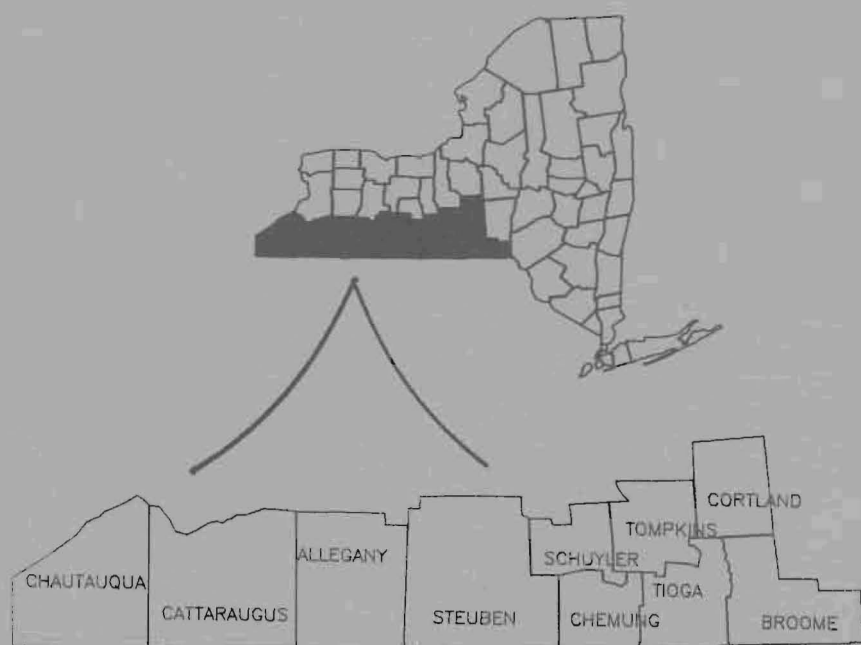


# DAIRY FARM BUSINESS SUMMARY

JUNE 1996

E.B. 96-09

## WESTERN AND CENTRAL PLATEAU REGION 1995



Wayne A. Knoblauch

Linda D. Putnam

Carl A. Crispell

Joan S. Petzen

James W. Grace

Gerald A. LeClar

Charles H. Cuykendall

Andrew N. Dufresne

Department of Agricultural, Resource, and Managerial Economics  
College of Agriculture and Life Sciences  
Cornell University, Ithaca, New York 14853-7801

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**1995 DAIRY FARM BUSINESS SUMMARY**  
**Western and Central Plateau**  
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## SUMMARY AND ANALYSIS OF THE FARM BUSINESS

### Business Characteristics

Planning the optimal management strategies is a crucial component of operating a successful farm. Various combinations of farm resources, enterprises, business arrangements, and management techniques are used by the dairy farmers in this region. The following table shows important farm business characteristics and the number of farms with each characteristic.

**BUSINESS CHARACTERISTICS**  
62 Western & Central Plateau Region Dairy Farms, 1995

Type of Farm	Number	Milking System	Number
Dairy	62	Bucket & carry	0
Part-time dairy	0	Dumping station	3
Dairy cash-crop	0	Pipeline	31
Part-time cash-crop dairy	0	Herringbone parlor	20
		Other parlor	8
Type of Ownership	Number	Production Records	Number
Owner	57	DHIC	47
Renter	5	Owner-Sampler	5
		Other	3
Type of Business	Number	None	7
Single Proprietorship	46	bST Usage	Number
Partnership	14	Used on <25% of herd	7
Corporation	2	Used on 25-75% of herd	9
Type of Barn	Number	Used on >75% of herd	2
Stanchion or Tie-Stall	31	Stopped using in 1995	7
Freestall	27	Not used in 1995	37
Combination	4	Business Record System	Number
Milking Frequency	Number	Account Book	27
2 times per day	53	Agrifax (mail-in only)	9
3 times per day	6	On-farm computer	16
Other	3	Other	10

The averages used in this report were compiled using data from all the participating dairy farms in this region unless noted otherwise. There are full-time dairy farms, part-time farms, dairy cash-crop farms, farm renters, partnerships, and corporations included in the average. Average data for these specific types of farms are presented in the State Business Summary.

### Income Statement

In order for an income statement to accurately measure farm income, it must include cash transactions and accrual adjustments (changes in accounts payable, accounts receivable, inventories, and prepaid expenses).

Cash paid is the actual cash outlay during the year and does not necessarily represent the cost of goods and services actually used in 1995.

Change in inventory: Increases in inventories of supplies and other purchased inputs are subtracted in computing accrual expenses because they represent purchased inputs not actually used during the year. Decreases in purchased inventories are added to expenses because they represent inputs purchased in a prior year and used this year.

**CASH AND ACCRUAL FARM EXPENSES**  
62 Western & Central Plateau Region Dairy Farms, 1995

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
<u>Hired Labor</u>	\$ 33,965		\$ 0	<<	\$ 0		\$ 33,965
<u>Feed</u>							
Dairy grain & concentrate	73,274		-1,134		2,266		76,674
Dairy roughage	4,510		2		106		4,614
Nondairy	69		16		0		53
<u>Machinery</u>							
Machinery hire, rent & lease	4,768		0	<<	44		4,812
Machinery repairs & farm vehicle exp.	15,799		-39		125		15,963
Fuel, oil & grease	6,058		-3		24		6,085
<u>Livestock</u>							
Replacement livestock	2,827		0	<<	0		2,827
Breeding	3,601		144		130		3,587
Veterinary & medicine	8,269		13		84		8,340
Milk marketing	11,611		0	<<	-6		11,605
Bedding	1,887		89		20		1,818
Milking supplies	6,131		106		181		6,206
Cattle lease & rent	199		0	<<	0		199
Custom boarding	1,483		0	<<	0		1,483
Other livestock expense	6,606		-73		-8		6,671
<u>Crops</u>							
Fertilizer & lime	6,039		56		255		6,238
Seeds & plants	4,155		28		208		4,335
Spray, other crop expense	3,618		54		22		3,586
<u>Real Estate</u>							
Land, building, & fence repair	3,603		-7		41		3,651
Taxes	6,171		-140	<<	973		7,284
Rent & lease	5,875		0	<<	465		6,340
<u>Other</u>							
Insurance	4,862		34	<<	0		4,828
Utilities (farm share)	9,067		0	<<	4		9,071
Interest paid	18,501		0	<<	0		18,501
Miscellaneous	3,127		10		5		3,122
Total Operating	\$ 246,075		\$ -844		\$ 4,939		\$ 251,858
Expansion livestock	4,011		0	<<	0		4,001
Machinery depreciation							15,042
Building depreciation							9,416
<b>TOTAL ACCRUAL EXPENSES</b>							<b>\$ 280,317</b>

Change in prepaid expenses (noted above by <<) is a net change in non-inventory expenses that have been paid in advance of their use. If 1995 funds used to prepay 1996 leases exceed the amount of 1995 leases prepaid in 1994, the amount of this excess is excluded from 1995 accrual lease expenses. The excess prepaid lease is charged against the future year's business operation. A decrease in prepaid lease is added to accrual expenses because it represents use of resources during this year that were paid for in past years.

Change in accounts payable: An increase in accounts payable from beginning to end of year is added when calculating accrual expenses because these expenses were incurred (resources used) in 1995 but not paid for. A decrease is subtracted because the resource was used before 1995.

Accrual expenses are the costs of inputs actually used in this year's production. They are the cash paid, less changes in inventory and prepaid expenses, plus accounts payable.

**CASH AND ACCRUAL FARM RECEIPTS**  
**62 Western & Central Plateau Region Dairy Farms, 1995**

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	\$ 263,770				\$ 1,895		\$ 265,665
Dairy cattle	11,398		\$ 12,069		0		23,467
Dairy calves	2,552				0		2,552
Other livestock	595		-58		206		743
Crops	1,831		-377		9		1,463
Government receipts	5,138		-50		-201		4,887
Custom machine work	370				-34		336
Gas tax refund	156				9		165
Other	<u>2,900</u>				<u>46</u>		<u>2,946</u>
Less nonfarm noncash capital**		(-)	<u>0</u>			(-)	<u>0</u>
Total Receipts	\$ 288,710		\$ 11,584		\$ 1,930		\$ 302,224

\*Change in advanced government receipts.

\*\*Gifts or inheritances of cattle or crops included in inventory.

Cash receipts include the gross value of milk checks received during the year plus all other payments received from the sale of farm products, services, and government programs. Nonfarm income is not included in calculating farm profitability.

Changes in inventory of assets produced by the business are calculated by subtracting beginning of year values from end of year values excluding appreciation. Increases in livestock inventory caused by herd growth and/or quality are added, and decreases caused by herd reduction and/or quality are subtracted. Changes in inventories of crops grown are also included. An annual increase in advanced government receipts is subtracted from cash income because it represents income received in 1995 for the 1996 crop year in excess of funds earned for 1995. Likewise, a decrease is added to cash government receipts because it represents funds earned for 1995 but received in 1994.

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. The January milk check for this December's marketings compared with the previous January's check is included as a change in accounts receivable.

Accrual receipts represent the value of all farm commodities produced and services actually generated by the farm business during the year.

### **Profitability Analysis**

Farm operators\* contribute labor, management, and equity capital to their businesses and the combination of these resources, and the other resources used in the business, determines profitability. Farm profitability can be measured as the return to all family resources or as the return to one or more individual resources such as labor and management.

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\* Operators are the 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 the partnership or corporation.

Net farm income is the return to the farm operators and other unpaid family members for their labor, management, and equity capital. It is the farm family's net annual return from working, managing, financing, and owning the farm business. This is not a measure of cash available from the year's business operation. Cash flow is evaluated later in this report.

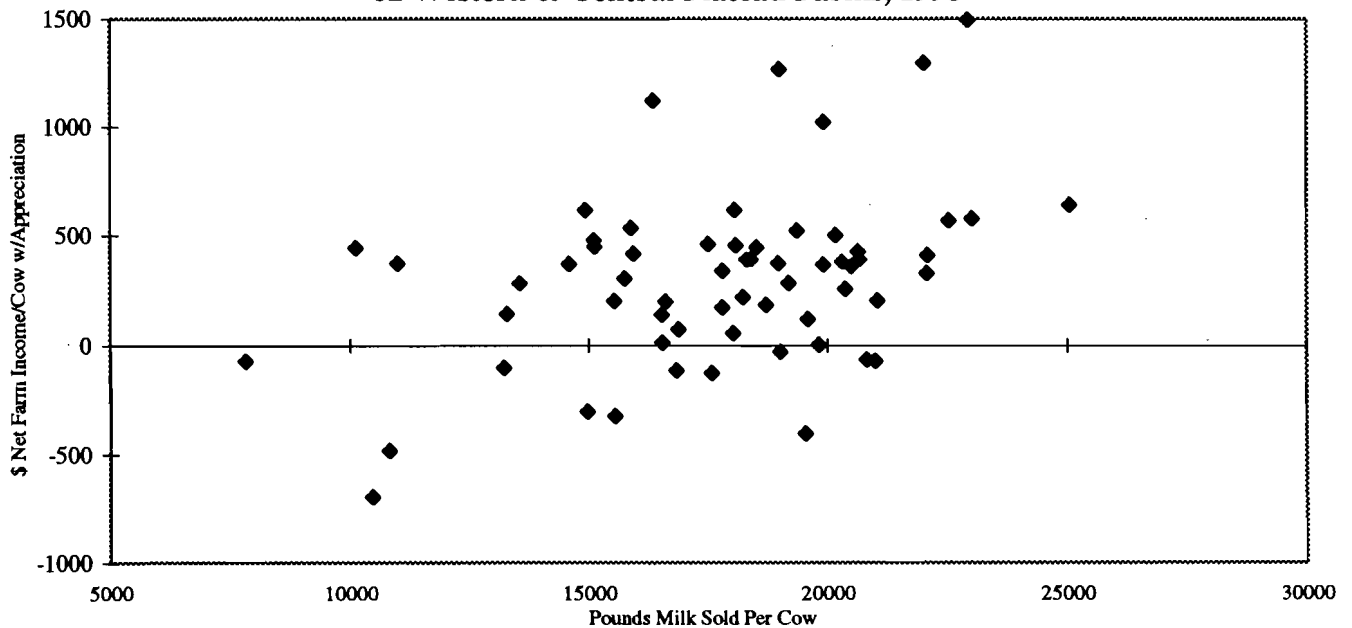
Net farm income is computed both with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than Farm Credit). Appreciation is a major factor contributing to changes in farm net worth and must be included for a complete profitability analysis.

**NET FARM INCOME**  
62 Western & Central Plateau Region Dairy Farms, 1995

Item	Average		My Farm	
	Total	Per Cow	Total	Per Cow
Total accrual receipts	\$ 302,224		\$ _____	
Appreciation: Livestock	-5,385		_____	
Machinery	3,959		_____	
Real Estate	15,249		_____	
Other Stock & Certificates	67		_____	
Total Including Appreciation	\$ 316,114		\$ _____	
Total accrual expenses	- 280,317		- _____	
Net Farm Income (with appreciation)	\$ 35,797	\$ 325	\$ _____	\$ _____
Net Farm Income (without appreciation)	\$ 21,907	\$ 199	\$ _____	\$ _____

The chart below shows the relationship between net farm income per cow (with appreciation) and pounds of milk sold per cow. Generally, farms with a higher production per cow have higher profitability per cow.

**Net Farm Income/Cow and Milk/Cow**  
62 Western & Central Plateau Farms, 1995



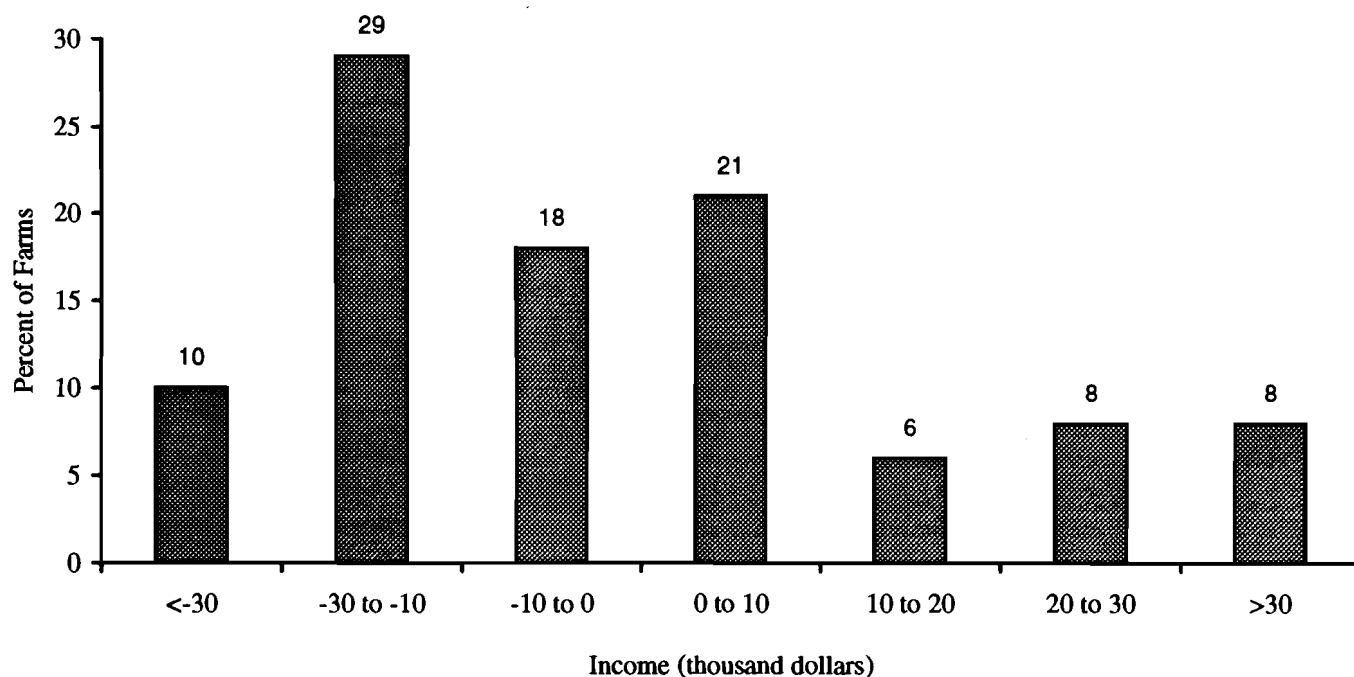
Labor and management income is the return which farm operators receive for their labor and management used in operating the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and management income is calculated by deducting a charge for family labor unpaid and the opportunity cost of using equity capital, at a real interest rate of five percent, from net farm income excluding appreciation. The interest charge of five percent reflects the long-term average rate of return above inflation that a farmer might expect to earn in comparable risk investments.

**LABOR AND MANAGEMENT INCOME**  
62 Western & Central Plateau Region Dairy Farms, 1995

Item	Average	My Farm
Net farm income without appreciation	\$21,907	\$ _____
Family labor unpaid @ \$1,450 per month	- 4,263	- _____
Interest on \$437,882 average equity capital @ 5% real rate	<u>-21,894</u>	- _____
Labor & Management Income per farm (1.37 Operators/farm)	\$-4,250	\$ _____
Labor & Management Income per Operator/Manager	\$ -3,102	\$ _____

Labor and management income per operator averaged \$-3,102 on these 62 farms in 1995. The range in labor and management income per operator was from less than \$-97,000 to more than \$61,000. Returns to labor and management were negative on 57% of the farms. Labor and management income per operator ranged from \$0 to \$20,000 on 27% of the farms while 16% showed labor and management incomes of \$20,000 or more per operator.

**Distribution of Labor & Management Incomes per Operator**  
62 Western & Central Plateau Dairy Farms, 1995





Return on equity capital measures the net return remaining for the farmer's equity or owned capital after a charge has been made for the owner-operator's labor and management. The earnings or amount of net farm income allocated to labor and management is the opportunity cost of operators' labor and management estimated by the cooperators. Return on equity capital is calculated with and without appreciation. The rate of return on equity capital is determined by dividing the amount returned by the average farm net worth or equity capital. Return on total capital is calculated by adding interest paid to the return on equity capital and then dividing by average farm assets to calculate the rate of return on total capital.

### RETURN ON EQUITY CAPITAL AND RETURN ON TOTAL CAPITAL

62 Western & Central Plateau Region Dairy Farms, 1995

Item	Average	My Farm
Net farm income with appreciation	\$ 35,797	\$ _____
Family labor unpaid @\$1,450 per month	- 4,263	- _____
Value of operators' labor & management	- 32,665	- _____
Return on equity capital with appreciation	\$ -1,131	\$ _____
Interest paid	+ 18,501	+ _____
Return on total capital with appreciation	\$ 17,370	\$ _____
Return on equity capital without appreciation	\$ -15,021	\$ _____
Return on total capital without appreciation	\$ 3,480	\$ _____
Rate of return on average equity capital:		
with appreciation	-0.3%	_____ %
without appreciation	-3.4%	_____ %
Rate of return on average total capital:		
with appreciation	2.5%	_____ %
without appreciation	0.5%	_____ %

### Farm and Family Financial Status

The first step in evaluating the financial position of the farm is to construct a balance sheet which identifies all the assets and liabilities of the business. The second step is to evaluate the relationship between assets, liabilities, and net worth and changes that occurred during the year.

Financial lease obligations are included in the balance sheet. The present value of all future payments is listed as a liability since the farmer is committed to make the payments by signing the lease. The present value is also listed as an asset, representing the future value the item has to the business. For 1995, lease payments were discounted by 9.25 percent to obtain their present value.

Advanced government receipts are included as current liabilities. Government payments received in 1995 that are for participation in the 1996 program are the end year balance and payments received in 1994 for participation in the 1995 program are the beginning year balance.

Current Portion or principal due in the next year for intermediate and long term debt is included as a current liability.

**1995 FARM BUSINESS & NONFARM BALANCE SHEET**  
62 Western & Central Plateau Region Dairy Farms, 1995

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 3,732	\$ 4,820	Accounts payable	\$ 9,283	\$ 14,226
Accounts receivable	20,242	22,172	Operating debt	5,681	10,211
Prepaid expenses	201	95	Short Term	1,340	422
Feed & supplies	54,794	53,680	Advanced govt. receipts	0	50
			Current Portion:		
			Intermediate	15,673	19,061
			Long Term	6,272	7,761
Total Current	\$ 78,969	\$ 80,767	Total Current	\$ 38,249	\$ 51,731
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows:			Structured debt		
owned	\$ 115,382	\$ 119,678	1-10 years	\$ 90,851	\$ 85,207
leased	259	121	Financial lease		
Heifers	51,870	54,240	(cattle/machinery)	2,243	2,127
Bulls & other livestock	1,275	1,235	Farm Credit stock	2,374	2,156
Mach. & equip. owned	119,921	121,019	Total Intermediate	\$ 95,468	\$ 89,490
Mach. & equip. leased	1,984	2,006			
Farm Credit stock	2,374	2,156			
Other stock & certificate	2,190	2,286			
Total Intermediate	\$ 295,255	\$ 302,741			
<u>Long Term</u>			<u>Long Term</u>		
Land & buildings:			Structured debt		
owned	\$ 294,280	\$ 314,248	>10 years	\$ 102,756	\$ 112,802
leased	9,694	9,021	Financial lease		
Total Long Term	\$ 303,974	\$ 323,269	(structures)	9,694	9,021
			Total Long Term	\$ 112,450	\$ 121,823
Total Farm Assets	\$ 678,198	\$ 706,777	Total Farm Liab.	\$ 246,167	\$ 263,044
			FARM NET WORTH	\$ 432,031	\$ 443,733

Nonfarm Assets, Liabilities & Net Worth (Average of 43 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	\$ 2,970	\$ 2,855	Nonfarm Liabilities	\$ 8,997	\$ 8,983
Cash value life insurance	6,024	6,469			
Nonfarm real estate	10,488	13,000			
Auto (personal share)	3,067	4,841			
Stocks & bonds	4,749	6,572			
Household furnishings	11,274	11,670			
All other nonfarm assets	4,237	3,426			
Total Nonfarm Assets	\$ 42,811	\$ 48,833	NONFARM NET WORTH	\$ 33,813	\$ 39,850

Farm & Nonfarm Assets, Liabilities, and Net Worth*	Jan. 1	Dec. 31
Total Assets	\$ 721,009	\$ 755,610
Total Liabilities	255,164	272,027
TOTAL FARM & NONFARM NET WORTH	\$ 465,845	\$ 483,583

\*Assumes that average nonfarm assets and liabilities for the nonreporting farms were the same as for those reporting.

The following condensed balance sheet, including deferred taxes, contains average data from only those farmers who elected to provide the additional information required to compute deferred taxes.

Deferred taxes represent an estimate of the taxes that would be paid if the farm were sold at year end fair market values and date on the balance sheet. Accuracy is dependent on the accuracy of the market values and the tax basis data provided. Any tax liability for assets other than livestock, machinery, land, buildings and nonfarm assets is excluded. It is assumed that all gain on purchased livestock and machinery is ordinary gain and that listed market values are net of selling costs. The effects of investment tax credit carryover and recapture, carryover of operating losses, alternative minimum taxes and other than average exemptions and deductions are excluded because they have only minor influence on the taxes of most farms. However, they could be important.

### CONDENSED BALANCE SHEET INCLUDING DEFERRED TAXES

December 31, 1995

10 New York Dairy Farms, 1995

Assets		Liabilities & Net Worth	
		Current debts & payables	\$ 100,866
		Current deferred taxes	<u>83,864</u>
Total Current Assets	\$ 140,077	Total Current Liabilities	\$ 184,729
		Intermediate debts & leases	\$ 144,152
		Intermediate deferred taxes	<u>134,146</u>
Total Inter. Assets	\$ 508,605	Total Intermediate Liabilities	\$ 278,297
		Long term debts & leases	\$ 151,600
		Long term deferred taxes	<u>73,307</u>
Total Long Term Assets	\$ <u>458,074</u>	Total Long Term Liab.	\$ 224,907
TOTAL FARM ASSETS	\$ 1,106,756	TOTAL FARM LIABILITIES	\$ 687,933
		Farm Net Worth	\$ 418,822
		Percent Equity (Farm)	38%
		Nonfarm debts	\$ 610
		Nonfarm deferred taxes	<u>13,010</u>
Total Nonfarm Assets	\$ 52,854	Total Nonfarm Liabilities	\$ 13,620
TOTAL ASSETS	\$ 1,159,609	TOTAL LIABILITIES	\$ 701,553
		Total Net Worth	\$ 458,056
		Percent Equity (Total)	40%

Balance sheet analysis involves examination of relative asset and debt levels for the business. Percent equity is calculated by dividing end of year net worth by end of year assets and multiplying by 100. The debt to asset ratio is compiled by dividing liabilities by assets. Low debt to asset ratios reflect business solvency and the potential capacity to borrow. Debt levels per productive unit represent old standards that are still useful if used with measures of cash flow and repayment ability.

### BALANCE SHEET ANALYSIS

62 Western & Central Plateau Region Dairy Farms, 1995

Item	Average	My Farm
<u>Financial Ratios - Farm:</u>		
Percent equity	63%	_____ %
Debt & asset ratio: total	0.37	_____
long-term	0.38	_____
intermediate & current	0.37	_____
<u>Farm Debt Analysis:</u>		
Accounts payable as % of total debt	5%	_____ %
Long-term liabilities as a % of total debt	46%	_____ %
Current & inter. liabilities as a % of total debt	54%	_____ %
<u>Farm Debt Levels:</u>		
	Per Cow	Per Tillable Acre Owned
Total farm debt	\$ 2,248	\$ 1,283
Long-term debt	1,041	594
Intermediate & long term	1,806	1,031
Intermediate & current debt	1,207	689

Farm inventory balance is an accounting of the value of assets used on the balance sheet and the changes that occur from the beginning to end of year. Changes in the livestock inventory are included in the dairy analysis. Net investment indicates whether the capital stock is being expanded (positive) or depleted (negative).

### FARM INVENTORY BALANCE

62 Western & Central Plateau Region Dairy Farms, 1995

Item	Average of Region's Farms	
	Real Estate	Machinery & Equipment
Value beginning of year	\$ 294,280	\$ 119,921
Purchases	\$ 21,547*	\$ 12,676
Gift & inheritance	+ 0	+ 0
Lost capital	- 5,582	-
Sales	- 1,829	- 495
Depreciation	- 9,416	- 15,042
Net investment	= 4,720	= -2,861
Appreciation	+ 15,249	+ 3,959
Value end of year	\$ 314,248	\$ 121,019

\*\$6,953 land and \$14,594 buildings and/or depreciable improvements.

The Statement of Owner Equity has two purposes. It allows (1) verification that the accrual income statement and market value balance sheet are interrelated and consistent (in accountants terms, they reconcile) and (2) identification of the causes of change in equity that occurred on the farm during the year. The Statement of Owner Equity allows you to determine to what degree the change in equity was caused by (1) earnings from the business, and nonfarm income, in excess of withdrawals being retained in the business (called retained earnings), (2) outside capital being invested in the business or farm capital being removed from the business (called contributed/withdrawn capital) and (3) increases or decreases in the value (price) of assets owned by the business (called change in valuation equity).

Retained earnings is an excellent indicator of farm generated financial progress.

**STATEMENT OF OWNER EQUITY (RECONCILIATION)**  
62 Western & Central Plateau Region Dairy Farms, 1995

Item	Average	My Farm
Beginning of year farm net worth	\$ 432,031	\$ _____
Net farm income without appreciation	\$ 21,907	\$ _____
+Nonfarm cash income	+ 7,778	+ _____
-Personal withdrawals & family expenditures excluding nonfarm borrowings	- 30,448	- _____
RETAINED EARNINGS	+ \$ -763	+\$ _____
Nonfarm noncash transfers to farm	\$ 0	\$ _____
+Cash used in business from nonfarm capital	+ 5,239	+ _____
-Note or mortgage from farm real estate sold (nonfarm)	- 0	- _____
CONTRIBUTED/WITHDRAWN CAPITAL	+ \$ 5,239	+\$ _____
Appreciation	\$ 13,890	\$ _____
-Lost capital	- 5,582	- _____
CHANGE IN VALUATION EQUITY	+ \$ 8,308	+\$ _____
IMBALANCE/ERROR	- 1,077	- \$ _____
End of year net worth*	= \$ 443,733	= \$ _____
Change in net worth w/appreciation	\$ 11,702	\$ _____
<b><u>Change in Net Worth</u></b>		
Without appreciation	\$ -2,188	\$ _____
With appreciation	\$ 11,702	\$ _____

\*May not add due to rounding.

**Cash Flow Statement**

Completing an annual cash flow statement is an important step in understanding the sources and uses of funds for the business. Understanding last year's cash flow is the first step toward planning and managing cash flow for the current and future years.

The annual cash flow statement is structured to show net cash provided by operating activities, investing activities, financing activities and from reserves. All cash inflows and outflows, including beginning and end balances, are included. Therefore, the sum of net cash provided from all four activities should be zero. Any imbalance is the error from incorrect accounting of cash inflows/outflows.

**ANNUAL CASH FLOW STATEMENT**  
62 Western & Central Plateau Region Dairy Farms, 1995

Item		Average	
<b>Cash Flow from Operating Activities</b>			
Cash farm receipts	\$ 288,710		
- Cash farm expenses	<u>246,075</u>		
= Net cash farm income		\$ 42,634	
Nonfarm income	\$ 7,778		
- Personal withdrawals & family expenses including nonfarm debt payments	<u>31,113</u>		
+ Net cash nonfarm income		<u>\$ -23,335</u>	
= Net Provided by Operating Activities			\$ 19,299
<b>Cash Flow From Investing Activities</b>			
Sale of assets: machinery	\$ 495		
+ real estate	1,829		
+ other stock & cert.	<u>0</u>		
= Total asset sales		\$ 2,324	
Capital purchases: expansion livestock	\$ 4,001		
+ machinery	12,676		
+ real estate	21,547		
+ other stock & cert.	<u>29</u>		
- Total invested in farm assets		<u>\$ 38,253</u>	
= Net Provided by Investment Activities			\$ -35,929
<b>Cash Flow From Financing Activities</b>			
Money borrowed (intermediate & long term)	\$ 46,997		
+ Money borrowed (short term)	396		
+ Increase in operating debt	4,530		
+ Cash from nonfarm capital used in business	5,239		
+ Money borrowed - nonfarm	<u>665</u>		
= Cash inflow from financing		\$ 57,827	
Principal payments (intermediate & long term)	\$ 37,718		
+ Principal payments (short term)	1,314		
+ Decrease in operating debt	<u>0</u>		
- Cash outflow for financing		<u>\$ 39,032</u>	
= Net Provided by Financing Activities			\$ 18,795
<b>Cash Flow From Reserves</b>			
Beginning farm cash, checking & savings		\$ 3,732	
- Ending farm cash, checking & savings		<u>4,820</u>	
= Net Provided from Reserves			\$ -1,088
Imbalance (error)			\$ 1,077

## ANNUAL CASH FLOW STATEMENT

Item		My Farm	
<b>Cash Flow from Operating Activities</b>			
Cash farm receipts	\$ _____		
- Cash farm expenses	_____		
= Net cash farm income		\$ _____	
Nonfarm income	\$ _____		
- Personal withdrawals & family expenses including nonfarm debt payments	_____		
+ Net cash nonfarm income		\$ _____	
= Net Provided by Operating Activities			\$ _____
<b>Cash Flow From Investing Activities</b>			
Sale of assets: machinery	\$ _____		
+ real estate	_____		
+ other stock & cert.	_____		
= Total asset sales		\$ _____	
Capital purchases: expansion livestock	\$ _____		
+ machinery	_____		
+ real estate	_____		
+ other stock & cert.	_____		
- Total invested in farm assets		\$ _____	
= Net Provided by Investment Activities			\$ _____
<b>Cash Flow From Financing Activities</b>			
Money borrowed (intermediate & long term)	\$ _____		
+ Money borrowed (short term)	_____		
+ Increase in operating debt	_____		
+ Cash from nonfarm capital used in business	_____		
+ Money borrowed - nonfarm	_____		
= Cash inflow from financing		\$ _____	
Principal payments (intermediate & long term)	\$ _____		
+ Principal payments (short term)	_____		
+ Decrease in operating debt	_____		
- Cash outflow for financing		\$ _____	
= Net Provided by Financing Activities			\$ _____
<b>Cash Flow From Reserves</b>			
Beginning farm cash, checking & savings		\$ _____	
- Ending farm cash, checking & savings		_____	
= Net Provided from Reserves			\$ _____
Imbalance (error)			\$ _____

**Repayment Analysis**

A valuable use of cash flow analysis is to compare the debt payments planned for the last year with the amount actually paid. The measures listed below provide a number of different perspectives on the repayment performance of the business. However, the critical question to many farmers and lenders is whether planned payments can be made in 1996. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 1996 debt payments shown below.

**FARM DEBT PAYMENTS PLANNED**

Same 39 Western &amp; Central Plateau Region Dairy Farms, 1994 &amp; 1995

Debt Payments	Average			My Farm		
	1995 Payments		Planned 1996	1995 Payments		Planned 1996
	Planned	Made		Planned	Made	
Long term	\$ 18,636	\$ 25,325	\$ 21,985	\$ _____	\$ _____	\$ _____
Intermediate term	32,122	43,980	31,901	_____	_____	_____
Short term	1,414	2,128	497	_____	_____	_____
Operating (net reduction)	3,558	0	6,723	_____	_____	_____
Accounts payable (net reduction)	4,293	0	551	_____	_____	_____
Total	\$ 60,024	\$ 71,433	\$ 61,657	\$ _____	\$ _____	\$ _____
Per cow	\$ 476	\$ 567		\$ _____	\$ _____	
Per cwt. 1995 milk	\$ 2.49	\$ 2.96		\$ _____	\$ _____	
Percent of total 1995 farm receipts	17%	20%		_____	_____	
Percent of 1995 milk receipts	19%	23%		_____	_____	

The cash flow coverage ratio measures the ability of the farm business to meet its planned debt payment schedule. The ratio shows the percentage of payments planned for 1995 (as of December 31, 1994) that could have been made with the amount available for debt service in 1995. Farmers who did not participate in DFBS in 1994 have their 1995 cash flow coverage ratio based on planned debt payments for 1996.

**CASH FLOW COVERAGE RATIO**

Same 39 Western &amp; Central Plateau Region Dairy Farms, 1994 &amp; 1995

Item	Average	My Farm
Cash farm receipts	\$ 341,346	\$ _____
- Cash farm expenses	293,502	_____
+ Interest paid	21,229	_____
- Net personal withdrawals from farm*	24,717	_____
(A) = Amount Available for Debt Service	\$ 44,356	\$ _____
(B) = Debt Payments Planned for 1995 (as of December 31, 1994)	\$ 60,024	\$ _____
(A/B) = Cash Flow Coverage Ratio for 1995	0.74	_____

\*Personal withdrawals and family expenditures less nonfarm income and nonfarm money borrowed. If family withdrawals are excluded, or inaccurately included, the cash flow coverage ratio will be incorrect.



## ANNUAL CASH FLOW WORKSHEET

Item	Regional Average		My Farm	Expected Change	1996 Projection
	Per Cow	Per Cwt.	Per Cow/ Per Cwt.		
Average no. of cows	110				
Total cwt. of milk sold		20,675			
<u>Accrual Oper. Receipts</u>					
Milk	\$ 2,415.14	\$ 12.85	\$		\$
Dairy cattle	213.34	1.14			
Dairy calves	23.20	0.12			
Other livestock	6.76	0.04			
Crops	13.30	0.07			
Misc. Receipts	75.75	0.40			
Total	\$ 2,747.49	\$ 14.62	\$		\$
<u>Accrual Operating Expenses</u>					
Hired labor	\$ 308.77	\$ 1.64	\$		\$
Dairy grain & concentrate	697.04	3.71			
Dairy roughage	41.95	0.22			
Nondairy feed	0.48	0.01			
Mach. hire, rent & lease	43.75	0.23			
Mach. repair & vehicle exp.	145.12	0.77			
Fuel, oil & grease	55.32	0.29			
Replacement livestock	25.70	0.14			
Breeding	32.61	0.17			
Vet & medicine	75.82	0.40			
Milk marketing	105.50	0.56			
Bedding	16.53	0.09			
Milking supplies	56.42	0.30			
Cattle lease	1.81	0.01			
Custom boarding	13.48	0.07			
Other livestock exp.	60.65	0.32			
Fertilizer & lime	56.72	0.30			
Seeds & plants	39.41	0.21			
Spray & other crop exp.	32.60	0.17			
Land, bldg., fence repair	33.20	0.18			
Taxes	66.22	0.35			
Real estate rent & lease	57.65	0.31			
Insurance	43.89	0.23			
Utilities	82.45	0.44			
Miscellaneous	28.38	0.15			
Total Less Interest Paid	\$ 2,121.43	\$ 11.29	\$		\$
<u>Net Accrual Operating Income</u>	<u>Total</u>				
(without interest paid)	\$ 68,867		\$		\$
- Change in livestock/crop inventory*	11,584				
- Change in accounts receivable	1,930				
- Change in feed/supply inventory**	-844				
+ Change in accounts payable***	4,939				
NET CASH FLOW	\$ 61,136		\$		\$
- Net family withdrawals	\$ 22,670				
Available for Farm	\$ 38,466		\$		
- Farm debt payments	56,600				
Available for Farm Investment	\$ -18,134		\$		\$
- Capital purchases	\$ 38,253				
Additional Capital Needed			\$		\$

\*Includes change in advance government receipts. \*\*Includes change in prepaid expenses. \*\*\*Excludes change in interest account payable.

**Cropping Analysis**

The cropping program is an important part of the dairy farm business and often represents opportunities for improved productivity and profitability. A complete evaluation of what the available land resources are, how they are being used, how well crops are producing, and what it costs to produce them is important to evaluating alternative cropping and feed purchasing alternatives.

**LAND RESOURCES AND CROP PRODUCTION**  
62 Western & Central Plateau Region Dairy Farms, 1995

Item	Average			My Farm		
<u>Land</u>	<u>Owned</u>	<u>Rented</u>	<u>Total</u>	<u>Owned</u>	<u>Rented</u>	<u>Total</u>
Tillable	205	119	324	_____	_____	_____
Nontillable	53	13	66	_____	_____	_____
Other nontillable	119	18	137	_____	_____	_____
Total	377	150	527	_____	_____	_____
<u>Crop Yields</u>	<u>Farms</u>	<u>Acres*</u>	<u>Prod/Acre</u>	<u>Acres</u>	<u>Prod/Acre</u>	
Hay crop	62	179	2.17 tn DM	_____	_____	tn DM
Corn silage	53	97	12.54 tn	_____	_____	tn
			4.17 tn DM	_____	_____	tn DM
Other forage	7	24	1.95 tn DM	_____	_____	tn DM
Total forage	62	265	2.79 tn DM	_____	_____	tn DM
Corn grain	22	60	124 bu	_____	_____	bu
Oats	10	34	42 bu	_____	_____	bu
Wheat	2	69	42 bu	_____	_____	bu
Other crops	7	24		_____		
Tillable pasture	27	37		_____		
Idle	23	31		_____		
Total Tillable Acres	62	324		_____		

\*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were hay crop 179, corn silage 83, corn grain 21, oats 5, tillable pasture 16, and idle 11.

Average crop acres and yields compiled for the region are for the farms reporting each crop. Yields of forage crops have been converted to tons of dry matter using dry matter coefficients reported by the farmers. Grain production has been converted to bushels of dry grain equivalent based on dry matter information provided.

The following crop/dairy ratios indicate the relationship between forage production, forage production resources, and the dairy herd.

**CROP/DAIRY RATIOS**  
62 Western & Central Plateau Region Dairy Farms, 1995

Item	Average	My Farm
Total tillable acres per cow	2.95	_____
Total forage acres per cow	2.41	_____
Harvested forage dry matter, tons per cow	6.73	_____

**Cropping Analysis** (continued)

A number of cooperators have allocated crop expenses among the hay crop, corn, and other crops produced. Fertilizer and lime, seeds and plants, and spray and other crop expenses have been computed per acre and per production unit for hay and corn. Additional expense items such as fuels, labor, and machinery repairs are not included. Rotational grazing was used on 29 farms in the region.

**CROP RELATED ACCRUAL EXPENSES**  
62 Western & Central Plateau Region Dairy Farms Reporting, 1995

Item	Total Per Till. Acre	All Corn Per Acre	Corn Silage Per Ton DM	Corn Grain Per Dry Sh. Bu.	Hay Crop		Pasture	
					Per Acre	Per Ton DM	Per Till Acre	Per Total Acre
No. of farms reporting	62	30			32		8	
Ave. number of acres	324	97			170		27	95
Fert. & lime	\$ 19.26	\$ 30.33	\$ 6.38	\$ 0.24	\$ 15.17	\$ 6.56	\$ 46.85	\$ 13.26
Seeds & plants	13.38	26.34	5.54	0.21	10.31	4.45	9.55	2.70
Spray & other crop exp.	<u>11.07</u>	<u>27.25</u>	<u>5.73</u>	<u>0.21</u>	<u>3.10</u>	<u>1.34</u>	<u>8.02</u>	<u>2.27</u>
TOTAL	\$ 43.71	\$ 83.92	\$ 17.65	\$ 0.66	\$ 28.58	\$ 12.35	\$ 64.42	\$ 18.23

**My Farm**

Fert. & lime	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
Seeds & plants	_____	_____	_____	_____	_____	_____	_____	_____
Spray & other crop exp.	_____	_____	_____	_____	_____	_____	_____	_____
TOTAL	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____

Most machinery costs are associated with crop production and should be analyzed with the crop enterprise. Total machinery expenses include the major fixed costs (interest and depreciation), as well as the accrual operating costs. Although machinery costs have not been allocated to individual crops, they are shown below per total tillable acre.

**ACCRUAL MACHINERY EXPENSES**  
62 Western & Central Plateau Region Dairy Farms, 1995

Machinery Expense	Average		My Farm	
	Total Expenses	Per Till. Acre	Total Expenses	Per Till. Acre
Fuel, oil & grease	\$ 6,085	\$ 18.78	\$ _____	\$ _____
Mach. repair & vehicle exp.	15,963	49.27	_____	_____
Machine hire, rent & lease	4,812	14.85	_____	_____
Interest (5%)	6,024	18.59	_____	_____
Depreciation	<u>15,042</u>	<u>46.43</u>	_____	_____
Total	\$ 47,926	\$ 147.92	\$ _____	\$ _____

**Dairy Analysis**

Analysis of the dairy enterprise can reveal a great deal about the strengths and weaknesses of the dairy farm business. Information on this page should be used in conjunction with DHI and other dairy production information. Changes in dairy herd size and market values that occur during the year are identified in the table below. The change in inventory value without appreciation is attributed to physical changes in herd size and quality. Any change in inventory is included as an accrual farm receipt when calculating all of the profitability measures on pages 6 and 7.

**DAIRY HERD INVENTORY**  
62 Western & Central Plateau Region Dairy Farms, 1995

Item	Dairy Cows		Bred		Heifer Open		Calves	
	No.	Value	No.	Value	No.	Value	No.	Value
Beg. year (owned)	108	\$ 115,382	32	\$ 27,727	31	\$ 17,147	27	\$ 6,996
+ Change w/o apprec.		8,194		1,610		2,746		-480
+ Appreciation		-3,898		-422		-878		-205
End year (owned)	116	\$ 119,678	34	\$ 28,915	36	\$ 19,015	26	\$ 6,311
End including leased	117							
Average number	110		92	(all age groups)				

**My Farm:**

Beg. year (owned)	_____	\$ _____	_____	\$ _____	_____	\$ _____	_____	\$ _____
+ Change w/o apprec.	_____	_____	_____	_____	_____	_____	_____	_____
+ Appreciation	_____	_____	_____	_____	_____	_____	_____	_____
End year (owned)	_____	\$ _____	_____	\$ _____	_____	\$ _____	_____	\$ _____
End including leased	_____	_____	_____	_____	_____	_____	_____	_____
Average number	_____	_____	_____	(all age groups)	_____	_____	_____	_____

Total milk sold and milk sold per cow are extremely valuable measures of size and productivity, respectively, on the dairy farm. These measures of milk output are based on pounds of milk marketed during the year. Farm managers on DHI should compare milk sold per cow with their rolling herd average on the test date nearest December 31 to see how close the DHI estimate of milk produced is to actual milk sales.

**MILK PRODUCTION**  
62 Western & Central Plateau Region Dairy Farms, 1995

Item	Average	My Farm
Total milk sold, lbs.	2,067,496	_____
Milk sold per cow, lbs.	18,801	_____
Average milk plant test, percent butterfat	3.67%	_____

The cost of producing milk has been compiled using the whole farm method and is featured in the following table. Accrual receipts from milk sales can be compared with the accrual costs of producing milk per cow and per hundredweight of milk. Using the whole farm method, operating costs of producing milk are estimated by deducting nonmilk accrual receipts from total accrual operating expenses including expansion livestock purchased. Purchased inputs cost of producing milk are the operating costs plus depreciation. Total costs of producing milk include the operating costs of producing milk plus depreciation on machinery and buildings, the value of unpaid family labor, the value of operators' labor and management, and the interest charge for using equity capital.

**ACCRUAL RECEIPTS FROM DAIRY, COSTS OF PRODUCING MILK,  
AND PROFITABILITY**

62 Western & Central Plateau Region Dairy Farms, 1995

Item	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
<u>Accrual Cost of Producing Milk</u>						
Operating costs	\$ 219,300	\$ 1,994	\$ 10.61	\$ _____	\$ _____	\$ _____
Purchased inputs costs	\$ 243,758	\$ 2,216	\$ 11.79	\$ _____	\$ _____	\$ _____
Total Costs	\$ 302,580	\$ 2,751	\$ 14.64	\$ _____	\$ _____	\$ _____
<u>Accrual Receipts From Milk</u>	\$ 265,665	\$ 2,415	\$ 12.85	\$ _____	\$ _____	\$ _____
Net Farm Income without Apprec.	\$ 21,907	\$ 199	\$ 1.06	\$ _____	\$ _____	\$ _____
Net Farm Income with Apprec.	\$ 35,797	\$ 325	\$ 1.73	\$ _____	\$ _____	\$ _____

The accrual operating expenses most commonly associated with the dairy enterprise are listed in the table below. Evaluating these costs per unit of production enables an evaluation of the dairy enterprise.

**DAIRY RELATED ACCRUAL EXPENSES**

62 Western & Central Plateau Region Dairy Farms, 1995

Item	Average		My Farm	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrate	\$ 697	\$ 3.71	\$ _____	\$ _____
Purchased dairy roughage	42	0.22	_____	_____
Total Purchased Dairy Feed	\$ 739	\$ 3.93	\$ _____	\$ _____
Purchased grain & conc. as % of milk receipts		29%	_____	%
Purchased feed & crop exp.	\$ 868	\$ 4.62	\$ _____	\$ _____
Purchased feed & crop exp. as % of milk receipts		36%	_____	%
Breeding	\$ 33	\$ 0.17	\$ _____	\$ _____
Veterinary & medicine	76	0.40	_____	_____
Milk marketing	106	0.56	_____	_____
Bedding	17	0.09	_____	_____
Milking supplies	56	0.30	_____	_____
Cattle lease	2	0.01	_____	_____
Custom boarding	13	0.07	_____	_____
Other livestock expense	61	0.32	_____	_____

**Capital and Labor Efficiency Analysis**

Capital efficiency factors measure how intensively the capital is being used in the farm business. Measures of labor efficiency are key indicators of management's success in generating products per unit of labor input.

**CAPITAL EFFICIENCY**

62 Western & Central Plateau Region Dairy Farms, 1995

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	\$ 197,661	\$ 6,295	\$ 2,137	\$ 3,378
Real estate		2,851		1,530
Machinery & equipment	34,956	1,113	378	
Asset turnover ratio	0.46			
<u>My Farm</u>				
Farm capital	\$ _____	\$ _____	\$ _____	\$ _____
Real estate	_____	_____	_____	_____
Machinery & equipment	_____	_____	_____	_____
Asset turnover ratio	_____			

**LABOR FORCE INVENTORY AND ANALYSIS**

62 Western & Central Plateau Region Dairy Farms, 1995

Labor Force	Months	Age	Years of Educ.	Value of Labor & Mgmt.
Operator number 1	13.67	46	14	\$ 23,752
Operator number 2	3.67	42	14	6,728
Operator number 3	1.06	45	14	2,185
Family paid	4.37			
Family unpaid	2.94			
Hired	16.33			
Total	42.04	/ 12 = 3.50 Worker Equivalent		
		1.37 Operator/Manager Equivalent		

**My Farm:** Total \_\_\_\_\_ / 12 = \_\_\_\_\_ Worker Equivalent  
 Operator's \_\_\_\_\_ / 12 = \_\_\_\_\_ Operator/Manager Equivalent

Labor Efficiency	Average		My Farm	
	Total	Per Worker	Total	Per Worker
Cows, average number	110	31	_____	_____
Milk sold, pounds	2,067,496	590,137	_____	_____
Tillable acres	324	92	_____	_____
Work units	1,154	329	_____	_____

Labor Costs	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Value of operator(s) labor (\$1,450/mo.)	\$ 26,680	\$ 243	\$ 1.29	\$ _____	\$ _____	\$ _____
Family unpaid (\$1,450/mo.)	4,263	39	0.21	_____	_____	_____
Hired	33,965	309	1.64	_____	_____	_____
Total Labor	\$ 64,908	\$ 590	\$ 3.14	\$ _____	\$ _____	\$ _____
Machinery Cost	\$ 47,926	\$ 436	\$ 2.32	\$ _____	\$ _____	\$ _____
Total Labor & Mach.	\$ 112,834	\$ 1,026	\$ 5.46	\$ _____	\$ _____	\$ _____

## COMPARATIVE ANALYSIS OF THE FARM BUSINESS

Progress of the Farm Business

Comparing your business with average data from regional DFBS cooperators that participated in both of the last two years can be helpful to establishing your goals for these parameters. It is equally important for you to determine the progress your business has made over the past two or three years, to compare this progress to your goals, and to set goals for the future.

## PROGRESS OF THE FARM BUSINESS

Same 39 Western & Central Plateau Region Dairy Farms, 1994 & 1995

Selected Factors	Average of 39 Farms*		My Farm		Goal
	1994	1995	1994	1995	
<u>Size of Business</u>					
Average number of cows	120	126	_____	_____	_____
Average number of heifers	100	108	_____	_____	_____
Milk sold, lbs.	2,305,658	2,413,983	_____	_____	_____
Worker equivalent	3.50	3.80	_____	_____	_____
Total tillable acres	355	365	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, lbs.	19,230	19,233	_____	_____	_____
Hay DM per acre, tons	2.53	2.29	_____	_____	_____
Corn silage per acre, tons	16	13	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	34	33	_____	_____	_____
Milk sold/worker, lbs.	659,400	635,895	_____	_____	_____
<u>Cost Control</u>					
Grain & conc. purchased as % of milk sales	27%	29%	_____ %	_____ %	_____ %
Dairy feed & crop exp. per cwt. milk	\$ 4.84	\$ 4.68	\$ _____	\$ _____	\$ _____
Labor & mach. costs/cow	\$ 1,037	\$ 1,024	\$ _____	\$ _____	\$ _____
Operating cost of producing cwt. of milk	\$ 10.25	\$ 10.74	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency**</u>					
Farm capital per cow	\$ 6,541	\$ 6,524	\$ _____	\$ _____	\$ _____
Mach. & equip. per cow	\$ 1,211	\$ 1,185	\$ _____	\$ _____	\$ _____
Asset turnover ratio	0.48	0.46	_____	_____	_____
<u>Profitability</u>					
Net farm income w/o apprec.	\$ 42,460	\$ 23,947	\$ _____	\$ _____	\$ _____
Net farm income w/apprec.	\$ 57,911	\$ 44,148	\$ _____	\$ _____	\$ _____
Labor & mgt. income per operator/manager	\$ 10,472	\$ -2,835	\$ _____	\$ _____	\$ _____
Rate of return on equity capital w/appreciation	4.5%	1.4%	_____ %	_____ %	_____ %
Rate of return on all capital w/appreciation	5.3%	3.5%	_____ %	_____ %	_____ %
<u>Financial Summary</u>					
Farm net worth, end year	\$ 507,324	\$ 526,060	\$ _____	\$ _____	\$ _____
Debt to asset ratio	0.37	0.37	_____	_____	_____
Farm debt per cow	\$ 2,408	\$ 2,340	\$ _____	\$ _____	\$ _____

\*Farms participating both years.

\*\*Average for the year.

**Regional Farm Business Chart**

The Farm Business Chart is a tool which can be used in analyzing your business. Compare your business by drawing a line through or near the figure in each column which represents your current level of performance. The five figures in each column represent the average of each 20 percent or quintile of farms included in the regional summary. Use this information to identify business areas where more challenging goals are needed.

**FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS**

62 Western &amp; Central Plateau Region Dairy Farms, 1995

Size of Business			Rate of Production			Labor Efficiency	
Worker Equiv- alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
7.24	252	4,988,602	21,883	3.59	19	44	852,479
3.80	121	2,274,477	19,636	2.50	15	35	625,351
2.77	77	1,478,307	18,096	2.05	13	30	561,376
1.99	51	836,463	16,133	1.65	9	25	425,416
1.38	35	498,956	12,498	1.03	6	17	246,002

Cost Control					
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(10)	(10)	(11)	(11)	(10)	(10)
\$389	19%	\$228	\$758	\$521	\$3.23
572	25	343	908	727	4.14
639	29	405	1,010	830	4.65
740	32	489	1,184	906	5.06
866	38	645	1,434	1,027	5.72

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income w/Apprec.	Net Farm Inc. w/o Apprec.	Labor & Mgt. Inc. Per Oper.	Change in Net Worth w/Apprec.
(10)	(10)	(10)	(3)	(3)	(3)	(6)
\$2,818	\$7.82	\$12.71	\$123,020	\$78,912	\$30,731	\$69,498
2,502	9.63	13.87	36,391	30,496	6,626	19,220
2,295	10.20	14.79	20,539	14,631	-3,564	4,635
2,069	11.00	16.08	7,855	3,182	-14,657	-5,506
1,585	12.73	19.33	-16,139	-23,153	-42,873	-34,786

\*Page number of the participant's DFBS where the factor is located.



## New York State Farm Business Charts

The Farm Business Chart is a tool which can be used in analyzing a business by drawing a line through the figure in each column which represents the current level of management performance. The figure at the top of each column is the average of the top 10 percent of the 321 farms for that factor. The other figures in each column are the average for the second 10 percent, third 10 percent, etc. Each column of the chart is independent of the others. The farms which are in the top 10 percent for one factor would not necessarily be the same farms which make up the top 10 percent for any other factor.

The cost control factors are ranked from low to high, but the lowest cost is not necessarily the most profitable. In some cases, the "best" management position is somewhere near the middle or average. Many things affect the level of costs, and must be taken into account when analyzing the factors.

### FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS 321 New York Dairy Farms, 1994

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv- alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
12.0	560	12,116,804	23,770	5.2	23	56	1,112,817
5.9	222	4,628,175	21,769	4.0	20	46	898,663
4.5	159	3,097,796	20,968	3.6	18	41	805,930
3.7	125	2,407,393	20,229	3.2	18	37	717,932
3.2	109	2,051,070	19,422	3.0	16	34	652,910
<hr/>							
2.8	93	1,715,708	18,856	2.8	16	32	603,031
2.5	75	1,352,622	18,020	2.5	15	30	552,825
2.2	63	1,137,044	17,044	2.1	14	27	491,227
1.9	51	888,899	15,864	1.9	13	24	433,739
1.4	40	655,673	13,700	1.4	10	20	335,490
<hr/>							
Cost Control							
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses per Cwt. Milk		
(10)	(10)	(11)	(11)	(10)	(10)		
\$390	16%	\$268	\$677	\$557	\$3.27		
525	22	326	814	686	3.86		
577	24	362	878	747	4.12		
646	26	401	938	800	4.35		
700	28	436	998	851	4.53		
<hr/>							
740	29	471	1,062	898	4.72		
786	31	508	1,119	955	4.90		
846	32	548	1,192	1,016	5.17		
918	35	618	1,295	1,092	5.46		
1,030	40	762	1,536	1,239	6.35		

\*Page number of the participant's DFBS where the factor is located.

**FARM BUSINESS CHART FOR  
FARM MANAGEMENT COOPERATORS  
321 New York Dairy Farms, 1994**

Milk Receipts Per Cow	Milk Receipts Per Cwt.	Oper. Cost Milk Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cow	Total Cost Production Per Cwt.
(10)	(10)	(10)	(10)	(10)	(10)
\$3,237	\$14.37	\$1,157	\$6.99	\$2,036	\$11.93
2,932	14.01	1,490	8.63	2,332	12.83
2,800	13.73	1,658	9.22	2,505	13.49
2,709	13.53	1,777	9.68	2,639	13.96
2,612	13.41	1,878	10.00	2,765	14.33
2,514	13.28	1,999	10.47	2,859	14.71
2,408	13.15	2,123	10.82	2,948	15.18
2,285	13.06	2,233	11.28	3,063	15.84
2,101	12.96	2,414	11.86	3,186	16.85
1,823	12.52	2,676	13.34	3,584	19.32

Profitability						
Net Farm Income Without Appreciation			Net Farm Income With Appreciation		Labor & Management Income	
Total	Per Cow	As % of Total Accrual Receipts	Total	Per Cow	Per Farm	Per Operator
(3)	(10)	(3)	(3)	(10)	(3)	(3)
\$239,265	\$933	30.1%	\$279,148	\$1,059	\$161,912	\$117,425
92,824	674	21.6	110,046	776	52,012	32,058
69,505	562	18.6	79,444	649	34,836	21,472
53,962	477	16.2	63,874	566	22,844	15,807
40,913	407	14.0	51,109	486	14,533	10,440
31,093	351	12.0	38,382	428	7,210	5,358
23,412	280	9.4	29,118	349	-687	-562
16,656	198	7.0	21,263	244	-8,059	-6,460
6,546	74	2.6	11,292	143	-19,089	-16,158
-19,060	-207	-9.3	-13,065	-137	-49,541	-43,229

Farm Business Charts for farms with freestall barns and 180 cows or less and more than 180 cows, and farms with conventional barns with 60 cows or less and more than 60 cows are shown on pages 28-31.

**Financial Analysis Chart**

The farm financial analysis chart on page 25 is designed just like the Farm Business Chart and may be used to assess the financial health of the farm business. Most of the financial measures used in the chart are defined on pages 6, 10, 14 and 20 of this publication. References to DFBS output page numbers for participating dairy farmers are provided in the table headings.

25  
**FINANCIAL ANALYSIS CHART**  
**321 New York Dairy Farms, 1994**

Liquidity (repayment)					
Planned Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio	Debt Payments as Percent of Milk Sales	Debt Per Cow	
(8)*	(12)	(8)	(8)	(5)	
\$43	\$804	4.63	5%	\$74	
204	615	1.66	9	669	
283	538	1.35	12	1,191	
332	475	1.15	14	1,727	
396	424	1.00	16	2,069	
-----					
452	387	0.87	18	2,387	
507	322	0.74	20	2,694	
562	243	0.61	23	3,015	
636	189	0.41	26	3,510	
796	0	-0.08	35	4,398	
-----					
Solvency				Profitability	
Leverge Ratio**	Percent Equity	Debt/Asset Ratio		Percent Rate of Return with appreciation on:	
		Current & Intermediate	Long Term	Equity	Total Capital
	(5)	(5)	(5)	(3)	(3)
0.01	99%	0.01	0.00	21%	13%
0.10	91	0.10	0.00	10	9
0.22	82	0.17	0.01	8	7
0.34	74	0.24	0.12	5	6
0.45	69	0.30	0.23	3	4
-----					
0.58	64	0.37	0.33	1	3
0.74	57	0.43	0.41	0	2
0.92	53	0.49	0.52	-2	0
1.20	45	0.58	0.64	-6	-1
3.54	31	0.81	0.91	-22	-6
-----					
Efficiency (Capital)					Change in Net Worth w/Appreciation
Asset Turnover (ratio)	Real Estate Investment Per Cow	Machinery Investment Per Cow	Total Farm Assets Per Cow		
(11)	(11)	(11)	(11)	(6)	
.75	\$1,152	\$571	\$4,262	\$182,925	
.60	1,924	751	5,128	63,674	
.55	2,232	902	5,569	41,117	
.50	2,491	1,040	5,948	29,544	
.47	2,764	1,167	6,368	20,624	
-----					
.43	3,033	1,290	6,842	14,936	
.39	3,377	1,443	7,447	8,501	
.36	4,026	1,683	8,055	1,168	
.32	4,698	1,969	8,891	-10,157	
.25	6,692	2,703	11,657	-40,417	

\*Page number of the participant's DFBS where the factor is located.

\*\*Dollars of debt per dollar of equity, computed by dividing total liabilities by total equity.

### **Comparison by Type of Barn and Herd Size**

When analyzing a dairy farm business by comparing it to a group of farms, it is important that the group of farms have used as many of the same physical characteristics as possible as the farm being analyzed. To assist in this endeavor, dairy farms in the summary have been divided into those with freestall and those with conventional housing. Conventional housing includes stanchion and tiestall barns. Within each group, is a further classification by size of the dairy herd.

The table on page 27 includes the average values for the resulting four groups of dairy farms. The average size of farms in the four groups ranges from 48 cows on the small conventional farms to 397 cows on the large freestall farms.

The large freestall farms averaged the highest milk output per cow and per worker, the lowest total costs of production and investment per cow, and the greatest returns to labor, management and capital. The small freestall farms showed average profits somewhat higher than the large conventional farm businesses.

Farm business charts have been computed for each of the four housing and herd size categories and are on pages 28-31. By comparing the farm's performance on the most appropriate business chart, a farm manager will be better able to evaluate his or her business performance.

### **Herd Size Comparisons**

A detailed comparison of profitability, financial situation and business analysis factors across herd sizes is contained on pages 42-51 of the 1994 State Summary\*. As herd size increases, the average profitability generally increases (pages 44-45). Net farm income without appreciation was \$216,491 per farm for the 300 or more herd size group and \$13,630 per farm for those with less than 40 cows. This relationship generally holds for all measures of profitability including rate of return on capital.

Farm net worth increases rapidly as herd size increases (pages 46-49)\*, even though percent equity was higher on the smaller farms. The group with less than 40 cows demonstrated the strongest ability to make debt payments.

Crop yields showed little relationship to herd size, but fertilizer and lime expenses, and machinery cost per tillable acre generally increased as herd size increased (pages 50-51)\*. The farms with 300 and more cows per farm averaged 23 percent more milk sold per cow than the smallest farms. All of the groups with 85 or more cows averaged above 19,000 pounds of milk sold per cow while the farms smaller than 85 cows averaged 17,700 pounds of milk sold per cow. Farm capital per worker increased, and farm capital per cow decreased as herd size increased. Milk sold per worker increased dramatically as herd size increased, ranging from 335,069 pounds at the lowest herd size category up to 1,023,849 pounds at the largest size category.

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\*Smith, Stuart F., Wayne A. Knoblauch, and Linda D. Putnam, Dairy Farm Management Business Summary, New York, 1994, Department of Agricultural, Resource, and Managerial Economics, Cornell University, R.B. 95-03, August 1995.

## SELECTED BUSINESS FACTORS BY TYPE OF BARN AND HERD SIZE

299 New York Dairy Farms, 1994

Item	Farms with:		Freestall	
	Conventional			
	<=60 Cows	>60 Cows	<=180 Cows	>180 Cows
Number of farms	69	71	96	63
<u>Cropping Program Analysis</u>				
Total Tillable acres	168	279	368	816
Tillable acres rented*	63	105	149	347
Hay crop acres*	109	156	185	350
Corn silage acres*	26	56	87	309
Hay crop, tons DM/acre	2.3	2.8	2.8	3.5
Corn silage, tons/acre	15.3	15.9	16.2	16.6
Oats, bushels/acre	93	63	44	74
Forage DM per cow, tons	8.1	8.6	8.5	7.3
Tillable acres/cow	3.5	3.2	3.1	2.1
Fert. & lime exp./tillable acre	\$17.07	\$23.51	\$23.47	\$29.43
Total machinery costs	\$22,500	\$40,129	\$57,579	\$158,497
Machinery cost/tillable acre	\$134	\$144	\$156	\$194
<u>Dairy Analysis</u>				
Number of cows	48	87	117	397
Number of heifers	38	69	94	296
Milk sold, lbs.	830,876	1,574,371	2,248,212	8,485,502
Milk sold/cow, lbs.	17,389	18,208	19,173	21,367
Operating cost of prod. milk/cwt.	\$9.79	\$10.26	\$10.40	\$10.67
Total cost of prod. milk/cwt.	\$15.99	\$14.91	\$14.58	\$13.19
Price/cwt. milk sold	\$13.33	\$13.39	\$13.43	\$13.48
Purchased dairy feed/cow	\$682	\$704	\$746	\$824
Purchased dairy feed/cwt. milk	\$3.92	\$3.87	\$3.89	\$3.86
Purchased grain & conc. as % of milk receipts	28%	28%	28%	28%
Purc. feed & crop exp./cwt. milk	\$4.64	\$4.69	\$4.72	\$4.51
<u>Capital Efficiency</u>				
Farm capital/worker	\$200,704	\$213,506	\$246,293	\$260,060
Farm capital/cow	\$7,801	\$6,977	\$7,050	\$5,774
Farm capital/tillable acre owned	\$3,518	\$3,449	\$3,776	\$4,889
Real estate/cow	\$3,937	\$3,229	\$3,144	\$2,533
Machinery investment/cow	\$1,517	\$1,359	\$1,411	\$916
Asset turnover ratio	0.35	0.41	0.44	0.58
<u>Labor Efficiency</u>				
Worker equivalent	1.86	2.83	3.36	8.82
Operator/manager equivalent	1.19	1.39	1.53	1.74
Milk sold/worker, lbs.	447,198	556,953	669,602	962,391
Cows/worker	26	30	35	45
Labor cost/cow	\$663	\$553	\$536	\$556
Labor cost/tillable acre	\$189	\$171	\$171	\$271
<u>Profitability &amp; Balance Sheet Analysis</u>				
Net farm income (without appreciation)	\$18,839	\$31,295	\$41,444	\$146,748
Labor & mgmt. income/operator	\$574	\$4,422	\$6,083	\$46,382
Return on all capital with appreciation	0.4%	2.6%	3.8%	8.3%
Farm debt/cow	\$2,025	\$1,952	\$2,286	\$2,502
Percent equity	74%	72%	67%	56%

\*Average of all farms, not only those reporting data.

# FARM BUSINESS CHART FOR SMALL CONVENTIONAL STALL DAIRY FARMS

69 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 1994

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv- alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
2.87	60	1,207,610	21,897	4.3	23	43	722,584
2.45	57	1,041,959	20,349	3.6	20	35	626,587
2.08	54	956,111	19,576	3.2	18	31	568,551
2.00	51	878,296	18,797	2.8	18	29	494,509
1.97	49	842,902	17,788	2.4	16	27	460,752
1.73	46	786,474	17,019	2.1	15	25	445,006
1.52	44	724,587	16,251	2.0	14	23	416,992
1.43	42	682,846	15,493	1.9	13	22	376,560
1.30	40	629,613	14,166	1.6	11	20	321,752
1.12	33	512,941	11,923	1.2	8	16	250,079
Cost Control							
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk		
(10)	(10)	(11)	(11)	(10)	(10)		
\$371	16%	\$278	\$715	\$506	\$3.17		
472	21	318	853	618	3.74		
526	24	366	935	667	3.96		
558	25	414	1,025	701	4.14		
594	27	443	1,082	747	4.36		
649	28	475	1,132	792	4.60		
707	30	505	1,200	837	4.94		
756	33	539	1,298	900	5.30		
840	36	591	1,401	1,021	5.57		
977	42	831	1,817	1,214	6.50		
Value and Cost of Production			Profitability				
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Inc. Per Oper.	Change in New Worth w/Apprec.	
(10)	(10)	(10)	Total	Per Cow	(3)	(6)	
\$2,925	\$5.82	\$12.53	\$48,399	\$1,005	\$25,239	\$43,090	
2,714	7.67	13.97	37,980	790	14,750	26,488	
2,610	8.60	14.47	28,428	623	10,716	19,929	
2,522	9.14	14.89	23,201	480	5,469	16,186	
2,390	9.43	15.36	20,798	413	1,841	12,027	
2,246	9.84	15.86	16,706	363	-1,561	8,102	
2,141	10.65	16.51	13,819	296	-4,656	2,548	
2,056	11.13	17.33	8,453	166	-8,365	-93	
1,895	11.63	18.26	52	1	-18,289	-7,737	
1,594	13.63	23.01	-14,172	-335	-31,199	-13,856	

\*Page number of the participant's DFBS where the factor is located.

# FARM BUSINESS CHART FOR LARGE CONVENTIONAL STALL DAIRY FARMS

71 Conventional Stall Dairy Farms with More Than 60 Cows, New York, 1994

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv- alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
4.69	133	2,488,241	22,189	5.1	24	48	916,052
3.57	108	2,024,167	20,323	3.9	20	39	693,816
3.10	97	1,858,587	19,731	3.5	18	36	651,968
2.84	91	1,640,996	19,070	3.1	17	33	615,426
2.65	81	1,514,509	18,843	2.9	16	32	582,121
2.53	77	1,367,445	18,327	2.7	15	30	532,500
2.48	72	1,283,594	17,406	2.4	15	28	500,895
2.28	68	1,234,765	16,563	2.2	13	26	455,380
2.08	66	1,155,076	15,388	2.0	12	24	424,899
1.78	63	1,045,775	13,835	1.5	9	21	375,069
Cost Control							
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk		
(10)	(10)	(11)	(11)	(10)	(10)		
\$301	14%	\$272	\$725	\$467	\$2.89		
462	19	331	831	651	3.66		
546	22	367	877	713	4.01		
624	26	397	945	762	4.32		
672	28	425	978	819	4.55		
734	30	459	1,031	876	4.78		
760	32	494	1,077	925	4.99		
824	33	539	1,142	978	5.20		
907	36	624	1,264	1,077	5.52		
1,028	41	710	1,386	1,224	6.59		
Value and Cost of Production			Profitability				
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Inc. Per Oper.	Change in New Worth w/Apprec.	
(10)	(10)	(10)	Total	Per Cow	(3)	(6)	
\$3,018	\$6.59	\$12.25	\$79,785	\$963	\$28,947	\$70,776	
2,742	8.57	13.35	56,214	662	20,229	33,799	
2,643	8.99	13.79	45,816	538	16,010	21,384	
2,563	9.61	14.19	37,113	469	12,516	16,067	
2,517	10.09	14.64	31,998	401	7,265	12,983	
2,445	10.55	15.00	27,327	341	3,312	7,707	
2,350	10.89	15.37	23,653	247	-3,056	3,124	
2,210	11.22	15.92	20,396	203	-10,172	-5,502	
2,016	11.76	16.80	6,705	91	-16,348	-16,437	
1,816	13.36	18.03	-22,986	-271	-40,921	-39,771	

\*Page number of the participant's DFBS where the factor is located.

**FARM BUSINESS CHART FOR SMALL FREESTALL DAIRY FARMS**

96 Freestall Barn Dairy Farms with 180 or Less Cows, New York, 1994

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv- alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
5.37	174	3,614,047	23,575	5.5	24	55	1,012,453
4.44	157	3,072,976	21,582	3.8	20	49	857,659
4.01	138	2,638,806	20,823	3.5	18	42	803,445
3.58	125	2,446,302	19,939	3.1	17	38	738,212
3.38	119	2,258,914	19,272	2.9	16	35	680,046
3.11	112	2,092,444	18,731	2.8	15	33	624,360
2.90	105	1,936,985	17,842	2.5	15	31	592,821
2.51	96	1,767,311	17,144	2.1	14	29	561,754
2.23	78	1,390,495	16,361	1.8	13	27	513,673
1.63	55	971,149	14,507	1.4	11	22	405,611
Cost Control							
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk		
(10)	(10)	(11)	(11)	(10)	(10)		
\$409	16%	\$277	\$673	\$610	\$3.25		
535	21	335	771	718	3.83		
565	23	374	855	762	4.12		
633	26	415	908	799	4.35		
681	28	456	969	830	4.55		
708	29	485	1,052	870	4.73		
761	31	528	1,139	933	4.95		
828	32	592	1,196	1,011	5.20		
931	35	670	1,299	1,090	5.42		
1,036	39	799	1,521	1,212	6.21		
Value and Cost of Production			Profitability				
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Inc. Per Oper.	Change in New Worth w/Apprec.	
(10)	(10)	(10)	Total	Per Cow	(3)	(6)	
\$3,179	\$7.55	\$11.98	\$106,326	\$891	\$51,358	\$82,133	
2,893	8.72	12.70	75,881	674	30,690	60,699	
2,777	9.29	13.30	67,616	586	22,390	46,520	
2,695	9.69	13.69	55,575	512	16,320	37,968	
2,589	9.86	14.10	47,285	410	9,432	28,369	
2,478	10.21	14.58	34,062	303	2,313	19,485	
2,388	10.55	15.18	24,908	228	-3,360	11,255	
2,321	11.24	15.91	14,979	134	-11,679	1,005	
2,201	11.94	16.77	1,574	15	-19,757	-17,501	
1,927	13.53	18.49	-29,062	-226	-55,063	-53,185	

\*Page number of the participant's DFBS where the factor is located.



**FARM BUSINESS CHART FOR LARGE FREESTALL DAIRY FARMS**

63 Freestall Barn Dairy Farms with More Than 180 Cows, New York, 1994

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv- alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
20.63	1,088	23,351,762	24,801	5.5	22	65	1,306,713
11.96	539	11,657,338	23,472	4.4	20	53	1,093,175
10.13	420	9,575,213	22,655	4.1	19	47	1,011,822
8.52	365	7,921,542	21,928	3.7	18	46	964,401
7.38	311	6,515,416	21,395	3.5	16	44	933,249
6.76	243	5,612,972	20,967	3.2	15	42	901,922
6.03	234	4,922,221	20,780	3.1	15	40	850,753
5.39	225	4,551,060	20,134	2.8	15	37	813,336
4.88	213	4,167,979	18,893	2.4	14	35	717,586
3.79	192	3,391,553	15,710	1.6	12	30	616,668
Cost Control							
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk		
(10)	(10)	(11)	(11)	(10)	(10)		
\$535	21%	\$233	\$606	\$706	\$3.84		
688	24	295	755	871	4.05		
728	25	330	858	895	4.24		
750	27	357	895	917	4.40		
782	27	386	943	954	4.51		
804	28	426	982	986	4.65		
847	29	468	1,039	1,019	4.74		
881	31	514	1,110	1,053	4.85		
928	32	547	1,158	1,102	5.12		
1,012	35	614	1,324	1,208	5.62		
Value and Cost of Production			Profitability				
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Inc. Per Oper.	Change in New Worth w/Apprec.	
(10)	(10)	(10)	Total	Per Cow	(3)	(6)	
\$3,443	\$8.83	\$11.90	\$507,138	\$668	\$289,802	\$432,825	
3,188	9.72	12.25	230,200	548	99,946	135,938	
3,073	10.00	12.51	159,773	448	68,360	103,969	
2,969	10.33	12.91	126,018	405	44,867	73,654	
2,889	10.66	13.38	112,980	373	28,779	59,734	
2,831	10.84	13.84	98,201	335	19,135	37,055	
2,760	11.10	14.02	82,247	312	13,143	23,094	
2,676	11.58	14.30	65,473	236	4,724	10,247	
2,529	11.96	14.62	21,692	90	-8,715	-13,935	
2,109	12.82	15.69	-12,379	-58	-50,954	-49,453	

\*Page number of the participant's DFBS where the factor is located.

## IDENTIFY AND SET GOALS

If businesses are to be successful, they must have direction. Written goals help provide businesses with an identifiable direction over both the long and short term. Goal setting is as important on a dairy farm as it is in other businesses. Written goals are a tool which farm operators can use to ensure that the business continues to move in the proper direction. Goals should be SMART:

1. Goals should be Specific.
2. Goals should be Measurable.
3. Goals should be Achievable but challenging.
4. Goals should be Rewarding.
5. Goals should designate a Time when each goal will be achieved.

Goal setting on a dairy farm does not have to be a complex process. In many cases it provides a process for writing down and agreeing on goals that you have already given some thought to. It is also important to remember that once you write out your goals they are not cast in concrete. If a change takes place which has a major impact on the farm business, the goals should be reworked to accommodate that change. Refer to your goals as often as necessary to keep the farm business progressing.

It is important to identify both objectives (long-range) and goals (short-range) when looking at the future of your farm business.

A suggested format for writing out your goals is as follows:

- a. Begin with a mission statement which describes why the business exists based on the preferences and values of the owners.
- b. Identify 4-6 objectives.
- c. Identify SMART goals.

### Worksheet for Setting Goals

#### I. Mission and Objectives

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## What

## When

## Who is Responsible

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are organized into four distinct vertical columns, each containing ten evenly spaced lines. There are no margins, text, or other markings on the page.

The Farm Business and Financial Analysis Charts on pages 22-25 can be used to help identify strengths and weaknesses of your farm business. Identify three major strengths and three areas of your farm business that need improvement.

**Strengths:** \_\_\_\_\_

Needs improvement:\_\_\_\_\_

[illegible]

**GLOSSARY AND LOCATION OF COMMON TERMS**

**Accounts Payable** - Open accounts or bills owed to feed and supply firms, cattle dealers, veterinarians and other providers of farm services and supplies.

**Accounts Receivable** - Outstanding receipts from items sold or sales proceeds not yet received, such as the payment for December milk sales received in January.

**Accrual Expenses** - (defined on page 3)

**Accrual Receipts** - (defined on page 4)

**Annual Cash Flow Statement** - (defined on page 12)

**Appreciation** - (defined on page 5)

**Asset Turnover Ratio** - The ratio of total farm income to total farm assets, calculated by dividing total accrual operating receipts plus appreciation by average total farm assets.

**Balance Sheet** - A "snapshot" of the business financial position at a given point in time, usually December 31. The balance sheet equates the value of assets to liabilities plus net worth.

**Capital Efficiency** - The amount of capital invested per production unit. Relatively high investments per worker with low to moderate investments per cow imply efficient use of capital.

**Cash From Nonfarm Capital Used in the Business** - Transfers of money from nonfarm savings or investments to the farm business where it is used to pay operating expenses, make debt payments and/or capital purchases.

**Cash Flow Coverage Ratio** - (defined on page 14)

**Cash Paid** - (defined on page 2)

**Cash Receipts** - (defined on page 4)

**Change in Accounts Payable** - (defined on page 3)

**Change in Accounts Receivable** - (defined on page 4)

**Change in Inventory** - (defined on page 2)

**Current Portion** - (defined on page 7)

**Dairy (farm)** - A farm business where dairy farming is the primary enterprise, operating and managing this farm is a full-time occupation for one or more people and cropland is owned.

**Dairy Cash-Crop (farm)** - Operating and managing this farm is the full-time occupation of one or more people, cropland is owned but crop sales exceed 10 percent of accrual milk receipts.

**Debt Per Cow** - Total end-of-year debt divided by end-of-year number of cows.

**Debt to Asset Ratios** - (defined on page 10)

**Deferred Taxes** - (defined on page 9)

**Dry Matter** - The amount or proportion of dry material that remains after all water is removed. Commonly used to measure dry matter percent and tons of dry matter in feed.

**Equity Capital** - The farm operator/manager's owned capital or farm net worth.

**Expansion Livestock** - Purchased dairy cattle and other livestock that cause an increase in herd size from the beginning to the end of the year.

**Farm Debt Payments as Percent of Milk Sales** - Amount of milk income committed to debt repayment, calculated by dividing planned debt payments by total milk receipts. A reliable measure of repayment ability, see page 14.

**Farm Debt Payments Per Cow** - Planned or scheduled debt payments per cow represent the repayment plan scheduled at the beginning of the year divided by the average number of cows for the year. This measure of repayment ability is used in the Financial Analysis Chart.

**Financial Lease** - A long-term non-cancellable contract giving the lessee use of an asset in exchange for a series of lease payments. The term of a financial lease usually covers a major portion of the economic life of the asset. The lease is a substitute for purchase. The lessor retains ownership of the asset.

**Income Statement** - A complete and accurate account of farm business receipts and expenses used to measure profitability over a period of time such as one year or one month.

**Labor and Management Income** - (defined on page 6)

**Labor and Management Income Per Operator** - The return to the owner/manager's labor and management per full-time operator.

**Labor Efficiency** - Production capacity and output per worker.

**Liquidity** - Ability of business to generate cash to make debt payments or to convert assets to cash.

**Net Farm Income** - (defined on page 5)

**Net Worth** - The value of assets less liabilities equal net worth. It is the equity the owner has in owned assets.

**Operating Costs of Producing Milk** - (defined on page 19)

**Opportunity Costs** - The cost or charge made for using a resource based on its value in its most likely alternative use. The opportunity cost of a farmer's labor and management is the value he/she would receive if employed in his/her most qualified alternative position.

**Other Livestock Expenses** - All other dairy herd and livestock expenses not included in more specific categories. Other livestock expenses include; bST, DHIC, registration fees and transfers.

**Part-Time Cash-Crop Dairy (farm)** - Operating and managing this farm is not a full-time occupation, crop sales exceed 10 percent of accrual milk receipts and cropland is owned.

**Part-Time Dairy (farm)** - Dairy farming is the primary enterprise, cropland is owned but operating and managing this farm is not a full-time occupation for one or more people.

**Personal Withdrawals and Family Expenditures Including Nonfarm Debt Payments** - All the money removed from the farm business for personal or nonfarm use including family living expenses, health and life insurance, income taxes, nonfarm debt payments, and investments.

**Profitability** - The return or net income the owner/manager receives for using one or more of his or her resources in the farm business. True "economic profit" is what remains after deducting all the costs including the opportunity costs of the owner/manager's labor, management, and equity capital.

**Purchased Inputs Cost of Producing Milk** - (defined on page 19)

**Repayment Analysis** - An evaluation of the business' ability to make planned debt payments.

**Replacement Livestock** - Dairy cattle and other livestock purchased to replace those that were culled or sold from the herd during the year.

**Return on Equity Capital** - (defined on page 7)

**Return on Total Capital** - (defined on page 7)

**Solvency** - The extent or ability of assets to cover or pay liabilities. Debt/asset and leverage ratios are common measures of solvency.

**Total Costs of Producing Milk** - (defined on page 19)

**Whole Farm Method** - A procedure used to calculate costs of producing milk on dairy farms without using enterprise cost accounts. All non-milk receipts are assigned a cost equal to their sale value and deducted from total farm expenses to determine the costs of producing milk.

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OTHER A.R.M.E. EXTENSION BULLETINS

No. 96-01	Fruit Farm Business Summary Lake Ontario Region New York 1994	Gerald B. White Alison M. DeMarree Linda D. Putnam
No. 96-02	Micro DFBS A Guide to Processing Dairy Farm Business Summaries in County and Regional Extension Offices for Micro DFBS Version 3.2	Linda D. Putnam Wayne A. Knoblauch Stuart F. Smith
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