cost equations estimate the total annual repair costs based on the accumulated hours of lifetime use. Repair and maintenance calculations are based on ASAE referenced equations.

$$\text{Annual Repair Cost} = \frac{\text{List Price} * \text{RC1} * \text{RC2} * \text{Percent Life}^{\text{RC3}}}{\text{YEARS}}$$

RC1 is the ratio of total lifetime accumulated repairs to the initial list price of the machine. RC2 and RC3 determine the timing of repair costs over the life of the machine. Percent Life is the proportion of machine life that will have expired when the current operator trades in or no longer uses the machine. The estimated number of years of use is defined as YEARS. The formula for estimating percent life is:

$$\text{Percent Life} = \frac{\text{YEARS} * \text{HOURS}}{\text{Hours of Life}} * 100$$

Total annual machinery operating costs per complement are allocated to the enterprise by multiplying the implement's cost per hour by the number of hours per acre each machine is used in performing a field operation.

Machinery fixed costs accumulate whether or not a machine is used. Types of ownership costs include interest, taxes, insurance, and depreciation. Used equipment has lower ownership costs. However, increased repairs and down time may offset fixed cost savings.

Depreciation represents an attempt to spread the investment cost or purchase price of durable assets over their productive lifetime. It is typically the largest cost associated with ownership reflecting normal machine wear and obsolescence. Depreciation should reflect the actual decline of value during ownership and a modified double-declining balance method is used to illustrate this relationship. The major modification is the addition of a factor that typically yields a high first year depreciation. Salvage value is determined by the following equation:

$$\text{Salvage Value} = \text{RFV1} * \text{List Price} * \text{RFV2}^{\text{Years}}$$

RFV1 is the proportion of the machine value remaining immediately after purchase. List price is the manufacturer's suggested selling price. RFV2 is the proportion of value remaining each successive year. Years is the number of years the machine is expected to be owned by the current operator.

Using the above salvage value formula, depreciation costs are estimated as:

$$\text{Annual Average Depreciation Cost} = \frac{\text{Purchase Price - Salvage Value}}{\text{Years}}$$

Purchase price is the actual dollar amount paid and may vary significantly from list price.

The fixed cost interest charge for machinery is based on the average amount of capital invested over the ownership period:

$$\text{Annual interest cost} = \frac{(\text{Purchase Price + Salvage Value})}{2} * \text{Machinery Interest Rate}$$

Since property taxes exist in Oklahoma, tax costs are estimated on agricultural machinery. The tax cost is based on the machinery purchase price and the tax rate for machinery specified on the Parameters sheet:

$$\text{Annual Tax Cost} = \text{Purchase Price} * \text{Machinery Tax Rate}$$

Insurance policies are usually carried on more expensive machines while the farmer usually assumes the risk of loss on simpler, less expensive assets. The insurance cost is based on the average amount of capital invested times the machinery insurance rate:

$$\text{Annual Insurance Cost} = \frac{(\text{Purchase Price + Salvage Value})}{2} * \text{Machinery Insurance Rate}$$

Annual machinery fixed costs per complement are allocated to an enterprise by multiplying the implement's cost per hour by the number of hours per acre each machine is used in performing a field operation.

Machinery Labor shown in the budget summary is the price for labor (found on the Parameters sheet) times the sum of machinery labor hours (found on the Machinery sheet) and harvest labor hours (found on the Harvest sheet). The hours of labor are directly related to the hours of machine operation. Labor hours are assumed to be ten percent greater than tractor hours, given extra time required for traveling to the tractor and servicing equipment. The user may change labor costs by changing the wage rates on the Parameter sheet or by changing labor usage per acre for owned machinery in the Harvest and Machinery sheets. If owner/operator labor hours are included in the budget, they are valued at the wage rate specified on the Parameters sheet. If the budget information is exported to cash flow report file, all labor costs are presumed to be cash costs.

Equipment – Annual and Perennial Forage

Equipment costs are summarized in the Equipment sheet with a link to separate inventories via the *Inventory* button. In the perennial forage budget, a five-wire non-electrified fence is shown as the default in the fencing system table. Electric fence chargers may be specified in the equipment table. Modifications or additions can be made directly in the green cells within the Equipment Costs summary or through a form accessed by double-clicking the yellow cells in the equipment specification tables.

Note: Equipment operating costs are determined by the user as a percentage of the purchase price. See the machinery section for additional details on fixed costs.

Irrigation

The user will not ordinarily access this sheet unless irrigation is specified via the start-up form. If you specify an irrigated crop at the beginning, direct links to Irrig(ation) sheet are through the *Irrigation Labor* or *Irrigation Fuel, Lube, Repairs* hyperlinks in the Operating Inputs section of the budget summary sheet. The user is offered a choice of several irrigation systems and pump power sources. Additional refinements that impact variable and fixed costs may be made by clicking the *Irrigation Details* button.

Total operating costs are dictated by the cost of water per acre-inch and the calculated total inches of water to be applied as shown in the Irrigation Costs summary. The amount of water required is based on system efficiency, average rainfall, and crop water requirements. By pressing the *View Avg. Rainfall* button, monthly average rainfall by region covering 30 years is available to evaluate the appropriate water application sequence by month. Default costs may be modified with entries in the "Your Value" column

In addition to efficiency and water availability, the initial capital requirement is a fundamental component that influences the fixed costs of an irrigation system. Such determinations may be made in the Initial Irrigation Investment Cost section via the *Irrigation Details* button. Fixed cost items include: depreciation, interest, insurance, and taxes.

Hours of irrigation labor per acre are generally greater for surface systems than with circular sprinkler irrigation. The wage rate provided in the Parameters sheet will also impact irrigation labor costs.

Cash Rent

If cash rent is specified, the user is allowed to change the amount and payment month(s) via the *Adjust Rental Amount* button in the C(ash)Rent sheet.

Other Expense

The Other Expense sheet includes items not accounted for in other sections. The user specifies the expense item, month of occurrence, and the dollars per acre expense.

STOCKER BUDGET WORKSHEETS

Start-Up Form

Entries made in the start-up form in the stocker budget determine many major income and expense values:

The county selection is only for descriptive purposes. The retained or purchased choice changes only the budget data's treatment for a cash flow report. If analyzing a stocker enterprise and you want to change the in-weights, a new budget should be developed so that default prices are appropriate for that calf weight.

Production

The Production sheet summarizes stocker purchase and sale information. Sales values are subject to user-specified shrinkage at start-up. A different sale weight may be entered in the "Your Value" column. The default average sale price is based on a five-year average monthly Oklahoma City livestock market price for the appropriate weight class estimated from the specified purchase weight and average daily gain. To modify the sales price for the number of animals sold, double-click on the blue cell at the right of Average Sale Price. The following form appears:

Month of Sale

Enter the percent sold each month and the estimated price for each month.

Steers

	Percent	Est. Price		Percent	Est. Price
January	0	123.37	July	0	128.84
February	0	124.07	August	0	129.59
March	100	124.77	September	0	129.61
April	0	127.30	October	0	131.52
May	0	126.03	November	0	133.04
June	0	127.24	December	0	133.86

Reset Price   Seasonal Price   OK   Cancel

Enter the appropriate number in the Est. Price column. If you do not know the price for the future sale, but have current price information, click on *Seasonal Price* and specify the month and price known in the form (shown on following page). This allows the seasonal price calculator to project the future sale value based on historical seasonal patterns.

> **Note**: You cannot change the sale month here as it is determined by the days on pasture or feed specified in the start-up form. You can modify the sales month on the Production worksheet, for instance, if a sale is made at the beginning of March rather than end of February. Multiple sale months are not allowed.

Calculate Seasonal Price

You can calculate an estimated seasonal price by specifying a recent month and price. For example, if you are preparing a budget in February and you know the price last month averaged $90/cwt, select January for the month and enter 90 for the average monthly price. The seasonal price will then be calculated using the month and price entered.

Month: January   Average price: 250

Month	Est. Price	Month	Est. Price
January	250.00	July	261.07
February	251.42	August	262.60
March	252.83	September	262.64
April	257.96	October	266.51
May	255.39	November	269.58
June	257.83	December	271.25

OK   Cancel

Other Income

The Other Income sheet allows the user to specify any other income generated, the month received, and the amount per head.

Pasture

In the Pasture sheet, descriptions and costs can be directly entered in the green cells or by double-clicking in the yellow entry area to bring up a form shown below. Cost entries in the green cells override any cost calculations from information in the yellow cells. Required forage information includes the forage type, whether the pasture is owned or leased, acreage, and cash maintenance costs (includes fertilizer and weed control on owned land, cash rent on leased pasture). In addition, the user may choose to specify the percentage of the cash costs assigned to the stocker operation if the pasture is used by more than one enterprise.

The user can choose a pasture type from the provided list or build a list of pasture acreages for future reference. Similar to other operating input forms, this is accomplished via *<Add New Pasture>*. The new item will be added to the bottom of the list and to use the item, select it from the list. Payment months should be entered as information for use in calculating operating capital requirements and cash flow information. Clicking *OK* will enter all information specified into the template.

> **Note**: Use of the "Your Value" column at the right-hand side in the information table will override itemized cost calculations. This column is included to facilitate quick calculations where a single number summarizes pasture costs. Costs of stand-alone values are allocated equally over the ownership period for operating interest calculations. When developing livestock cash flow reports, the user may also signify whether owned or leased pasture expenses are included.

Feed

Feed categories are comprised of hay, grain, protein supplement, salt, minerals, and additives. Each category is assigned a separate sheet. Default information can be modified either through direct entry in the yellow cells in the appropriate table or by double-clicking to bring up a form in the sheets. The Hay Information pop-up form is shown below. The forms allow you to modify default values for input items in the list including description and unit type, unit weight, cost per unit, number of head, pounds fed per head per day, and days fed. Calculated values are pounds and defined units fed to the herd per day and total units fed.

The user can choose a feed item from the provided list or build a list of customized feeds for future reference. As in other operating input forms, this is accomplished via *<Add New Feed>* (e.g., hay). The new item will be added to the bottom of the list and to use the item, select the item from the list. Allocation months should be entered as information that will be used for operating capital requirements and would be exported to cash flow report is generated. Clicking *OK* will enter all information specified into the template.

> **Note**: Use of the "Your Value" column at the right-hand side in the information table will override itemized cost calculations. This column is included to facilitate quick calculations where a single number summarizes feed costs. Costs of stand-alone values are allocated equally over the ownership period.

Veterinary Medicine/Services

The costs incurred for various herd health programs like parasite control, vaccines, medication, implants and others may be entered individually or as a combined cost for all items on the VetMed1 sheet. Select the *Itemized* option button to enter detailed cost information or subtotal values by herd health category. Click on *OK* to proceed to a cost summary of health practices with links to parasite controls, vaccines, medication, implants, and other processing costs. Data can be entered directly or through forms by double-clicking within each health program table.

To specify a total value that summarizes all herd health information, select *Combined* and click on *OK* to proceed. This choice will override all individual settings with a value reflecting all herd health programs. Estimated costs per head do not include values for owner/operator labor.

> **Note:** Use of the "Your Value" column at the right-hand side in the information table will override itemized cost calculations. This column is included to facilitate quick calculations where a single value summarizes each veterinary medicine item. Costs of stand-alone values are allocated equally over the ownership period.

Vet Supplies

In the Vet(erinary)Supplies sheet, you may allocate a portion of the values of supplies to the stocker enterprise as they may be used by other enterprises (cow-calf for example) or may have value beyond this production period. Data can be entered directly or through forms accessed by double-clicking in the yellow cells within the information table.

> **Note:** Use of the "Your Value" column at the right-hand side in the information table will override itemized cost calculations. This column is included to facilitate quick calculations where a single number summarizes each supply item. Costs of stand-alone values are allocated equally over the ownership period.

Marketing

In the Marketing sheet, enter the type of expense, month in which the expense is incurred, cost per head, and number of head. The first line is reserved for freight and hauling in the stocker budget. There is not an input form available by double-clicking since all input cells are green in the information table.

> **Note:** Use of the "Your Value" column at the right-hand side in the information table will override itemized cost calculations. This column is included to facilitate quick calculations where a single value summarizes each marketing item. Costs of stand-alone values are allocated equally over the ownership period.

Parameters

Parameters are items such as wage rates, fuel prices, tax rates and interest rates used in determining opportunity costs on investments. Several variables listed in the Parameter sheet are used in all budget calculations: labor wage rates, fuel prices, annual operating and machinery/equipment loan interest rates, tax and insurance rates for machinery/equipment, annual capital month, opportunity interest on owned land, ad valorem tax rate on land, value of land per acre, and the percent of overhead costs to be allocated to the enterprise. Currently, land is a residual claimant against the returns shown in the budget summary. However, the opportunity cost of land and real estate taxes may be included through data entry in the Parameters sheet. If such costs are included, returns above all specified costs are defined as returns to management, risk, and overhead in the budget summary.

Machinery

Machinery costs are summarized in this sheet with a link via the Machinery Cost Calculator button to a predetermined inventory. Default machinery includes a gooseneck commercial bowtop stock trailer (28' x 6'), a ¾-ton 4x4 truck and 75 PTO hp tractor with bale fork attachment. The percentage of the total cost assigned to the stocker enterprise is 4% of the truck, 40% of the trailer and 12% of the tractor. You can eliminate costs associated with an item by entering zero for the proportion charged. The selection of new or used by machinery item identifies input items that are relevant in cost calculations. Items that are not applicable in cost determinations are labeled with "NA". The *View Cost Summary* button shows the variable and fixed costs per machinery item while all machinery costs are summarized in the Machinery Cost summary. The user may also enter cost revisions in the "Your Value" column. The *Machinery Information* button provides a brief overview of the default inventory. The *Parameters* button takes you to the Parameters sheet where additional refinements may be made in the default cost structure.

       The *Machinery and Equipment Labor* item in the budget summary is the price for labor (found on the Parameters sheet) times the sum of Machinery labor hours (found on the Machinery Cost sheet) and Equipment Labor hours (found on the Equipment sheet). *Other Labor* has its own sheet and is allowed a wage rate different from the value specified on the Parameters sheet.

> **Note:** See Crop and Forage Budget Worksheets - Machinery section for additional details on Machinery calculations. If you change any or all of the items to "new", the budget summary header does not change.

Equipment

In the Equipment sheet, modifications or additions can be made directly in the green cells in the cost summary or through a pop-up form accessed by double-clicking in the Equipment Inventory information table. Default equipment includes a portable loading chute, squeeze chute, and round bale feeder. You can eliminate costs associated with an item by entering zero for the proportion charged. The *Parameters* button takes you to the Parameters sheet where additional refinements may be made in the default cost structure. The *Equipment Information* button provides a brief overview of equipment information.

> **Note**: See Crop and Forage Budget Worksheets - Machinery and equipment sections for additional details on cost estimation.

Other Expenses

Livestock labor hours, wage rate, and expense allocations can be modified in the Other Expenses sheet. The *Other Labor* budget item can have a wage rate that is different from the value on the Parameters sheet. Any other expenses not previously listed can also be added.

COW-CALF BUDGET WORKSHEETS

Start-Up Form

The start-up form allows the user to specify the herd size, where breeding females include mature cows and heifers that will calve during the year. In order for cull sales to be accurately estimated, death losses for each category of breeding livestock--cows, replacement heifers 1-2 years old, weaned replacement heifers less than one year old, and herd bulls--are required. A spring or fall calving season selection initiates a default series of management practices typical of the setting. Primary calving month adjustments impact the default weaning weight and date. Default sales prices are seasonally adjusted for the weaning month. The county identification is only used as descriptive information for the budget summary.

> **Caution:** If an enterprise budget scenario is changed in size dramatically (for instance, the number of breeding females is changed from 20 to 200), a new budget should be started as pasture, feeds, and other inputs do not automatically change to match adjustments in herd size. If a decision is made to evaluate a different size enterprise after new information has been entered in a sheet (for instance, veterinarian practices), save the budget file (choose *File, Save As*, and specify a name), then reopen it to access a new start-up form and specify a different size scenario.

Production

The default budget is 100 cows on 1230 acres of pasture supplemented with hay and protein supplements. As mentioned earlier, pasture, feed and other inputs do not automatically increase or decrease if a different herd size is specified. Thus, it is important to customize each sheet in the cow-calf budget.

The Production sheet summarizes herd information, weaned calf retention and sales, culling and replacement practices, and herd bull information. Default values for calving percentages, calf death losses and average weaning weight are based on Cow-calf Standardized Performance Analysis (SPA) statistics for the southwest region (Oklahoma, Texas and New Mexico) for 2008-2012. The default budget assumes that replacements are raised and that the herd is stable in size—that is, enough heifer calves are retained to replace culled replacement heifers and cows. Thus, the number of heifer calves sold is the number produced (number of breeding females times the calving percentage less the calf death loss times half for the proportion of heifers) minus the number retained. Default bull numbers are as follows: herds of less than 33 cows, 1 bull; herds of 33-65 cows, 2 bulls; herds of 66-100 cows, 3 bulls; herds of more than 100 cows, 3 bulls per 100 cows. If artificial insemination is used and no clean-up bulls are maintained, the user should change the bull number to zero and include semen and insemination costs in veterinary medicine/services or other expenses.

The user may specify a different number of head as well as different prices for sale, purchase, and inventory values for cows, bulls and replacement heifers. If the user typically purchases replacement heifers rather than raising them, the number of heifer calves kept for replacement is set to zero (the increase in number of heifer calves sold will be calculated automatically) and the appropriate number of replacement heifers is entered in replacement heifers purchased each year. Likewise, if the user purchases bred cows rather than either raising or purchasing heifers, the number of heifer calves kept for replacement would be set to zero and the appropriate number of cows purchased each year would be entered. As the budget is intended to represent an on-going operation of constant size, the user should ensure that the number of heifers retained plus replacement heifers and cows purchased each year equals the cows plus replacement heifers culled through sale or death loss.

Inventory values affect calculations of fixed costs (interest on investment, taxes and insurance). Depreciation is calculated for purchased livestock. The cost of raising breeding livestock should be reflected in the on-going operating and maintenance cost (feeds, pasture, veterinary medicine/services, etc.). Interest on average investment, insurance and taxes are calculated on all purchased and raised breeding livestock.

Since depreciation is calculated for purchased livestock, the sale price per head less salvage value determines receipts in order to prevent an economic double counting of culled income. The cost of the purchased animal is prorated over its useful life and the culled animals are presumed to be at the end of their useful lives, thus full depreciated. Sale prices times the number of head determine receipts from raised livestock. The user will need to specify the number of head sold from purchased or raised sources on the Cattle Inventory sheet. Cull sales prices are based on five-year average monthly prices for the Oklahoma City Livestock Market for utility grade cows, replacement heifers, and yield grade 1, 1000-2000 pound bulls.

> **Note:** In the Cow Herd Information table, the number of animals in the "Default Value" column is formatted to appear as a whole number (0 places to the right of the decimal). However, use of percentages and other calculations result in numbers that are not whole. In calculations, the fractions and/or proportion of an animal on a per cow basis is being

used. Thus, the budget summary may show 41.3 head of steer calf sales or other numbers that do not seem logical, but are in fact correct when viewed as a statistical long-run average for the operation.

Steer and heifer calf sale prices are calculated in the same way that stocker sale prices are calculated. Spring calves are weaned at 210 days and fall calves at 285 days of age. The default sales price is based on a five-year average monthly Oklahoma City livestock market price for the appropriate weight class. The user may specify a price by double-clicking on the blue cell at the right of Average Sale Price and entering the appropriate number in the Est. Price column within the Month of Sale form:

Month of Sale						X
Enter the percent sold each month and the estimated price for each month.						
			Steers			
	Percent	Est. Price		Percent	Est. Price	
January	0	140.60	July	0	139.31	
February	0	145.86	August	0	141.09	
March	0	149.64	September	0	137.38	
April	0	149.65	October	100	141.07	
May	0	146.48	November	0	146.94	
June	0	142.53	December	0	149.98	
Reset Price		Seasonal Price		OK		Cancel

You may change the sale month(s) if days weaned is different than the default period assumed.

Note: Although multiple sale months are allowed, one weight is assumed for sales calculations so you are not able to retain some stockers from the calf crop for sale later in the year to sell at a different weight and price. Use the Stocker Budget to estimate net income for the stocker enterprise.

If you do not have an established price at weaning, but have current price information, you can click on *Seasonal Price*, specify the month and price known and allow the seasonal price calculator to project the future sale value based on historical seasonal patterns.

Other Income

The Other Income sheet allows the user to specify any other income generated, the month received, and the amount per head.

Pasture

See Stocker section for description.

Feed

See Stocker section for description. Type of cattle fed is an additional variable in cow-calf budgets.

Veterinary Medicine/Services

See Stocker section for description. Type of cattle treated is an additional variable in cow-calf budgets.

Vet Supplies

See Stocker section for description.

Marketing

See Stocker section for description. The first line in the information table is not reserved for freight and trucking expense.

Parameters

See Stocker section for description.

Machinery

See Stocker section for description. Default machinery includes a gooseneck commercial stock trailer (28' x 6'), a ¾-ton 4x4 truck, and 75 hp tractor with bale fork attachment. The percentage of the total cost assigned to the cow-calf enterprise is 6% of the truck, 60% of the trailer and 12% of the tractor.

Equipment

See Stocker section for description. Default equipment includes a portable loading chute, squeeze chute, round bale feeders, feed bunks and a corral

Other Expenses

See Stocker section for description.

Cattle Inventory

The CatInv (Cattle Inventory) sheet includes an ownership charge on the amount of capital invested in breeding livestock. The purchase and/or market value, the years used in the herd, the number of head sold from purchased or raised sources, and slaughter value for each cattle type kept for breeding purposes are required inputs. Breeding livestock inventory changes during the production year are also illustrated based on information specified at start-up and from the Cow Herd Information section.

MEAT GOAT BUDGET WORKSHEETS

Start-Up Form

The start-up form allows the user to specify the herd size. Breeding females includes mature does and replacement doe kids that will kid during the year. For cull sales to be accurately estimated, death losses for each category of breeding livestock--does, replacement doe kids, and herd bucks--are required. A breeding season beginning and ending month selection initiates a default series of management practices typical of the setting. The breeding season determines the default kidding season and month(s) of kid sales. Given that historical price data is insufficient at this time, sales prices are NOT seasonally adjusted for the sales month. The county within Oklahoma, other state or country identification is only used as descriptive information for the budget summary.

> **Caution:** If an enterprise budget scenario is changed in size dramatically (for instance, the number of breeding females is changed from 20 to 200), a new budget should be started as pasture, feeds, and other inputs do not automatically change to match adjustments in herd size. If a decision is made to evaluate a different size enterprise after new information has been entered in a sheet (for instance, veterinarian practices), save the budget file (choose *File, Save As*, and specify a name), then reopen it to access a new start-up form and specify a different size scenario.

OSU Goat Budget Opening Menu ☒

Goat Information

Name of the Producer — `Your Name`

Description of the Farm — `Farm Description`

Number of females within breeding flock
(Mature does + bred repl. doe kids) — `50`

Number of

	Raised	Purchased
Mature Does	35	0
Bred repl. doe kids	15	0
Repl. doe kids (immature)	0	

Estimated death loss (number of head)

Mature does	1
Bred repl. doe kids	2
Repl. doe kids (immature)	0
Herd Bucks	0

Breeding Season Start Month — `October ▼`

Breeding Season End Month — `November ▼`

Beginning Kidding Month — `March`

Choose the county where most of your operation is located. — `Payne ▼`

Select your machinery complement status. `?` ○ New ⦿ Used

Change in herd size? Be sure to update data in supporting worksheets to match the new scenario described above. `?`

About Enterprise Budgets | OK | Cancel

Production

The default budget is 50 bred females on 20 acres of pasture supplemented with hay and protein supplements. As mentioned earlier, pasture, feed and other inputs do not automatically increase or decrease if a different herd size is specified. Thus, it is important to customize each sheet in the goat budget.

The Production sheet summarizes herd information, kid retention and sales, culling and replacement practices, and herd buck information. Default values for kidding percentages, kid death losses and average sale weight are based on information from the E (Kika) de la Garza Institute for Goat Research at Langston University. The default budget assumes that replacements are raised and that the herd is stable in size—that is, enough replacement female kids are retained to replace culled replacement doe kids and mature does plus death loss. Thus, the number of female kids sold is the number produced (number of breeding females times the kidding percentage less the kid death loss times half for the proportion of females) minus the number retained. Default buck numbers are as follows: herds of less than 25 does, 1 buck; herds of 26-50 does, 2 bucks; herds of 51-75 does, 3 bucks; herds of 76-100 does, 4 bucks; herds more than 100 does, 4 bucks per 100 does. If artificial insemination is used and no clean-up bucks are maintained, the user should change the buck number to zero and include semen and insemination costs in veterinary medicine/services or other expenses.

The user may specify a different number of head as well as different prices for sale, purchase, and inventory values for does, bucks and replacement doe kids. If the user typically

purchases replacement doe kids rather than raising them, the number of doe kids kept for replacement is set to zero (the increase in number of female kids sold will be calculated automatically) and the appropriate number of replacement doe kids is entered in replacement doe kids purchased each year. Likewise, if the user purchases bred does rather than either raising or purchasing doe kids, the number of doe kids kept for replacement would be set to zero and the appropriate number of does purchased each year would be entered. The initial default budget is intended to represent an on-going operation of constant size, but the user may wish to increase or decrease herd size numbers given various production and sales parameters. When exiting the production sheet, the user is asked to confirm potential adjustments in herd size before proceeding.

Inventory values affect calculations of fixed costs (interest on investment, taxes and insurance). Depreciation is calculated for purchased livestock. The cost of raising breeding livestock should be reflected in the on-going operating and maintenance cost (feeds, pasture, veterinary medicine/services, etc.). Interest on average investment, insurance and taxes are calculated on all purchased and raised breeding livestock.

Since depreciation is calculated for purchased livestock, the sale price per head less salvage value determines receipts in order to prevent an economic double counting of culled income. The cost of the purchased animal is prorated over its useful life and the culled animals are presumed to be at the end of their useful lives, thus full depreciated. Sale prices times the number of head determine receipts from raised livestock. The user will need to specify the number of head sold from purchased or raised sources on the Inventory sheet. Cull sale prices are based on annual price data from Oklahoma and Texas livestock auctions.

> **Note:** In the Goat Herd Information table, the number of animals in the "Default Value" column is formatted to appear as a whole number (0 places to the right of the decimal). However, use of percentages and other calculations result in numbers that are not whole. In calculations, the fractions and/or proportion of an animal on a per budget unit (doe) basis is being used. Thus, the budget summary may show 40.5 head of male kid sales or other numbers that do not seem logical, but are in fact correct when viewed as a statistical long-run average for the operation.

Kids are assumed to be sold at 120 days of age. The default sales price is based on an Oklahoma average annual price estimate for the appropriate weight class. The user may specify a price by double-clicking on the blue cell at the right of Average Sale Price and entering the appropriate number in the Est. Price column within the Month of Sale form:

You may change the sale month(s) if different than the default period assumed.

> **Note:** Although multiple sale months are allowed, one weight is assumed for sales calculations. You are not able to retain some animals from the kid crop for sale later in the year to sell at a different weight and price.

Other Income

The Other Income sheet allows the user to specify any other income generated, the month received, and the amount per head.

Pasture

See Stocker section for description.

Feed

See Stocker section of this manual for description. The type of livestock fed is modified to list goat categories. Salt and minerals are combined in the Salt sheet. The Additive sheet is unavailable.

Veterinary Medicine/Services

See Stocker section for description. The type of livestock treated is modified to list goat categories. Implant practices are not included. The user is notified if an item is restricted for extra-label drug use only.

Vet Supplies

See Stocker section for description.

Marketing

See Stocker section for description. A stand-alone default value is provided. The first line in the information table is not reserved for freight and trucking expense.

Parameters

See Stocker section for description.

Machinery

See Stocker section for description. Default machinery includes a gooseneck commercial stock trailer (28' x 6'), a ¾-ton 4x4 truck, a 75 hp tractor with bale fork attachment, and a 4-wheeler. The percentage of the total cost assigned to the goat enterprise is 1% of the truck, 5% of the trailer, 1% of the tractor, and 20% for the 4-wheeler.

Equipment

See Stocker section for description. Default equipment includes feeders, waterers, stock panels, and t-posts.

Other Expenses

See Stocker section for description.

Goat Inventory

The Inventory sheet includes an ownership charge on the amount of capital invested in breeding livestock. The purchase and/or market value, the years used in the herd, the number of head sold from purchased or raised sources, and slaughter value for each livestock type kept for breeding purposes are required inputs. Breeding livestock inventory changes during the production year are also illustrated based on information specified at start-up and from the Goat Herd Information section.

STOCKER GOAT BUDGET WORKSHEETS

Start-Up Form

Entries made in the start-up form in this budget determine many major income and expense values:

The Oklahoma county, region or country selection is only for descriptive purposes. The retained or purchased choice changes only the budget data's treatment for cash flow reports. If analyzing a stocker enterprise and you want to change the in-weights, a new budget should be developed so that default prices are appropriate for the specified weight.

Production

See Stocker section for general description. As with meat goats, prices are not seasonally adjusted for the sales month.

Other Income

See Stocker section for description.

Pasture

See Stocker section for description.

Feed

See Stocker section of this manual for description. The type of livestock fed is modified to list goat categories. Salt and minerals are combined in the Salt sheet. The Additive sheet is unavailable.

Veterinary Medicine/Services

See Stocker section for description. The type of livestock treated is modified to list goat categories. Implant practices are not included. The user is notified if an item is restricted for extra-label drug use only.

Vet Supplies

See Stocker section for description.

Marketing

See Stocker section for description. The first line in the information table is reserved for freight and trucking expense.

Parameters

See Stocker section for description.

Machinery

See Stocker section for description. Default machinery includes a gooseneck commercial stock trailer (28' x 6'), a ¾-ton 4x4 truck, a 75 hp tractor with bale fork attachment, and a 4-wheeler. The percentage of the total cost assigned to the goat enterprise is 1% of the truck, 5% of the trailer, 0% of the tractor, and 20% for the 4-wheeler.

Equipment

See Stocker section for description. Default equipment includes waterers, stock panels, and t-posts.

Other Expenses

See Stocker section for description.

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