

# The LBUDGET User Guide a livestock budget generator



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**Written by**

*Leroy D. Stodick, Computer Analyst, University of Idaho*  
*Robert L. Smathers, Research Associate, University of Idaho*

**In consultation with**

*Neil R. Rimbey, Extension Range Economist*  
*C. Wilson Gray, Extension Livestock Economist*  
*Paul E. Patterson, Extension Crops Economist*

**Documentation written by**

*Leroy D. Stodick*  
*Neil R. Rimbey*  
*C. Wilson Gray*

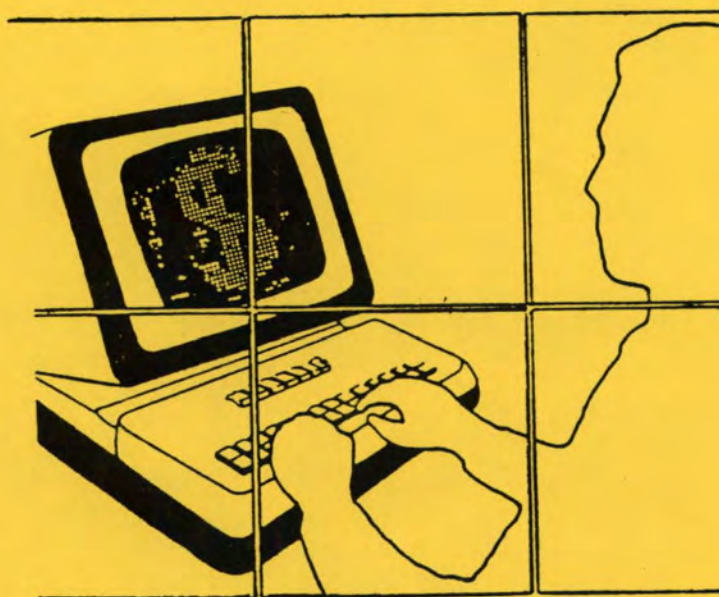
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529-3350

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## Introduction

### ***About Livestock Budgets***

Cost and return estimates (enterprise budgets) have been commonly done to calculate per acre or per head costs of producing various commodities. Computer programs have assisted greatly in this process. Most of these "budget generators" were initially developed to produce crop budgets and later modified to include livestock. Differences in crop and livestock production made this arrangement unsatisfactory.

In 1991 the Agricultural Economics and Rural Sociology and Animal Sciences departments at the University of Idaho took a first step to remedy this and produced DBUDGET, a budget generating program designed specifically for dairy enterprises. LBUDGET is the second step in this process of developing livestock budget generators. Four types of budgets can be created using LBUDGET: cow-calf, sheep, swine, and feeder/stocker. While it may be possible to use one of these four formats for other types of livestock, the user should be aware that LBUDGET was not designed for anything other than the four types listed above.

### ***Hardware Requirements***

LBUDGET is designed to run on a computer with at least a 80386 microprocessor using DOS version 3.3 or higher and 520 kilobytes of free RAM. A hard disk drive on which to store the program files and the enterprise budget files is also required. A minimum of 2 MB of free disk space is recommended. **A PostScript printer must be available if the output is to be printed in typeset format.**

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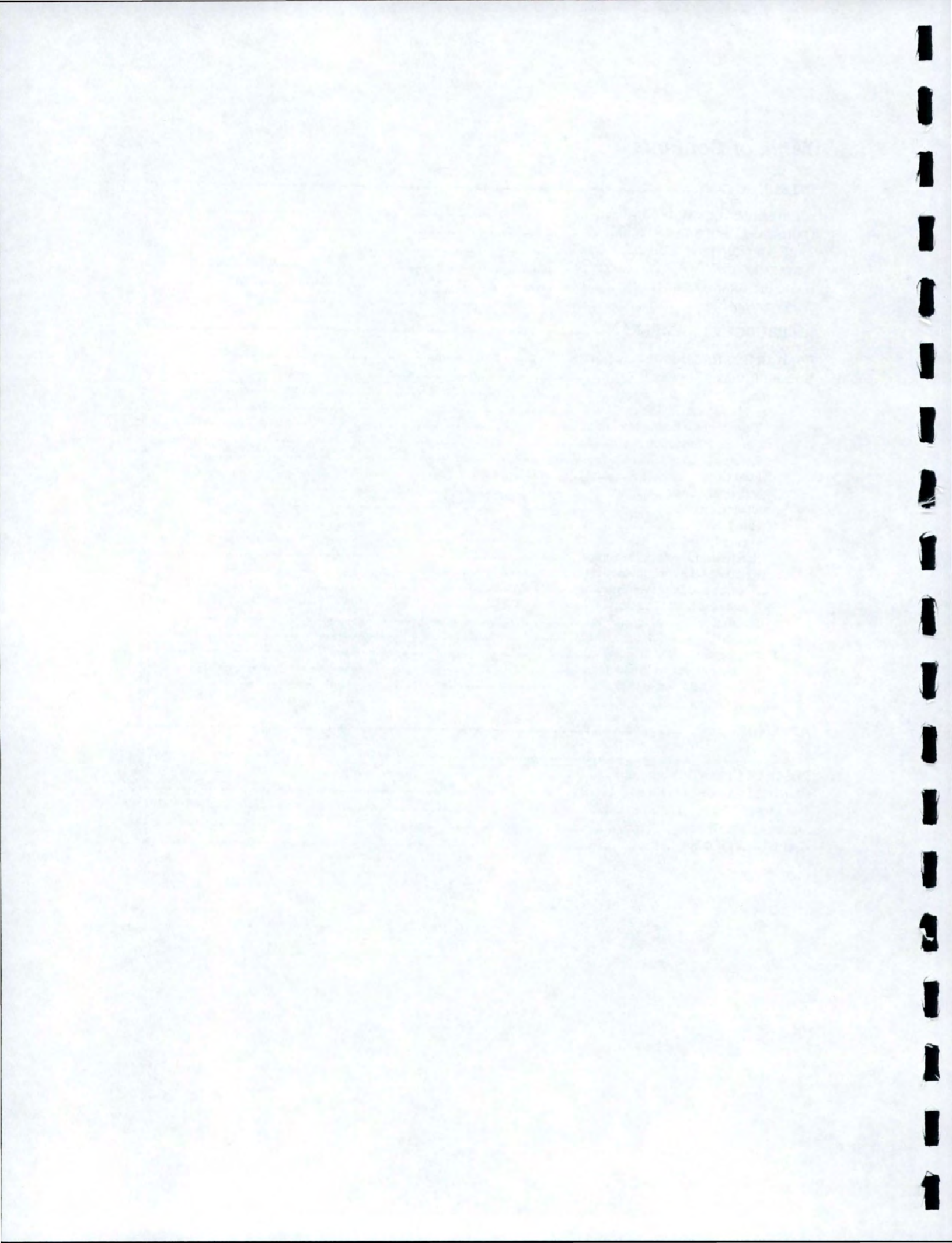
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## ***Installing LBUDGET***

The LBUDGET program and associated files (see appendix for list) are contained in a compressed self expanding file titled LBUDxx.EXE where xx indicates the version number. At the main prompt (i.e. C:\>) use the DOS Make Directory command to create a new subdirectory for the program (i.e. md lbudget). Next copy the LBUDxx.EXE file to that directory. Change to the new subdirectory (if you haven't already) and type LBUDxx and press enter to execute the expanding file. The LBUDGET program and associated files will now be in the directory. To save space the file LBUDxx.EXE may now be deleted from your hard disk drive. Be sure to save your original disk in a safe place.

## ***Basic Program Operation***

To run LBUDGET, make the directory containing the LBUDGET program the current directory, type "LBUDGET" and press the ENTER key. If the directory containing the program is listed in the DOS path, it is possible to run LBUDGET from any directory. However, the program will be unable to find the help files, the setup file, and the printer description files without help from the user. The first time the program attempts to use these files and cannot find them, the user will be prompted for the subdirectory in which these files are located.

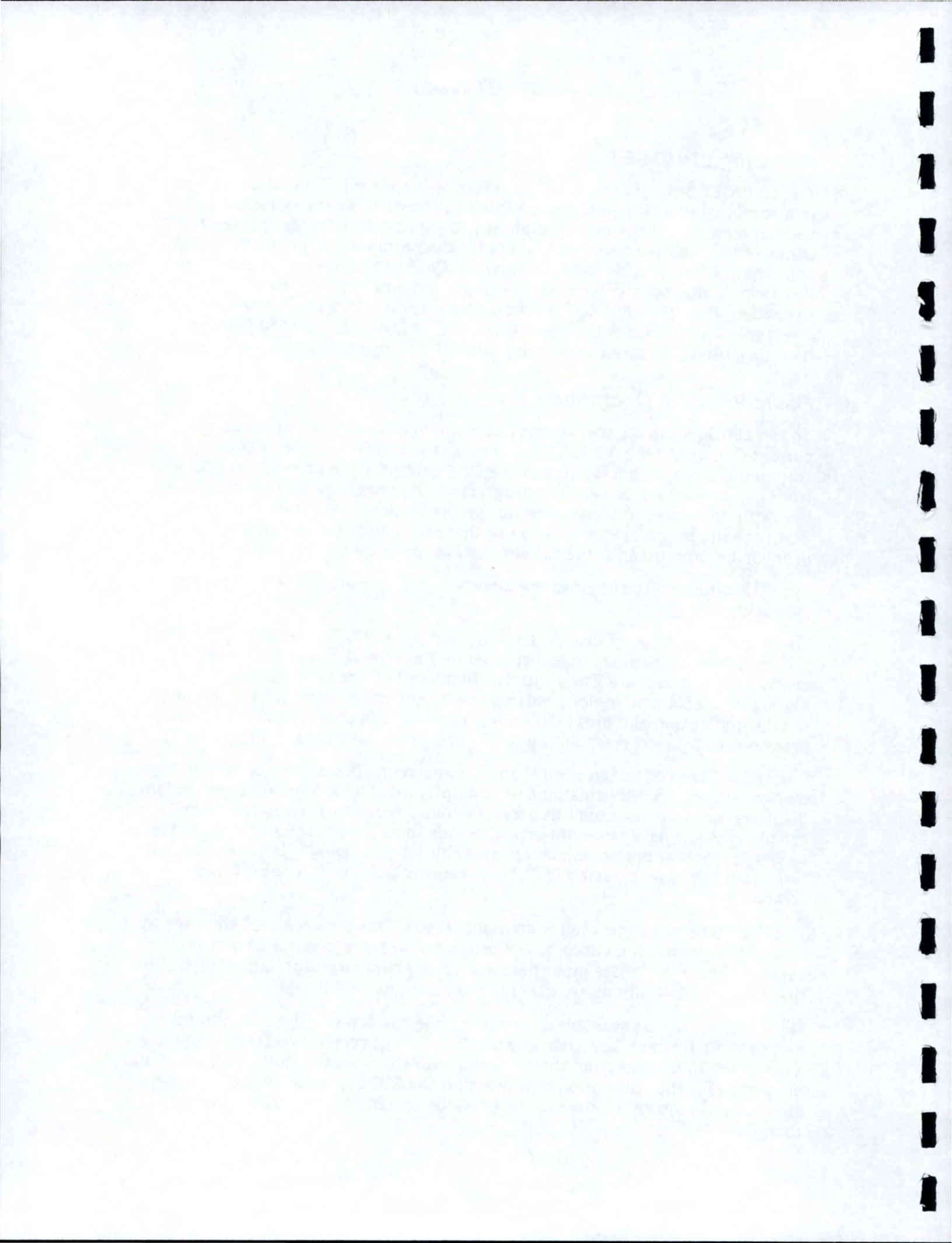
Type "LBUDGET m" to suppress the display of colors and run the program in monochrome.

There are three types of display screens used by LBUDGET. The first is a menu screen. When a menu screen is displayed on the screen, the various options available to the user are listed with the first word of one of the options highlighted. Select an option by using the up and down arrow keys to highlight the desired option and press the ENTER key. You can also select an option by pressing the letter corresponding to the first letter for that option.

The second type of screen used is an output screen. This screen is used to display the results of calculations or to display messages. Messages will remain displayed until the user presses a key. Output screens displaying results of calculations will have more options. The user should press the F1 function key to view a menu of options which are available when viewing this type of output screen. In any case, pressing ESC always returns the user to the previous screen.

The third type of screen used is an input screen. This screen allows the user to enter data which will be used by the program. An entry is made by moving the cursor to the appropriate input field and typing over any information already in that field. Key definitions are given in the appendix.

More options will be available depending upon the screen. The user should press the F1 function key when any particular input screen is displayed to view a list of additional keys and their functions for that input or output screen. This program uses the convention that pressing the ESC key when an input screen is displayed will return the user to the previous screen without saving any changes.



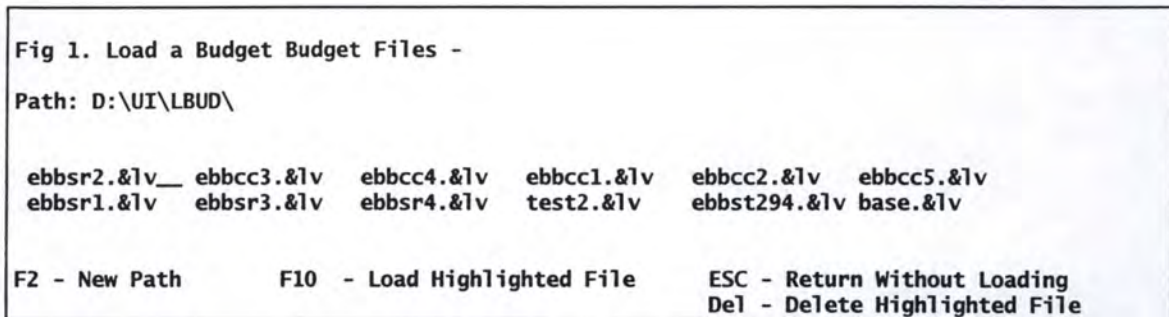


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If the user wants to retain the changes made while the input screen was displayed, the F10 key must be pressed. The changes will be retained and the user will return to the previous screen. These retained changes will not be saved to disk unless the user selects the "Save" option from the menu.

### Parameter Files

The parameter file is named LBUDGET.PAR and can be located in any subdirectory. The default location is specified in the data paths portion of the "Modify Printer Setup and Data Paths" option from the Main Menu. This file



contains information which may be used to create and update budget files. Interest rates, prices for gasoline and diesel, livestock names and prices, machinery names and parameters, and other similar items can be stored in the parameter file. More information on parameter files is contained in the appendix.

## An LBUDGET Example

To illustrate the features of the LBUDGET program a sample cow-calf budget is used. Each section of the program will then be explained in regard to the example. With that brief introduction lets proceed!

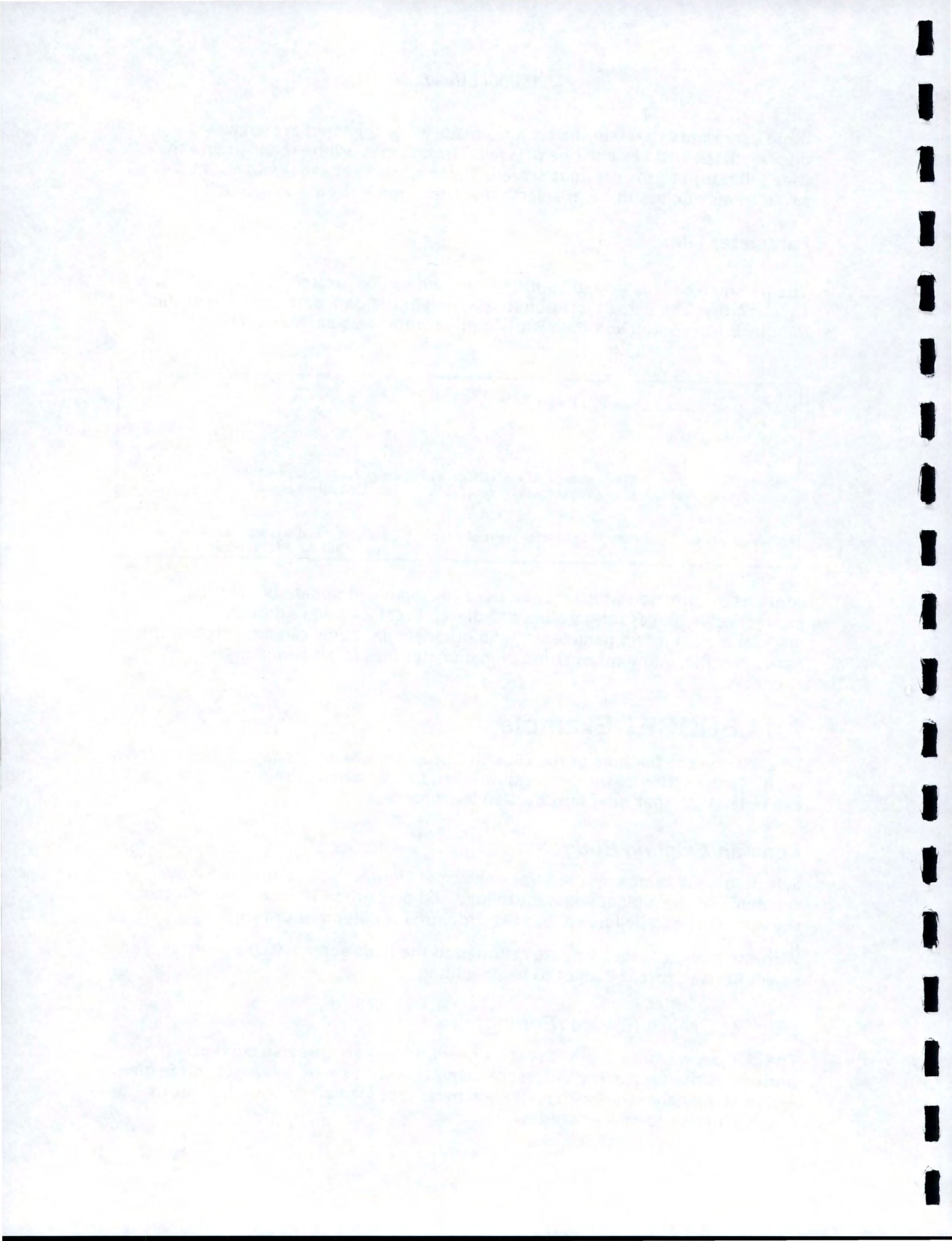
### *Load an Existing Budget*

Selecting Load brings up the screen shown in Figure 1. Move the cursor over the name of the budget you want to load and press the F10 key. This will cause the budget file to be loaded into the program for editing or printing.

With the budget loaded you are returned to the main screen where you may select Revise Current Budget to begin editing.

### *Budget Create/Revise (Editing)*

The primary menu for both "Create a new budget" and "Revise current budget" is the same. The difference being that with create a budget you begin with a blank page while with revise you must first load an existing budget to which you wish to make changes.



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Four types of budgets can be created using LBUDGET: cow-calf, sheep, swine, and feeder/stocker. While it may be possible to use one of these four formats for other types of livestock, the user should be aware that LBUDGET was not designed for anything other than the four types listed above.

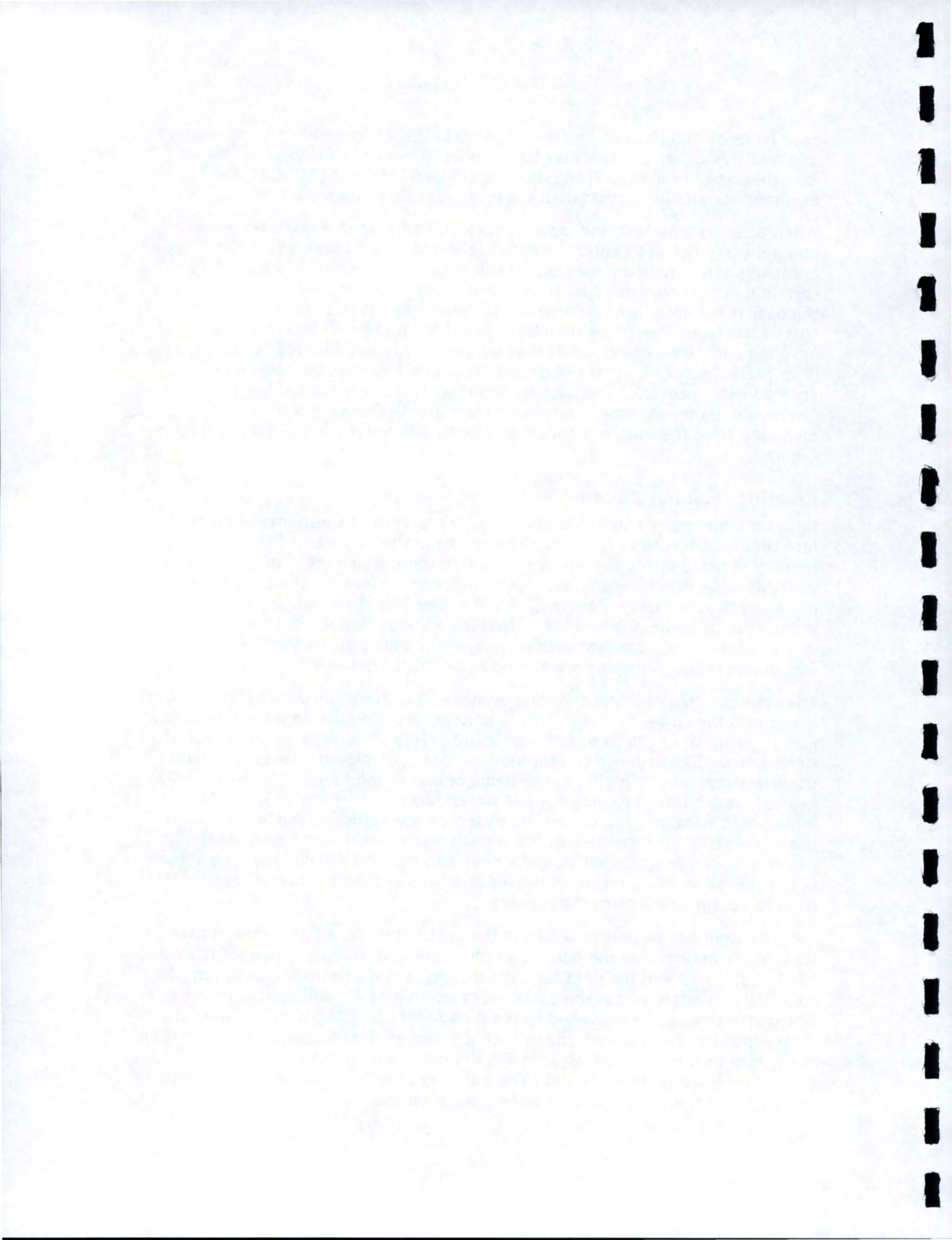
When creating a budget, the input data can be entered in any order. However, it is generally better to enter the data in the order listed in the Edit Menu because intermediate output screens which can be displayed while viewing certain input screens use data from previous input screens. For example, when the user is entering input parameters for vehicles, it is possible to view the costs associated with these vehicles. The program uses the interest rates, gasoline and diesel prices, and other information entered on the "General Information" screen so that the data for "General Information" should be entered before entering the data for vehicles. This comment applies only to intermediate output screens displayed from input screens. For the output displayed from the output menu, it makes no difference what order the data is entered.

### **Creating (Editing) a Budget**

Data for a budget is entered in one of two ways: it can be either typed directly into the input screen or it can be retrieved from the parameter file. When a number is typed into a numeric input field, the program makes no attempt to verify that the value is within an acceptable range. However, the program will not allow the user to type a minus sign if values less than zero are not allowed in the current context. When the output for a budget is calculated and displayed, all values are first verified and, if any values are not within an acceptable range, warnings are posted as described below.

The user can choose to retrieve one or more items from the parameter file to insert into the current budget. This is done by pressing the F6 key while in any input screen other than a monthly allocation table (described below). A list of items compatible with the current input screen is displayed. The user should use the arrow keys to highlight the name of one of the items and press the F2 key to insert it into the current input screen. Press the F3 key to insert the highlighted item into the current input screen and return to the input screen. If there is no room for the item in the current input screen (ten items maximum per screen) the program will sound a beep and nothing will change. If a screen is full you will need to return to the input screen and press enter after the last item to obtain a new blank input screen.

Once an item has been inserted from the parameter file, a link between that item in the budget and the parameter file is created. When the budget is saved, the link is saved and the next time the budget is loaded into the program, the item will be updated from the parameter file. An asterisk will appear to the left of the names of all items linked to the parameter file. If the user changes any item which has been linked, the link will be broken. Pressing any key other than the cursor movement keys while in any field of any item linked to the parameter file will break the link. The only way to restore the link is to delete the item and then retrieve it from the parameter file.

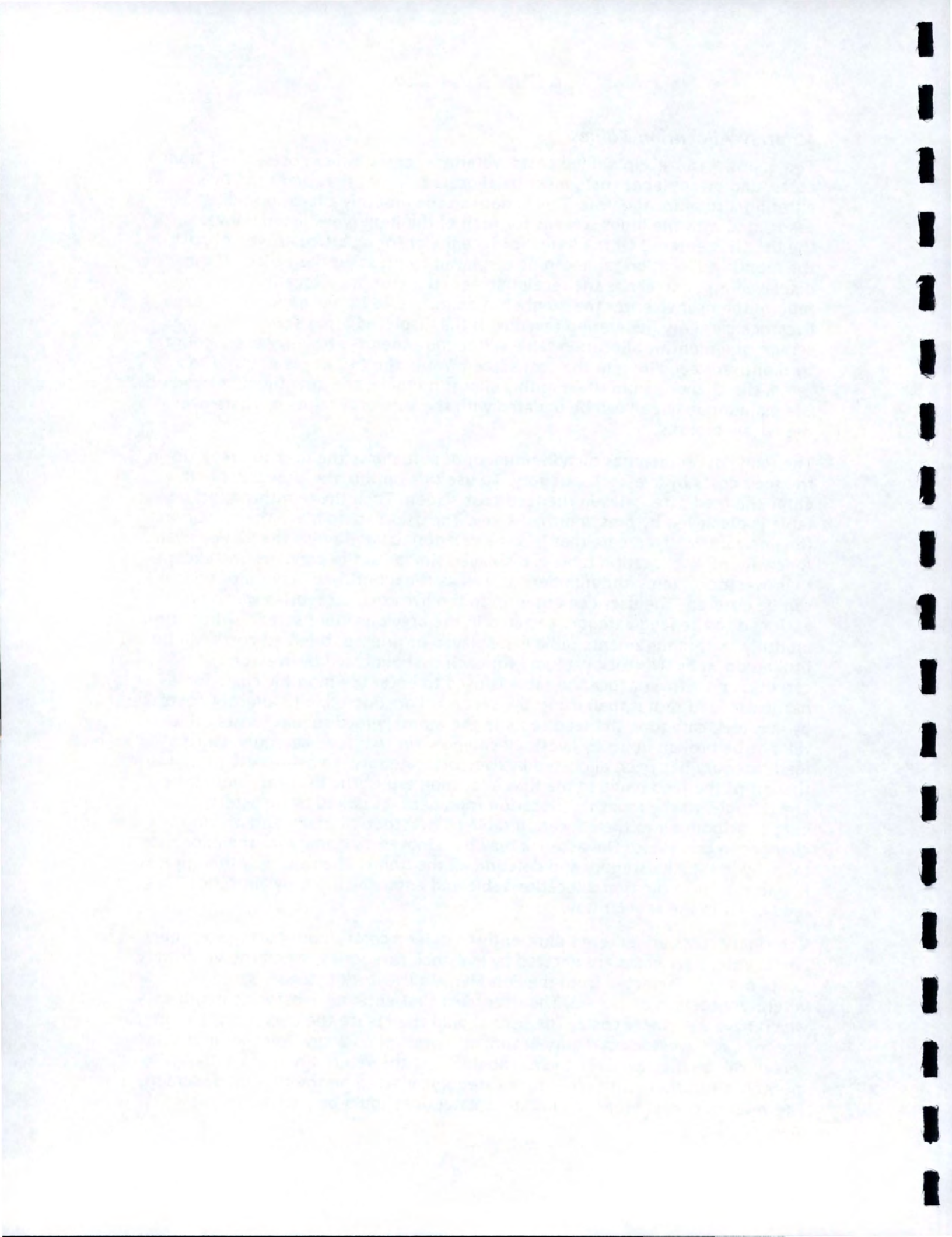


### **Monthly Allocation Tables**

The quantity for receipts, feed costs, veterinary costs, other costs, hired labor costs, and owner labor costs must be allocated by month rather than by entering a total for the year. This is done in the monthly allocation table associated with the input screens for each of the item types listed above. Once the user has entered all the items for receipts or for a particular type of cost, the monthly allocation table can be displayed by pressing the F2 key. If the displayed input screen is the receipt screen, the monthly allocation table will require the user to enter the number of animals sold for each month for each livestock category generating revenue. If the displayed input screen is a cost screen, the monthly allocation table will require the user to enter the amount by month for each item in the cost screen. When the F10 key is pressed to retain the changes from the monthly allocation table, the quantity displayed on the main input screen will be updated with the sum of receipts or costs over the twelve months.

The feed cost screen has an additional option: it allows the user to break down the feed costs by livestock category. To use this option, the user must first enter the feed categories in the feed cost screen. Then the monthly allocation table is displayed by pressing the F2 key. The user should place the cursor on the line for each feed cost that is to be categorized and press the F2 key again. A new monthly allocation table is displayed similar to the previous one except that livestock names and numbers as well as the monthly allocation of units can be entered. The user can enter up to ten livestock categories which are assigned to the feed category selected in the previous input screen. When the monthly feed requirements table is displayed or printed, the feed costs will be broken down by livestock category for each cost allocated by livestock category. If the first allocation table is used to enter the monthly costs for a particular feed rather than using the second allocation table to allocate costs by livestock category, the feed costs in the monthly feed requirements table will not be broken down by livestock category for that feed category. Once a feed category has been allocated by livestock category, an asterisk is placed to the left of the feed name in the first allocation table. The user may not make any changes to the monthly allocation for any cost marked by an asterisk except by going into the allocation table by livestock category and making the changes in this table. The asterisk may be removed by going into the allocation table by livestock category and deleting all the items. The user may then press F10 to return to the first allocation table and enter the monthly allocation for feed costs in the regular way.

Veterinary costs are entered differently than feed costs, labor costs and other costs. Veterinary costs are entered by livestock categories. When the Veterinary Costs option is selected from the Edit Menu, a livestock category screen for veterinary costs is displayed. The user must first enter all livestock categories which have veterinary costs. The user should then place the cursor on the input line for each livestock category in turn and press the F2 key. Another input screen will be displayed. The user should enter the veterinary costs and monthly allocation for the livestock category selected on the first input screen. The veterinary costs for each livestock category should be entered in this manner.



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Purchased livestock, retained livestock and overhead cost categories do not have monthly allocation tables.

The monthly allocation tables for housing and improvements, equipment, machinery, and vehicles allocate taxes, insurance, repairs, and fuel and lubrication costs by a percentage of costs rather than by actual monthly costs as in the other tables. The user enters a percentage of the respective cost for each month and should make sure that the total is equal to 100%. There is a separate allocation table for each of the four input tables which use this method of allocation so that, for example, taxes for housing and improvements could be paid in June and December while taxes for vehicles could be paid in March.

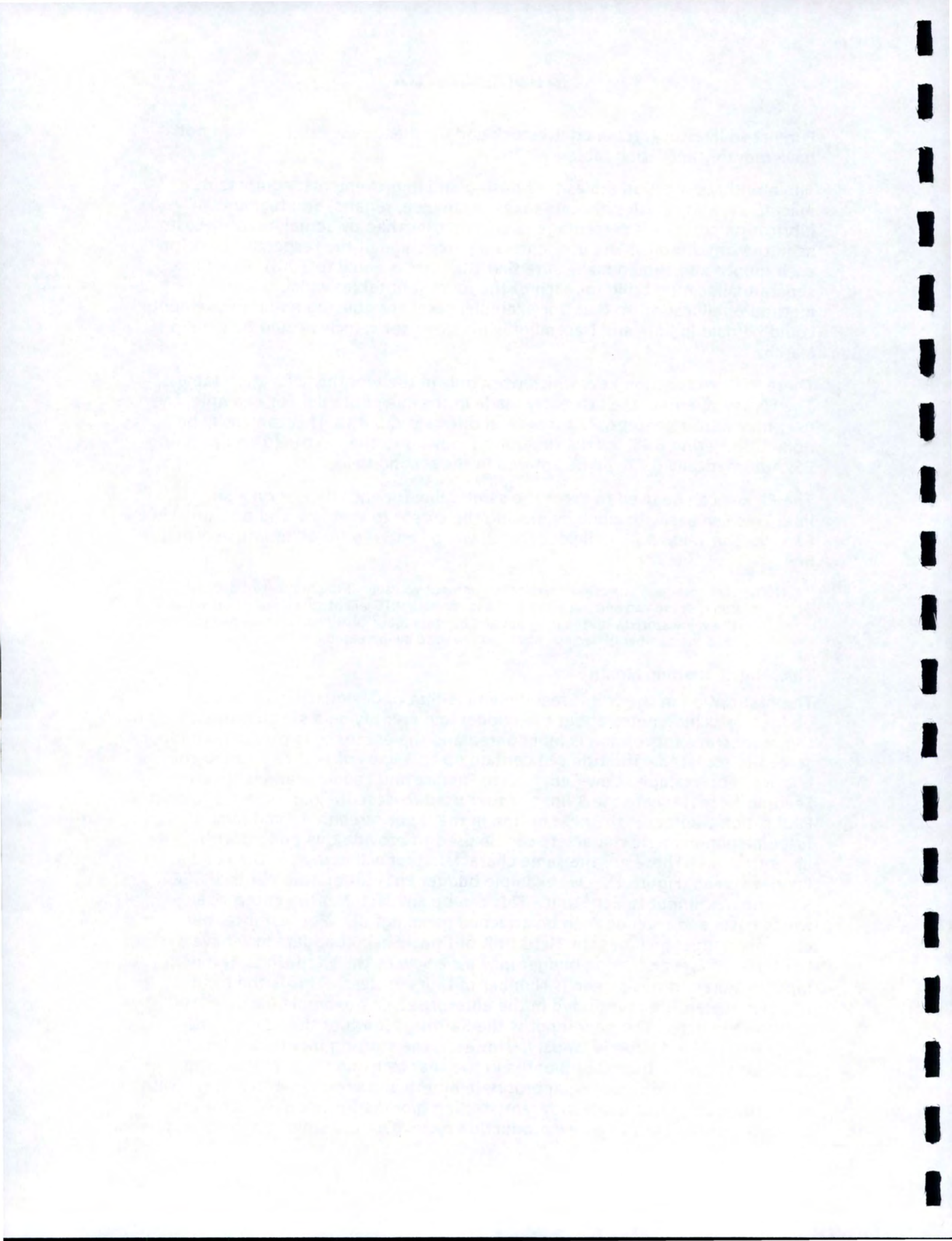
There are two function keys which work only in the monthly allocation tables. The F6 key re-enters the last entry made in the current table. For example, the user may want to enter 6.77 for several different months. This can easily be done by entering 6.77 for the first entry, moving to the next field and pressing F6. Automatically 6.77 will be entered in the second field.

The F7 key can be used to enter the same value for each month on a single line. This can easily be done by moving the cursor to that line and pressing the F7 key. The value 8.33 (1 divided by 12) will be entered for all months on that line.

**NOTE:** This program stores numbers based on what you see. If the number of decimal places is set to two and the value 9.159 is entered, 9.16 will be displayed. That will also be the value stored with the program and used for all calculations. If more precision is needed the number of decimal places will need to be increased.

### **Title, Notes, Starting Month**

The first option in the Edit (Create) menu is that of designating a title for the budget, attaching notes about the budget and identifying a starting month for the year. Once this option is highlighted and the enter key is pressed, an input screen is accessed. The title can contain up to 3 lines of text describing the budget. For example, Cow-Calf, Private Pasture and Federal Range, Winter Feeding Necessary are the 3 lines of text used to describe our example budget. Publication Number is the next option in the input screen. A maximum of fifteen alpha-numeric characters can be used to provide this budget with identification. These are the same characters that will appear in the Load a Budget screen (Figure 1). Our example budget Publication Number is EBBCC2-95. The next input is Herd Unit. This can be any factor in the enterprise to which costs and revenues can be attached meaningfully. For instance, our example budget includes the Herd Unit of Cow. Sheep budgets may have a herd unit of Ewe and swine budget may have Sow as the Herd Unit. The next input required in this screen is Number of Units in Herd. This is the total number of Herd Units included in the enterprise. Our example includes 100 Cows in the herd. The next input is the Starting Month of the year for the enterprise. The default is January. However, the starting month can be changed to any of the other months in the year by using the arrow keys to scroll across to highlight the appropriate month and pressing enter. This will allow the user to designate different starting months for fiscal years for tax purposes or the start of a new production cycle. Our example cow-calf budget





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includes a January Starting Month. The final area of input on this screen involves Notes. These 10 lines of text can be used to designate critical assumptions used in the budget, distinguishing factors associated with the budget or any other factor desired by the user. Our example budget includes the notes that Federal range includes BLM and Forest Service and that Sale weights are net of shrink. After inputs are completed, press F10 to return to the Edit menu.

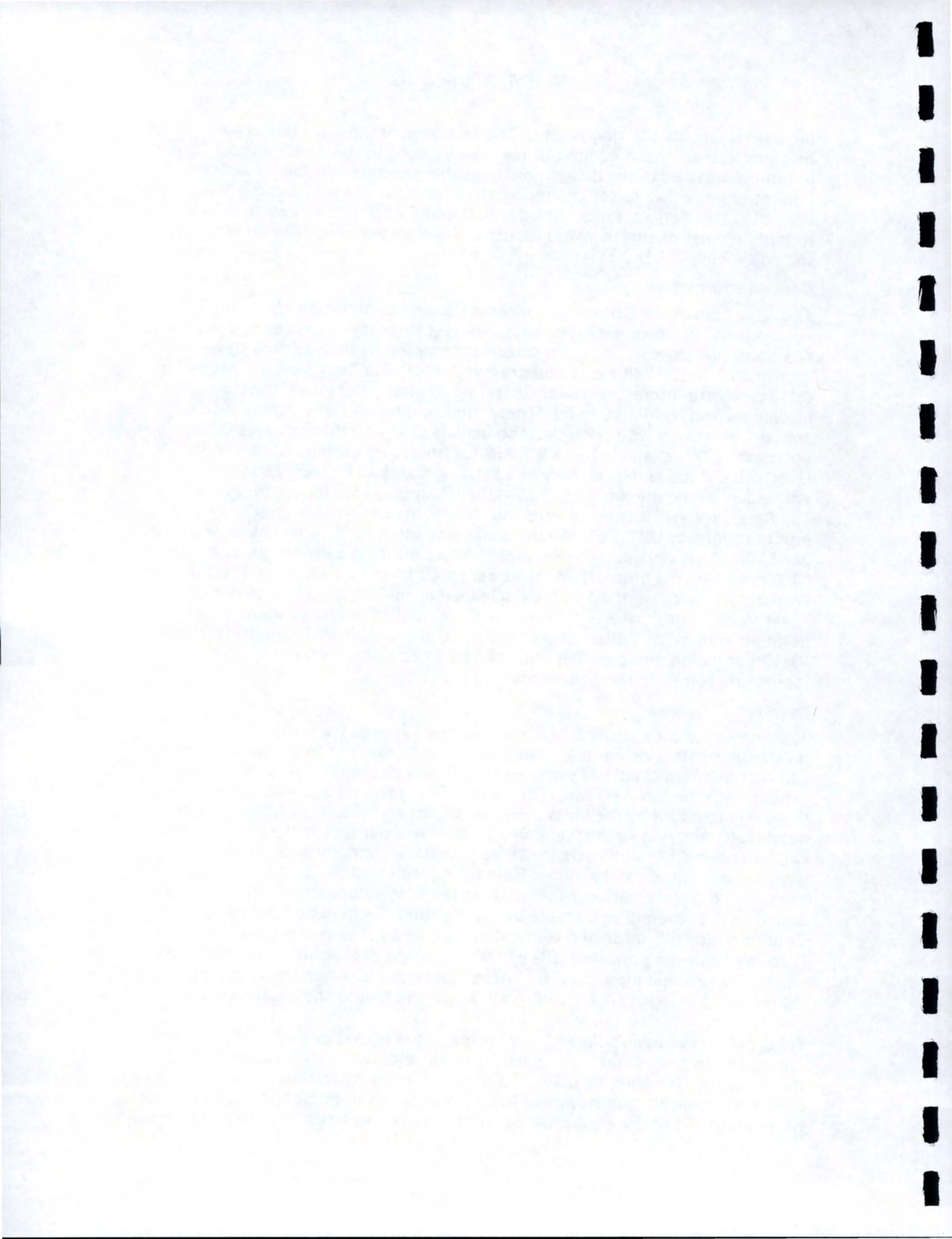
### **General Information**

The next item in the Edit menu concerns General Information about the enterprise. This information includes interest rates, property tax and insurance rates and fuel prices. The input screen is accessed by highlighting General Information in the Edit menu and pressing enter. The first 3 inputs needed in this screen are interest rates for Operating Capital, Livestock Capital and Machinery and Building Capital. These are the interest rates expressed in annual percentage rate (APR) that the bank is charging for each area of capital borrowing. Our example has a 9 % APR for operating capital, 9.5 % APR for Livestock Capital and Machinery and Building Capital. Interest rates are entered as whole numbers (ie. 9.75 rather than 0.0975). Inputs for Property Tax Rate, Property Insurance Rate and Vehicle Insurance Rate are the next 3 inputs sought by LBUDGET. All three of these inputs are on the basis of a rate per \$100 of asset value. Our example budget includes a Property Tax Rate of \$1.00 per \$100 of property Asset Value, \$0.60 Insurance Rate per \$100 of Property Asset Value and \$1.50 Vehicle Insurance Rate per \$100 of vehicle Asset Value. The final 2 inputs are for diesel fuel price and gasoline price. Both are entered as Dollars (\$) per gallon. Our example includes diesel price of \$1.12 per gallon and gasoline price of \$1.24 per gallon. Press F10 to save inputs and return to the Edit menu.

### **Receipts**

The next input area in the Edit menu involves Receipts from the enterprise. A maximum of 10 revenue items can be entered in the first input screen. Entries can be made in a couple of ways. First, individual revenue items can be typed directly into the input screen. The name of the revenue generator (Steer Calves) is followed by the units being sold (cwt) and the number of units per head (5.40 cwt, or 540 lb steer calves). The Price per unit is the last item that can be entered from this screen (\$86 per cwt). Second, individual items, weights and prices can be added from the parameter file. This is done by pressing F6 (View Parameter file) while in the first input screen. Items can be added to the revenue input table by highlighting the item and pressing F2. Continue with this until all revenue items desired in the budget are added. Pressing F3 in the parameter file will take only the highlighted item and return you to the revenue input screen. These inputs can be edited by re-typing values into the input area. Editing will break the link to the parameter file.

Total number of head sold and total revenue generated by each item cannot be entered from this screen. You must go to the Monthly Allocation table to "sell" the livestock. Pressing F2 takes you to the Monthly Allocation Table. You can now input monthly marketings of livestock in terms of number of head sold or transferred out of the enterprise per month. Use the arrow keys or tab to scroll



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through the 12 months of the year and type the number of head sold in the appropriate month. For example, Steer Calves sold in the cow-calf enterprise amounted to 92 head in November. At completion of input, press F10 to return to the Receipt Input screen. Note that Total Number of Head and Revenue have been added to this screen. At completion of input, press F10 to return to the Edit menu.

### Feed Costs

Feed Costs may be entered in a similar manner as the Revenue items covered above. In other words, feed items, units and cost per unit can be typed directly into the input screen or loaded from the parameter file. Feeds must then be allocated on a monthly basis, as was done with Revenue.

### Veterinary Costs

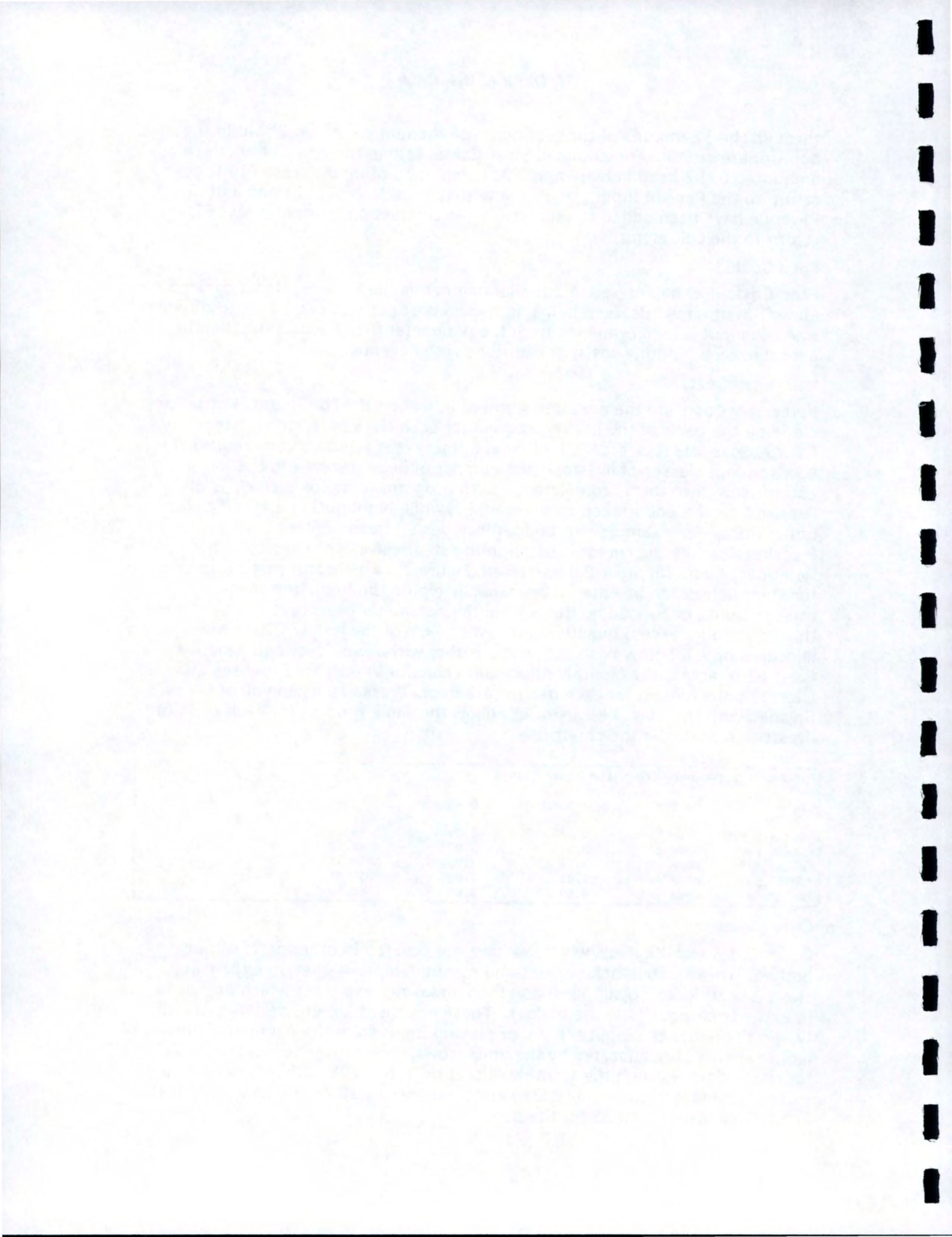
Veterinary Costs are the next items entered through the Edit menu. Entries are made on the basis of the health program for each class of livestock (Steer Calves, Cows, Heifers, etc.). The first veterinary cost input screen requires the user to input classes of livestock and number of head involved in the enterprise. Once this is completed, health program costs for each class of livestock can be undertaken by pressing F2, while highlighting a specific class of livestock. For example, our budget includes 92 head of Steer Calves. Pressing F2 while the cursor is highlighting steer calves switches us to the Veterinary Costs for Steer Calves screen (Figure 2). The health care program for Steer Calves can be entered by manually typing the item, unit name and price per unit, or by loading items from the parameter file (pressing F6). Note that you cannot access quantity and cost of each of the items. These must be allocated on a monthly basis, as we did earlier with Feed Costs and Revenue. Press F2 to access the Monthly Allocation Table for Veterinary Expenses and allocate units (doses) for each health care item. Press F10 when you are finished with this class of livestock. Follow the same process for each class of livestock included in the enterprise.

Figure 2. Veterinary Costs for Steer Calves

Item	Unit	Price/Unit	Quantity	Cost
*IBR PI3 BVD	dose	0.47	2.00	\$0.94
*Seven Way	dose	0.34	3.00	\$1.02
*Vitamin A	dose	0.14	1.00	\$0.14
*BOSE	dose	0.41	1.00	\$0.41
*Ralgro	dose	0.99	1.00	\$0.99

### Other Costs

Other Costs include items which we have not covered in other parts of our budget. These would include dues and memberships, marketing expenses, sheep shearing, camp supplies, dog food and other expenses which do not fit in expense categories in the budget. These expenses are entered by manually typing them into the input screen, or picking items from the parameter file (F6). Expenses are allocated by the units (cows, ewes, etc.) used as the basis for the budget through the Monthly Allocation Table (F2). Other Costs in our example budget include only a Marketing expense of \$8.43 per cow, for a total annual expense of \$1,686 for the herd.



**Hired Labor**

Expenses for Hired Labor are entered in the next option of the Edit menu. The Hired Labor input screen operates similarly to others in the Edit menu. Inputs are either typed or drawn from the parameter file. Once entries are made in the input screen, editing of wage and benefit rates and allocating them on a monthly basis (F2) can be undertaken. Care should be taken to keep hired labor items on the same basis throughout the input and allocation process. If the units listed in the initial input screen are Hours, monthly allocations should also be in hours. If wages and benefits are on a monthly basis, allocate the monthly totals in terms of person-months.

**Owner Labor**

Many discussions have been held over the years of what the Owner's Labor is worth to the operation and how to allocate these "expenses" to an enterprise. Rather than repeat all of those discussions here, we will spend the time explaining the allocation process and inputting owner labor amounts. Suffice it to say that the owner's labor is worth at least the lowest wage rate of what other employees are paid on the operation. Although this does not provide a true picture of expenses, it does present an "opportunity cost" of the owner's contribution to the operation of the enterprise. If one is concerned about the return to owner's labor and management from the enterprise, then one should not include a wage rate on the hours contributed by the owner. In any case, the process for inputting and allocating Owner Labor is the same as that described in the Hired Labor section.

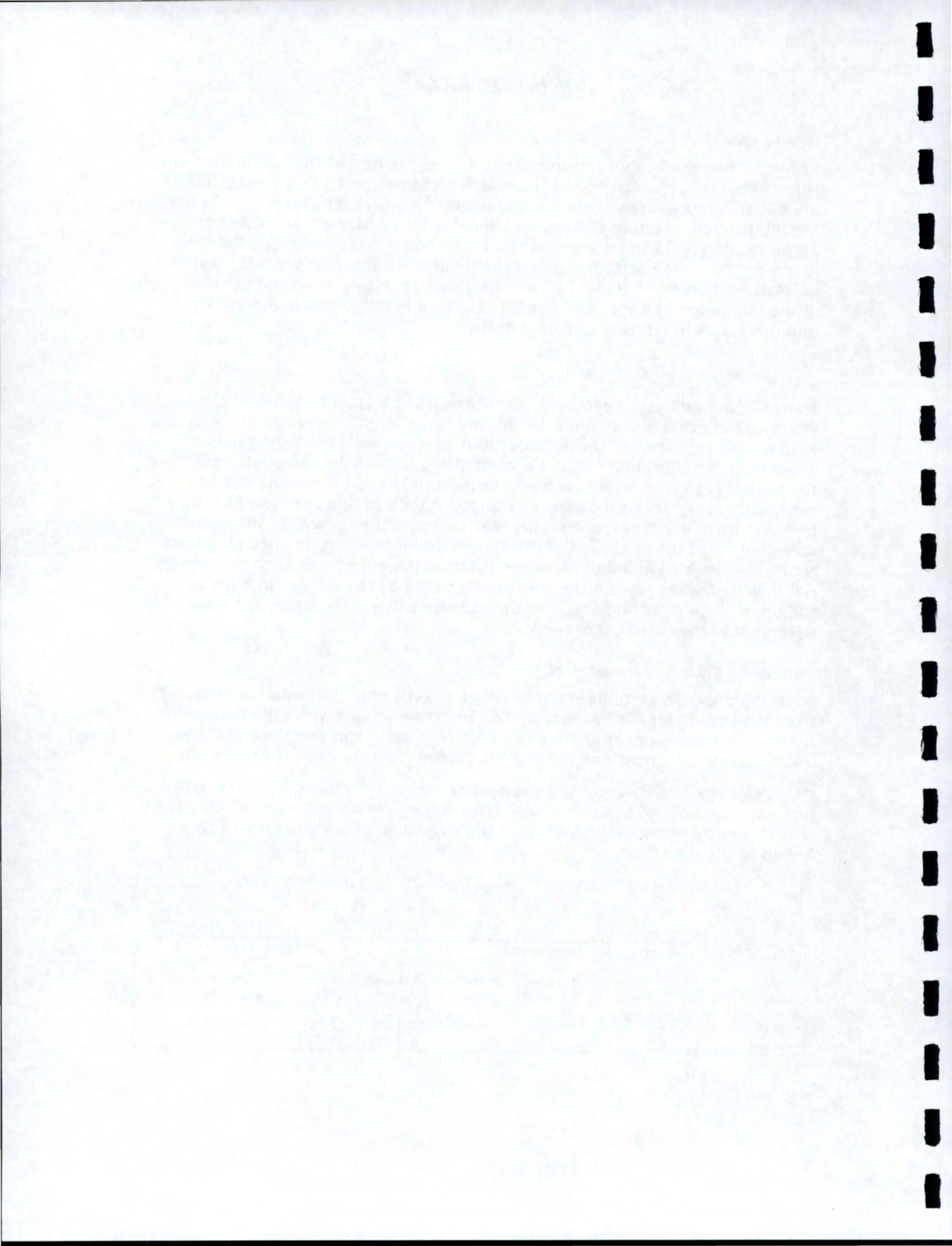
**Purchased Livestock Investment**

As in the previous sections you may either directly enter information or select from the parameter file by pressing F6. Selecting an item from the parameter file brings in the name, purchase price, salvage value and years life. At this point enter the number of head and the capital recovery value is calculated.

If you elect to directly enter the information rather than using the data base just enter number of head, purchase price, salvage value and years of life. Note that this entry will not have an "\*" in the left column thus showing it is not linked to the data base.

Figure 3 below illustrates the purchased livestock investment screen.

FIG. 3: Purchased Livestock Investment:					Interest Rate = 9.50
Name	Number of Head	Price/Head	Salvage Value	Useful Life	Capital Recovery
*Bull	10	1500.00	1500.00	2.0	\$1,425.00
*Horses_____	3	600.00	600.00	10.0	\$171.00



### Retained Livestock Investment

Retained livestock can be entered either from the parameter file or directly by the user. Information on number of head, value per head and salvage value are entered and interest on investment is calculated based on the interest rate on livestock entered earlier. Figure 4 illustrates the retained livestock screen.

FIG 4: Retained Livestock Investment:				Interest Rate = 9.50
Name	Number of Head	Value/Head	Salvage Value	Interest on Investment
*Cow	200	500.00	500.00	\$9,500.00
*Replacement heifer____	36	500.00	500.00	\$1,710.00

**Note:** One may ask "why distinguish purchased livestock from raised or retained livestock in LBUDGET?" This distinction is made solely for the purposes of calculating depreciation expenses on livestock. While the value of both purchased and raised livestock can be depreciated under current tax laws (1996), the costs associated with raising livestock are commonly charged as an operating expense each year. The value of purchased livestock cannot be charged to operating expenses. LBUDGET uses a straight-line method of calculating depreciation.

### Housing and Improvements

Use this section to list any buildings or improvements made to the operation. Costs for barns, watering systems, fencing and storage facilities should all go in this section. As in the sections above, the user may either select from the parameter file or enter information on specific items separately. Pressing the

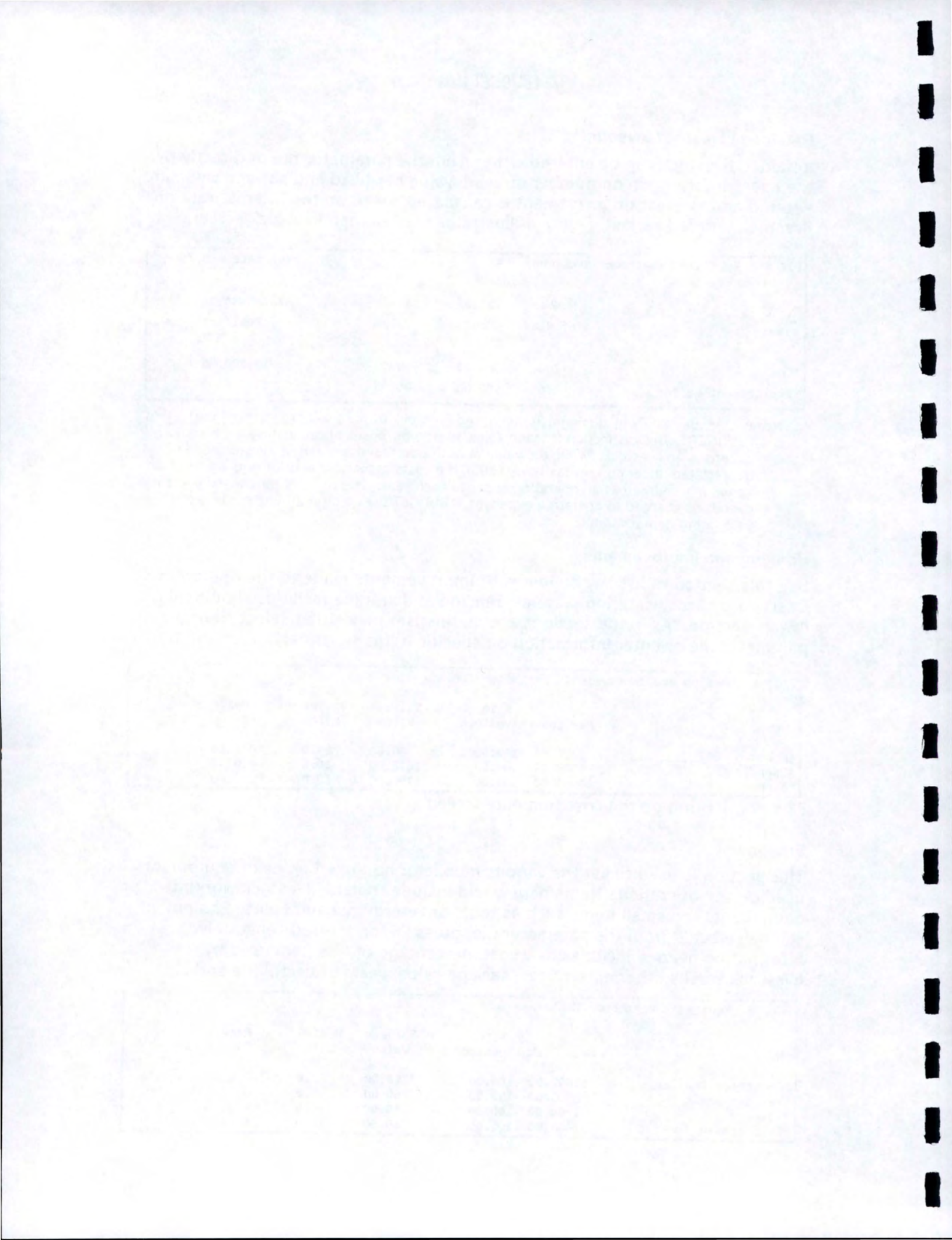
Fig. 5 Housing and Improvements Parameter Table:					
Name	New Cost	% to Livestock	Salvage Value	Useful Life	Repair Factor
*Fencing CC2_____	19200.00	100.00	0.00	25.0	0.0064
*Corral CC2	6700.00	100.00	1675.00	30.0	0.0237
*Barn	11900.00	100.00	1190.00	30.0	0.0200

F8 key will bring up the cost summary screen.

### Equipment

This section is used to list the various mobile or non-fixed types of equipment used on the operation. Items here would include trailers, livestock working equipment, and small items such as tools or veterinary equipment. Equipment can be selected from the parameter file, press F6, or entered separately. Information needed includes new cost, percentage of this item used by livestock versus other enterprises, salvage value, years of useful life and a

Fig. 6 Equipment Parameter Table:					
Name	New Cost	% to Livestock	Salvage Value	Useful Life	Repair Factor
*Gooseneck trailer____	11000.00	100.00	1100.00	20.0	0.0500
*Vet equipment	600.00	100.00	60.00	15.0	0.0333
*Squeeze	1700.00	100.00	170.00	10.0	0.0100
*Calf cradle	800.00	100.00	80.00	10.0	0.0100





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repair coefficient. The repair coefficient has been developed by the American Society of Agricultural Engineers. Pressing the F8 key will bring up a table showing the cash and non-cash ownership (fixed) costs.

**Fig. 7 Equipment Costs:**

Name	<---Non Cash--->		<-----Cash----->			Total
	Capital	Recovery	Taxes	Insurance	Repair	
Gooseneck trailer		1227.92	60.50	36.30	550.00	1874.72
Vet equipment		74.68	3.30	1.98	19.98	99.94
Squeeze		259.83	9.35	5.61	17.00	291.79
Calf cradle		122.27	4.40	2.64	8.00	137.31

### Machinery

List items like tractors and loaders in this section. Again these items can be selected by pressing F6 and using the parameter file or by entering the needed information. When machinery is selected from the data base it is still necessary to enter the hours of annual use. In addition, in this screen only, when the cursor is in the field for the repair coefficient, pressing the F1 key will bring up a worksheet for calculating the repair coefficient. Once the necessary data is

**Fig. 8 Machinery Parameters:**

Name	F u e l	New Cost	PTO HP	% to Live	Salvage Value	<---Hours--->		
						Annual Use	Useful Life	Repair Factor
*Tractor loader_____	D	31000.00	80	50.00	6200.00	350	7000	0.040

supplied cash and non-cash costs of ownership can be viewed by pressing F8.

**Fig. 9 Calculate an annual repair factor for: Tractor loader**

List price	:	31000.00
Annual use (hours)	:	350
RF1	:	0.0120
RF2	:	2.0000
Accumulated machine hours prior to current year:		2500
Annual repair and maintenance cost:		682.00
Annual repair factor	:	0.022

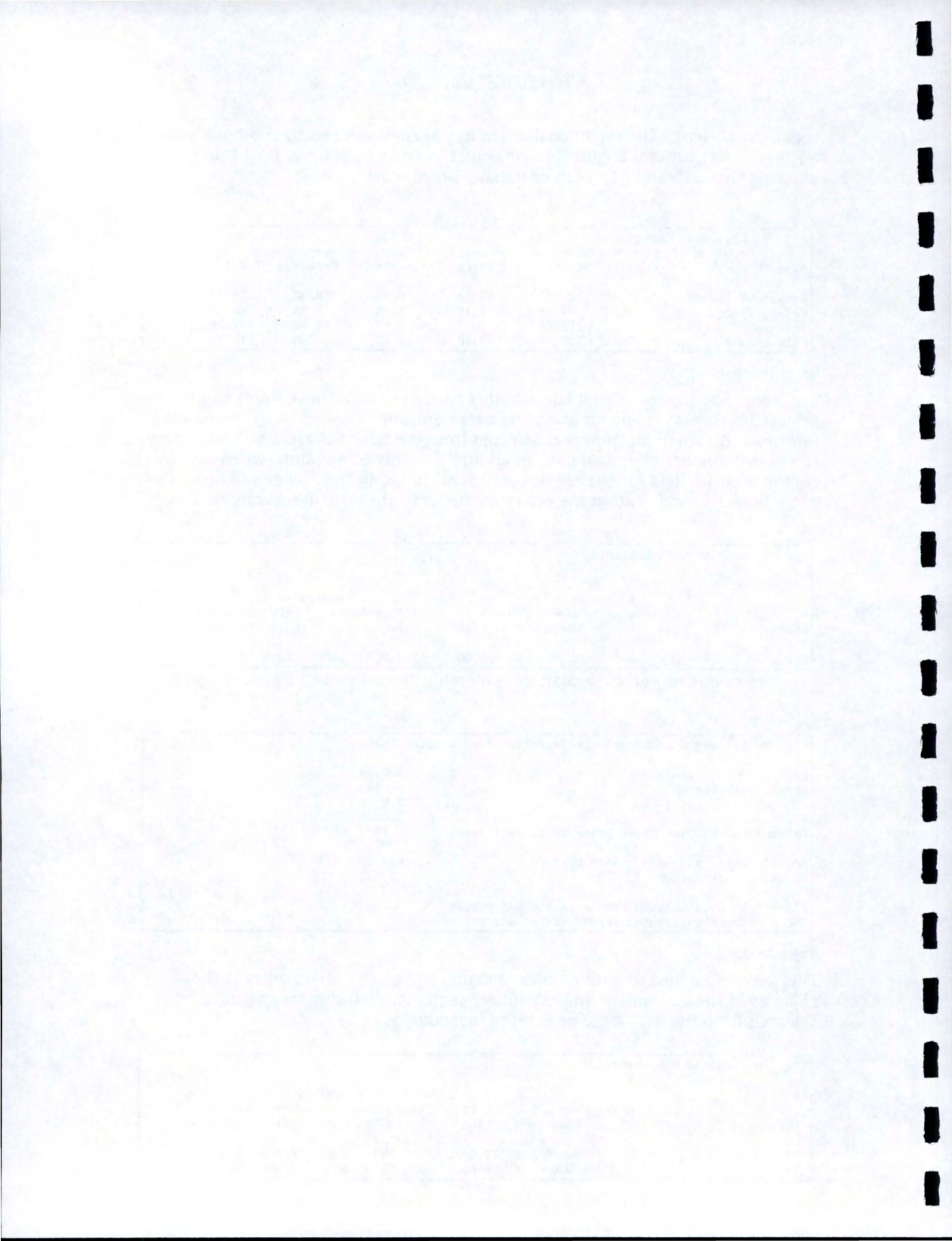
F10 - Retain calculated repair factor and return.  
ESC - Discard calculated repair factor and return.

### Vehicle

This section applies to automobiles, pickups and trucks. Data entry is the same as in the equipment and machinery sections. Vehicles may be either selected from the data base or entered individually.

**Fig. 10 Vehicle Parameters:**

Name	F u e l	New Cost	MPG	% to Live	Salvage Value	<---Miles--->		
						Annual Use	Useful Life	Repair Factor
*Pickup 4x4 3/4 ton	G	21000.00	8	75.00	2400.00	6000	60000	0.070
*Truck 2 ton_____	D	24000.00	4	50.00	4800.00	4000	36000	0.070



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**Note:** Capital Recovery method was used to allocate the value of durable assets, rather than the more traditional method of calculating depreciation and interest as separate items. See calculations in the index.

### Overhead

Overhead is often a bit of a "catch all" category where dues, subscriptions, professional fees, and various miscellaneous charges are lumped together. These can be detailed or a general figure put in the budget.

Fig. 11 Business Overhead:

Name	Value
*Overhead	2000.00

### Decimal Places on Printouts

The user has some control over the number of decimal places shown on printouts (as well as on-screen). When this menu item is selected, a table - shown below - is displayed with the current decimal settings for the four output tables. These may be changed by editing the table values.

Fig. 12 Number of decimal places for printouts:

Table 1:		
Weight	: 2	
Number of Units	: 2	
Price	: 2	
Total Value	: 2	
Value/Head	: 2	
Table 2		: 0
Table 3		: 0
Table 4:		
Purchase Price	: 2	
Salvage Value	: 2	
Livestock Share	: 0	
Useful Life	: 0	
Taxes and Insurance	: 2	
Capital Recovery	: 2	

**NOTE:** This program stores numbers based on what you see. If the number of decimal places is set to two and the value 9.159 is entered, 9.16 will be displayed. That will also be the value stored with the program and used for all calculations. If more precision is needed the number of decimal places will need to be increased.

### Save Current Budget to Disk

Once a budget has been created or revised it should be saved to preserve the new figures. By selecting the SAVE option from the main menu the following screen is displayed.

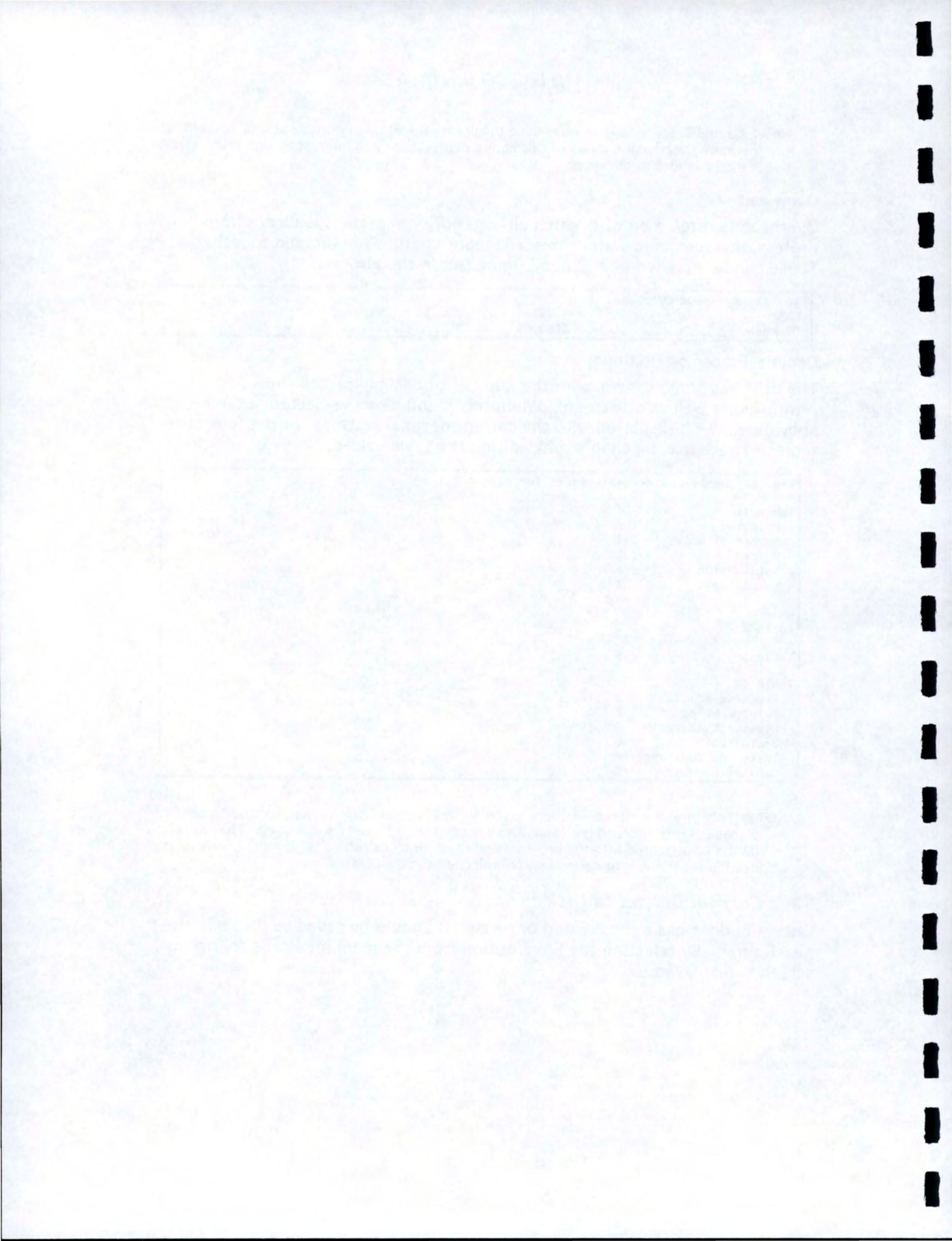


Fig. 13 Save Budget File to Disk -

Path : D:\UI\LBUD\  
File Name : base1\_\_\_\_  
File Extension: &lv (The file extension must begin with &. The program will automatically insert the &.)  
ESC - Return to last screen without saving file.  
F10 - Save file and return to the last screen.

If the budget is a revision or a replacement of an existing budget with the same name you will be asked to confirm overwriting the existing file. If you do not wish to overwrite the old file you will be returned to the save file screen where you may change the file name or press ESC to exit the save file routine.

### *Display Output*

Once a budget has been created or loaded, the output can be viewed or printed. Four tables are generated: a cost and returns table, a monthly summary of returns and expenses table, a monthly feed requirements table, and an investment summary table. Each of these tables can be printed by selecting the table from the view menu and pressing the F9 key. Before attempting to print, the user should select the printer description file and the output port. This is done from the "Modify Printer Setup and Data Paths" option in the Main Menu.

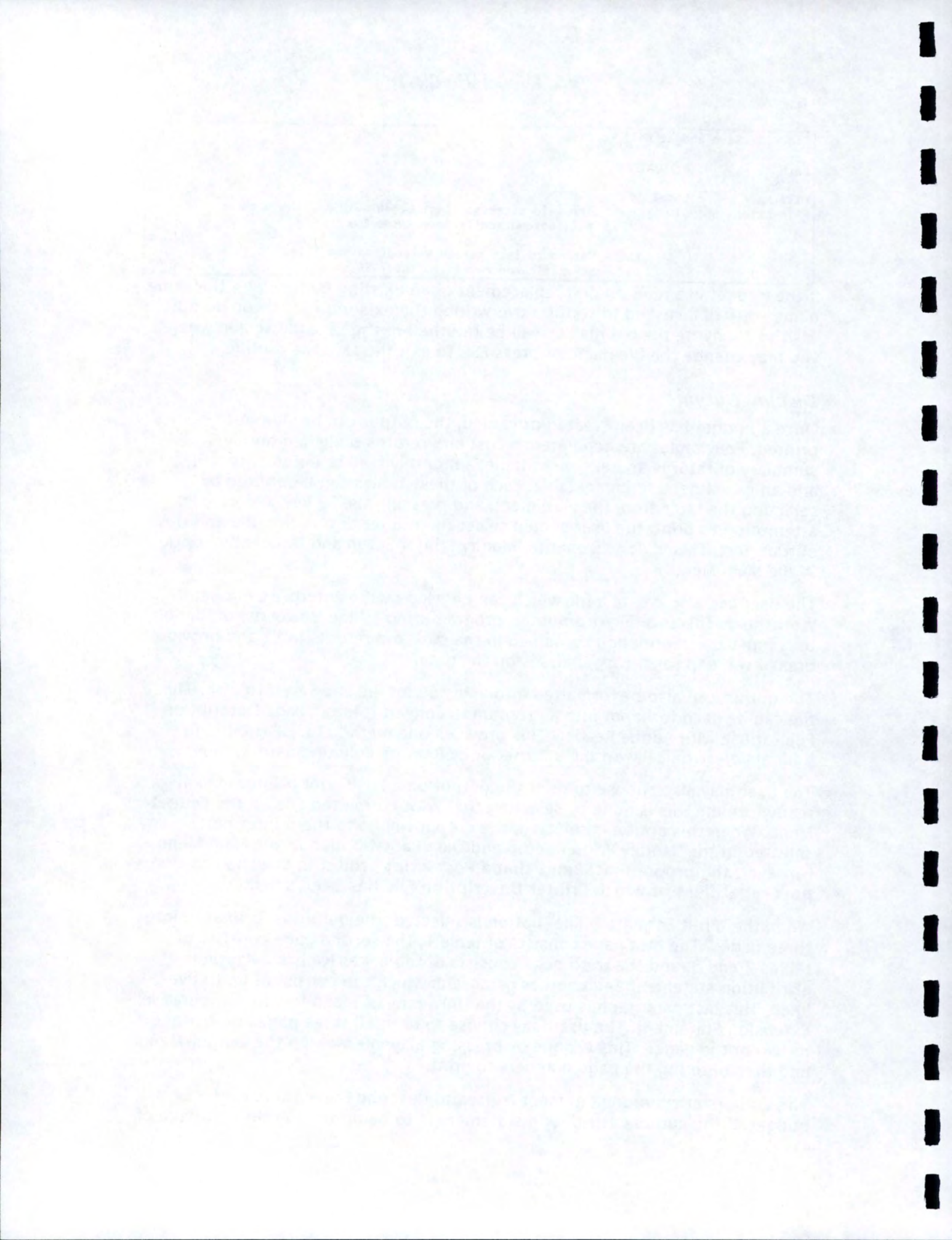
The user can also create a file which can be used by the Enterprise Budget Worksheet. This is a microcomputer program used by the University of Idaho to summarize information contained in the cost and returns table and provide break-even and sensitivity analyses on the data.

The output can also be formatted into a PostScript file and saved to disk. This file can be used for input into a program to convert it into a Page Description File for use with Adobe Reader. This provides one method for distributing budgets electronically on the Internet or by Remote Bulletin Board Systems.

The user may also choose to print the output on a PostScript printer in camera ready format. This is done by selecting the "Print Formatted File" in the Output Menu. When this option is selected, the output will go to the printer port selected in the "Modify Printer Setup and Data Paths" option in the Main Menu. However, **the program assumes that a PostScript printer is attached to that port regardless of which Printer Description File has been selected.**

When the "Print Formatted File" option is selected, the output is formatted into three pages. The first page consists of table 1, the second page consists of tables 2 and 3, and the third page consists of table 4 as well as an authors attribution statement and another paragraph which can consist of up to five lines. This last paragraph is used by the University of Idaho for the Cooperative Extension Statement. The user may choose to print all three pages or just one or two of the pages. This is done by pressing F2 while viewing the Output Menu and then entering the page numbers to print.

The authors attribution statement is used to describe the authors of the budget. If the authors attribution statement is to be printed on the last page of



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the output, a text (ASCII) file named AUTHORS.DAT must be created and stored in the same subdirectory as the budget file. This file contains the authors information for one or more budgets. The file must consist of a line containing a publication number. This is a string of letters and numbers which is used to identify the budget and must match the publication number entered in the Title, Notes, and Starting Months input screen. This match is case sensitive. LBUDGET reads the AUTHORS.DAT file and attempts to match the publication number stored with the budget with the publication number in the file. If the AUTHORS.DAT file is not found or if no match is found, the authors attribution statement on the third page of the PostScript output will not be printed. If a match is found, the program reads the next line of the file. This line will be printed on the bottom left side of page 3. The program then reads the next line and prints this information on the bottom right side of page 3. The description of the authors follows these three lines. There is no limit to the number of lines used to describe the authors but the total description should be limited to about 400 characters. LBUDGET will read the description lines until it finds a blank line and will then assume that it has reached the end of the authors description. The program will automatically insert page breaks where needed and print the lines full justified. Since LBUDGET will format these lines by adjusting the space between words, care should be taken when creating this file to use only one space after a period.

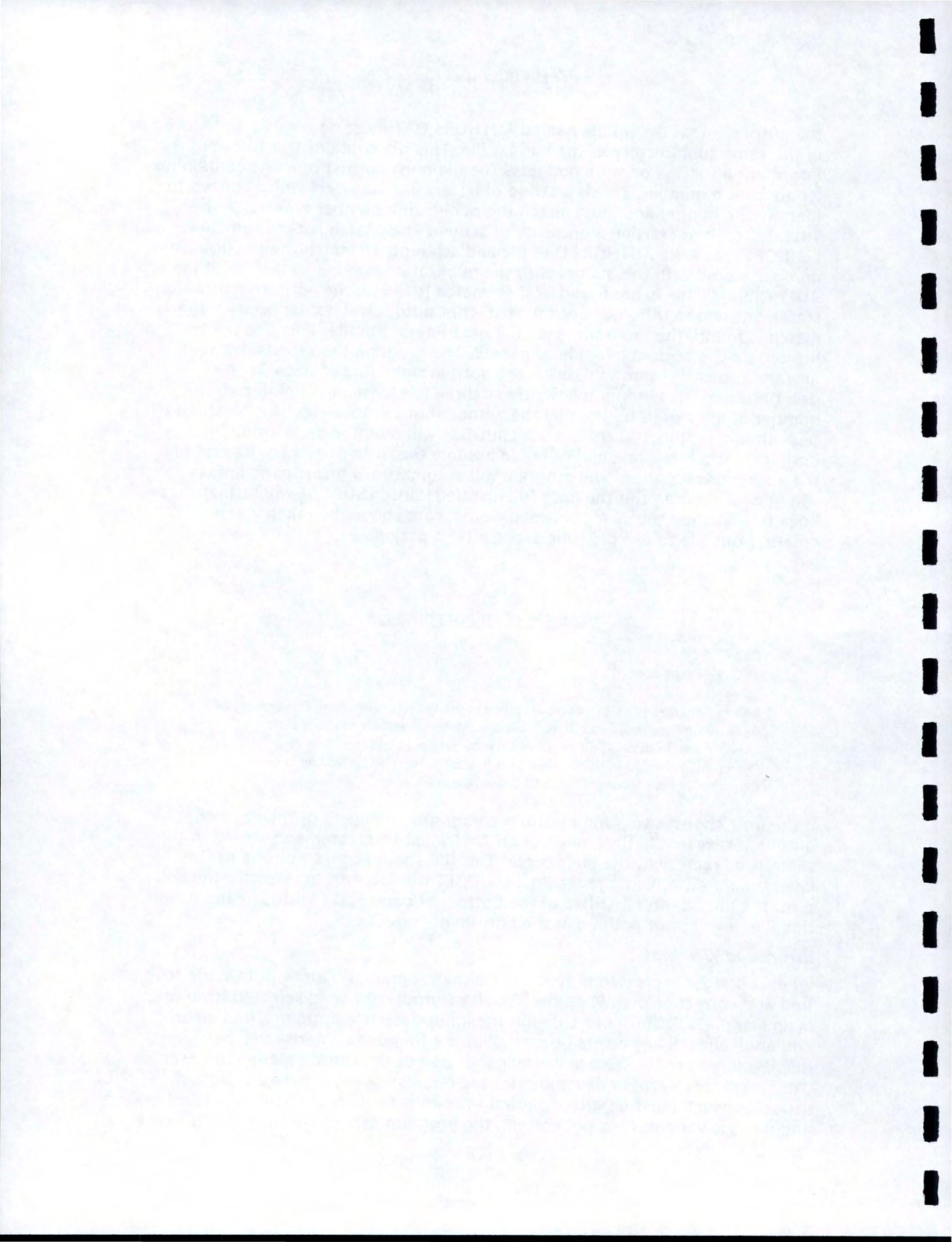
### Example of authors data file:

```
EBB-CC2-96
150, 12-96 (revised)
50 cents
Robert Smathers is an Extension associate in the University of Idaho Department of
Agricultural Economics and Rural Sociology, Moscow. Robert R. Loucks is an
Extension agricultural agent in Lemhi County, Salmon. C. Wilson Gray is an
Extension economist in the UI Twin Falls R & E Center. Neil R. Rimbey is an
Extension range economist in the UI Caldwell R & E Center.
```

If the user chooses to print a bottom paragraph on page 3 of the PostScript output, a text (ASCII) file named COOP.DAT must be created and stored in the same subdirectory as the budget file. This file should consist of one to five lines separated by carriage returns. LBUDGET will attempt to read this file and print the lines center justified at the bottom of page 3. If LBUDGET cannot find this file, it will print nothing at the bottom of page 3.

### **Errors and Warnings**

When a budget is created or loaded into the program, no attempt is made to find and correct errors. When the "Display Output" option is selected from the Main Menu, LBUDGET looks through the input data attempting to find errors and anomalies. If any errors or anomalies are found, an asterisk will be displayed next to the "Check Warnings" option of the Output Menu. The user can ignore this warning flag and print the results anyway. There are certain variables which must be within allowable bounds for output to be calculated and if these variables are not correct, the program cannot continue. In this case





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an error message will be printed to the output device (either the screen or the printer) and further calculations and output will not be made. Errors other than these critical errors will not cause the program to discontinue printing the output. However, the user should always select the "Check Warnings" option if an asterisk is displayed next to it in the Output Menu.

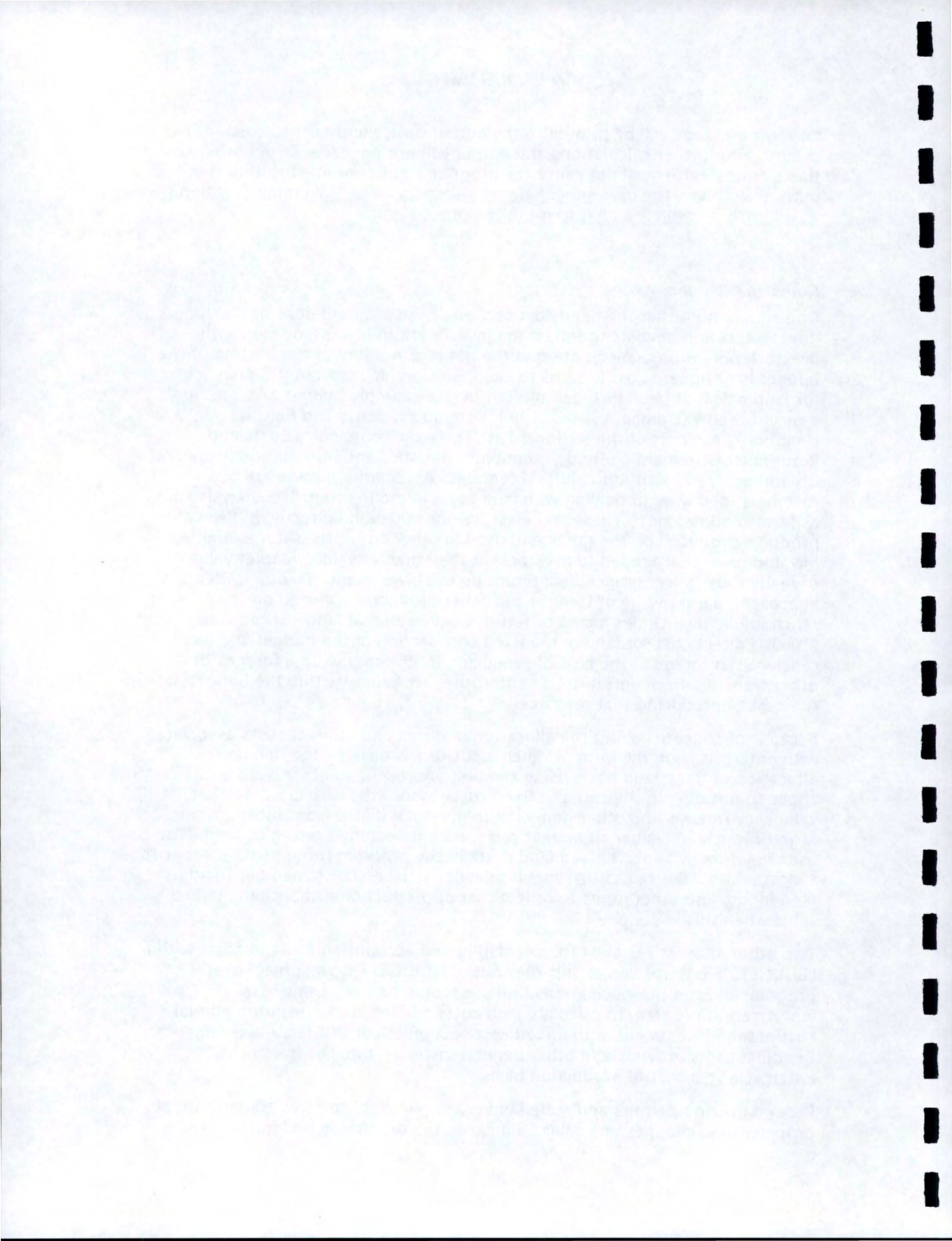
### **Notes and Cautions**

One should note that the fixed cost section of the program does not include a direct allocation of costs to reflect the investment in land associated with livestock operations. Also note that the net return figure at the bottom of the budget is designated as "Returns to Land, Risk and Management". Fixed costs for land have not been included directly in this example budget. According to a recent report (Eidman, V. et al. 1994. Commodity Costs and Returns Handbook. A report of the National Task Force on Commodity Costs and Returns Measurement Methods. Economic Statistics and Information Resources Committee, American Agricultural Economics Association), there are two recommended ways of dealing with land costs in multi-enterprise analysis such as farms and ranches. These are: **First**, to not value land directly, but to value products produced on the ranch and used in other enterprises (for example, hay and grain that are fed to livestock) at their market value. Market value of feeds thus reflect or include a return on the investment in land. Under this approach, market value of forages and other products produced on the farm or ranch implicitly includes a cost or return on the value of land. **Second**, to attach a direct cost for land in the fixed cost section of the budget and value ranch-raised forage at the cost of producing it. In other words, forages or other transfers from enterprise to enterprise, are valued within the budget at the cost of producing that resource.

Because of concerns about the allocation of direct and indirect costs associated with enterprises on the farm or ranch, LBUDGET is designed to handle the allocation of fixed land costs using the first approach. In other words, we chose to not directly allocate the fixed costs associated with land. Market values for forages and other items fed to livestock that are produced on the farm or ranch are valued at market rates, thus reflecting a return to land. The user can directly allocate fixed land costs in the program through REVISE CURRENT BUDGET|HOUSING & IMPROVEMENTS menu selections. However, remember to adjust feed inputs and other items to reflect cost of production rather than market value when this is done.

Two other alternatives exist for calculating and accounting for land costs within LBUDGET. First, one can export files out of LBUDGET into a spreadsheet program and run the calculations there. Second, one can use a loan amortization program to calculate land costs and input the resulting annual cost of land investment in the fixed cost section of LBUDGET. Again, remember to adjust costs of feeds and other items transferred into the livestock enterprise to a cost of production basis.

Federal grazing permits and state land grazing leases are often traded as real property in exchanges and sales. Similar to the discussion on land value,



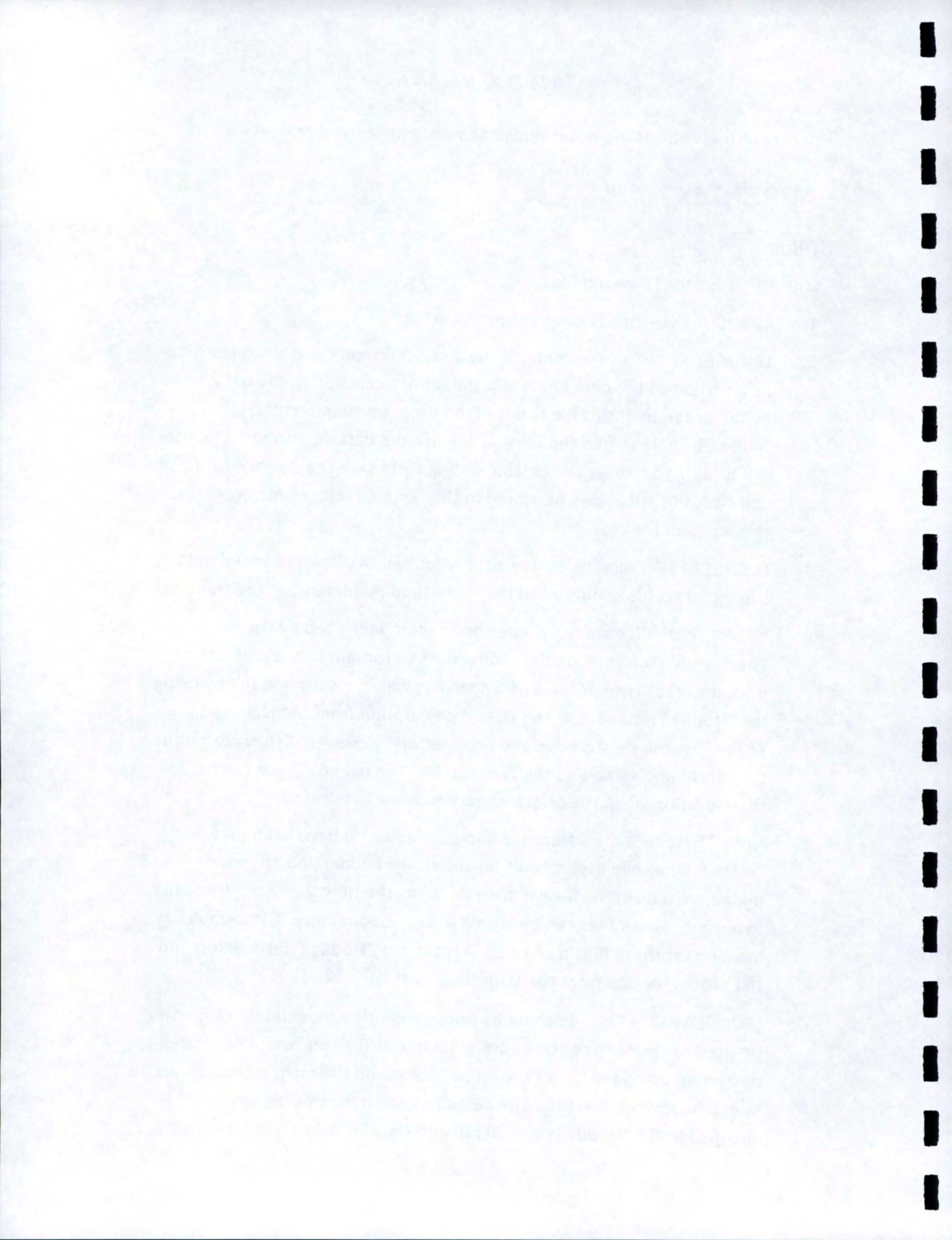
permit or lease values are not included as fixed costs in our budgets.

## **APPENDIX**

### ***Files***

LBUDGET uses the following files:

1. LBUDGET.EXE - This is the main program file.
2. LBUDGET.SET - This file contains the setup information. It contains such information as the data paths and the printer description file to be used by the program. If this file is not in the program subdirectory, LBUDGET will not be able to find the file and will use the default settings. The user will be able to change the default settings and save the new file for future use. This file will always be stored in the same directory which contains the program file.
3. LBUDGET.HLP - This file contains the information displayed in the help screens. This file should be in the same subdirectory as the program file.
4. \*.PDF - These files are the printer description files used by the program. They contain information describing to the program how a particular printer works. The user selects a specific printer description file by using the "Modify Printer Setup and Data Paths" option from the Main Menu. These files can be stored in any subdirectory. However, if they are not in the same subdirectory as the program file, the user will have to specify their location when the printer description file is selected.
5. \*.&\* - These files are enterprise budget files which have been previously created. When the user creates an enterprise budget and stores the budget on a disk, the file will have an '&' as the first character in the file extension. These files can be stored in any subdirectory. The default location for these files may be changed in the "Modify Printer Setup and Data Paths" option from the Main Menu.
6. LBUDGET.PAR -. This file contains prices and other parameters which can be used to create budgets. Information in this file can be edited, added to or deleted using the "Edit Parameters" option on the main menu. It can be stored in any subdirectory. The default location for this file may be changed in the "Modify Printer Setup and Data Paths" option from the



Main Menu.

### **Program Operation**

To run LBUDGET, make the directory containing the LBUDGET program the current directory, type "LBUDGET" and press the ENTER key. If the directory containing the program is listed in the DOS path, it is possible to run LBUDGET from any directory. However, the program will be unable to find the help files, the setup file, and the printer description files without help from the user. The first time the program attempts to use these files and cannot find them, the user will be prompted for the subdirectory in which these files are located.

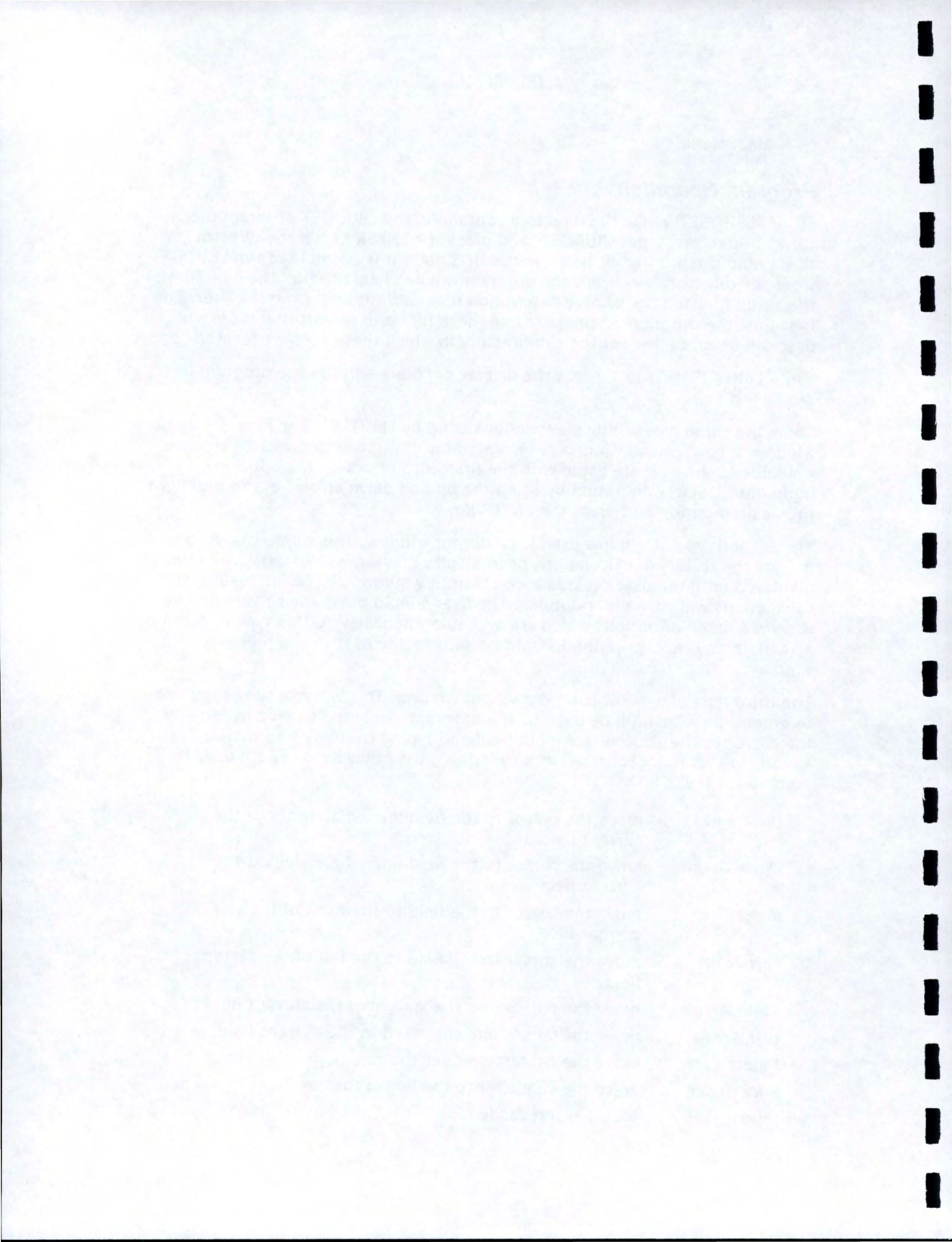
Type "LBUDGET m" to suppress the display of colors and run the program in monochrome.

There are three types of display windows used by LBUDGET. The first is a menu window. When a menu window is displayed on the screen, the various options available to the user are listed with the first word of one of the options highlighted. Select an option by using the up and down arrow keys to highlight the desired option and press the ENTER key.

The second type of window used is an output window. This window is used to display the results of calculations or to display messages. Messages will remain displayed until the user presses a key. Output windows displaying results of calculations will have more options. The user should press the F1 function key to view a menu of options which are available when viewing this type of output screen. In any case, pressing ESC always returns the user to the previous window.

The third type of window used is an input window. This window allows the user to enter data which will be used by the program. An entry is made by moving the cursor to the appropriate input field and typing over any information already in that field. For most input windows, the following keys are used to accomplish these tasks:

<i>Up Arrow</i>	move the cursor to the field immediately above the current field.
<i>Down Arrow</i>	move the cursor to the field immediately below the current field.
<i>Right Tab</i>	move the cursor to the field to the right of the current field.
<i>Left Tab</i>	move the cursor to the field to the left of the current field.
<i>Right Arrow</i>	move the cursor one space right in the current field.
<i>Left Arrow</i>	move the cursor one space left in the current field.
<i>Delete</i>	erase the character under the cursor.
<i>Back Space</i>	erase the character to the left of the cursor.
<i>Insert</i>	toggle insert mode.



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When a new window is displayed or the cursor is moved to a new field, the input editor is set to type-over mode. This means that when a character is typed on the keyboard, that character is displayed at the current cursor position and the character which was in that position is erased. If the input editor is in insert mode, the new character is inserted before the character at the current cursor position. Press the insert key once to enter insert mode and press it again to return to type-over mode. In type-over mode, the cursor is a blinking underline while in insert mode it is a blinking solid block.

More options will be available depending upon the screen. The user should press the F1 function key when any particular input screen is displayed to view a list of additional keys and their functions for that input or output screen. This program uses the convention that pressing the ESC key when an input screen is displayed will return the user to the previous screen without saving any changes. If the user wants to retain the changes made while the input screen was displayed, the F10 key must be pressed. The changes will be retained and the user will return to the previous screen. These retained changes will not be saved to disk unless the user selects the "Save" option from the menu.

**IMPORTANT** - If changes have been made and the ESC key is pressed, the changes will not be saved. Press F10 to save the changes and exit from the input screen.

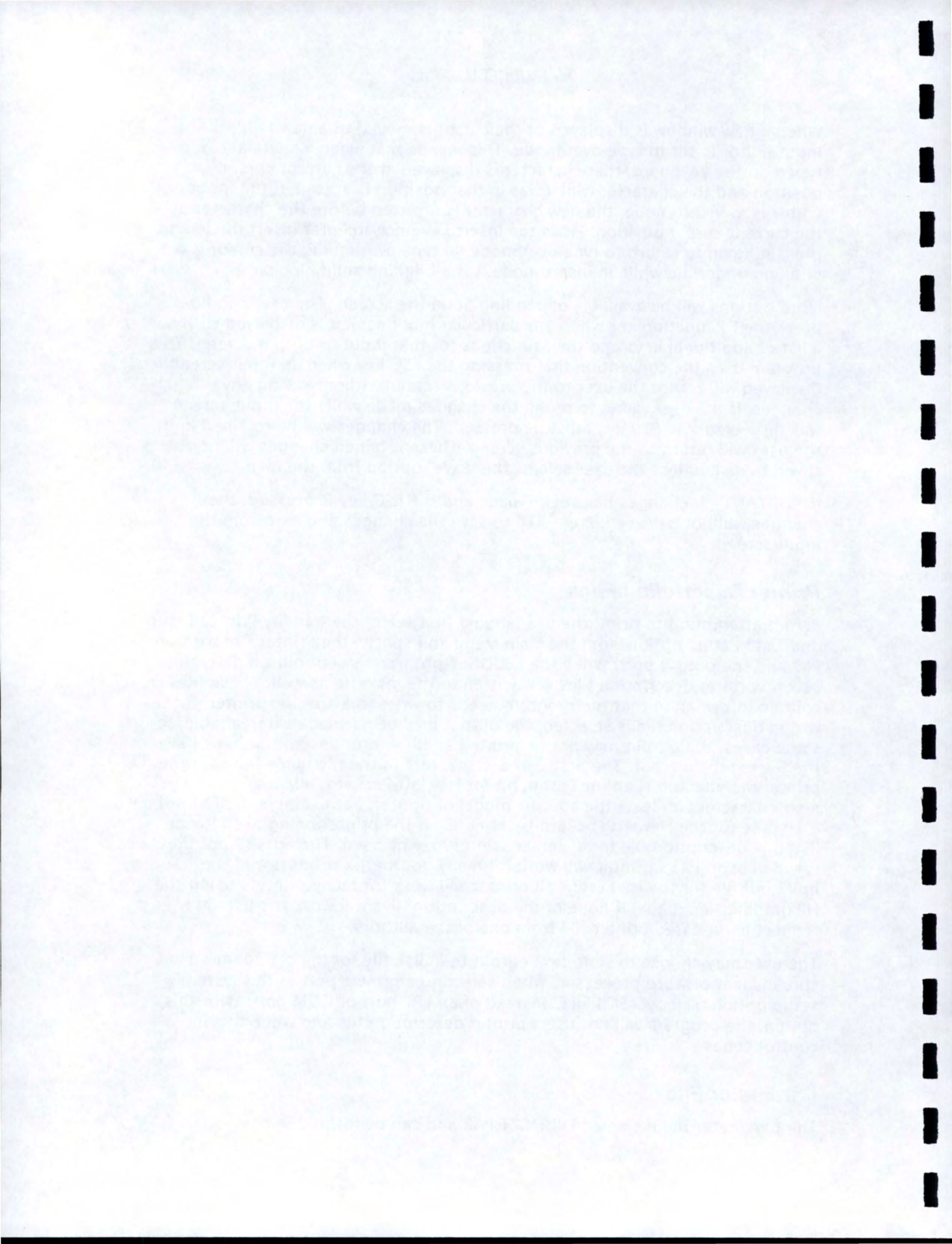
### ***Printer Description Files***

Before attempting to print, the user should first select the "Modify Printer Setup and Data Paths" option from the Main Menu and specify the Printer Description File and the output port. When the LBUDGET program is sent out on diskette, several printer description files are written to the diskette as well. These files contain information that the program needs to write to a specific printer. If the wrong description file is selected, the output may be garbled or unreadable. In some cases, the output may not be printed at all. Printer description files have the file extension .pdf. The first 2 or 3 characters of the file name indicate the printer manufacturer; ep for Epson, hp for Hewlett-Packard, IBM, NEC, etc. The next characters indicate the specific model of printer. For example, hplj2d.pdf is the file for the Hewlett-Packard Laserjet IID. If the printer being used is not listed, a description file for a similar printer may be used. The epfx85.pdf file for the Epson FX85 printer will work for many dot matrix printers and the hplj2.pdf file for the HP Laserjet II printer will work for many printers using the HP graphics language. If none of the description files will work the user may request an updated printer file from one of the authors.

The user may choose to send text output to a disk file for importing into a spreadsheet or word processor. When selecting a printer port in the system setup option, select "ASCII FILE" instead of an LPT port or COM port. With this option, the program will not use a printer description file and will not print control codes.

### ***Parameter File***

The parameter file is named LBUDGET.PAR and can be located in any



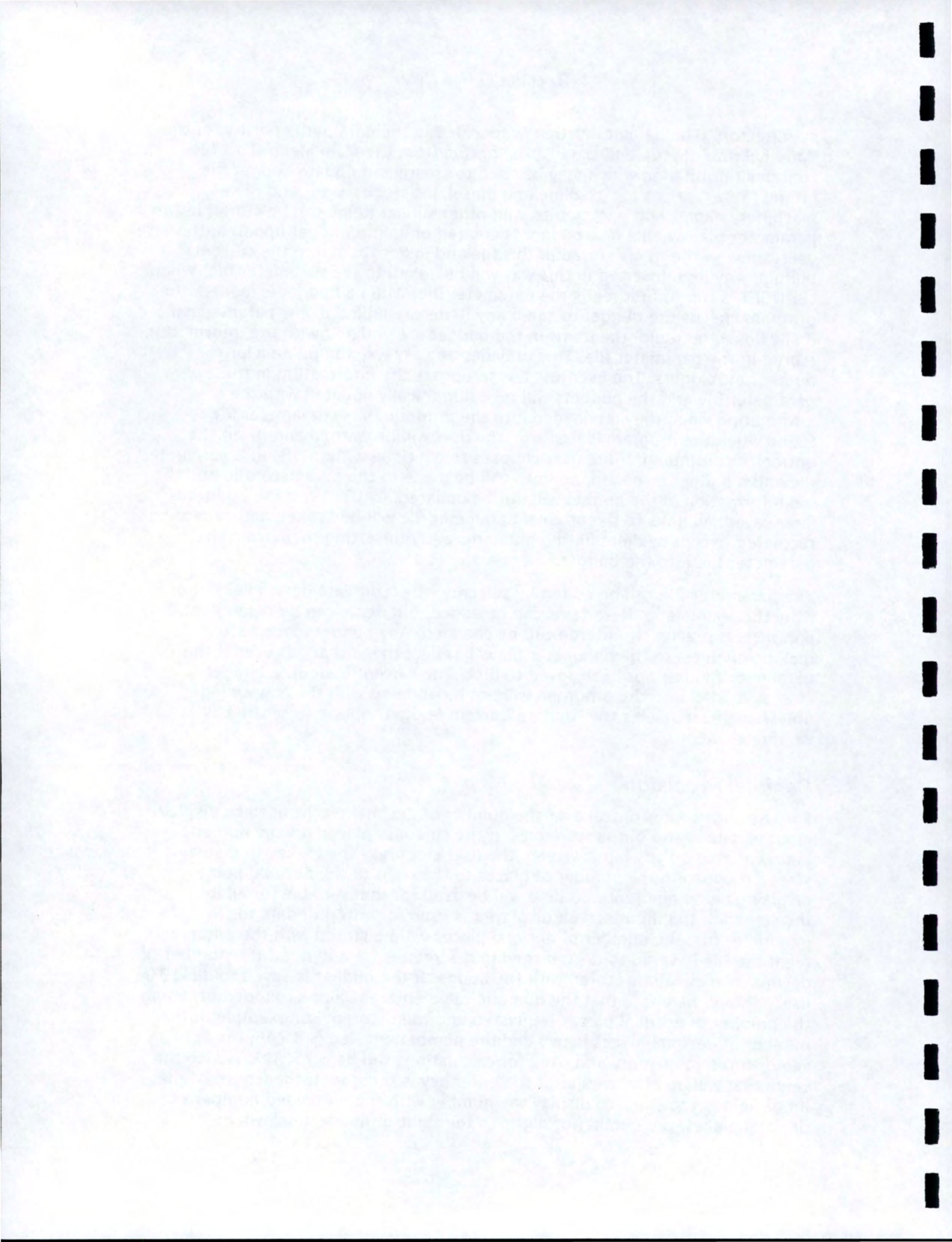


subdirectory. The default location is specified in the data paths portion of the "Modify Printer Setup and Data Paths" option from the Main Menu. This file contains information which may be used to create and update budget files. Interest rates, prices for gasoline and diesel, livestock names and prices, machinery names and parameters, and other similar items can be stored in the parameter file. When a new budget is created or an old budget updated, the user can view the items stored in this file and insert them into the current budget. Any item inserted in this way will be linked to the parameter file. When LBUDGET is run, it first reads the parameter file. When a budget is loaded, the program checks the budget to see if any items are linked to the parameter file. If any links are found, the items in the budget are updated with the information stored in the parameter file. This provides an easy way to update a large number of budgets. The user just has to update the information in the parameter file and the budgets will be automatically updated with the new information when they are loaded into the program. If no parameter file is found when the program is first run, the user will be warned and given the option of continuing. If the user chooses to continue without using a parameter file and a budget is loaded, no links will be made to the parameter file and the old information in the budget will not be updated. CAUTION: if the budget is later saved, all links to the original parameter file will be broken and cannot be recreated except by deleting the old items and reinserting them from the parameter file into the budget.

The parameter file can be edited by selecting the "Edit Parameter File" option from the Main Menu. New items can be added, old items can be deleted, and parameters previously entered can be changed. Any budget loaded after making changes to the parameter file will reflect those changes even if the parameter file has not been saved to disk. The current budget (a budget already loaded into the program) will not be updated with the new changes unless the user selects the "Update Current Budget" option from the Edit Parameter menu.

### ***Decimal Precision***

The user has some control over the number of decimal places used to display input variables and output variables. If the cursor is placed on any numeric input variable on any input screen, the user can press the F5 key to display a screen requesting the number of places to the right of the decimal point to display. The number entered here will be used for that variable for all items on the screen. If the input screen displayed is used for entering data for the parameter file, the number of decimal places will be stored with the parameter file if the file is saved to disk. If the input screen is for a budget, the number of decimal places will be stored with the budget if the budget is saved to disk. The users should be aware that the numeric value entered will be rounded off using the number of decimal places requested and then stored. For example, if the number of decimal places is two and the number entered is 3.748, the actual value stored in memory and used for calculations will be 3.75. This is also the value that will be displayed after the enter key is pressed. If the length of the input field is too small to display the number with the requested number of decimal places, the number of digits to the right of the decimal will be



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automatically reduced until the value will fit into the length of the field.

The user may also control the number of decimal places used for printing the budgets. This is done from an option in the Edit Menu. The values entered using this option will be stored with the current budget if the current budget is saved to disk.

### **CALCULATIONS**

#### **Capital Recovery Formula**

$$\text{Capital Recovery} = \frac{\text{Purchase Price} - \text{Salvage Value}}{\frac{1 - 1 / (1 + \text{rate})^{\text{year}}}{\text{rate}}} + \text{Salvage Value} \cdot \text{rate}$$

#### **Housing and Improvements**

Depreciation and interest are included in capital recovery.

Taxes = property tax rate x average investment x % to livestock

Average investment = (new cost + salvage value) ÷ 2

Insurance = insurance rate x average investment x percent to livestock

Annual repairs = repair factor x new cost x percent to livestock

#### **Equipment**

Depreciation and interest are included in capital recovery.

Taxes = property tax rate x average investment x percent to livestock

Average investment = (new cost + salvage value) ÷ 2

Insurance = insurance rate x average investment x percent to livestock

Annual repairs = repair factor x new cost x percent to livestock

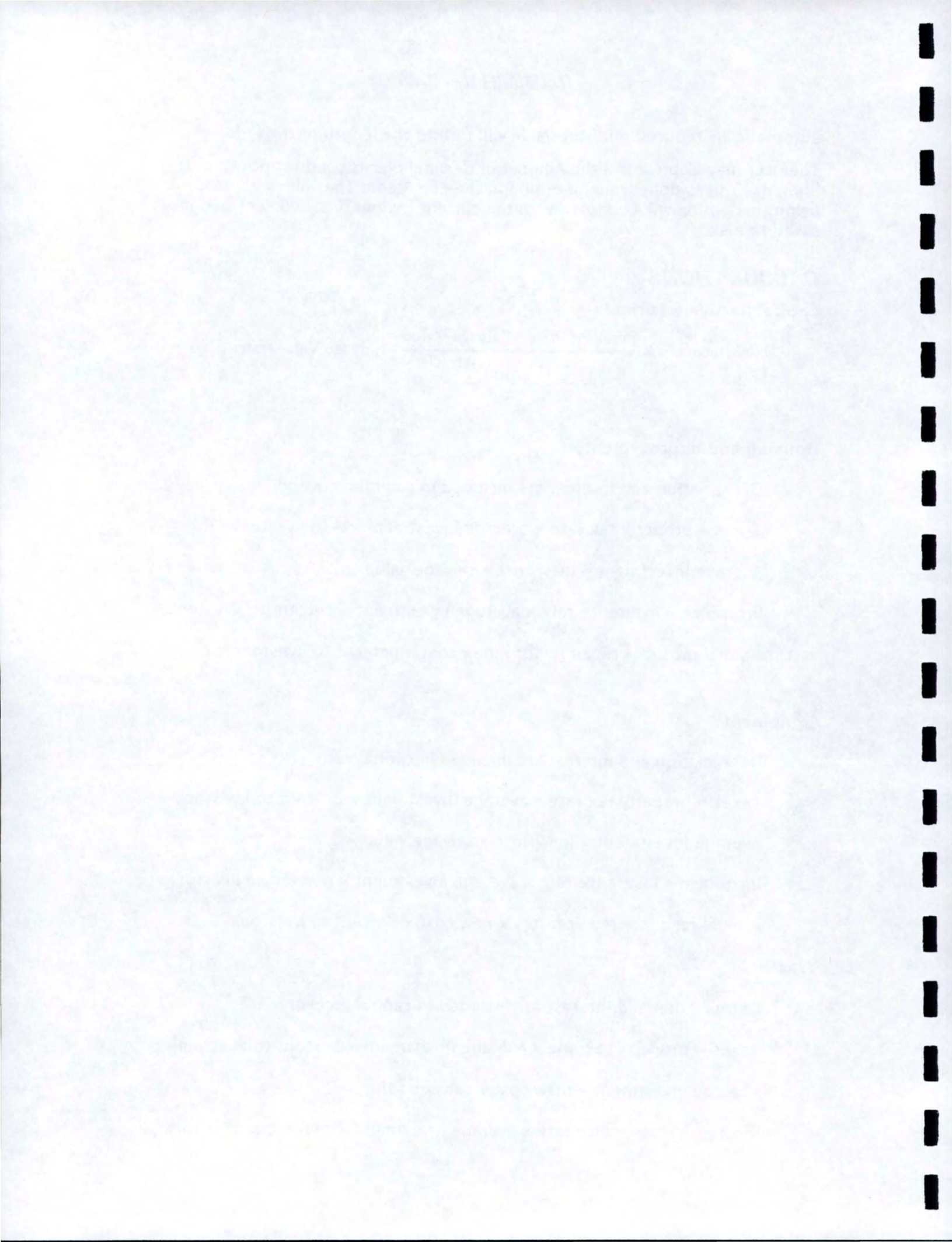
#### **Tractors**

Depreciation and interest are included in capital recovery.

Taxes = property tax rate x average investment x percent to livestock

Average investment = (new cost + salvage value) ÷ 2

Insurance = insurance rate x average investment x percent to livestock



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Repair = Repair factor x new cost x percent to livestock

Repair factor can be calculated with following equation, but calculated factor can be overridden.

$$\text{Repair factor}^* = \text{list price} \times [rf_1 \times ((\text{accumulated hours prior use} + \text{annual use}) \div 1000)^{rf_2} - rf_1 \times (\text{accumulated hours prior use} \div 1000)^{rf_2}]$$

\* $rf_1$  and  $rf_2$  are repair coefficients for tractors that are reported in the 1986 Society of Agricultural Engineers yearbook.

Fuel Cost = F x .06 x max pto HP x fuel price x lube multiplier x percent to livestock

F = .73 diesel and 1.00 gasoline  
Lube multiplier = 1.15

### Vehicles

Depreciation and interest are included in capital recovery.

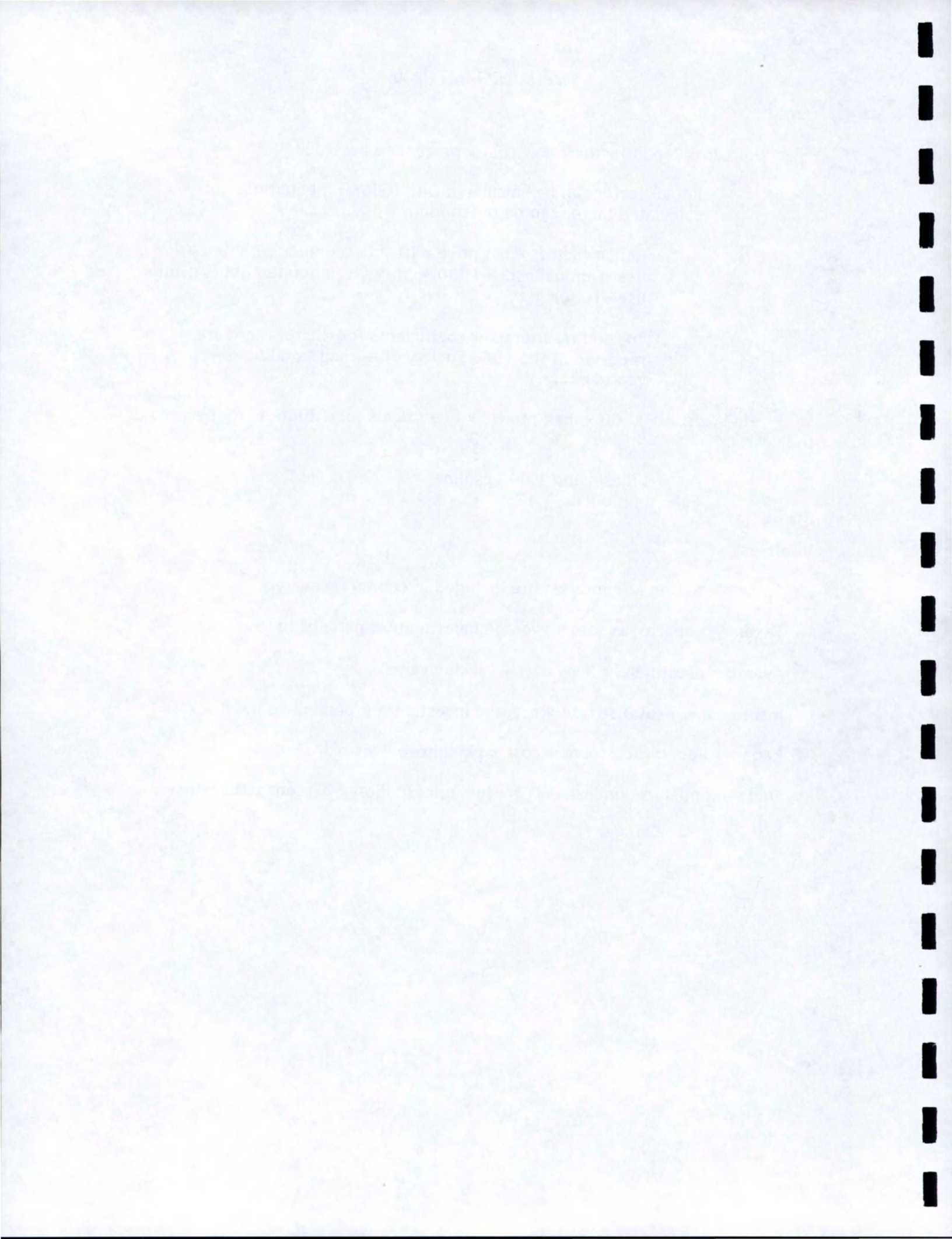
Taxes = property tax rate x average investment x percent to livestock

Average investment = (new cost + salvage value) ÷ 2

Insurance = insurance rate x average investment x percent to livestock

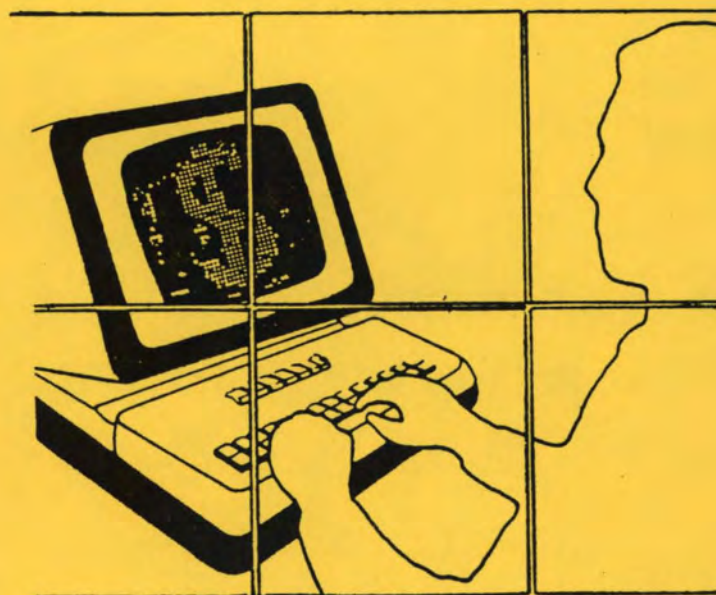
Repair = Repair factor x new cost x percent to livestock

Fuel = (annual use (miles) ÷ MPG) x fuel price/gallon x percent to livestock



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