

January 1986

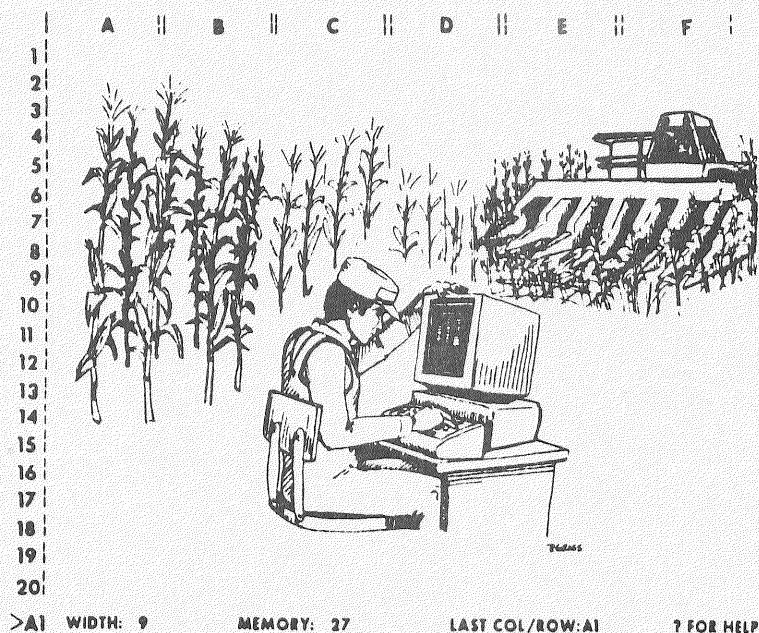
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Revised

# DAIRY FARM ANNUAL CASH FLOW PROJECTION TEMPLATE

## User's Manual



For  
Lotus 1-2-3 Electronic Spreadsheet  
and  
IBM PC, XT and IBM - Compatible Microcomputers

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## DAIRY FARM ANNUAL CASH FLOW PROJECTION TEMPLATE

### USER'S MANUAL

Cash flow projections are useful to help farmers understand the implications of price changes, increases or decreases in production, changes in enterprises, and other changes on their farms. The tedious and time-consuming calculations can be done quickly using electronic spreadsheet templates.

### PURPOSE

The purpose of the templates described here is to make an annual cash flow and debt repayment projection for a dairy farm for the coming year, based on the past year's figures. The projection is made both on a per cow and a per farm basis. The format is very similar to the "Yearly Cash Flow Planning and "Analysis" page included in most regional dairy farm business summary publications for a number of years (for example, see page 16 of 1984 Northern New York Dairy Farm Business Summary, A.E. Ext. 85-10).

The past year's receipts and expenses are entered into the templates along with the projected changes for the coming year. The total farm cash flows are then automatically calculated and the borrowed or equity funds needed for the coming year are determined.

The Lotus 1-2-3 electronic spreadsheet software package is required.

### OVERVIEW

Two Lotus 1-2-3 templates are included on the diskette that accompanies this manual. The first template, PROJECT.WKS, is intended for general use. The past year's data is entered into the template manually.

The step of inserting the past year's data can be avoided in county Extension offices using the Micro Dairy Farm Business Summary microcomputer program to process dairy farm business summaries. The other template, PROJDFBS.WKS, can be used by those who are inputting data from a farm on the Micro DFBS. This template avoids the time consuming step of inputting data manually by allowing the user to transfer data on a farm directly from the Micro DFBS farm file.

There are also two accessory programs, CONVERT.BAT and LOTUSCON.COM that are required to change the data from a Micro DFBS file into a form that can be used with Lotus 1-2-3.

### GETTING STARTED

The first time user should be familiar with the IBM, or IBM compatible microcomputer being used. A basic knowledge of saving and retrieving files on floppy diskettes or hard disk drives is required as well as transferring files from one diskette to another. The user can



refer to the DOS manual for the particular disk operating system and microcomputer being used.

The user should also be familiar with some basic skills of Lotus 1-2-3 such as using 1-2-3 commands, moving around the worksheet, and typing cell entries. The Lotus tutorial program can provide some background. The user will also want to refer to the Lotus manual.

A familiarity of Micro DFBS is also required of those wanting to transfer data from a farm on the Dairy Farm Business Summary.

Be sure to make a backup copy of the templates before using them in case the original is damaged or destroyed.

#### GENERAL USE: USING THE PROJECT TEMPLATE

The template called PROJECT is used by those who are manually entering farm data from the past year. The past year figures are entered by the user from an individual dairy farm business summary printout or other source. Changes are entered as either percentages (in decimal form) or dollar amounts. The changes can be made either on a per cow or whole farm basis. The blank worksheet has zeros entered in the whole farm % change column. Erase these zeros using /Range Erase for lines where you want to make changes in the per cow columns. Otherwise the zero will override the per cow change and the whole farm amount will stay the same as last year. Enter only one change in each row (a percentage or dollar amount, but not both). The templates contain Lotus 1-2-3 "@ if statements" set up so that if you enter a dollar amount and a percentage for the same item, the dollar amount is used and the percentage is ignored. Also, if changes are entered in the whole farm columns, the per cow changes are ignored in the calculation of the whole farm figures for the coming year. The whole farm changes should be interpreted as changes from the whole farm figures for the past year (second column from the left).

Changes from last year's per cow or whole farm figures to the coming year may result from changes in cow numbers, milk or input price changes, changes in feeding or other production practices, and many other factors. Last year's expenses and receipts can be entered on a cash basis. If accrual figures (adjusted for inventories and accounts payable and receivable) are available, these may be better for estimating next year's cash expenses. If last year's figures are entered on a cash basis, one change which should be accounted for is any large change in accounts payable or receivable which is not expected to be repeated next year. A change in accounts payable should be entered in the line corresponding to the items purchased. (An increase in the outstanding feed bill would be entered in the line "dairy grain & concentrate", for example).

Load the "PROJECT" template by starting the Lotus 1-2-3 program and inserting the diskette containing the template. Use the

/File Directory

command to select the drive containing template, and

# /File Retrieve PROJECT

The template is divided into two worksheet areas. The first, Projected Receipts and Expenses, is where the per cow or whole farm changes are made. The second area projects Farm Debt Repayment Ability.

The template is menu driven through a command bar menu that appears at the top of the screen. It is based on Lotus 1-2-3 macros. Macros take effect when you hold down the [Alt] key located in the lower left area of the keyboard, and press the proper letterkey. To get the command bar menu, hold down [Alt] and press M, abbreviated as

## Alt-M

If you lose your place in the template at anytime, you can always go to the command bar menu by typing Alt-M.

There are seven options in the command bar menu. A selection is made by placing the command bar cursor over the desired option using the arrow keys on the numeric key pad and then pressing the return key. As the cursor is placed over each option, a brief description of that selection is displayed on the second line of the command bar menu. Following is a description of each of the command bar menu options. Figure I shows the screen after the PROJECT program has been loaded and Alt-M has been pressed. The command bar cursor is located over the input option. The input option is briefly described on the second line of the menu.

Figure I.

						CMD MENU
A101:	Input	Change	Borrow	Print	Erase	LeaveMenu Quit
	Enter receipts and expenses from last year					
	A	B	C	D	E	F
101						
102	Dairy Farm Annual Cash Flow Projection Template					
103						
104	Designed by William F. Lazarus, Assistant Professor					
105	Programmed by Dale Johnson, Graduate Research Assistant					
106	Department of Agricultural Economics, Cornell University					
107	This version current as of January 9, 1986					
108						
109						
110	FOR COMMAND BAR MENU PRESS Alt M					
111						
112						
113						
114						
115						
116	For use instructions, see departmental publication					
117	A.E. Extension 86-4, January 1986					
118						
119						
120						

## INPUT

Selecting the first option, "Input" takes the user to the receipt area of the worksheet. The user can then enter the receipts from the past year on a per cow and/or per farm basis. Regardless of which way the information is entered, the user must enter the number of cows milked in the receipt area of the worksheet. To enter the corresponding expenses for the past year, press the [PgDn] key on the numeric key pad. This will take the user to the expenses area of the worksheet. The [PgDn] key will have to be pressed twice for the user to enter all the expenses. Figures II and III show the screens after the input option has been invoked. Figure II shows the receipt area of the worksheet ready for data input. Figure III shows the screen after the [PgDn] key has been used to scroll down to the expense area.

Figure II.

C9: (F0) U 0.01

READY

	A	B	C	D	E	F
1	PROJECTED RECEIPTS & EXPENSES					
2		Last	Last			
3		Year	Year	Forecast	Amount	This
4		Per Cow	Per Farm	% change	Change	Year
5	-----					
6		PER COW				
7		-----				
8	RECEIPTS					
9	number of cows	XXXXX	0	XXXXX	XXXXX	XXXXX
10	milk sales in pounds	0	0			0
11	price received-\$/cwt.	0.00	0.00			0.00
12	milk sales-\$	0.00	0	XXXXX	XXXXX	0.00
13	dairy cattle sales	0.00	0			0.00
14	dairy calf sales	0.00	0			0.00
15	other livestock sales	0.00	0			0.00
16	crop sales	0.00	0			0.00
17	government receipts	0.00	0			0.00
18	custom machine work	0.00	0			0.00
19	gas tax refund	0.00	0			0.00
20	other	0.00	0			0.00

Figure III.

C38: (F0) U

READY

	A	B	C	D	E	F
1	PROJECTED RECEIPTS & EXPENSES					
2		Last	Last			
3		Year	Year	Forecast	Amount	This
4		Per Cow	Per Farm	% change	Change	Year
5	-----					
6		PER COW				
7		-----				
26	EXPENSES					
27						
28	Hired labor	0.00	0			0.00
29	Feed					
30	dairy grain & concentrate	0.00	0			0.00
31	dairy roughage	0.00	0			0.00
32	other livestock feed					
33	Machinery					
34	machine hire, rent & lease	0.00	0			0.00
35	machine repairs & parts	0.00	0			0.00
36	auto expense (farm share)	0.00	0			0.00
37	fuel, oil & grease	0.00	0			0.00
38	Livestock					

## CHANGE

The second option, "Change" allows the user to enter the projected changes for the coming year and observe the effects on the farm receipts and expenses. Selection of this option takes the user to the receipts area of the worksheet where the projected changes for the coming year can be made on a per cow basis. The per cow changes are presented on the screen first. If you want to project changes on a per farm basis, use the [->] key on the numeric key pad to scroll over to the "per farm change" area of the worksheet. Figure IV shows the screen after the [->] has been used to scroll over to the "per farm change" area of the worksheet. To project changes for expenses, use the [PgDn] key to go to the expense area of the worksheet. Changes can be made on a per cow or per farm basis just as with the receipts.

Figure IV

110: (F0) 3IF (H10<>0, (H10+C10), 3IF (G10<>0, (\$I9:F10)\*(1+B10), \$I9:F10))      READY

	A	B	C	G	H	I
1	PROJECTED RECEIPTS & EXPENSES					
2	Date of Analysis	Last	Last			
3	09-Jan-86	Year	Year	Forecast	Amount	This
4		Per Cow	Per Farm	% change	Change	Year
5	-----					
6					PER FARM	
7	-----					
8	RECEIPTS					
9	number of cows	XXXXX	0	0%		0
10	milk sales in pounds	0	0	0%		0
11	price received-\$/cwt.	0.00	0.00	0%		0.00
12	milk sales-\$	0.00	0	XXXXX	XXXXX	0
13	dairy cattle sales	0.00	0	0%		0
14	dairy calf sales	0.00	0	0%		0
15	other livestock sales	0.00	0	0%		0
16	crop sales	0.00	0	0%		0
17	government receipts	0.00	0	0%		0
18	custom machine work	0.00	0	0%		0
19	gas tax refund	0.00	0	0%		0
20	other	0.00	0	0%		0

## BORROW

The "Borrow" option of the menu takes the user to an area of the worksheet that aids in projecting cash flow and borrowing needs for the coming year. The first two lines in this section display the total cash receipts and expenses for the past year and those projected for the coming year. The net cash flow is then calculated from these figures. Two adjustments are made to the net cash flow. First, the interest paid for both years is added back in since this will be included in scheduled debt payment. The second adjustment requires the user to input cash family living expenses for the past year as well as the amount projected for the coming year.



The result of these adjustments is the amount available for debt service, capital investment, and retained earnings. The user then inputs the scheduled debt service for the past year and the amount projected for the coming year. This is subtracted out and the remainder is displayed as the amount available for capital investment. The user then inputs capital investments for the past year and those projected for the coming year. The final result is the borrowed or equity funds needed. A positive number here indicates that there is a deficit and borrowed funds will be required to meet cash needs. A negative number in this row indicates a surplus of funds. Figure V shows the screen after the Borrow option has been chosen.

Figure V.

D77: U O

READY

	A	B	C	D	E	F
65	FARM DEBT REPAYMENT ABILITY					
66				Last Year		This Year
67				-----		-----
68	Farm Receipts			0		0
69	Less: Farm Expenses			0		0
70						
71	Equals: Net Farm Income			0		0
72						
73	Plus: Interest paid			0		0
74	Subtotal					
75						
76	Less: Personal Withdrawals					
77	From the Farm (A)	...>		0 <.....>		0
78						
79	Equals: Left For Farm Debt Service, Capital					
80	Investment, & Retained Earnings			0		0
81	Planned Farm Debt Payments(B)	...>		0 <.....>		0
82						
83	Available for Capital Invest.			0		0
84	Expansion Livestock Purchases	...>		0 <.....>		0

PRINT

The "Print" option allows the user to print out a copy of the worksheet. When the print option is selected from the menu, a submenu will be displayed in the command bar which will allow the user to choose the type of printer used. There are three options available: Epson (IBM), Okidata, and Default. Choose the default option if a printer other than an Epson (IBM) or Okidata is being used. When the cursor is placed over the printer used and the return key is pressed, the print job will be carried out. Figure VI shows a completed worksheet printed out on an Epson or Okidata printer. If another type of printer is being used, the projected receipt and expense statements will be printed out on two pages rather than the single page. One will be the "per cow" basis and the other will be the "per farm" basis.

Figure VI.

PROJECTED RECEIPTS & EXPENSES									
Date of Analysis	09-Jan-86	Last Year	Last Year	Forecast % change	Amount Change	This Year	Forecast % change	Amount Change	This Year
					PER COW	PER FARM			
-----									
RECEIPTS									
number of cows	XXXXX	0	XXXXX	XXXXX	XXXXX	0%			0
milk sales in pounds	0	0			0	0%			0
price received-\$/cwt.	0.00	0.00			0.00	0%			0.00
milk sales-\$	0.00	0	XXXXX	XXXXX	0.00	XXXXX	XXXXX		0
dairy cattle sales	0.00	0			0.00	0%			0
dairy calf sales	0.00	0			0.00	0%			0
other livestock sales	0.00	0			0.00	0%			0
crop sales	0.00	0			0.00	0%			0
government receipts	0.00	0			0.00	0%			0
custom machine work	0.00	0			0.00	0%			0
gas tax refund	0.00	0			0.00	0%			0
other	0.00	0			0.00	0%			0
Farm operating receipts	\$0.00	\$0			\$0.00				\$0
EXPENSES									
Hired labor	0.00	0			0.00	0%			0
Feed									
dairy grain & concentrate	0.00	0			0.00	0%			0
dairy roughage	0.00	0			0.00	0%			0
other livestock feed									
Machinery									
machine hire, rent & lease	0.00	0			0.00	0%			0
machine repairs & parts	0.00	0			0.00	0%			0
auto expense (farm share)	0.00	0			0.00	0%			0
fuel, oil & grease	0.00	0			0.00	0%			0
Livestock									
replacement livestock	0.00	0			0.00	0%			0
breeding fees	0.00	0			0.00	0%			0
veterinary & medicine	0.00	0			0.00	0%			0
milk marketing	0.00	0			0.00	0%			0
cattle leased	0.00	0			0.00	0%			0
other livestock expense	0.00	0			0.00	0%			0
Crops									
fertilizer & lime	0.00	0			0.00	0%			0
seeds & plants	0.00	0			0.00	0%			0
spray & other crop expense	0.00	0			0.00	0%			0
Real estate									
land, build., fence repair	0.00	0			0.00	0%			0
taxes	0.00	0			0.00	0%			0
insurance	0.00	0			0.00	0%			0
rent & lease	0.00	0			0.00	0%			0
Other cash expense									
telephone (farm share)	0.00	0			0.00	0%			0
electricity (farm share)	0.00	0			0.00	0%			0
interest paid	0.00	0			0.00	0%			0
miscellaneous	0.00	0			0.00	0%			0
Farm operating expenses	\$0.00	\$0			\$0.00				\$0

Figure VI (cont).

FARM DEBT REPAYMENT ABILITY		
	Last Year	This Year
	-----	-----
Farm Receipts	0	0
Less: Farm Expenses	0	0
Equals: Net Farm Income	0	0
Plus: Interest paid	0	0
Subtotal		
Less: Personal Withdrawals		
From the Farm (A)	...> 0 <.....>	0
Equals: Left For Farm Debt Service, Capital		
Investment, & Retained Earnings	0	0
Planned Farm Debt Payments(B)	...> 0 <.....>	0
Available for Capital Invest.	0	0
Expansion Livestock Purchases	...> 0 <.....>	0
Equipment Purchases	...> 0 <.....>	0
Borrowed or Equity Funds Needed	0	0
Farm Cash Flow Coverage Ratio (A/B)		ERR

## ERASE

The "Erase" option allows the user to erase all the input data that has been entered into this worksheet. This option calls up the PROJECT template so the user can re-enter the data. To save the present information for later use before erasing it, use the Lotus 1-2-3 /File Save command. Caution - Use a name other than PROJECT to save the completed template. Failure to do so will result in damage to the PROJECT template.

## LEAVEMENU

The "LeaveMenu" option allows the user to leave the command bar menu. This is equivalent to not making any menu selection. This is usually accomplished in Lotus 1-2-3 by pressing the [Esc] key. However, when using this worksheet command bar menu the [Esc] key should NEVER be pressed. Doing so will cause unexpected results. Always use the "LeaveMenu" option.

## QUIT

The "Quit" option allows the user to exit Lotus 1-2-3. The user is reminded to use the /File Save command to save the worksheet information for later use before leaving Lotus 1-2-3.

## MICRO DFBS USE

The step of inserting the past year's data can be avoided in county Extension offices using the Micro DFBS microcomputer program to process dairy farm business summaries (see A.E. Extension 86-2). The farm record must first be processed on Micro DFBS, creating a farm record file with the farm number as the name and the last two digits of the year as the file extension, such as 12001.85. (The file extension will be .85 for the 1985 summaries, as in 12001.85.)

A macro included in the template uses the Lotus 1-2-3 command /File Insert to prompt the user to load the converted farm record file. First, the file must be copied to the template diskette and converted to a form Lotus understands. Use the DOS command COPY to copy the file. You must have the DOS prompt A> or C> to start. If the farm record file is on a diskette in drive B, insert the template diskette in drive A and type

COPY B: 12001.85 A:

for the sample farm. Substitute your own farm record file name for 12001.85.

The farm record file must then be converted to a form Lotus understands. Actually, the farm record file is in a form called binary format, and we'll convert it to an ASCII format, but that's not important to most users. Two accessory programs are used to make this conversion. The program, LOTUSCON.COM does the actual conversion. However, to make it easier for the user to make this conversion, a batch file named CONVERT.BAT has been set up. The following step will

complete the conversion. From A>, with the template containing 12001.85 or your file in drive A, type

CONVERT

The following statement then appears:

"Enter file name to convert" A:12001.85

(Again, substitute your file name to include drive designation.)

Note: The conversion program and template are set up to do only one farm at a time--each farm record file must be converted, then loaded into Lotus 1-2-3, before the next one is converted.

When A> returns, move the template diskette to drive B and load Lotus 1-2-3 in drive A. To load the converted farm record file into cash flow projection worksheets, load the template PROJDFBS using

/File Retrieve PROJDFBS

The template automatically enters the information from the farm data file into the worksheet. The user can then use this template to calculate the cash flow projections for the coming year by following the same instructions that were used for the PROJECT template. The command bar menu is the same except that the input option has been removed since the data is automatically entered in.

## EXPLANATION OF SELECTED CELL ENTRIES AND FORMULAS

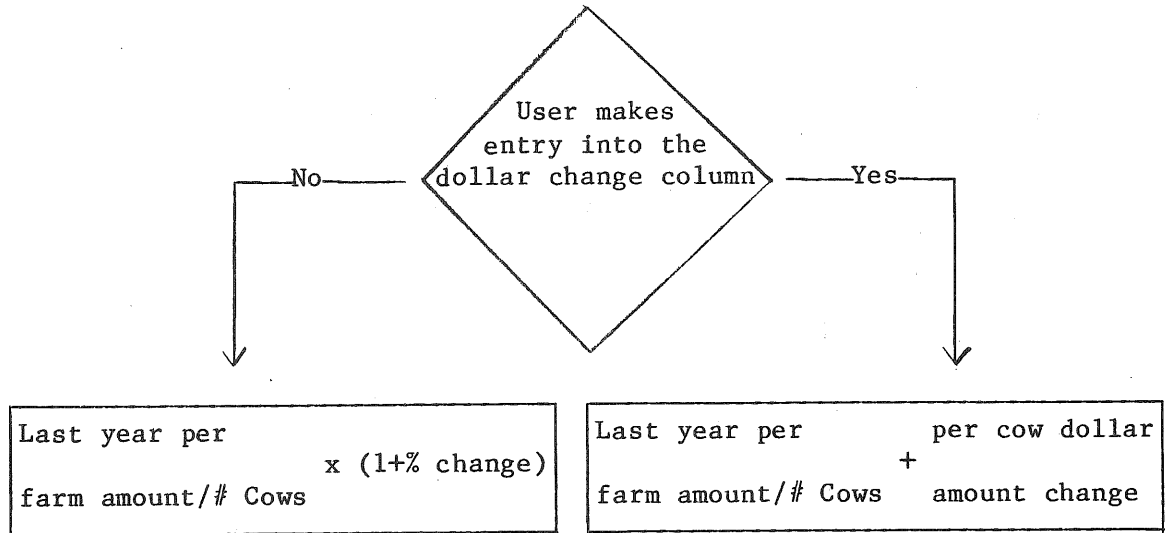
### Calculation of per farm figures in the input section

If the user enters a receipt or expense in the "per cow" column in the input section of the worksheet, then a formula in the "per farm" column automatically calculates the per farm total for that receipt or expense. If the user makes the entry on a "per farm basis", then the formula is just displaced by the entry. If the user makes the entry on a "per farm" basis and then decides to change it and make it on a "per cow" basis, then the formula will be erased and there may be an error in the projections unless the formula is re-entered.



## PROJECTION FORMULAS

The following flowchart explains the logic of the per cow projection formulas for the receipts and expenses



The following flow chart explains the logic of the per farm projections formulas for the receipts and expenses.

