DAIRY FARM BUSINESS SUMMARY

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INTENSIVE GRAZING FARMS NEW YORK 2006

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Intensive Grazing Farms
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This report was written by the Intensive Grazing Committee consisting of George Conneman, Professor Emeritus, Farm Management; Jason Karszes, Senior Extension Associate, PRO-DAIRY; James Grace, Extension Educator, Steuben, Chemung and Schuyler Counties; Janice Degni, Area Field Crops Specialist, South Central New York Area Dairy and Field Crop Extension Program; David Munsee, Extension Educator, Chautauqua County; Ed Staehr, Extension Associate, Applied Economics and Management; Charles Kyle, Extension Educator, Onondaga County; and Linda Putnam, Extension Support Specialist, Farm Management. The committee appreciates the assistance from all the Cornell Cooperative Extension Educators that collected the Dairy Farm Business Summary data, as well as the following that collected the grazing practices survey data: Consultant: George Allhusen; Extension Educators: Sandy Buxton, Mariane Kiraly, Jim Manning, Anita Deming and Joan Petzen.

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INTENSIVE GRAZING FARMS

INTRODUCTION

Dairy farm managers throughout New York State have been participating in Cornell Cooperative Extension's farm business summary and analysis program since the early 1950's. Managers of each participating farm business receive a comprehensive summary and analysis of the farm business.

The farms included in the study are a subset of New York State farms participating in the Dairy Farm Business Summary and Analysis Program (DFBS). Forty-four New York farms indicated that they grazed dairy cows at least three months, moving to a fresh paddock at least every three days and more than 30% of the forage consumed during the growing season was from grazing. Operators of these 44 farms were asked to complete a grazing practices survey. Thirty-three of the farms did complete it. The investigators had special interest in practices used on farms with above average profitability. **Therefore the study centered on 42 New York farms which were not organic farms, were not first year grazers and on which at least 30 percent of forage consumed during the grazing season was grazed. The "Average Top 30% Farms" are twelve farms with the highest labor and management incomes per operator per cow and are compared to the average of the 42 farms.**

Program Objective

The primary objective of the dairy farm business summary, DFBS, is to help farm managers improve the business and financial management of their business through appropriate use of historical farm data and the application of modern farm business analysis techniques. This information can also be used to establish goals that will enable the business to better meet its objectives. In short, DFBS provides business and financial information needed in identifying and evaluating strengths and weaknesses of the farm business.

Format Features

The first section compares intensive grazing farms that participated in the Dairy Farm Business Summary project in 2005 and 2006. A ten-year comparison is also included this year. The second section of this publication reports data from the grazing practices survey. A comparison of intensive grazing farms with non-grazing farms is included on page 10. The third section, Case Studies, describes three grazing farms. The fourth section summarizes grazing farms by herd size.

The summary and analysis portion of this report follows the same general format as in the 2006 DFBS individual farm report received by all participating dairy farmers. It may be used by any dairy farm manager who wants to compare his or her business with the average data of intensive grazing farms. Non-DFBS participants can download a DFBS Data Check-In Form at http://dfbs.cornell.edu . After collecting data on the form, it can be entered in the U.S. Top Dairies business summary program at the same website to obtain a summary of their business.

The summary and analysis portion of the report features:

(1) an income statement including accrual adjustments for farm business expenses and receipts, as well as measures of profitability with and without appreciation,

(2) a complete balance sheet with analytical ratios;

(3) a statement of owner equity which shows the sources of the change in owner equity during the year;

(4) a cash flow statement and debt repayment ability analysis;

(5) an analysis of crop acreage, yields, and expenses;

(6) an analysis of dairy livestock numbers, production, and expenses; and

(7) a capital and labor efficiency analysis.

PROGRESS OF THE FARM BUSINESS

Comparing your business with average financial data from Dairy Farm Business Summary (DFBS) grazing farms that participated for the last two years can be helpful in comparing performance[1] and establishing goals for your business. 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. Please refer to the table on page 3 for selected factors from 35 farms that were grazing in both 2005 and 2006 and participated in the DFBS project for both years.

These 35 farms increased in herd size from 102 cows in 2005 to 106 cows in 2006. Along with the increase in cow numbers, the average number of heifers increased from 82 to 88 head. While the average number of cows did increase, the total milk produced for the year remained unchanged, with a decrease of 4.1 percent in milk sold per cow offsetting the increase in cows.

There was a 0.7 percent decrease in worker equivalents, to 2.81, which resulted in an increase of 5.6 percent in cows per worker equivalent. Milk sold per worker equivalent increased only 0.8 percent, with the increase in cows per worker offset by the decrease in milk sold per cow. With milk sold per worker equivalent relatively unchanged, there was an increase of 4.0 percent in hired labor costs per hundredweight of milk produced. This increase resulted from an 8.9 percent increase in the average cost per worker equivalent, which was $27,756 for 2006.

The 2006 growing season was variable across New York State with many areas experiencing wet conditions for most of the year. While the wet conditions and many days of rainfall impacted corn yields, which decreased 18.4 percent, hay yields increased 10 percent and grazing pastures grew throughout the year. This minimized the amount of forage supplementation needed during the grazing season.

The major factor impacting farm profitability in 2006 was the milk price, which fell 12.9 percent, from $16.23 per hundredweight in 2005 to $14.13 per hundredweight in 2006. With this large decrease in milk price, coupled with the decrease in milk sold per cow, gross milk sales per cow fell 16.5 percent to $2,411. While milk sales fell, the beef market remained strong, and dairy cattle sales per cow increased 2.5 percent to $323 per cow. With the decrease in milk prices, the USDA MILC program provided payments during the year, leading to an increase of government receipts from $0.41 per hundredweight in 2005 to $0.86 per hundredweight in 2006.

While farm revenue decreased from the prior year, costs to operate the farm showed little change. Total farm operating costs per hundredweight increased 0.6 percent to $14.32 per hundredweight. Purchased grain and concentrates decreased 3.8 percent to $4.04 per hundredweight, but this decrease was offset by the 21.1 percent increase in interest costs per hundredweight. The rise in interest costs was primarily due to higher interest rates, which had changed during the last quarter of 2005.

The amount of investment per cow continued its upward trend, increasing from $7,164 to $7,374 or 2.9 percent. This increase continued even though the average farm size had also increased. This resulted from the value of machinery and equipment increasing and cattle and land being worth more than in 2005. Debt per cow increased 2.6 percent to $2,084 for 2006.

With little change in cost of operations, and the large decrease in milk prices, profitability decreased from 2005 to 2006, even though increases in dairy cattle sales and government receipts offset some of the decrease in milk prices.

Profitability Measures

- Net farm income without appreciation decreased 38.4 percent to $40,468.
- Net farm income per cow without appreciation decreased from $644 to $382.
- Net farm income with appreciation decreased 37.7 percent to $59,700.
- Labor and management income per operator decreased from $23,293 to $3,251.
- Rate of return on equity capital without appreciation decreased from 2.7 percent to -1.9 percent.
- Rate of return on all capital without appreciation decreased from 3.4 percent to 0.2 percent.

2006 was a challenging dairy year for grazing farms. Even with growing conditions leading to high quantities of grass, there were challenges in harvesting feed for winter needs, ability to maintain milk production, and inability to lower costs to offset the large decrease in milk prices received. While all measures of profitability decreased to levels not seen since 2002–2003, net worth continued to increase by 4.1 percent to $584,736 on these farms. This increase is primarily due to increased values of assets.

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[1]The importance of trend analysis is to identify what areas changed, ask why they changed, and look at what you can do differently in the future to influence that change. If you would like help in developing and looking at the trends in your business, contact your local Cornell Cooperative Extension office and become involved in a financial management education program.

PROGRESS OF THE FARM BUSINESS

Same 35 Grazing Dairy Farms, 2005 & 2006

Selected Factors	Average of 35 Farms 2005	Average of 35 Farms 2006	Percent Change
Size of Business			
Average number of cows	102	106	3.9
Average number of heifers	82	88	7.3
Milk sold, lbs.	1,810,028	1,810,661	0.0
Worker equivalent	2.83	2.81	-0.7
Total nontillable and tillable pasture & hay acres	268	250	-6.7
Total nontillable pasture & tillable acres	331	321	-3.0
Rates of Production			
Milk sold per cow, lbs.	17,780	17,054	-4.1
Hay DM per acre, tons	2.0	2.2	10.0
Corn silage per acre, tons	18.5	15.1	-18.4
Labor Efficiency & Costs			
Cows per worker	36	38	5.6
Milk sold per worker, lbs.	639,586	644,363	0.8
Hired labor cost per cwt.	$1.50	$1.56	4.0
Hired labor cost per worker	$25,482	$27,756	8.9
Hired labor cost as % of milk sales	9.2%	11.1%	20.7
Cost Control			
Grain & concentrate purchased as % of milk sales	26%	29%	11.5
Grain & concentrate per cwt. milk	$4.20	$4.04	-3.8
Dairy feed & crop expense per cwt. milk	$5.43	$5.30	-2.4
Labor & machinery costs per cow	$1,320	$1,309	-0.8
Total farm operating costs per cwt. sold	$14.23	$14.32	0.6
Interest costs per cwt. milk	$0.57	$0.69	21.1
Milk marketing costs per cwt. milk sold	$0.91	$0.97	6.6
Operating cost of producing cwt. of milk	$11.20	$10.57	-5.6
Total costs of producing cwt. of milk	$16.91	$16.30	-3.6
Capital Efficiency (average for the year)			
Farm capital per cow	$7,164	$7,374	2.9
Mach. & equipment per cow	$1,254	$1,289	2.8
Asset turnover ratio	0.52	0.44	-15.4
Income Generation			
Gross milk sales per cow	$2,886	$2,411	-16.5
Gross milk sales per cwt.	$16.23	$14.13	-12.9
Net milk sales per cwt.	$15.32	$13.16	-14.1
Dairy cattle sales per cow	$315	$323	2.5
Dairy calf sales per cow	$70	$50	-28.6
Government receipts per cwt.	$0.41	$0.86	109.8
Profitability			
Net farm income without appreciation	$65,714	$40,468	-38.4
Net farm income with appreciation	$95,783	$59,700	-37.7
Labor & mgt. income per operator/manager	$23,293	$3,251	-86.0
Labor & mgt. income per oper./manager per cow	$228	$31	-86.4
Rate of return on equity capital without apprec.	2.7%	-1.9%	-170.4
Rate of return on all capital without appreciation	3.4%	0.2%	-94.1
Financial Summary			
Farm net worth, end year	$561,990	$584,736	4.1
Debt to asset ratio	0.26	0.28	7.7
Farm debt per cow	$2,031	$2,084	2.6

TEN YEAR COMPARISON: SELECTED BUSINESS FACTORS
New York Intensive Grazing Dairy Farms, 1997 to 2006

Item	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Number of farms	46	59	65	65	54	30	27	30	42	42
Cropping Program										
Total tillable acres	234	247	227	271	288	243	270	267	264	254
Tillable acres rented	83	90	105	133	142	125	126	96	110	145
Hay crop acres	121	126	120	139	152	119	149	133	143	145
Corn silage acres	49	45	42	44	37	22	28	38	34	41
Hay crop, tons DM/acre	2.1	2.4	2.1	2.7	2.2	2.2	3.7	2.9	1.9	2.2
Corn silage, tons/acre	14.1	14.8	13.9	12.0	15.5	12.4	15.3	15.3	14.9	15.5
Fertilizer & lime exp./tillable acre	$20	$25	$25	$20	$22	$30	$21	$31	$31	$29
Machinery cost/cow	$421	$448	$545	$501	$528	$439	$447	$598	$586	$590
Dairy Analysis										
Number of cows	82	83	79	93	94	94	100	104	95	101
Number of heifers	57	62	60	67	70	68	72	74	76	83
Milk sold, cwt.	14,227	14,652	14,477	15,860	15,396	15,687	15,637	17,744	15,868	17,168
Milk sold/cow, lbs.	17,277	17,653	18,346	17,107	16,295	16,618	15,684	17,144	16,783	17,054
Purchased dairy feed/cwt. milk	$4.22	$3.98	$3.65	$3.88	$4.19	$4.21	$4.45	$4.76	$4.48	$4.41
Purchased grain & concentrate as % of milk receipts	30%	24%	23%	27%	23%	28%	29%	25%	26%	30%
Purchased feed & crop exp/cwt.milk	$4.97	$4.81	$4.39	$4.56	$4.94	$4.99	$5.06	$5.55	$5.34	$5.30
Operating cost producing milk/cwt.	$11.08	$10.53	$10.53	$10.17	$11.71	$9.76	$9.53	$11.83	$11.35	$10.58
Veterinary & medicine exp./cow	$55	$55	$68	$66	$67	$57	$59	$74	$67	$83
Capital Efficiency										
Farm capital/cow	$6,419	$6,438	$6,236	$6,445	$6,841	$5,870	$6,286	$7,300	$7,526	$7,667
Real estate/cow	$3,112	$3,025	$2,508	$2,791	$2,951	$2,389	$2,738	$3,475	$3,369	$3,249
Machinery investment/cow	$1,136	$1,137	$1,291	$1,316	$1,319	$1,109	$1,191	$1,287	$1,337	$1289
Asset turnover ratio	0.42	0.51	0.51	0.46	0.51	0.46	0.46	0.50	0.48	0.42
Labor Efficiency										
Worker equivalent	2.79	2.75	2.63	2.76	2.78	2.59	2.71	2.90	2.70	2.80
Operator/manager equivalent	1.34	1.30	1.41	1.35	1.40	1.24	1.36	1.50	1.32	1.39
Milk sold/worker, lbs.	509,941	532,809	550,437	574,630	553,819	605,677	577,020	611,862	587,165	614,066
Cows/worker	29	30	30	34	34	36	37	36	35	36
Labor cost/cow	$651	$642	$715	$644	$717	$683	$681	$732	$746	$744
Hired labor exp./hired worker equiv.	$20,012	$19,706	$21,189	$20,024	$24,430	$24,009	$22,912	$25,966	$25,645	$26,504
Profitability & Financial Analysis										
Labor & mgmt. income/operator	$-2,348	$26,364	$13,203	$1,693	$15,205	$2,482	$9,638	$22,397	$17,801	$1,606
Labor &mgmt income/operator/cow	$-29	$318	$167	$18	$162	$26	$96	$215	$187	$16
Net farm income/cow w/o apprec.	$240	$703	$543	$310	$555	$322	$449	$652	$572	$383
Farm net worth, end year	$341,050	$376,720	$364,069	$410,672	$477,037	$369,123	$454,465	$578,704	$535,182	$584,266
Percent equity	64%	68%	73%	67%	71%	66%	69%	73%	72%	74%

INTENSIVE GRAZING SURVEY SUMMARY

From the survey data of the 33 selected grazing farms that completed the grazing practices survey, analysis of average production levels and profitability measures are shown below. Labor and management income per operator per cow without appreciation was used to evaluate whether certain practices contributed favorably to improved profitability. Labor and management income per operator per cow is a measure of the net annual return after the operators' unpaid family labor and an equity charge for capital used in the business has been applied. This is the best way to compare diverse businesses that have high debt to those with no debt and those that may rely heavily on unpaid labor with those that have all paid labor. The farms were divided into two groups comprised of the upper 30 percent and the lower 70 percent scaled from the highest to lowest labor and management income per operator per cow.

SELECTED PRODUCTION AND PROFITABILITY MEASURES

Intensive Grazing Dairy Farms, 2006

	Average (33 farms)	Average of the Upper 30% (10 farms)	Average of the Lower 70% (23 farms)
Labor and management income per cow	$58	$385	$-84
Average number of cows	118	160	100
Milk sold per cow, pounds	17,218	17,492	17,099
Operating cost of producing milk per cwt.	$10.22	$7.45	$11.42
Total cost of producing milk per cwt.	$17.55	$13.83	$19.17

Comparison of survey data on the various grazing practices, such as water availability, supplemental feeding, pasture species, pasture management, milking system type and frequency of rotation are shown as follows:

GRAZING PRACTICES

Intensive Grazing Dairy Farms, 2006

	Number of Farms Responding	Average of All Farms Answering Question	Average of the Upper 30%	Average of the Lower 70%
Experience				
Average years of farming experience	31	26	29	24
Average years of grazing experience	31	13	16	11
Farm Characteristics				
Percent of farms with seasonal or semi-seasonal calving	33	30%	20%	30%
Percent of farms with a parlor milking system	31	42%	33%	45%
Pasture in the Ration				
Average percent forage from pasture	29	68	67%	70%
Average length (days) of grazing season	31	184	199	177
Average pounds of grain fed while grazing	29	15.8	15.7	15.0
Average pounds of grain fed in winter	27	17.6	18.3	17.3
Average pounds of forage dry matter fed while grazing	29	11.2	9.5	12.0
Average pounds of forage dry matter from grazing	29	19.4	18.3	19.8
Average pounds of forage dry matter fed in winter	27	29.6	26.8	30.8
Pasture Management				
Percent rotated after each milking	32	53%	50%	55%
Percent rotated daily	32	25%	20%	27%
Percent rotated every other day	32	6%	10%	5%
Percent other rotation	32	16%	20%	18%
Percent applied commercial fertilizer to pasture	30	50%	70%	40%
Percent applied manure to pasture	30	53%	50%	55%
Percent applied lime to pasture	30	23%	20%	25%
Percent that clipped pasture	30	85%	88%	82%
Percent with a weed problem	31	42%	40%	38%
Percent with water in every paddock	32	63%	44%	70%
Percent with pasture re-seeded in past 10 years	25	76%	90%	40%
Percent that mechanically harvested pastures	25	72%	80%	40%
Most common pasture species				
First		Orchardgrass	Orchardgrass	Orchardgrass
Second		Native White Clover	Native White Clover	Native White Clover
Third		Bluegrass	Bluegrass	Bluegrass

Practices to increase pasture quality tended to indicate higher profitability. Those practices included having more gazing experience, rotating pastures more often, use of fertilizer, clipping weeds, re-seeding pasture, and mechanically harvesting pasture before it becomes overgrown.

Breeds

Holstein was the most common breed with 48 percent of the farms having 95 percent or greater Holstein animals. The second most common were crossbreeds at 21 percent of farms. Farms with Holstein animals tended to have higher milk production and higher profitability both per cow and per hundredweight.

FARMS SCALED BY BREED OF HERD
Intensive Grazing Farms, 2006

	Number	Milk Production	Labor & Mgmt. Income per Operator Per Cow	Labor & Mgmt. Income per Operator Per Cwt.	Cull Rate (Sold for Beef or Died)
Farms that are 95+% Holstein	16	20,034	$156	$0.13	29%
Farms that are less than 95% Holstein	17	14,567	-$37	$-0.35	21%

Supplemental Feeding

Twenty-nine farms gave detailed ration data and the table below compares the 16 farms that fed corn silage to the 13 that did not. Farms that incorporated corn silage into their grazing forages also tended to feed more grain and have higher milk production. These farms did not always have higher profitability. In past years, the feeding of corn silage has shown to be profitable some years and unprofitable others, while supplementation of pasture in general has always shown to be a profitable practice. For a more specific look at what was being fed to these grazing herds, see the following section "Grazing Season Ration Details".

SUPPLEMENTAL FEEDING
Intensive Grazing Farms, 2006

	Upper 30% (9 farms)		Lower 70% (20 farms)	
	Corn Silage (6)	No Corn Silage (3)	Corn Silage (10)	No Corn Silage (10)
Labor & management income per oper. per cow	$1014	$806	$-34	$ -178
Milk sold per cow, pounds	19,728	15,000	18,905	14,296
Grain fed in summer, pounds dry matter	16.6	14.0	13.8	16.3
Corn silage fed in summer, pounds dry matter	9.7	-	7.4	-
Other forage fed in summer, pounds dry matter	4.0	2.2	3.4	5.6
Percent forage from pasture	54%	94%	60%	81%

Grazing Season Ration Details

The 9 farms in the upper 30 percent of profitability fed an average of 15 pounds dry matter of grain during the grazing season. Five farms fed corn silage at an average of 9.2 pounds dry matter. None fed haylage or baleage. Four farms fed dry hay at an average of 4 pounds dry matter.

The 19 farms in the lower 70 percent of profitability fed an average of 15.8 pounds dry matter of grain during the grazing season. Nine of the farms fed corn silage at an average of 7.3 pounds dry matter. Five fed haylage at an average of 8.3 pounds dry matter. Four farms fed baleage at an average of 7.2 pounds dry matter and three farms fed dry hay at an average of 3.6 pounds dry matter.

Frequency of Rotation

Seventeen of the farms rotated their pastures for milk cows after each milking, 8 of the farms rotated pasture every day, 2 farms rotated pasture every other day, and 5 farms rotated based on field conditions. The table below compares the rotation frequency to milk production and labor and management income per operator per cow.

ROTATION FREQUENCY
Intensive Grazing Farms, 2006

	Upper 30% (9 farms)		Lower 70% (19 farms)	
	Rotate After Each Milking (5)	Other Rotation Schedule (5)	Rotate After Each Milking (12)	Other Rotation Schedule (10)
Milk sold per cow, pounds	17,497	19,067	15,773	17,707
Labor and management income per operator per cow	$385	$462	$-55	$-138

Water Source

Seventeen farms provided the majority of water from a well while the remaining sixteen provided water from a natural source (pond-4, spring-5, stream-2 and municipal-1).

WATER SOURCE
Intensive Grazing Farms, 2006

	Upper 30% (9 farms)		Lower 70% (19 farms)	
	Well (5)	Other (4)	Well (12)	Other (8)
Milk sold per cow, pounds	17,199	18,972	15,945	18,250
Labor and management income per operator per cow	$400	$469	$-74	$-1.91

Milking System

Farms utilizing some sort of a parlor (herringbone, parallel, rotary, flat barn or other) were separated from those utilizing a pipeline. The type of milking system may impact the degree of control the manager has over the supplemental feeding system and the capital investment level of the farm. In total there were 13 parlor systems (12 pit parlors, 1 flat parlor) and the remaining 18 farms used pipeline systems.

MILKING SYSTEM
Intensive Grazing Farms, 2006

	Upper 30%		Lower 70%	
	Pipeline (6)	Parlor (3)	Pipeline (12)	Parlor (10)
Milk sold per cow, pounds	18,457	17,543	17,347	16,277
Labor and management income per operator per cow	$468	$332	$-45	$-113
Average number of cows	64	316	62	172

Commercial Fertilizer

Fifteen farms applied fertilizer to the paddocks during the growing season. The majority of farms applied urea and others applied a blended fertilizer. Most applied all the fertilizer in one application in the spring to early June while others applied fertilizer at multiple times throughout the season. It is not possible to compare pasture yields in the different systems because quantities were not measured from farms that mechanically harvested hay from pasture.

COMMERCIAL FERTILIZER
Intensive Grazing Farms, 2006

	Upper 30%		Lower 70%	
	Applied Fertilizer (7)	Did Not Apply Fertilizer (3)	Applied Fertilizer (8)	Did Not Apply Fertilizer (12)
Milk sold per cow, pounds	19,864	17,231	15,074	16,967
Labor and management income per operator per cow	$416	$490	$-186	$-56
Stocking rate, cows per acre	0.9	0.6	1.2	1.2
Percent forage from pasture	72%	59%	68%	72%
Most common product applied	Urea		Urea	

Intensive Grazing Satisfaction Comments

On a scale of 1 to 5, with 5 being the highest, 32 farms responded with the average rating of grazing satisfaction as 4.4 with 18 farms responding 5 (very satisfied), 8 responding 4 (satisfied), and 5 responding 3 (equally satisfied). When asked whether their lifestyle has improved with the adoption of rotational grazing, 29 farms responded with 24 saying "yes" and 5 saying "no".

Grazing Trends

The table below compares key figures from 1996 (the first year of the intensive grazing summary), 2006, and an 11-year average (not the same farms all 11 years). Cow numbers have increased but milk sold per cow has remained basically the same. [3] Operating cost of producing milk in 2006 averaged $0.18 below the 11-year average and $0.71 below 1996. Net farm income per cow without appreciation was $84 lower in 2006 than the 11-year average. Due to the lower milk price in 2006, the grain cost was higher as a percent of milk receipts and on a per hundredweight basis.

2006 GRAZING INFORMATION COMPARED TO 1996 AND 1996 – 2006 AVERAGE
Intensive Grazing Farms, 1996 – 2006

	59 Grazing Dairy Farms, 1996 Average	42 Grazing Dairy Farms, 2006 Average	47 Grazing Dairy Farms, 1996 – 2006 Average
Number of cows	78	101	91
Milk sold per cow, pounds[2]	17,270	17,054	17,021
Operating cost of producing milk per cwt.	$11.29	$10.58	$10.76
Net farm income per cow without apprec.	$409	$383	$467
Grain and concentrate as % of milk receipts	30%	30%	27%
Grain and concentrate expense per cwt. milk	$4.41	$4.04	$3.88
Price of milk per cwt.	$14.78	$14.09	$14.83

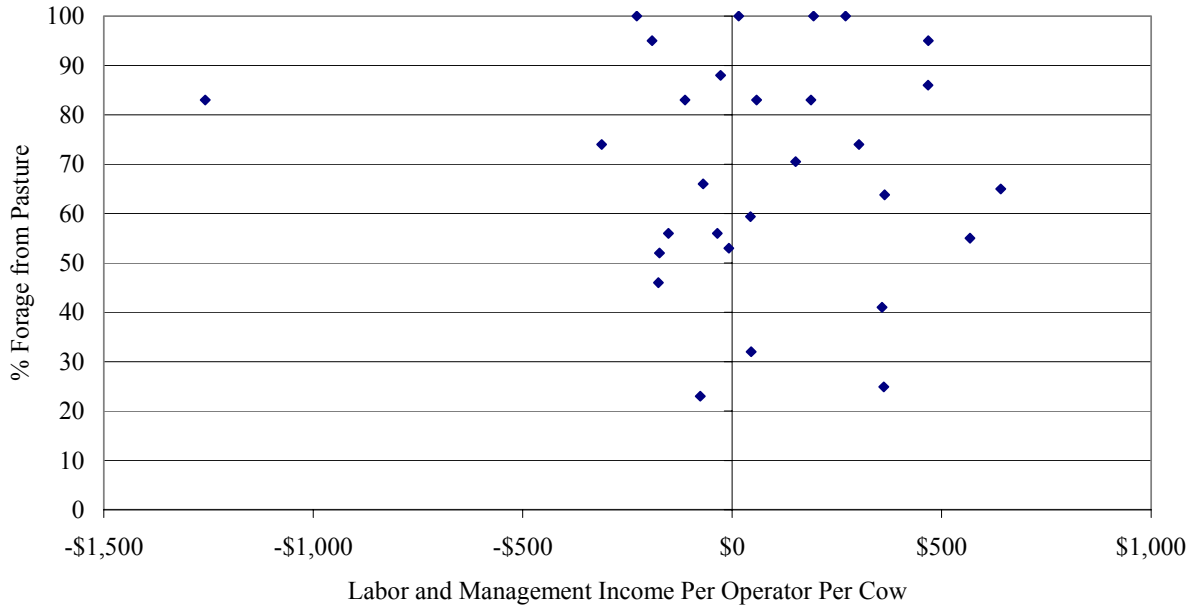
[2] In 1996, similar size non-grazers sold 17,547 pounds of milk per cow and in 2006 similar size non-grazers sold 20,089 pounds per cow.

Percent Forage from Pasture

The following graphs compare the percent forage from pasture to labor and management incomes per operator per cow and pasture acres per cow.

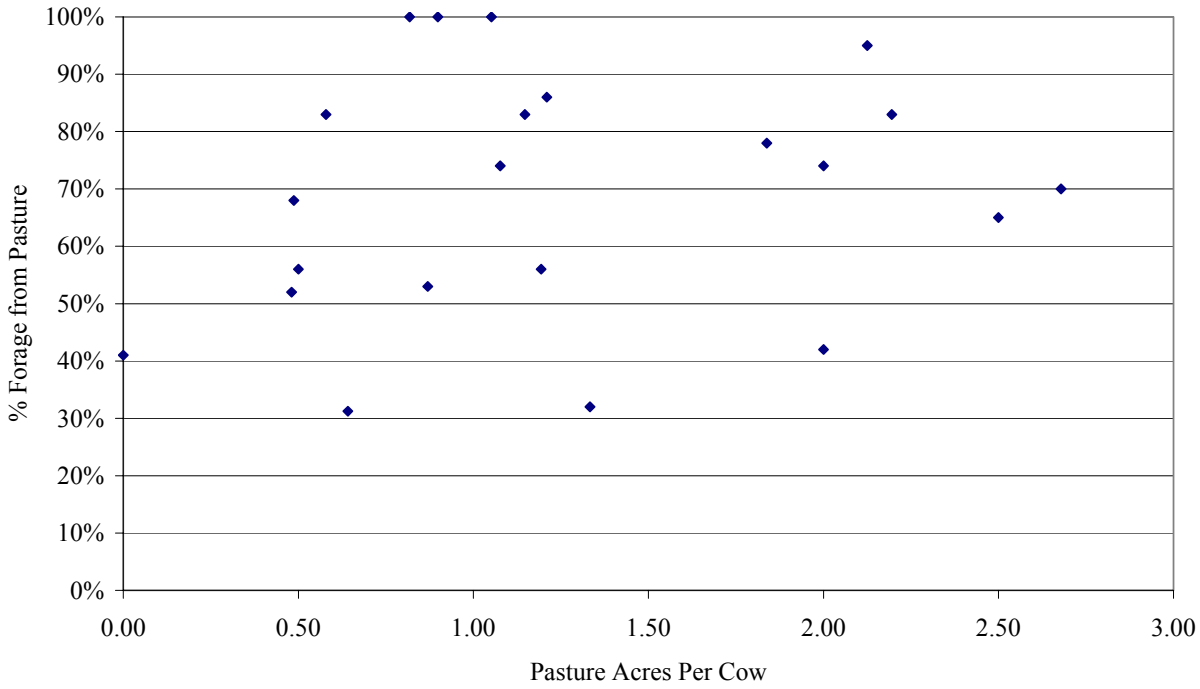
PERCENT FORAGE FROM PASTURE VERSUS LABOR AND MANAGEMENT INCOME PER OPERATOR PER COW

Intensive Grazing Farms, 2006



ACRES PER COW VERSUS PERCENT FORAGE FROM PASTURE

Intensive Grazing Farms, 2006



INTENSIVE GRAZING FARMS VS. NON-GRAZING FARMS
New York State Dairy Farms, 2006

Item	All Intensive Grazing Farms[3]	Non-Grazing Farms[4]	Average Top 30% Grazing Farms[5]	Profitable Non-Grazing Farms[6]
Number of farms	42	81	12	25
Business Size & Production				
Number of cows	101	104	136	155
Number of heifers	83	86	114	123
Milk sold, lbs.	1,716,827	2,093,925	2,239,169	3,347,189
Milk sold/cow, lbs.	17,054	20,089	16,505	21,645
Milk plant test, % butterfat	3.70%	3.78%	3.98%	3.66%
Cull rate	24.5%	29.4%	23.1%	29.3%
Tillable acres, total	254	299	286	354
Hay crop, tons DM/acre	2.2	2.6	2.2	3.7
Corn silage, tons/acre	15.5	16.1	18.9	19.5
Forage DM/cow, tons	5.4	8.6	4.5	9.2
Labor & Capital Efficiency				
Worker equivalent	2.80	3.20	3.15	3.62
Milk sold/worker, lbs.	614,066	653,501	711,600	925,064
Cows/worker	36	33	43	43
Farm capital/worker	$275,654	$317,941	$303,305	$314,465
Farm capital/cow	$7,667	$9,761	$7,020	$7,361
Farm capital/cwt. milk	$45	$49	$43	$34
Machinery & equipment per cow	$1,289	$1,966	$1,002	$1,486
Milk Production Costs & Returns				
Selected costs/cwt.:				
Hired labor	$1.52	$1.57	$1.88	$1.32
Grain & concentrate	$4.04	$4.19	$3.41	$3.80
Purchased roughage	$0.37	$0.19	$0.63	$0.29
Replacements purchased	$0.10	$0.07	$0.04	$0.01
Vet & medicine	$0.49	$0.55	$0.39	$0.53
Milk marketing	$0.98	$0.91	$0.94	$0.66
Other dairy expenses	$1.10	$1.37	$0.91	$1.48
Operating cost of producing milk/cwt.	$10.58	$11.76	$8.92	$9.79
Total labor cost/cwt.	$4.36	$4.19	$3.69	$2.94
Operator resources/cwt.	$4.18	$3.92	$3.64	$2.77
Total cost of producing milk/cwt.	$16.49	$17.57	$13.79	$13.70
Average farm price/cwt.	$14.09	$13.78	$14.19	$13.54
Related Cost Factors				
Hired labor/cow	$259	$316	$311	$286
Total labor/cow	$744	$842	$608	$637
Purchased dairy feed/cow	$752	$880	$666	$886
Purchased grain & conc. as % of milk receipts	30%	31%	26%	28%
Vet & medicine/cow	$83	$111	$65	$115
Machinery costs/cow	$590	$694	$460	$597
Feed & crop exp./cwt.	$5.30	$5.27	$5.09	$4.83
Profitability Analysis				
Net farm income (with appreciation)	$55,447	$36,467	$103,841	$115,131
Net farm income (without appreciation)	$38,541	$11,883	$92,893	$92,044
Net farm income per cow (w/o appreciation)	$383	$114	$685	$595
Net farm income per cwt. (w/o appreciation)	$2.24	$0.57	$4.15	$2.75
Labor & management income/operator	$1,606	$-24,173	$39,392	$32,226
Labor & mgmt. income/operator/cow	$16	$-232	$290	$208
Rates of return on: Equity capital with apprec.	0.7%	-2.4%	7.6%	7.5%
All capital with appreciation	2.1%	0.0%	7.3%	7.1%

[3]Farms grazing at least three months of year, changing paddock at least every three days, forage from pasture at least 30 percent, and no organic farms.
[4]Farms with similar herd size as the 42 intensive grazing farms.
[5]Top 30 percent of grazing farms by Labor and Management Incomes Per Operator Per Cow.
[6]Farms with similar herd size as the "Top 30%" grazing farms and Labor and Management Incomes Per Operator greater than $8,000.

CASE STUDIES

Ormond Farm

History

Ormond Farm was started in 1942 when Charles and Julia Ormond purchased the original 174 acre farm and farmed there with 30 cows. In 1959 their son, Tom, joined the farm and, at that time, they were milking 45 cows. Over the years the farm increased cow numbers from within, and their facilities had to expand with the cow numbers. In 1973 the farm built a free stall barn and added some silos. Tom started to graze the cows intensively in 1980. At that time, Tom cleared 35 acres of wooded land, which was the start of today's very successful grazing system. Tom and his wife, Joyce, raised three children on the farm. Their youngest, Lonny, joined Tom on the farm in 1992 at the age of 26. With two families being supported by the farm, plans for expansion were made.

In 1994 Lonny and his wife, Robin, became more involved with the farm. In 1995, after Tom and Lonny had formed an LLC a new double 8 herringbone milking parlor was built. The Ormond's cow numbers continued to increase. With over 100% crowding in the original free stall barn for about a 10 year period, a 190 stall free stall was built in 2004.

Today

Currently the farm averages around 200 cows for the year and over 200 replacement animals. The herd's current rolling herd average is 23,000 pounds of milk per cow. The LLC owns the cows, the majority of the equipment, and the dairy facilities. The majority of the land is owned privately by either Tom or Lonny. The farm crops 300 acres, 1/3 of the acres are corn and the balance consists of various grass and legume varieties. There is also 100 acres of permanent pasture. Depending on the season, some of the closest hayfields are brought into the grazing rotation as needed.

The labor on this 200 cow dairy is split between family and hired help. Lonny and Tom act as the management team and perform a variety of duties. Robin does milking, calf care and helps to manage the farm's books. Joyce is also involved with managing the farms books. Lonny and Robin's three children; Alexandra (12), Austin (10) and Dexter (8) continue to help on the farm more and more as they get older. Non-family help consists of a herdsperson, a general farm hand, a milker and a few part-time high school students. The Ormonds have come to depend on these individuals to ensure family time and allow for some time away from the farm.

The Ormond's cow numbers fluctuate greatly from winter to grazing season. During the grazing months cow numbers are highest, and every fall in October or November 50 to 100 cows in various stages of lactation are marketed, to a few established buyers, as dairy replacements. Going into winter the herd is usually around 150 cows. Being able to sell the quantity of animals and replace them each year is a testament of the breeding and replacement program of the Ormond's.

Breeding / Replacement Program

The Ormond's work hard to have as many cows and heifers freshen in the late winter and early spring as possible. This practice allows the Ormond's to overcrowd their facilities during the grazing season. Not only do the Ormond's make their cheapest milk of the year in grazing season, they make the most during that period. Through their very aggressive calf feeding and breeding program their heifers consistently calf at 18 – 22 months of age. The Ormond's heifer to bull calving ratio is 50% live heifers annually. All heifers are raised on the farm. This 100% registered Holstein herd uses AI and also maintains a herd bull for "catch-up" work.

Grazing System

The Ormond's are experienced grazers. Their farm has been featured on numerous pasture walks and tours. In 1994 Tom and his family were selected as an "Outstanding Forage Producer" by the New York State Forage and Grassland Council. The Ormond's offer the following practices that they feel are the most important for their success in rotational grazing: (in no particular order)

Getting the cows out early

Tom feels this is very important, not only getting an early start on the grazing season, while grass quality is high, but getting an early start each day. The Ormond's try to have their cows milked and out in the pasture by 8 AM (or earlier) each day. As the heat of the day wears on, cows tend not to eat as much and lounge in the shady areas of the pasture, which also tend to be muddy. By getting cows out early they tend to eat more pasture, stay cleaner and make more milk.

Water

The Ormond's are fortunate to have spring fed water accessible to the cows in almost every paddock. Over the years with the help of various cost sharing programs, a gravity fed watering system consisting of 13 cement 300 gallon tanks has been installed.

Supplemental Feeding

The Ormond's supplement the cows grazing by feeding a complete TMR in the barn all summer. The amount of TMR fed varies almost daily. Lonny is constantly tweaking the amount of TMR fed based on available pasture and how well the cows clean up the feed. In the early spring the herd consistently gets 75% of their forage dry matter from pasture. As the grazing season progresses, the percentage of forage from pasture decreases and the TMR feeding increases.

Education

The Ormond's are always looking for new ideas that will improve some aspect of their farm business. They attend as many pasture meetings and winter meetings as possible. They also read the popular trade publications, are enrolled in Cornell Cooperative Extension, and are Soil and Water Conservation District and NRCS Cooperators, members of Farm Bureau, DFA, Holstein Association, and Dairy One. Tom is on the board of several organizations such as Seneca Trails RC+D, GLCI (Grass Lands Conservation Initiative), is regional director for Dairy One and a local director for DFA.

Future

The near term future plans include continuing to sell cows in the fall of the year as cow numbers allow; no cow expansion plans are expected. Plans are being made for a new machine shop. The Ormond's hope they will be able to maintain a low debt load and continue to market their "cash crop" of breeding stock. As far as the grazing is concerned, they hope to do more rotational grazing of their calves, instead of the current large pasture. As far as a fourth generation on this farm? The Ormond children are all interested in the farm and are active in their 4H club showing cattle at the fair, but they are not being pushed into anything.

Pastureland Dairy

Pastureland Dairy, owned and operated by Pete Mapstone and Family, has been going through strategic changes in operations. Since 2000, the farm has been working to maximize the components produced off the grazing land by moving towards a higher stocking rate, increased cross breeding, and utilizing increasing number of rented acres to produce feed for winter months. While this has been successful in meeting Pete's goals, due to the farm location, loss of rented ground to housing, and increasing value of land that may be available to purchase, he began thinking about other options or changes to continue to generate profit growth and meet his goals without necessarily adding cows.

During 2005, Pete began researching the issues and management challenges associated with operating his dairy under organic rules. With the way he was managing his pastures, he felt that there would only be significant changes in how he managed his cows. Using the information gathered, Pete worked on budgets for the transition year and for after the transition year to see if the move would continue to generate profit growth with the limitations due to his location and loss of rented land and decreased ability to support a high number of cows on his grazing acres.

While the transition year looked difficult, after the transition year, he felt that the profit growth would continue and would be the best choice for his family and the home farm. Starting in May of 2006, he began his transition period, making some significant changes on his farm.

With the loss of some of the rented ground already, and much of the rented ground remaining requiring three years to become certified organic, there were less tillable acres available to support the herd. He would also be giving up the ability to purchase standing crops, which had been done in the past. With less ground available to produce organic feed, the current herd size could not be maintained. In the spring of 2006, the remaining pure bred Holstein cows were sold for dairy, reducing the herd size from 220 to 140 for the 2006 grazing season. This change served three purposes:

1. With the reduced cow numbers and, if a normal growing year, the home farm would be able to support the grazing herd and also produce organic forages and some grains for future feed needs.
2. By selling the animals for dairy purposes, the farm received a large infusion of cash that would be available to help during the transition year if needed.
3. The herd was then comprised of cross-bred cows that Pete felt were performing the best on the pasture. While cows were sold, all youngstock were kept, positioning the business to grow or to market additional animals in the future. By the end of 2006, they were back up to 190 animals, but with the target size for the grazing seasonat 165, additional animals were marketed in early 2007.

With the transition starting in May of 2006, the transition year was even more difficult than envisioned, primarily due to the historic low milk prices. The combination of the transition year per hundredweight premium, the cash infusion from the sale of the cows, and with some additional sales of replacements not needed to maintain herd size, the farm was able to make it through without having to borrow any additional capital. The organic certification was completed in May of 2007.

Production Changes

With the change to organic, Pete made some changes in how he operated the grazing herd. With the grazing ground operated essentially organically, there were no significant changes to the manure-based fertilizing program. However, two changes were made, incorporating higher rates of lime and spreading a micronutrient organic product.

Fly control underwent a major change, moving away from a top-of-the-line product that was poured on every few weeks to an organic product based with dry flowers. This is one area that Pete is still working on to figure out what works best.

With the non-grazing ground taking three years to be certified organic, the farm was limited in the ability to produce grain to feed the milking herd. Supplementation of the herd changed considerably, with purchased protein no longer fed on the farm, and feeding one-half of the energy source as in past years. There is also no longer a supplementation of hay/halage during the grazing season, with the focus on doing more with the pasture. So far, even though milk production dropped about 5 pounds per cow per day, the animals are holding condition and breeding efficiency has not fallen. As additional land becomes certified organic and Pete can produce more grains, they will move towards more supplementation as feed production permits.

While the transition to organic was the option chosen by Pete, it was not the only one considered. He also looked at traveling further to acquire crop ground to maintain his current herd size, selling the farm and moving to another location, or starting a second dairy at another location. While the option was there to travel further for land, this was only going to maintain the status quo and would most likely lead to some decrease in profitability due to the increased distance traveled. With his young children active in school and other family activities and involvement with the local community, selling and moving to a different location didn't meet the families' goals. The idea of a satellite farm is an option that is still being considered, and if the right option comes available, will be pursued. However, Pete didn't feel that there was anything coming along that would impact the choice to transition to organic. With the transition now complete, Pete is excited about the opportunities within organic production and is looking forward to his 10th year participating in the Dairy Farm Business Summary and how the changes have impacted his results.

Milky Whey Farm (Jim and Sarah Youngers)

Milky Whey Farm is a continually changing dairy that has been meeting the goals of Jim and Sarah Youngers and their family. While the dairy is now a grazing-based operation, this is just one of the many changes that has occurred over the years since they have been in business.

History

In 1986, the farm was purchased and the first year 45 cows were milked in the old tie stall barn with a dumping station. They grew all the feed, which was stored in a small bunk silo and upright silos.

With all labor provided by the family over the years, and Sarah being employed part-time off the farm, changes were made to improve labor efficiency. They wanted to utilize less labor as the kids grew older and left the farm and as other family members cut back and then retired from helping during the year. Along with focusing on labor efficiency and labor use, changes were made to improve cow comfort and management to lower costs and improve output. Some of the changes that were made in the late eighties and early nineties included installing a pipeline, installing curtains on the tie-stall, utilizing mattresses in the barn, purchasing a TMR mixer, and adding to the bunk silo system.

One of the key changes to the business occurred in 1991, with a focus on rotational grazing, driven by less family labor to help produce forages during the summer. The farm always had some pasture, but starting in 1991, improvements were made to the fencing system, laneways, and watering to better utilize the existing pasture, and to increase the amount of pasture that was available to the cows.

As the family labor became less available to work – going on to college and other careers, other changes were made on the farm. The first step was to custom chop the corn silage. After a few years of custom corn harvesting, the next change was to rent out the tillable land and buy back tons of corn silage, thereby limiting all cropping activities related to corn silage. After a few years of buying all the corn, haylage was next to go, with the chopper finally being sold. The hay is now custom harvested in large processed bales for summer supplementation and winter TMR use.

Current Operation

The farm is comprised of 70 milking age animals utilizing 90 acres of pasture, with the herd predominately fall calving, with 2/3 of the herd in the fall, and the rest spread throughout the year. The farm focuses on fall calving to raise calves in the fall and early winter, capture the fall of spring milk price incentive, better calving environment for the cattle, and capture peak production during the winter while in the barn on a complete TMR. They strive for better success on breeding cows back before the onset of the summer heat and the ability to cut back on inputs during mid to late lactation when pasture are being utilized.

With all the changes that have occurred over the years, there is no hired labor on the farm, with part-time labor utilized when the family needs to be away from the farm.

Along with the milking herd, a total of 30 heifers are raised. The first 15 heifer calves are started each year, with the remainder being sold. The farm is set up to efficiently handle 30 heifers, and when things are going well, they only need 15 a year to enter the herd. Unless additional investment is made in facilities or additional labor is added, they can't raise more than the 30. The 15 breeding age heifers are boarded out for the winter and return in the spring to graze.

Within the herd, the breed is predominately Holstein, but is moving toward crossbreeding with one third of the herd now crossed with Jersey and some New Zealand genetics. Breeding is all A.I., with the animals not meeting the breeding windows sold and heifers purchased that fall within the calving window.

During the grazing season, the cows are supplemented with corn silage, grain and dry hay in a TMR. The TMR is fed during milking in the tie stall barn, averaging 37 pounds per cow per day of supplementation on an as-fed basis. The herd is rotated to a fresh pasture every other day or as needed.

Future

With 21 years of ownership, and 12 years prior to that as an employee on a local farm, plans for retirement are on-going. Also, consideration is given to changes to the business that will continue to improve the ability to take care of 70 cows with the same or less effort and labor hours. Over the next year or two, consideration will be given to adding automatic takeoffs to the pipeline, purchasing a TMR delivered daily, and upgrading to one newer tractor instead of two older tractors currently used.

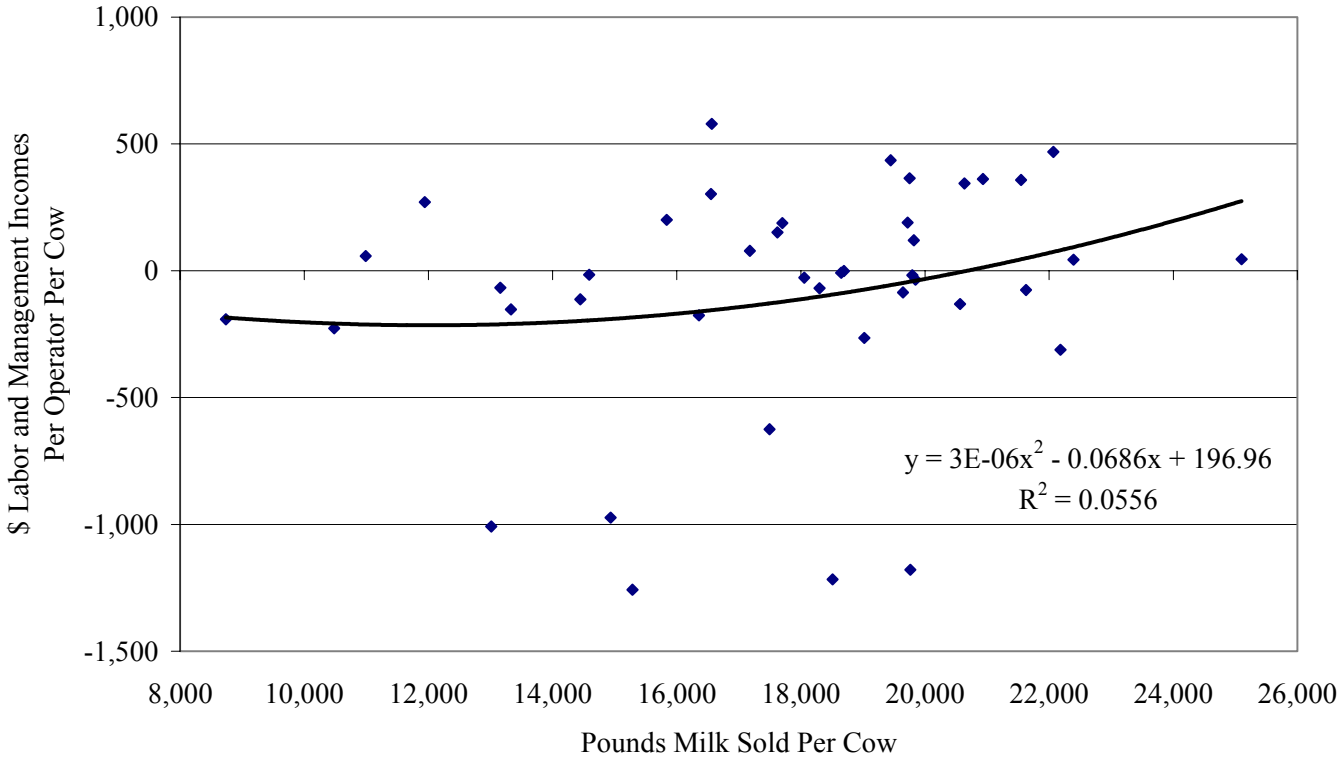
While many changes have been made to the farm, and as changes occur within the dairy industry, Jim and Sarah are excited about the progress they have made on their farm towards meeting their goals, raising and supporting their family, and positioning themselves for retirement along with the continued enjoyment of milking cows and grazing grass. Participating in the Dairy Farm Business Summary Project for the last 19 years allows the success of the changes to be tracked, and future changes can be projected.

SUMMARY OF GRAZING FARMS BY HERD SIZE

There were 16 New York grazing farms with more than 80 cows. Herd size does not guarantee profitability, however, as small farms that are able to produce higher levels of milk per cow also show higher levels of profitability. The chart below shows the variation in labor and management income per operator by pounds of milk sold per cow. The table on the following page compares grazing farms by herd size group.

LABOR AND MANAGEMENT INCOMES PER OPERATOR PER COW AND MILK PER COW

42 Intensive Grazing Farms, 2006



INTENSIVE GRAZING FARMS BY HERD SIZE GROUP

42 Intensive Grazing Dairy Farms, 2006

Item	Less Than 50 Cows	50 to 80 Cows	80 Cows Or More
Number of farms	14	12	16
Business Size & Production			
Number of cows	40	61	183
Number of heifers	32	43	158
Milk sold, lbs.	660,778	1,133,130	3,078,644
Milk sold/cow, lbs.	16,548	18,476	16,795
Milk plant test, % butterfat	3.90%	3.84%	3.82%
Cull rate	23.4%	28.5%	23.7%
Tillable acres, total	148	170	409
Hay crop, tons DM/acre	1.9	2.0	2.4
Corn silage, tons/acre	12.2	17.3	15.3
Forage DM/cow, tons	5.7	6.1	5.2
Labor & Capital Efficiency			
Worker equivalent	1.91	1.94	4.21
Milk sold/worker, lbs.	345,354	583,837	730,980
Cows/worker	21	32	44
Farm capital/worker	$248,338	$248,852	$296,662
Farm capital/cow	$11,879	$7,872	$6,813
Farm capital/cwt. milk	$72	$43	$41
Milk Production Costs & Returns			
Selected costs/cwt.:			
Hired labor	$0.55	$0.75	$1.91
Grain & concentrate	4.42	3.71	4.06
Purchased roughage	0.82	0.35	0.29
Replacements purchased	0.04	0.11	0.11
Veterinary & medicine	0.44	0.37	0.53
Milk marketing	1.12	0.91	0.97
Other dairy expenses	1.70	1.24	1.01
Operating cost of producing milk/cwt.	10.47	9.77	10.83
Operator resources/cwt.	7.26	5.00	3.37
Total labor cost/cwt.	7.58	4.42	3.72
Total cost of producing milk/cwt.	21.23	16.20	15.68
Average farm price/cwt.	14.09	13.72	14.20
Related Cost Factors			
Hired labor/cow	$91	$139	$321
Total labor/cow	1,254	818	625
Purchased dairy feed/cow	867	751	730
Purchased grain & concentrate as % of milk receipts	32%	27%	30%
Veterinary & medicine/cow	$73	$69	$88
Machinery costs/cow	$701	$538	$583
Feed & crop expense/cwt.	$5.71	$4.78	$5.37
Profitability Analysis			
Net farm income (without appreciation)	$11,872	$30,584	$67,843
Net farm income/cow (without appreciation)	$297	$499	$370
Net farm income/cwt. (without appreciation)	$1.80	$2.70	$2.20
Labor & management income/operator	$-15,748	$7,933	$8,770
Labor & management income/operator/cow	$-394	$130	$48
Rates of return on:			
Equity capital with appreciation	-6.7%	2.4%	3.0%
All capital with appreciation	-4.3%	3.3%	3.8%

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 grazing dairy farmers in New York. The following table shows important farm business characteristics and the number of farms with each characteristic.

BUSINESS CHARACTERISTICS
42 Intensive Grazing Dairy Farms, 2006

Type of Farm	Number
Dairy	42
Part-time dairy	0
Dairy cash-crop	0

Type of Ownership	Number
Owner	38
Renter	4

Type of Business	Number
Sole Proprietorship	29
Partnership	7
Limited Liability Corporation	5
Subchapter S Corporation	1
Subchapter C Corporation	0

Type of Barn	Number
Stanchion or Tie-Stall	24
Freestall	14
Combination	4

Milking Frequency	Number
2 times per day	41
3 times per day	0
Other	1

Breed	Percent
Holstein	72
Jersey	14
Other	14

Milking System	Number
Bucket & carry	0
Dumping station	1
Pipeline	24
Herringbone-conventional exit	9
Herringbone-rapid exit	1
Parallel	1
Parabone	3
Rotary	0
Other	3

Production Records	Number
Testing Service	32
On-Farm System	3
Other	1
None	6

bST Usage	Number
Used consistently	5
Used inconsistently	1
Started using in 2006	0
Stopped using in 2006	0
Not used in 2006	36
Average percent usage, if used	39%

Business Record System	Number
Account Book	15
Accounting Service	3
On-farm computer software	24
Other	0

The averages used in this report were compiled using data from all the participating grazing dairy farms in New York unless noted otherwise. There are full-time dairy 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 2006.

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

42 Intensive Grazing Dairy Farms, 2006

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
Hired Labor	$ 25,877		$ 44	<<	$ 251		$ 26,084
Feed							
Dairy grain & concentrate	66,273		-1,952		1,153		69,378
Dairy roughage	7,506		1,513		314		6,307
Nondairy	52		0		0		52
Professional nutritional services	50		0		0		50
Machinery							
Machinery hire, rent & lease	10,994		-381	<<	59		11,434
Machinery repairs & farm vehicle exp.	15,268		-28		1,176		16,472
Fuel, oil & grease	10,468		-193		205		10,866
Livestock							
Replacement livestock	1,701		0	<<	0		1,701
Breeding	3,623		-46		16		3,685
Veterinary & medicine	8,204		9		141		8,336
Milk marketing	16,738		0	<<	22		16,760
Bedding	3,033		54		664		3,642
Milking supplies	5,616		53		118		5,682
Cattle lease & rent	0		0	<<	0		0
Custom boarding	914		-14	<<	99		1,028
bST expense	696		-46		-2		739
Livestock professional fees	1,255		5		0		1,250
Other livestock expense	3,057		2		-49		3,006
Crops							
Fertilizer & lime	8,036		-920		24		8,979
Seeds & plants	3,067		-321		0		3,388
Spray, other crop expense	2,408		-191		135		2,733
Crop professional fees	252		0		0		252
Real Estate							
Land, building & fence repair	5,132		9		-172		4,952
Taxes	6,125		-24	<<	-1		6,148
Rent & lease	5,616		0	<<	0		5,616
Other							
Insurance	4,714		0	<<	42		4,756
Utilities (farm share)	8,019		-3	<<	146		8,168
Interest paid	11,486		0	<<	317		11,804
Other professional fees	625		0		0		625
Miscellaneous	2,512		8		104		2,607
Total Operating	$ 239,315		$ -2,423		$ 4,763		$ 246,500
Expansion livestock	1,858		0	<<	-333		1,525
Extraordinary expense	575		0		0		575
Machinery depreciation							14,269
Building depreciation							6,895
TOTAL ACCRUAL EXPENSES							$ 269,764

Change in prepaid expenses (noted above by <<) is a net change in non-inventory expenses that have been paid in advance of their use. For example, prepaid lease expense on the beginning of year balance sheet represents last year's payment for use of the asset during this year. End of year prepaid expense represents payments made this year for next year's use of the asset. Adding payments made last year for this year's use of the asset, and subtracting payments made this year for next year's use of the asset is accomplished by subtracting the difference.

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 2006 but not paid for. A decrease is subtracted because it represents payment for resources used before 2006.

Accrual expenses are an estimate of 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
42 Intensive Grazing Dairy Farms, 2006

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	$ 242,142				$ -202		$ 241,940
Dairy cattle	22,008		$ 11,873		-852		33,029
Dairy calves	5,306		-8		0		5,298
Other livestock	869		502		20		1,391
Crops	1,985		2,626		-20		4,591
Government receipts	14,518		0 [7]		194		14,712
Custom machine work	714				0		714
Gas tax refund	253				0		253
Other	6,378				0		6,378
Less nonfarm noncash capital[8]		(-)	0 [8]			(-)	0
Total Receipts	$ 294,172		$ 14,994		$ -861		$ 308,305

[7]Change in advanced government receipts.
[8]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 increase in advanced government receipts is subtracted from cash income because it represents income received in 2006 for the 2007 crop year in excess of funds earned for 2006. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2006 but received in 2005.

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. Payments in January for milk produced in December 2006 compared to January 2006 payments for milk produced in 2005 are 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[9] 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.

These measures should be considered estimates as they include inventory values that are only estimates and they include an unknown degree of error stemming from cash flow imbalances.

[9]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, and financing 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.

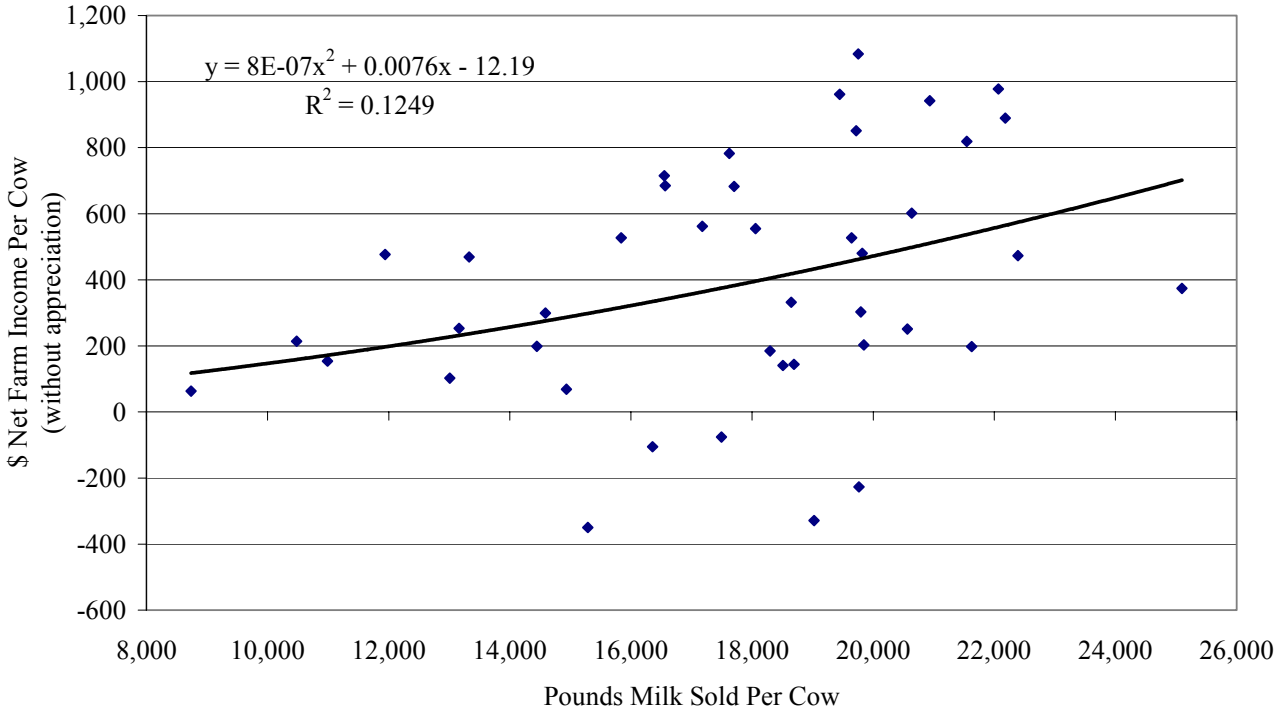
NET FARM INCOME
Intensive Grazing Dairy Farms, 2006

Item	42 Grazing Dairy Farms[10]	Average Top 30% Farms[10]
Total accrual receipts	$ 308,305	$ 413,946
Appreciation: Livestock	-680	-3,557
Machinery	3,736	3,177
Real Estate	13,929	10,936
Other Stock & Certificates	-79	392
Total Including Appreciation	$ 325,212	$ 424,894
Total accrual expenses	- 269,764	- 321,053
Net Farm Income (with appreciation)	$ 55,447	$ 103,841
Net Farm Income Per Cow (with appreciation)	$ 551	$ 765
Net Farm Income (without appreciation)	$ 38,541	$ 92,893
Net Farm Income Per Cow (without appreciation)	$ 383	$ 685

[10]See page 1 for a description of these groups of farms.

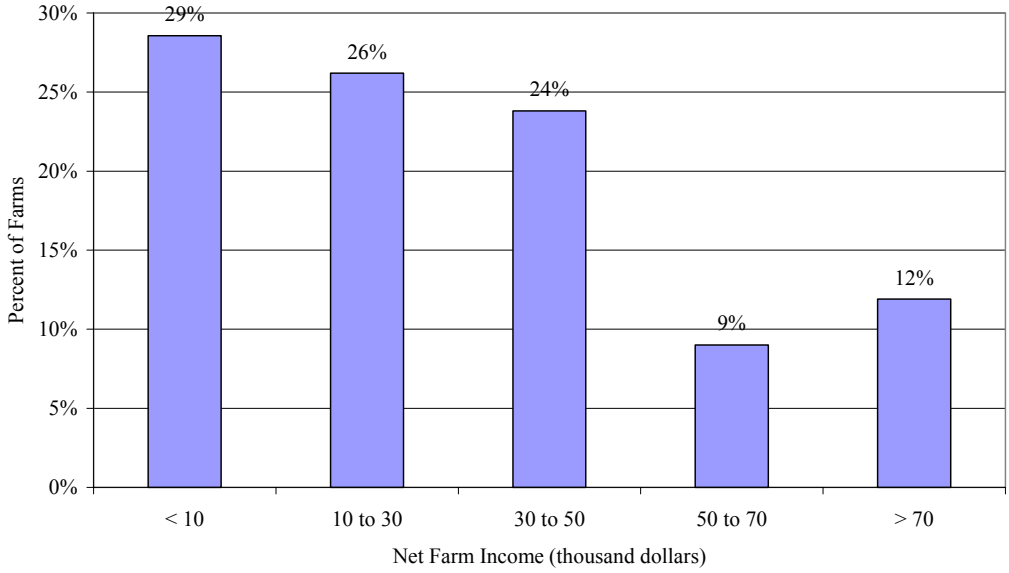
The chart below shows the relationship between net farm income per cow (without appreciation) and pounds of milk sold per cow. Higher new farm incomes can be achieved across a range of production levels as a result of different management systems, such as grazing, being utilized by the participating dairies.

NET FARM INCOME PER COW AND MILK PER COW
42 Intensive Grazing Farms, 2006



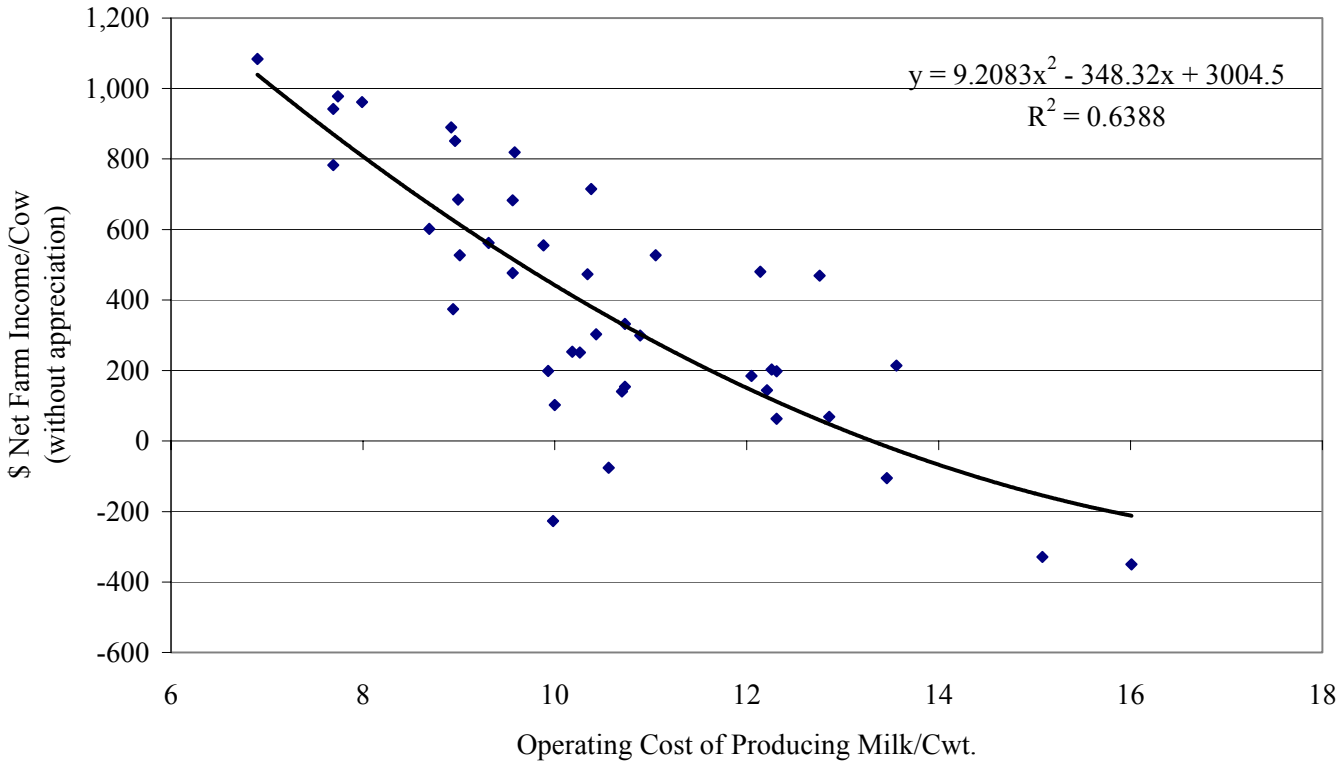
Net farm income without appreciation averaged $38,541 on these 42 farms in 2006. The range in net farm income without appreciation was from less than $-78,901 to more than $308,000. Net farm income was less than $30,000 on 55 percent of the farms, between $30,000 and $70,000 on 33 percent of the farms, while 12 percent showed net farm incomes of $70,000 or more.

DISTRIBUTION OF NET FARM INCOME WITHOUT APPRECIATION
42 Intensive Grazing Farms, 2006



The importance of cost control and its impact on farm profitability are illustrated in the chart below. As the operating cost of producing milk per hundredweight increased, net farm income per cow fell.

NET FARM INCOME/COW & OPERATING COST OF PRODUCING MILK/CWT.
42 Intensive Grazing Farms, 2006



Labor and management income is the return which farm operators receive for their labor and management used in 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.

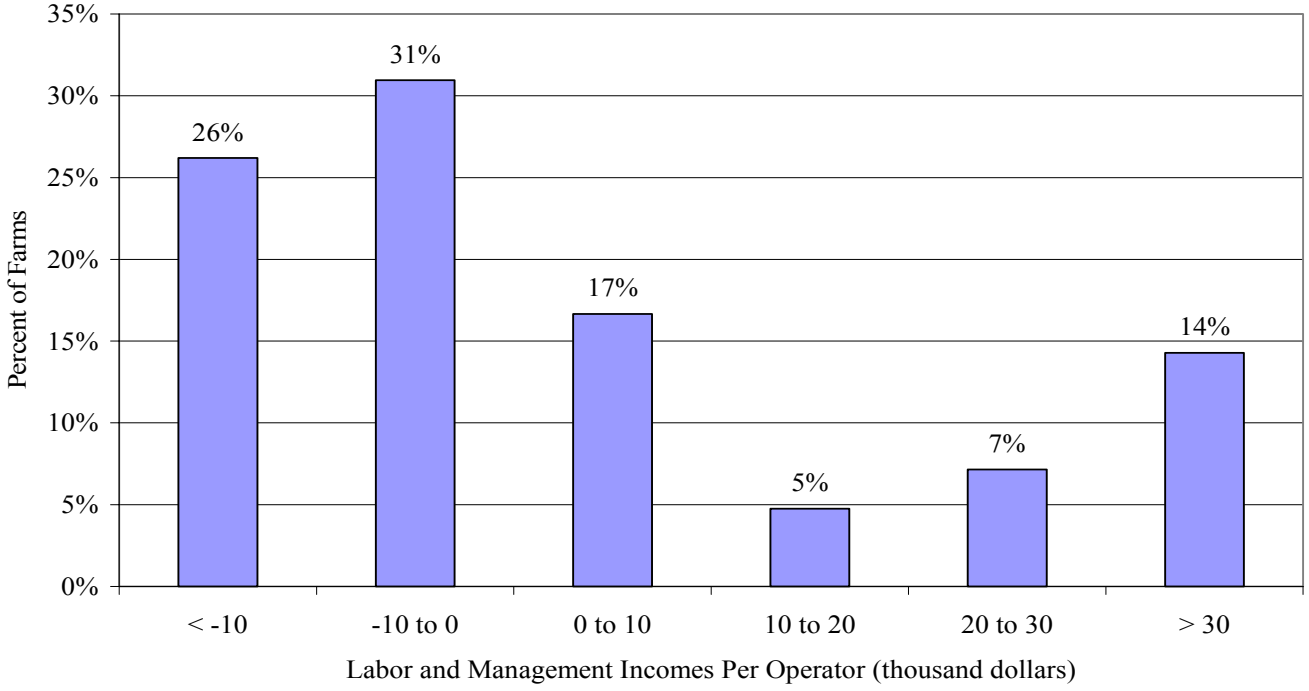
LABOR AND MANAGEMENT INCOME
Intensive Grazing Dairy Farms, 2006

Item	42 Grazing Dairy Farms[11]	Average Top 30% Farms[11]
Net farm income without appreciation	$ 38,541	$ 92,893
Family labor unpaid @ $2,300 per month	- 8,028	- 2,358
Interest on average equity capital @ 5% real rate	- 28,280	- 36,174
Labor & Management Income per Farm	$ 2,233	$ 54,362
Labor & Management Income per Operator/Manager	$ 1,606	$ 39,392
Labor & Management Income per Operator per Cow	$ 16	$ 290

[11]See page 1 for a description of these groups of farms.

Labor and management income per operator averaged $1,606 on these 42 farms in 2006. The range in labor and management income per operator was from less than $-63,000 to more than $175,000. Returns to labor and management were less than $0 on 57 percent of the farms. Labor and management incomes per operator were between $0 and $30,000 on 29 percent of the farms while 14 percent showed labor and management incomes of $30,000 or more per operator.

DISTRIBUTION OF LABOR & MANAGEMENT INCOMES PER OPERATOR
42 Intensive Grazing Farms, 2006



The distribution of labor and management incomes per operator on grazing farms is somewhat similar to the distribution for all farms across the state that participate in the DFBS project. A large percentage of farms fall near $-10,000 to $0 with a considerable percentage less than zero. One comparison to make to the state distribution is the percentage of farms that were above zero labor and management income per operator. For the intensive grazing farms, 43 percent of the farms had returns that were over zero, while for 231 farms across the state, 33 percent had returns greater than zero in 2006.

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. Net farm income from operations ratio is net farm income (without appreciation) divided by total accrual receipts.

RETURN ON EQUITY CAPITAL AND RETURN ON TOTAL CAPITAL
Intensive Grazing Dairy Farms, 2006

Item		42 Grazing Dairy Farms[12]		Average Top 30% Farms[12]
Net farm income with appreciation	$	55,447	$	103,841
Family labor unpaid @$2,300 per month	-	8,028	-	2,358
Value of operators' labor & management	-	43,437	-	45,361
Return on equity capital with appreciation	$	3,983	$	56,122
Interest paid	+	11,804	+	13,189
Return on total capital with appreciation	$	15,786	$	69,311
Return on equity capital without appreciation	$	-12,924	$	45,174
Return on total capital without appreciation	$	-1,120	$	58,363
Rate of return on average equity capital:				
with appreciation		0.7%		7.6%
without appreciation		-2.3%		6.1%
Rate of return on average total capital:				
with appreciation		2.1%		7.3%
without appreciation		-0.2%		6.1%
Net farm income from operations ratio		0.13		0.22

[12]See page 1 for a description of these groups of farms.

Farm and Family Financial Status

The first step in evaluating the financial position of the farm is to construct a balance sheet which identifies and values 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 2006, lease payments were discounted by 8.15 percent to obtain their present value.

Advanced government receipts are included as current liabilities. Government payments received in 2006 that are for participation in the 2007 program are the end year balance and payments received in 2005 for participation in the 2006 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.

2006 FARM BUSINESS & NONFARM BALANCE SHEET

42 Intensive Grazing Dairy Farms, 2006

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 6,189	$ 4,912	Accounts payable	$ 8,205	$ 12,635
Accounts receivable	20,258	19,398	Operating debt	12,037	10,826
Prepaid expenses	532	159	Short Term	93	49
Feed & supplies	52,930	53,507	Advanced govt. receipts	0	0
			Current Portion:		
			Intermediate	12,051	15,853
			Long Term	4,686	6,096
Total Current	$ 79,909	$ 77,975	Total Current	$ 37,072	$ 45,460
Intermediate			Intermediate		
Dairy cows:			Structured debt		
owned	$ 130,963	$ 139,210	1-10 years	$ 68,673	$ 67,728
leased	0	0	Financial lease		
Heifers	81,490	84,420	(cattle/machinery)	663	917
Bulls & other livestock	3,232	3,743	Farm Credit stock	1,613	331
Mach. & equip. owned	125,608	132,350	Total Intermediate	$ 70,950	$ 68,976
Mach. & equip. leased	663	917			
Farm Credit stock	1,613	331			
Other stock/certificate	14,255	12,791			
Total Intermediate	$ 357,825	$ 373,763			
			Long Term		
Long Term			Structured debt		
Land & buildings:			>10 years	$ 83,389	$ 95,407
owned	$ 311,822	$ 342,372	Financial lease		
leased	0	0	(structures)	0	0
Total Long Term	$ 311,822	$ 342,372	Total Long Term	$ 83,389	$ 95,407
			Total Farm Liab.	$191,412	$ 209,843
Total Farm Assets	$ 749,556	$ 794,109	FARM NET WORTH	$558,144	$ 584,266

Nonfarm Assets, Liabilities & Net Worth (Average of 21 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	$ 9,485	$ 11,940	Nonfarm Liabilities	$ 985	$ 5,371
Cash value life insurance	12,163	13,066			
Nonfarm real estate	8,333	13,095			
Auto (personal share)	7,440	7,024			
Stocks & bonds	35,498	42,616			
Household furnishings	12,429	12,595			
All other nonfarm assets	6,577	7,685			
Total Nonfarm Assets	$ 91,926	$ 108,022	NONFARM NET WORTH	$ 90,941	$ 102,651

Farm & Nonfarm Assets, Liabilities, and Net Worth[13]	Jan. 1	Dec. 31
Total Assets	$ 841,482	$ 902,131
Total Liabilities	192,397	215,214
TOTAL FARM & NONFARM NET WORTH	$ 649,085	$ 686,917

[13]Assumes that average nonfarm assets and liabilities for the nonreporting farms were the same as for those reporting.

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. The leverage ratio is the dollars of debt per dollar of equity, computed by dividing total farm liabilities by farm net worth. Debt levels per productive unit represent old standards that are still useful if used with measures of cash flow and repayment ability. A current ratio that has been falling or is less than 1.5 warrants additional evaluation. An adequate amount of working capital will be related to the size of the farm business.

BALANCE SHEET ANALYSIS
Intensive Grazing Dairy Farms, 2006

Item	42 Grazing Dairy Farms[14]	Average Top 30% Farms[14]
Financial Ratios - Farm:		
Percent equity	74%	78%
Debt/asset ratio: total	0.26	0.22
long-term	0.28	0.30
intermediate/current	0.25	0.16
Leverage Ratio	0.36	0.29
Current Ratio	1.72	1.84
Working Capital: $32,515, As % of Expenses	12%	($46,207) 14%
Farm Debt Analysis:		
Accounts payable as % of total debt	6%	4%
Long-term liabilities as a % of total debt	45%	58%
Current & inter. liabilities as a % of total debt	55%	42%
Cost of term debt (weighted average)	5.7%	5.3%

Farm Debt Levels:	42 Grazing Dairy Farms[14] Per Cow	42 Grazing Dairy Farms[14] Per Tillable Acre Owned	Average Top 30% Farms[14] Per Cow	Average Top 30% Farms[14] Per Tillable Acre Owned
Total farm debt	$ 2,067	$ 1,511	$ 1,681	$ 1,236
Long-term debt	940	687	976	717
Intermediate & long term	1,620	1,183	1,265	930
Intermediate & current debt	1,127	824	705	518

[14] See page 1 for a description of these groups of farms.

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
42 Intensive Grazing Dairy Farms, 2006

Item	Real Estate	Machinery & Equipment
Value beginning of year	$ 311,822	$ 125,608
Purchases	$ 29,487[15]	$ 18,775
Gift & inheritance	+ 0	+ 0
Lost capital	- 3,763	
Sales	- 2,208	- 1,500
Depreciation	- 6,895	- 14,269
Net investment	= 16,621	= 3,006
Appreciation	+ 13,929	+ 3,736
Value end of year	$ 342,372	$ 132,350

[15] $17,485 land and $12,002 building 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 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) , (3) increases or decreases in the value (price) of assets owned by the business (called change in valuation equity), and (4) the error in the business cash flow accounting.

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

STATEMENT OF OWNER EQUITY (RECONCILIATION)
Intensive Grazing Dairy Farms, 2006

Item	42 Grazing Dairy Farms[16]		Average Top 30% Farms[16]	
Beginning of year farm net worth		$ 558,144		$ 713,843
Net farm income w/o appreciation	$ 38,541		$ 92,893	
+Nonfarm cash income	+ 6,756		+ 3,870	
-Personal withdrawals & family expenditures excluding nonfarm borrowings	- 37,685		- 40,078	
RETAINED EARNINGS		+$ 7,613		+$ 56,685
Nonfarm noncash transfers to farm	$ 0		$ 0	
+Cash used in business from nonfarm capital	+ 5,004		+ 573	
-Note or mortgage from farm real estate sold (nonfarm)	- 0		- 0	
CONTRIBUTED/ WITHDRAWN CAPITAL		+$ 5,004		+$ 573
Appreciation	$ 16,907		$ 10,948	
-Lost capital	- 3,763		- 7,573	
CHANGE IN VALUATION EQUITY		+$ 13,144		+$ 3,376
IMBALANCE/ERROR		- -361		- 2,095
End of year net worth[17]		=$584,266		=$772,381
Change in Net Worth				
Without appreciation	$ 9,216		$ 47,591	
With appreciation	$ 26,122		$ 58,539	

[16]See page 1 for a description of these groups of farms.
[17]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. You should be aware that all profitability measures may be affected by this error.

ANNUAL CASH FLOW STATEMENT
42 Intensive Grazing Dairy Farms, 2006

Item			Average	
Cash Flow from Operating Activities				
Cash farm receipts	$ 294,172			
- Cash farm expenses	239,315			
- Extraordinary expense	575			
= Net cash farm income		$ 54,283		
Personal withdrawals & family expenses including nonfarm debt payments	$ 40,126			
- Nonfarm income	6,756			
- Net cash withdrawals from the farm		$ 33,370		
= Net Provided by Operating Activities			$	20,913
Cash Flow From Investing Activities				
Sale of assets: machinery	$ 1,500			
+ real estate	2,208			
+ other stock & cert.	2,022			
= Total asset sales		$ 5,730		
Capital purchases: expansion livestock	$ 1,858			
+ machinery	18,775			
+ real estate	29,487			
+ other stock& cert.	637			
- Total invested in farm assets		$ 50,757		
= Net Provided by Investment Activities			$	-45,027
Cash Flow From Financing Activities				
Money borrowed (intermediate & long term)	$ 43,732			
+ Money borrowed (short term)	133			
+ Increase in operating debt	0			
+ Cash from nonfarm capital used in business	5,004			
+ Money borrowed - nonfarm	2,442			
= Cash inflow from financing		$ 51,311		
Principal payments (intermediate & long term)	$ 27,449			
+ Principal payments (short term)	177			
+ Decrease in operating debt	1,211			
- Cash outflow for financing		$ 28,837		
= Net Provided by Financing Activities			$	22,474
Cash Flow From Reserves				
Beginning farm cash, checking & savings		$ 6,189		
- Ending farm cash, checking & savings		4,912		
= Net Provided from Reserves			$	1,277
Imbalance (error)			$	-364

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 2007. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2007 debt payments shown below.

FARM DEBT PAYMENTS PLANNED
Same Intensive Grazing Dairy Farms, 2005 & 2006

	Same 35 Grazing Dairy Farms			Same 11 Farms in Top 30% Farms		
	2006 Payments		Planned	2006 Payments		Planned
Debt Payments	Planned	Made	2007	Planned	Made	2007
Long term	$ 11,218	$ 15,277	$ 13,240	$ 11,421	$ 11,936	$ 16,906
Intermediate term	20,487	23,629	20,766	21,423	23,058	18,693
Short term	112	214	59	0	3	0
Operating (net reduction)	1,065	3,890	505	1,841	10,516	545
Accounts payable (net reduction)	971	377	413	2,727	1,145	0
Total	$ 33,853	$ 43,386	$ 34,982	$ 37,412	$ 46,658	$ 36,144
Per cow	$ 319	$ 409		$ 280	$ 349	
Per cwt. 2006 milk	$ 1.87	$ 2.40		$ 1.73	$ 2.16	
Percent of total 2006 farm receipts	11%	13%		10%	12%	
Percent of 2006 milk receipts	13%	17%		12%	15%	

The coverage ratios measure the ability of the farm business to meet its planned debt payment schedule. The ratios show the percentage of payments planned for 2006 (as of December 31, 2005) that could have been made with the amount available for debt service in 2006. Farmers who did not participate in DFBS in 2005 have their 2006 coverage ratios based on planned debt payments for 2007.

COVERAGE RATIOS
Same Intensive Grazing Dairy Farms, 2005 & 2006

Item	Average	Item	Average
Same 35 Grazing Dairy Farms, 2005 & 2006			
(A)=Amount Available for Debt Service	$ 40,309	(A')=Repayment Capacity	$ 43,641
(B)=Debt Payments Planned for 2006	$ 33,853	(B)=Debt Payments Planned for 2006	$ 33,853
(A/B)=Cash Flow Coverage Ratio for 2006	1.19	(A'/B)=Debt Coverage Ratio for 2006	1.29
Same 11 Farms in Top 30% Farms, 2005 & 2006			
(A)=Amount Available for Debt Service	$ 75,835	(A')=Repayment Capacity	$ 95,165
(B)=Debt Payments Planned for 2006	$ 37,412	(B)=Debt Payments Planned for 2006	$ 37,412
(A/B)=Cash Flow Coverage Ratio for 2006	2.03	(A'/B)=Debt Coverage Ratio for 2006	2.54

ANNUAL CASH FLOW WORKSHEET

Intensive Grazing Dairy Farms, 2006

	42 Grazing Dairy Farms		Average Top 30% Farms	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average no. of cows	101		136	
Total cwt. of milk sold		17,168		22,392
Accrual Operating Receipts				
Milk	$2,403	$14.09	$2,342	$14.19
Dairy cattle	328	1.92	354	2.15
Dairy calves	53	0.31	66	0.40
Other livestock	14	0.08	12	0.07
Crops	46	0.27	86	0.52
Misc. Receipts	219	1.28	189	1.15
Total	$3,063	$17.96	$3,051	$18.49
Accrual Operating Expenses				
Hired labor	$ 259	$ 1.52	$ 311	$ 1.88
Dairy grain & concentrate	689	4.04	562	3.41
Dairy roughage	63	0.37	104	0.63
Nondairy feed	1	0.00	1	0.00
Professional nutritional services	0	0.00	0	0.00
Mach. hire, rent & lease	114	0.67	62	0.37
Mach. repair & vehicle expense	164	0.96	154	0.93
Fuel, oil & grease	108	0.63	80	0.48
Replacement livestock	17	0.10	6	0.04
Breeding	37	0.21	29	0.18
Vet & medicine	83	0.49	65	0.39
Milk marketing	166	0.98	155	0.94
Bedding	36	0.21	28	0.17
Milking supplies	56	0.33	44	0.27
Cattle lease	0	0.00	0	0.00
Custom boarding	10	0.06	3	0.02
bST expense	7	0.04	7	0.04
Livestock professional fees	12	0.07	12	0.07
Other livestock expense	30	0.18	26	0.16
Fertilizer & lime	89	0.52	113	0.68
Seeds & plants	34	0.20	30	0.18
Spray & other crop expense	27	0.16	25	0.15
Crop professional fees	3	0.01	5	0.03
Land, bldg., fence repair	49	0.29	32	0.20
Taxes	61	0.36	52	0.32
Real estate rent & lease	56	0.33	50	0.30
Insurance	47	0.28	29	0.18
Utilities	81	0.48	69	0.42
Miscellaneous	32	0.19	29	0.17
Total Less Interest Paid	$2,331	$13.67	$2,083	$12.62
Net Accrual Operating Income	Total		Total	
(without interest paid)	$ 73,608		$131,336	
- Change in livestock & crop invent.[18]	14,994		26,497	
- Change in accounts receivable	-861		-2,888	
- Change in feed & supply inventory[19]	-2,423		1,242	
+ Change in accounts payable[20]	4,446		677	
NET CASH FLOW	$ 66,344		$107,162	
- Net family withdrawals	30,394		36,208	
Available for Farm	$ 35,950		$ 70,954	
- Farm debt payments	42,625		48,395	
Available for Farm Investment	$ -6,675		$ 22,560	
- Capital purchases	50,757		85,190	
Additional Capital Needed	$ 57,433		$ 62,631	

[18]Includes change in advance government receipts. [19]Includes change in prepaid expenses. [20]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
Intensive Grazing Dairy Farms, 2006

Item	42 Grazing Dairy Farms[22]			Average Top 30% Farms[22]		
Land	Owned	Rented	Total	Owned	Rented	Total
Tillable	139	115	254	179	107	286
Nontillable	37	21	58	29	21	50
Other nontill.	94	9	103	82	0	82
Total	270	145	415	290	128	418
Crop Yields	Farms	Acres[21]	Prod/Acre	Farms	Acres[21]	Prod/Acre
Hay crop	41	149	2.2 tn DM	11	189	2.2 tn DM
Corn silage	29	59	15.5 tn	8	51	18.9 tn
			5.2 tn DM			6.1 tn DM
Other forage	3	131	0.7 tn DM	0	0	0 tn DM
Total forage	41	200	2.8 tn DM	11	259	2.5 tn DM
Corn grain	7	59	133 bu	2	67	112 bu
Oats	0	0	0 bu	0	0	0 bu
Wheat	0	0	0 bu	0	0	0 bu
Other crops	4	47		0	0	
Tillable pasture	29	56		7	52	
Idle	4	50		0	0	
Total Tillable Acres	42	254		11	286	

[21]This column represents the average acreage for the farms producing that crop. For the 42 New York dairy farms, average acreages including those farms not producing were hay crop 145, corn silage 41, corn grain 10, oats 0, wheat 0, tillable pasture 39, and idle 5.

Average crop acres and yields compiled for the grazing farms 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
Intensive Grazing Dairy Farms, 2006

Item	41 Grazing Dairy Farms[22]	Average Top 30% Farms[22]
Total tillable acres per cow	2.52	2.11
Total forage acres per cow	1.96	1.80
Harvested forage dry matter, tons per cow	5.42	4.52

[22]See page 1 for a description of these groups of farms. Excludes farms that do not harvest forages.

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. Intensive grazing was used by all farms reported in the below tables.

CROP RELATED ACCRUAL EXPENSES

Intensive Grazing Dairy Farms Reporting, 2006

Item	Total Per Till. Acre	All Corn Per Acre	Corn Silage Per Ton DM	Corn Grain Per Dry Sh. Bu.	Hay Crop Per Acre	Hay Crop Per Ton DM	Pasture Per Till. Pasture Acre	Pasture Per Total Pasture Acre
All Grazing Farms								
No. of farms reporting	41[23]	10			11		7	
Ave. number of acres	258	66			253		19	97
Fert. & lime	$ 29.05	$ 70.57	$ 23.90	$ 0.10	$ 22.60	$ 9.94	$ 25.37	$ 17.37
Seeds & plants	12.26	48.70	12.45	0.13	9.27	4.22	3.26	3.77
Spray & other	9.72	66.12	15.04	0.14	1.90	0.76	0.00	0.00
TOTAL	$ 51.03	$ 185.39	$ 51.39	$ 0.37	$ 33.77	$ 14.92	$ 28.63	$ 21.14
Average Top 30% Farms								
No. of farms reporting	11	4			6		5	
Ave. number of acres	304	49			207		27	76
Fert. & lime	$ 39.52	$ 102.43	$ 24.07	$ 0.11	$ 31.85	$ 13.12	$ 35.52	$ 19.32
Seeds & plants	14.09	62.27	11.83	0.16	10.00	3.57	4.57	4.57
Spray & other	10.97	82.77	14.71	0.22	3.15	1.07	0.00	0.00
TOTAL	$ 64.58	$ 247.47	$ 50.61	$ 0.49	$ 45.00	$ 17.76	$ 40.09	$ 23.89

[23]Excludes farms that do not harvest forages.

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

Intensive Grazing Dairy Farms, 2006

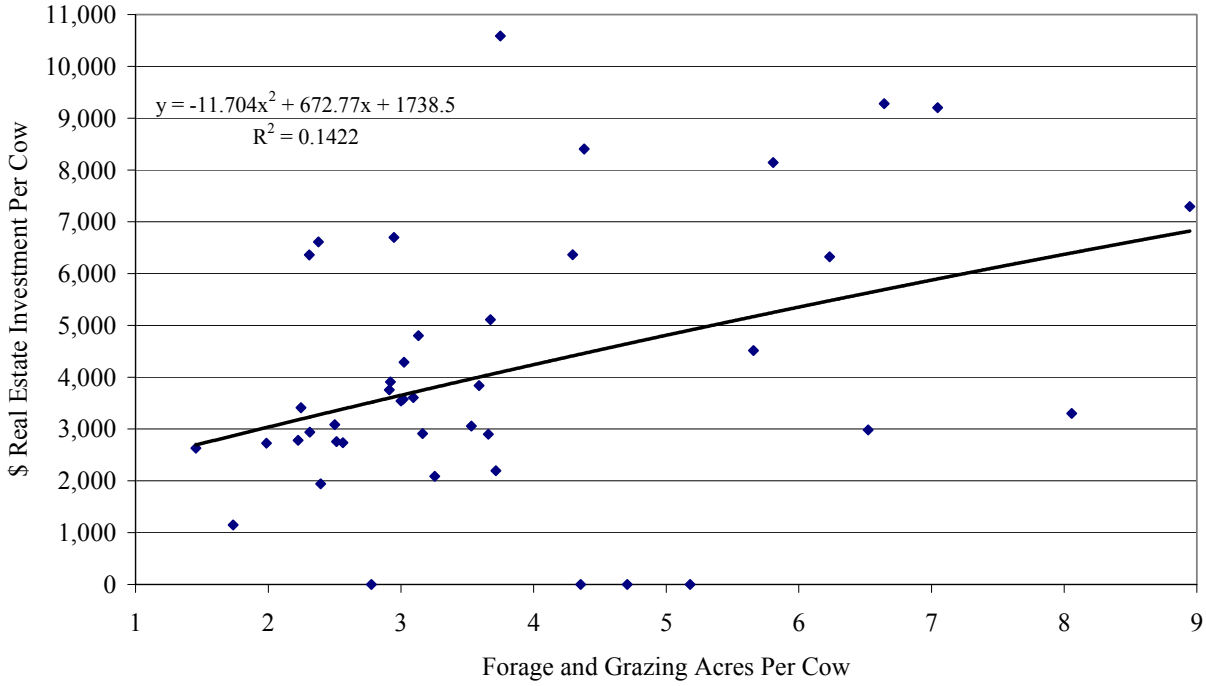
Machinery Expense	41 Grazing Dairy Farms[24] Total Expenses	41 Grazing Dairy Farms[24] Per Tillable Acre	Average Top 30% Farms[24] Total Expenses	Average Top 30% Farms[24] Per Tillable Acre
Fuel, oil & grease	$ 10,975	$ 42.59	$ 11,231	$ 37.00
Mach. repair & vehicle exp.	16,585	64.36	21,698	71.48
Machine hire, rent & lease	11,713	45.45	9,141	30.11
Interest (5%)	6,514	25.28	6,917	22.79
Depreciation	14,521	56.35	16,969	55.90
Total	$ 60,308	$ 234.03	$ 65,955	$ 217.28

[24]See page 1 for a description of these groups of farms. Excludes farms that do not harvest forages.

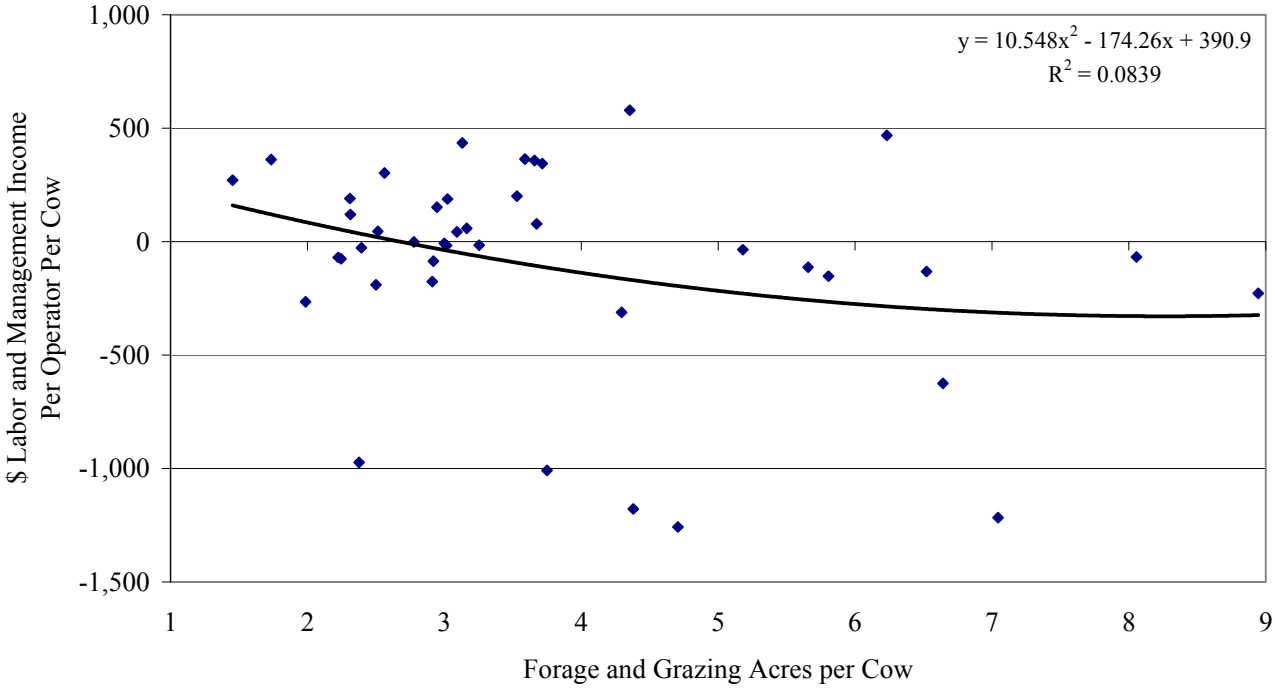
Cropping Analysis (continued)

The charts below show the relationship between the stocking rate (forage and grazing acres per cow) and labor and management income per operator per cow and real estate investment per cow. Stocking rate is total tillable acres plus nontillable pasture acres less corn grain acres, all divided by the average number of cows.

REAL ESTATE INVESTMENT/COW & FORAGE AND GRAZING ACRES/COW
42 Intensive Grazing Farms, 2006



LABOR AND MANAGEMENT INCOMES/OPERATOR/COW & FORAGE AND GRAZING ACRES/COW
42 Intensive Grazing Farms, 2006



Dairy Analysis

Analysis of the dairy enterprise can reveal 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 20 through 23.

DAIRY HERD INVENTORY
Intensive Grazing Dairy Farms, 2006

	Dairy Cows		Bred Heifers		Open Heifers		Calves	
Item	No.	Value	No.	Value	No.	Value	No.	Value
42 Grazing Dairy Farms[25]								
Beg. year (owned)	95	$ 130,963	30	$ 40,804	29	$ 25,339	23	$ 15,347
+ Change w/o apprec.		7,778		2,356		1,739		-8
+ Appreciation		469		-98		188		-1,248
End year (owned)	101	$ 139,210	32	$ 43,063	31	$ 27,266	22	$ 14,091
End including leased	102							
Average number	101		83	(all age groups)				
Average Top 30% Farms[25]								
Beg. year (owned)	123	$ 169,075	46	$ 66,675	26	$ 24,017	39	$ 32,451
+ Change w/o apprec.		10,846		3,033		1,365		1,131
+ Appreciation		-192		-1,058		142		-2,375
End year (owned)	131	$ 179,729	47	$ 68,650	27	$ 25,523	40	$ 31,207
End including leased	132							
Average number	136		114	(all age groups)				

[25] See page 1 for a description of these groups of farms.

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.

MILK PRODUCTION
Intensive Grazing Dairy Farms, 2006

Item	42 Grazing Dairy Farms[26]	Average Top 30% Farms[26]
Total milk sold, pounds	1,716,827	2,239,169
Milk sold per cow, pounds	17,054	16,505
Average milk plant test, percent butterfat	3.70%	3.98%

[26] See page 1 for a description of these groups of farms.

Monitoring and evaluating culling practices and experiences on an annual basis are important herd management tools. Culling rate can have an effect on both milk per cow and profitability.

ANIMALS LEAVING THE HERD
Intensive Grazing Dairy Farms, 2006

	42 Grazing Dairy Farms		Average Top 30% Farms	
Item	Number	Percent[27]	Number	Percent[27]
Cows sold for beef	20	19.7	24	17.6
Cows sold for dairy	6	5.6	10	7.2
Cows died	5	4.8	8	5.5
Culling rate[28]		24.5		23.1

[27]Percent of average number of cows in the herd. [28]Cows sold for beef plus cows died.

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
Intensive Grazing Dairy Farms, 2006

Item	42 Grazing Dairy Farms[29] Per Cow	42 Grazing Dairy Farms[29] Per Cwt.	Average Top 30% Farms[29] Per Cow	Average Top 30% Farms[29] Per Cwt.
Accrual Cost of Producing Milk				
Operating costs	$ 1,805	$ 10.58	$ 1,472	$ 8.92
Purchased inputs costs	$ 2,020	$ 11.85	$ 1,658	$ 10.04
Total Costs	$ 2,813	$ 16.49	$ 2,276	$ 13.79
Accrual Receipts From Milk	$ 2,403	$ 14.09	$ 2,342	$ 14.19
Net milk receipts	$ 2,292	$ 13.12	$ 2,426	$ 13.25
Net Farm Income without Appreciation	$ 383	$ 2.24	$ 685	$ 4.15
Net Farm Income with Appreciation	$ 551	$ 3.23	$ 765	$ 4.64

[29] See page 1 for a description of these groups of farms.

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
Intensive Grazing Dairy Farms, 2006

Item	42 Grazing Dairy Farms[29] Per Cow	42 Grazing Dairy Farms[29] Per Cwt.	Average Top 30% Farms[29] Per Cow	Average Top 30% Farms[29] Per Cwt.
Purchased dairy grain & concentrate	$ 689	$ 4.04	$ 562	$ 3.41
Purchased dairy roughage	63	0.37	104	0.63
Total Purchased Dairy Feed	$ 752	$ 4.41	$ 666	$ 4.04
Purchased grain & concentrate as % of milk receipts	30%		26%	
Purchased feed & crop expense	$ 904	$ 5.30	$ 840	$ 5.09
Purchased feed & crop expense as % of milk receipts	38%		36%	
Breeding	$ 37	$ 0.21	$ 29	$ 0.18
Veterinary & medicine	83	0.49	65	0.39
Milk marketing	166	0.98	155	0.94
Bedding	36	0.21	28	0.17
Milking supplies	56	0.33	44	0.27
Cattle lease	0	0.00	0	0.00
Custom boarding	10	0.06	3	0.02
bST expense	7	0.04	7	0.04
Livestock professional fees	12	0.07	12	0.07
Other livestock expense	30	0.18	26	0.16

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
Intensive Grazing Dairy Farms, 2006

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
42 Grazing Dairy Farms[30]				
Farm capital	$ 275,654	$ 7,667	$ 3,042	$ 5,557
Real estate		3,249		2,355
Machinery & equipment	46,346	1,289	511	
Ratios:				
Asset Turnover Ratio	Operating Expense	Interest Expense		Depreciation Expense
0.42	0.77	0.04		0.07
Average Top 30% Farms[30]				
Farm capital	$ 303,305	$ 7,020	$ 3,333	$ 5,308
Real estate		2,968		2,244
Machinery & equipment	43,282	1,002	476	
Ratios:				
Asset Turnover Ratio	Operating Expense	Interest Expense		Depreciation Expense
0.45	0.68	0.03		0.06

[30] See page 1 for a description of these groups of farms.

Capital and Labor Efficiency Analysis (continued)

LABOR FORCE INVENTORY AND ANALYSIS
Intensive Grazing Dairy Farms, 2006

Labor Force	Months	Age	Years of Education	Value of Labor & Management
42 Grazing Dairy Farms				
Operator number 1	13.1	49	14	$ 30,246
Operator number 2	5.2	46	14	13,190
Family paid	2.5			
Family unpaid	3.5			
Hired	9.3			
Total	33.6	/ 12 = 2.80 Worker Equivalent		
		1.39 Operator/Manager Equivalent		
Average Top 30% Farms				
Total Labor Force	37.8	/ 12 = 3.15 Worker Equivalent		
Operator's Labor		1.38 Operator/Manager Equivalent		

Labor Efficiency	42 Grazing Dairy Farms Total	42 Grazing Dairy Farms Per Worker	Average Top 30% Farms Total	Average Top 30% Farms Per Worker
Cows, average number	101	36	136	43
Milk sold, pounds	1,716,827	614,066	2,239,169	711,600
Tillable acres	254	91	286	91

Labor Costs	42 Grazing Dairy Farms Per Cow	42 Grazing Dairy Farms Per Cwt.	Average Top 30% Farms Per Cow	Average Top 30% Farms Per Cwt.
Value of operator(s) labor ($2,300/month)	$ 407	$ 2.39	$ 282	$ 1.71
Family unpaid ($2,300/month)	78	0.46	16	0.10
Hired	259	1.52	311	1.88
Total Labor	$ 744	$ 4.36	$ 608	$ 3.69
Machinery Cost	$ 590	$ 3.46	$ 460	$ 2.79
Total Labor & Machinery	$ 1,334	$ 7.82	$ 1,069	$ 6.48
Hired labor expense per hired worker equivalent	$26,504		$27,197	
Hired labor expense as % of milk sales	10.8%		13.3%	

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 Intensive Grazing Dairy Farms, 2005 & 2006[31]

	Same 35 Grazing Dairy Farms		Same 11 Farms in Top 30% Farms	
Selected Factors	2005	2006	2005	2006
Size of Business				
Average number of cows	102	106	122	134
Average number of heifers	82	88	108	112
Milk sold, pounds	1,810,028	1,810,661	2,045,065	2,159,459
Worker equivalent	2.83	2.81	2.81	2.96
Total tillable acres	270	260	292	268
Rates of Production				
Milk sold per cow, pounds	17,780	17,054	16,763	16,159
Hay DM per acre, tons	2.0	2.2	2.1	2.0
Corn silage per acre, tons	18.5	15.1	19.8	19.2
Labor Efficiency				
Cows per worker	36	38	43	45
Milk sold/worker, pounds	639,586	644,363	727,781	729,547
Cost Control and Milk Price				
Grain & concentrate purchased as % of milk sales	26%	29%	25%	24%
Dairy feed & crop expense per cwt. milk	$ 5.43	$ 5.30	$ 5.75	$ 5.21
Labor & machinery costs/cow	$ 1,320	$ 1,309	$ 1,078	$ 1,017
Operating cost of producing cwt. of milk	$ 11.20	$ 10.57	$ 10.42	$ 8.91
Milk receipts per cwt.	$ 16.23	$ 14.13	$ 16.32	$ 14.25
Capital Efficiency[32]				
Farm capital per cow	$ 7,164	$ 7,374	$ 6,497	$ 6,677
Machinery & equipment per cow	$ 1,254	$ 1,289	$ 1,048	$ 1,032
Asset turnover ratio	0.52	0.44	0.56	0.46
Profitability				
Net farm income without appreciation	$ 65,714	$ 40,468	$ 93,331	$ 89,117
Net farm income with appreciation	$ 95,783	$ 59,700	$ 138,435	$ 100,512
Labor & management income per operator/manager	$ 23,293	$ 3,251	$ 47,528	$ 40,623
Rate of return on equity capital with appreciation	8.3%	1.4%	16.1%	8.3%
Rate of return on all capital with appreciation	7.5%	2.7%	13.2%	7.8%
Financial Summary				
Farm net worth, end year	$ 561,990	$ 584,736	$ 632,819	$ 700,004
Debt to asset ratio	0.26	0.28	0.25	0.25
Farm debt per cow	$ 2,031	$ 2,084	$ 1,706	$ 1,805

[31]Farms participating both years.
[32]Average for the year.

RECEIPTS AND EXPENSES PER COW AND PER CWT.

Same 35 Intensive Grazing Dairy Farms, 2005 & 2006

	2005		2006	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	102		106	
Cwt. Of Milk Sold		18,100		18,107
ACCRUAL OPERATING RECEIPTS				
Milk	$2,886	$16.23	$2,411	$14.13
Dairy cattle	315	1.77	323	1.90
Dairy calves	70	0.40	50	0.30
Other livestock	12	0.07	14	0.08
Crops	27	0.15	36	0.21
Miscellaneous receipts	148	0.83	223	1.31
Total Receipts	$3,458	$19.45	$3,058	$17.93
ACCRUAL OPERATING EXPENSES				
Hired labor	$ 266	$ 1.50	$ 266	$ 1.56
Dairy grain & concentrate	747	4.20	690	4.04
Dairy roughage	48	0.27	61	0.36
Nondairy feed	1	0.00	0	0.00
Professional nutritional services	1	0.01	1	0.00
Machine hire/rent/lease	122	0.69	116	0.68
Machinery repair & vehicle expense	149	0.84	156	0.91
Fuel, oil & grease	91	0.51	110	0.64
Replacement livestock	41	0.23	19	0.11
Breeding	40	0.23	35	0.21
Veterinary & medicine	77	0.44	82	0.48
Milk marketing	161	0.91	166	0.97
Bedding	19	0.11	35	0.21
Milking supplies	63	0.35	57	0.33
Cattle lease	0	0.00	0	0.00
Custom boarding	14	0.08	12	0.07
bST expense	6	0.04	5	0.03
Livestock professional fees	14	0.08	13	0.08
Other livestock expense	36	0.20	28	0.16
Fertilizer & lime	114	0.64	94	0.55
Seeds & plants	38	0.21	31	0.18
Spray/other crop expense	16	0.09	26	0.15
Crop professional fees	2	0.01	3	0.02
Land, building, fence repair	72	0.40	53	0.31
Taxes	66	0.37	55	0.32
Real estate rent/lease	65	0.37	57	0.34
Insurance	47	0.26	43	0.25
Utilities	82	0.46	80	0.47
Interest paid	101	0.57	118	0.69
Other professional fees	8	0.04	7	0.04
Miscellaneous	20	0.11	26	0.15
Total Operating Expenses	$2,530	$14.23	$2,442	$14.32
Expansion Livestock	35	0.19	8	0.04
Extraordinary Expense	12	0.07	6	0.04
Machinery Depreciation	170	0.96	149	0.87
Real Estate Depreciation	65	0.37	72	0.42
Total Expenses	$2,812	$15.82	$2,677	$15.69
Net Farm Income Without Appreciation	$ 646	$ 3.63	$ 381	$ 2.23

RECEIPTS AND EXPENSES PER COW AND PER CWT.

Same 11 Farms in Top 30% Intensive Grazing Dairy Farms, 2005 & 2006

	2005		2006	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	122		134	
Cwt. Of Milk Sold		20,451		21,595
ACCRUAL OPERATING RECEIPTS				
Milk	$2,736	$16.32	$2,303	$14.25
Dairy cattle	296	1.76	348	2.15
Dairy calves	110	0.66	65	0.41
Other livestock	17	0.10	14	0.08
Crops	30	0.18	58	0.36
Miscellaneous receipts	95	0.57	189	1.17
Total Receipts	$3,284	$19.59	$2,977	$18.42
ACCRUAL OPERATING EXPENSES				
Hired labor	$ 300	$ 1.79	$ 294	$ 1.82
Dairy grain & concentrate	685	4.09	562	3.48
Dairy roughage	67	0.40	115	0.71
Nondairy feed	1	0.00	1	0.00
Professional nutritional services	0	0.00	0	0.00
Machine hire/rent/lease	57	0.34	60	0.37
Machinery repair & vehicle expense	141	0.84	138	0.86
Fuel, oil & grease	68	0.41	74	0.46
Replacement livestock	3	0.02	7	0.04
Breeding	36	0.21	23	0.14
Veterinary & medicine	67	0.40	58	0.36
Milk marketing	135	0.81	147	0.91
Bedding	14	0.08	23	0.14
Milking supplies	46	0.28	41	0.25
Cattle lease	0	0.00	0	0.00
Custom boarding	4	0.03	3	0.02
bST expense	2	0.01	1	0.01
Livestock professional fees	9	0.05	13	0.08
Other livestock expense	27	0.16	23	0.14
Fertilizer & lime	170	1.01	118	0.73
Seeds & plants	28	0.17	24	0.15
Spray/other crop expense	11	0.07	17	0.10
Crop professional fees	2	0.01	6	0.04
Land, building, fence repair	60	0.36	35	0.22
Taxes	54	0.32	47	0.29
Real estate rent/lease	64	0.38	54	0.33
Insurance	31	0.19	30	0.18
Utilities	73	0.44	68	0.42
Interest paid	94	0.56	102	0.63
Other professional fees	9	0.05	4	0.02
Miscellaneous	24	0.14	26	0.16
Total Operating Expenses	$2,284	$13.62	$2,114	$13.08
Expansion Livestock	12	0.07	0	0.00
Extraordinary Expense	0	0.00	1	0.01
Machinery Depreciation	128	0.76	122	0.76
Real Estate Depreciation	96	0.57	74	0.46
Total Expenses	$2,520	$15.02	$2,311	$14.31
Net Farm Income Without Appreciation	$ 765	$ 4.56	$ 667	$ 4.13

Grazing 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

42 Intensive Grazing Dairy Farms, 2006

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
(14)[33]	(12)	(12)	(12)	(11)	(11)	(14)	(14)
5.51	271	4,337,339	22,060	3.9	22	55	858,061
3.05	96	1,872,929	19,864	3.0	19	37	677,950
2.51	65	1,185,010	18,547	2.3	17	31	589,495
1.86	49	904,916	16,426	1.8	14	26	446,922
1.35	37	533,364	12,298	1.1	8	18	293,517

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
(12)	(12)	(14)	(14)	(12)	(12)
$456	21%	$329	$932	$608	$3.70
661	27	506	1,289	861	4.74
757	30	609	1,494	942	5.32
860	33	691	1,755	1,069	6.06
987	39	1,067	2,383	1,261	7.43

Value and Cost of Milk Production			Profitability			
Milk Receipts Per Cow	Operating Cost Milk Prod. Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income with Appreciation	Net Farm Income w/o Appreciation	Labor & Mgmt. Income Per Operator	Change in Net Worth with Appreciation
(12)	(12)	(12)	(4)	(4)	(4)	(8)
$3,085	$8.17	$13.71	$169,804	$120,698	$54,375	$142,707
2,738	9.53	15.74	70,472	45,465	10,783	31,253
2,549	10.36	17.40	41,211	31,558	-264	11,015
2,360	11.51	19.28	17,186	13,860	-8,553	1,233
1,740	13.54	25.11	-8,642	-9,754	-43,696	-43,751

[33]Page number of the participant's DFBS where the factor is located.

SUPPLEMENTARY INFORMATION

Each year DFBS cooperators volunteer to complete supplementary data collection forms looking at selected management aspects of the business or specific research areas being studied. This is in addition to the normal DFBS data collection form. Two areas that were examined this year were the source of dairy replacements and the breakdown of the milk income and marketing expenses. Following is a summary of this information.

SOURCE OF DAIRY REPLACEMENTS
56 New York Dairy Farms, 2006

Animals Entering Herd	Average
Number calving in 2006 for first time	146
Animals purchased, percent[34]	5%
Animals raised by farm, percent[35]	95%
Current Heifer Inventory	
Raised on dairy, percent	86%
Raised by a custom grower, percent	14%

[34]Animals purchased are animals purchased from a different farm and were not the farm's genetics.
[35]Animals raised by farm are animals that were born on the farm and entered the herd, which includes animals raised by the farm or custom grower.

On the average farm, 146 animals calved for the first time in 2006. The breakdown of these animals for source was 5 percent purchased and 95 percent raised by the farm. Of the current heifer inventory, 86 percent were raised on the dairy and 14 percent were being raised by a custom grower. There is increased interest in evaluating the dairy replacement enterprise.

Milk Income and Marketing Expense Breakdown

Starting January 1st, 2000, the Northeast switched to multiple components pricing, which changed the format of the milk check and how farmers received payment for their milk. To examine the breakdown of the gross milk income and the marketing expenses, 20 intensive grazing farms filled out a detailed form for all the different sources of income for milk sales and the milk marketing expenses on an accrual basis. This information is reported in the following two tables. The tables are divided into six different areas, each representing a different area of income or expenses.

The first section looks at the value of the milk components on a per cwt. basis. The second area looks at the Producer Price Differential. The third area looks at the premiums a farm receives. Any premiums not specifically noted as quality or volume related are included in market premiums. The fourth area looks at the expenses associated with marketing milk. A new line item in this section is the expenses associated with utilizing forward contracting or hedging programs to market milk, such as commission or broker fees. The fifth area is income from the compact program or from forward contracting or hedging programs. The sixth area is the patronage dividends or refunds from the milk cooperatives. Equity purchased in the milk cooperative utilizing a monthly deduction from the milk check or a percent of the patronage dividend is treated as a capital purchase and is not a milk marketing expense. The cumulative total for these six areas is the net price received on farms. Your net farm price can be found on page 12 of your farm's DFBS report.

The table on page 42 reports the averages for these different areas. The table on page 43 contains the range for each of the individual lines of the report. This table is in farm business chart format with each item sorted independently and ranked by fourths. Numbers for the different areas will not add to the totals for that quartile or to the net price received because the highest farms for each item were averaged, not the same farms throughout the six areas. This table shows the range of income and expenses received by farms for all the different areas.

For your individual farm, compare your accrual numbers following this same format to look at how you compare to other farms in your region and to identify possible areas to generate additional revenue.

AVERAGE[36] MILK INCOME AND MARKETING REPORT
20 Intensive Grazing Dairy Farms, 2006

	Pounds	Percent	Price/Pound	Total	$/Cwt of Milk
BASE FARM PRICE					
Butterfat	68,611.50	3.70%	$ 1.41	$ 96,582.90	$ 5.22
Protein	55,639.80	3.00%	$ 2.20	$122,378.00	$ 6.61
Solids	99,936.80	5.40%	$ 0.19	$ 18,533.90	$ 1.00
Total Component Contribution					$12.82
PPD	1,851,962.30			$ 14,030.00	$ 0.76
Base Farm Price					$ 13.58
Premiums					
Quality				$ 2,724.95	$ 0.15
Volume				$ 4,930.15	$ 0.27
Market Premiums				$ 2,969.40	$ 0.16
Total Premiums					$ 0.57
BASE FARM PRICE + PREMIUM					$ 14.16
Deductions					
Promo				$ 3,180.20	$ 0.17
Hauling + Stop Charges				$11,949.65	$ 0.65
Market Fees & Coop Dues				$ 1,703.40	$ 0.09
Total Deductions					$ 0.91
BASE FARM PRICE + PREMIUMS - DEDUCTIONS					$ 13.25
Marketing Programs					
Futures Contracts, Forward Contracting, Etc.				$ 0.00	$ 0.00
Total Marketing Income					$ 0.00
Patronage Dividends				$ 1,528.20	$ 0.08
NET PRICE RECEIVED ON FARM, ALL SOURCES					**$ 13.33**
PPD - Hauling, $ per cwt.					$ 0.11
PPD - Hauling + Market Premiums, $ per cwt.					$ 0.27
Net Marketing Value (PPD + Total Premiums – Total Deductions), $ per cwt.					$ 0.42

[36]Each calculation of an average is independent of all others. Therefore, math operations on the detail will not result in the totals. However, detail in the "$/Cwt of Milk" column will result in the totals.

MILK PRICE INFORMATION BY QUARTILE[37, 38]
(Each Category Sorted Independently)
20 Intensive Grazing Dairy Farms, 2006

	Lowest Quartile	◄———	———	Highest Quartile
Butterfat, %	3.52	3.71	3.92	4.54
Protein, %	2.99	3.06	3.14	3.37
Other Solids, %	5.54	5.69	5.73	5.79
Butterfat, $ per Cwt.	4.73	4.99	5.17	5.73
Protein, $ per Cwt.	6.23	6.37	6.62	7.18
Other solids, $ per Cwt.	0.91	0.98	1.01	1.15
Total Component Value per Cwt.	**$12.06**	**$12.32**	**$12.69**	**$13.98**
PPD, $ per Cwt.	0.64	0.71	0.78	0.98
Base Farm Price per Cwt.	**$12.87**	**$13.10**	**$13.45**	**$14.74**
Quality, $ per Cwt.	0.02	0.15	0.26	0.45
Volume, $ per Cwt.	0.00	0.03	0.08	0.35
Market premium, $ per Cwt.	-0.01	0.10	0.23	0.57
Total Premium, $ per Cwt.	**0.23**	**0.39**	**0.64**	**0.96**
Base Farm Price + Premiums per Cwt.	**$13.27**	**$13.65**	**$14.04**	**$15.40**
Promotion, $ per Cwt.	0.15	0.15	0.21	0.42
Hauling, $ per Cwt.	0.45	0.58	0.67	1.04
Market fees & coop dues per Cwt.	0.00	0.01	0.05	0.17
Total Marketing Expenses per Cwt.	**$0.76**	**$0.85**	**$0.97**	**$1.32**
Base + Premiums – Deductions per Cwt.	**$12.21**	**$12.72**	**$13.09**	**$14.47**
Futures contract, forward contracting, $ per Cwt.	0.00	0.00	0.00	0.10
Total Marketing Income, $ per Cwt.	**$0.00**	**$0.00**	**$0.00**	**$0.10**
Patronage Dividends, $ per Cwt.	**$0.00**	**$0.00**	**$0.00**	**$0.30**
Net Price Received From All Sources, $ per Cwt.	**$12.21**	**$12.74**	**$13.30**	**$14.63**
PPD - hauling, $ per Cwt.	**-0.18**	**0.06**	**0.16**	**0.33**
PPD - hauling + mkt premiums, $ per Cwt.	**-0.04**	**0.19**	**0.36**	**0.75**
Net Marketing Value (PPD + Total Premiums – Total Deductions), $ per Cwt.	**-0.09**	**0.16**	**0.51**	**0.84**

[37]Each calculation of an average is independent of all others. Therefore, math operations on the detail will not result in the totals.

[38]Holstein and Jersey herds are included.

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 desired direction. Goals should be SMART:

1. Goals should be **S**pecific.

2. Goals should be **M**easurable.

3. Goals should be **A**chievable but challenging.

4. Goals should be **R**ewarding.

5. Goals should be **T**imed with a designated date by which the goal will be achieved.

Goal setting on a dairy farm should be 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

_____

_____

_____

_____

_____

_____

_____

_____

Worksheet for Setting Goals (Continued)

II. Goals

What	How	When	Who is Responsible

Summarize Your Business Performance

The Farm Business Chart on page 40 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:

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 18)

Accrual Receipts - (defined on page 19)

Annual Cash Flow Statement - (defined on page 27)

Appreciation - (defined on page 20)

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.

bST Usage - An estimate of the percentage of herd, on average, that was injected with bovine somatotropin during the year.

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 28)

Cash Paid - (defined on page 17)

Cash Receipts - (defined on page 19)

Change in Accounts Payable - (defined on page 18)

Change in Accounts Receivable - (defined on page 19)

Change in Inventory - (defined on page 19)

Cost of Term Debt – A weighted average of the cost of borrowed capital to the farm. Calculate by multiplying end of year principal of each loan that is borrowed by the interest rate for each loan at that time. Add up each amount that is calculated for each loan and then divide by total amount of borrowed funds. Do not include accounts payable, operating debt or advanced government receipts. This information is found on pages 8 & 9 of the data entry form.

Culling Rate – (defined on page 33)

Current Portion - (defined on page 23)

Current Ratio – Measures the extent to which current farm assets, if liquidated, would cover current farm liabilities. Calculated as current farm assets at end year divided by current farm liabilities at end year.

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 Coverage Ratio – (defined on page 28)

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

Debt to Asset Ratios - (defined on page 25)

Depreciation Expense Ratio – Machinery and building depreciation divided by total accrual receipts.

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 28.

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.

Financial Lease - A long-term non-cancelable 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.

Hired Labor Expense per Hired Worker Equivalent – The total cost to the farm per hired worker equivalent. Divide accrual hired labor expense by number of hired plus family paid worker equivalents.

Hired Labor Expense as % of Milk Sales – The percentage of the gross milk receipts that is used for labor expense. Divide accrual hired labor expense by accrual milk sales.

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.

Interest Expense Ratio – Accrual interest expense divided by total accrual receipts.

Labor and Management Income - (defined on page 22)

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.

Leverage Ratio – (defined on page 25)

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

Net Farm Income - (defined on page 20)

Net Farm Income from Operations Ratio – (defined on page 23)

Net Milk Receipts – Accrual milk receipts less milk marking expense.

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 34)

Operating Expense Ratio – Total accrual expenses less interest and machinery and building depreciation, divided by total accrual receipts.

Operator Resources/cwt. - The total value of labor contributed to the farm from all owner/operators. This measure is calculated by multiplying the number of months of labor provided by all owner/operators by $2,300 and dividing by the number of cwt. produced during the year.

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 DHIC, registration fees and transfers.

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 34)

Renter - Farm business owner/operator owns no tillable land and commonly rents all other farm real estate.

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 23)

Return on Total Capital - (defined on page 23)

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

Stocking Rate – (defined on page 32)

Total Costs of Producing Milk - (defined on page 34)

Total Labor Cost/cwt. - The total cost of all labor used on the farm on a per cwt. basis. The value of unpaid labor at $2,300 per month plus the value of operator(s) labor at $2,300 per month plus total hired labor expense divided by the number of cwt. produced.

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.

Working Capital – A theoretical measure of the amount of funds available to purchase inputs and inventory items after the sale of current farm assets and payment of all current farm liabilities. Calculated as current farm assets at end year less current farm liabilities at end year.

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OTHER A.E.M. EXTENSION BULLETINS

EB No	Title	Fee (if applicable)	Author(s)
2007-12	Quantifying the Contributions to Dairy Farm Business Risk: Implications for Producer's Risk Management Strategies		Schmit, T., Chang, H., Boisvert, R. and L. Tauer
2007-11	Dairy Farm Business Summary, Northern New York Region, 2006	($12.00)	Knoblauch, W., Putnam, L., Karszes, J., Murray, P., Vokey, F., Ames, M., Van Loo, W., Deming, A. and J. Prosper
2007-10	Dairy Farm Business Summary, Western and Central Plateau Region, 2006	($12.00)	Knoblauch, W., Putnam, L., Karszes, J., Grace, J., Munsee, D. and J.Petzen
2007-09	Dairy Farm Business Summary, New York Small Herd Farms, 80 Cows or Fewer, 2006	($16.00)	Knoblauch, W., Putnam, L., Kiraly, M. and J. Karszes
2007-08	Producing a Business Plan for Value-Added Agriculture		Streeter, D.
2007-07	Dairy Farm Business Summary, Northern Hudson Region, 2006	($12.00)	Conneman, G., Putnam, L., Wickswat, C., Buxton, S., Smith, R. and J. Karszes
2007-06	Dairy Farm Business Summary, Western and Central Plain Region, 2006	($12.00)	Knoblauch, W., Putnam, L., Karszes, J., Hanchar, J., Moag, G., Getty, K. and Z. Waite
2007-05	Dairy Farm Business Summary, New York Large Herd Farms, 300 Cows or Larger, 2006	($16.00)	Karszes, J., Knoblauch, W. and L. Putnam
2007-04	A Bridge Across the Generations by New York FarmLink (video) 26:44	($9.99)	Staehr, A.
2007-03	An Overview of Dairy Marketing Cooperatives Operating in New York State		Henehan, B.

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