



**A Guide to Processing
Dairy Farm Business Summaries
in County and Regional Extension Offices
for
Micro DFBS V 2.1**

IBM PC, XT and IBM-Compatible Microcomputers

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TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
HARDWARE REQUIREMENTS	1
GETTING STARTED	1
I. Make backup copies of diskettes	2
II. Start the program	2
III. Final startup instructions - the INSTALL program	5
IV. Enter the input data	7
V. Verify the data	27
VI. Calculate and print farm summary	28
VII. Check the diagnostics page	41
VIII. Update a record	41
IX. Display a record	41
X. Delete a record	41
XI. Help	41
XII. Quit	41
XIII. Make two backup copies of the data diskette	42
DFBS ERROR MESSAGES	43
WHAT TO DO WHEN THE DISKETTE GETS FULL	44
HINTS FOR INTERPRETING AND USING DAIRY FARM BUSINESS SUMMARY DIAGNOSTICS	45
APPENDIX A. HOW TO COMPLETE DFBS CHECK-IN FORMS	59
APPENDIX B. PROCEDURES FOR CALCULATING COST OF PRODUCING MILK	69
APPENDIX C. CREATION OF A CONFIG.SYS FILE	73

INTRODUCTION

This publication is a guide to using the Microcomputer Dairy Farm Business Summary (Micro DFBS) computer program for analyzing individual dairy farm businesses. County Extension agents and regional specialists are the intended audience, however, college faculty in other states may also find this publication of value. Farm business summary and analysis projects have long been a basic part of the agricultural Extension program in New York State. Records submitted by New York State dairy farmers provide the basis for many Extension educational programs and the data for applied research studies and classroom teaching.

Extension offices with appropriate microcomputers have the capability to strengthen their dairy farm business analysis activities by calculating and printing the individual farm summaries for immediate use by the agent and farmer, at any time. After entry in the county, individual farm data is sent to the Department of Agricultural Economics at Cornell University for additional review prior to calculation of county, regional, and State summaries.

HARDWARE REQUIREMENTS

Version 2.1 of the Micro DFBS program will run on IBM PC and XT and IBM-compatible computers such as Compaq with a minimum of 256K of random-access memory (RAM). The DOS 2.0 (or higher) operating system is needed. Either two floppy disk drives or one floppy and one hard disk are needed.

Printers vary from one Extension office to another, and an effort is made to make the program work with as many printers as possible. Most printers capable of printing in pica type (10 characters per inch, 66 lines per page) should work.

Each farm summary printout is 11 pages long and you typically need three copies -- one for the farmer, one for your county or regional Extension office file, and one to send to Cornell for the regional and State summaries. Triple-copy paper will allow you to print all three copies at once, and is highly desirable.

GETTING STARTED

This tutorial section will serve as a learning guide and "hands-on" exercise in using Micro DFBS. The user becomes familiar with the operation of Micro DFBS by:

- a) making backup copies of diskettes
- b) starting the program
- c) typing information from a sample input form
- d) calculating and printing a summary
- e) preparing a diskette for shipment to Cornell

This tutorial assumes that a suitable microcomputer and printer are available and the user knows how to operate them. Microcomputer hardware requirements were explained above. If you are not familiar with the operation of your microcomputer and operating system, refer to its DOS manual.

I. Make backup copies of diskettes.

You should have received a program diskette and at least one data diskette. Make copies of these diskettes, put the original diskettes in a safe place, and use the copies. Use the DOS "copy" command. For example, on a computer with two floppy disk drives, after booting the computer, place the diskette to be copied in Drive A and a blank formatted diskette in Drive B and type:

```
copy a:*. * b:
```

Repeat this command for each diskette.

The names of the files being copied will appear on the screen as they are copied. Each farm has three data files on the data diskette:

```
<farm no.>.86 is the current year's data file,
<farm no.>.850 is the 1985 output file, and
<farm no.>.840 is the 1984 output file.
```

The 1985 and 1984 output data files are required for use by the current year data file (<farm no.>.86) in order to print a "Progress of the Farm Business" table on page 1 of the output. The 1986 data file contains data from the 1985 data file, such as beginning of year inventory values and beginning of year assets and liabilities.

II. Start the program.

Important - be sure to always enter the correct date when you start the computer to run Micro DFBS. Micro DFBS prints this date on the summary printout. It also assumes that the summary is for the previous year. For example, if you enter 1-12-87, the printout will show:

1986 Dairy Farm Business Summary

If you don't enter the date and instead leave it as the default of 1-01-1980, the printout will show:

1979 Dairy Farm Business Summary

which is probably not what you wanted.

Follow A or B depending on the hardware system you are using.¹

A. Two floppy disk drives (IBM PC, Compaq):

Insert your DOS diskette in drive A (the left-hand drive) and turn on the computer and printer. Wait until DOS is loaded. Type the date and time, if asked. You should see a prompt A>. This means that drive A is the default drive. If you were not prompted for the date as the computer was booting, at the A> prompt type:

¹If you have not already done so, be sure to make a backup copy of your program diskette.

date 1-12-87 ↵

Take out the DOS diskette. Insert the Micro DFBS diskette in drive A and the sample data diskette provided in drive B (right-hand drive).

Skip to C on page 5.

B. One floppy and one hard drive (IBM XT):

If you have previously loaded DOS onto the hard disk², turn on the computer and printer with the floppy drive empty. Wait until DOS is loaded from the hard disk. Type the date and time, if asked. If you were not prompted for the date as the computer was booting, at the C> prompt type:

date 1-12-87 ↵

If you will be storing data on the hard disk and/or operating the program from the hard disk, it is advisable to set up a separate directory on the hard disk for this purpose.³ We'll call the directory DFBS. First, let's check if the directory DFBS already exists. To check, type:

CD \DFBS ↵

If it does exist, you will see the prompt C> reappear. If it does not exist, you will see 'invalid directory', so set it up. To set up a directory named DFBS, from the prompt C>, type:

MD \DFBS ↵

Each time Micro DFBS is rerun on a one-floppy/one-hard disk system, the Micro DFBS directory must be accessed using the command:

CD \DFBS ↵

The sample data diskette contains files which must be copied to your new Micro DFBS directory if you select to store data on the

²If you have not previously loaded DOS onto the hard disk, follow the procedure in A, and when you see the prompt A>, type:

C:↵

(The symbol ↵ stands for a carriage return.)

Upper- or lower-case letters will do. This makes drive C the default drive.

³If you are unfamiliar with the concept of a directory, refer to your DOS manual. In the IBM DOS 2.1 manual, see pages 5-1 to 5-12. Typing the command "prompt \$p\$g" or inserting this command in your autoexec.bat file will change your C> prompt to show which directory you are in, such as C:\DFBS>.

hard disk. Insert the sample data disk into drive A and copy the file by typing:

```
COPY A:38005.* ↵
```

The C> prompt should reappear.

The Micro DFBS program may be run from the hard disk drive or from the floppy disk drive.

1. Operating the Micro DFBS program from the hard disk drive:

The Micro DFBS program diskette contains all the files necessary to run the Micro DFBS program. These files must be copied to your 'DFBS' directory to be able to run the program from the hard disk. If you are not already in the 'DFBS' directory, type 'CD \DFBS'. Insert the Micro DFBS program diskette into drive A and copy all the files to the hard disk by typing:

```
COPY A:*. * ↵
```

The names of the files being copied will appear on the screen as they are copied to the hard disk. The C> prompt should reappear after all the files are copied.

2. Operating the Micro DFBS program from the floppy disk drive:

Insert the Micro DFBS program diskette in drive A. Type:

```
A:↵
```

This makes the A drive the default drive. With the Micro DFBS program operating from the A drive, you will need to store the data files on the C drive as there is insufficient space on the program diskette. The "Install" program described in Section III will enable you to specify the C drive for data storage.

Note: The MD \DFBS and COPY commands need to be used only once -- the directory and files will remain after the session is ended and can be used in future sessions.

C. You are now ready to run Micro DFBS. Type:

DFBS ↵

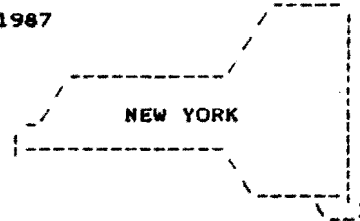
You should see the main menu.

MAIN MENU

COOPERATIVE EXTENSION

DATE: 1/12/1987

Prepared by
DEPARTMENT OF
AGRICULTURAL ECONOMICS
CORNELL UNIVERSITY



Dairy Farm Business Summary

<input type="checkbox"/> Create/Update/Display Record	<input type="checkbox"/> Calculate and Print Farm Summary
<input type="checkbox"/> Verify Record	<input type="checkbox"/> Run Install Program
<input type="checkbox"/> Delete Record	<input type="checkbox"/> Help
<input type="checkbox"/> Quit	

The main menu shows the options available in DFBS. A set of brackets [] appears to the left of each named option. An underline character [] is used as the cursor and marks the first option 'Create/Update/Display Record'. Practice moving the cursor keys. What happens when you use the right and left arrow keys?

III. Final startup instructions - the INSTALL program

An installation program must be run before using the Micro DFBS Program in order to specify which disk drive data is to be stored on. Use the cursor keys (↑ or ↓) to select "Run Install Program".

You should get the message:

DAIRY FARM BUSINESS SUMMARY INSTALLATION PROGRAM
PRESENT DRIVE IS A: ENTER NEW DRIVE OR PRESS RETURN TO OK EXISTING DRIVE.

Enter a drive letter, either A, B, C or press return if the correct drive is already specified. Once you set the drive, it will remain at that setting until you change it by selecting "install" again.

You should then see the following menu:

CURRENT DIRECTORY IS \

CHOOSE OPTION:

- 1: MAKE A DIRECTORY
- 2: REMOVE A DIRECTORY
- 3: SET NEW PATH TO DIRECTORY
- 0: QUIT

OPTION:

This menu allows the user to create and select the path for the storage of data in the program. The current path will display at the top of the menu. If the path displayed is correct then choose 0 (zero) to quit the program and save the current path.

If the path displayed needs to be changed or a new subdirectory needs to be created, then select those items from the menu. For example, to create a subdirectory on the hard disk called DFBSDATA you select 1 from the menu. The program will then prompt you for the name of the new directory. To specify the name you would type the complete path name to the new directory, e.g., C:\DFBS\DFBSDATA and press the return key. The program will now create the desired subdirectory. After the new directory is created the menu will again appear, the new path should be displayed at the top of the screen. If the path is not correct you can use option number 3 to set the proper path.

If you will be storing the data on a floppy diskette, it is not necessary to create a directory on the diskette. Choose option 3 from the menu and when prompted for the directory name simply type ↵ (return/enter).

When you are satisfied with your selection, you can exit the installation program by typing 0 to quit, you will then return to the main DFBS menu.

FOR DOS 1.XX USERS:

The path command is not implemented in this version of DOS and you will get an error message if you try to specify a path or create a subdirectory. To properly install the program for this version enter the desired disk drive and then select option 3 from the menu and, when prompted for a path, press return. There should be either a \ or nothing displayed at the top of the screen where the path is normally displayed. Once this is done you may exit the installation program.

FAILURE TO PROPERLY SET THE PATH WILL RESULT IN THE DATA BEING DIRECTED TO THE WRONG SUBDIRECTORY OR IN THE PROGRAM ABORTING WITH AN "I/O ERROR 01" ERROR MESSAGE DISPLAYED.

IV. Enter the input data.⁴

The Create/Update/Display Record option on the main menu is used to enter input data for a new farm or to change or display a previously entered farm record. Use the cursor keys (↑ or ↓) to select this option. Type:

↵

to select the 'Create/Update/Display Record' option.

You will see a prompt to enter a farm number. The farm number assigned will be made up of your 2-digit county number, followed by a 3-digit number identifying the individual farm.

MAIN MENU WITH FARM NUMBER PROMPT

COOPERATIVE EXTENSION		DATE: 1/12/1987
Prepared by DEPARTMENT OF AGRICULTURAL ECONOMICS CORNELL UNIVERSITY		NEW YORK
Dairy Farm Business Summary		
<hr/>		
<input type="checkbox"/> Create/Update/Display Record	<input type="checkbox"/> Calculate and Print Farm Summary	
<input type="checkbox"/> Verify Record	<input type="checkbox"/> Run Install Program	
<input type="checkbox"/> Delete Record	<input type="checkbox"/> Help	
<input type="checkbox"/> Quit		
<hr/>		
ENTER FARM NO		

Important - select farm numbers carefully following the recommended procedure. You must assign the same number to the same farm each year and assign a new number to a new farm. This is essential for the first page of the summary, "Progress of The Farm Business", and page 7, "Repayment Analysis", to work properly.

If you make an error entering data and you notice it before typing the ↵ (return/enter) key, you can correct the error by using the backspace key, delete key or the ← key to erase the error, and type the correct entry. If you type ↵ (return/enter) before noticing the error, you can move back to the incorrect entry by using the ↑ key, and then retype the number.

⁴See Appendix A for guidelines to completing the Dairy Farm Business Summary check-in form.

The top of the first page of our sample farm check-in form is shown below. We will call our sample farm number 38005 and we have written the number in the block labelled "For Cornell Use Only".

NEW YORK STATE COOPERATIVE EXTENSION DAIRY FARM BUSINESS
SUMMARY AND DATA CHECK-IN FORM

Name <u>Sam Farmer</u>		County <u>Rockland</u>	SCREEN 1.
Farm Name		For Cornell Use Only:	
Address <u>RD 1 Box 19</u>		Proc. number <u>38005</u> Year 1986	
Phone no. <u>607-255-8429</u>		(<input checked="" type="checkbox"/>)complete, ()entered, ()ready	

Type the farm number:

38005 ↵

The program will find the file 38005.86. This file already contains data from the previous year, such as beginning of year inventory values and beginning of year assets and liabilities. The program continues on to Screen 1.

If the data you are entering is for a new cooperator you will see the following message after you enter the newly assigned farm number:

Data files missing, create new ones (Y/N)

Enter y ↵

The program will continue on to Screen 1. Screen 1 contains the farm name, address, and phone number from the boxed-in area at the top of page 1 of the check-in form. Screen numbers 2 through 14 correspond to the other 13 boxed-in areas of the check-in form.

Screen 1 should look like Screen 1 below. The farm number, state, and county will already be inserted for you and the cursor will be at the farm name.

There is no farm name, so enter ↵ (return/enter) to move to 'Operator's Name' and then enter the farmer's name and the rest of the farm information, (use the sample farm information from above).

FARM INFORMATION		Verified (N)
Farm No.	38005	
Farm Name		
Operator's Name .		
Address		
City		
State	NY	
Zip	-	
County	ROCKLAND	
Phone	() -	
Regular []		Irregular []

At the bottom of the screen, find the classifications "Regular" and "Irregular". The regular and irregular classifications indicate the accuracy and completeness of the information for determination of whether or not this farm will be included in the county, regional, and state summaries. Regular is included; irregular is not. Select the appropriate classification by entering an "x" in the space between the brackets.

The "Verified [N]" notation in the upper right corner of Screen 1 indicates that the data has not yet been verified. The "N" will change to a "Y" after the verification has been completed.

The entering of farm information in Screen 1 has now been completed. It is possible to change data in the screen at this point. For example, use the ↑ key to move the cursor to "Farm Name" and type:

Sam Hill ← (return/enter)

There are three ways to get out of Screen 1 and move to the next screen:

- 1) ← (return/enter). Keep pressing return until the cursor goes off the screen and you get the message below.
- 2) ↓ key. Keep pressing the down arrow key until you get the message below.
- 3) [Esc] key. The escape key only needs to be pressed once to get the message below. Note: Use this key with caution. On screens with totals or computed values use ← or ↓ to move through the entire screen so values are calculated.

[PgDn] or [RETURN] - next, [PgUp] - previous screen, [Esc] to exit, or # of Screen.

The above message or command line allows you four courses of action:

- 1) [PgDn] or [RETURN] will take you to the next screen.
- 2) [PgUp] will take you to the previous screen.

- 3) [Esc] will exit the screen and take you back to the main menu.
- 4) # of Screen, i.e., enter the number of any screen to move to that screen. It is not necessary to ↵ (Return/Enter) after entering the Screen #.

Screen #1

FARM INFORMATION

		Verified [N]
Farm No.	38005	
Farm Name	Sam Hill	
Operator's Name ..	Sam Farmer	
Address	RD1 Box 19	
City	Dairytown	
State	NY	
Zip	19876-	
County	ROCKLAND	
Phone	(607)255-8429	
Regular []		Irregular [x]

(PgDn)or[RETURN]-next. (PgUp)-previous screen. (Esc) to exit. Or # of Screen.

Move to Screen 2 by typing:

↵ as many times as necessary.

You should see Screen 2.

Farm No.38005

Screen #2

MACHINERY AND EQUIPMENT INVENTORY AND DEPRECIATION

Machinery & Equipment Inventory Beginning #	90000	End #	0
Machinery & Equipment Purchased	+ #	0	
Nonfarm Noncash Transfer	+ #	0	
Machinery & Equipment Sold	- #	0	
1986 Tax Depreciation	- #	0	
Total Beginning Inventory After Changes		#	90000
Machinery Appreciation (end less beginning after changes)		#	-90000

Part of page 1 of Sample Farmer's check-in sheet, the machinery inventory and depreciation information, is shown below. The arrows show where each item is typed into Screen 2 of Micro DFBS. The computer doesn't know what to do with commas (or spaces within or to the left of numbers), so

don't type the commas. If there were previous year's data, the beginning of year inventory value will be displayed. If this value does not need to be revised, press \leftarrow (return/enter) to move to the next item. If it needs to be changed, simply type the revised value over the existing one. Enter the data called for. Use \leftarrow to move from one item to the next one below. The bottom two items, marked with *, are calculated by Micro DFBS. When you have entered all the data for Screen 2, advance to Screen 3 by typing:

[PgDn]

SCREEN 2.		
MACHINERY & EQUIPMENT INVENTORY & DEPRECIATION (do not include leased items)		
Beginning of Year Inventory	\$ 90,000	End of Year Inventory \$ 94,000
Machinery & Equipment Purchased	+ 10,800	
Nonfarm Noncash Transfer (e.g., gifts/inheritances)	+ 5,000	
Machinery & Equipment Sold	- 1,250	
1986 Tax Depreciation*	- 14,280	
Total Beginning Inventory After Changes		\$ 90,270
Machinery Appreciation (and less beginning after changes)		\$ 3,730

*Exclude buildings and cattle from ACRS depreciation.

Farm No. 38005

Screen #2

MACHINERY AND EQUIPMENT INVENTORY AND DEPRECIATION		
Machinery & Equipment Inventory Beginning \$	90000	End \$ 94000
Machinery & Equipment Purchased	+ \$ 10800	
Nonfarm Noncash Transfer	+ \$ 5000	
Machinery & Equipment Sold	- \$ 1250	
1986 Tax Depreciation	- \$ 14280	
Total Beginning Inventory After Changes		\$ 90270 *
Machinery Appreciation (and less beginning after changes)		\$ 3730 *

Screens 3 through 14 are handled in a similar way and, as with Screen 2, are designed to resemble the check-in form as closely as possible.

Now finish typing the farm information for Sam Hill into Screens 3 through 14 using the data on the following pages. After Screen 14, you should be back to the main menu.

Screen 3, Feed and Supply Inventory, has three columns, two of which are for data entry. The beginning and end year columns are entered and the beginning and end year totals and inventory change column are computed. The check-in form has additional columns in Screen 3 for quantities and \$ per unit; however, these are work spaces.⁵ If there were previous year's data, the beginning of year inventory values will be displayed. The order of data entry is across the rows.

The inventory change for grown feeds is calculated by subtracting the beginning year inventory value from the end year inventory value. This inventory change is then transferred automatically to Screen 12, the accrual receipts screen.

The inventory changes for purchased feeds and supplies are calculated by subtracting the end year inventory value from beginning year value for each item. These inventory change values are then transferred to Screen 13, the accrual expenses screen.

Use the cursor (↓) key or ↵ (return/enter) to skip zero entries.

	Total ↓	Total ↓	SCREEN 3. Inventory Change*
FEED & SUPPLY INVENTORY			
Total Grown Feeds	\$31,500	\$43,985	\$12,485
PURCHASED FEEDS:			
Dairy grain & conc 20 T. x 170/T = \$ 3400		18 T. x 175/T = \$ 3150	250
Dairy roughage			
Other lvsck. feed			
SUPPLIES:			
Machine: Parts	\$ 200	\$ 225	-25
Fuel, oil, grease 115 gal. x 1.15/gal. = 115		87 gal. x 1.15/gal. = 87	28
Livestock: Semen			
Vet. supplies	50	70	-20
Other supplies	100	125	-25
Crops: Fertilizer	5000	3000	2000
Seeds	500		500
Pesticides		250	-250
Land/Bldg./Fence:	300	400	-100
Other:			
Total Feed & Supplies	\$41,165	\$51,292	

*Inventory changes are calculated: total grown feeds - end year - beginning year and is carried over to Screen 12; purchased feeds and supplies - beginning year - end year, and are carried over to Screen 13.

Farm No. 38005

FEED & SUPPLY INVENTORY

Screen #3

Feed & Supply Inventory	Begin-Year	End-Year	Inventory Change:
Total Grown Feeds	\$ 31500	\$ 43985	\$ 12485
Purchased Feeds:			
Dairy Grain & Conc.	\$ 3400	\$ 3150	\$ 250
Dairy Roughage	\$ 0	\$ 0	\$ 0
Other Lvsck. Feed	\$ 0	\$ 0	\$ 0
Supplies:			
Machine: Parts	\$ 200	\$ 225	\$ -25
Fuel, Oil, Grease	\$ 115	\$ 87	\$ 28
Livestock: Semen	\$ 0	\$ 0	\$ 0
Vet. Supplies	\$ 50	\$ 70	\$ -20
Other Supplies	\$ 100	\$ 125	\$ -25
Crops: Fertilizer	\$ 5000	\$ 3000	\$ 2000
Seeds	\$ 500	\$ 0	\$ 500
Pesticides	\$ 0	\$ 250	\$ -250
Land/Bldg./Fence:	\$ 300	\$ 400	\$ -100
Other:	\$ 0	\$ 0	\$ 0
Total Feed & Supplies	\$ 41165	\$ 51292	

⁵There are three kinds of spaces on the check-in form: for work space, _____ for data entry items, for calculated values.

Data entry in Screen 4, Livestock Inventory, starts with "leased dairy cows" then continues across the remaining rows. The "\$ per Head" columns are calculated after the "number of head" and "total value" entries are made for each row. All totals are calculated.

If there were previous year's data, the beginning of year inventory values will be displayed.

LIVESTOCK				SCREEN 4.			
Number of leased/rented dairy cows at end of year				0			
				December 31, 1986 Inventory Using:			
Jan. 1, 1986 Inventory				1/1/86 Prices 12/31/86 Prices			
\$ per Total				\$ per Total \$ per Total			
No. Head Value				No. Head Value Head Value			
Dairy Cows:.....				70 \$ 900 \$ 63000 80 \$ 900 \$ 72000 \$ 850 \$ 68000			
.....						
Total Dairy Cows				70. \$ 63000 80. \$ 72000 \$ 68000			
Heifers:							
Bred Heifers..				10 \$ 1000 \$ 10000 20 \$ 1000 \$ 20000 \$ 950 \$ 19000			
Open Yearlings				20 750 15000 20 750 15000 700 14000			
Calves.....				20 500 10000 10 500 5000 475 4750			
Total Heifers				50 \$ 35000 50 \$ 40000 \$ 37750			
Bulls & Other Livstk.:							
Dairy Steers..				0 \$ 0 4 \$ 400 \$ 1600 \$ 400 \$ 1600			
.....						
Total Bulls & Other Livestock				0 \$ 0 4 \$ 1600 \$ 1600			
Total Livestock				120 \$ 98000 134 \$ 113600 \$ 107350			

Explain change in livestock value per head from beginning of year to end of year at beginning of year prices: no change

Farm No.38005		LIVESTOCK INVENTORY						Screen #4			
Leased Dairy Cows End Yr.:				0		End of Year Inventory Using:					
Beginning of Year				Beg. Prices			End Prices				
		No.	\$ per Head	Total Value			No.	\$ per Head	Total Value	\$ per Head	Total Value
Dairy Cows:		70	\$ 900	\$ 63000	80	\$ 900	\$ 72000	\$ 850	\$ 68000		
		0	0	0	0	0	0	0	0	0	0
Total Dairy Cows		70		63000	80		72000			68000	
Heifers:		10	1000	10000	20	1000	20000	950	19000		
		20	750	15000	20	750	15000	700	14000		
		20	500	10000	10	500	5000	475	4750		
Total Heifers		50		35000	50		40000			37750	
Bulls/Other Lvstk		0	0	0	4	400	1600	400	1600		
		0	0	0	0	0	0	0	0	0	0
Total Bulls & Other Livestock		0		0	4		1600			1600	
+ TOTAL LIVESTOCK		120		98000	134		113600			107350	

The data for Screen 5, Real Estate Inventory, is entered in the following order: beginning year market value, end year market value, new land, new buildings, lost capital, nonfarm noncash transfer, depreciation, and real estate sold (beginning year value, total sale price, sale expenses, and note/mortgage held by seller). All remaining items are calculated.

If there were previous year's data, the beginning of year inventory value will be displayed. It may be revised, if necessary, by typing the new value over the existing one.

REAL ESTATE INVENTORY BALANCE				SCREEN 5.
Land & Building Market Value:				Beginning \$ <u>190,000</u> End \$ <u>240,000</u>
New Real Estate:				
Purchased: **\$	<u>0</u>	+ \$ <u>10,300</u>	- \$ <u>0</u>	= +\$ <u>10,300</u>
	land	buildings	lost capital	value added
Nonfarm Noncash Transfer (e.g., gifts/inheritances)				+ <u>60,000</u>
Depreciation: from 1986 income tax (Include bldgs. in ACRS 5, 10, 15, 18, & 19-year classes & non-ACRS)				- <u>6,615</u>
Real Estate Sold: Beginning of year inventory value				- <u>17,000</u>
Total sale price				\$ <u>20,000</u>
Sale expenses				- <u>1,500</u>
Note/mortgage held by seller				- <u>15,000</u>
Net cash amt. rec'd. in 1986 - **				<u>3,500</u>
Total Beginning Value After Changes				\$ <u>236,685</u>
Real Estate Appreciation:				
Assets owned at end of year (end - beginning after changes)				\$ <u>33,150</u>
Assets sold during the year (sale price - beginning of year value)				\$ <u>3,000</u>

*Use Worksheet 4, page 2. **Calculated value is a cash inflow to the farm. If part or all of this was converted to nonfarm, include that amount in "personal withdrawals & family expenditures" (Screen 13, page 11).

Form No.38005

Screen #5

REAL ESTATE INVENTORY

Land and Building Market Value	Beginning # 190000	End # 240000
New Real Estate:		
Purchased:	0 + 10300 - 0	= + \$ 10300
	(land) + (buildings) - (lost capital)	= (value added)
Nonfarm Noncash Transfer		+ \$ 60000
Depreciation: From 1986 Income Tax		- \$ 6615
Real estate sold: Beginning of Year Inv Value		- \$ 17000
Total sale price	\$ 20000	
Sale expenses	- \$ 1500	
Note/mort. held by seller	- \$ 15000	
Net cash amt. rec'd	= \$ 3500	
Total Beginning Value After Changes		\$ 236685
Real Estate Appreciation:		
Assets owned at end of year (end - beginning after changes)	\$ 3315	
Assets sold during the year (sale price - beg of year value)	\$ 3000	

The order of data entry in Screen 6 is as follows: numbers of livestock, milk sold, butterfat test, production record, DHI#, milking system, business type, dairy housing, and financial recordkeeping system.

Business description items in Screen 6 are entered by typing the number that appears in parentheses on the data check-in form and pressing ↵ (return/enter). The appropriate business description item will be displayed on the screen. Initially, all the items are set to 1, so there will be data on the screen when you call it up.

When entering the Average Milk Plant Test, the decimal must be typed.

The value entered for other livestock is the number of total work units for the total number of other livestock. Table 1 on the next page shows estimated work units for various livestock and crops.

If there were previous year's data, the production record, milking system, business type, dairy housing, and financial recordkeeping system will have last year's data displayed. (If the financial recordkeeping system in 1985 was CAMIS, a 0 is displayed, since CAMIS is not one of the choices for 1986.) These items may be revised by typing the correct number.

LIVESTOCK & BUSINESS DESCRIPTION				SCREEN 6.	
Livestock	Avg. No. For Year	Production Record	Milking System	Business Type	
Dairy cows (owned, rented & leased)	77	<input checked="" type="checkbox"/> (1) D.H.I.	<input type="checkbox"/> (1) Bucket & carry	<input type="checkbox"/> (1) Single prop.	
Heifers (dairy)	50	<input type="checkbox"/> (2) O.S.	<input type="checkbox"/> (2) Dumping station	<input checked="" type="checkbox"/> (2) Partnership	
Bulls		DHI# 381234	<input checked="" type="checkbox"/> (3) Pipeline	<input type="checkbox"/> (3) Corporation	
Other: Dairy Steers	4	<input type="checkbox"/> (3) Other	<input type="checkbox"/> (4) Herringbone par.	<input type="checkbox"/> (4) Other	
(type) (#head) w.u.*	8	<input type="checkbox"/> (4) None	<input type="checkbox"/> (5) Other parlor		
Lbs. milk sold 1,116,500		Dairy Housing	Primary Financial Recordkeeping System		
		<input checked="" type="checkbox"/> (1) Stanchion	<input type="checkbox"/> (1) ELFAC		
		<input type="checkbox"/> (2) Freestall	<input checked="" type="checkbox"/> (2) Account Book		
Avg. milk plant test 3.4 % B.F.		<input type="checkbox"/> (3) Other	<input type="checkbox"/> (3) Agrifax (mail-in only)		
			<input type="checkbox"/> (4) On-Farm Computer		
			<input type="checkbox"/> (5) Other		

Farm No. 38005

Screen #6

LIVESTOCK and BUSINESS DESCRIPTION

Livestock	Average No. For Year	Production Record	Milking System	Business Type
Dairy Cows	77	1 D.H.I	3 PIPELINE	2 PARTNERSHIP
Heifers (dairy)	50			
Bulls	0	D.H.I # 381234		
Other:	8 w.u.			
Milk Production		Dairy Housing	Financial Recordkeeping System	
milk sold (lb)	1116500	1 STANCHION	2 ACCT. BOOK	
Average Milk Plant Test 3.40% B.F.				

Table 1. Work Units For Livestock and Crops

	Work units per head or per acre
<u>Livestock</u>	
Beef cows	2
Horses	2
Hens (production only)	0.04
Egg processing (per dozen)	0.002
Pullets raised	0.004
Broilers raised	0.003
Brood sows	3
Hogs raised	0.15
Ewes	0.5
<u>Crops</u>	
Barley	0.6
Dry beans	1.5
Potatoes	6
Cabbage	9
Snap beans for processing	1
Sweet corn	1
Onions	12
Apples - growing	4
Apples - harvest - per bushel	0.02
Work off farm, days	1
----- Primary Enterprises* -----	
<u>Livestock</u>	
Dairy cows	7
Heifers	2
Bulls	2
<u>Crops</u>	
Hay	0.6
Hay crop silage	0.8
Corn silage	0.8
Other forage harvested	0.6
Corn for grain	0.6
Oats	0.6
Wheat	0.6
Tillable pasture	0

*Work units for the primary enterprises are built into Micro DFBS and are not entered by the user. They are provided here for information only.

In Screen 7, the order of data entry for the labor and land inventory is across the rows. The total months of labor, worker equivalent, and land inventory totals are calculated. If there were previous year's data, the entire land inventory section will be displayed. If revisions need to be made in this data, simply type over the existing values. The "all acres" column and the "total" row will be recalculated.

SCREEN 7.				
LABOR INVENTORY	Full-Time Months	Age	Years Educ.	Value of Management & Labor
Operator - 1	<u>12</u>	<u>51</u>	<u>14</u>	<u>\$ 10,000</u>
- 2	<u>12</u>	<u>28</u>	<u>16</u>	<u>\$ 10,000</u>
- 3	<u> </u>	<u> </u>	<u> </u>	<u>\$ </u>
- 4	<u> </u>	<u> </u>	<u> </u>	<u>\$ </u>
- 5	<u> </u>	<u> </u>	<u> </u>	<u>\$ </u>
- 6	<u> </u>	<u> </u>	<u> </u>	<u>\$ </u>
Family (paid employees)	<u>6</u>			
Family (unpaid)	<u>3</u>			
Hired (regular & seasonal)	<u> </u>			
Total	<u>.33 + 12 = 2.75 Worker Equivalent</u>			
LAND INVENTORY	Acres Owned	Acres Rented	All Acres	
Tillable land	<u>200</u>	<u>60</u>	<u>260</u>	
Pasture (nontillable)	<u>30</u>	<u>10</u>	<u>40</u>	
Woods & other nontillable	<u>160</u>	<u>5</u>	<u>165</u>	
Total	<u>390</u>	<u>75</u>	<u>465</u>	

Farm No.38005

Screen #7

LABOR and LAND INVENTORY

LABOR INVENTORY	Full-Time Months	Age	Years Educ.	Value of Mgmt & labor
Operator - 1	12	51	14	\$10000
- 2	12	28	16	\$10000
- 3	0	0	0	\$ 0
- 4	0	0	0	\$ 0
- 5	0	0	0	\$ 0
- 6	0	0	0	\$ 0
Family (paid emp.)	6			
Family (unpaid emp.)	3			
Hired (reg & seasonal)	0			
Total	33	12 =	2.75 Worker Equivalent	
LAND INVENTORY	Acres Owned	Acres Rented	All Acres	
Tillable land	200	60	260	
Pasture (nontillable)	30	10	40	
Woods & other nontillable	160	5	165	
Total	390	75	465	

Screen 8 is Tillable Land Use. When entering the data in the dry matter coefficient column, the decimal must be typed. The entry for total production of "Other Crops" is in number of work units (see Table 1 on page 16). The order of data entry is across the rows. Total Tillable Acres and the Total Tons Dry Matter column are the calculated values.

SCREEN 8.				
TILLABLE LAND USE	Acres (1st cut only)	Total Production (all cuttings)	Dry Matter Coeffi- cient***	Total Tons Dry matter
Hay Crop (1st cut acres only)	120	*****	*****	*****
Hay	*****	150 tons	.85	128
Hay crop silage	*****	480 tons	.4	192
Corn silage	70	980 tons	.35	343
Other forage harvested	10	40 tons	.4	16
Corn for grain**	35	3300 dry sh. bu.	Tot. tn DM	679
Oats	10	560 dry bu.		
Wheat		dry bu.		
Other:.....		1 w.u.*		
Tillable pasture	15			
Idle tillable acres				
Total tillable acres	260			

*Work units. To be entered at Cornell. **Convert to dry shelled equivalent (see tables, opposite page). *** Enter as decimal, e.g, 40% is entered as .4.

TILLABLE LAND USE				
	Acres (1st cut)	Total Production (all cuttings)	Dry Matter Coefficient	Total Tons Dry Matter
Hay Crop	120			
Hay		150 tons	0.85	128
Hay Crop Silage		480 tons	0.40	192
Corn Silage	70	980 tons	0.35	343
Other Forage	10	40 tons	0.40	16
Corn for Grain	35	3300 bu.	Total Tons D.M.:	679
Oats	10	560 bu.		
Wheat	0	0 bu.		
Other	0	0 w.u.		
Tillable Pasture	15			
Idle Till. Acres	0			
Total Till. Acres	260			

Screen 9 is the Asset portion of the Farm Family Financial Situation. The first items, beginning and end year total farm inventories, are calculated from data entered in earlier screens and displayed here. The order of data entry is across the rows. The calculated values are Total Farm Assets, Total Nonfarm Assets, and Total Assets. If there were previous year's data, the entire beginning year column will be displayed except for the "FLB & PCA stock" value since this is a new entry this year.

SCREEN 9.		
<u>ASSETS</u>		
	<u>January 1, 1986</u>	<u>December 31, 1986</u>
Total Farm Inventory	\$ 419,165..	\$ 492,642
Other Farm Assets:		
Farm cash, checking, & savings	13,000	11,200
Accounts receivable	12,500	13,025
FLB & PCA stock	6,950	7,250
Other stock & certificates	3,000	3,300
Total Farm Assets	\$ 454,615..	\$ 527,417..
Nonfarm Assets:		
Personal cash, checking & savings	1,500	1,600
Cash value life insurance	3,000	3,200
Nonfarm real estate	0	0
Personal share auto	2,000	1,500
Stock & bonds	0	0
Household furnishings	5,000	5,000
Other (include mortgages & notes)	0	14,940
Total Nonfarm Assets	\$ 11,500..	\$ 26,240..
TOTAL ASSETS (not including leases)	\$ 466,115..	\$ 553,657..

Farm No.38005

Screen #9

FARM FAMILY FINANCIAL SITUATION--ASSETS

	January 1, 1986	December 31, 1986
Total Farm Inventory	\$ 419165	\$ 492642
Other Assets:		
Farm Cash, Check/Saving	\$ 13000	\$ 11200
Accounts Receivable	\$ 12500	\$ 13025
FLB & PCA Stock	\$ 6950	\$ 7250
Other Stock and Cert.	\$ 3000	\$ 3300
Total Farm Assets:	\$ 454615	\$ 527417
Nonfarm Assets:		
Personal Cash, Check/Saving	\$ 1500	\$ 1600
Cash Value Life Insurance	\$ 3000	\$ 3200
Nonfarm Real Estate	\$ 0	\$ 0
Personal Share Auto	\$ 2000	\$ 1500
Stocks & Bonds	\$ 0	\$ 0
Household Furnishings	\$ 5000	\$ 5000
Other	\$ 0	\$ 14940
Total Nonfarm Assets	\$ 11500	\$ 26240
TOTAL ASSETS	\$ 466115	\$ 553657

Screen 10, Liabilities and Planned Debt Payment Schedule, is divided into two screens (Screen 10 and Screen 10a). Screen 10 contains the Long Term and Intermediate Liabilities and Debt Payments. Screen 10a contains the Short Term, Operating Debt, Accounts Payable, and Nonfarm Liabilities and Debt Payments. To move from Screen 10 to Screen 10a, press the [PgDn] key or the [Esc] key. To get back to Screen 10 from Screen 10a, press the [PgUp] key.

The data check-in form contains two more columns than Screen 10, the Amount of Payments and Payments Per Year columns. These columns are for workspace, the data are not entered into the computer. The "FLB & PCA Stock" values at the bottom of Screen 10 are displayed. These values were entered as assets in Screen 9. The first column, the creditor description, is limited to 12 characters of input. You may abbreviate and use upper or lower case letters, however you wish; the description will be printed on the output just as it is entered here. If a decimal is contained in the interest rate, it must be typed. The order of data entry is across the rows. The calculated values are the rows for Total Farm Liabilities/Payments and Total Liabilities/Payments. If there were previous year's data, the creditor description and beginning year liability columns will be displayed.

LIABILITIES				DEBT PAYMENTS*				SCREEN 10.	
Creditor (the first 12 characters will be used as input.)	Amount		Actual 1986 Pymts.		Planned 1987 Payment Schedule				
	Jan. 1, 1986	Dec. 31, 1986	Principal	Interest	Beg.'87 Int. Rate	Amt. of Pymts.	Per Year	Total Annual Payments	
Long Term Debt (10 years & over)									
1 st Bank Mtg	\$36,000	\$35,000	\$1,000	\$3,000	9.5%	\$376	x 12.	= \$3,920	
FLB	\$60,000	\$58,000	\$2,000	\$4,000	11%	\$589	x 12.	= \$7,068	
	\$	\$	\$	\$	%	\$.....	x	= \$	
	\$	\$	\$	\$	%	\$.....	x	= \$	
Intermediate Term Debt (over 1 year, under 10 years)									
First Bank	\$18,000	\$18,000	\$0	\$0	12%	\$378	x 12.	= \$4,539	
PCA	\$30,000	\$33,000	\$2,000	\$4,500	14%	\$675	x 12.	= \$8,100	
	\$	\$	\$	\$	%	\$.....	x	= \$	
	\$	\$	\$	\$	%	\$.....	x	= \$	
	\$	\$	\$	\$	%	\$.....	x	= \$	
FLB & PCA Stock	\$6,950	\$7,250	*****						
Short Term Debt (1 year or less)**									
	\$	\$	\$	\$	%	\$.....	x	= \$	
	\$	\$	\$	\$	%	\$.....	x	= \$	
Operating Debt***	\$16,000	\$15,000		\$3,000	net reduction planned in operating debt: \$4,000				
Accounts Payable****	\$5,500	\$18,600		\$2,500	net reduction planned in accounts payable: \$1,000				
Total Farm Liab/Pymts	\$172,450	\$184,850	\$5,000	\$17,000	Total Farm Loan Pymts \$28,627				
Nonfarm Liab/Pymts	\$0	\$0	\$0	\$0	Total Nonfarm Pymts \$				
TOTAL LIAB/PYMTS (not including leases)	\$172,450	\$184,850	\$5,000	\$17,000	Total Payments \$28,627				

*Include payments on all liabilities listed to the left. If no payments are made, please enter zero. **Money borrowed to purchase capital items. ***Money borrowed to purchase items/services entered as expenses in Screen 13, page 11. ****Accounts not paid (no money borrowed) for noncapital items/services.

Farm No.38005		LIABILITIES & PLANNED DEBT PAYMENT SCHEDULE				Screen #10	
Liabilities:				Debt Payment:			
Amount				Actual Pymts		Planned Payment Sched.	
January 1, 1986		December 31, 1986		Principal	Int.	Req. 1987 Int. Rate	Total
*Long Term:.....							
1st Bank Mtg	\$ 36000	\$ 35000	\$ 1000	3000	9.50%	\$ 3920	
FLB	\$ 60000	\$ 58000	\$ 2000	4000	11.00%	\$ 7068	
	\$ 0	\$ 0	\$ 0	0	0.00%	\$ 0	
	\$ 0	\$ 0	\$ 0	0	0.00%	\$ 0	
*Intermediate:.....							
First Bank	\$ 18000	\$ 18000	\$ 0	0	12.00%	\$ 4539	
PCA	\$ 30000	\$ 33000	\$ 2000	4500	14.00%	\$ 8100	
	\$ 0	\$ 0	\$ 0	0	0.00%	\$ 0	
	\$ 0	\$ 0	\$ 0	0	0.00%	\$ 0	
	\$ 0	\$ 0	\$ 0	0	0.00%	\$ 0	
FLB/PCA stock	\$ 6950	\$ 7250					
PRESS [PgDn] OR [ESC] TO GO TO SCREEN 10A							

PRESS [PgDn] OR [ESC] TO GO TO SCREEN 10A

<<<<<(SCREEN 10 CONTINUED)>>>>> (PRESS [PgUp] TO GO TO SCREEN 10)

Liabilities:				Debt Payment:			
Amount				Actual Pymts		Planned Payment Sched.	
January 1, 1986 December 31, 1986				Principal		Req. 1987 Int. Rate Total	
*Short Term:							
	\$ 0	\$ 0		\$ 0	0	0.00%	\$ 0
	\$ 0	\$ 0		\$ 0	0	0.00%	\$ 0
*Operating Debt:						Net Reduction Planned	
	\$ 16000	\$ 15000			3000	Oper. Debt	\$ 4000
*Accounts Payable:						Net Reduction Planned	
	\$ 5500	\$ 18600			2500	Accts Payable	\$ 1000
*Total Farm Liab./Pymts:						Total Farm Loan	
	\$ 172450	\$ 184850		\$ 5000	\$ 17000	Payments	\$ 28627
*Nonfarm Liab./Pymts:						Total Nonfarm	
	\$ 0	\$ 0		\$ 0	\$ 0	Payments	\$ 0
TOTAL LIAB./PYMTS:						TOTAL PYMTS	
	\$ 172450	\$ 184850		\$ 5000	\$ 17000		\$ 28627

Financial leases are entered in Screen 11. The columns titled "amount of each payment", "no. of payments in 1986", "no. of payments/full year", and "no. of payments remaining" from the data check-in form are entered on Screen 11. The total 1986 expense column is calculated. The order of data entry is across rows.

Leased item	Amount of each payment	No. of payments in 1986	Total 1986 expense	SCREEN 11.	
				No. of payments/full year	No. of payments remaining
Cattle:.....	\$ .....	.....	\$ .....	.....	.....
.....
.....
		Total	\$.....*		
Equipment:..Tractor.....	\$ 170	12	\$ 2040	12	24
.....
.....
		Total	\$ 2040**		
Structures:.....	\$ .....	.....	\$ .....	.....	.....
.....
.....
		Total	\$.....***		

*Enter under "Cattle leases" on Screen 13, page 11.

**Enter under "Machine hire, rent, & lease" on Screen 13, page 11.

***Enter under "Real Estate rent/lease" on Screen 13, page 11.

Farm No.38005

Screen #11

FINANCIAL LEASES

Leased Item	Amount of Each Pymt	No. of Payments in 1986	Total 1986 Expense	No. of Payments/ Full Year	No. of Payments Remaining
Cattle	\$ 0	0	\$ 0	0	0
	\$ 0	0	\$ 0	0	0
	\$ 0	0	\$ 0	0	0
		Total	\$ 0		
Equipment	\$ 170	12	\$ 2040	12	24
	\$ 0	0	\$ 0	0	0
	\$ 0	0	\$ 0	0	0
		Total	\$ 2040		
Structures	\$ 0	0	\$ 0	0	0
	\$ 0	0	\$ 0	0	0
	\$ 0	0	\$ 0	0	0
		Total	\$ 0		

Screen 12 is the Summary of Yearly Receipts and Changes in Inventory and Accounts Receivable. The pounds of milk sold will be displayed on the screen when it is first brought up. This value was entered earlier in Screen 6. The change in inventory values are also displayed. The dairy cattle change in inventory value is calculated from the dairy cow and heifer values entered in Screen 4. The other livestock change in inventory value is calculated from the bulls and other livestock values entered on Screen 4. The crops change in inventory value is calculated from the grown feeds inventory on Screen 3.

There is work space to itemize other receipt items, only the total is entered. The order of data entry is across the rows. The calculated values include the change in inventory column, accrual receipts column, and the total accrual receipts row.

For any negative values in the Change in Accounts Receivable column, you must type the negative sign.

SCREEN 12.				
Farm Receipts	Cash Receipts +	Change in Inventory* +	Change in Accounts Receivable** -	Accrual Receipts
Milk ..1116,500.... lbs.	\$145,145	xxxxxxxx	\$ 1825	\$146,970
Dairy Cattle	9540	\$ 14000	-1000	22540
Dairy Calves	1630	xxxxxxxx	-300	1330
Other Livestock	0	1600		1600
Crops	400	12485		12885
Government Receipts	230	xxxxxxxx		230
Custom Machine Work	250	xxxxxxxx		250
Gas Tax Refunds	160	xxxxxxxx		160
Other: Pat: Refunds, 200.				
..... \$.....				
..... \$.....				
Total Other	200	xxxxxxxx		200
TOTAL	\$157555	\$28085	\$ 525	\$186165
Sale of other stock & certificates (exclude FLB & PCA stock)				\$ 1000
Nonfarm Receipts:				
Cash income (describe & itemize largest amounts:				
Mary's income: \$10,000; RE, mort.(P+I): \$...435..) total				-\$10435
Cash used in the business from nonfarm capital				\$ 2000
Noncash capital used in the farm business (e.g. gifts/inheritances)				
machinery (enter Screen 2), real estate (enter Screen 5), cattle & crops				\$ 1600

*End of year minus beginning of year. **Use Worksheet 6 on page 8 to calculate.

Farm No.38005

Screen #12

SUMMARY OF YEARLY RECEIPTS & CHANGES IN INVENTORY & ACCOUNTS RECEIVABLE				
Receipts	Cash Receipts +	Changes in Inventory +	Changes in Accts Rec. -	Accrual Receipts
Milk 1116500 lbs	\$ 145145		\$ 1825	\$ 146970
Dairy Cattle	\$ 9540	\$ 14000	\$ -1000	\$ 22540
Dairy Calves	\$ 1630		\$ -300	\$ 1330
Other Livestock	\$ 0	\$ 1600	\$ 0	\$ 1600
Crops	\$ 400	\$ 12485	\$ 0	\$ 12885
Government Recpts	\$ 230		\$ 0	\$ 230
Cust Mach Work	\$ 250		\$ 0	\$ 250
Gas Tax Refunds	\$ 160		\$ 0	\$ 160
Other	\$ 200		\$ 0	\$ 200
TOTAL	\$ 157555	\$ 28085	\$ 525	\$ 186165
Sale of Other Stock & Certificates (exclude FLB & PCA stock)				\$ 1000
NONFARM RECEIPTS				
Cash Income				\$ 10435
Cash Used in Business from Nonfarm Capital				\$ 2000
Noncash Capital Used in the Farm Business, Cattle & Crops				\$ 1600

Screen 13, Summary of Year's Expenses and Changes in Inventory and Accounts Payable, is divided in two screens (Screen 13 and Screen 13a). Screen 13 contains the hired labor, feed, machinery, and livestock expense categories. Screen 13a contains the crops, real estate, other, and nonfarm expense categories. To move from Screen 13 to Screen 13a, press the [PgDn] or [Esc] keys. To get back to Screen 13 from Screen 13a, press the [PgUp] key.

The values in the change in inventory column are displayed when Screen 13 is first brought up. These values are calculated from the purchased feed and supply inventories entered in Screen 3. The order of data entry is across the rows. The calculated values are the change in inventory column, accrual expenses column, and the total accrual expenses row.

See page 12 for instructions.				SCREEN 13.
Farm Expenses	Cash Amount paid	+ Change in Inventory	+ Change in Acct. Pay.*	Accrual Expenses
<u>Hired Labor</u>	\$ 5200	\$XXXXXXXX	\$ _____	\$ 5200.
<u>Feed</u>				
Dairy grain & concentrate	30000	..250.	6000	36250.
Dairy roughage	_____	.....	_____	.....
Other livestock feed	_____	.....	_____	.....
<u>Machinery</u>				
Machine hire, rent & lease	2040	xxxxxxx	_____	2040.
Machinery repairs & parts	5800	..-25..	1500	7275.
Auto expense (farm share)	500	xxxxxxx	_____	500.
Fuel, oil & grease	5500	..28..	_____	5528.
<u>Livestock</u>				
Replacement livestock	1800	xxxxxxx	_____	1800.
Breeding	2300	.....	_____	2300.
Veterinary & medicine	3120	..-20..	-500	2600.
Milk marketing	8500	xxxxxxx	_____	8500.
Cattle lease/rent	0	xxxxxxx	_____	0.
Other livestock expense	5190	..-25..	400	5565.

<u>Crops</u>				
Fertilizer & lime	5700	2000.	2200	9900.
Seeds & plants	2000	..500.	800	3300.
Spray, other crop expense	2640	..-250.	600	2990.
<u>Real Estate</u>				
Land, building, fence repair	4000	..100..	_____	3900.
Taxes	3600	xxxxxxx	_____	3600.
Insurance	2730	xxxxxxx	_____	2730.
Rent & lease	1200	xxxxxxx	_____	1200.
<u>Other</u>				
Telephone (farm share)	700	xxxxxxx	_____	700.
Electricity (farm share)	4200	xxxxxxx	_____	4200.
Interest	17000	xxxxxxx	2100	19100.
Miscellaneous	2330	.....	_____	2330.
TOTAL OPERATING	\$116050	\$2358.	\$13100.	\$131508
Expansion livestock	\$ 9000	xxxxxxx	0	\$ 9000.
Purchase of other stock & certificates (exclude FLB & PCA stock)				\$ 1200
<u>Nonfarm Cash Expenses</u>				
Personal withdrawals & family expenditures**				\$29190

*Use Worksheet 7 on page 10 to calculate. **Include all cash withdrawals plus all additional nonfarm expenses paid with farm cash or from farm accounts, e.g., income tax, self-employment tax, life insurance. Include withdrawals used for nonfarm savings and investments as well as family living expenses. If any or all "Nonfarm Cash Income" has been excluded from the value entered in Screen 12, pg. 9, you must also exclude any family expenses paid from that income.

Farm No.38005 (PRESS [PgDn] or [ESC] TO GO TO SCREEN 13A) Screen #13
SUMMARY OF YEARS EXPENSES & CHANGES IN INVENTORY & ACCOUNTS PAYABLE

Expenses	Cash Amount Paid	Change In + Inventory	Change In + Accts Payable	= Accrual Expenses
Hired Labor	\$ 5200		\$ 0	\$ 5200
FEED				
Dairy Grain/Conc	\$ 30000	\$ 250	\$ 6000	\$ 36250
Dairy Roughage	\$ 0	\$ 0	\$ 0	\$ 0
Other Lvstk Feed	\$ 0	\$ 0	\$ 0	\$ 0
MACHINERY				
Mach Hire/Rent/Ls	\$ 2040		\$ 0	\$ 2040
Mach repair/parts	\$ 5800	\$ -25	\$ 1500	\$ 7275
Auto Expense	\$ 500		\$ 0	\$ 500
Fuel Oil & Grease	\$ 5500	\$ 28	\$ 0	\$ 5528
LIVESTOCK				
Replacement Lvstk	\$ 1800		\$ 0	\$ 1800
Breeding	\$ 2300	\$ 0	\$ 0	\$ 2300
Vet & Medicine	\$ 3120	\$ -20	\$ -500	\$ 2600
Milk Marketing	\$ 8500		\$ 0	\$ 8500
Cattle Lease	\$ 0		\$ 0	\$ 0
Other Lvstk Exp	\$ 5190	\$ -25	\$ 400	\$ 5565

<<<<(SCREEN 13 CONTINUED)>>>> (PRESS [PgUp] TO GO TO SCREEN 13)

Expenses	Cash Amount Paid	Change In + Inventory	Change In + Accts Pay.	= Accrual Expenses
CROPS				
Fertilizer/Lime	\$ 5700	\$ 2000	\$ 2200	\$ 9900
Seeds & Plants	\$ 2000	\$ 500	\$ 800	\$ 3300
Spray/Other Exp	\$ 2640	\$ -250	\$ 600	\$ 2990
REAL ESTATE				
Land/Bldg Repair	\$ 4000	\$ -100	\$ 0	\$ 3900
Taxes	\$ 3600		\$ 0	\$ 3600
Insurance	\$ 2730		\$ 0	\$ 2730
Rent/Lease	\$ 1200		\$ 0	\$ 1200
OTHER				
Telephone	\$ 700		\$ 0	\$ 700
Electricity	\$ 4200		\$ 0	\$ 4200
Interest Paid	\$ 17000		\$ 2100	\$ 19100
Miscellaneous	\$ 2330	\$ 0	\$ 0	\$ 2330
TOTAL	\$ 116050	\$ 2358	\$ 13100	\$ 131508
Expansion Lvstk.	\$ 9000		\$ 0	\$ 9000
Purchase of Other Stock & Certificates(exclude FLB & PCA)				\$ 1200
NONFARM EXPENSE				
Personal Withdrawals & Family Expenditures				\$ 29190

The final screen, Screen 14, contains the breakdown of crop expenses by crop. The total crop expense row at the bottom of the screen is displayed. These values were calculated from the crop expense data entered in Screen 13. The rows for hay crop and corn require data entered in them. The all other crops row is calculated as the residual so the column totals equal the crop expenses in Screen 13.

SCREEN 14.			
Crop	Fertilizer & Lime	Seeds & Plants	Spray, Other Crop Expenses
Enter dollar amounts, totals below should equal <u>accrual</u> expenses in Screen 13.			
Hay crop (silage & dry)	\$ <u>3137</u>	\$ <u>917</u>	\$ <u>628</u>
Corn (silage & grain)	<u>6172</u>	<u>2134</u>	<u>2292</u>
All other crops	... <u>591</u>	... <u>249</u>	... <u>70</u>
Total	\$ <u>9900</u>	\$ <u>3300</u>	\$ <u>2990</u>

Farm No.38005

Screen #14

BREAKDOWN OF 1986 CROP EXPENSES BY CROP

Crop	Fertilizer & Lime	Seeds & Plants	Spray, Other Crop Expenses
Enter dollar amounts, totals below should equal amounts in right column of screen 13A.			
Hay Crop (silage & dry)	\$ 3137	\$ 917	\$ 628
Corn (silage & grain)	\$ 6172	\$ 2134	\$ 2292
All Other Crops	\$ 591	\$ 249	\$ 70
TOTAL	\$ 9900	\$ 3300	\$ 2990

At the command line, type \leftarrow (return/enter) or [Esc] to go back to the main menu.

V. Verify the data.

We all make typing mistakes occasionally. The "Verify Record" option is an important step that will reduce the embarrassment of having a farmer tell you that you typed one of his figures incorrectly and printed out a "nonsense" summary for him. It is tempting to skip this step. The best advice is don't skip this step.

Use the ↓ cursor key to move down to "Verify Record" in the main menu and type ↵. You will be asked for the farm number. Type:

38005 ↵ (return/enter)

The program will go on to Screen 1. As you see, the information that was entered under the "Create/Update/Display Record" option is displayed. Re-enter the data for Screen 1.

If you were to incorrectly enter the Operator's name as "Simple Farmer", the following message would appear on the screen:

ENTRY DOES NOT MATCH PREVIOUS ENTRY

The program will give you this kind of message for up to three tries. On the fourth try, if it still does not match a previous entry, the following message will be displayed:

LAST ENTRY DIDN'T MATCH - ACCEPTED WITHOUT QUESTION

At this point you are on your own to see that the entry is correct. Use the cursor key (↑) to move back to the incorrect entry and retype it.

In Screens 2 through 14, where the entries are numeric not character data, the value you are verifying will appear as a zero.

Re-enter the data for all the screens. The cursor movement and movement between screens is done the same as in the "Create/Update/Display Record" option.

When you have completed the verification process on Screen 14, the program will return to the main menu.

VI. Calculate and print farm summary.⁶

You are now ready to calculate and print a dairy farm business summary. Use the ↓ cursor key to move down to "Calculate and Print Farm Summary". You will be prompted for the farm number. Type:

38005 ↵ (return/enter)

The following will be displayed on the screen⁷:

BEGINNING CALCULATIONS

DFBS CALCULATION PROGRAM

ENTER DESIRED OUTPUT DEVICE; (S)creen, (P)rinter, (F)ile or (Q)uit

Select the appropriate output device:⁸

1. Type "S" to have the output be displayed on the screen. The output will scroll, so use [Control] - [num-lock]⁹ keys or the [Pause] key to stop the output from scrolling. Hit any key to continue scrolling.
2. Type "P" to have the output printed on your printer. You will be prompted for the number of copies to print. Before entering the number be sure to have your printer on and the paper set at the perforation. The program will advance the paper a couple of lines before starting to print.
3. Type "F" to have the calculated output stored on your disk. The file name will be made up of the farm number with a file extension of .prn (<farm no.>.prn). This file will be stored on the disk that you specified when you ran the "install" program.
4. Type "Q" to go back to the main menu.

After you select one of the above, you will see the following message:
Enter "A" to print All pages, "D" to print Diagnostics or Number of Page:

Typing A ↵ (return/enter) will display, print or file the 11 pages of output plus the diagnostic page; D ↵ gives the diagnostic page only; and entering a number from 1 to 11 gives you that page number.

⁶See Appendix A for the procedure used to calculate costs of producing milk that are printed on page 9 of the following output.

⁷If there were no previous year's data, the following messages will also be displayed:

1985 FILE DOES NOT EXIST - SETTING VALUES TO 0
1984 FILE DOES NOT EXIST - SETTING VALUES TO 0

⁸If there is an I/O error F3 during calculation, follow the instructions in Appendix B.

⁹Hold down the [ctrl] key and press the [num-lock] key.

NEW YORK COOPERATIVE EXTENSION
 Prepared by
 DEPARTMENT OF AGRICULTURAL ECONOMICS
 CORNELL UNIVERSITY

Name _____

Address _____

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1986 DAIRY FARM BUSINESS SUMMARY

FARM NO. 38005

JANUARY 19, 1987

PROGRESS OF THE FARM BUSINESS

<u>SELECTED FACTORS</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Size of Business			
Avg # of cows	65	67	77
Avg # of heifers	50	50	50
Milk sold, lbs.	910000	964800	1116500
Worker equiv.	2.75	2.75	2.75
Total tillable acres	260	260	260
Rates of Production			
Milk sold per cow, lbs.	14000	14400	14500
Hay DM per acre, tons	2.8	2.4	2.7
Corn silage per acre, tons	14	14	14
Labor Efficiency			
Cows per worker	24	24	28
Milk sold per worker, lbs.	330909	350836	406000
Cost Control			
Grain & conc. purch. as % milk sales	26%	29%	25%
Dairy feed & crop exp. per cwt. milk	\$ 4.19	\$ 4.17	\$ 4.70
Labor and mach. costs per cow	\$ 747	\$ 888	\$ 800
Capital Efficiency (average for year)			
Farm capital per cow	\$ 6269	\$ 6110	\$ 6431
Real estate per cow	\$ 2393	\$ 2377	\$ 2792
Machinery and equipment per cow	\$ 1464	\$ 1362	\$ 1249
Capital turnover, years	2.7	2.7	2.6
Profitability			
Net farm income w/o apprec.	\$ 9060	\$ 2574	\$ 23162
Net farm income w/ appreciation	\$ 26675	\$ 19719	\$ 27057
Labor & management income	\$ -3574	\$ -10670	\$ 5744
Rate return on equity capital w/apprec	2.3%	-0.8%	1.7%
Financial Summary			
Farm net worth, End year	\$ 221375	\$ 235365	\$ 342567
Debt to asset ratio	0.44	0.43	0.35
Farm debt per cow	\$ 2648	\$ 2626	\$ 2354
Cash flow coverage ratio	1.44	1.80	1.39

PARTNERSHIP, ACCT. BOOK, OWNER, FULL-TIME, DAIRY.*

FARM NO. 38005

JANUARY 19, 1987

INCOME STATEMENT

EXPENSES	Cash Amount paid	Change in Inventory*	Change in Accounts Payable**	Accrual Expenses
Hired Labor	\$ 5200		\$ 0	\$ 5200
Feed				
Dairy grain & conc.	30000	\$ 250	6000	36250
Dairy roughage	0	0	0	0
Other livestock	0	0	0	0
Machinery				
Mach hire, rent/lease	2040		0	2040
Machinery repairs/parts	5800	-25	1500	7275
Auto expense (f.s.)	500		0	500
Fuel, oil & grease	5500	28	0	5528
Livestock				
Replacement livestock	1800		0	1800
Breeding	2300	0	0	2300
Veterinary & medicine	3120	-20	-500	2600
Milk marketing	8500		0	8500
Cattle lease/rent	0		0	0
Other livestock expense	5190	-25	400	5565
Crops				
Fertilizer & lime	5700	2000	2200	9900
Seeds & plants	2000	500	800	3300
Spray, other crop exp.	2640	-250	600	2990
Real Estate				
Land/bldg/fence repair	4000	-100	0	3900
Taxes	3600		0	3600
Insurance	2730		0	2730
Rent & lease	1200		0	1200
Other				
Telephone (farm share)	700		0	700
Electricity (farm share)	4200		0	4200
Interest paid	17000		2100	19100
Miscellaneous	2330	0	0	2330
TOTAL OPERATING	\$ 116050	\$ 2358	\$ 13100	\$ 131508
Expansion livestock	\$ 9000		\$ 0	\$ 9000
Machinery depreciation				\$ 14280
Building depreciation				\$ 6615
TOTAL ACCRUAL EXPENSES				\$ 161403

*Net amount of purchased feed and supplies used out of inventory during the year. A decline in inventory results in a positive value that will increase expenses, an increase in inventory is a negative value that will decrease expenses.

**Unpaid items or services that were used or added to inventory during the year.

FARM NO. 38005

JANUARY 19, 1987

INCOME STATEMENT (continued)

RECEIPTS	Cash Receipts +	Change in Inventory* +	Change in Accounts Receivable =	Accrual Receipts
Milk sales	\$ 145145		\$ 1825	\$ 146970
Dairy cattle	9540	\$ 14000	-1000	22540
Dairy calves	1630		-300	1330
Other livestock	0	1600	0	1600
Crops	400	12485	0	12885
Gov't receipts	230		0	230
Custom machine work	250		0	250
Gas tax refund	160		0	160
Other	200		0	200
- Nonfarm noncash capital		1600		1600
TOTAL ACCRUAL RECEIPTS	\$ 157555	\$ 26485	\$ 525	\$ 184565

*Change in livestock inventory excluding appreciation plus total change in grown feeds inventory.

PROFITABILITY ANALYSIS

	Without Apprec. +	Appreci- ation =	With Apprec.
RETURN TO OPERATOR(S) & FAMILY LABOR UNPAID, MGMT., & EQUITY CAPITAL:			
Total Accrual Receipts	\$ 184565		\$ 184565
		Livestock	-6250
		Machinery	3730
		Real Estate	6315
		Other Stock/ Cert.	100
- Total Accrual Expenses	\$ 161403		\$ 161403
= NET FARM INCOME	\$ 23162		\$ 27057
RETURN TO OPERATOR(S) LABOR, MANAGEMENT & EQUITY CAPITAL:			
Net Farm Income	\$ 23162		\$ 27057
- Family Labor Unpaid @ \$600/mo.	1800		1800
= RETURN TO OPERATOR'S LABOR, MANAGEMENT & EQUITY CAPITAL	\$ 21362		\$ 25257
RETURN TO OPERATOR'S LABOR & MGMT.:			
Return to Operator's Labor, Management & Equity Capital	\$ 21362		
- Real Interest on \$ 312366 Average Equity Capital @ 5%	15618		
= LABOR & MANAGEMENT INCOME	\$ 5744		
LABOR & MANAGEMENT INCOME PER 2.00 OPERATOR/MANAGER	\$ 2872		
RETURN TO EQUITY CAPITAL:			
Return to Operator's Labor, Management & Equity Capital	\$ 21362		\$ 25257
- Value of Operator's Labor & Management	20000		20000
= RETURN ON EQUITY CAPITAL	\$ 1362		\$ 5257
Rate of Return on Equity Capital	0.4%		1.7%

FARM NO. 38005

JANUARY 19, 1987

1986 BALANCE SHEET

FARM ASSETS			FARM BUSINESS LIABILITIES & NET WORTH		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, chkg & savings	\$ 13000	\$ 11200	Accounts payable	\$ 5500	\$ 18600
Accts. rec.	12500	13025	Operating debt	16000	15000
Feed/supplies	41165	51292	Short term:		
				0	0
				0	0
Total	\$ 66665	\$ 75517	Total	\$ 21500	\$ 33600
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows:					
owned	63000	68000	First Bank	18000	18000
leased	0	0	PCA	30000	33000
Heifers	35000	37750		0	0
Bulls/other				0	0
lvstk.	0	1600		0	0
Mach/eq owned	90000	94000	Financial lease		
Mach/eq leased	4900	3494	(cattle/mach.)	4900	3494
FLB/PCA Stock	6950	7250	FLB/PCA Stock	6950	7250
Coop stock & cert.	3000	3300			
Total	\$ 202850	\$ 215394	Total	\$ 59850	\$ 61744
<u>Long-Term</u>			<u>Long-Term</u>		
Land/buildings:			1st Bank Mtg	36000	35000
owned	190000	240000	FLB	60000	58000
leased	0	0		0	0
Total	\$ 190000	\$ 240000		0	0
Total Farm Assets	\$ 459515	\$ 530911	Fin. lease (struc)	0	0
			Total	\$ 96000	\$ 93000
			Total Farm Liab.	\$ 177350	\$ 188344
			FARM NET WORTH	\$ 282165	\$ 342567
NONFARM					
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
Nonfarm Assets			Nonfarm Liab.	\$ 0	\$ 0
Pers cash, chkg. & savings	\$ 1500	\$ 1600			
Cash value of life ins	3000	3200			
Nonfarm RE	0	0			
Auto (pers sh)	2000	1500			
Stocks & Bonds	0	0			
Hshld. furn.	5000	5000			
All other	0	14940			
Total Nonfarm	\$ 11500	\$ 26240	NONFARM NET WORTH	\$ 11500	\$ 26240
FARM & NONFARM					
			Total Farm & Nonfarm Liab.	\$ 177350	\$ 188344
Total Farm & Nonfarm Assets	\$ 471015	\$ 557151	FARM & NONFARM NET WORTH	\$ 293665	\$ 368807

FARM NO. 38005

JANUARY 19, 1987

BALANCE SHEET ANALYSIS

<u>Financial Ratios</u>	<u>Farm Business</u>	<u>Farm & Nonfarm</u>
Percent equity	65%	66%
Debt to asset ratio		
Total	0.35	0.34
Long-term	0.39	
Intermediate/current	0.33	

Change in Net Worth
 Without appreciation
 With appreciation

\$ 56507
 \$ 60402 \$ 75142

Debt Analysis

Accounts payable as % of total debt 10%
 Long-term liabilities as a % of
 total debt 49%
 Current & intermediate liabilities
 as % of total debt 51%

Debt Levels

	<u>Per Cow</u>	<u>Per Tillable Acre Owned</u>
Total farm debt	\$ 2354	\$ 942
Long-term debt	1163	465
Intermediate/current	1192	477

Farm Inventory

	<u>Real Estate</u>	<u>Machinery & Equipment</u>	<u>Livestock</u>	<u>Feed & Supplies</u>
Beginning of Year	\$ 190000	\$ 90000	\$ 98000	\$ 41165
Purchases	10300*	10800		
+ Nonfarm Noncash Transfer	60000	5000		
- Lost Capital	0			
- Sales	17000	1250		
- Depreciation	6615	14280		
= Net Investment	46685	270	15600**	
Appreciation	3315***	3730	-6250	
End of Year	\$ 240000	\$ 94000	\$ 107350	\$ 51292

* \$ 0 Land + \$ 10300 Building.

** See page 9, Dairy Inventory Analysis, for dairy cow and heifer inventory detail.

*** Excludes \$ 3000 of appreciation on assets sold during the year.

FARM NO. 38005

JANUARY 19, 1987

ANNUAL CASH FLOW STATEMENT

Cash Inflows

Beginning farm cash, checking & savings	\$ 13000	
Cash farm receipts	157555	
Sale of assets: Machinery	1250	
Real estate	3500	
Other stock & certificates	1000	
Money borrowed (intermediate & long-term)	5000	
Money borrowed (short-term)	0	
Increase in operating debt	0	
Nonfarm income	10435	
Cash from nonfarm capital used in business	2000	
Money borrowed - nonfarm	0	
TOTAL		\$ 193740

Cash Outflows

Cash farm expenses	\$ 116050	
Capital purchases: Expansion livestock	9000	
Machinery	10800	
Real estate	10300	
Other stock & certificates	1200	
Principal payments (intermediate & long-term)	5000	
Principal payments (short-term)	0	
Decrease in operating debt	1000	
Nonfarm debt payments	0	
Personal withdrawals & family expenditures	29190	
Ending farm cash, checking & savings	11200	
TOTAL		\$ 193740
Imbalance (error)		\$ 0

FARM NO. 38005

REPAYMENT ANALYSIS

JANUARY 19, 1987

<u>Debt Payments</u>	<u>Planned for 1986*</u>	<u>Made in 1986</u>	<u>Planned for 1987</u>
Long term	\$ 10988	\$ 10000	\$ 10988
Intermediate term	12639	6500	12639
Short-term	0	0	0
Operating (net reduction)	4000	1000	4000
Accounts payable (net reduction)	1000	0	1000
Total	\$ 28627	\$ 17500	\$ 28627
(% made of planned = 61%)			
Per cow	\$ 372	\$ 227	
Per cwt. 1986 milk	\$ 3	\$ 2	
Percent of total 1986 receipts	15%	9%	
Percent of 1986 milk receipts	19%	12%	

* If on Business Summary in 1985.

Cash Flow Coverage Ratio

Cash Farm Receipts	\$ 157555	
- Cash Farm Expenses	116050	
+ Interest Paid	17000	
- Net Pers. Withdls from Farm**	18755	
(A) = Amount Available for Debt Service		\$ 39750
(B) = Debt Payments Planned for 1986		\$ 28627
(A / B) Cash Flow Coverage Ratio for 1986		1.39

** Personal withdrawals & family expenditures less nonfarm income.

FARM NO. 38005

JANUARY 19, 1987

CROPPING PROGRAM ANALYSIS

Land	Owned	Rented	Total
Tillable	200	60	260
Nontillable	30	10	40
Other nontillable	160	5	165
Total	390	75	465

Crop Yields	Acres	Total Production	Production Per Acre
Dry hay		128 Tons DM	
Hay crop silage		192 Tons DM	
Total Hay Crop Production	120	320 Tons DM	2.67 Tons DM
Corn silage	70	980 Tons	14.00 Tons
		343 Tons DM	4.90 Tons DM
Other forage	10	16 Tons DM	1.60 Tons DM
Total Forage	200	679 Tons DM	3.40 Tons DM
Corn grain	35	3300 Bushels	94.29 Bushels
Oats	10	560 Bushels	56.00 Bushels
Wheat	0	0 Bushels	0.00 Bushels
Other crops	0		
Tillable pasture	15		
Idle tillable land	0		
Total tillable acres	260		

Crop Related Accrual Expenses

Crops	Total/ Till. Acre	Hay Crop		Corn		Other Crops Per Acre
		Per Acre	Per Ton DM	Per Acre	Per Ton Corn Sil. Equiv.*	
Fert. & lime	\$ 38.08	\$ 26.14	\$ 9.80	\$ 58.78	\$ 4.00	\$ 29.55
Seeds & plants	12.69	7.64	2.87	20.32	1.38	12.45
Spray/other						
crop expense	11.50	5.23	1.96	21.83	1.49	3.50
Total Crop	\$ 62.27	\$ 39.02	\$ 14.63	\$ 100.93	\$ 6.88	\$ 45.50

Machinery	Total Expenses	Per Tillable Acre
Fuel, oil & grease	\$ 5528	\$ 21.26
Machinery repair & parts	7275	27.98
Machine hire, rent & lease	2040	7.85
Auto expense (farm share)	500	1.92
Interest (5%)	4600	17.69
Depreciation	14280	54.92
Total Machinery	\$ 34223	\$ 131.63

*Corn grain converted to silage equivalent using 5.88 bushels = 1 ton silage as fed.

Crop/Cow Factors

Total Tillable Acres per Cow	3.38
Total Forage Acres per Cow	2.60
Harvested Forage Dry Matter per Cow	8.82

FARM NO. 38005

JANUARY 19, 1987

DAIRY ANALYSIS

<u>Dairy Inventory</u>	<u>Dairy Cows</u>		<u>Heifers</u>	
	<u>Number</u>	<u>Value</u>	<u>Number</u>	<u>Value</u>
Beginning of Year	70	\$ 63000	50	\$ 35000
+ Change in Inventory (without appreciation)		9000		5000
+ Appreciation		-4000		-2250
= End of Year	80	\$ 68000	50	\$ 37750
Total End (incl. leased)	80			
Average Number	77		50	
<u>Milk Production</u>				
Total milk sold		1116500 lbs.		
Milk sold per cow		14500 lbs.		
Average milk plant test		3.40 % butterfat		
<u>Accrual Receipts From Dairy</u>	<u>Total</u>	<u>Per Cow</u>	<u>Per Cwt.</u>	
Milk	\$ 146970	\$ 1909	\$ 13.16	
Dairy cattle (including culls)	22540	293	2.02	
Dairy calves	1330	17	0.12	
Total	\$ 170840	\$ 2219	\$ 15.30	
<u>Accrual Cost of Producing Milk - Whole Farm Method</u>				
Operating cost of producing milk	\$ 93913	\$ 1220	\$ 8.41	
Total cost of producing milk excluding operator's labor, management & capital	125608	1631	11.25	
Total cost of producing milk	161226	2094	14.44	
<u>Dairy Related Accrual Expenses</u>				
Purchased dairy grain & concentrates	\$ 36250	\$ 471	\$ 3.25	
Purchased dairy roughage	0	0	0.00	
Total Purchased Dairy Feed	36250	471	3.25	
Purchased grain & concentrates as % of milk receipts	25%			
Purchased feed & crop exp.	\$ 52440	\$ 681	\$ 4.70	
Purchased feed & crop exp. as % of milk receipts	36%			
Breeding	\$ 2300	\$ 30	\$ 0.21	
Veterinary & medicine	2600	34	0.23	
Milk marketing	8500	110	0.76	
Cattle lease	0	0	0.00	
Other livestock expense	\$ 5565	\$ 72	\$ 0.50	

D.H.I, PIPELINE, STANCHION.

FARM NO. 38005

JANUARY 19, 1987

CAPITAL & LABOR EFFICIENCY ANALYSIS

Capital Efficiency (Average for Year)

	<u>Per Worker</u>	<u>Per Cow</u>	<u>Per Tillable Acre</u>	<u>Per Tillable Acre Owned</u>
Farm capital	\$ 180077	\$ 6431	\$ 1905	\$ 2476
Real estate		2792		1075
Machinery & equip.	34981	1249	370	
Capital Turnover, years		2.63		

<u>Labor Force</u>	<u>Months</u>	<u>Age</u>	<u>Years of Education</u>	<u>Value of Labor & Mgmt.</u>
Operator number 1	12	51	14	\$ 10000
Operator number 2	12	28	16	\$ 10000
Family paid	6			
Family unpaid	3			
Hired	0			
Total	33 / 12 =	2.75 Worker Equivalent		
		2.00 Operator/Manager Equivalent		

Labor Efficiency

	<u>Total</u>		<u>Per Worker</u>
Cows, average no.	77		28
Milk sold, lbs.	1116500		406000
Tillable acres	260		95
Work units	808		294
<u>Labor Cost</u>	<u>Total</u>	<u>Per Cow</u>	<u>Per Till Acre</u>
Value of Operator(s)			
Labor (\$850/month)	\$ 20400	\$ 265	\$ 78.46
Family unpaid (\$600/month)	1800	23	6.92
Hired	5200	68	20.00
Total Labor	\$ 27400	\$ 356	\$ 105.38
Machinery Cost	\$ 34223	\$ 444	\$ 131.63
Total Labor & Machinery Costs	\$ 61623	\$ 800	\$ 237.01

ANNUAL CASH FLOW WORKSHEET

Item	Receipt or Expense		Expected Change	1987 Projection
	Total	Per Cow		
Average Number of Cows	77			
ACCRUAL OPERATING RECEIPTS				
Milk	\$ 146970	\$1908.70		\$
Dairy cattle	22540	292.73		
Dairy calves	1330	17.27		
Other livestock	1600	20.78		
Crops	12885	167.34		
Miscellaneous receipts	840	10.91		
Total	\$ 186165	\$2417.73		\$
ACCRUAL OPERATING EXPENSES				
Hired labor	\$ 5200	\$ 67.53		\$
Dairy grain & concentrate	36250	470.78		
Dairy roughage	0	0.00		
Other livestock feed	0	0.00		
Machine hire/rent/lease	2040	26.49		
Mach.repair/parts & auto	7775	100.97		
Fuel, oil & grease	5528	71.79		
Replacement livestock	1800	23.38		
Breeding	2300	29.87		
Veterinary & medicine	2600	33.77		
Milk marketing	8500	110.39		
Cattle lease	0	0.00		
Other livestock expense	5565	72.27		
Fertilizer & lime	9900	128.57		
Seeds & plants	3300	42.86		
Spray/other crop expense	2990	38.83		
Land, bldg., fence repair	3900	50.65		
Taxes	3600	46.75		
Insurance	2730	35.45		
Real estate rent/lease	1200	15.58		
Utilities	4900	63.64		
Miscellaneous	2330	30.26		
Total Less Interest Paid	\$ 112408	\$1459.84		\$
NET ACCRUAL OPERATING INCOME				
(w/o interest paid)	\$ 73757	\$ 957.88		\$
- Change in lvstk/crop inv	26485	343.96		
- Change in accounts rec.	525	6.82		
+ Change in feed/supply inv	2358	30.62		
+ Change in accts. payable*	11000	170.13		
NET CASH FLOW	\$ 60105	\$ 780.58		\$
- Personal withdrawals & family expenditures	29190	379.09		
Available for Debt Payments, Investments & Savings	\$ 30915	\$ 401.49		\$
- Farm Debt Payments	17500	227.27		
Available for Investment & Savings	\$ 13415	\$ 174.22		\$
- Capital Purchases; Cattle, Machinery, Stock/cert	31300	406.49		
Additional Capital Needed				\$

* Less change in account payable for interest.

FARM NO. 38005

JANUARY 19, 1987

MACHINERY & EQUIPMENT INVENTORY
FEED AND SUPPLY INVENTORY
LIVESTOCK INVENTORY

3. End of year heifer inventory at beginning prices > beginning of
year inventory but no increase in heifer numbers.

REAL ESTATE INVENTORY
LIVESTOCK & BUSINESS DESCRIPTION
LABOR

LAND INVENTORY AND CROPS
ASSETS AND LIABILITIES
FINANCIAL LEASES
RECEIPTS
EXPENSES

CROP EXPENSE BREAKDOWN
MANAGEMENT PERFORMANCE MEASURES

*. Cash flow coverage ratio < .8 or > 1.2, = 1.39.
OTHER

Farm coded irregular.

VII. Check the diagnostics page.

The last page of the summary is a diagnostic page, a listing of data items that fall outside of "normal" ranges for that item. These unusual items may indicate data entry errors or simply unusual farm situations. Look over the diagnostics page. Refer to the section at the back of this manual entitled, "Hints for Interpreting and Using Dairy Farm Business Summary Diagnostics". Initial each item and write an explanation as necessary on one copy. Send this copy to Cornell along with the diskette and check-in form to indicate that the record is correct. This will save everyone time and telephone calls spent verifying and correcting farm records.

VIII. Update a record.

Select the "Create/Update/Display Record" option on the main menu to update a farm record. After entering the farm number, the program will take you to Screen 1. If no updates are to be made on Screen 1, press the [Esc] key to display the message:

[PgDn] or [RETURN] - next, [PgUp] - previous screen, [Esc] to exit, or # of Screen.

Enter the number of the screen where a change needs to be made. Use the cursor keys to move to the appropriate value and retype the new value over the old one. Important: If totals or calculated values appear on the screen, be sure to press return or use the ↓ arrow key to move through the calculated items so they will be recalculated.

You may now move to another screen to make more changes in data or return to the main menu.

IX. Display a record.

To display a record, select "Create/Update/Display Record" on the main menu. Move to any screen by entering the screen number as described in the previous section.

X. Delete a record.

To delete a farm record, select "Delete Record" on the main menu. You will be prompted for a farm number. Enter the number of the farm you want deleted. The current year's data file (<farm no.>.86) will be erased.

XI. Help

Select the "Help" option on the main menu. A brief description of each option on the main menu will be displayed.

XII. Quit

To leave the Micro DFBS program, select "Quit" on the main menu. You will then be at the DOS prompt (C>). For a two-floppy disk system, you will be prompted to insert the DOS diskette in drive A. You can restart Micro DFBS by typing 'dfbs'.

XIII. Make two backup copies of the data diskette.

Remove the DFBS program diskette from drive A and insert a blank, formatted diskette. To review the data files on your data diskette, type:

DIR B:↵
(Or DIR C:↵ if the data is on the hard disk and you are still in the 'dfbs' directory.)

You should see a list of data files as shown below.

```
A:\>dir c:

Volume in drive C is MACHINE #13
Directory of C:\dfbs

.                <DIR>          1-12-87    1:36a
..               <DIR>          1-12-87    1:36a
38005      86      5507    1-12-87    1:38a
38005      840      250    1-12-85    1:29a
38005      850      310    1-12-86    1:50a
38005      PRN      35070  1-12-87    1:38a
        6 File(s)    2596864 bytes free
```

The 1986 farm record files entered in 1987 will have file extensions of .86. The sample farm is file 38005.86. Its print file has a file extension .prn. It is less important to backup print files than record files because the print file can be easily recreated from the record file using "calculate and print farm summary". If you wish to save the print files, it is recommended you save them on a separate disk.

To make backup copies of the farm record files from drive B to the blank, formatted diskette in drive A, type:

COPY B:*.8* A:↵
(Or COPY *.8* A: if the data is on the hard disk.)

Do this twice.

One backup diskette is now ready to be shipped to Cornell, along with the check-in form, a copy of the printout and initialed diagnostics page. Keep the other diskette as your backup. This completes the operation of Micro DFBS.

DFBS ERROR MESSAGES

Run Time Error 02 PCXXXX¹⁰ - Caused by an attempt to divide by zero. Check input to assure that all information is correct. If problem persists, call the authors for help.

Run Time Error F0 PCXXXX - Caused by program attempting to locate and not finding the program file Calc.000. Check the program disk to see if the file is present. If the file is not present, copy the file from a backup disk to the program disk.

I/O Error 01 PCXXXX - Caused by an attempt to open a file that the program cannot find; i.e., a data file that is not on the disk. Check to make sure the file exists and that you are using the proper disk drive.

I/O Error F0 PCXXXX - Disk full error. Too many files on the data disk. See the next section "What to do When the Diskette Gets Full".

I/O Error F3 PCXXXX - Too many files open. See Appendix B.

All of the above errors will cause the program to terminate and will bring the user back to the operating system. After checking and correcting the cause of the problem, the program may be run as usual.

COMMON PROBLEMS:

<u>Message</u>	<u>Interpretation</u>	<u>Solution</u>
Program won't recognize a farm record file	File extension (year, example .86) must be one less than the year you entered when you turned the computer on or typed "DATE"	Rename the file, changing the file extension. See your DOS manual, RENAME command
Disk error on drive A (or B or C)	Diskette not inserted, door not closed, bad diskette	Insert diskette Close door Try again or copy files from other drive. Replace diskette.
	Drive out of alignment	Service disk drive
CAN'T OPEN FILE!! or other cycling - keyboard won't respond	Cannot locate a file	Check file name. Use DIR command to check disk to see if file exists.

If the program locks up, the user can exit by pressing the Ctrl and C keys at the same time or, if that fails, by turning the computer off.

Please notify the authors (607-255-8429) of any problems.

¹⁰"XXXX" will be replaced by a number. Make note of this number. It is useful information to the programmer if there is a persistent problem.

WHAT TO DO WHEN THE DISKETTE GETS FULL

A diskette formatted in DOS 2.1 holds about 360K of data. The "Create/Update/Display Record" option creates a data file for each farm which is about 6K in size. The two previous year's data files total 13K. "Calculate and Print Farm Summary" creates a file (the one with the .prn extension) which is 33K. So, it takes a total of 52K for each farm if you have previous year's data, enter new data and calculate each summary in turn. The data diskette should then hold about seven ($360K \div 52K$) farm records if you save the print files, and about 18 farm records if you do not. If you do wish to save the print files (<farm no.>.prn), it is recommended you save them on a separate disk.

When you fill up the diskette, you will get a message telling you to change diskettes. This may happen when you use "Create/Update/Display Record", but more likely at "Calculate and Print Farm Summary".

When this happens, you will need to use the DOS command COPY to copy the current and previous years' farm record files to another diskette. For example, to copy the record files for farm 38005 to a new diskette, remove the DFBS program diskette from drive A and insert a blank, formatted diskette. Then type:

```
COPY B:38005.* A:←
```

Then remove the original data diskette from drive B and move the new one from A to B.

HINTS FOR INTERPRETING AND USING
DAIRY FARM BUSINESS SUMMARY DIAGNOSTICS

The last page(s) of a farm business summary printout are the "diagnostics". Diagnostics serve the purpose of alerting the person editing the record to possible data problems. Diagnostic statements are generated when data is missing, inconsistent or outside a "normal" expected range. Each diagnostic statement should be carefully scrutinized to help insure that the data is accurate. One should not rely on the diagnostics to "catch" data entry or data acquisition errors. Accurate original collection and entry of data are the best methods.

Page No. of
Check-In Form

MACHINERY AND EQUIPMENT INVENTORY

1. "Machinery owned but no machinery depreciation."

Check to see if machinery depreciation was collected on the check-in form (Screen 2) and not entered or if an entry error is present. Machinery could be rented from a partner in the business with the market value being reported, but not the depreciation. In situations where machinery is rented from a partner, it is preferable to enter machinery inventory values and depreciation for business analysis purposes. However, check to make certain machinery rental payments have been removed as a cash expense, but that debt payments on machinery remain.

1. "Machinery depreciation = n% of beginning inventory plus new machinery." (When $n < 5\%$ or $n > 20\%$)

Depreciation reported is probably too low or too high (Screen 2). Check to be certain that building and/or cattle depreciation has not been included as a machinery entry. Low depreciation values are expected when the average age of machinery is high (greater than 10 years) and little if any new machinery was purchased. High depreciation values are expected when the average age of machinery is low (less than five years) and relatively large purchases of new machinery occurred in recent years.

1. "Machinery appreciation exceeds depreciation."

Check to see if depreciation is within the expected range, but is not correct (Screen 2). Low depreciation often results in appreciation that is unrealistically high. In "normal" years of low to moderate inflation, machinery appreciation is expected to be less than machinery depreciation.

1. "Machinery appreciation = -\$n." [When $n < (-)10\%$ of beginning machinery inventory]

Reported machinery market values fell more than was accounted for by depreciation (Screen 2). While this is possible, especially in periods of "soft" machinery markets, the decrease was more than 10% of beginning machinery inventory. Check to see if all values, especially depreciation, are correct.

FEED AND SUPPLIES

2. "Feed and supply inventory increase > 25%."

Feed and supply inventory increased beyond what would "normally" be expected (Screen 3). Check to see if physical quantities and/or prices increased from beginning to end of year.

2. "Feed and supply inventory decrease > 25%."

Feed and supply inventory decreased beyond what would normally be expected (Screen 3). Check to see if physical quantities and/or prices decreased from beginning to end of year.

LIVESTOCK INVENTORY

3. "End of year heifer inventory at beginning prices > beginning of year inventory but no increase in heifer numbers."

Two possible explanations exist:

- (1) An increase in the quality of heifers has occurred.
- (2) The average age of youngstock from beginning of year to end of year has increased and thereby value per head increased.

Check to be certain one or both of the above actually occurred (Screen 4).

3. "End of year heifer inventory at beginning prices < beginning of year inventory, but no decrease in livestock numbers."

Again, two possible explanations exist:

- (1) A decrease in the quality of heifers has occurred.
- (2) The average age of youngstock from beginning to end of year has decreased and thereby value per head decreased.

Check to be certain one or both of the above actually occurred (Screen 4).

3. "Change in cow values/head >\$100, change = \$_____."

The upward or downward movement in dairy cow market prices was greater than \$100 per head. Check to see if this actually occurred as a result of:

- (1) An increase or decrease in quality of animals.
- (2) A change in market conditions from beginning to end of year.

Check to be certain one or both of the above occurred (Screen 4). If the beginning of year values taken from last year's end of year inventory were incorrect, make the change in beginning of year values so as to accurately reflect the market at the beginning of the year being analyzed.

3. "Number of leased dairy cows > 0 but cattle lease expense = \$0."

An inconsistency may exist. Check to see if cattle were leased (Screen 4) and if lease payments were entered correctly (Screens 11 and 13). Cows may in fact be rented from others or boarded for others. In this situation, do not report cows as leased, but enter the rental expense on Screen 13 and total average numbers, including rentals, on Screen 6.

3. "Livestock appreciation is < \$0, - \$_____."

Livestock values fell from beginning to end of year (Screen 4). Check to make certain this occurred.

3. "Livestock appreciation > change in inventory, - \$_____."

The majority of the increase in total livestock inventory resulted from price increases and not growth or quality improvement of the herd (Screen 4). Check to see if this is accurate.

3. "Expansion livestock expense > \$0 but no increase in dairy cow numbers."

An inconsistency exists. If herd size did not increase from beginning to end of year, cattle purchases were not for increase of herd size. Cattle purchases should be entered under "Replacement Livestock" on Screen 13.

An exception to the above is the purchase of youngstock/bred heifers in anticipation of a herd size increase. If this is the situation, disregard the diagnostic.

3. "Dairy cow numbers decreased _____ and dairy cattle sales < \$400/head."

The revenue from dairy cattle sales is divided by the number of cows by which herd size decreased and this diagnostic is printed if the result is less than \$400 per head.

Did dairy cow numbers decrease (Screen 4) and, if so, were the prices received for cull cows low or did a higher proportion of cows die, or was the sales revenue not accurately reported (Screen 13)? Check the accuracy of input data.

3. "Dairy cow end year inventory at beginning prices > beginning year inventory but no increase in dairy cow numbers."

Quality of cows increased from beginning to end of year (Screen 3). Check to see if this is accurate.

3. "Dairy cow end year inventory at beginning prices < beginning year inventory but no decrease in dairy cow numbers."

Quality of cows decreased from beginning to end of year (Screen 3). Check to see if this is accurate.

3. "Number of cows = 0, total value = \$x." (Where $x > 0$)
 "Number of cows = x, total value = \$0." (Where $x > 0$)
 (Also for heifers and bulls and other livestock.)

There is missing data. If number of livestock is entered there must be a corresponding value for those livestock. If a value for livestock is entered, the number of livestock must be entered.

REAL ESTATE INVENTORY

3. "Real estate appreciation > 0.05 of beginning + value added or < 0 ."

Real estate appreciation is greater than expected in "normal" circumstances or is negative (Screen 5). Real estate values may have not been changed for several years and this year's change reflects more than one year's increase. If this occurred, change the beginning of year value to accurately reflect beginning of year value.

3. "Lost capital > 0.50 of real estate purchased = _____."

Lost capital is greater than "normally" expected (Screen 5). Small capital improvements may not add to the market value of the property and, therefore, lost capital could be equal to the total cost.

3. "Land and building inventory $> \$30,000$ but no land is owned."

Implies ownership of buildings, but no land (Screens 5 and 7). Check to see if this is accurate. The operator could rent or lease a farm, but own improvements or real estate consistent with the terms of the contract. If the farm is a partnership or corporation, check to determine if assets are recorded consistent with expenses.

3. "Land is owned but no land and building inventory value."

If land is owned, a market value was not entered (Screen 4). Land owned may have incorrectly been entered. The above stated possibilities should also be explored.

3. "Building depreciation $> 4\%$ of beginning real estate."

Building depreciation is greater than "normally" expected (Screen 4). Check to see if machinery and equipment or livestock depreciation was incorrectly included. Large investments in new buildings may justify depreciation in excess of four percent.

3. "Real estate inventory value added $< \$0$."

Lost capital exceeds the value added from new real estate purchases (Screen 5). At worst, this should be \$0. Check to be certain data entry is correct.

LIVESTOCK AND BUSINESS DESCRIPTION

5. "Number of bulls and other livestock inconsistent with livestock inventory." (When number = 0 and inventory > 0, or number > 0 and inventory = 0)

Data entered on Screens 4 and 6 are inconsistent with respect to other livestock. Check data collected and entered for accuracy.

5. "Milk per cow = n pounds." (When n < 8,000 or n > 18,000)

Pounds milk sold per cow is outside the "normal" range. Check to see if average cow numbers and pounds of milk sold (Screen 6) are entered correctly. Check butterfat content to see if a non-Holstein herd is being analyzed.

5. "Milk per worker = n pounds." (When n < 200,000 or n > 700,000)

Milk sold per worker is outside the "normal" range. Check to see if months of labor (Screen 7) and milk sold (Screen 6) are entered correctly.

5. "Average number of dairy cows at least 25% more than total at end, owned and leased."

Implies a significant reduction in herd size from beginning to end of year which occurred close to year end (Screens 4 and 6). Check to see if this is correct.

5. "Average number of dairy cows at least 25% less than total at end, owned and leased."

Implies a significant increase in herd size from beginning to end of year which occurred close to year end (Screens 4 and 6). Check to see if this is correct.

5. "Invalid business description."

One or more of the coded business descriptions (Screen 6) are out of acceptable range. Check data entry.

LABOR

5. "Single proprietorship but operators labor = n months." (When n > 12)

Single proprietorship category was checked on Screen 6, but more than one operator was recorded on Screen 7. A single proprietor in the majority of instances would have only one operator, the other should be reported as family unpaid. An exception to this would be when a second person is significantly involved in the day-to-day management of the business, then this person would be entered as Operator #2.

5. "Hired labor expense but no hired labor."

Hired labor expense was recorded on Screen 13 but no months of hired labor were recorded on Screen 7. Check to be certain these

two entries are consistent. Example: labor hired off farm to repair a roof should be reported as land, building, and fence repair, not as hired labor. If the farm is a partnership or corporation, check the labor inventory against business organization for consistency.

5. "Hired labor but no hired labor expense."

Hired labor months were recorded on Screen 7 but no expense on Screen 13. These two entries should be consistent. Example: Hired labor was paid with milk, beef or other farm products. Add the value of the products to receipts (Screen 12) and then count it as an expense (Screen 13). If the farm is a partnership or corporation, check the labor inventory against business organization for consistency.

5. "Partnership or corporation but operator labor is \leq 12 months."

Partnership or corporation operator labor input is "normally" expected to be greater than 12 months. Check to see if labor input (Screen 7) is correct.

LAND AND CROPS

5. "Land is rented but rental expense = \$0."

Land is rented (Screen 7) but real estate rent/lease is \$0 (Screen 13). Check to see if this is correct. Example: If land rent is paid with a portion of crop, report that value as a crop sale and as a rent payment.

5. "There are less than two tillable acres per cow."

Land is very limited. Check to see if feed purchases (Screen 13) reflect low levels of farm grown feeds. Check to see if all owned and rented land has been omitted (Screen 7).

5. "Hay crop yield is < 2 or > 4 tons DM per acre. Yield is _____."

Hay crop yield is outside the "normal" range. Check to see if a large number of acres of new seeding were established, poor weather or good weather existed. Also check acres in hay for accuracy (Screen 8).

5. "Corn silage yield is < 2.5 or > 7 tons DM per acre. Yield is _____."

Corn silage yield is outside "normal" range. Check to see if the dry matter coefficient and conversion are correct (Screen 8). Check acres of corn silage (Screen 8) and determine if some acres were not harvested. Check calculation of quantity harvested.

5. "Corn grain yield is < 50 or > 120 bushels per acre. Yield is _____."

Corn grain yield is outside "normal" range. Check to see if moisture conversion and/or bushel conversions were done correctly

(Screen 8). Check acres in corn grain and repeat calculations of quantity harvested.

5. "Oat yield is < 20 or > 80 bushels per acre. Yield is _____."

Oat yield is outside the "normal" range. Check to see if oat acreage was reported under grain and production under forage if harvested as oatlage (Screen 8).

5. "Tons DM harvested per cow < 4 or > 12 = _____."

Tons of dry matter harvested is outside "normal" range. Check dry matter harvested calculations, cow numbers, and feed purchases for consistency.

5. "Tillable land, all acres, does not equal total tillable acres."

Calculations on Screen 7 and Screen 8 are not correct/consistent. Review the data entries for accuracy and recheck your math.

ASSETS AND LIABILITIES

7. "Scheduled debt payments > 0.35 of milk sales = _____%."

Scheduled debt payments are 10 percentage points above the average (Screens 10 and 12). Check milk sales and debt payment schedule for accuracy.

7. "Long-term debt > 0.80 of land and building inventory."

Long-term debt is higher than "normally" expected. Check to see if data is entered correctly (Screen 10). Falling asset values may have contributed to creation of this situation as well as increased borrowing.

7. "Farm net worth < 0.30 of farm capital. NW = _____."

Farm net worth is lower than normal (Screen 10). Check all calculations for accuracy. Falling asset values and increased borrowing may have contributed.

7. "Debt per cow > \$3,500 = \$_____."

Debt per cow is above average. Check for accuracy of data (Screens 6 and 10).

7. "Accounts receivable < 5% of milk sales."

The December milk check may not have been included as an account receivable (Screen 12). Check to see if all accounts have been included.

7. "Intermediate term debt > total farm inventory less real estate."

Intermediate term debt is high and, in fact, greater than intermediate term assets (Screens 9 and 10). Check to see if this is correct.

7. "Long-term planned payments > long term debt."

Long-term planned payments being greater than long-term debt would be expected to occur only in the last year of the payment schedule. Check all entries for accuracy (Screen 10).

7. "Intermediate term planned payments > intermediate term debt."

Intermediate term planned payments greater than intermediate term debt would be expected to occur only in the last year of the payment schedule. Check all entries for accuracy (Screen 10).

7. "Short-term planned payments > 120% of short-term debt."

Short-term planned payments are higher than expected. Check for accuracy of entries (Screen 10).

7. "Planned reduction of operating debt > operating debt."

This is a definite inconsistency. The reduction in operating debt cannot be greater than the end of year balance (Screen 10). Check to see if interest is included.

7. "Planned reduction of accounts payable > accounts payable."

This is a definite inconsistency. The reduction in accounts payable cannot be greater than the end of year balance (Screen 10). Check to make certain interest and penalties have not been included.

7. "Liability > 0 but no scheduled payment, liability = \$_____."

Liabilities are greater than \$0 but scheduled debt payments are \$0, indicates that the payments were inadvertently omitted or, in fact, that no payments are scheduled (Screen 10). Check to make certain the data is accurate.

7. "Decrease in _____ liability from beginning to end year does not equal principal paid."

If no new money was borrowed, the decrease in the liability amount from beginning to end year should equal the amount of principal paid during the year. Check to make certain the data is accurate (Screen 10).

FINANCIAL LEASES

8. "Leases cattle but no lease expense."

Cattle are leased (Screen 11) but lease expense is \$0 (Screen 13). Check to be certain cattle lease is not included with machinery or real estate lease and the cattle are in fact leased, not rented.

8. "Leases equipment but no lease expense."

Equipment is leased (Screen 11), but lease expense is \$0 (Screen 13). Check to see if cattle or real estate lease includes equipment (Screen 13) and if equipment is in fact leased.

8. "Leases structures but no lease expense."

Structures are leased (Screen 11), but lease expense is \$0 (Screen 13). Check to see if cattle or real estate lease includes equipment (Screen 13) and if equipment is in fact leased.

RECEIPTS

9. "Milk price < \$11 or > \$15. Price = \$_____ per cwt."

Milk price is outside the "normal" range. Check to see if pounds of milk sold are under-reported (Screen 6), milk sales (gross) is over-reported (Screen 12) or a Jersey herd is being summarized (Screen 6).

9. "Tillable crop acres per cow > 4, but \$0 crop sales."

Tillable crop acres per cow are high (Screen 7) but not crop sales are reported (Screen 12). Check to see if crop yields are low (Screen 8) or inventories of feed and supplies increased (Screen 3).

9. "No dairy cattle sales."

This statement indicates that dairy cattle sales on Screen 12 is blank. Check to see if this was overlooked when gathering data or not entered in the computer.

9. "No dairy calf sales."

This statement indicates that dairy calf sales on Screen 12 is blank. Check to see if this was overlooked when gathering data, not entered in the computer or if in fact all calves were either raised or died and, therefore, no sales existed.

9. "Government receipts, other receipts or miscellaneous receipts > \$5,000."

Government receipts, other receipts or miscellaneous receipts are greater than normally expected. Verify that the entry is correct (Screen 12) and that other categories are not more appropriate.

9. "Gas tax refund in excess of \$500."

Gas tax refund is greater than normally expected. Verify that the entry is correct (Screen 12) and that other receipts have not been included here.

- 6 & 9 "Total change in accounts receivable entered as a receipt does not equal change in accounts receivable entered as an asset."

This indicates a problem in calculation or data entry as these two totals should be equal.

EXPENSES

11. "Wages < \$400 or > \$1,200. Wages = \$_____ per month."

Wages per month for family paid and hired labor are outside the normal range. Determine if months of labor recorded (Screen 7) and labor expense (Screen 13) are accurate.

11. "Total accrual (item) expenses are negative."

An accrual expense (Screen 13) would not likely be a negative value. Check the data for accuracy. Values in the column "Cash amount paid" cannot be negative. It is possible to have negative values in the "Change in Acct. Payable" column; however, an offsetting value in "Cash Amt. Paid" calculates to a positive accrual expense. It is possible to have negative values in the "Change in Inventory" column calculated from entries made on page 2, Screen 3. However, this indicates an increase in that inventory item and, therefore, should be offset by "Cash Amt. Paid" or "Change in Acct. Payable".

11. "Owns farm real estate but pays no taxes."

Farm real estate is owned (Screen 5) but taxes are not reported (Screen 13). Check to see if taxes were paid but not reported, paid by a third party or not paid during the year.

11. "Farm liabilities > \$0 but no interest expense, liabilities - \$_____."

Farm liabilities exist (Screen 10), but no interest expense reported (Screen 13). Check to see if special circumstances exist or if interest was in fact not paid during the year.

11. "Interest expense on page 11 does not equal interest payments on page 7."

The total farm liability interest (Screen 10) does not equal total interest expense (Screen 13). Check to see if data was collected and entered correctly. These two totals must be identical.

11. "Cattle lease expense > \$0, but no lease information."

Cattle lease expense is reported (Screen 13), but lease information is missing (Screen 11). Record the information on Screen 13 once the existence of an actual lease has been verified.

11. "Owns farm real estate but pays no insurance."

Farm real estate is owned (Screen 5) but no insurance expense is reported (Screen 13). Check to see if insurance expense was omitted or is included in other categories. Make certain real estate is owned.

11. "Personal withdrawals and family expenditures < nonfarm income."

This indicates that the nonfarm income could be subsidizing the farm business and, therefore, the Net Personal Withdrawals from

Farm on page 7 of the Business Summary will be negative. Check to be certain this is accurate.

- 7 & 11 "Total change in accounts payable entered as expense does not equal change in accounts payable entered as liability."

The total change in accounts payable on Screen 10 does not equal the total accounts payable change on Screen 13. There must be a data acquisition or data entry problem.

11. "Operating cost of producing milk is < \$8 or > \$12/cwt., - \$_____."

The operating cost of producing milk is outside the "normally" expected range. Check all operating expenses and nondairy receipts for accuracy (Screens 12 and 13) as well as total pounds of milk sold (Screen 6).

11. "Total cost of producing milk is < \$10 or > \$16/cwt., - \$_____."

The total cost of producing milk is outside the "normal" range. Check all expenses and nondairy receipts, plus interest on equity capital and value of operator's labor and management and unpaid family labor for accuracy (Screens 12, 13, and 7). Also check the total pounds of milk sold for accuracy (Screen 6).

MANAGEMENT PERFORMANCE MEASURES

- 12 & 13 "Net farm income w/o appreciation = \$n." (When n < \$10,000 or > \$50,000)

Net farm income without appreciation is outside the "normally" expected range. Review receipts and expenses especially accounts payable and receivable, depreciation, and inventory changes for accuracy.

- 12 & 13 "Net farm income w/appreciation = \$n." (When n < \$10,000 or > \$50,000)

Net farm income with appreciation is outside the "normally" expected range. Review receipts and expenses especially livestock, machinery, and real estate appreciation for accuracy.

- 12 & 13 "Labor and management income per operator < \$0 or > \$30,000 - \$_____."

Labor and management income is outside "normally" expected range. Review the cash receipts and cash expenses (Screens 12 and 13) and especially inventory adjustments and/or depreciation for real estate, machinery and equipment, livestock, and feed and supplies.

- 12 & 13 "Return to operator's labor, management, and equity capital < \$10,000 or > \$50,000."

Return to operator's labor, management, and equity capital is outside the "normally" expected range. Check all receipts and expenses, plus the unpaid family labor for accuracy.

- 12 & 13 "Grain and concentrate as % milk unusually low or high. Value is n%." (When n < 10% or > 40%)

Feed purchases as a percent of milk sales is outside the normally expected range. Check feed purchases (Screen 11) for accuracy, check to see if crop yields are high and/or a large number of crop acres per cow exists.

- 12 & 13 "Rate of return on equity capital w/o appreciation = n%." (When n ≤ 0% or > 10%)

This indicates a rate of return without appreciation outside the "normally" expected range. Check expenses and receipts as well as assets and liabilities for accuracy.

- 10, 12 & 13 "Cash flow imbalance (error) is > 1% of total cash inflows."

The cash flow imbalance is greater than can be accepted. Check the family withdrawals and family expenditures calculations for accuracy; remember income and social security taxes are considered personal withdrawals and family expenditures. Check principal payments as well as new borrowings for accuracy. Also consider gifts and inheritances as possible sources of discrepancy.

7. "Debt to asset ratio < 0.3, = ____."

Debt to asset ratio is very low. Check asset values and liabilities for accuracy.

- 10, 12 & 13 "Cash flow coverage ratio < 0.8 or > 1.2."

Cash flow coverage ratio is outside "normal" range. Check receipt and expense items as debt payments made for accuracy.

CROP EXPENSES

13. "Sum of fertilizer and lime expenses for hay crop and corn is > farm total for all crops."

The allocation of expenses among crops is not accurate (Screen 14). Check the allocations.

13. "Sum of seed and plant expenses for hay crop and corn is > farm total for all crops."

The allocation of expenses among crops is not accurate (Screen 14). Check the allocation.

13. "Sum of spray and other expenses for hay crop and corn is > farm total for all crops."

The allocation of expenses among crops is not accurate (Screen 14). Check the allocations.

13. "Total crop expenses per acre of hay crop is > \$150 or < \$50, = \$_____."

The total crop expense per acre of hay is outside the "normally" expected range (Screen 14). Check the allocation of expenses to hay and compare with yields to see if a deviation is justified. Also check acreage for accuracy.

13. "Total crop expense per acre of corn is > \$150 or < \$50 = \$_____."

The total crop expense per acre of corn is outside the "normally" expected range (Screen 14). Check the allocation of expenses to corn and compare with yields to see if a deviation is justified. Also check acreage for accuracy.

13. "Total crop expenses per acre of other crops is > \$150 or < \$25, = \$_____."

This is a difficult statement to check. First, determine what crop or crops comprise "other" and then check the allocations of expenses and acreages.

OTHER

"Farm coded irregular" - A farm is coded irregular when data is incomplete, missing or judged to be inaccurate.

"Farm coded part-time" - A farm is coded part-time when operator months are less than six months and total labor months are less than 12.

"Farm coded renter" - A farm is coded renter when no land is owned and/or the real estate inventory = 0.

"Farm coded cash-crop" - A farm is coded cash-crop when crop receipts and government receipts total more than 10 percent of milk receipts.

APPENDIX A

HOW TO COMPLETE DAIRY FARM BUSINESS SUMMARY
DATA CHECK-IN FORMS

HOW TO COMPLETE DAIRY FARM BUSINESS SUMMARY DATA CHECK-IN FORMS

Screen 1. Cooperator's Name and Address (page 1)

Fill in the name of the operator(s) of the farm business, the farm name if there is one, the address, and the county's record project in which he or she is participating. The processing number will be assigned at Cornell if the data is to be entered on the computer at Cornell. If entering the data in the county, use the list of processing numbers provided by Cornell to assign numbers to new cooperators and to confirm numbers used for continuing cooperators.

Please indicate if a farm is to be coded "irregular" at the top of the check-in form. An "irregular" farm has missing or inaccurate data. Any farms participating in the "Buyout" should be coded "irregular".

Worksheet 1. Machinery and Equipment Purchased (page 1)

List all new or used machinery and equipment acquired during the year and the "boot" amount paid or obligated to pay on each item. List the market value of items traded-in and make the inventory checks in order to substantiate beginning and end inventory values. Check the farmer's capital expenditures with the inventory book for the business. New items should be inventoried at "boot" plus market value of trade-in less first year's depreciation. Loss or increase in market value may occur from date of purchase to year end. Adjust year end value recorded in inventory to represent year end market values of machinery and equipment purchased. Make sure traded items are removed from this year's inventory. Do not include any leased items. We will assume the list of capital purchases and dollar amount reported here are correct and it will take precedence over other lists that may be included in the record.

The only item from this section required to complete a farm business summary is the total machinery and equipment purchased. Worksheet 1 is included to provide a workplace for the operator, manager or managers to calculate this information. If prior to completion of the check-in forms the farm business has an accurate, up-to-date machinery and equipment inventory there is no particular need to copy that information onto Worksheet 1.

Worksheet 2. Machinery and Equipment Sold or Destroyed (page 1)

List machinery and equipment that was disposed of by outright sales and items that were destroyed by fire, flood, and other disasters. Do not list items traded-in here. Report insurance received from machinery destroyed and check to see that all dispositions are removed from the end inventory.

As with the machinery and equipment purchased, only the total machinery and equipment sold is required to complete a business summary; consequently, if the farm records are complete and accurate, Worksheet 2 is not needed for input and need not be used.

Screen 2. Machinery and Equipment Inventory and Depreciation (page 1)

The information to be collected in this section is required to calculate the ownership costs incurred in maintaining an inventory of owned machinery and equipment and to calculate the increase (or possibly decrease) in the value of the machinery complement resulting from changes in the price level of farm machinery and equipment. The fixed cost of maintaining the equipment inventory is charged as a business expense while machinery appreciation is credited toward the ownership income of the farm business.

Probably the most difficult information to obtain in this section is the beginning and end-of-year inventory. If this cooperator had a business summary the previous year, the end of the year inventory is the beginning of year inventory for this year. The cooperator then must inventory and determine the market value of his machinery and equipment as of December 31 of the year for which you are summarizing. Do not include any leased items.

Machinery and equipment purchased and machinery and equipment sold are the totals from Worksheets 1 and 2 discussed above. If an alternative source of complete information for purchases and sales is available, it is not necessary to complete Worksheets 1 and 2.

Machinery and equipment received from "Nonfarm Noncash Transfer" is entered in Screen 2. Include machinery and equipment received as a gift/inheritance or converted from nonfarm to a farm asset.

The next item is machinery and equipment depreciation as calculated for tax purposes. This value is used as the charge against the farm business for the use of the machinery and equipment complement. It is obtained by taking 1986 regular tax depreciation, excluding buildings and cattle from ACRS depreciation. End-of-year inventory less the total beginning inventory after changes is equal to machinery appreciation. This value is then used as the contribution toward ownership income from machinery and equipment.

If machinery appreciation appears to be too high or too low given changes in prevailing machinery and equipment prices during the year, one might consider some of the following possible causes:

If change in inventory due to price appears to be too high, check the following possible causes:

- a) There are more new items in the inventory book than listed as capital purchases.
- b) New items were not depreciated this year or were valued at "list price" rather than at a value based on cost.
- c) Trade-ins and other dispositions were not removed from book.
- d) Machinery was revalued upward during the year and beginning inventory was not adjusted in the same direction.

If change in inventory due to price appears to be too low, check these possible causes:

- a) New items were not all listed in inventory book.
- b) Items acquired through trade were not valued correctly.

- c) Items no longer in use were removed from end inventory or devaluated without corresponding changes to beginning inventory.
- d) Machinery was revalued downward during the year and beginning inventory was not adjusted in the same direction.

Worksheet 3. Grown Feed Inventory Worksheet (page 2)

This worksheet is used to calculate the grown feed inventory at the beginning and end of year. Space is provided to enter quantities of the various grown feeds, their market value per unit, and the calculated market value for each grown feed. The total values of the grown feeds at beginning and end of year need to be calculated and entered in the appropriate spaces in Screen 3.

Screen 3. Feed and Supply Inventory (page 2)

Report beginning and end market values of purchased feeds and supplies in Screen 3. Workspace is provided for the quantity and market value per unit for the purchased feed and supply categories to assist in the calculation of the total value for each item at beginning and end of year. Of course, if an accurate accounting was made for the previous year, the end-of-year inventory should be used for the beginning-of-year inventory for this year. The beginning-of-year data is not optional; it is required. If winter wheat is grown, be sure to include in grown feed end-of-year inventory (Worksheet 3) the value of the crop based on the cost incurred in growing it.

Screen 4. Livestock Inventory (page 3)

Report all leased dairy cows at end of year in the space provided. This number will be added to owned dairy cows at end of year when computing debt levels per cow.

For owned livestock, this section is used to obtain information on the inventory of livestock at the beginning and end of the year and to separate the change in inventory during the year into the change (a) that results from changes in numbers and/or qualities of livestock and (b) that result from price changes during the year. The screen is designed to help inventory the livestock by categories -- such as calves, open heifers, bred heifers. The information required in this section is the value at the beginning of the year, the value at the end of the year using beginning-of-year prices, and the value at the end of the year using end-of-year prices for dairy cows, heifers, and bulls and other livestock. In addition, the number of head at the beginning and the end of the year is required. The value per head entries are provided for use in obtaining these figures.

The quantity and value for beginning-of-year inventory can either be taken from last year's end-of-year inventory if accurate information is available or can be calculated based on the livestock on hand and the value per head at the beginning of the year.

The end-of-year inventory is more complex since the livestock numbers at the end of the year need to be valued both at beginning-of-year prices and at end-of-year prices in order to separate the increase in inventory into the change (a) that results from changes in numbers and/or qualities of livestock and (b) that result from price changes during the year. Unless large numbers of animals have been purchased of a different quality or the composition of the animals in the group has been altered significantly, the value per head using the beginning-of-year prices is the same as the value per head in the beginning-of-year

inventory. Situations which could result in the value per head in the beginning-of-year inventory and the value per head using beginning-of-year prices for the end-of-year inventory being different are a large change in the composition of the livestock group (example would be average age of calves two to three months more than at beginning of year) and a purchase of a large number of animals of higher quality than those previously in the herd. Finally, the end-of-year inventory at end-of-year prices is the same number of head as for the end-of-year inventory at the beginning-of-year prices times the value per head based on the market price of the livestock on December 31 of the summary year.

Worksheet 4. Land and Buildings Purchases and Sales (page 2)

In this section, only the totals for cost and lost capital of new purchases and capital improvements, and sale price/amount received and beginning inventory value of capital sales and losses are required. If the cooperator has an accurate record of his or her real estate transactions, these totals can be taken from that record; if the cooperator does not, Worksheet 4 can be used to assist in calculating the totals.

Screen 5. Real Estate Inventory Balance (page 3)

This section must be completed to confirm changes in the market value of real estate during the year.

- a) Report the beginning-of-year market value (previous year's end-of-year value).
- b) Enter the cost of new purchases and capital improvements for land and buildings and subtract lost capital. Value added (the difference between cost of new real estate and lost capital) is that proportion of the new investment that adds to the market value of the farm.

Enter the value of real estate that has come into the farm business during the year from gifts/inheritances and from conversion of nonfarm real estate to farm real estate.

- c) Building depreciation from 1986 tax return is used as an estimate of a total building depreciation charge for the year. Be sure to include depreciation on buildings in ACRS 5, 10, 15, 18, and 19-year classes as well as non-ACRS depreciation.
- d) Deduct the beginning inventory value of real estate sold. For example, a tenant house inventoried at \$20,000 and sold for \$25,000 with \$1,000 of sale expenses and a mortgage of \$15,000 held by the seller would be entered as follows:

<i>Real Estate Sold: Beginning of year inventory value</i>	<i>\$20,000</i>
<i>Total sale price</i>	<i>\$25,000</i>
<i>- Sale expenses</i>	<i>1,000</i>
<i>- Note/mortgage held by seller</i>	<i><u>15,000</u></i>
<i>= Net cash amt. rec'd. in 1986</i>	<i>9,000</i>

The "note/mortgage held by seller" of \$15,000 must be entered as an "Other Nonfarm Asset" in Screen 9, page 6. If the seller is not the mortgage holder, there would be no entry in the "note/mortgage held by seller" space and the "Net cash amount received in 1986" would then equal \$24,000.

The calculated value, "net cash amount received in 1986", is a cash inflow to the farm. If part or all of this was converted to nonfarm, include that amount as a "personal withdrawal and family expenditure" in Screen 13.

- e) Beginning market value plus value added from real estate purchased, minus depreciation and the value of sales, equals total beginning value after changes.
- f) End-of-year market value less the total beginning value after changes is equal to real estate appreciation on the assets owned at end of year. Real estate appreciation also needs to be calculated for the assets sold during the year by subtracting the beginning year value of real estate sold from the sale price. These values are then used as the contribution toward ownership income from real estate.

Screen 6. Livestock and Business Description (page 5)

The average number of cows for the year is a key factor. It can be taken from the DHIA or other herd testing records. It is the average number of cows in the herd each month totaled and divided by 12. It includes dry cows as well as cows in milk. It includes leased cows. It is not an average of beginning and ending inventory numbers. Also report the average number for year of dairy heifers and bulls. If the data is being entered on a computer in the county, enter the work units for other livestock. Use Table 1, page 17 of the Micro-DFBS User's Manual as a guide.

Total pounds of milk sold is the total weight reported by the milk plant. Average milk plant test is not used to convert to a 3.5 equivalent. It is used as a reference only.

Check the appropriate item under Production Record, Milking System, Business Type, Dairy Housing, and Primary Financial Recordkeeping System.

Screen 7. Labor Inventory (page 5)

Begin by identifying the operators of the farm. Operators should include all individuals who are integrally involved in the operation and management of the farm business. They are not limited to those who are the owner of a sole proprietorship or are formally a member of a partnership or corporation. In instances where a husband and wife operate and manage the farm as a team both may be included as operators. The labor input of each operator should then be specified in months. In most instances, this is 12 months but in some instances where one or more operators of the farm business have other items occupying their time, such as an off-farm enterprise, commitment to farm organizations or family commitments; less than 12 months would be appropriate. In addition, for each operator, indicate their age, their years of education, and the estimated value of their management and labor input. This value should be based on what that person could earn in a similar capacity in similar employment. Any farm expenses for labor or perquisites for these operators should be excluded from the labor expenses entered later in the input. This exclusion will probably be most relevant for corporations but may also apply to other businesses.

In addition, the total months of family labor who are paid, the months of family labor not paid, and the total full-time months of hired labor should be recorded. The full-time months can then be totaled and divided by 12 to determine the worker equivalent.

The conversion to full-time, worker-month equivalents is necessary; conversion is not always easy but is very important to an accurate summary. A high school student may provide three months of worker-month equivalent labor during the 10 month school year by working part-time. Convert hourly labor on the basis of 230 hours per month.

Screen 7. Land Inventory (page 5)

The purpose of this section is to obtain a complete accounting of the owned and rented acreages included as a part of this farm business. First, the tillable acres owned and rented should be entered. Tillable acres should include all acres that normally are cropped, either in row crops, hay crops, or cropland pasture. Pasture acres owned and rented should include all acres of pasture that are not cropland. Nontillable woodland and other acres owned would then be included and the three would add to total acres owned, rented and to the total acres in the farm business.

Screen 8. Tillable Land Use (page 5)

The purpose of this section is to obtain a complete accounting of the tillable acres in the farm business and an accurate record of the cropping program of the farm business. This record is an essential part of the business summary.

The forage crops should be separated into hay, hay crop silage, corn silage, and other forage crops harvested (could include green chop, small grain silage, and sudan/sorghum silage). Enter only the first cut acres for all hay crops on the first line. The measure of production of the roughages is the total tons of dry matter. The intermediate columns of total production and percent dry matter are used to assist in calculating the total tons of dry matter. Total production of all hay crops are divided into dry hay and hay crop silage. The total production of corn for grain, oats, and wheat should be reported on a dry bushel equivalent. Worksheet 5 is included on the opposite page for conversion of corn to a dry shelled basis.

Clear seeding acres should be entered under hay unless another crop is then grown on those acres and considered the major crop in which case the acres are entered with the major crop. Acres used to grow winter wheat should be entered with the crop grown during the regular growing season.

After the acreages and production of the harvested crop enterprises have been reported, the acres of tillable cropland included in pasture and the acres of idle tillable cropland should be recorded. The total of all of the acres in each of these enterprises should be the total tillable acres. This total should then be compared to the total tillable acres recorded above in the land inventory. Furthermore, if this cooperator was in the summary the previous year and has not had a change in owned or rented acres, the tillable acres should be exactly the same as they were in the previous year.

Screen 9. Farm Family Financial Situation - Assets (page 6)

The assets section of the Farm Family Financial Situation requires entry of all farm and nonfarm assets for beginning and end of year. Total farm inventory is calculated from the previously-entered inventory sections.

If a cooperator had a business summary the previous year, the end-year assets are the beginning-year assets for this year, with one exception. FLB and

PCA stock was not a farm asset category last year. This value would have been included in "Coop. stock & certificates" last year.

Do not enter negative numbers for "Farm cash, checking & savings". In the situation where there is a negative checkbook balance, it should be considered money borrowed and be included in short-term or operating debt, and a zero entered for farm cash, checking, and savings.

Mortgages or notes held from the sale of farm real estate should be included as "Other Nonfarm Assets".

See the bottom of page 6 of the check-in form for further guidelines to completing the assets section.

Screen 10. Farm Family Financial Situation - Liabilities (page 7)

The liabilities and debt payments sections of the Farm Family Financial Situation require entry of all liabilities for beginning and end of year, the principal and interest actually paid in 1986, and the planned annual payments for 1987. If a cooperator had a business summary the previous year, the end-year liabilities are the beginning-year liabilities for this year. However, for FLB and PCA liabilities, be sure the proceeds amount is entered as the liability (i.e., exclude FLB and PCA stock). The amount of FLB and PCA stock will be displayed under Intermediate Term Debt. These values are automatically carried over from FLB and PCA stock assets entered in Screen 9, page 6.

The total of the interest actually paid in 1986 (5th column) should equal the interest expense entered in Screen 13, page 11.

See the bottom of page 7 of the check-in form for additional guidelines to completing this section.

Screen 11. Financial Leases (page 8)

The purpose of this table is to help calculate the expenses associated with financial leases and to determine the present assets and liabilities for the leased items. Include those items for which the farmer originally had an obligation to make specific payment for more than one year. Do not include rented items such as hourly machine rental.

The total yearly expense is calculated by multiplying the amount of each payment times the number of payments for the year. The total yearly expenses for each item are added to get the total expense for cattle, equipment, and structures. The totals are entered under expenses on page 11. The total expense for cattle is entered under cattle lease; the total expense for equipment is entered under machine hire, rent and lease; and the total expense for structures is entered under real estate rent/lease.

Enter the number of payments in a full year and the number of payments remaining for each item. From this information present values for assets and liabilities can be computed for the leased items.

Worksheet 6. Changes in Operating Accounts Receivable (page 8)

The purpose of Worksheet 6 is to assist in calculating the changes in operating accounts receivable and to allocate the changes to the appropriate receipt category for entry in Screen 12, page 9. If there are no operating accounts receivable other than the January milk check, it is not necessary to use

the worksheet. Simply calculate the difference in the account receivable from beginning to end of year and enter that value in Screen 12 in the space for "Milk, Change in Accounts Receivable".

The total of the column "Balance, December 31, 1986" in Worksheet 6 must equal the value in Screen 9, page 6 for "Accounts Receivable, December 31, 1986". The total of the column "Balance, January 1, 1986" in the worksheet must equal "Accounts Receivable, January 1, 1986" in Screen 9. The totals of the "Change in Account" and "Receipt Category Amount" columns in Worksheet 6 must be equal. They must also equal the total of the column "Change in Accounts Receivable" in Screen 12, page 9. See the bottom of page 8 of the check-in form for further guidelines to recording changes in accounts receivable.

Screen 12. Summary of 1986 Receipts and Changes in Inventory and Accounts Receivable (page 9)

Record the 1986 cash receipts and changes in accounts receivable in Screen 12. The "Change in Inventory" column is calculated by the computer program from entries previously made in Screen 3 (grown feeds inventory) and Screen 4 (livestock inventory). Use Worksheet 6 on page 8 to assist in the calculation of changes in accounts receivable. The "Accrual Receipts" column is the total of the first three columns.

Enter the amount received for sale of stock and certificates other than FLB and PCA stock. This value will be used in the calculation of appreciation of stock and certificates to be included as ownership income.

The new section at the bottom of Screen 12 is used to record nonfarm cash inflows and nonfarm capital used in the farm business.

See the bottom of page 9 of the check-in form for further guidelines to recording the farm and nonfarm receipts.

Worksheet 7. Changes in Operating Accounts Payable (page 10)

The purpose of Worksheet 7 is to assist in calculating the changes in operating accounts payable and to allocate the changes to the appropriate expense category for entry in Screen 13, page 11. If there are no operating accounts payable, do not use the worksheet, go directly to Screen 13 on page 11.

The total of the column "Balance 12/31/86" in Worksheet 7 must equal the value in Screen 10, page 7 for "Accounts Payable, December 31, 1986". The total of the column "Balance 1/1/86" in the worksheet must equal the value in Screen 10 for "Accounts Payable, January 1, 1986". The totals of the "Change in Account" and "Expense Category Amount" columns in Worksheet 7 must be equal. They must also equal the total of the column "Change in Accounts Payable" in Screen 13, page 11. See the bottom of page 10 of the check-in form for further guidelines to recording changes in accounts payable.

Screen 13. Summary of 1986 Expenses and Changes in Inventory and Accounts Payable (page 11)

Record the 1986 cash expenses and changes in accounts payable in Screen 13. Be sure to include as cash expenses any items paid directly by a bank through use of a "line-of-credit". Payment on the "line-of-credit" is a reduction in the account payable to the bank. The "change in inventory" column is calculated by the computer program from entries previously made in Screen 3 (purchased feed and supplies inventory). Use Worksheet 7 on page 10 to assist in the calculation of

changes in accounts payable. The "Accrual Expenses" column is the total of the first three columns.

Enter the amount spent for purchase of stock and certificates other than FLB and PCA stock. This value will be used in the calculation of appreciation of stock and certificates to be included as ownership income.

Enter all personal withdrawals and family expenditures in the space provided at the bottom of Screen 13. Do not skip this entry. It is necessary for the Annual Cash Flow Statement to balance and also for an accurate Cash Flow Coverage Ratio to be calculated.

See page 12 of the check-in form for further guidelines to recording farm expenses.

Screen 14. Breakdown of 1986 Crop Expenses by Crop (page 13)

Record the breakdown of crop expenses for hay crop, corn, and other crops in Screen 14. The "Total" line at the bottom of the screen must equal the accrual expenses on Screen 13, page 11, for fertilizer and lime, seeds and plants, and spray and other. Calculate the accrual expense for these three crop expense categories on Screen 13 by totaling "Cash Amount Paid" + "Change in Inventory" + "Change in Accounts Payable". The "Change in Inventory" values are calculated from the beginning and end year inventory values in Screen 3, page 2 (beginning year - end year = change in inventory).

The computer program will display on Screen 14 the total accrual expenses for the crop expense categories from Screen 13 at the time of data entry. The "All other crops" line will be calculated using the accrual expense totals less the values entered in the first two lines of the screen for hay crop and corn.

APPENDIX B

PROCEDURES FOR CALCULATING
COST OF PRODUCING MILK

PROCEDURES FOR CALCULATING COST OF PRODUCING MILK -
1986 DAIRY FARM BUSINESS SUMMARY

		<u>Example^{a/}</u>
Total Accrual Operating Expenses		\$131,508
Less: Total Accrual Receipts	\$184,565	
Less Accrual Milk Sales	<u>-146,970</u>	
Accrual Receipts Less Milk Sales		<u>- 37,595</u>
Operating Cost of Producing Milk ^{b/}		\$ 93,913
 Total Accrual Expenses		 \$161,403
Family Labor Unpaid		+ 1,800
Accrual Receipts Less Milk Sales		<u>- 37,595</u>
 Total Cost of Producing Milk Excluding Operator's Labor, Management & Capital ^{c/}		 \$125,608
 Total Accrual Expenses		 \$161,403
Family Labor Unpaid		+ 1,800
Value of Operator's Labor & Management		+ 20,000
Real Interest on Equity Capital		+ 15,618
Accrual Receipts Less Milk Sales		<u>- 37,595</u>
 Total Cost of Producing Milk ^{d/}		 \$161,226

^{a/}Same example as in Section VI of this publication.

^{b/}Considering only operating costs, this measure shows how you are doing on cost control in "operating" the business. If milk receipts are less than this measure, the farm has serious milk production profitability troubles which must be corrected immediately if the business is to survive.

^{c/}Considering all costs except the opportunity cost of operator's labor, management, and equity capital, this measure after being subtracted from milk receipts will show the return from milk production to the above mentioned factors of production. If milk receipts are less than this measure of cost of producing milk, the business has milk production profitability difficulties. If the operating cost of producing milk is less than milk sales, but this measure is more than milk sales, the farm business is contributing to but not totally covering fixed costs. This situation must be corrected for long-run business survival.

^{d/}Considering all costs of producing milk, including the opportunity cost of operator provided inputs, this measure is the best indicator of long-run business survival. On many farms, the total cost of producing milk will be less than milk sales. This does not imply the business is doomed. If milk sales are greater than the previously discussed two measures of cost of milk production, but less than the total cost of producing milk, the business is not returning the total opportunity cost of operator provided inputs. For long-run business survival, farms should strive for milk sales to meet or exceed this cost of producing milk.

APPENDIX C**CREATION OF A CONFIG.SYS FILE**

CREATION OF A CONFIG.SYS FILE

In order for the program to work properly, a CONFIG.SYS file must exist in the root directory of a hard disk or on the MSDOS or PCDOS boot diskette of a floppy based system. To see if such a file exists, use the DIR command to get a directory of the existing files in the root directory.

For example, on a hard disk you would type:

DIR C:\CONFIG.SYS and press return.

If the file exists, it will be listed on the screen, if the file is not present a message "FILE NOT FOUND" will be displayed.

Existing files will need to be edited. This can be done by using the EDLIN command. To use this command, type:

EDLIN CONFIG.SYS and press return

and the following message will be displayed if the file is found:

End of input file
*

To get a listing of the file, type l and press return. The contents of the file will now be displayed:

```
*
1:*FILES = 10
2: BUFFERS = 10
*
```

What is displayed on your screen will be similar to the above example.

You will need to edit the line that contains the FILES statement. In the example above, line 1 contains the statement. To edit the line type:

1 and press return.

The following will then display:

```
*1
1:*FILES = 10
1:*
```

Enter new information on the blank line directly below the statement. You will now type:

FILES = 16 and press return.

The prompt will reappear. Type:

E and press return.

You will then return to the operating system prompt.

If the file does not exist on your disk, one has been supplied for you on the program diskette. Simply copy the file onto your boot diskette or into the root directory of the hard disk.

Once you have completed either of the steps outlined above, you will need to reboot the computer.