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PRO-DAIRY

Cornell Cooperative Extension

PRO-DAIRY FINANCIAL DATA COLLECTION WORKBOOK

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and

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by

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INTRODUCTION

The PRO-DAIRY Financial Data Collection workbook is designed to guide the farm manager through the data collection process necessary for completion of a Cornell dairy farm business summary. It was developed for use specifically with the PRO-DAIRY workshop "Managing With Finance," but can be used outside the course as well.

Cornell Cooperative Extension's dairy farm business summary (DFBS) program is designed to help you, the farm manager, improve the financial management of your business through appropriate use of historical farm data and the application of business analysis techniques. In short, DFBS identifies the business and financial information farm managers need and demonstrates how it should be used in evaluating the strengths and weaknesses of the farm business.

The workbook is laid out in column format, with each column labeled at the top of the page by a column number. Instructions for completion of each worksheet are offered on the page proceeding the worksheet. The description page (odd numbered) makes reference to the column numbers in explaining how each worksheet (even numbered) should be filled in. In some cases, an example is provided on the description page. In addition to the primary worksheets, there is an **Appendix** of supplementary worksheets which may be useful for some aspects of the data collection. Column numbers in the appendix are preceded by the letter "A".

In order that this workbook remain useful into the future, specific years are not designated in the text or on the worksheets. Nearly all of the information needed is data from what is termed the "Summary Year." Summary Year refers to the calendar year prior to the year during which you are filling out this workbook. For example, if you are completing this workbook early in 1991, the Summary Year would typically be 1990. Unless otherwise noted, such terms as "Beginning of Year" and "End of Year" refer to January 1st and December 31st of the Summary Year. Note the Summary Year below:

Summary Year:_____

Obtaining the information necessary to complete a summary does take time. However, it will be **time well spent**. It would be easy to feel overwhelmed by the number of worksheets and columns of data required. It may help to keep two things in mind: first, you **will not** be filling in every blank line in the workbook - many will not apply to your individual situation and, second, you will be using an **organized process** for collecting all the needed information.

Outlined on the page below is a three-stage process suggested for collection of the data required to complete a farm business summary. This process is designed to accompany the Managing for Success workshop outline. Stage 1 is to be completed **prior to** Session-I of Managing With Finance, Stage 2 **prior to** Session-II, and Stage 3 **prior to** Session-III. If you are having difficulties with completion of a particular worksheet, assistance will be available at the workshop sessions.

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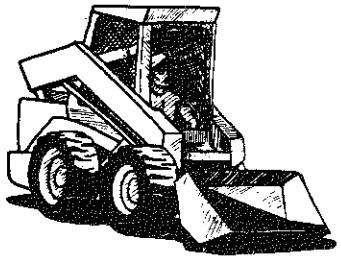
* **Assignments for completion of Stage 1 are surrounded by stars (***) on both the instruction page and the worksheet itself.** *

THREE STAGE PROCESS FOR DATA COLLECTION

Assignment	Column number	Page
Stage 1: Completed by Session I		
Physical inventories	**********	
- machinery & equipment	* A1, A2 *	Appendix 2-8
- feed & supplies	* 14, 17, 20, 23, 26, 29 *	10, 12, 14
- livestock	* 32, 35, 40 *	16
Liability information	* 67-69, 76-78 *	32, 34
Accounts receivable & payable	* 88-92, 95-99 *	38, 42
	**********	
Stage 2: Completed by Session II		
Capital sales & purchases		
- machinery & equipment	1-11	4, 6
- land & buildings	42-47	18
Inventory values		
- machinery & equipment	12-13	8
- feed & supplies	15-16, 18-19, 21-22, 24-25, 27-28, 30-31	10, 12 12, 14
- livestock	33-34, 36-39, 41	16
- real estate	48	20
Depreciation information	12, 48	8, 20
Miscellaneous assets	65-66	30
Debt payment information	71-72, 80-81	32, 34
Financial leases	83-87	36
Cash income & expenses	93-94, 100-101	40, 44
Stage 3: Completed by Session III		
Labor inventory	55-59	24
Business description	49-54	22
Land inventory	60-61	26
Tillable land use	62-64	28
Breakdown of crop expenses	102-107	46
New borrowings	70, 79	32, 34
Planned debt payments	74-75, 82	32, 34
Nonfarm cash income & expenses	93-94, 100-101	40, 44



MACHINERY AND EQUIPMENT PURCHASED

This worksheet provides a place for you to list each piece of machinery and equipment purchased during the summary year.

A description of the item purchased should be entered in **Column 1**. In **Column 2** enter the amount you paid for the item (or the "boot" in the case of a trade). The market value of the piece of machinery or equipment traded-in is entered in **Column 3**. Use your inventory market value--not the dealers' trade allowance. If nothing was traded-in when the purchase was made, put a zero in this column. **Column 4** is the sum of **Columns 2 and 3** and represents the market value of the new item.

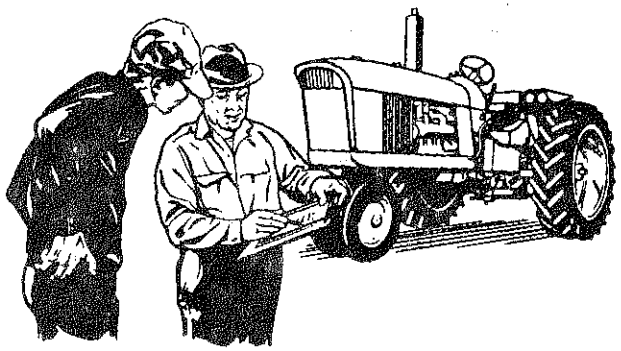
Columns 5 and 6 are used as controls on your inventory. Items traded-in are priced in **Column 3** and should be removed from inventory. After removing them from your inventory records, mark an "X" in Column 5. The description and market value of items purchased need to be added to your inventory. A loss in market value is likely to have occurred from the date of purchase to year end. Therefore, you should adjust the amount appearing in **Column 4** when recording in inventory to represent the **year end market values** of machinery and equipment purchased. Once this has been done mark an "X" in **Column 6**.

Example: (Enter your own data on the page provided below.)

(Col. 1)	(Col. 2)		(Col. 3)		(Col. 4)	(Col. 5)	(Col. 6)
Description	Amount or boot paid	+	Market value of trade-in	=	Market value of new item	Inventory checks (X) Remove trade-in	Add new item
mixer wagon	$ 16,500	+	$ 0	=	$ 16,500		X
haybine	$ 8,500	+	$ 2000	=	$ 10,500	X	X

MACHINERY AND EQUIPMENT PURCHASED

(Col. 1)	(Col. 2)		(Col. 3)		(Col. 4)	(Col. 5)	(Col. 6)
						Inventory checks (X)	
Description	Amount or boot paid	+	Market value of trade-in	=	Market value of new item	Remove trade-in	Add new item
____________	$________	+	$________	=	$________	_____	_____
____________	$________	+	$________	=	$________	_____	_____
____________	$________	+	$________	=	$________	_____	_____
____________	$________	+	$________	=	$________	_____	_____
____________	$________	+	$________	=	$________	_____	_____
____________	$________	+	$________	=	$________	_____	_____
____________	$________	+	$________	=	$________	_____	_____
____________	$________	+	$________	=	$________	_____	_____
____________	$________	+	$________	=	$________	_____	_____
____________	$________	+	$________	=	$________	_____	_____
Total machinery and equipment purchased	$________						



MACHINERY AND EQUIPMENT SOLD OR DESTROYED (not trade-ins)

This worksheet is used to enter any machinery or equipment which you sold or which was destroyed.

You should include a description of the item in **Column 7** followed by the sale amount in **Column 8** or the insurance payment received (for destroyed items) in **Column 9**. **Column 10** is simply the total of **Columns 8 and 9**.

Items traded-in when another purchase is made should not be entered on this worksheet (these are included in the preceding worksheet). **Column 11** should be marked with an "X" after the item is removed from inventory.

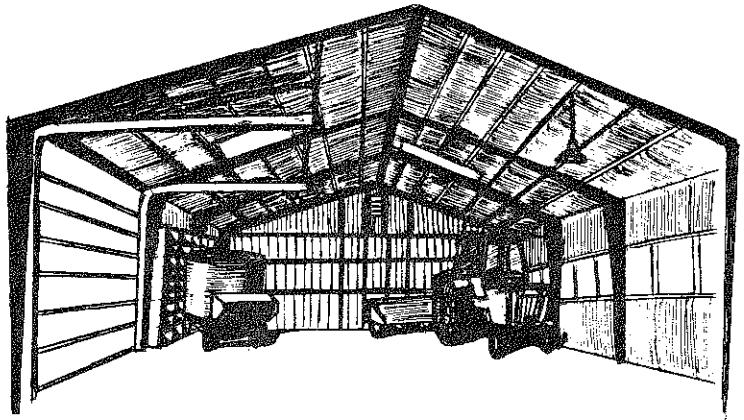
Example: (Enter your own data on the page provided below.)

(Col. 7)	(Col. 8)	(Col. 9)	(Col. 10)	(Col. 11)
Description	Price Received	Insurance Received		Remove from Inventory (X)
I.H. manure spreader	$ 300	$		X
Farmall-H	$ 550	$		X

MACHINERY AND EQUIPMENT SOLD OR DESTROYED (not trade-ins)

(Col. 7)	(Col. 8)	(Col. 9)	(Col. 10)	(Col. 11)
Description	Price Received	Insurance Received		Removed from Inventory (X)
_____	$_____	$_____		_____
_____	$_____	$_____		_____
_____	$_____	$_____		_____
_____	$_____	$_____		_____
_____	$_____	$_____		_____
_____	$_____	$_____		_____
_____	$_____	$_____		_____
_____	$_____	$_____		_____
_____	$_____	$_____		_____
Totals	$_____	+ $_____	= _____	

Total machinery and equipment sold and destroyed (Col. 8 + Col. 9) = $_____



MACHINERY AND EQUIPMENT INVENTORY AND DEPRECIATION

This worksheet summarizes the information about your machinery and equipment.

The **beginning and ending year inventory** amounts can be transferred from your farm inventory book or other inventory record. The inventory amount should be based on the **market value** of your machinery and equipment. If you do not have a good record of the machinery and equipment you own, pages 2-8 of the Appendix provide a place for you to take a complete machinery and equipment inventory.

Machinery and equipment purchased can be transferred from the total of **Column 2**.

Noncash machinery transfer to farm refers to any machinery and equipment acquired at no cost for use in the business. Gifts, inheritances and transfers from personal use are included.

Machinery and equipment sold or destroyed can be transferred directly from **Column 10**.

Summary year's tax depreciation is the amount you are claiming for depreciation during the summary year on your Federal income tax return for machinery and equipment. **Do not** include buildings and cattle depreciation in this figure.

Once these figures have been compiled, **machinery appreciation** can be computed by following the math outlined on the worksheet. In short, machinery appreciation is equal to ending inventory less adjusted beginning inventory. Adjusted beginning inventory is the beginning inventory plus purchases plus noncash transfers less sales less depreciation.

The information on this worksheet and all of the other inventory worksheets is essential to completion of your balance sheet and income statement.

MACHINERY AND EQUIPMENT INVENTORY AND DEPRECIATION

	(Col. 12)		(Col. 13)	
Beginning of Year Inventory (Jan. 1)	$	End of Year Inventory (Dec. 31)	$	(A)
Machinery and Equipment Purchased	+			
Noncash Machinery Transfer to Farm	+			
Machinery and Equipment Sold or Destroyed	-			
Summary Year's Tax Depreciation	-			
Total Beginning Inventory After Changes	→		$	(B)
Machinery Appreciation (ending less beginning after changes or **A minus B**)			$	

GROWN FEED INVENTORY

This worksheet is used to calculate beginning and end of year inventory of all grown feeds. These are crops that you raised for feed. Purchased feed is not included here. The general method is to determine physical quantities of feeds, set a value per unit (ton, bushel, etc.), and then multiply the quantity times the value per unit to compute the total value of the particular feed in inventory.

If you have an end of year inventory of grown feeds for the year **prior to** the summary year, this can be used to complete the beginning of year portion of the worksheet for January 1. If you are without the prior year's ending inventory figures, it may be easier to start by determining the summary year's ending inventory (December 31). In other words, start by completing the right side of the worksheet. Then make your best estimates of the quantities you had on hand at the beginning of the year (January 1). One method is to compare what you have at the summary year' end with what you think you had at the prior year's end.

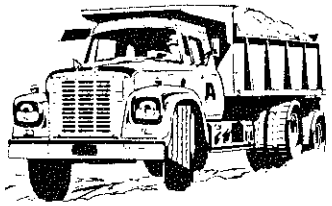
Stage 1 Assignment: Enter quantities of feed on hand on January 1 in Column 14 and quantities on hand on December 31 in Column 17. To help you with accurately estimating your physical inventories, an additional worksheet, silo charts and grain and hay volume conversion tables are included in the appendix on pages 9-17.

Example: (Enter your own data on the page provided below.)

	(Col. 14)	(Col. 15)	(Col. 16)	(Col. 17)	(Col. 18)	(Col. 19)
	Beginning of Year (January 1)			End of Year (December 31)		
Item	Quantity	Price Per Unit	Total Value	Quantity	Price Per Unit	Total Value
Corn-HMSC	75 t.	$ 85	$ 6375	105 t.	$ 75	$ 7875
Corn-HMEC						
Corn-dry, shell	3500 bu.	3.00	10,500	2000 bu.	2.65	5300

GROWN FEED INVENTORY

	(Col. 14)	(Col. 15)	(Col. 16)	(Col. 17)	(Col. 18)	(Col. 19)
	Beginning of Year (January 1)			End of Year (December 31)		
Item	Quantity	Price Per Unit	Total Value	Quantity	Price Per Unit	Total Value
Corn-HMSC		$	$		$	$
Corn-HMEC						
Corn-dry,_____						
Oats						
Wheat						
Other_____						
Dry hay						
Hay crop silage						
Corn silage						
Other_____						
Total Grown Feed			$			$



PURCHASED FEED INVENTORY

This worksheet is used to calculate beginning and end of year inventory of purchased feeds. The method used is the same as that for grown feeds - determine physical quantities and then multiply the quantity times the price per unit to compute the total value of the purchased feed in inventory. You can use the price paid for your last load of feed in deciding on the price per unit figure.

Once again, the beginning of year inventory is simple if you have a year end inventory of purchased feeds the year prior to the summary year. (If you don't, you can look forward to having it next year!) Feed bills can be useful in making estimates for the beginning of the year if you do not have inventories recorded. For example, if you received a large delivery of feed on January 3rd, it may have been because you had very little in inventory at the time. On the other hand, if you went without a delivery until the third week of January, perhaps you had a significant quantity of feed on hand on January 1st.

****
* **Stage 1 Assignment: Enter quantities of purchased feed on hand on January 1 in Column 20 and** *
* **quantities on hand on December 31 in Column 23.** *
****

Example: (Enter your own data on the page provided below.)

	(Col. 20)	(Col. 21)	(Col. 22)	(Col. 23)	(Col. 24)	(Col. 25)
	Beginning of Year (January 1)			End of Year (December 31)		
Item	Quantity	Price Per Unit	Total Value	Quantity	Price Per Unit	Total Value
Dairy grain & concentrate	20 t.	$ 290	$ 5800	15 t.	$ 250	$ 3750
Total dairy grain & conc.			$ 5800			$ 3750

PURCHASED FEED INVENTORY

Item	(Col. 20) Beginning of Year (January 1) Quantity	(Col. 21) Beginning of Year (January 1) Price Per Unit	(Col. 22) Beginning of Year (January 1) Total Value	(Col. 23) End of Year (December 31) Quantity	(Col. 24) End of Year (December 31) Price Per Unit	(Col. 25) End of Year (December 31) Total Value
Dairy grain & concentrate		$	$		$	$
Total dairy grain & conc.			$			$
Dairy roughage						
Total dairy roughage			$			$
Nondairy feed			$			$

SUPPLIES INVENTORY

This worksheet is used to calculate beginning and end of year inventory of supplies. Supplies include such things as machine parts, fuel, oil, grease, semen, veterinary supplies, seeds, fertilizer, and materials for land, building and fence repair. The method used is the same as that for grown and purchased feeds - determine physical quantities of the particular supply, set a price per unit, and then multiply the quantity times the price per unit to compute the total value of the supplies in inventory.

****
* **Stage 1 Assignment: Enter quantities of supplies on hand for January 1 in Column 26 and quantities on hand for December 31 in Column 29. If known, the total value of a supply may be entered directly, without listing the quantity and unit price.** *
****

Example: (Enter your own data on the page provided below.)

	(Col. 26)	(Col. 27)	(Col. 28)	(Col. 29)	(Col. 30)	(Col. 31)
	Beginning of Year (January 1)			End of Year (December 31)		
Item	Quantity	Price Per Unit	Total Value	Quantity	Price Per Unit	Total Value
Machine: Parts		$	$ 2500		$	$ 1850
Fuel, oil, grease						
Livestock: Semen	50 straws	20	1000	40 straws	25	1000
Vet. supplies						
Other supplies			1500			1800
Crops: Fertilizer				2 tons	200	400

SUPPLIES INVENTORY

	(Col. 26)	(Col. 27)	(Col. 28)	(Col. 29)	(Col. 30)	(Col. 31)
	Beginning of Year (January 1)			End of Year (December 31)		
Item	Quantity	Price Per Unit	Total Value	Quantity	Price Per Unit	Total Value
Machine: Parts		$	$		$	$
Fuel, oil, grease						
Livestock: Semen						
Vet. supplies						
Other supplies						
Crops: Fertilizer						
Seeds						
Pesticides/other						
Land/building/fence						
All Other						
Total supplies			$			$

LIVESTOCK INVENTORY

The livestock inventory worksheet is used to determine the value of livestock at beginning and end of year. An example of this worksheet for "Sample Farmer" is included in the Appendix on page 18.

Stage 1 Assignment: Begin by entering the number of each different type of animal for January 1 (Column 32) and December 31 (Column 35). Do not include leased cows in beginning or end of year numbers. Enter the average number of animals on the farm during the year in Column 40. This is most easily found on the D.H.I. report. This is the average number of cows in the herd for each month, totaled and divided by 12; it is not the average of beginning and ending numbers. Your entry should include dry cows as well as cows in milk. Unlike the numbers in Columns 32 and 35, the averages in Column 40 should include leased cows.

To determine beginning of year inventory values, make your best estimate of the value per head for each category on January 1 and enter in **Column 33**. Next multiply the value in **Column 33** by the number in **Column 32** to find the total value (to be entered in **Column 34**).

End of year inventory value is computed in two ways - using both beginning and end of year **prices**. First, consider what the animals you had standing in your barn on December 31 of the summary year would have been worth on January 1 of the summary year, given the market conditions prevailing at that time. Unless large numbers of animals of different quality have been purchased or the composition of the animals in the group has changed significantly, the value per head using beginning of year prices (**Column 36**) will be the same as the value per head in the beginning-of-year inventory (**Column 33**). Two situations which would increase animal values are (1) purchase of a large number of higher quality animals and (2), and increase in the average age of calves in the ending inventory. The decision you must make then, is whether your animals are worth the same, more or less than you valued them in **Column 33**? Enter your estimate for the end of year inventory at beginning of year prices in **Column 36**. If you do enter an amount in **Column 36** that is different than **Column 33**, please explain what changes you have made to affect the value of your livestock (**Column 41**).

The second way in which end of year inventory value is computed is more straight forward. What were the animals standing in your barn on December 31 worth on that same day? This end of year inventory at end of year prices is entered in **Column 38** on a per head basis with the total value being entered in **Column 39**.

Several additional items are needed in **Column 41**. Did you lease or rent any cows in during the summary year? What was your average milk plant butterfat test? What was your total pounds of milk sold? Be sure to base this on actual pounds shipped during the summary year. You may want to use the following method to determine this figure:

Year-to-date lbs. shipped (Summary year December milk check)
- Monthly lbs. shipped (Summary year January milk check)
+ Monthly lbs. shipped (Present year January milk check)
= Actual milk shipped during summary year

LIVESTOCK INVENTORY

Type	(Col 32) January 1 Inventory No.	(Col 33) January 1 Inventory Price Per Head	(Col 34) January 1 Inventory Total Value	(Col 35) December 31 Inventory Using: Dec. 31 No.	(Col 36) December 31 Inventory Using: January 1 Prices Price Per Head	(Col 37) December 31 Inventory Using: January 1 Prices Total Value	(Col 38) December 31 Inventory Using: December 31 Prices Price Per Head	(Col 39) December 31 Inventory Using: December 31 Prices Total Value	(Col 40) Average Number for Year
Dairy cows		$	$		$	$		$	
Heifers:									
Bred									
Open (6 mo.-bred)									
Calves (< 6 mo.)									
Bulls									
Other livestock									

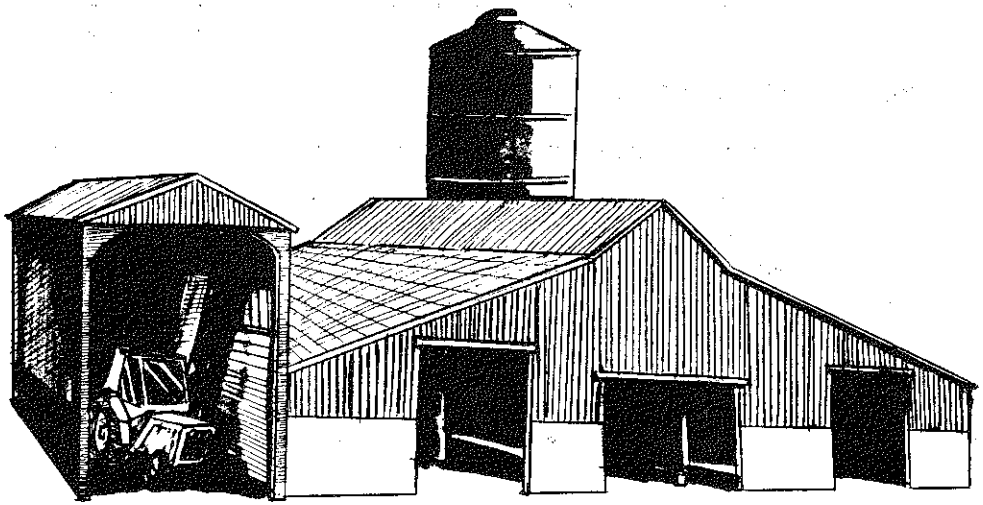
Column 41

Please explain if any change in livestock value per head from beginning of year to end of year at beginning prices (i.e. if there are differences between Column 33 and Column 36): _____

Number of leased/rented dairy cows at end of year

Total pounds of milk shipped between January 1 and December 31 lbs.

Average milk plant butterfat test %



LAND AND BUILDING PURCHASES AND SALES

This worksheet is for recording of new purchases and capital improvements in land and buildings. If you neither bought nor sold land or buildings this year, nor suffered any capital losses, then you can skip this worksheet.

Land purchases and improvements in land and buildings should be described in **Column 42**, followed by the cost of the investment to be entered in **Column 43**. The category "Building and Land Improvements" refers to such things as permanent fencing, tile drainage, and farm ponds.

Lost capital is the difference between the cost of an investment and its market value. For example, often a building costs more to construct than it will be worth on the open market after it is built. Tile drainage will likely cost more to install than the increase in the market value of the land resulting from the tiling. This does not mean that the improvement was an unwise investment; the value of the improvement to you, on your farm, over a period of years may well justify incurring the lost capital.

The right side of the worksheet (**Columns 45, 46, and 47**) is for recording **capital sales and losses.** Capital sales to be included here are sales of land and buildings. Capital losses refers to losses incurred, for example, as the result of natural disasters. The insurance proceeds from a claim for a barn damaged by severe winds would be entered here. The heading "amount received" on **Column 46** refers to insurance payments received.

LAND AND BUILDING PURCHASES AND SALES

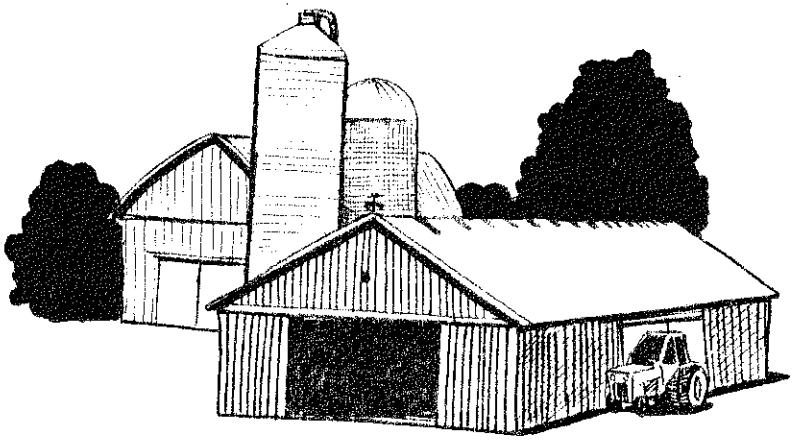
(Col. 42) (Col. 43) (Col. 44) (Col. 45) (Col. 46) (Col. 47)

New Purchases and Capital Improvements

Description	Cost	Lost Capital
Land		
_____	$_____	
_____	$_____	
Total land purchases	$_____	
Buildings and land improvement		
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____
Total buildings/ land improvements and lost capital	$_____	$_____

Capital Sales and Losses

Description	Sale Price/ Amount Received	Beginning Inventory Value
Capital sales		
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____
Losses		
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____
Total capital sales and losses	$_____	$_____



REAL ESTATE INVENTORY

This worksheet is used to record market value of land and buildings at the beginning and end of year and to collect other information necessary to calculate real estate appreciation.

Noncash real estate transfer to farm refers to land and buildings gifted to or inherited by the business/operator.

Use your tax depreciation schedule to determine the amount you will claim for **depreciation** on your summary year's Federal tax return.

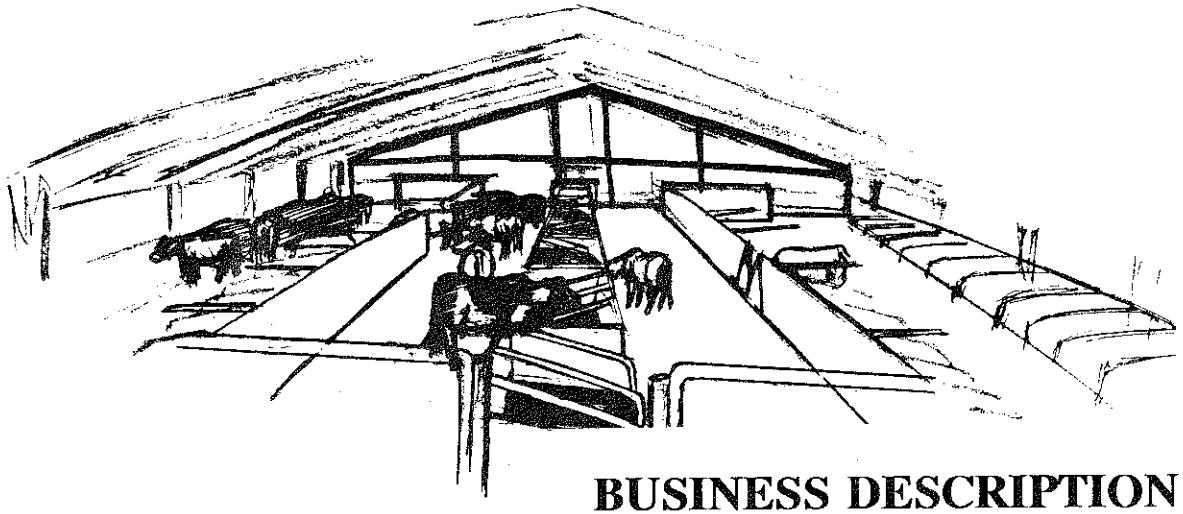
Sale expenses are the costs incurred in selling the land or buildings. The sale price itself was collected on the previous worksheet **(Column 46)**.

Note/mortgage held by seller refers to amounts still owed you from a real estate sale which you have agreed to finance for the buyer. These are the proceeds of the sale that you will not receive in the summary year, but in future years.

REAL ESTATE INVENTORY

(Col. 48)

Market value of land and buildings:	
Beginning of year (January 1)	$
End of year (December 31)	$
Noncash real estate transfer to farm	$
Summary year's tax depreciation (Include buildings in pre-ACRS, ACRS, MACRS, and ADS)	$
Sale expenses for real estate sold	$
Note/mortgage held by seller from real estate sold	$



BUSINESS DESCRIPTION

The business description worksheet is for collection of essential information regarding your milking frequency and systems, housing, records, *and* business organization.

This information is used to separate farms into similar groups when analyzing summaries from many different businesses. It allows the individual farm manager to compare his or her success with that of similar farms.

Place an "X" on **ONE** of the lines in **each column**. (You should end up with six "X's" on the worksheet).

For milking frequency, mark 2x if all cows were milked twice a day for the entire year. Mark 3x if all cows were milked three times a day for the entire year. If only a portion of the herd was milked 3x or if the whole herd was milked 3x but only for part of the year, mark "Other."

In addition, if you are a D.H.I. cooperator, enter your D.H.I. herd code number on the designated line. This number will allow cross referencing of your D.H.I. and farm business summary information. *This does not provide D.H.I. or animal science staff access to Dairy Farm Business Summary Data.*

BUSINESS DESCRIPTION

Place ONE "X" in Each Column

(Col. 49)	(Col. 50)	(Col. 51)	(Col. 52)	(Col. 53)	(Col. 54)
Production records	Milking frequency	Milking system	Dairy housing	Primary business type	Primary financial recordkeeping system
☐ D.H.I.	☐ 2x/day	☐ Bucket & carry	☐ Stanchion/ tie stall	☐ Single proprietorship	☐ ELFAC
☐ O.S.	☐ 3x/day	☐ Dumping station	☐ Freestall	☐ Partnership	☐ Account book
☐ Other	☐ Other	☐ Pipeline	☐ Combination	☐ Corporation	☐ Agrifax mail-in
☐ None		☐ Herringbone parlor			☐ On-farm computer
D.H.I. #: 21 _ _ _ _ _ _		☐ Other parlor			☐ Other

Computer entry: See page 16 for average number of animals, milk sold, and butterfat test.

LABOR INVENTORY

This worksheet is used to account for all of the labor utilized in your business. 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 and entered in **Column 56**. 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 (**Column 57**), their years of education (**Column 58**), and the estimated value of their management and labor input (**Column 59**). This value should be based on what that person could earn in a similar capacity in similar employment (the opportunity cost). Any farm wage or benefit expense for these operators should be excluded from the labor expenses entered in **Column 44**, page 100. This exclusion will be most relevant for corporations but may also apply to other businesses.

Next list in **Column 55** the names and months worked of the following:

1. family labor which was paid,
2. family labor which was not paid, and
3. hired labor.

The months of labor recorded should all be in numbers of full-time months worked. For part-time workers this requires a conversion be made. Hourly labor should be converted on the basis of 230 hours per month. There are 4.3 weeks in a month. Below is a formula for converting hours per week to full-time months and 2 examples of this type of conversion:

$$\text{Full-time months} = \frac{\text{No. Hours/week} \times 4.3 \text{ weeks/month}}{230 \text{ hours}} \times \text{No. Months worked}$$

1. **Neighbor's teenager works 40 hours per week in the summer from June through August. 40 hours X 4.3 weeks/month = 172 hours/month. 172 hours/230 hour full-time person = .75 (in other words he is three-quarters of a full-time person). 3 months worked X .75 = 2.25 full-time month equivalents.**

2. **Daughter-in-law milks evenings, six days a week, year round. Usually averages about 20 hours/week.**

$$\text{Full-time months} = \frac{20 \text{ Hours/week} \times 4.3 \text{ weeks/month}}{230 \text{ hours}} \times 12 \text{ Months worked}$$

Full-time months = 4.5 months

After computing the months worked for each employee, enter the totals for family paid, family unpaid, and hired employees in Column 56. Column 56 can then be totaled to determine the total months worked by all personnel on the farm. The conversion to full-time, worker-month equivalents is necessary; conversion is not always easy but is very important to an accurate summary. These figures will be used to determine profitability, size of the labor force, and labor efficiency.

LABOR INVENTORY

(Col 55) Labor description	(Col 56) Full-time Months	(Col 57) Age	(Col 58) Years Education	(Col 59) Value of Mgmt. & Labor
Operator - 1: _____				$
- 2: _____				$
- 3: _____				$
- 4: _____				$
- 5: _____				$
- 6: _____				$

Family members (paid employees):

Names	Months
_____	_____
_____	_____
_____	_____

Total Family Paid _____ months

Family members (unpaid):

Names	Months
_____	_____
_____	_____
_____	_____

Total Family Unpaid _____ months

Hired (regular and seasonal)

Names	Months
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Total Hired _____ months

Total All Labor _____ months

LAND INVENTORY

This worksheet is for recording the acreage with which you are working.

Enter acres owned in **Column 60** and acres rented in **Column 61.** Combined with cost information, these figures will allow for determination of many crop management factors on a per acre basis.

Example:

	(Col. 60)	(Col. 61)
	Acres Owned	Acres Rented
Tillable land	100	105
Pasture (nontillable)	64	25
Woods and other nontillable	80	
Total	244	130

LAND INVENTORY

	(Col. 60)	(Col. 61)
	Acres Owned	Acres Rented
Tillable land		
Pasture (nontillable)		
Woods and other nontillable		
Total		

TILLABLE LAND USE

This worksheet is used to record how you utilized your tillable land during the summary year.

For each type of land use, enter number of acres in **Column 62**. Note that for hay crops you enter the acreage only once, that being for the number of first cut acres. If you double-cropped one or more fields, count the acreage once under the primary crop produced or allocate teh acres between crops. Do not double count. The production of both crops is entered on the appropriate lines. Additional worksheets to assist you in determining tillable land use and crop yields are available in the appendix (pages 9-17) if needed.

Quantities of crop produced is recorded for **all hay cuttings** and other crops in **Column 63**.

Enter the percentage dry matter for forages in **Column 64**.

Corn for grain should be converted to dry shelled equivalent. A worksheet and tables to assist with this conversion are located in the appendix. Check to see that total acres (**Column 62**) is equal to tillable land owned and rented (**Column 60 and 61**).

These figures will be used to compute crop yields and costs per unit of production, thereby helping you to plan and control your cropping program.

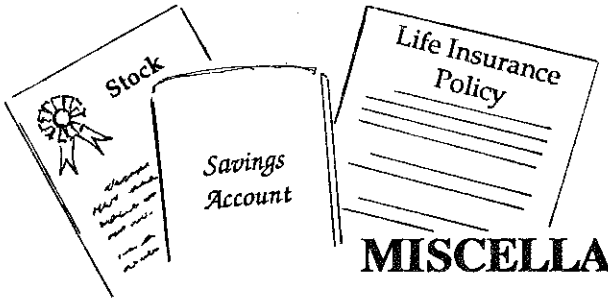
Example:

Use	(Col. 62) Acres (1st cut only)	(Col. 63) Total Production (all cuttings)	(Col. 64) Percent Dry Matter
Hay crop (1st cut acres only)	159		
Hay		90 tons	85 %
Hay crop silage		625 tons	40 %
Corn silage	46	736 tons	30 %
Corn for grain	0	0 dry shelled bushels	

TILLABLE LAND USE

Use	(Col. 62) Acres (1st cut only)	(Col. 63) Total Production (all cuttings)	(Col. 64) Percent Dry Matter
Hay crop (1st cut acres only)			
Hay		tons	%
Hay crop silage		tons	%
Corn silage		tons	%
Other forage harvested		tons	%
Corn for grain		dry shelled bushels	
Oats		dry shelled bushels	
Wheat		dry shelled bushels	
Other:_____			
Tillable pasture			
Idle tillable acres			
Total tillable acres			

Computer entry: Enter "Percent Dry Matter" as a decimal.



MISCELLANEOUS FARM AND FAMILY ASSETS

The information from this worksheet is used along with the inventory information already collected to complete your farm and nonfarm balance sheet. This will allow you to examine, among other things, your net worth and how it changed from the beginning to the end of the year.

Prepaid expenses are the cost of items or services paid for in advance of their use. For example, rent for the current year which was paid during the summary year is a prepaid expense. Thus, the prepaid expense amount for January 1 (**Column 65**) would represent expenses paid for in years prior to the summary year for goods or services not used before January 1; December 31 prepaid expense (**Column 66**) represents expenses paid for but not used before the end of the summary year. The total change in prepaid expense (the difference between the January 1 and December 31 amounts), whether positive or negative, must be distributed among the proper expense category in **Column 101** (page 44).

If you participated in the Dairy Farm Business Summary program last year, there is no need to enter the January 1 values (**Column 65**) unless a change needs to be made in the values entered last year. Enter end of year values in **Column 66**.

Nonfarm assets for partnerships and corporations should include nonfarm assets of all families in the business or none at all.

Example:

Asset	(Col. 65) January 1	(Col. 66) December 31
Farm Assets:		
Farm cash, checking, & savings	$ 4700	$ 4800
FLB & PCA stock	0	0
Other stock & certificates	25	25
Prepaid expenses		
Nonfarm assets:		
Personal cash, checking, and savings	12,500	2800

MISCELLANEOUS FARM AND FAMILY ASSETS

Asset	(Col. 65) January 1	(Col. 66) December 31
Farm Assets:		
Farm cash, checking, & savings	$	$
FLB & PCA stock		
Other stock & certificates		
Prepaid expenses		
Nonfarm assets:		
Personal cash, checking, and savings		
Cash value of life insurance		
Nonfarm real estate		
Personal share auto		
Stock & bonds		
Household furnishings		
Other (include mortgages & notes)		

Computer entry: See page 38 for accounts receivable (note that begining/ending order is reversed - Col. 90 is beginning, Col. 89 is ending).

LIABILITIES AND DEBT PAYMENTS

The liabilities and debt payments worksheet is a place for you to record money borrowed to purchase capital items. It is divided into three categories of debt: long term (ten years or more), intermediate term (more than one year but less than ten), and short term (one year or less). Note that the short term debt on this worksheet is not for "operating debt" but for short term money borrowed for capital purchases. Operating debt will be entered on the next worksheet.

****
* **Stage 1 Assignment: In Column 67 enter the name of the bank or other creditor loaning the money. In Columns 68 enter the beginning of year loan balances; in Column 69 enter the end of year loan balances.** *
****

New borrowings added to a particular loan during the summary year should be noted in **Column 70.** **Column 71** is the amount of money borrowed to refinance or pay down an existing debt. Enter the loan as a positive number and the amount paid down as a negative number. Do not enter money borrowed for refinancing in **Column 70.** **Column 72 and 73** ask you to split your actual summary year loan payments into principal and interest portions; a call to the bank may be helpful in coming up with these numbers.

Current year plans are requested in **Columns 74 and 75.** Enter the amount of each payment (principal and interest) and number of payments per year (usually one per month or 12 per year). FmHA borrowers will want to contact your county supervisor to find out how much of your milk assignment will be applied to each loan.

Example:

(Col. 67)	(Col. 68)	(Col. 69)	(Col. 70)	(Col. 71)	(Col. 72)	(Col. 73)	(Col 74)	(Col 75)
	Debt Amount		Amounts of New	Amount of Debt	Actual Summary Year Payments		Current Year Plans Amount of Each	# Pay-ments
Creditor	Jan. 1	Dec. 31	Borrowings	Refinanced	Principal	Interest	payment	year
Trust Company	$ 60,599	$ 57,849	$	$	$ 2750	$ 3550	$ 525	12
1st National	10,000	0		- 8000	2000	600	0	0
Russell Bank	0	7000		+ 8000	1000	200	400	12

LIABILITIES AND DEBT PAYMENTS

(Col. 67)	(Col. 68)	(Col. 69)	(Col. 70)	(Col. 71)	(Col. 72)	(Col. 73)	(Col 74)	(Col 75)
	Debt Amount		Amounts of New	Amount of Debt	Actual Summary Year Payments		Current Year Plans	
Creditor	Jan. 1	Dec. 31	Borrowings	Refinanced	Principal	Interest	Amount of Each payment	# Payments year
*Long term debt (≥ 10 years)								
	$	$	$	$	$	$	$	
* Intermediate term debt (>1 yr., <10 yrs.)								
	$	$	$	$	$	$	$	
* Short term debt (1 year or less)								
	$	$	$	$	$	$	$	

OTHER LIABILITIES AND DEBT PAYMENTS

This worksheet is for entry of additional liability and debt information not covered by the previous worksheet.

Operating debt is the money borrowed to purchase items or services which are expensed during the same year (e.g. fertilizer). These expenses are entered on another worksheet; that is why there is no place for entry of principal paid during 1989 since such an entry here would "double count" the expense.

****
* **Stage 1 Assignment:** In Column 76 enter the name of the bank or other creditor loaning the money. In Columns 77 enter the beginning of year loan balances; in Column 78 enter the end of year loan balances. The beginning of year (January 1, 1989) government payments item should indicate payments received in 1988 for participation in 1989 government programs. The end of year (December 31, 1989) item should indicate government payments received in 1989 for participation in 1990 government programs. *
****

Column 82 asks for planned net reductions in operating debt and accounts payable. This is the amount you plan to reduce your operating loan(s) and accounts payable by the end of 1990. If you expect to experience an increase in either of these areas, enter the net change preceded by a negative sign. Detailed accounts payable information will be entered in **Column 98**; you will probably want to complete **Column 98** before estimating your net 1990 reduction in accounts payable.

The nonfarm debt information is necessary to complete your nonfarm balance sheet. Your figures should include debt incurred for all nonfarm assets purchased. In this case, **Column 82** should indicate the total nonfarm debt payments you are planning to make in 1990.

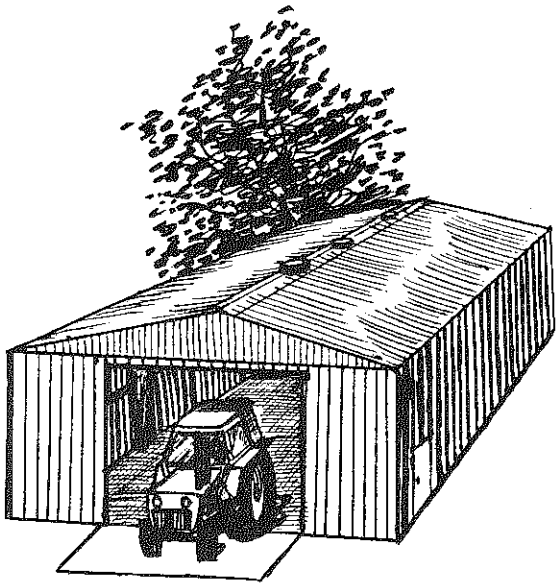
Example:

(Col. 76)	(Col. 77)	(Col. 78)	(Col. 79)	(Col. 80)	(Col. 81)	(Col. 81a)	(Col. 82)
	Debt Amount		Amounts of New Borrowings	Amount of Debt	Actual 1989 Payments		Planned 1990 Net reductions and non-farm
Creditor	1/1/89	12/31/89	1989	Refinanced	Principal	Interest	payments planned
Operating debt							
Bank of Reedsville	$ 32,450	$ 31,600		$		$ 3204	$ 10,000

OTHER LIABILITIES AND DEBT PAYMENTS

(Col. 76)	(Col. 77)	(Col. 78)	(Col. 79)	(Col. 80)	(Col. 81)	(Col. 81a)	(Col. 82)
	Debt Amount		Amounts of New	Amount of Debt	Actual Summary Year Payments		Current Year Plans Net Reductions and Total Non-Farm
Creditor	Jan. 1	Dec. 31	Borrowings	Refinanced	Principal	Interest	Payments Planned
* Operating debt							
* _____	$	$		$		$	$
* _____							
* _____							
* Accounts payable	(Beginning and ending accts. pay. are entered in Columns 96 & 97.)					$	$
* Advanced government payments received	$	$					
* Nonfarm debt	$	$	$	$	$	$	$

Computer entry: See page 42 for accounts payable (note that beginning/ending order is reversed - Col. 97 is beginning and Col. 96 is ending.



FINANCIAL LEASES

Fill in the following worksheet only if you are leasing cattle, equipment, or structures from outside you family or business.

Include only formal financial lease agreements where there is a scheduled payment commitment. This worksheet is not for recording of rent paid; rent information is recorded on the cash expenses worksheet in Column 100. The total amounts paid on financial leases in each category as recorded on the worksheet below in Column 85 should be added to the rent paid in each category, if any, and entered in Column 100.

FINANCIAL LEASES

	(Col. 83)		(Col. 84)		(Col. 85)	(Col. 86)	(Col. 87)
Leased item	Amount of each payment	X	Number of payments	=	Total Summary Year expense	Number of payments/ full year	Number of payments remaining
Cattle: _____	$				$		
_____							
_____							
			Total cattle lease		$		
Equipment: _____	$				$		
_____							
_____							
			Total equipment lease		$		
Structures: _____	$				$		
_____							
_____							
			Total structures lease		$		

CHANGES IN OPERATING ACCOUNTS RECEIVABLE

This worksheet is for recording of changes in accounts receivable and allocating these changes to proper receipt category.

****
* Stage 1 Assignment: Identify changes in operating accounts receivable with a description (Column 88), *
* end of year (December 31) balance (Column 89) and beginning of year (January 1) balance (Column 90). *
* Subtract the beginning from the end of year balance and enter the change in Column 91. Caution: Make *
* sure the year end balance is entered in Column 89 and the beginning of year balance is in Column 90. *
* *
* Next, assign and allocate changes in accounts receivable to appropriate farm receipts category on the *
* right side of the worksheet (Column 92). *
* *
* When completed and totaled, the "Change in Accounts Receivable" by account column (Column 91) must *
* equal the "Change in Account Receivable" by category column (Column 92). *
****

Example:

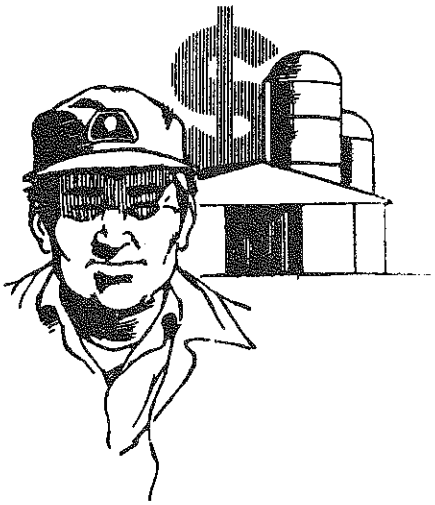
(Col. 88)	(Col. 89)		(Col. 90)		(Col. 91)	(Col. 92)
Account Number or Description	Year End Balance (Dec. 1)	-	Beginning Balance (Jan. 1)	=	Change in Acct.Rec.	Allocation: Receipt Category / Change in Acct. Rec.
Milk receipts:	$ 20,391	-	$ 18,371	=	$ 2020	Milk $ 2020
						Dairy cattle -500
Sale barn:	$ 2600	-	$ 3600	=	$ -1000	Dairy calves -500
						Other livestock
TOTAL:	$ 22,991	-	$ 21,971	=	$ 1020	)======= EQUALS ======> $ 1020

CHANGES IN OPERATING ACCOUNTS RECEIVABLE

(Col. 88) Account Number or Description	(Col. 89) Year End Balance (Dec. 1)	-	(Col. 90) Beginning Balance (Jan. 1)	=	(Col. 91) Change in Acct.Rec.
Milk receipts:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
TOTAL:	$_____	-	$_____	=	$_____

Allocation		(Col. 92)
Receipt Category		Change in Acct. Rec.
Milk		$_____
Dairy cattle		_____
Dairy calves		_____
Other livestock		_____
Crops		_____
Government receipts		_____
Custom machine work		_____
Gas tax refunds		_____
Other: _____		_____
	EQUALS ⟹	$_____

Computer entry: Data in Col.92 will be used with data on page 40 to complete Screen 12.



CASH RECEIPTS

This worksheet is a place for you to list farm and nonfarm receipts. This information will be combined with changes in inventories and accounts receivable to compute your accrual receipts for the year.

Below are some guidelines for recording summary year receipts:

1. Include gross value for pounds of milk sold.

2. Dairy cattle sales include receipts from cull cows and breeding stock. Include bob calf receipts under dairy calves sold.

3. Sales of standing and harvested field, fruit and vegetable crops go under crop sales. Maple products and wood sales should be reported as miscellaneous income. Include all receipts from custom work, gas tax refunds, and government receipts under the appropriate category.

4. Machinery and real estate sales have been accounted for in previous worksheets and must not be added in with other farm receipts.

5. Itemize and identify miscellaneous ("other") receipts of more than $500. Include income from maple product slaes and positions such as director of cooperative.

6. Nonfarm cash income from nonfarm work for self and spouse, tax refunds, principal and interest received from prior sale of farm assets, timber sales, gas and oil royalties, gravel sales, income from elected office, and other nonfarm income that is available for debt payments and family living. In some instances, receipts such as timber sales should be classified as farm income; i.e., if the farm operator has actively managed the enterprise and the corresponding expenses are included in Screen 13, page 11. Nonfarm income is necessary for the Annual Cash Flow Statement to balance, but it is not included when calculating farm profitability.

7. Cash used in the business from nonfarm capital is all the rest of the cash flowing into the farm business from outside. Include cash from personal savings accounts, stocks or bonds converted to cash, cash gifts and inheritances.

8. Nonfarm noncash capital used in the farm business includes gifts and inheritances of farm assets and the conversion of nonfarm assets to farm assets.

CASH RECEIPTS

Receipts	(Col. 93)	(Col. 94) Cash Receipts
Farm receipts:		
Milk		$
Dairy cattle		$
Dairy calves		$
Other livestock		$
Crops		$
Government receipts		$
Custom machine work		$
Gas tax refund		$
Other: _____	$	
_____	$	
_____	$	
Total Other	→	$
Sale of other stock & certificates (exclude FLB & PCA stock)		$
Nonfarm receipts:		
Cash income: _____	$	
_____	$	
_____	$	
Total nonfarm cash income	→	$
Cash used in the business from nonfarm capital		$
Noncash capital transferred to farm business		$

Computer entry: Combine information on this page with accounts receivable information on page 38 (Col. 92) to complete Screen 12.

CHANGES IN OPERATING ACCOUNTS PAYABLE

This worksheet is for recording of changes in accounts payable and allocating these changes to proper expense category.

****
* **Stage 1 Assignment: Complete all columns (95 to 99) on the worksheet. Follow the guidelines below.** *
****

Guidelines for recording summary year changes in accounts payable:

1. Identify changes in open operating accounts payable by first entering the end of year balance (December 31) in **Column 96**, the beginning of year (January 1) balance in **Column 97**, and then subtracting the beginning of year balance from the end of year balance and enter in **Column 98**. These are accounts established when farm inputs, such as feed, fertilizer, farm supplies, machinery, repairs, and veterinarian services were bought on credit.

2. If there is more than one account per dealer or farm supplier (e.g., feed is purchased from the same supplier as fertilizer), list them separately on the left-hand portion of the worksheet to facilitate easier allocation to farm expense categories.

3. Assign and allocate changes in open operating accounts payable to appropriate farm expenses listed in **Column 99** on the right side of the worksheet.

4. When more than one type of farm input is included in a particular open account, allocate to the expense categories using the estimated proportion of farm input actually purchased from the account during the year.

5. The totals of the two "Change in Accounts Payable" columns (**Columns 98 and 99**) must be equal.

6. If scheduled debt payments were not made, there is likely an increase in accounts payable for "interest". However, if the loan was refinanced and the unpaid amount added to the principal, the interest is considered paid and is reported with the debt payments.

CHANGES IN OPERATING ACCOUNTS PAYABLE

(Col. 95) Account Number or Description	(Col. 96) Ending Balance (Dec. 31)	-	(Col. 97) Beginning Balance (Jan. 1)	=	(Col. 98) Change in Acct. Pay.
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
_____:	$_____	-	$_____	=	$_____
TOTAL:	$	-	$	=	$_____

Allocation: Expense Category	(Col. 99) Change in Acct. Payable
Hired labor	$_____
Feed	
Dairy grain & conc.	_____
Dairy roughage	_____
Nondairy feed	_____
Machinery	
Mach. hire & lease	_____
Mach. repairs/parts	_____
Auto exp. (farm share)	_____
Fuel, oil & grease	_____
Livestock	
Replacement livestock	_____
Breeding	_____
Veterinary & med.	_____
Milk marketing	_____
Cattle lease	_____
Other livestock exp.	_____
Crops	
Fertilizer & lime	_____
Seeds & plants	_____
Spray, other crop exp.	_____
Real Estate	
Land, bldg., fence rep	_____
Taxes	_____
Rent & lease	_____
Other	
Insurance	_____
Telephone (farm share)	_____
Electric (farm share)	_____
Interest	_____
Miscellaneous	_____
Expansion livestock	_____
) ====== EQUALS ======>	$_____

Computer entry: Combine Col. 99 with data on page 44 to complete Screen 13.

CASH AND PREPAID EXPENSES

This worksheet is for entering of all cash expenses incurred during the summary year. It is also used to record changes in prepaid expenses in categories where a change in inventory will not account for the changes in expense. Additional guidelines for recording summary year's expenses follow:

1. Enter hired labor expenses separately including wages, social security paid on labor, worker's compensation insurance, unemployment insurance, and privileges purchased for hired labor. Wages paid must be consistent with months of hired labor. Check to see that monthly wages range between $600 and $1,700 per employee. Make sure that wages do not include "draws" to partners or wages of corporate owner/operators for individuals entered as operators in **Column 55**.

2. Dairy grain and concentrate bought should include the concentrate, minerals, protein, and grain purchased for the dairy herd during the year. Dairy roughage includes hay and silage for the dairy herd. All feed purchased for nondairy livestock should be included in other livestock feed.

3. Milk marketing includes government assessments, milk hauling, milk promotion, and coop dues. Do not include capital assessments. Other livestock expenses include DHIC dues, cattle registration, livestock board, milk house supplies, and bedding.

4. Enter all the town, county, and school taxes paid on farm real estate. Exclude taxes paid on your personal residence, income and self-employment taxes. (Itemize corporate taxes under miscellaneous.) Sales taxes should be capitalized along with cost of improvement.

5. Enter all the fire and farm liability insurance paid on farm property. Exclude life insurance and personal health insurance. Enter employee health insurance under hired labor.

6. Enter the farm share of electricity and telephone expenses.

7. Include all real estate rent paid and any lease payments on structures. Identify taxes and insurance paid by the rentee as rent. Enter machinery lease payments under machine hire, rent or lease, cattle lease payments under cattle lease/rent expense. See **Column 85** for lease payments.

8. Include all interest paid on farm liabilities including finance charges.

9. Miscellaneous expenses should not be large. Include only those items which cannot be identified within another category. Maple product expenses should be entered as miscellaneous.

10. Cattle purchased must be divided into those purchased as replacements and those that increase the size of the herd (expansion). Start by allocating the increase in herd size recorded on the Livestock Inventory (**Columns 32 to 40**).

11. Personal withdrawals and family expenditures includes 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 loan payments, savings and investments as well as family living expenses. Include borrowed capital used for nonfarm purchases, providing it has been entered as a new nonfarm liability in **Column 78**. If any or all "Nonfarm Cash Income" has been excluded from the value entered in **Column 94**, you must also exclude any family expenses paid from that income.

12. Change in prepaid expenses is the difference between the amount of an item prepaid on January 1 and the amount prepaid on December 31 (beginning year minus end-of-year). The total change in prepaid expenses (the sum of **Column 101**) must equal the difference between prepaid expense totals in **Columns 65 and 66** (beginning year minus end-of-year).

CASH AND PREPAID EXPENSES

	(Col. 100) Cash Amount Paid	(Col. 101) Change in Prepaid expense
Hired labor	$	$
Feed: Dairy grain & concentrate	$	
Dairy roughage	$	
Nondairy feed	$	
Machinery: Machine hire, rent & lease	$	$
Machinery repairs/parts	$	
Auto expense (farm share)	$	$
Fuel, oil & grease	$	
Livestock: Replacement livestock	$	$
Breeding	$	
Veterinary & medicines	$	
Milk marketing	$	$
Cattle lease/rent	$	$
Other livestock expense	$	
Crops: Fertilizer & lime	$	
Seeds & plants	$	
Spray, other crop exp.	$	
Real Estate: Land, bldg., fence rep.	$	
Taxes	$	$
Rent & lease	$	$
Other operating: Insurance	$	$
Telephone (farm share)	$	$
Electric (farm share)	$	$
Interest	$	$
Miscellaneous	$	
Other: Expansion livestock	$	$
Stock and certificates purchased (exclude FLB & PCA stock)	$	
Personal withdrawals & family expenditures	$	

Computer entry: Combine information on this page with accounts payable data on page 42 (Col. 99) to complete Screen 13.

ACCRUAL CROP EXPENSE BY CROP

This worksheet is used to separate your total crop expense bills into the amount spent on hay crops, corn crops, and all other crops.

If you have this information broken down in your records, you need not record all of the detail here. The only essential information is the total row in each of the three categories of crop expense (**fertilizer and lime, seeds and plants, and spray and other crop expense**).

Columns 102 and 103 are for you to indicate date and description of expense for your information. Enter the total amount of each bill paid or expense in **Column 104**. Then assign amounts to hay crops, corn, and/or other crops in **Columns 105, 106, and 107**. **Columns 105, 106, and 107** should add to the amount in **Column 104**.

In most cases, it is possible to identify which crop large purchases of inputs were used on. Use field records, dates, and descriptions as clues for allocating the expenses. Unless you have a better basis for allocation, allocate lime expenses proportionately across all crop acres since benefits extend to crops grown in future years. Charge fertilizer, chemical, and seed costs to the crop to which they were applied.

In order to gain the improved accuracy of accrual accounting, this worksheet also has a place for you to enter changes in inventory and accounts payable. You have previously entered this information in **Columns 28, 31, and 99**. However, it is now necessary to break down these changes as to whether they relate to hay crops, corn crops, or other crops. The **change in inventory** number should be determined by subtracting **Column 31** (end of year inventory) from **Column 28** (beginning of year inventory) for the three crop expense categories. If you had an increase in inventory, the resulting number will be negative and should be entered with a negative sign in front of it. The **changes in account payable** can be read directly from **Column 99** for each category. Again, the number may be positive or negative.

After entering the amount of the changes in inventory and account payable in **Column 104**, distribute the changes among the hay, corn or other crop categories.

As a result of your work on this sheet, your summary printout will provide you with a breakdown of crop expense by crop on a per tillable acre basis and per ton dry matter or per dry bushel basis. This information will be useful in evaluating potential changes in crop acreages and other cropping decisions.

Example:

(Col 102)	(Col. 103)	(Col 104)	(Col 105)		(Col 106)		(Col 107)
Month/ Day	Description of Expense	Total Bill Paid =	Hay Crop Amount (silage & dry)	+	Corn Amount (silage & dry)	+	All Other Crops Amount
Fertilizer and Lime							
9/10	Union Soil Service	$ 3300	$ 1400		$ 1900		$ 0
	Inventory change	-1000	-200		-800		0
	Change in accounts payable	0					
	Total fertilizer and lime	$ 2300	$ 1200		$ 1100		$ 0

ACCRUAL CROP EXPENSE BY CROP

(Col 102)	(Col 103)	(Col 104)	(Col 105)		(Col 106)		(Col 107)
Month/ Day	Description of Expense	Total Bill Paid =	Hay Crop Amount (silage & dry)	+	Corn Amount (silage & dry)	+	All Other Crops Amount
Fertilizer and Lime							
____	_____	$_____	$_____		$_____		$_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
	Inventory change	_____	_____		_____		_____
	Change in accounts payable	_____	_____		_____		_____
	Total fertilizer and lime	$	$		$		$
Seeds and Plants							
____	_____	$_____	$_____		$_____		$_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
	Inventory change	_____	_____		_____		_____
	Change in accounts payable	_____	_____		_____		_____
	Total seeds and plants	$	$		$		$
Spray and other crop expense							
____	_____	$_____	$_____		$_____		$_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
____	_____	_____	_____		_____		_____
	Inventory change	_____	_____		_____		_____
	Change in accounts payable	_____	_____		_____		_____
	Total spray and other crop expense	$	$		$		$

APPENDIX

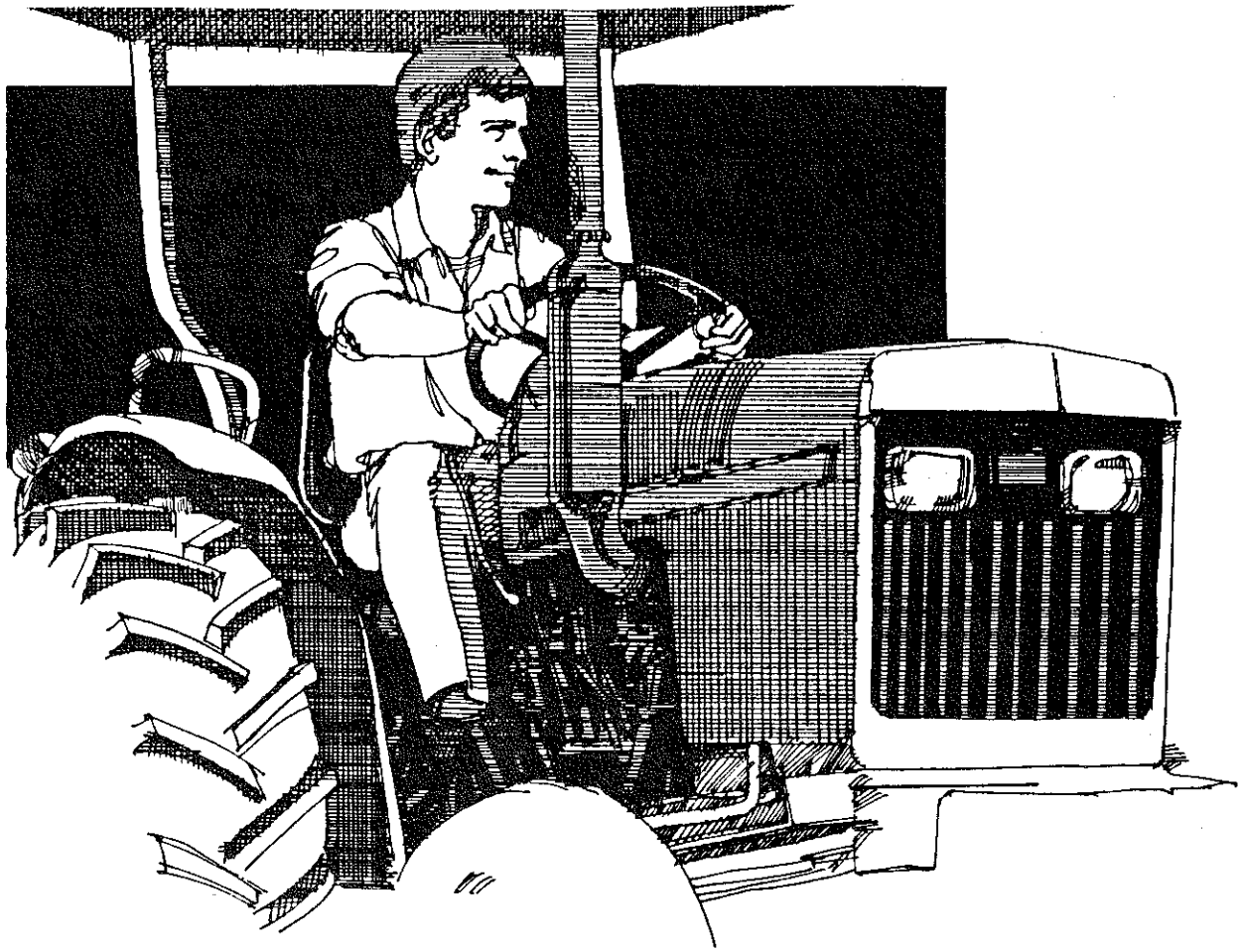
The following worksheets do not have to be filled out to complete a farm business summary. They are provided as back-up worksheets to assist you in compiling some information which would then be transferred to one of the columns in the main section of the workbook.

The machinery and equipment inventory worksheets (Columns A1 and A2) are provided as a place to make an inventory record if you do not already have one. Another alternative would be to use a Cornell "Farm Inventory and Depreciation Book" which is available at your county Extension office.

Several worksheets are included to help you accurately estimate your physical inventories and crop production. These worksheets cover silo capacities, corn grain conversion, estimating grain and hay volumes, and compiling total crop production.

MACHINERY AND EQUIPMENT INVENTORY WORKSHEETS

The worksheets on Appendix pages 2 through 8 are for completion of an inventory record of machinery and equipment. If you already have such an inventory, it is not necessary to complete these worksheets. The only numbers which are essential to completion of a dairy farm business summary are the beginning and end of year total inventory values. These values are entered in **Columns 12 and 13** on workbook page 8. If you use the machinery and equipment inventory worksheets below, transfer the totals from Appendix page 8 to the appropriate lines on workbook page 8.



MACHINERY AND EQUIPMENT INVENTORY

The value of used machinery and equipment should be based on current market or sale prices, reduced by the cost that would be incurred to sell the item.

Description of item	(Col. A1) Market Value January 1	(Col. A2) Market Value December 31
Power		
	$	$
Tractors:		
Trucks:		
Auto (farm share)		
Electric Motors		
Generator		
Other		
Plow and tillage equipment		
Plows		
Totals (carry over to next page)		
	$	$

MACHINERY AND EQUIPMENT INVENTORY (continued)

Description of item	(Col. A1) Market Value January 1	(Col. A2) Market Value December 31
Total (from previous page)	$	$
Discs		
Harrows		
Clodbuster		
Cultipacker		
Cultivator		
Weeder		
Roller		
Land leveler		
Other		
Wagons and the like		
Wagons, grain		
Wagons, hay		
Wagons, self-unloading		
Totals (carry over to next page)	$	$

MACHINERY AND EQUIPMENT INVENTORY (continued)

Description of item	(Col. A1) Market Value January 1	(Col. A2) Market Value December 31
Total (from previous page)	$	$
Mower		
Mower conveyor		
Rakes		
Windrower, power take-off		
Windrower, self-propelled		
Windrow turner		
Corn machinery		
Corn planters		
Corn picker		
Corn picker-sheller		
Picker, grinder, recut		
Field choppers		
Silo blowers and pipe		
Totals (carry over to next page)	$	$

MACHINERY AND EQUIPMENT INVENTORY (continued)

Description of item	(Col. A1) Market Value January 1	(Col. A2) Market Value December 31
Total (from previous page)	$	$
Silo unloaders		
Silo distributor		
Small grain machinery		
Drills		
Seeder		
Combines		
Other field and crop machinery		
Crop sprayers		
Power sprayer		
Fertilizer spreader		
Insecticide applicator		
Irrigation equipment		
Harvesters		
Planters		
Totals (carry over to next page)	$	$

MACHINERY AND EQUIPMENT INVENTORY (continued)

Description of item	(Col. A1) Market Value January 1	(Col. A2) Market Value December 31
Total (from previous page)	$	$
Dairy equipment		
Bulk tanks		
Feed bunks		
Feed carts		
Furnace		
Heater		
Milking machine units		
Milk pipeline		
Milk pump		
Milk transfer system		
Milk house equipment, portable		
Parlor equipment, portable		
Vacuum pump		
Ventilation fans		
Waterer, automatic livestock		
Totals (carry over to next page)	$	$

MACHINERY AND EQUIPMENT INVENTORY (continued)

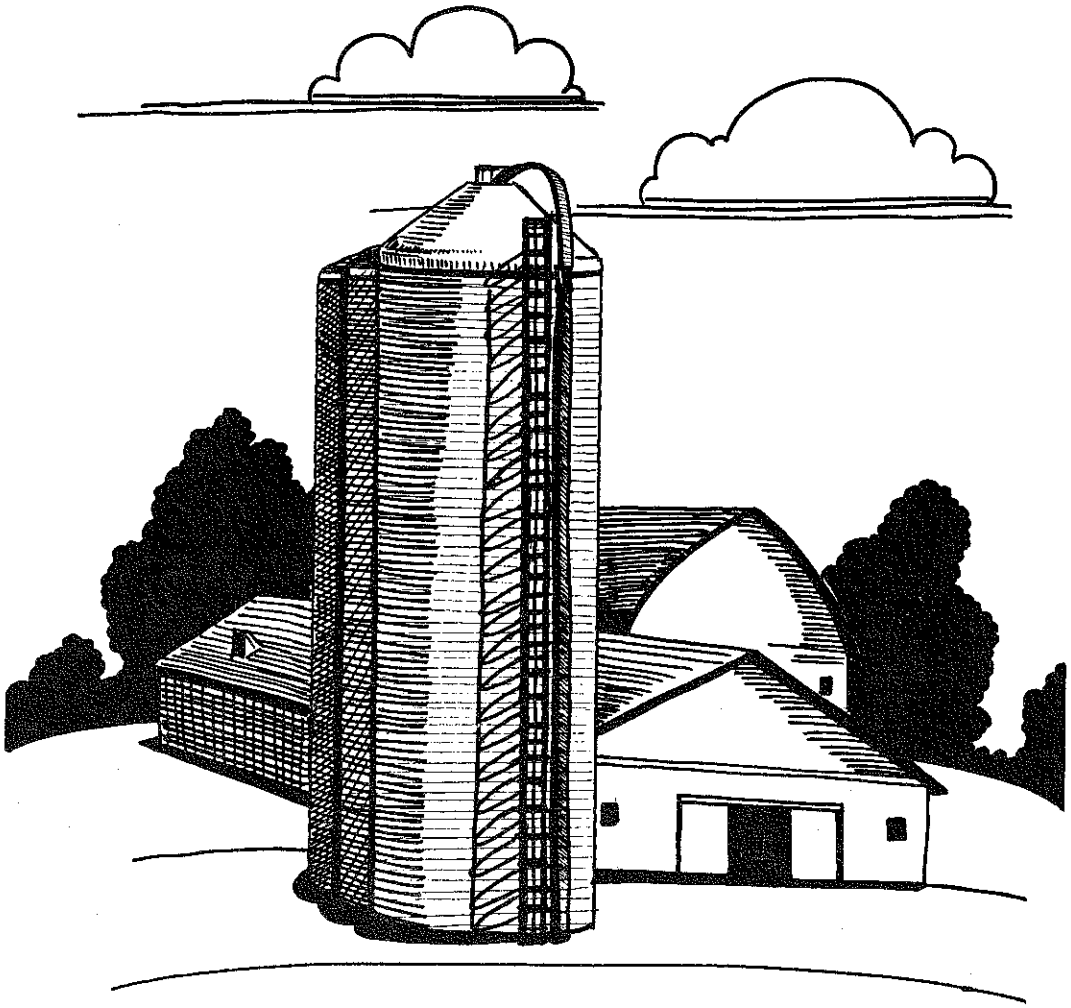
Description of item	(Col. A1) Market Value January 1	(Col. A2) Market Value December 31
Total (from previous page)	$	$
Water pump		
Waste disposal equipment		
Gutter cleaner		
Loader		
Scraper		
Spreaders		
Liquid manure equipment		
Feed equipment		
Carts or conveyors		
Grain dryer		
Feed mill		
Feed grinder-mixer		
Mechanical feeders		
Totals (carry over to next page)	$	$

MACHINERY AND EQUIPMENT INVENTORY (continued)

Description of item	(Col. A1) Market Value January 1	(Col. A2) Market Value December 31
Total (from previous page)	$	$
Other livestock and poultry equipment		
Miscellaneous		
Total machinery and equipment	$	$

CROP WORKSHEETS

The following eight pages (10-17) are to assist you with completion of the crop production information. They should be helpful in working on **Columns 14, 17, 62-64, 102-107** of the workbook. It is not essential for you to fill in the worksheets below; they are here for your use only.



CORN GRAIN CONVERSION WORKSHEET

	Percent Moisture	Tons as Harvested[1]		Conversion Factor[2]		Dry Shell Equivalent	
Ear Corn:	_____%	_____T	%	_____	=	_____	bushels
	_____	_____	%	_____	=	_____	
Shell Corn:	_____%	_____T	%	_____	=	_____	bushels
	_____	_____	%	_____	=	_____	
		Total (enter in Column 63)				_____	bushels

[1]Use Table 1 below. [2]Use Table 2 below.

TABLE 1. TOWER SILO CAPACITIES FOR HIGH MOISTURE CORN

Settled Depth	Tons High Moisture Ear Corn[3] Inside Diameter in Feet 14	16	18	20	Tons High Moisture Shelled Corn[4] Sealed Storage 20 Feet Diameter
15	47	62	78	97	113
20	65	84	107	132	154
25	83	108	137	169	192
30	102	133	168	207	235
35	121	158	200	247	274
40	142	185	234	289	320
45	163	213	269	332	360
50	185	241	305	377	407
55		271	342	423	448
60		302	381	471	498
65			421	520	
70			462	571	

[3]Based on 33 percent moisture content. [4]Based on 28 percent moisture content.

HMEC stored in horizontal silos will range from 40 to 42 pounds per cubic foot.

TABLE 2. CORN GRAIN CONVERSION TABLE

Percent Moisture in Kernel	Tons of Shelled Corn Needed to Equal One Bushel of Dry Shelled[5]	Percent Moisture in Whole Ear	Tons of Ear Corn Needed to Equal One Bushel of Dry Shelled Corn[5]
14.0	0.0275	14.2	0.0335
15.5	0.0280	16.0	0.0342
16.0	0.0282	16.6	0.0345
18.0	0.0289	19.7	0.0357
20.0	0.0296	22.6	0.0370
22.0	0.0300	25.2	0.0384
24.0	0.0312	27.9	0.0399
26.0	0.0320	30.0	0.0414
28.0	0.0329	32.6	0.0428
30.0	0.0338	34.6	0.0443
32.0	0.0348	36.4	0.0457
35.0	0.0364	39.3	0.0479

[5]One bushel of no. 2 corn at 15.5 percent moisture content.

APPROXIMATE DRY MATTER CAPACITY OF SILOS*

Depth of Settled Silage (feet)	Inside Diameter of Silo 10	12	14	16	18	20	22	24	26	28	30
2	0	1	1	1	2	2	2	2	3	3	4
4	1	2	2	3	4	5	5	6	8	9	10
6	2	2	3	4	5	7	8	10	11	13	15
8	3	4	5	7	9	11	13	16	18	21	24
10	4	5	7	9	11	14	17	20	24	28	32
12	5	7	9	11	14	18	22	26	30	35	40
14	5	8	11	14	17	22	26	31	36	42	48
16	6	9	12	17	21	26	32	37	44	51	58
18	7	11	14	19	24	29	35	42	49	57	65
20	8	12	16	21	27	33	40	47	56	65	74
22	9	14	19	24	30	38	48	54	64	74	85
24	11	15	21	27	34	43	52	61	72	83	96
26	12	17	23	30	38	48	58	68	81	94	107
28	13	19	26	35	44	53	64	76	90	104	119
30	15	21	29	38	47	59	71	84	99	115	132
32	16	23	32	41	52	65	78	93	109	127	145
34	18	25	34	45	57	70	85	101	119	137	158
36	19	28	37	48	62	76	92	109	129	150	172
38	21	30	41	53	67	82	100	118	139	161	185
40	22	32	44	57	72	89	107	127	150	173	199
42	24	34	47	61	77	95	115	137	161	186	214
44	26	37	50	65	82	102	123	146	172	200	229
46	27	39	53	69	88	108	131	155	183	212	244
48	29	42	56	74	93	115	140	166	195	226	260
50	31	44	60	78	99	122	148	175	206	239	274
52	32	47	64	83	105	129	157	186	219	254	291
54	34	49	67	88	111	137	165	197	231	267	306
56	36	51	71	93	117	144	174	207	243	282	324
58	38	54	74	98	123	151	183	218	261	297	339
60	40	56	78	102	129	159	192	228	273	309	357
62	To find the tons remaining				135	167	201	239	287	324	374
64	in a silo after part of the				142	174	210	250	301	339	391
66	silage is removed: (1) find				149	18[illegible]	219	260	314	354	407
68	the tons of silage when the				155	1[illegible]	228	271	328	369	424
70	silo was filled, (2) find				162	198	237	282	342	384	441
	the tons in a silo filled to										
72	the height equal to the depth of silage							293	356	400	458
74	removed, (3) subtract the number of tons							305	371	415	476
76	in Step (2) from the number of tons in							316	385	431	493
78	Step (1). Example: A 20 foot silo filled							328	400	446	511
80	to a settled depth of 60 feet and 22 feet were							339	462	462	528
	were fed off. (1) 20 x 60 equals 159 tons (2)										
	20 x 22 equals 38 tons (3) 159 minus 38 equals 121 tons remaining.										

*This table was adapted by the Departments of Agricultural Engineering and Agricultural Economics from a silo capacity table developed by the National Silo Association, 1201 Waukegan Road, Glenview, Illinois and added to by the Departments of Agricultural Engineering and Agricultural Economics, the University of Wisconsin.

APPROXIMATE CAPACITY OF HORIZONTAL SILOS

The following tables give approximate capacity of horizontal silos in tons based on 70 percent moisture silage, good packing practices, and level full condition after settling. Allowance should be made for sloping end(s), i.e., the capacity indicated is for full length of average depth, so for design purposes add depth of silo to this length.

Avg. width in feet	Length in feet							Amount of silage per slice	
	60	80	100	120	140	160	200	4" thick	12" thick
	8' deep, 40 pounds per cubic foot:								
	- - - - - - - - - - - - tons - - - - - - - - - - - -							- - - tons - - -	
20	192	256	320	384	448	512	640	1.1	3.2
30	288	384	480	576	672	768	960	1.6	4.8
40	384	512	640	768	896	1,024	1,280	2.1	6.4
50	480	640	800	960	1,120	1,280	1,600	2.7	8.0
60	576	768	960	1,152	1,344	1,536	1,920	3.2	9.6
80	768	1,024	1,280	1,536	1,792	2,048	2,560	4.3	12.8
	10' deep, 42 pounds per cubic foot:								
20	252	336	420	504	588	672	840	1.4	4.2
30	378	504	630	756	882	1,008	1,260	2.1	6.3
40	504	672	840	1,008	1,176	1,344	1,680	2.8	8.4
50	630	840	1,050	1,260	1,470	1,680	2,100	3.5	10.5
60	756	1,008	1,260	1,512	1,764	2,016	2,520	4.2	12.6
80	1,008	1,344	1,680	2,016	2,352	2,688	3,360	5.6	16.8
	12' deep, 44 pounds per cubic foot:								
20	317	422	528	634	739	845	1,056	1.8	5.3
30	475	634	792	950	1,109	1,267	1,584	2.6	7.9
40	634	845	1,056	1,267	1,478	1,690	2,112	3.5	10.6
50	792	1,056	1,320	1,584	1,848	2,112	2,640	4.4	13.2
60	950	1,267	1,584	1,901	2,218	2,534	3,168	5.3	15.8
80	1,267	1,690	2,138	2,521	2,957	3,379	4,224	7.0	21.4
	14' deep, 46 pounds per cubic foot:								
20	386	515	644	773	902	1,030	1,288	2.1	6.4
30	580	773	966	1,159	1,352	1,546	1,932	3.1	9.7
40	773	1,030	1,288	1,546	1,803	2,061	2,576	4.3	12.9
50	966	1,288	1,610	1,932	2,254	2,576	3,220	5.4	16.1
60	1,159	1,546	1,932	2,318	2,705	3,091	3,864	6.4	19.3
80	1,546	2,061	2,576	3,091	3,606	4,122	5,152	8.6	25.8

SOURCE: GJC: 302:73:246

Estimating Grain and Hay Volume

Grain A bushel of grain contains 1.25 cubic feet. Multiply the length of the bin by the width, by the depth (all in feet) to get cubic feet. Then divide cubic feet by 1.25. A quicker way is to multiply the cubic feet by 0.8. If the storage unit is round, use the formula πr^2 x height = cubic feet.

Example: Bin 10 x 4 x 3 equals 120 cubic feet; 120 times .8 equals 96 bushels. Storage Space Requirements for Feed Bedding[1]

Material		Wgt. Per Cu. Ft. Pounds	Cubic Ft. Per Ton
Hay —	Long Loose, in shallow mows	3.6 - 4.2	475 - 550
	Long loose, in deep mows	4 - 5	400 - 500
	Baled, loosely	5.5 - 6.6	300 - 360
	Baled, tightly	6.6 - 8.3	240 - 300
	Chopped, 3" machine cut	5.3 - 6.1	330 - 380
	Chopped, 1½" - 2" machine cut	5.6 - 6.7	300 - 360
Straw —	Loose	3.5 - 4.5	450 - 570
	Baled	6 - 10	200 - 330
	Chopped	5.7 - 8.0	250 - 350
Shavings, baled		20	100
Mixed ground feed		30 - 40	50 - 67

[1]Special Bulletin 4, Planning Stall Barns, October Experiment Station, University of Wisconsin, Madison, Wisconsin 53706

Estimating Ear Corn Volume

General Directions

Multiply the length times the width times the height (all in feet) to get cubic feet. If the storage unit is round, use the formula πr^2x height equals cubic feet. To get bushels, multiply cubic feet times 0.4 or divide cubic feet by 2.5.

Two Moisture Content Corrections[1]

1) If dry — Bushels = Volume in cubic feet x 4/9 4/9 = 0.4444
   If New — Bushels = Volume in cubic feet x 4/10 4/10 = 0.4000
   If damp — Bushels = Volume in cubic feet x 4/11 4/11 = 0.3636
2) Following are correction factors for converting gross bushels of ear corn to net bushels.

% Moisture Content	Factor	% Moisture Content	Factor	% Moisture Content	Factor
15 or less	1.030	22	0.925	29	0.820
16	1.015	23	0.910	30	0.805
17	1.000	24	0.895	31	0.790
18	0.985	25	0.880	32	0.775
19	0.970	26	0.865	33	0.760
20	0.955	27	0.850	34	0.745
21	0.940	28	0.835	35	0.730

1) Example: 10,000 cubic feet of storage
   Dry — 10,000 cubic feet x 4/9 = 4,444 Bu.
   New — 10,000 cubic feet x 4/10 = 4,000 Bu.
   Damp — 10,000 cubic feet x 4/11 = 3,636 Bu.
2) Example: 10,000 cubic feet of storage.

Moisture	Cu. Ft.	Gross Bu. Standard Factor	Bushels	Moisture Factor	Net Bu.
15%	10,000 x	0.4	= 4,000	x 1.030	= 4,120
17	10,000 x	0.4	= 4,000	x 1.030	= 4,000
19	10,000 x	0.4	= 4,000	x 0.970	= 3,880
21	10,000 x	0.4	= 4,000	x 0.940	= 3,760
23	10,000 x	0.4	= 4,000	x 0.910	= 3,640
25	10,000 x	0.4	= 4,000	x 0.880	= 3,520
27	10,000 x	0.4	= 4,000	x 0.850	= 3,400
29	10,000 x	0.4	= 4,000	x 0.820	= 3,280
31	10,000 x	0.4	= 4,000	x 0.790	= 3,160

[1]Pages 44 and 49, Agricultural Handbook No. 230 Farmer's Handbook of Financial Calculations, USDA

Standard Weights of Farm Products Per Bushel

	lbs.
Alfalfa	60
Apples	48
Barley (common)	48
Barley (hull-less)	60
Beans	60
Bluegrass (Kentucky)	14
Bromegrass	14
Buckwheat	50
Clover	60
Corn (broom)	50
Corn (dry ear)	35
Corn (shelled)	56
Corn (sweet)	50
Cowpeas	60
Flax	56
Millet	48
Oats	32
Onions	52
Orchard grass	14
Peas	60
Potatoes	60
Rape	50
Redtop	14
Rye	56
Sorghum	56
Soybeans	60
Timothy	45
Wheat	60
Wrinkled Peas	56
Milk, per gallon	8.6

WORKSHEET 3. TILLABLE LAND USE BY FIELD

Hay Crop (Hay and Hay Crop Silage)		Corn Silage	
Field	Acres	Field	Acres
Total Hay Crop	*	Total Corn Silage	*

*Transfer total acres for each crop to middle box on Worksheet 1. Cross-check total tillable acres at bottom of box against "Tillable Land - All Acres" in Land Inventory (top box).

WORKSHEET 3. TILLABLE LAND USE BY FIELD (con't)

Other Forage Harvested		Corn Grain	
Field	Acres	Field	Acres
Total Other Forage	*	Total Corn Grain	*
Oats		Wheat	
Total Oats	*	Total Wheat	*
Other:		Tillable Pasture	
Total Other	*	Total Tillable Pasture	*

*Transfer total acres for each crop to middle box on Worksheet 1. Cross-check total tillable acres at bottom of box against "Tillable Land - All Acres" in Land Inventory (top box).

WORKSHEET 4. TOTAL CROP PRODUCTION

Hay* Storage structure	Dimensions (in feet) Length x Width x Height = Cu. Ft.	÷	Cu. Ft. Per Ton =	Total Prod. (tons) (all cuttings)	Dry Matter Coefficient**
Total****					(avg.)

*Use this worksheet if you don't have a count of number of bales produced. An alternative would be to multiply number of bales times average bale weight.
**Enter as decimal, e.g., 40% is entered as .4.

Hay Crop Silage, Corn Silage, or High Moisture Corn in Tower Silos****

Storage Structure	Dimensions Depth	Diameter	Total Tons Dry Matter (from silo chart)	÷	Dry Matter Coefficient	=	Total Production (tons) (all cuttings)

Corn Silage in Trench Silo

Storage Structure	Length x Width*** x Depth	=	Cubic Feet	x	Tons per Cu. Ft.	=	Total Production (tons) (fresh weight)	Dry Matter Coefficient
Total****								(avg.)

***For width, average widths at top and bottom of trench.
****Transfer total production for each crop to middle box of Worksheet 1.

GROWN FEED INVENTORY

This worksheet is used to calculate beginning and end of year inventory of all grown feeds. These are crops that you raised for feed. Purchased feed is not included here.

If you have an end of year inventory of grown feeds for the year **prior to** the summary year, this can be used to complete the beginning of year portion of the worksheet for January 1. If you are without the prior year's ending inventory figures, it may be easier to start by determining the summary year's ending inventory (December 31). In other words, start by completing the right side of the worksheet. Then make your best estimates of the quantities you had on hand at the beginning of the year (January 1). One method is to compare what you have at the summary year' end with what you think you had at the prior year's end.

	Beginning of Year (January 1)			(Col. 14) End of Year (December 31)		(Col. 17)
Item	Size of Storage	Amount Still Full	Quantity	Size of Storage	Amount Still Full	Quantity
Corn-HMSC						
Corn-HMEC						
Corn-dry,_____						
Oats						
Wheat						
Other_____						
Dry hay						
Hay crop silage						
Corn silage						
Other_____						

End of crop worksheets.

SAMPLE FARMER LIVESTOCK INVENTORY EXAMPLE

Sample Farmer had 50 head of young stock valued at $30,500 at the beginning of the year. At the end of the year he still had 50 head of young stock and his total inventory value had increased to $35,500.

How much of an increase can be attributed to growth and herd improvement and how much to change in market prices?

A completed livestock inventory worksheet can provide the answers. At the beginning of the year, Sam had 10 bred heifers, 20 open yearlings, and 20 calves. At the end of the year he had 20 bred heifers that are younger and smaller than the 10 he had at the beginning of the year, but bred heifer prices have increased $100 during the year. The open yearlings did not change in quality or price during the year. The 10 calves in the year end inventory are older than last year's group. The increase in young stock value do to a change in the physical make up of the herd was $3500 while higher prices at the end of the year resulted in an increase due to appreciation of $2000.

	(Col 32)	(Col 33)	(Col 34)	(Col 35)	(Col 36)	(Col 37)	(Col 38)	(Col 39)	(Col 40)
	January 1 Inventory			December 31 Inventory Using:					
					January 1 Prices		December 31 Prices		
Type	No.	Price Per Head	Total Value	Dec. 31 No.	Price Per Head	Total Value	Price Per Head	Total Value	Average Number for Year
Heifers:									
Bred	10	$850	$8500	20	800	$16,000	$900	$18,000	17
Open (6 mo.-bred)	20	650	13,000	20	650	13,000	650	13,000	21
Calves (< 6 mo.)	20	450	9,000	10	500	5,000	500	5,000	13
Total			$30,500			$34,000		$36,000	

Other Agricultural Economics Extension Publications

No. 90-10	Dairy Farm Business Summary, Central New York and Central Plain Regions, 1989	Wayne A. Knoblauch Linda D. Putnam
No. 90-11	Dairy Farm Business Summary, Eastern Plateau Region, 1989	Robert A. Milligan Linda D. Putnam Carl A. Crispell William H. Gengenbach Gerald A. LeClar
No. 90-12	National and State Trends in Milk Production	Andrew Novakovic Kevin Jack Maura Keniston
No. 90-13	Dairy Farm Business Summary, Oneida-Mohawk Region, 1989	Eddy L. LaDue Mark E. Anibal Jacqueline M. Mierek
No. 90-14	Dairy Farm Business Summary, Western Plateau Region, 1989	George L. Casler
No. 90-15	Dairy Farm Business Summary, Northern Hudson Region, 1989	Stuart F. Smith Linda D. Putnam
No. 90-16	Dairy Farm Business Summary, Southeastern New York, 1989	Stuart F. Smith
No. 90-17	Present Value, Future Value and Amortization Formulas and Tables	Eddy L. LaDue
No. 90-18	The Milkfat Issue: Production, Processing, and Marketing	Tom Cosgrove Andrew Novakovic
No. 90-19	Dairy Farm Business Summary, Eastern New York Renter Summary, 1989	Linda D. Putnam Stuart F. Smith
No. 90-20	Improving Communication About Risks Associated With Residues of Agricultural Chemicals on Produce	Nancy Ostiguy Enrique E. Figueroa Carole Bisogni
No. 90-21	Cornell Cooperative Extension Farm Business Management Program Guidelines, Suggestions, and Resources	Stuart F. Smith Wayne A. Knoblauch Gerald B. White