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What Successful Small Farmers Say

The Results of
A Survey of Successful Small Farm Operators

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INTRODUCTION[2]

By any measure, small farms make up a large proportion of United States, Northeast Region and New York State farms. Using the USDA definition of a small farm as one that sells less than $250,000 worth of agricultural products, 92 percent of all farms are small (Table A1). Those small farms produce 28 percent of all agricultural products in the United States and 40 percent in New York State.

Many small farms are really farms

About half of all farms counted by the USDA sell less than $10,000 of agricultural products. However, if you apply a stringent assessment and say a farmer is one who indicates that farming is his/her primary occupation and does not hold a full time job off the farm and receives at least 10 percent of household income from the farm, 18 percent of the operators now called farmers by the USDA would be *still be classified* as farmers. Of the farmers who met these requirements, nearly three-quarters are small farmers.

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[1] Cuykendall is a senior extension associate and LaDue is W. I. Myers Professor of Agricultural Finance, both in the Department of Applied Economics and Management, and Smith is CALS Professor of Agriculture and Food Systems Sustainability. The authors thank Jacob Schuelke for assisting with the interviews and Jerry White for a helpful review. This project was supported in part by the Cornell University Agricultural Experiment Station federal formula funds, Project No 1217809 received from Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture.

[2] For a more detailed discussion of the issues raised in this introduction, see LaDue and Smith, "Why Conduct Research and Extension for Small Farms", E.B. 2001-20, Department of Applied Economics and Management, December 2001.

Table A1. Distribution of Farms and Production by Farm Size
United States, Northeast Region and New York State, 1997

Size (sales per farm)	Percent of All Farms			Percent of Production		
	United States	Northeast Region	New York State	United States	Northeast Region	New York State
($1,000)						
Under 10	50	49	46	1	2	2
10 – 19	11	11	11	2	1	1
20 – 39	10	8	8	3	3	3
40 – 99	11	12	13	7	8	10
100–249	10	12	14	15	21	24
250-500	4	5	5	15	17	17
Over 500	4	3	3	57	48	43

Source: 1997 Census of Agriculture, Table 2

These data indicate that there are several times as many small farms as large farms. If your interest is in people and communities, rather than (or in addition to) cows, corn *or* cabbage, there is good reason for being interested in small farms. A focus on small farms will influence the lives of more farm operators, their families, and the communities in which they live and work than a focus on large farms.

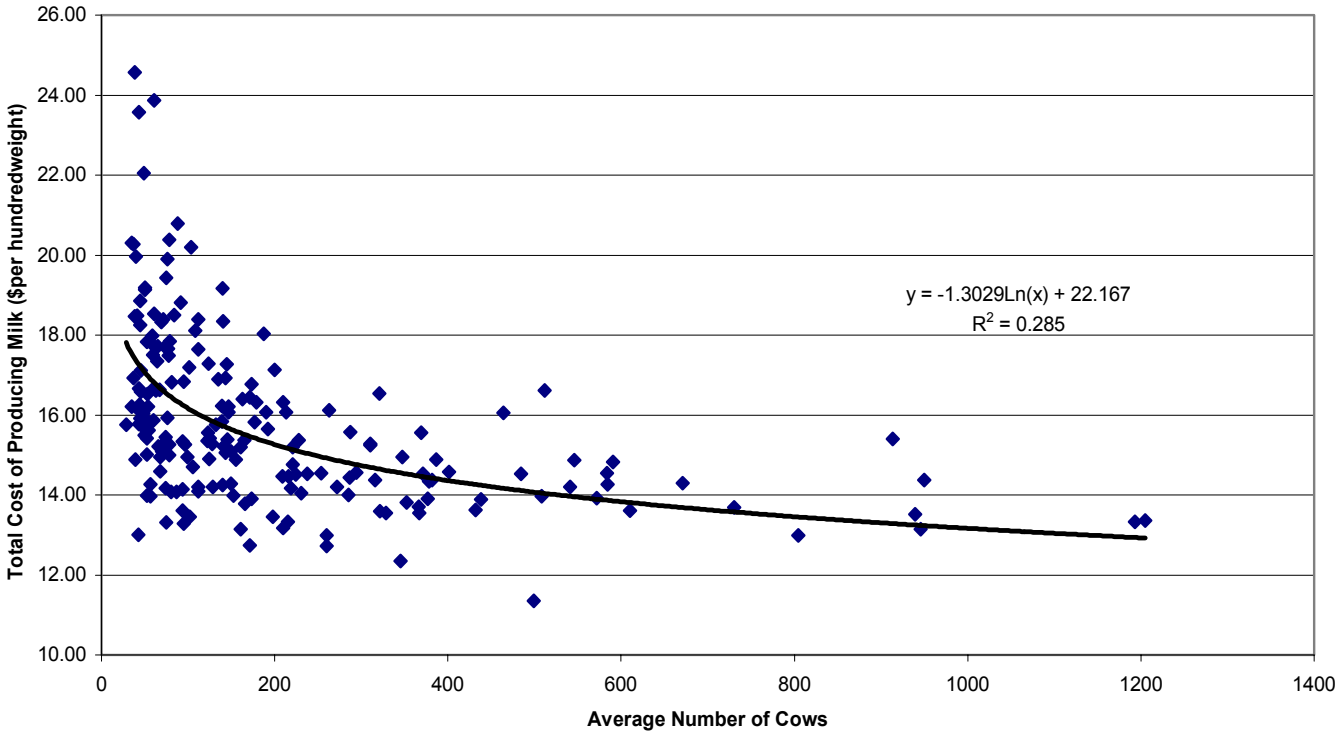
Economies of size are not as important as many think

A basic economic reality with which small farms must deal is economies of size. However, economies of size are not as large as frequently implied and are not sufficiently large but what efficient smaller farm units can be competitive in today's economic environment. Some small farms are indeed able to operate quite efficiently. For example, in Figure 1, notice that there are a number of small farms with total costs of producing milk of approximately $13 per hundredweight – similar to the levels achieved by the best larger farms. Those small farms find a way to produce at a competitive level of cost.

Economies of size are also less important in many horticulture (fruit, vegetable, nursery) businesses than in dairy. Many of these businesses do not use specialized machinery or buildings that are the primary contributors to economies of size in dairy herds.

Some small farms are able to offset the economies of size that do exist by developing niche markets. These niche markets are often found where the total product required can be provided by a small operation (e.g. community supported agriculture) or where the needs of the market can most easily be met by small operations (local ethnic markets). Niche markets often provide price premiums, which allow farms to be profitable even if costs are high.

Figure 1. TOTAL COST OF PRODUCING MILK BY HERD SIZE
3-Year Average of 201 Farms, 1997-1999



Even though small farms can compete on a per hundredweight basis, they still have the multiplier disadvantage. A 50 cow farm producing 20,000 pounds per cow and netting $2 per hundredweight will net $20,000, while a 150 cow farm with the same production and net income of $2 per hundredweight will net $60,000. However, it is important to note that the small dairy farms of this size make an important contribution to family income and also provide the small farm lifestyle benefits that many farm families desire. Rather than expand the farm (the herd in our example) many small farms choose to combine non-farm work, by some member of the family, with the small farm.

In spite of the challenges they face, a number of small farms make just as large a contribution to family living as some larger farms (Table A2). The net income per operator shown in Table A2 represents the income earned by the operator as a return to his/her labor, management and equity capital. The best managed small farms make respectable incomes and incomes are greater than that of some larger farms.

Table A2. Distribution of Net Income Per Operator[a] By Size of Business
322 New York Dairy Farms, 1999

Income Group	Number of Cows <65	65-129	130-194	195-259	260+
Number of Farms	65	96	45	31	83
	Net Farm Income Excluding Appreciation Per Operator				
Top 20 percent	$51,668	$78,309	$103,316	$157,436	$567,863
2nd Quintile	31,127	52,891	61,896	108,483	198,128
Median 20 %	20,971	33,660	42,733	76,065	129,938
4th Quintile	13,369	20,508	27,675	46,824	75,756
Bottom 20 %	-3,392	471	1,534	11,629	27,597
Average	22,095	36,786	47,431	77,879	203,427

[a] Excluding appreciation of capital assets.
Source: NY Dairy Farm Business Summary, Cornell University

In addition to the monetary contribution to family income, small farms provide a particular quality of life that is valued by many farm families. These families find the small farm setting a good place to raise a family. They find self-satisfaction in operating a successful small farm business. They also enjoy the connections to nature as well as the independence and type of work activities required on a small farm.

Small Farms Contribute to Communities

Small farms make significant contributions to the economies, natural environments and social fabric of rural communities.

Local Economies. Small farm businesses are important sources of income for rural farm families, who frequently combine that income with income from non-farm sources.

Small farms provide a skilled part and full time labor force for non-farm businesses in the community and surrounding area. Farm developed skills are useful in a wide variety of jobs. Good working habits such as hard work and reliability are a hallmark of farm operators.

Small farm operators tend to make local purchases and make use of local tradespersons and services. They contribute to the critical mass necessary to maintain rural community businesses and services. In New York Small farms sell 40 percent of production of all of agriculture and purchase over 40 percent[3] of the inputs purchased to support New York's agricultural production sector.

Social Fabric. Rural residents cite the small farm sector as a core component of the social fabric of rural areas. Basic agrarian values make a positive contribution to the set of community values that guide the local mores. Small farm operators also contribute

[3] 43% according to the 1997 census of agriculture

to the critical mass necessary to maintain local churches and community organizations, such as boy and girl scouts.

Natural Environment. Small farms make a contribution to the aesthetics of rural areas. Many European countries have maintained rural pastoral scenery by encouraging small farms. Small farms provide green space. Small farms can be more environmentally friendly because they do not concentrate large quantities of waste or chemicals in one place. Some small farms (e.g. livestock farms and organic farms) are also more likely to use less intensive methods, such as grazing or reduced levels of pesticides and nutrients.

Justification for the Study

It is clear that small farms are important because of their number and because of their contributions to the incomes and quality of life of the families that derive all or a portion of their incomes from them. Their contributions to rural communities add to their importance. The basic objective of this study was to identify practices and techniques that the owners of small farms can use to keep their businesses competitive and allow the farm to make the contribution to family living and the quality of life that small farm families seek. The study was designed to achieve this by identifying those practices that are important in making successful farms successful. Whether the practices are conventional practices that are useful on small farms as well as large ones, or whether they are practices that are uniquely of value to small farms, this study is designed to identify such practices.

Design of the Study

For this study, small farms were defined as farms with gross sales of $250,000 or less. This is currently the definition used by the USDA.

Success in the context of a small farm business is defined in multiple ways. Economists and lenders tend to use profit numbers, such as net income, rate of return on assets or labor and management income as indicators of success. However, the small farm community and a large proportion of the people who work with farm businesses consider such a definition grossly incomplete. They argue that the contribution of the business to quality of life for the family and the community are also important components of any measure of success to be applied to the small farm.

For that reason, the definition of a successful farm for this study was not tightly defined. Agribusiness personnel with knowledge of farm businesses (extension agents, lenders, veterinarians and feed dealers) were asked to provide the names of "successful" farms. A successful farm was one that was deemed to be successful based on the judgement of the person who nominated the farm. They were told that "success is not measured solely in dollars. Successful farms do contribute to the family income of the operator, and, thus, contribute to the family's success in achieving both its financial and lifestyle goals. Thus, if you think the farm is successful in meeting the family goals for the farm, we accept that as successful." Those who nominated farms for the study were not asked to provide information on the criteria they used to identify the farm as being "successful."

The farmers suggested by agribusiness personnel were contacted and asked if they would be willing to participate in the survey. At that time they were also asked their level of sales to confirm that they met the small farm definition. The personal interview was then scheduled.

The questionnaire used in the survey was designed to identify the management practices used on the farm that the farmers believed were important to their success. In addition to obtaining information on farm and family goals and financial results, questions were asked on crop production, crop marketing, livestock production, livestock marketing, machinery management, labor management, cost control and financial management. The general design approach was to first ask the farmer to identify the important management practices and procedures in an area (say, livestock production). Following that, they were asked if they used, and the importance of, several management practices related to the area (i.e. livestock production) that had previously been identified as potentially important practices by cooperative extension personnel.

The questionnaire was developed by the research team[4] and then reviewed by several cooperative extension educators with management responsibilities, three of whom made substantive comments. The questionnaire was then pre-tested on actual farm situations and revised. Administration of the questionnaire generally took 1 1/4 to 2 hours to complete. While this is longer than normal, the farmers were generally quite willing to continue through completion.

THE FARMS SURVEYED

Agribusiness and Cooperative Extension personnel from throughout New York State provided the names of 219 farms that in their opinion met the definition of a small successful farm. Seventy-six of those farms were interviewed during the summer of 2000 through the beginning of the year 2001.

Of the 219 farms 68 were excluded because they were located outside New York State (10 farms), were not in agricultural production (8 farms) or were identified after the sample to interview had been selected (50 farms). An additional 14 farms could not be contacted, either because an incorrect phone number was provided or no one answered repeated calls. The remaining 137 farms were called and asked to participate in the survey.

The agribusiness representatives who supplied the successful farm names often did not have data on gross farm sales. Consequently, an additional 25 farms were excluded because they had gross sales of over $250,000 annually and, thus, did not meet the definition of a small farm.

An additional 22 farms were not interviewed because they could not find one to two hours to be away from their farm activities. Because many of the surveys were conducted during the summer, hay harvest and other summer farm work provided a conflict. Fourteen of the farms contacted were not interested in participating in the survey. This left a total of 76 farms that were included in the survey. They were distributed throughout New York State as shown in Figure B1.

[4] Eddy LaDue, R. David Smith, Charles Cuykendall and Jacob Schuelke.

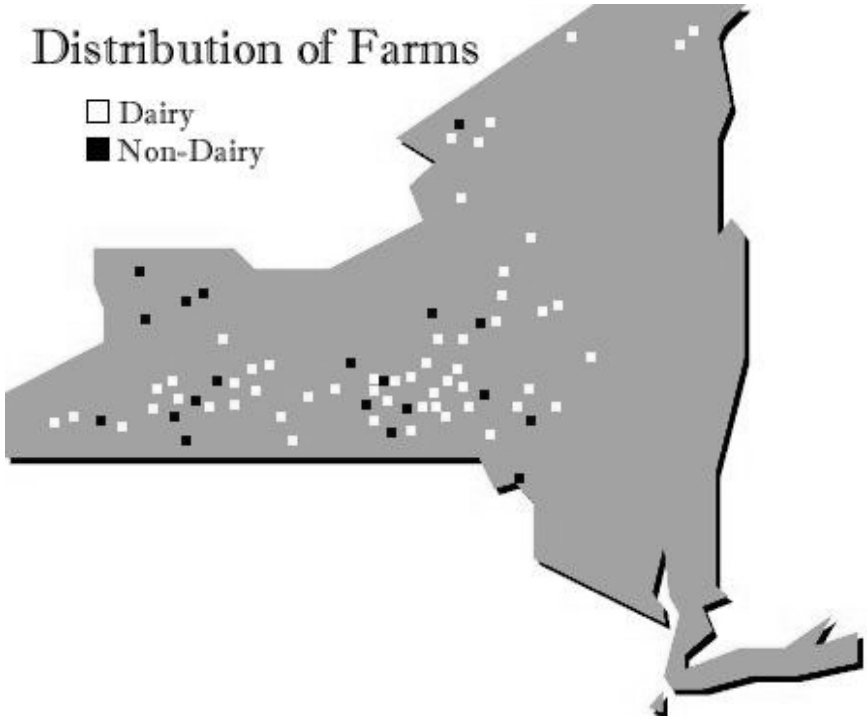


Figure B1. Location of Small Farms Surveyed.

Farm types and enterprises

The major farm type was livestock. Of the 76 farms surveyed, 56 were dairy farms and six had other types of livestock (Table B1). One farm had both a small dairy and grew and sold vegetables and ornamentals. Since the horticultural enterprise contributed most of the gross sales, this farm was classified as non-dairy. However, the dairy was included in the dairy results reported below. Consequently dairy data reported below includes 57 farms.

The non-livestock farms surveyed included 14 fruit and/or vegetable crop growers, some with greenhouses or nurseries. One of these farms had a small percentage of income from beef cattle that was utilized to consume unsold produce. Another vegetable grower with a minor dairy enterprise was noted above.

Table B1. Farm Types Surveyed
76 New York State Small Farms, 2000-2001

Type of Farm	Number of Farms	Percent of all Farms
Livestock farm		
Dairy	56	74
Other livestock	6	8
Crop farm		
Fruit, Vegetable, Greenhouse	14	18

Farm enterprises

The majority of the dairy farms sold primarily milk, calves, and cull animals (Table B2). Eight of the dairy farms also reported some hay or silage sales in addition to their dairy income. Crop sales averaged 14% of total farm gross income on the eight farms selling extra forage.

Five of the non-dairy livestock farms reported sales of livestock for meat and/or livestock products such as eggs, goat cheese and goat milk. Five of the farms surveyed reported having feeder cattle for beef. Two of the farms reported a commercial herd of over 100 head while the other three had 12 or fewer head.

Table B2. Enterprises on Farms Surveyed
76 New York State Small Farms, 2000-2001

Type of Farm	Number of Farms	Percent of all Farms
Dairy with no crop sales	48	63
Dairy with some crop sales	8	11
Beef, sheep, goats, and/or other livestock	6	8
Vegetable, fruit, nursery combinations	14	18

Crops on livestock farms

Crops, especially forages, are a very important part of the ration fed on most livestock farms. The New York 1997 Census of Agriculture reported that the primary use of harvested cropland in the state was 56% for hay and grass silage and 15% for corn silage. Surveyed livestock farms varied widely in their approaches to crop growing. Included were: “we grow all our own feed”, “we do not have any cropland”, “we grow what we can and buy the rest”, “we grow enough to meet the needs of our livestock and sell the rest to neighbors as a cash crop”.

The major crop harvested on the livestock farms was hay, harvested as dry hay or hay crop silage. Farms reported from zero to 254 acres of hay crop with an average of 109 acres of hay per farm.

On the livestock farms, 39 reported growing 9 to 85 acres of corn silage with an average of 40 acres per farm (20% of total farm acreage) (Table B3). Only 12 farms grew corn for grain and these farms harvested an average of 39 acres per farm. A desire to avoid investment in grain harvesting, storage and handling equipment was the reason for the low number of farms growing corn for grain.

Eight (thirteen percent) of the livestock farms planted oats and two farms planted other small grains (Table B3). In addition to forages and small grains, two farms grew an average of 25 acres of soybeans.

Table B3. Average Acres of Field Crops on Livestock Farms
62 New York State Small Livestock Farms, 2000-2001

Crop	Number of Farms	Ave. Number of Acres All Farms[a]	Ave. Number of Acres Farms with Crop
Corn silage	39	25	40
Corn grain	12	8.5	39
Hay	55	97	109
Oats	8	2.9	20
Rye & barley	2	1.0	28
Soybeans	2	0.9	25

[a] Average of all 62 farms including those not growing the crop.

Crops on horticulture farms

Most of the horticulture businesses grew a combination of fruits, vegetables and landscape products. Twelve of the 14 horticultural farms reported an average of 17 acres of sweet corn, tomatoes, cucumbers and various other vegetables that were sold at roadside stands and farmer's markets. Ten farms also had an average of 4689 square feet of greenhouse (Table B4). There were three vineyards and two orchards in the study. The horticulture farms generally used less acreage than the livestock farms.

Table B4. Average Acres/Square Feet of Horticultural Crops
14 New York State Small Horticultural Farms, 2000-2001

Crop	Number of Farms	Ave. Number of Acres/Sq. Ft. All Farms[a]	Ave. Number of Acres/Sq. Ft. Farms with Crop
Vegetables	12	14.6	17
Berries	5	0.5	1.5
Orchard	2	0.6	4
Vineyard	3	0.4	2.7
Nursery	2	4.0	28
Greenhouse	10	3349 sq. ft	4689 sq. ft

[a] Average of all 14 farms including those not growing the crop.

Farm size

To qualify for inclusion in the study as a small farm, all farms had to have gross sales in the last year of $250,000 or less. Gross sales were obtained either directly from account books or from the manager's memory. Income included both farm income from Schedule F line 11 (or Schedule C line 7) plus any gross sales from livestock as reported on IRS tax form 4797. The range of gross sales was from $12,000 to $250,000. The average gross sales were $144,045 with 31% of the farms equal to or below $100,000 and 33% above $175,000. The median of the group was $150,000 gross sales (Table B5).

Table B5. Annual Gross Farm Income from the Farm
76 New York State Small Farms, 2000-2001

Gross Income	All Farms	Livestock Farms	Horticulture Farms
Dollars	----------Percent of Farms----------		
Less than 25,001	5	3	14
25,001-50,000	7	5	14
50,001-75,000	4	2	14
75,001-100,000	15	13	22
100,001-125,000	9	10	7
125,001-150,000	13	14	7
150,001-175,000	14	18	0
175,001-200,000	14	13	22
200,001-225,000	7	8	0
225,001-250,000	12	14	0

A total of 73 of the 76 farms owned or rented an average of 182 acres of land. These farms reported that a significant proportion of this acreage was woodland and non-tillable acreage. Reported acreage ranged from none to 675 acres. The three agricultural businesses without cropland were two dairies and a horse farm that purchased all feed.

The average number of milk cows on the 57 dairy farms was 55, with a range from 19 to 98. Fifty-three percent of the farms had between 41 and 60 dairy cows (Table B6).

Table B6. Average Number of Milk Cows on the Farm
57 New York State Small Farms, 2000-2001

Number of Cows	Percent of Farms
Less than 20	2
20-30	2
31-40	14
41-50	30
51-60	23
61-70	17
71-80	3
81-90	7
More than 90	2
Total	100

In addition to the milking herd, 54 of the 57 herds raised youngstock and had an average of 42 calves and heifers (Table B7). The youngstock inventory varied from none to 120. Three farms reported that all calves are sold and replacements were purchased as needed. These farms had a limited family labor supply and consequently concentrated on the dairy cows rather than the replacement enterprises.

Table B7. Average Number of Youngstock on the Dairy Farms
57 New York State Small Dairy Farms, 2000-2001

Number of Youngstock	Percent of Operators
Less than 20	16[a]
20-30	21
31-40	16
41-50	24
51-60	9
61-70	9
71-80	2
More than 80	3
Total	100

[a] Three farms raised none.

Production levels

The dairy farms reported an average per cow annual production of 20,055 pounds. Production ranged from 15,000 pounds to 27,900 pounds per cow (Table B8). A few of these farms were not milk testing and did not keep track of actual pounds sold, so the rates of production were estimates. Others had complete production records. The 1999 Cornell Dairy Farm Business Summary of small herd farms reported, sixty-one farms averaging 17,217 pounds of milk sold per cow.[5] The New York State average production per cow for all cows in the state was 17,376 pounds in 2000.[6] Thus, these successful farms indicated that their practices resulted in milk production rates significantly above the Cornell DFBS and New York State averages.

Table B8. Level of Milk Production per Cow on Annual Basis
57 New York State Small Farms, 2000-2001

Pounds per Cow per Year	Percent of Farms
Less than 16,001	7
16,001-18,000	26
18,001-20,000	21
20,001-22,000	25
22,001-24,000	14
More than 24,000	7

[5] Knoblauch et al. 2000. New York Small Herd Farms, 65 Cows or Fewer 1999. E.B. 2000-12. Department of Agricultural, Resource, and Managerial Economics, Cornell University, Ithaca, NY pp.44.

[6] Milk Production. National Agricultural Statistics Service, USDA 2001.

Education and experience of farm operator(s)

Men and women jointly operated many of the small family farms. On five of the farms the primary operator was a woman. On the rest of the farms a male was designated as the primary operator.

Table B9 gives the educational level achieved by the operators of the farms surveyed. One-third of the operators had an associates degree (AS) and 25% had completed degrees beyond the AS degree. This sample of respondents had a similar level of formal education to the1999 Dairy Farm Business Summary cooperators, which reported an average of one year beyond high school.[7]

Table B9. Highest Level of Schooling that the Operator Achieved
76 New York State Small Farms, 2000-2001

Level or Degree	Percent of Operators
Some high school	5
High school graduate	28
Some college	9
Associates degree	33
Bachelors degree	20
Master degree	4
Ph.D. degree	1

Many of these operators indicated that growing up on a farm provides an exposure to farming and considerable practical knowledge. Seventy-five percent of the operators grew up on a farm.

Forty-five percent of the operators had an average of over 9 years of work experience before farming. Their experience in professions prior to farming varied from one year to 40 years. About half of the people who had previous work experience were in those occupations less than 5 years before going into farming full time.

Table B10. Work Experience of Operators Before Farming
76 New York State Small Farms, 2000-2001

Experience	Percent of Operators
None	52
Skilled laborer	12
Construction worker	8
Farm laborer	7
Business management	5
Teaching	5
Factory laborer	4
Mechanic	4
Truck/bus driver	3

[7] Knoblauch et al. 2000. Business Summary New York State 1999. R.B. 2000-03. Department of Agricultural, Resource, and Managerial Economics, Cornell University, Ithaca, NY pp. 86.

Previous work experience of the operators included a wide range of job titles (Table B10). Skilled laborer and construction workers were the leading professions prior to farming. Business management, teaching and mechanic were also frequently mentioned areas of work experience. The farmers with off farm experience indicated that their skills were generally readily usable on the farm. About one-half of the operators did not have any work experience prior to their current farming position.

About one-half of the operator's spouse's reported off farm experience (Table B11). The experiences of office worker and teacher were the most prevalent.

Table B11. Off Farm Experience of Farm Operator's Spouse[a]
76 New York State Small Farms, 2000-2001

Type of Experience	Percent of Respondents
No off farm experience	49
Office worker	12
Teaching	11
Business management	8
Farm labor	7
Nurse	5
Lab technician	4
Mechanic	1
Skilled laborer	1
Truck/bus driver	1
Factory laborer	1

[a] Current or prior to involvement in the farm operation.

Fifty-two of the 59 farms where the operator and/or spouse had off farm experience considered such experience important to the success of the farm. The number one reason (Table B12) for this on these 45 farms was the improved record keeping and planning skills, followed by the skills gained for reducing expenses and as a second source of income.

Table B12. Why Was Off Farm Experience Important to Your Success
45 New York State Small Farms, 2000-2001

Reason	Percent of Farms
Improve record keeping and planning skills	27
Skills for reducing expenses	18
Source of income	18
Improve non-labor management skills	16
Different perspective on management	13
Improve labor management skills	4
No reason given	2
Contacts in business	2

[a] Current or prior to involvement in the farm operation.

Success

Since someone else had already indicated that these farms were successful, the survey asked the operator his/her opinion of the success of their small farm business. Neither definitions of success, nor the factors to measure it, were provided to the operator. They were expected to use their own definition of success. The farm operators supported the agribusiness community view that they were successful small farm operators. Forty-five percent of the operators rated themselves in the mid range (successful) category, while 37% rated themselves as very or extremely successful (Table B13).

Table B13. How Did the Operators Rate Their Success?
76 New York State Small Farms, 2000-2001

Ratings	Percent of Farms
Extremely successful	11
Very successful	26
Successful	45
Slightly successful	17
Hardly successful	1

Farmer's reasons for considering themselves successful varied (Table B14). The most frequently mentioned reason was good cash flow, indicating the importance of profitability in their assessment. However, the ability to maintain a lifestyle they liked and a good family life are also very important to their assessment of success. In addition, a number indicated that achieving a low debt level or improved levels of production were important indicators.

Table B14. Reason Listed Why They Consider Themselves Successful
76 New York State Small Farms, 2000-2001

Reason	Percent Indicating[a]
Good cash flow	47
Able to maintain desirable lifestyle	34
Low/no debt	17
Have improved rates of production	17
Good family life	14
Customer recognition of quality	13
Increasing equity	11
Using all farm resources available	9
Still in business	7
Success at being own boss	7
Business growing in size	4
Longevity of farm business	3
Have respect in the community	3

[a] Totals add to more than 100% as respondents had more than one success reason.

The factors used to measure success were generally consistent with the reasons given for considering themselves successful (Table B15). Profitability measures, such as cash flow and net income, and business records analysis were the most important factors. But, contentment/satisfaction and good family life also ranked high on the list.

Table B15. Factors Used to Measure Success
76 New York State Small Farms, 2000-2001

Factor	Percent Indicating[a]
Cash flow	32
Net worth (equity)	26
Contentment/satisfaction	26
Net income (profitability)	22
Good rates of production	17
Business records analysis	9
Good family life	8
Growth of business	7
Meeting goals	7
Attractive farmstead	4
Selling a quality product	4
Labor productivity	3
Contribution to community (employment)	1
Capital efficiency	1
Farm efficiency	1

[a] Totals add to more than 100% as respondents had more than one success factor.

Goals and objectives

Another important set of the characteristics of the operators of small farms is their personal goals and objectives, and the goals and objectives they have for their businesses. The most frequently mentioned business goal for this group of farmers was to stay small (Table B16). However, they are interested in improving income and operating an efficient business. On the other hand, some of these small businesses do want to grow the business or expand the enterprise. These businesses see the small farm as a stepping stone to a larger business, rather than an optimal business size.

Table B16. Goals and Objectives for The Small Farm Businesses
76 New York State Small Farms, 2000-2001

Goal and/or Objective	Percent Indicating[a]
Stay small (one person business)	25
Improve income	17
Operate business that makes efficient use of land, labor, and capital	13
Growth of business	13
Get debt free / reduce debt	13
Maintain an up to date business	12
Pass business to the next generation	12
Increase rates of production	12
Retire	12
Add new or expand minor enterprise	8
Expand other enterprises to exit dairy	7
Farm to have good image in community	5
Develop better markets	5
Generate all family living from business	4
Enjoy the business	4
Improve human resource management	3
Produce quality product	3
Improve labor efficiency	3
Expand facilities	1
Continue the business	1

[a] Totals add to more than 100% as respondents had more than one goal and objective.

Some farm goals and objectives are obviously affected by the length of time the operator has been in farming and the number of years before retirement. Table B17 shows the relative importance of the goals as a function of years of experience. It is clear that regardless of years of farming this group of farmers want to remain a one-person business, improve income and get out of debt. The newer farmers place more emphasis on developing better markets for their products, growing the business and making efficient use of resources.

Table B17. Relationship Between Years in Farming and Selected Farm Goals and Objectives 76 New York State Small Farms, 2000-2001

Goal and/or Objective	15 Years or less	16 Yrs. to 24 Yrs.	25 Years or more.
	----------Percent Indicating--------		
Growth of business	32	4	4
Stay small (one-person business)	20	30	25
Operate business that makes efficient use of resources	20	11	8
Develop better markets	16	0	0
Improve income	12	19	21
Get debt free / reduce debt	12	11	17
Increase rates of production	8	7	21
Retire to exit the business	8	7	21
Maintain an up to date business	0	26	8
Number of farms	25	27	24

[a] Totals add to more than 100% as respondents had more than one goal and/or objective.

The goals and objectives for the business are generally set within the farm family's personal goals. Further, the personal goals and objectives indicate to some degree what is desired for the farm, what they expect the farm to provide, or, in some cases, what the farm is not providing. Over one third of the farmers indicated they wanted more leisure time (Table B18). Many small farms used mainly family labor, and consequently, if work got done, the family did it. The time commitment to get things done in a timely fashion often meant less time for leisure and/or family time. The strength of the response to the goals for more leisure and family time indicated that this is a definite issue for these farmers.

Respondents also indicated the importance of having a business that generated a significant net income. Increasing income, having non-farm investments, putting children through college, reducing debt and more travel, all require money. Although this is not the most important objective on most farms, it is important.

Personal goals are also somewhat influenced by years in farming, at least in part because years in farming are related to age (Table B19). Younger operators desire more family time. They most likely have younger children and desire to spend more time with them as they are growing up. Somewhat surprisingly, the mid-experience group of farmers placed a higher focus on improving quality of life. This may be caused by burnout or less willingness to accept the high level of commitment required. This group also placed somewhat more focus on increasing non-farm investment. This group likely sees retirement creeping up and realizes that they need to do something about provisions for retirement before long.

Table B18. Personal Goals and Objectives
76 New York State Small Farms, 2000-2001

Factor	Percent Indicating[a]
More leisure time	34
More family time	16
Maintain or improve quality of life	16
Increase income	13
Retire to exit business	12
No goal indicated	12
Have non-farm investments	9
Pass business to next generation	9
Stay in farming	4
More community involvement	3
Put kids through college	3
Reduce debt to zero	3
Develop a hobby	3
Be own boss	1
More traveling	1

[a] Totals add to more than 100% as respondents had more than one goal and objective.

Regardless of age, the most frequently mentioned goal was more leisure time. Operating a small farm takes a lot of time and many of the operators would prefer to have more time free to do other things.

Table B19. Relationship Between Years in Farming and Selected Personal Goals and Objectives
76 New York State Small Farms, 2000-2001

Goal and/or Objective	15 Years or less	16 Yrs. to 24 Yrs.	25 Years or more.
	----------Percent Indicating[a] --------		
More leisure time	32	40	32
More family time	20	16	12
Retire to exit business	16	8	12
Increase income	12	16	12
Maintain or improve quality of life	8	28	12
Have non-farm investments	8	16	4
Pass business to next generation	4	12	12
Number of farms	25	27	24

[a] Totals add to more than 100% as respondents had more than one goal and/or objective.

When operators were asked to rank the importance to their small farm of six different goals often found to be important for other businesses, a place to raise a family and spending time with the family were clearly most important (Table B20). Making

money and high productivity were important, but not as important as family issues. Vacations were of least importance. Whether this was because of too much work to be done or just not a desire of the farm family is unclear. Given the importance of leisure time in personal goals, it appears that the leisure time desired is not necessarily a vacation. It may be time during the week to do other things. Alternately, it may be that vacations are a desire, but not as important as the other listed goals.

Table B20. Importance of Various Goals for the Farm Business
76 New York State Small Farms, 2000-2001

Goal	Level of Importance[a]
Place to raise a family	4.6
Spending time with the family	4.4
Maintain a certain lifestyle	3.9
Maximize profit and make money	3.9
High productivity	3.6
Vacations	2.2

[a] On a scale where 1 is not important and 5 is very important.

Given the goals listed by the small farms, it appears that the list of small farm goals is not basically different from those of the operators of larger businesses. It is the weighting of the goals that differ. The operators of small farms tended to place more weight on lifestyle and family life, but making money was still an important goal.

Summary and Highlights: the Farms Surveyed

1. The survey included 76 farms of which 56 had dairy enterprises and 14 were horticultural businesses.
2. Gross sales averaged $144,000; about one-third of the farms had gross sales under $100,000
3. Most of the operators grew up on a farm and had some college education. About half had non-farm experience that they considered important.
4. Most rated their farm as being successful because it provided both financial and family/lifestyle benefits.
5. Operators tended to place more weight on lifestyle and family life, but making money was still an important goal.
6. Many operators had a specific desire to keep the farm small.

DAIRY PRODUCTION

A total of 63 of the surveyed farms had livestock enterprises. Fifty-seven of these livestock enterprises were dairy farms. One of the dairy farms was a horticulture farm with a small dairy enterprise. The rest of the livestock farms had a variety of hogs, chickens, goats and beef cattle. Because of the variety, there were too few farms to report the livestock data on many production questions without breaching confidentially.

Thus, this report provides only information on dairy production. Other reports in this series will include data from non-dairy livestock farms.

The basic production characteristics of the dairy farms are shown in Table C1. Milk sold per cow at just over 20,000 pounds was slightly above the state average. Farmers estimated average culling and cow death rates at twenty-five and three percent, which were below state averages. Most of the farms raised their own replacements and relatively few animals were sold for breeding purposes.

The successful small farmers were first asked to indicate the most important livestock production practices that contribute to the success of their businesses. Most farmers listed two to four practices (Table C2). Following that, the farmers were asked

Table C1. Production Characteristics of Dairy Farms
57 New York Small Dairy Farms, 2000-2001

Characteristic	Value
Milk sold per cow (pounds)	20,055
Culling rate (%)	25
Death rate (%)	3
Percent of replacements raised	88
Percent of herd sold for breeding	5
Number of cows	55
Number of heifers	42

about their use, and the importance, of ten specific livestock production practices that had been identified by extension personnel as being potentially important to the success of small farms (Table C3).

Cow health

Good cow health was the most frequently mentioned production practice contributing to farm success. About 30 percent of the dairy operators specifically mentioned it as being important. Good cow health in these herds most often related to practices that reduce the incidence of disease and/or lower somatic cell counts. Furthermore, 81 percent of the dairy farms maintain a vet health program and consider it very important to success (Table C3). Several other production practices that relate to cow health, such as cow comfort, don't stress cows, and good general care of the herd were also often mentioned (Table C2).

Feed quality and nutrition

Factors related to feed quality and nutrition were often cited as important contributors to success. High quality forage and ration balancing were frequently identified as being important contributors. Use of a total mixed ration (TMR), good dry cow nutrition and forage testing were also mentioned. When specifically asked about these practices, 86 percent of the farms used ration balancing and 82 percent used forage testing. They generally rated these practices as being very important. A total mixed

ration was used by only about a third of the farmers, but was considered to be very important to success on those farms.

Table C2. Most Important Dairy Production Practices that Contribute to Success
57 New York State Small Farms, 2000-2001

Production Practice	Percent of Operators[a]
General good cow health	30
High forage quality	25
Rotational grazing	21
Ration balancing	18
Cow comfort	16
Good general care	16
Seasonal herd[b]	9
Artificial breeding	9
Focus on maintaining low cell count / control mastitis	9
Vet health program	7
Timely breeding program	5
Low purchased inputs	5
Total mixed ration	5
Don't stress cows	5
High quality sires	5
Forage testing	4
Milking practices to maintain low bacteria count	4
Minimize purchased grain	4
Use consultants	4
Frequent feeding	4
Profit based production	4
Appropriate feed supplementation with rotational grazing	2
All livestock on pasture	2
Good dry cow nutrition	2
Raise own replacements	2
Testing for culling	2
Stanchion barn	2
Lower purchased feed use when milk price is lower	2
Use a bull	2
Board out heifers	2
Add dry hay to total mixed ration (TMR)	2

[a] Totals to more than 100% as some operators had more than one important production practice.
[b] Cows bred so that all freshen and dry off at about the same time.

Table C3. Level of Use and Importance of Selected Dairy Production Practices 57 New York State Small Dairy Farms, 2000-2001

Practices	Percentage of Use	Level of Importance[a]
Artificial breeding	93	4.6
Ration balancing	86	4.4
Forage testing	82	4.3
Vet health program	81	4.6
Rotational grazing	56	4.4
Total mixed ration	32	4.6
Freshen at 22 months	32	3.9
bST	19	3.4
3 times a day milking	2	4.5

[a] On a scale where 1 is not important and 5 is very important by those who use it.

Grazing

Twenty-one percent of the operators indicated that rotational grazing was one of the top three or four contributors to their success. Some others believed that pasture was very important, but it was not necessary to use intensive rotation (Table C2). Over half used rotational grazing and those farms considered it a very important practice (Table 3). This compares to only five percent of farms with over 100 cows that participated in Cornell's farm business summary program[8] that graze.

One of the costs that is difficult for small farms to control is machinery cost. Many machines have much more capacity, and thus, represent a much higher investment than small farms need. Some farmers reported that rotational grazing was used to reduce their investment and the cost of machinery.

Breeding program

Using a variety of words, a number of farmers stressed the importance of good breeding. This was identified as use of artificial breeding, use of a timely breeding program and use of high quality sires. Nearly all (93%) of the surveyed farms used artificial breeding and gave it one of the highest ratings in importance of the dairy production practices.

Careful selection of technology and practices

Small farms must carefully select the technologies and practices that fit their resources. Some technology that is very useful for large farms may be inappropriate for small farm businesses. Over 80 percent of the farms used basic dairy production technologies such as artificial breeding, ration balancing, forage testing and vet health

[8] Knoblauch et al. 2000. Business Summary New York State 1999. R.B. 2000-03. Department of Agricultural, Resource, and Managerial Economics, Cornell University, Ithaca, NY pp. 86.

program (Table C3). The farmers ranked each of these practices as very important to their success.

Adoption rates of some newer technologies and practices were limited. Only a few farms used bovine somatotropin (bST) or three times a day milking (Table C3). The proportion of these small farms using bST was 19 percent and this percentage was similar to that published in the New York Small Herd Summary study which reported 15 percent usage.[9] In contrast, the 1999 New York State Dairy Business Summary of 314 farms showed that 72 percent of herds with over 100 cows and 94 percent of herds with over 400 cows used some amount of bST.[10] The level of importance placed on this practice by the 11 farms using it was the lowest of the entire list of production practices shown in Table C3. Clearly, this technology has not been found to be real valuable on small farms. This is consistent with the wide use of grazing and research results that find that bST provides significant increases in milk production, but at current average use levels and costs does not improve average profitability.[11]

Only one dairy farm out of 57 was currently milking three times a day. While this farm ranked it high in importance, most of the other farms had no interest in this practice because of the extra family labor it would require. The Cornell Small Herd Summary reported very similar results with only one farm out of 61 milking three times a day.[12] In contrast, larger herds participating in the Cornell Dairy Farm Business Summary made more use of three times a day milking: 39 percent for herds over 100 cows and 79 percent for herds over 400 cows.[13]

Milk production

Even though average milk production on these small dairies was above state average levels, the rate of milk production varied considerably from farm to farm (Table C4). Some of the lower production levels may be explained by herd production management decisions of the operators. For example, there was wide use of rotational grazing. In some herds, rotational grazing was associated with lower milk production and lower costs. Thus, lower production levels can be quite profitable. The limited use of bST also explains some of the lower production levels. Again the farms are trading off

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[9] Knoblauch et al. 2000. New York Small Herd Farms, 65 Cows or Fewer 1999. E.B. 2000-12. Department of Agricultural, Resource, and Managerial Economics, Cornell University, Ithaca, NY pp.44.

[10] Unpublished data. Business Summary New York State 1999. Department of Agricultural, Resource, and Managerial Economics, Cornell University, Ithaca, NY.

[11] Stefanides, Zdenko and Loren Tauer, "The Empirical Impact of Bovine Somatotropin on a Group of New York Dairy Farms." American Journal of Agricultural Economics. Vol. 81, No. 1, February 1999, pp. 95-102.

[12] Knoblauch et al. 2000. New York Small Herd Farms, 65 Cows or Fewer 1999. E.B. 2000-12. Department of Agricultural, Resource, and Managerial Economics, Cornell University, Ithaca, NY pp.44.

[13] Unpublished data. Business Summary New York State 1999. Department of Agricultural, Resource, and Managerial Economics, Cornell University, Ithaca, NY.

lower production for lower costs. Also, a few farms practiced organic milk production, which generally was associated with lower rates of milk production.

Table C4. Annual Production of Milk per Cow
57 New York State Small Dairy Farms, 2000-2001

Pounds Milk Per Cow	Percent of Farms
Less than 16,001	7
16,001-18,000	26
18,001-20,000	21
20,001-22,000	25
22,001-24,000	14
More than 24,000	7

Raise their own replacements

Most of the dairy farms raised their own replacements (Table C5). Since the farm had the feed, family labor and facilities, they felt that it was economical to raise their own replacements. Raising replacements often seemed to fit the farm. Buildings for housing, as well harvesting and storage facilities were already available and the family provided the labor. There were many other reasons why they felt that raising replacements was important to the success of their business (Table C6).

Table C5. Percentage of Dairy Replacements Raised on the Farm
57 New York State Small Dairy Farms, 2000-2001

Replacement Raised Percentage	Percentage of Farms
100	79
90-99	9
1-89	2
Zero	10

Many of the farms reported that they had established good quality breeding lines that they wished to continue in their herds. Thirty-six percent of the dairy farms indicated that maintenance of an established genetics program was a major reason that they raised all their replacements (Table C6). As previously mentioned, most farms were using artificial breeding and they were selecting sires to improve milk production and other traits. They took great pride in knowing the strengths and weaknesses of their herd and in breeding for better cows and higher production.

Many of the farms raised their own replacements because they did not want to introduce disease into their herd. This was expressed as either desire to maintain a closed herd or a concern for bio-security. Many of the herds were 'Johnes' free and/or free from other cattle diseases, and they wanted to remain that way. Eleven percent of the farms specifically listed bio-security as a reason for raising all their replacements. They did not want to chance the herd picking up diseases from animals imported into the herd.

A variety of other reasons were given for raising their own replacements. Some liked the cash flow spread out over time, thus avoiding borrowing for replacements. Some felt that the home grown heifers adapted better as the feeding program and

facilities were not new to the animals. Still others felt that replacements sold in the market were the ones that other herds considered their poorest quality animals.

Table C6. Why Dairy Farms Raise 100 Percent of their Replacements
45 New York State Small Farms Raising 100 Percent of Replacements, 2000-2001

Reasons	Percent Giving This Response[a]
Maintain genetics	36
Maintain closed herd	24
No reason given for practice	13
Waste of capital not to use facilities	13
Better quality	13
Bio-security	11
Cash outflow spread over time	9
Raised adapt better	7
Always done this way	4
To maintain herd size	2
To sell replacements	2
Organic herd	2
Not good at selecting replacements	2
Maintain herd size	2

[a] Total more than 100% as some respondents had more than one reason.

In some cases, operators who were purchasing all replacements (10 percent) were experiencing problems trying to buy replacements. For those with employment off the farm, this meant taking time off from the off farm job without pay to attend auctions to get the quality replacements they wanted. Others were concerned with bringing in diseases, could not find the cross breeds that they desired, or felt they were getting the culls from other herds. Two of the farms had an arrangement whereby they would sell their calves to a heifer raising facility and get back some of their own calves as bred heifers. One of these farms found this arrangement somewhat unsatisfactory because the heifer raiser did not have replacements ready when the dairy farmer needed them. In this case, the delay was caused by a low rate of gain and problems in getting the heifers bred in a timely fashion.

Specialization

Small farms are faced with many difficult decisions about how much of the dairy production process is optimal for them to conduct as part of their operation. Many dairy farms that have the resources of land, labor and capital will grow their needed forages and grain plus raise their own replacements. However, some small farms find it best to specialize and perform only some of these functions.

Some farms specialized in milk production only. These farms purchased all their feed and/or all their replacements. Some farms that bought all their feed purchased concentrates from commercial feed mills and purchased the forages from surrounding farms. Other farms purchased a total mixed ration (TMR) from neighboring farms. In a

few cases the TMR was from a neighboring farm that already was growing crops for his/her own herd and had excess TMR to sell. At other locations the purchased TMR was from a crop farm in the business of commercially growing and storing crops to supply a number of dairies in the area.

Purchasing all the feed allowed farmers to handle a larger herd, and concentrate on excellent herd management. Farmers indicated that purchasing feed decreased labor requirements, gave the family more leisure time, took advantage of economies of scale and minimized investment in machinery and land. In one case the operator worked full time off the farm and milked with the help of family labor. One operator with very few acres stated that if necessary he could reduce his herd size without worrying about selling parts or all of a large silo, machinery and land investments. Most large farm investments can not be downsized or expanded without a large amount of lost capital or additional capital investment.

For farms with land for forage, an alternate to purchasing all the forage is to hire the crop work done. This reduces labor needs and machinery investment and frequently reduces fluctuations in forage costs caused by market forces.

Seven farms did not raise any replacements. This eliminated the need for heifer facilities and reduced labor needs. These farms found some advantage in the fact that no feed or cash costs are incurred until replacements are purchased. Purchased replacements are immediately income producers and can be depreciated for income tax purposes.

Specialization in milk production can also be accomplished by boarding out the heifers. This makes growth rates dependent upon others feeding programs and often exposes the farm to bio-security issues, but does maintain the farm's breeding program. One farm thought this was an important key to their success.

Reduce labor requirements

One contributor to the success of some small dairy farms was the use of techniques to reduce labor requirements for dairy production. The two methods most frequently mentioned were seasonal herds and rotational grazing. Two of the farms maintained seasonal herds. All the cows calved in the early spring and were dry in mid-late winter. These farmers indicated that this practice reduced stored feed requirements and made effective use of grazing to meet the forage needs during the peak of the lactation of all cows. Manure handling was reduced, as all cows were dry during a large part of the season when they were confined to the barns. The need for winter heifer facilities was decreased, because all calves were born in the spring and were nearly yearlings by winter.

Spring calving reduced other labor requirements compared to year around milking. By having all the cows calve in a short period of time they could more efficiently spend time with the animals during calving, which resulted in a better calving percentage. After the cows were dried off in the fall the operators could devote more time to preventative maintenance for the farm and winter tasks. It also provided a very valuable opportunity for leisure time and family time away from the farm, as it was much easier to get a neighbor to feed and check on the cows than to feed and milk the cows.

Twenty percent of the operators said they employ rotational grazing to reduce overall labor needs. Overall 59 percent of the farms used rotational grazing, but they did

not all list it as a labor saving practice. The daily changing of pasture paddocks did take some additional labor but grazing reduced the overall need for harvesting, handling, and feeding of forages for their herd. Rotational grazing was also labor saving as it resulted in less manure handling compared to confinement feeding.

Summary and Highlights: Dairy Production

1. Average rates of production on successful small farms were above state average. However, some farms succeeded by using production practices that reduce production levels in order to reduce costs or meet niche market demands.
2. Many important production practices, such as good cow health, high quality forage, ration balancing, cow comfort, good general care and use of a vet health program are similar to important production practices on large farms.
3. Many operators used rotational grazing to reduce operating costs and labor. Similar benefits were achieved on a few farms by maintaining a seasonal herd.
4. Few successful small farms used three times a day milking and bST.
5. Some farms specialized to reduce costs by buying all feed (forages and grain), contracting for heifer raising or buying all replacements.
6. Most small farms raised their own replacements to maintain genetics, retain closed herd and make use of existing facilities.

LIVESTOCK AND LIVESTOCK PRODUCT MARKETING

Marketing practices are important in making small farms successful. Small farm operators were asked to list the livestock marketing practices that were most important to the success of their business (Table D1).

About two-thirds of the livestock farms reported some unique marketing practices that they perceived as important (Table D1). Most of these practices translated into higher prices for their livestock or livestock products.

After indicating the practices that were important to their farm, operators were asked to react to a number of practices that had be identified by extension personnel as being potentially important on small farms. For each of these practices, the farmer was asked to indicate whether she/he used it and its importance on his/her farm (Table D2). In some cases, the list included practices that the farmer thought were important but had not thought of when asked for important practices. In other cases, the practice was not used, or was considered unimportant.

Table D1. Livestock Marketing Practices Important to Success
63 New York State Small Farms, 2000-2001

Practices	Percent Giving This Response[a]
No special practice important to success	37
Somatic premium	21
High quality cull calves	10
Niche market for product or service	5
Component pricing	5
Breeding for market	5
Established reputation for quality	5
Milk cooperative to shop processors	5
NE dairy compact	5
Put weight on cull cows	5
Milk quality contract with processor separate from component pricing	3
Sell animals on specific days of the week	3
Special marketing activities	2
Sell registered cattle replacements	2
Timing production for high seasonal price	2
Add value after production	2
Auction market	2
Community supported agriculture	2
Sell calves at eight weeks	2
Special promotion or advertising	2

[a] Totals more than 100% as respondents listed more than one practice.

Table D2. Level of Use and Importance of Selected Livestock Marketing Practices
63 New York State Small Livestock Farms, 2000-2001

Practices	Percentage of Use	Level of Importance[a]
Special quality product	37	4.2
Unique product or service	16	4.0
Niche market	10	4.7
Special promotion/advertising	6	4.0
Add value after production	5	5.0
Use special pricing strategy	3	4.0
Special marketing activities (tourism, etc.)	3	4.0
Forward pricing / contracting	2	n/a

[a] On a scale where 1 is not important and 5 is very important.

Focus on quality

Quality milk and quality livestock were often emphasized on farms. Over a third of the farms produced a special quality product. The high quality product took the form of quality milk to receive the somatic cell count premium, planning for component pricing, breeding for the market, keeping cull calves long enough to sell a quality animal, and establishing a reputation for quality.

Niche market or unique product

Sometimes managers of both small and large businesses find a niche market for their product or service (Table D2). By locating a niche market they are able either to sell units at a higher price or sell more units than their competitors. Often it is a special additional process or marketing procedure that is used to make the product unique. Sometimes an added service or slight modification of the product creates the niche.

A few of the farms surveyed were certified organic milk producers. Those that were certified organic were experiencing about a 30 to 40 percent premium in the price of milk received. However, their current price advantage over non-organic milk was obtained only after, typically, one year of transition for animals and three years of transition for cropland to become a certified organic producer. After certification they reported an ongoing difficulty in purchasing qualified organic inputs, such as feed and replacement heifers. These farmers also expressed concern that they had no control over how long the processor would pay a premium for the organic milk or how long they will be able to find economical transportation of the milk from the farm to the processor. If the processor found a closer supply of organic milk, those farms that were not near other organic producers or near the processor could lose their market or suffer serious transportation cost disadvantages.

Some dairy farmers had a niche market that involved sale to processors that were willing to pay a premium for certified bST free milk. Since most of the herds (81%) were not using bST, this would appear to be an opportunity to gain a price advantage. However, there must be a processor in the region with a demand for bST free milk.

Another example of a niche market was selling colostrum milk to various zoos. This is a very limited market but an example of successful managers finding a profitable use of their excess colostrum milk. In this case the milk from mature cows in 'Johnes' certified free herds was frozen in gallon jugs to be bulk expressed to various zoos. The zoos used the milk to bottle feed young mammals or as needed for supplemental nutrition.

A niche market for some livestock farms involved the sale of meat animals for slaughter and making slaughter facilities available for ethnic buyers. Various religious groups were purchasing meat animals and renting the farm's facilities to prepare the meat as a family ritual.

Some non-dairy livestock farmers developed their niche by being part of community-supported agriculture (CSA). In this market, they advertised their products and took prepaid orders before raising the product. They contracted with consumers to be paid for the product before it was produced. The prepaid sales provided them operating capital and an accurate measure on product demand and selection. The

livestock CSA farmers sold broilers, pigs, sheep and brown eggs. After meeting with their clientele they took written orders with payment for future delivery of so many dozen eggs, frozen broilers or turkeys, frozen cuts of pork or lamb. Delivery was made to a central area once a month and the customers picked up their prepaid frozen or fresh orders. When production exceeded presales, they would sell the excess at the local farmer's market.

Balancing market demand and product supply is a difficult part of niche market development. It is easy to end up with more produce than sales. Some dairy farms and goat farms started processing some of their milk into cheese. Some product was needed to develop the market (get people to taste and decide they liked the cheese), but initial production normally exceeded sales and use. Since cheese is perishable and demand is seasonal, they experienced both supply and demand problems in their niche market development. The additional step of processing milk produced on the farm into cheese, does involve more labor, investment and risk, but can give returns, once the market is developed.

Some farmers indicated that niche markets are often difficult to maintain. Profitability is frequently eroded by additional producers entering the market, or by changes in consumer demand. A niche is no longer a "niche" when other people start doing the same thing. Thus, niche marketing is a continual maintenance and development activity. Either the farmer must maintain his or her market by continually finding ways to be just a little different from the competition, or (s)he must be continually developing new niches.

Marketing

Special advertising and marketing activities were important on some farms. A few farms found unique marketing practices that gave their product a special identity and/or placed it in a higher price market. For example, some marketed their calves or culls on a particular day of the week and received a higher than average price. Others used timing of peak milk production to get high seasonal pricing and seasonal sale of replacements for higher prices. A few meat livestock producers used community supported agriculture and auction markets to receive better prices for their meat products.

Cull animal sales

When asked specifically about cull animal sales, twenty-five percent of the dairy farms reported receiving above average prices. The reasons identified for above average prices for their cull animals are shown in Table D3. Most farms indicated they were taking steps to send a higher quality cull to market. They were not selling lean, sick, or injured animals but rather keeping them until the obvious defects were cured. A number of farms had identified a higher priced market through which to sell their animals. Others were selling animals directly to the consumer.

Table D3. Reasons Why Farms Received Above Average Prices for Culls
14 New York State Small Dairy Farms With Higher Prices, 2000-2001

Reasons	Percent Giving This Response[a]
Higher quality	43
Ship to higher priced market	21
Direct sales to cut out middle man	14
Lower cost marketing	7
Labeling so source is known in market	7
Sell to processing plant on hanging weight basis	7
Cull animals at time of high market demand	7
Sell fat animals, not sick	7

[a] Total more than 100% as respondents had more than one reason.

Livestock product prices

Sixty-eight percent of the livestock farms reported receiving above average prices for their livestock products. The reasons identified for above average prices are listed in Table D4. Again, selling a quality product for which the market was willing to pay a premium was the primary reason for the higher price. The most frequently used procedure for obtaining a higher milk price was maintenance of a low somatic cell count to qualify for the quality premium.

Some of the small dairy farms kept Jersey cows in their herds to increase the components in the milk. This is because Jersey cows typically produce milk with a much higher butterfat and solids content than the other dairy breeds. Since dairy processors now pay for milk on a component-pricing basis, several of the herds were emphasizing components, which resulted in a larger milk check. Thirty-one percent of the livestock farms indicated that component pricing was the reason they received above average prices for milk.

Table D4. Why Farms Receives Above Average Prices for Livestock Products
42 New York State Small Livestock Farms With Above Average Prices, 2000-2001

Reasons	Percent Giving This Response[a]
Somatic cell premium	57
Component pricing premiums	31
NE dairy compact	14
Coop premium	12
High quality product	10
Grass based product	5
Developed higher price market	2
Organic	2

[a] Total more than 100% as some respondents had more than one reason.

Taking advantage of local marketing opportunities

Some of the dairy farms obtained above average milk prices just because of their geographic location while others selected or joined cooperatives for a price advantage. Eleven percent of the dairy farms were located in a region where they could ship to the New England Compact and received above average prices for so doing. Nine percent of the dairies were members of small milk cooperatives that allowed them to obtain above average milk prices.

Methods used to obtain top prices for calf sales were very individualized. Local markets seemed to determine the practices that were most successful in obtaining above average prices for their livestock sales.

Many farmers stated that calves need to be dry and healthy when sold. To get the best price at the local market a few farms sold calves only on Monday, as the packing plants were empty and need a sufficient start-up supply for the workers. Other operations indicated they got the best price by selling on Wednesdays. The calves they sent to market on Wednesday were born the previous week and were bigger and had a finer coat compared to calves from larger herds, which were born on Monday and Tuesday and were weaker and smaller. Some farms that did not raise replacements raised their heifer calves for eight weeks before selling. The calves then went to heifer raising facilities that paid a premium for started calves.

Timing livestock sales

The beef farms had some advantages in marketing not usually found in the dairy industry. Beef prices are cyclical and seasonal. The beef feeders were managing the operation to try to time their production so that cattle are ready to be sold at times when prices are typically at their seasonal high. If prices were not favorable when heifers were at market weights, the farmer would hold the heifers back and breed them for the calf crop. If the price were favorable when feeders were ready, the farmer would sell. All of the beef farms visited promoted and encouraged direct sales of hanging beef sides to local consumers. Some of the farms found the limit to their local sales to be availability of private commercial butchering facilities.

Summary and Highlights: Livestock and Livestock Product Marketing

1. Two-thirds of the successful small farm operators were able to improve their income through special marketing practices.
2. Many farms used high quality animals or products (milk) to obtain higher prices.
3. A number of farmers had identified niche markets, such as organic milk, colostrum for zoo animals, ethnic meats or bST.
4. Many dairy farms operated their business to take advantage of component pricing and quality premiums.
5. Beef operators used small farm flexibility to time animal sales for higher prices. They also nurtured direct-to-consumer markets for butchered beef.

CROP PRODUCTION MANAGEMENT

Crop production management was viewed as important on all the 14 horticultural businesses and 55 of the 62 livestock operations. The other seven livestock farms operated no farmland. These seven farms either purchased all grains and forages or had a small operation where they purchased the grains and let the livestock range and graze in the woods and permanent pasture for summer forages. The horticulture farms grew a variety of fruits, vegetables and nursery/greenhouse crops (Table E1).

Table E1. Average Acres/Square Feet of Horticultural Crops
14 New York State Small Horticultural Farms, 2000-2001

		Ave. Number of Acres/Sq. Ft.	
Crop	Number of Farms	All Farms	Farms with Crop
Vegetables	12	14.6	17
Berries	5	0.5	1.5
Orchard	2	0.6	4
Vineyard	3	0.4	2.7
Nursery	2	4.0	28
Greenhouse	10	3349 sq. ft	4689 sq. ft

Hay crop and corn, generally grown for feed and frequently harvested as silage, were the predominant crops grown on the livestock farms. Over two-thirds of the livestock farms grew corn silage in addition to hay or haylage for their livestock. Only small amounts of other crops were grown (Table E2). Often the amount of corn silage, corn for grain or other grains was determined by the geographical location of the farm in that the soils and growing season dictated what crops could be grown.

Table E2. Average Acres of Field Crops on the Livestock Farms
55 New York State Small Livestock Farms, 2000-2001[a]

		Ave. Number of Acres	
Crop	Number of Farms	All Farms	Farms with Crop
Hay/haylage	55	97	109
Corn silage	39	25	40
Corn grain	12	8.5	39
Rye & barley	2	1.0	28
Soybeans	2	0.9	25
Oats	8	2.9	20

[a] Seven farms did not have any cropland.

The farmers were first asked to list the crop production practices that were important to their success. The major practices listed for livestock farms were crop rotation, timeliness of operation and land nutrient programs (Table E3). While the horticultural farms indicated that crop rotation and weed control were important, they mentioned timeliness and nutrient programs less frequently.

Table E3. Crop Production Practices Important to Small Farm's Success
69 New York State Small Farms, 2000-2001[a]

Crop Production Practice	55 Livestock Farms Percent Giving This Response[b]	14 Horticultural Farms Percent Giving This Response[b]
Crop rotation	25	21
Timeliness of operation	22	7
Lime & fertilizer program	20	7
Manure distribution mapping	13	14
Use consultants, not salesman	13	7
Weed control	11	21
Soil testing	9	7
Low purchased input levels	7	7
Environmental practices	5	0
Fit crop practices to specific soil resources	5	0
High quality focus	4	14
No production practice important	4	0
Purchased good soil	2	14
Irrigation	2	7
Compost	2	7
Full till	2	0
Narrow rows	2	0
Variety selection	2	0
Forage bales	2	0
Pasture without rotational grazing	2	0
IPM	0	7
Leaf analysis	0	7

[a] Seven farms did not have any cropland.
[b] Total more than 100% as respondents indicated more than one practice.

One-quarter of the livestock farms and almost that number of the horticultural farms credited crop rotation as important to their success. This practice has been used on farms for generations to take advantage of the benefits of nitrogen fixing legumes, improved soil structure and disease, insect, and weed control. In addition, 22 percent of the livestock farms believe that timely crop planting and harvesting are important to success. Many studies have shown the benefits in terms of quantity and quality from timely planting and harvesting of crops. Many of the other crop production practices related to soils; nutrients applied and weed control.

After indicating the crop production practices that were important to their farm, the farmers were asked to react to a number of crop management practices that had been identified by extension personnel as being potentially important on small farms. For each of these practices, the farmer was asked to indicate whether she/he used the practice and its importance on his/her farm (Table E4). In some cases, the list included practices that the farmer thought were important but had not thought of when asked for important practices. In other cases, the practice was not used, or was considered unimportant. Again the management of the soil as a vital resource came out on top in terms of importance to success and in terms of the number of farms using specific practices. Over

eighty percent of the farms used soil testing and then applied fertilizer and or lime based upon the information obtained. Crop rotation, soil testing, lime and fertilization and environmental practices were rated high in importance. Often those who did not use a nutrient management practice said they knew it was important but did not have the funds available to complete the practice.

Table E4. Level of Use and Importance of Selected Crop Management Practices 69 New York State Small Farms, 2000-2001[b]

	55 Livestock Farms		14 Horticultural Farms	
Practice	Percentage of Use	Level of Importance[a]	Percentage of Use	Level of Importance[a]
Fertilizer and lime program	91	4.6	79	4.3
Soil testing	85	4.2	93	3.7
Environmental practices	82	4.0	86	4.2
Crop rotation	73	4.5	79	4.8
Manure distribution/mapping	75	4.2	43	3.5
Yield monitoring	62	3.7	64	3.4
Variety trials	38	3.1	93	4.2
IPM	35	4.1	93	4.4
Irrigation program	4	2.0	86	4.3
Organic production	4	3.5	29	4.5

[a] On a scale where 1 is not important and 5 is very important as rated by those who use the practice.

[b] The other seven farms had no cropland.

Of significance is the number of farms that reported the use of environmental practices. When asked, 83 percent (of all farms) responded that they carry out such practices and rate this of medium (4.1) importance. In contrast, when asked to list the crop production practices important to their success (Table E3), fewer than five percent of the farms listed this practice. Most all of the farms were concerned about future environmental regulations limiting their success, but only two livestock farms and two horticulture farms indicated that regulations were now a problem. Most of the current concerns had to do with chemical clearance and the concerns for the future were about nutrient and manure run off and manure handling.

Crop production on livestock farms

The proportion of gross income from crop sales for all the livestock farms averaged 19 percent. This figure underestimates the importance of the crop program because most of the crops are marketed through livestock fed on the farm. Consequently the total contribution of crops to gross income is higher, but it is impossible to accurately estimate.

The majority of the livestock farms purchased the grain they fed. The exceptions were the 22 percent of the farms with cropland that grew some corn for grain. Even on these farms the amount of grain produced was usually less than the farm needed. In many cases, production of corn for grain was the result of growing excess corn to be very sure that the corn silage needs would be met. In good years, a significant amount of grain

was harvested. These farms tended to be located in the parts of New York State where the growing conditions and soils were favorable for corn. It is very difficult to economically justify grain production on a small farm in terms of the investment of machinery, labor, and storage required. Because of this most of the farms were growing most of the forages and purchasing most of the grains for the livestock ration.

Grow more forage crops than needed for feed

Eight of the dairy farms grew excess forages and sold them as a cash crop. Those farms wanted to make more efficient use of their resources of land, labor and machinery. The crop sales also provided an alternative income source. Some farms sold hay only in months when they needed funds to meet cash flow shortages. Others had planned sales to neighboring farms and either sold the forage at harvest time or had a monthly delivery arrangements. The sale of excess forage is one way they spread the cost and investment of machinery and equipment over more units of production.

Ratings of crop yields

About forty-four percent of the livestock farmers rated their yields above those of similar operation in their region (Table E5). Others felt their crop yields were the same (27%) or did not know how they compared to other similar farms (18%). Not surprisingly, since the farms were selected because they were deemed to be successful, only eleven percent felt their yields were below others. In almost all the cases where farms reported lower yields, it was due to a decision to apply a limited amount of nutrients and/or chemicals.

Table E5. Rating of Crop Production Yields Compared to Similar Operations in the Region 69 New York State Small Farms, 2000-2001[a]

Comparison	55 Livestock Farms	14 Horticulture Farms
	----------Percent of Respondents----------	
Lower	11	0
Same	27	43
Higher	44	7
Unknown	18	50

[a] Seven farms did not have any cropland.

Over one fifth of the livestock farms that reported higher yields compared to other farms indicated that the higher yields were due to good production practices on the farm (Table E6). Another slightly larger group of farms did not have a good explanation for their above average yields. The others identified variety selection, weed control and nutrient management as the reasons for their above average yields.

Table E6. Reasons Why Crop Production Yields are Higher than Similar Farms
24 New York State Small Livestock Farms With Higher Yields, 2000-2001

Reason	Percent Giving This Response[a]
No reason indicated	25
Good crop production practices	21
Timeliness	21
Appropriate fertilizer, lime, and manure	17
Good soils	17
Good weed control	8
Avoid soil compaction	4
Variety selection	4
Field specific crop management practices	4

[a] Total more than 100% as respondents provided more than one reason.

Crop production on horticultural farms

Most of the fourteen farms that grew primarily horticultural crops grew vegetables and maintained a greenhouse (Table E1). Acreage of the various crops ranged from 1.5 to 28 acres. Some farms were diversified and grew a wide range of vegetable and fruit crops. Others were very specialized, like those that raised blueberries or grapes.

These farms made a much higher level of use of variety trials, IPM (Integrated Pest Management) and irrigation than did livestock farms (Table E4). Variety trials were used as part of a continual search for better yields and higher quality, and for new varieties to add to their product line. IPM was important because of the wide variety of pests that attack fruits and vegetables and the farmer's desire to control the pests with as little cost and chemical as possible. Irrigation was deemed important to obtain good yields and product quality.

Produce for retail market

The majority of the horticulture farms produced their crops for retail markets. About 29 percent of the farms did a little wholesale marketing along with their retail trade (Table E7), but even on those farms most of the sales was retail.

Table E7. Marketing Outlets of Horticultural Crop Farms
14 New York State Small Farms, 2000-2001

Market	Percent of Farms
Retail	71
Wholesale	0
Retail and wholesale	29

Horticulture farms were generally striving to meet the demands of the consumer market. Some used production practices to meet the changing needs of the market. One third of the growers were producing organic fruits and vegetables to meet the needs of

their customers. Others were minimizing the use of inorganic fertilizers, pesticides and herbicides to have a positive effect on the environment and consumer opinion.

With many horticultural crops, early and continual market supply is very important to success. Sweet corn growers were using multiple planting dates to give consumers a longer season and to have a product that could be picked and sold at the peak of tenderness. The growers of fruits and vegetables (like melons and cucumbers) said all the produce was hand harvested to meet the desires of the consumer.

Relative yields frequently not known

Horticultural farms often did not know how their yields compared with other farms (Table E5). Only one farm reported yields higher than for similar operations in the region. The remainder felt their yields were similar to others. Several problems may explain the unknown and only average yields that were reported. First, there is little published data on the yields of these crops. So, farmers may not know the yields achieved by others. Second, many of these crops are produced for specific markets and the requirements of the market may change the appropriate production practices, making it difficult to identify other producers who are producing exactly the same crop. Third, horticultural products are often harvested in multiple pickings, multiple sizes and multiple varieties. This makes yield determinations very difficult and some farmers just do not measure yields. Fourth, quality of produce is often more important than yield since high quality produce often results in a higher price.

Summary and Highlights: Crop Production Management

1. The most important factors contributing to success were good basic soil and crop management practices (crop rotation, a good fertilization program, weed control, manure distribution mapping and soil testing).
2. Successful small farmers who were able to compare their yields generally believed their yields were as high or higher than others in their region.
3. Crop production was an important part of most livestock farms, although a few succeeded by purchasing all feed and forage.
4. Horticulture farms generally considered variety trials, IPM and irrigation important crop production practices.
5. Some small livestock farms with available land and labor were able to improve cash flow by growing and selling excess forage.
6. Horticulture farms generally produced for retail and used a large number of products and varieties, and multiple planting dates in order to extend the marketing season.

CROP MARKETING

Crop marketing practices were important only on farms where sale of crops was a major determinant of income. Although some livestock farms sold a small amount of crops, these sales were generally not large enough for the farmer to believe that crop marketing was important to the success of the business. Only one of the livestock

farmers with crop sales indicated that marketing was important. Thus, no results are reported for crop marketing on livestock farms.

On the other hand 100 percent of the horticultural farms had management practices that made marketing an important part of their success (Table F1). All of the horticultural farms indicated that marketing was a strength of their crop management. Seventy-one percent of the horticultural farms were marketing exclusively to retail customers and the others had both retail and wholesale outlets.

Table F1. Crop Marketing Practices Important to Success
14 New York State Small Horticultural Farms, 2000-2001

Practices	Percent Giving This Response[a]
All retail	21
Attractive retail display	21
Provide a unique product or service	14
Provide a special quality product	14
Owner does all sales	14
Niche market for product or service	7
Add value to crop after production	7
Provide recipes on product use	7
Mailing to customers	7
Treat customers well	7

[a] Total more than 100% as respondents often listed more than one practice.

Selling all products retail and having an attractive retail display were the most frequently mentioned key marketing practices for success listed by only 21 percent of the growers. But when specifically asked about these marketing practices; the importance and use was near the top of the scale (Table F2). Having a unique and high quality product was also important.

After indicating the crop marketing practices that were important to their farm, the farmers were asked to react to a number of practices that had been identified by extension personnel as being potentially important on small farms. For each of these practices, the farmer was asked to indicate whether she/he used it and its importance on his/her farm (Table F2). In some cases, the list included practices that the farmer thought were important but had not thought of when asked for important practices. In other cases, practices were not used, or were considered unimportant. All of the horticultural farms sold a special quality product, were diversified, and all but one sold in a niche market. These practices were also indicted to be of the highest level of importance. Clearly, these are important practices for success.

Table F2. Level of Use and Importance of Selected Crop Marketing Practices
14 New York State Small Horticultural Farms, 2000-2001

Practice	Percentage of Use	Level of Importance[a]
Special quality product	100	4.8
Diversification	100	4.8
Niche market	93	4.9
Unique product or service	79	4.7
Good location	79	4.5
Add value after production	64	3.9
Special marketing activities (tourism, etc.)	64	3.6
Use special pricing strategy	50	4.7
Special promotion/advertising	43	4.7
Forward pricing / contracting	36	4.4

[a] On a scale where 1 is not important and 5 is very important as indicated by those who use the practice.

Knowledgeable sales staff

Since the owner/operator was the final inspector of quality and a very good source of product knowledge, many owner operators felt it very important that they be present at the time of sale to the retail customer. On most of the fruit and vegetable farms that sold retail products, the owners insisted on being the sales contact with the potential buyers. The owners felt that they could convey knowledge about the product that could not be done by a hired salesclerk. In wine sales rooms the winemaker(s) tried to be present for tastings and questions about the products for sale. At the farmer's markets, the operator or the spouse was usually the one doing all the selling. They were the experts on production, varieties and taste and the growers felt that their customers deserved the best service from a professional with all the answers.

Develop a niche market

The niches are created by producing a special kind of product, producing a very high quality product, modifying the product after production and/or serving the needs of a particular group of consumers. Most of the successful horticulture producers indicated that they had developed some type of a niche market. One grower identified their niche as combining perennials and nursery stock with the vegetable stand. Another grower produced special varieties of potatoes to meet their customer's market desires. Some growers identified a local farmer's market as their niche market.

Some flower and vegetable growers were part of community-supported agriculture (CSA). CSA operators received payment for their products before they were grown. This was a niche market where the farmers advertised their products before the growing season started, and took prepaid orders for crops to be grown. They then grew the products to meet their demand for the season. Vegetable growers, sold units of production. Each unit gave the purchaser a weekly allocation of fresh produce. The prepaid sales provided the farmers operating capital and an accurate measure on product

demand. All produce was either picked up at the farm on a certain day or at a specified location.

Customer loyalty

Most commercial businesses, from Wal-Mart to a local car dealership, strive for customer loyalty. This principal is no different for growers selling at roadside stands, farmer's markets, or any other retail location. Repeat customers are necessary for success in a small business. There are many ways to strive for customer loyalty. One example was a grower who sold produce in small wooden or pressed paper baskets with the farm logo on them. This clearly identified the source of the product and provided a clear method of advertising. Furthermore, the seller added to the logo on the container, a request to please return the container. This served two purposes, one to bring the customer back to the sales place and secondly to provide a basket for use in future sales.

Many commercial stores give shoppers a small paper punch card and punch the card with each purchase. The card entitles the bearer to free products after a given number of punches are obtained. This marketing technique is common in shoe sales, milk sales and shirt sales. Some of the growers used this method to build customer loyalty. One of the growers improved upon this marketing procedure. At this farm stand a card was prepared after the first purchase and the name and address of the purchaser was placed on the card. Instead of the purchaser putting the card in their wallet or pocketbook where it can be forgotten or lost by the time of the next purchase, it is placed alphabetically in a file box at the stand for use the next time the customer comes and makes a similar purchase. The grower was much happier with no lost cards or "forgot to bring" excuses but had achieved great customer loyalty from customers purchasing toward a reward.

Customer loyalty was also influenced by other factors, such as, product quality, customer service, knowledgeable sales staff, providing fresh clean products and an attractive sales area.

Product identification

Growers selling at a farmer's market often have the same product for sale as several other growers. Some of the growers reported better sales if their product had distinct packaging. For example, some growers wrapped their floral bouquets in distinctive colored paper. This provided customer recognition of where they had made prior purchases. If they liked the product, they would know where to go next time. It also was good advertising as purchasers carried this distinguishable product around while shopping at the farmer's market.

Another product identification method used by vegetable growers with common vegetables like squash and pumpkins was to place farm logo stickers on the products. This provided product source recognition and helped the returning consumer find the seller next time.

Why they receive a higher price

One half of the small horticultural farms indicated that they received a higher price for their crops than others in the region. The most important explanations for the higher price (Table F3) were quality (50%) and diversification (50%). People are clearly willing to pay more for quality products. Further, when they go to a location to purchase products, they want to be able to purchase several things at one place.

Table F3. Reasons Why Farmers Receive a Higher Price For Crops Than Others
8 New York State Small Horticultural Farms With Higher Prices, 2000-2001

Reason	Percent Giving This Response[a]
Quality	50
Multi-product line	50
Known for honesty, good reputation	25
Recipes for product on its label	13
Marketing skills	13
Organic	13

[a] Total more than 100% as respondents had more than one reason.

Some growers used a value-added technique to enhance the value of their products. On less commonly prepared vegetables they attached preparation instructions and cooking recipes. This method encouraged more home chef's to buy the product and try a recommended recipe when they were unfamiliar with the product. Making jams and jellies of the fruit is also a method of adding value. Some growers gave special attention to consumers desiring organically grown products.

Full product line

One hundred percent of the growers grew and sold a range of products. The successful growers interviewed said it was important to provide many products and choices to attract today's buyers in the market. With multi products, the growers selling at farmer's markets were at the market every week with at least some products. This helped maintain customer recognition and loyalty. Some growers were so convinced that it was important to have a full line that they purchased supplemental products from other growers to complete their sales offerings.

Three of the growers processed some of their fruits into jams and jelly to sell at the farm markets. They used attractive labels with farm logos to make their product distinctive. The sale of jams and jellies expanded their product line, provided an advertising vehicle for distributing their logo and made a perishable product into a year around sales opportunity.

Growers are aware that customers have distinctive likes and dislikes. Many grew more than one variety not only to reduce risk but also to meet customer desires. With many varieties of specific vegetables, like potatoes, they met customer demand, expanded the season and reduced risk of unfavorable weather at pollination time. Some growers grew as many as 15 potato varieties and many carrot varieties to meet customer demand and reduce risks. They also kept tract of yields so they could drop the varieties that yielded the poorest.

Location, location, location

As the old saying goes, the three most important factors in marketing success for direct marketers are location, location and location. Nearly eighty percent of the growers who sold produce at retail said that location of the retail outlet was very important. Importance was placed on a stand in an easily visible location, on a heavily traveled road and/or being in the same location weekly in the farmer's market. Some of the growers did not have the roadside stand on their farm, as it did not meet the criteria of easily visible and on a heavily traveled road. In these cases they rented a location off the farm that met the requirements of a good location.

Product appearance

Good salesmanship includes presenting the product in an attractive display that appealed to the customer. One hundred percent of the growers indicated that they provided a special quality product. To some it was special handling in the way the product was prepared and to others it was the importance of a clean and washed product. Those growers who sold small berries said they always topped off the berry baskets at the market so they would not show the natural effects of settling.

The vegetable and fruit growers identified fresh, clean products as their way of getting a higher price for their products. Some had installed special washers for vegetables and hand sorting to assure high quality.

Summary and Highlights: Crop Marketing

1. All of the horticulture farms sold most or all of their products directly to consumers, rather than through wholesale outlets.
2. Knowledgeable sales staff was considered very important to successful marketing. This led many operators to do the selling themselves.
3. Most of the horticulture farmers had developed some type of niche market based on the array of products provided, the way products were sold (community-supported agriculture), a special product or the location of the market.
4. Many successful marketers made special efforts to build customer loyalty using such practices as returnable baskets with the farm logo, free merchandise after each given number of purchases, product quality and clean produce.
5. Wrapping products in special colored paper or putting logo stickers on produce were some of the practices used to insure product identification.
6. Farm stands should be easily visible and on a heavily traveled road.

MACHINERY AND EQUIPMENT

Control of machinery and equipment investment and costs is one of the largest challenges for the small farm. There is a certain level of machinery and equipment required for crop and livestock production that varies only modestly between small and

mid sized farms. Many of the machinery and equipment makers are designing and producing units for larger farms. If smaller units are available, they are frequently only slightly lower in cost. This is why it is important for the smaller farms to design strategies and management practices to keep their machinery costs competitive with farms of other sizes.

For example, the 1999 Dairy Farm Business Summary data illustrate this problem. Farms with less than 75 dairy cows averaged about 70 to 90 percent more investment in machinery per cow than did herds over 600-cows (Table G1). This increased investment resulted in higher machinery depreciation, and, thus, higher costs. The smaller herds had about $100 higher machinery cost per cow or $0.50 to $1.45 more cost per hundredweight (cwt.) than did the larger herds. With the typical narrow margins in milk production the extra cost on an average farm of up to $1.45 per hundredweight of milk represent a challenge for successful small farms. Finding ways to control machinery costs could be a very important contributor to success.

Table G1. Machinery Cost and Investment by Herd Size
314 New York Dairy Farms, 1999

		Machinery Costs		Machinery Investment
Number of Cows	Number of Farms	Per Cow	Per Cwt.	Per Cow
Less than 50	32	$574	$3.45	$1829
50-74	56	568	3.19	1645
75-99	42	560	2.96	1597
300-399	22	470	2.19	950
400-599	27	492	2.22	1121
600 or more	21	470	2.00	968

Source: Cornell Dairy Farm Business Summary New York State R. B. 2000-03, 2000

Important machinery management strategies

The farmers were first asked to list the machinery management strategies that were important to the success of their business (Table G2). The basic strategy most frequently suggested for successful control of machinery costs involved purchase of good used machinery and careful attention to repair and maintenance of the machinery they had. Those who bought new equipment were very selective and only bought those pieces that were essential or when breakdown would be very expensive in terms of time and/or dollars. For example, many said they buy only new manure spreaders because they did not want to empty a broken spreader by hand.

Some of the management strategies listed by the farms surveyed (Table G2) appear to be contradictory. But, each farm had a unique set of labor, land, equipment and management resources. This often resulted in different practices being optimal for various farm situations.

Table G2. Machinery & Equipment Management Strategies Important to Success
76 New York State Small Farms, 2000-2001

Management Strategies	Percent Giving This Response [a]
Repair and maintain to keep existing line in good condition	38
Buy used	32
Minimize investment by maximizing use	17
Buy new technology	8
Do not replace until absolutely necessary	7
Buy new	5
Custom hire on my farm	5
Replace regularly to increase dependability	5
Operate with care	5
Buy at farm auctions	4
Do not buy larger size than needed	4
No investment in machinery and equipment	4
Share ownership	3
Build my own equipment to meet needs	3
Buy good machinery when cash flow is high	3
Buy something every year	3
Only buy your important items new	3
Hay only, no corn grown to decrease investment	3
No management practice important to success	3
Drop the crop that required special equipment	1
Specialize to reduce machinery needs, dairy only, no crops	1
Have a complete line of equipment to do all functions	1
Buy used tractors and the other machinery new	1
Cash flow all purchases	1
Group harvest with neighbor farms	1
Off season buying	1

[a] Total more than 100% because respondents listed more than one management strategy.

After indicating the machinery and equipment management strategies that were important to their farm, the farmers were asked to react to a number of practices that had been identified by extension personnel as being potentially important on small farms. For each of these management practices, the farmer was asked to indicate whether she/he used it and its importance on his/her farm (Table G3). In some cases, the list included practices that the farmer thought were important but had not thought of when asked for important practices. In other cases, the practice was not used, or was considered unimportant. Again, the practice of buying used machinery and equipment was used by nearly 90 percent of the respondents and they considered it to be very important.

Table G3. Level of Use and Importance of Selected Machinery Management Practices 76 New York State Small Farms, 2000-2001

Practices	Percentage of Use	Level of Importance[a]
Buy used machinery	89	4.1
Buy new machinery	80	3.5
Custom hire work on my farm	46	4.2
Do custom work for others	21	3.3
Drop crop that required special equipment	16	4.3
Daily rental of machinery	12	4.0
Share ownership of machines	12	3.9
Lease machinery	8	3.0

[a] On a scale where 1 is not important and 5 is very important as indicated by those who use the practice.

Controlling machinery & equipment investment

Control of machinery costs can be divided into two separate but interrelated parts: machinery investment (capital investment in machinery) and annual machinery costs (operating costs). Machinery purchase decisions determine the depreciation expense, which represents the allocation of the initial cost of the item over its life of use, and the set of machinery with which the farmer has to work. Annual machinery costs are determined by those purchase decisions and the roughness or gentleness of use, as well as the repair and maintenance procedures used by the farmer after purchase.

Buy used machinery

The most important method used to control investment was "buy used." Nearly thirty percent of the farmers indicated use of this method (Table G4). An additional nine percent modified the "buy used" approach to focus on purchase of good used machinery. While others did not make it a practice to buy used machinery, many placed emphasis on maintenance and restraint from purchasing replacement equipment until it was absolutely necessary. A limited number found alternatives to ownership by custom hiring, rental, sharing and exchanging machine work with neighbors.

Carefully consider replacement decisions

Since all machinery and equipment will eventually wear out or become obsolete, the methods or techniques used in deciding to replace machinery and equipment have an important influence on costs (Table G5). The most important technique listed by the farmers was to replace only when needed. While this is easy to say and most will agree with it, most of these farmers were very serious that the existing machine must be physically unable to be used, or clearly more economical to replace than to repair, in order to warrant replacement.

Table G4. Practices Use to Control Machinery & Equipment Investment
76 New York State Small Farms, 2000-2001

Management Practices	Percent Giving This Response [a]
Buy used	29
No practices used	18
Good machinery maintenance	16
Minimize machinery investment	11
Custom hire work done on farm	11
Buy good used	9
Delay replacement	4
No investment in machinery and equipment	4
Shared ownership	1
Trade machine work with neighbors	1
Daily rental	1
Evaluate machinery investment decisions	1
Drop the crop requiring special machinery	1
Add enterprise to more effectively use investment	1
Careful operation	1

[a] Total more than 100% as respondents listed more than one practice.

Farmers also indicated the importance of conducting an analysis of the economics of the replacement alternatives and assessing the cash flow and tax implications of the decision. In a few cases they relied on third parties (lenders, consultants, etc.) to conduct the analysis. Purchasing machinery was not an impulse decision or a quick response to a breakdown. It was carefully considered.

Specialize to reduce investment

One method of reducing machinery investment is to specialize in only part of the production process. Then, investment in the specialized equipment that is required for other parts of the production process can be avoided. Some of the successful small farms specialized in milk production and did not grow crops. This greatly reduced their need of machinery and equipment. Dairy farms with cropland accomplished this by cash renting the land to others, thus eliminating a portion of their machinery investment and creating an additional source of income. They may or may not subsequently purchase the crops grown on that land for their own livestock feed. Other farmers avoided the ownership of land by purchasing a farm site with a house and dairy barn located on a small parcel of land, or built a barn on a small parcel of land, and bought feed. Those farms that only milked cows and purchased all feeds were often able to limit machinery investments to a tractor and manure spreader.

Table G5. Methods Used in Decisions to Acquire Replacement Machinery & Equipment
76 New York State Small Farms, 2000-2001

Management Methods	Percent Giving This Response [a]
Replace only when needed	29
Economic analysis of fix vs. buy new	17
Replacement driven by cash and tax position	17
Buy to maintain dependable machinery line	16
Match purchase to farm needs, buy only necessary items	11
No methods used in decisions	9
Shop for low price	8
Economic analysis of all options - fix, buy, custom, drop, etc.	7
Regular replacement	5
Get information from other farmers before purchase	5
Buy to maintain a modern machinery line	4
Payback analysis	4
No investments in machinery and equipment	4
Economic analysis by 3rd party	3
Efficiency of new item	3
Fix everything, no replacement	3
Avoid borrowing	1

[a] Total more than 100% as respondents had more than one method.

Custom hire to reduce machinery investment

Some farmers custom hired various machine operations to both reduce machinery investment and labor needs. Some small farm operators indicated that it was cheaper for them to custom hire various planting and harvesting operations than to own machinery, pay the operating and labor costs and go through the trouble of trying to find and hire labor at busy times of the year.

In situations where farmers who milked cows, purchased all feeds and had no land except the building site, manure spreading was a challenge. Some farmers reported that they had arrangements with neighbors to allow free manure spreading on vegetable or grain cropland. Other farms owned about enough pastureland to spread it on if the season was dry. Others had made arrangements with a neighbor who had bulk manure handling equipment to empty the farm pit weekly or as needed for a per cow unit custom hauling and distribution fee. This fee was established with a credit for the nutrient value of the manure spread.

Forty-six percent of the farms in the survey used some kind of custom hiring on their farms. Fifty-seven percent of the farms growing corn for grain employed custom operations on their farms. The determination of what enterprise the custom work was utilized on cannot be determined from the data. Custom work as a management practice ranked very high in their level of importance (4.2 average out of 5 maximum).

Plowing is one farm operation that usually requires a large tractor with high horsepower. Some of the growers did not need a large horsepower tractor for any other farm operation except plowing. In this case they found it most economical to either

custom hire the plowing done or rent a tractor when they could obtain a daily rental from a dealer.

Machine sharing to reduce investment

One method of reducing the investment in machinery is to have two or more farms share in the ownership of expensive machines. However, the farmers reported minimal interest in shared ownership of machinery as a management practice (Table G3). Only twelve percent of the farms have some limited use of this practice, and those that do rate it only medium in importance with a 3.9 rating.

There can be problems of co-ownership of machinery in terms of decisions on repair, conflicts of who get to use it first, who stores it and who maintains it. A modification of a shared ownership arrangement was reported where farmers owned different harvesting equipment but worked together cooperatively on their respective farms to complete their harvest. It was described as a practice similar to the old thrashing bee of years gone by. One farmer (possibly a larger farm) owned the chopper and big tractor, other smaller farmer owned the small tractors and wagons and/or trucks for hauling forage to the barns. They worked together, completing the harvest at each farm until all were done. All participating farms were able to spread their fixed costs over more acres and saved money and investment.

Some farms shared equipment by doing custom work for others. This spread the cost of the machinery over more acres and provided a source of income.

Operating a horticulture business

It was observed that the horticulture businesses had lower machinery investment per farm than livestock operations. Small machines were frequently available and quite adequate for the jobs needed. Less machinery was required because more hired labor was being utilized. Thus, these operators placed less focus on the control of machinery investment. While they did purchase some machinery to save labor, horticulture operators did so less frequently than livestock farmers. The other procedures used to control investment were similar to the procedures used by livestock farmers. They focused on purchase of good used machinery when cash flow is high and repair and maintain what you have. One-half of the horticulture farms felt that their level of technology was higher than others, because of their use of irrigation and the desire to reduce labor. In general they bought used equipment when available, but often could not readily find the newer technology on the used market.

Reduce machinery operating costs

Nearly 60 percent of the farms could not identify a specific practice that they used to control machinery costs (Table G6). Although many of them did control machinery investment, they did not do anything else specifically designed to control operating costs. A majority of those who listed a machinery cost control practice indicated that maintenance and repair on the farm were the keys.

Table G6. Practices Used to Control Machinery & Equipment Operating Costs
76 New York State Small Farms, 2000-2001

Management Practices	Percent Giving This Response [a]
No practices used to control costs	58
Maintenance of machinery	20
Repair on farm	13
No investment in machinery and equipment	4
Buy used machinery	3
Use parent's or other's equipment	1
Buy new machinery	1
Buy used parts	1
Careful operation	1

[a] Total more than 100% as respondents listed more than one practice.

Approximately 60 percent of the small farms indicated that the mechanical repairing ability of the operator and their workers was above average (Table G7). This was likely due to the economic pressure to do the repairs on the farm to reduce expenses. This group with above average mechanical abilities did an average of 90 percent of the repairs on the farm. Often the only off farm repair reported was major tractor overhauls.

Those farms indicating that their workers were below average in mechanical ability sent an average of nearly 60 percent of repair work to off-farm repair businesses. At least one farmer who hired machinery repaired indicated that this was the cheapest method for his farm. Since he was running a family farm with limited labor, the timeliness of his crop and dairy operations was so important that he could not afford the time to try to repair the equipment himself. Whenever this farm called the dealer or repair shop, they knew his needs and took care of his equipment repairs in a timely fashion and he was back in operation that same day.

Table G7. Rating of Mechanical Repairing Ability of Operator and Farm's Workers
73 New York State Small Farms, 2000-2001 [a]

Mechanical Repair Ratings	Percent Giving This Response	Percent Repairs Done on the Farm
Above average	59	90
Average	26	63
Below average	12	58
Unknown	3	N/A.

[a] Three farms did not have any machinery and equipment.

The horticultural farm machinery and equipment cost control techniques generally did not differ from those found on the livestock farms. They focused on buying used machinery and applying good maintenance.

Other strategies

Multiple smaller units instead of one large unit

Small farms often reported that they liked to remain small in all their endeavors. Some indicated that when it comes to timely harvesting of forages they would rather chop into three different wagons than to have one large truck for hauling from the field to storage. Their reasoning was that depending on one larger vehicle with a single motor might cause a very costly breakdown if the truck was inoperable. They reasoned that the multiple wagons pulled by multiple tractors were interchangeable and much less likely to cause a serious harvesting delay upon the untimely breakdown of any one unit.

Use machinery technology to keep one person operation

Some farmers want to keep their farm small so that they do not have to deal with hired labor. On the other hand, they may want as large a business as possible within that constraint in order to maximize income. These farmers often use technology to allow one person to handle as large a business as possible. Twenty-six percent of the farms rated their level of machinery and equipment technology higher than similar operations in their region (Table G8). The reason given by fifty percent of those farms that had the higher technology was to save labor. They were substituting capital expenditures for labor costs in an effort to remain a one-person operation. Sixteen percent of the farms listed their number one labor saving equipment as the power feed cart.

On the other hand those with a lower level of machinery and equipment technology reported this was because the "old still works." They do more hand labor, but it is necessary to keep cost down.

Table G8. Level of Machinery and Equipment Technology Compared to Similar Operations 73 New York State Small Farms, 2000-2001[a]

Comparison	Percent of Respondents
Lower	28
Same	34
Higher	26
Unknown	12

[a] Three farms did not have any machinery and equipment.

Summary and Highlights: Machinery and Equipment

1. Control of machinery and equipment costs is one of the largest challenges facing small farms.
2. Most small farms controlled capital investment in machinery by buying good used machinery.
3. Other methods used to reduce investment included specializing enterprises on the farm business so that less machinery was needed, custom hiring and machine sharing.

4. New machinery was purchased only for items where an untimely breakdown would cause severe losses.
5. Machinery was purchased only after careful consideration and analysis.
6. Successful small farms controlled machinery costs by doing most of the repairs with farm labor on the farm.
7. A wide range of technology adoption was observed on these successful farms. Some used the latest machines to allow all the work to be done by one person. Others used older technology because it "still works" and was cheaper.

LABOR MANAGEMENT

There are at least three perspectives on labor management for small farms. First, small farm operators often try to organize the farm to require little or no hired labor. In this case, efficient use of the operator and family labor becomes a key to successful labor management. Second, if labor is hired, finding ways to minimize the cost and make effective use of what is often part time labor becomes a focus. Third, efficient use of the labor available is required to produce sufficient product and services to insure that the business makes the desired contribution to family living.

Labor use on the small farms surveyed averaged about two full time equivalents (Table H1). Two-thirds of the labor used was provided by the operators, frequently a husband and wife. Less than five months of hired labor were used. The rest of the labor, about 3.7 months equivalent, was provided by the family.

One-half of the livestock farms employed hired labor and those hiring labor used an average of 6.6 months per farm. For all livestock farms, hired labor averaged about three months per farm. Slightly more family labor (3.7months) than hired labor was used.

On the other hand, over three-quarters of the horticulture farms employed hired labor. Total hired labor for those hiring labor averaged more than one full time worker equivalent. For all horticulture farms total hired labor averaged 10.9 months compared to 4.0 months of family labor.

Interestingly, horticultural operators were more likely to pay family labor than were livestock farmers. This may relate to the greater prevalence of piecework for hired labor.

The operators of these farms worked long hours (Table H2). The median workweek was approximately 70 hours. About one-quarter of the livestock operators indicated that they worked over 80 hours per week. In contrast, none of the horticulture growers averaged that many hours. This is twice the length of a standard non-farm workweek. Surprisingly, over half of these livestock operators were comfortable with these hours. Less than 20 percent of the livestock operators worked less than 60 hours while half of the horticulture farmer reported this as their average work hours. A much higher proportion of these operators were comfortable with this level of work. Clearly, operating a small farm is not an occupation for people who are afraid of work!

Table H1. Labor Equivalent per Farm
76 New York State Small Farms, 2000-2001

Labor Sources	Ave. Months per Year		Percent of
	Farms Using	All Farms Average	Farms Using
Livestock Farms (62)			
Operator(s)	16.9	16.9	100
Hired	6.6	3.3	50
Family paid	5.4	2.0	37
Family unpaid	3.6	1.7	47
Horticulture Farms (14)			
Operator(s)	15.6	15.6	100
Hired	13.9	10.9	79
Family paid	8.7	3.7	43
Family unpaid	2.0	0.3	14
All Farms (76)			
Operator(s)	16.7	16.7	100
Hired	8.5	4.7	55
Family paid	6.1	2.3	38
Family unpaid	3.5	1.4	41

Some of the reasons given for working long hours were "required for the job" and "I like working". Some farmers said they would rather work harder themselves than train a hired worker who may not report to work next week. On the other hand, others indicated they were not comfortable with the hours, as it was "too much work" and "not enough leisure time".

Table H2. Hours per Week Operator Works on the Farm and Comfort Level
76 New York State Small Farms, 2000-2001

Hours per Week	Percent Working This Amount			Percent Comfortable with This Level		
	Livestock	Horticulture	All	Livestock	Horticulture	All
Over 80	26	0	21	62	*	53
60 to 80	55	50	54	71	86	73
59 or under	19	50	25	75	57	81

* Not applicable

The small farmer operators were first asked to indicate the particular labor sources, incentives or management strategies that they use on their farm that are important to success. In response to this question, all of the farmers referred to hired labor management strategies (Table H3). Thus, 28 percent, most of whom hired no labor, indicated that they had no specific strategies.

The most important source of labor on these farms was high school students. They fit the part time labor needs of most small farms, are frequently less expensive than regular labor and are generally available in most rural areas. These students are frequently willing to work hard for the opportunity to earn some money and obtain some

work experience. The biggest drawback with this labor source is that they require considerable training and continual monitoring.

Table H3. Specific Labor Sources, Incentives or Management Strategies that are Important 76 New York State Small Farms, 2000-2001

Management Strategies	Percent Giving This Response[a]
No specific labor strategies	28
Use of high school students and/or seasonal labor	16
Organize farm to avoid hired labor	14
Treat labor well	13
Use unpaid family labor	12
Pay well	11
Flexible days off	7
Good labor management practices followed	5
Hire well qualified employees	4
Establish performance standards	3
Continued training of employees	3
High school only, no migrant workers	3
Allow others to participate in management decisions	1
Housing or farm product benefits	1
Schedule work activities to de done	1

[a] Totals more than 100% because respondents indicated more than one management strategy.

After indicating the labor management strategies that were important to their farm, the farmers were asked to react to a number of practices that had been identified as being potentially important on small farms. For each of these management practices, the farmer was asked to indicate whether she/he used it and its importance on his/her farm (Table H4). In some cases, the list included practices that the farmer thought were important but had not thought of when asked for important practices. In other cases, the practice was not used, or was considered unimportant.

In general, those practices that had to do with managing hired labor for best performance were little used and not considered to be very important. Labor saving techniques were widely used and considered very important.

Avoid hired labor by maximizing use of family

One strategy used by a number of farms was to organize the farm to maximize use of family labor. Thus, the farmer avoided the need for hired labor. There are two facets to this strategy.

First, organizing the farm so that the labor from the family can do all the work. This involves limiting the size of the operation. It also involves structuring the work activities so that the work required can be done by the family members who are available and scheduling work to be done when the family is available to do it. For example, all the first cutting of hay may be harvested as silage before school is out for the summer and the later cuttings are harvested as hay when school is out. Fruit and vegetable harvest

may be scheduled for afternoons after school is out. Other activities may be scheduled during school hours when both spouses are available to participate. Many operators indicated that vacations, family time and sleep are elements that get shorted when there is fieldwork to be done or cattle to be tended.

Table H4. Level of Use and Importance of Selected Labor Management Practices 76 New York State Small Farms, 2000-2001

Practices	Percentage of Use	Level of Importance[a]
Purchase of labor saving equipment	58	5.0
Use high school students and/or seasonal labor	42	4.1
Construction of labor saving structures	40	5.0
Design special labor routines	40	4.1
Allow others to participate in management	26	3.6
Avoid labor consuming activities	25	4.4
Continued training of employees	14	3.9
Shared ownership of livestock or crops	11	4.3
Incentive based on farm profits/goals	9	3.3
Paid vacations	9	3.9
Housing or farm product benefits	8	3.8
Overtime pay	5	4.0
Distributed written mission and goals	3	4.0

[a] On a scale where 1 is not important and 5 is very important as indicated by those who use the practice.

The second facet is to structure the business to make effective use of the labor that is available. This may mean selecting enterprises that are easily accomplished by family labor, or custom hiring activities for which family labor is not qualified to complete or is unavailable to complete. For example, some families maintained a heifer raising activity because it required tasks that family labor could conduct and allowed the timing flexibility necessary for the family to do the work when they were available.

Organize to minimize labor needs

A frequently used approach to labor management on these small farms was to make every effort to minimize labor needs. The approaches used varied widely. Labor is often an extremely limited resource on small farms. Thus, every activity needs to be assessed to determine if it can be omitted, done less frequently or there is a way to do it easier or quicker. These activities have allowed some of the farms to achieve above average labor efficiency (Table H5). However, the majority ranked their operations as average or below in the efficiency of their use of labor.

Table H5. Operator Rating of Farm's Labor Efficiency
76 New York State Small Farms, 2000-2001

Efficiency Ratings	Percent Giving This Response
Above average	25
Average	41
Below average	14
Rating unknown or no response	20

Mechanize to reduce labor

The most frequently mentioned method of reducing labor needs was mechanization (Table H6). This was particularly important on horticulture farms. About 58 percent of the farms indicated that they had purchased labor saving equipment and all indicated that such purchases were very important (Table H4). An important perspective on mechanization on small farms, however, was that it did not mean purchasing the largest tractor, chopper and field machinery but rather purchase of appropriate sized equipment for their operation. The most frequently mentioned item purchased for mechanization was a power feed cart (Table H7). Other examples included a skid steer, big baler, baleage, weeder and transplanter. Many of the purchases were used in parts of the business where labor requirements were high and a modest investment could have a significant effect on labor use.

Some small farms would rather pay the cost for mechanization than the cost in time, frustration and money for the labor monitoring, payroll records and tax reporting required for hired help.

Reduce job frequency

One method used to increase labor efficiency was to reduce the frequency with which jobs were done. For example, letting the manure accumulate in a storage area for a week and spreading at one time reduces the trips to the field with part loads and the frequency with which someone has to "get ready to spread manure." Some farms have practiced feeding once per day, when feed quality permitted. Movement to a TMR made this possible on some farms.

Change feeding programs on livestock farms

Feeding programs were sometimes changed to reduce labor. Feeding more silage and less hay can reduce harvest and feeding labor because both can be mechanized. A few farmers switched to a single or simplified TMR to increase feeding efficiency.

Table H6. Specific Labor Practices Used to Reduce Total Labor Needs
76 New York State Small Farms, 2000-2001

Labor Practices	Percent Giving This Response[a]
No specific labor practice to reduce labor needs	42
Mechanize	20
Rotational grazing	12
Work harder to avoid training some jobs to others	7
Hire labor only when needed	5
Custom hiring to avoid peak season labor needs	5
Baleage	5
Single TMR for all groups	5
Limit expansion	3
Use family labor for extra hands	3
Community harvest of crops	3
More silage, less hay	3
Free stall heifer barn	3
Seasonal herd	3
Simplified TMR	1
Treat labor well	1
Trade labor with other farmers	1
Chemical weed control	1
Train vines for mechanical harvesting	1
Feed cows once per day	1
Regular routine so jobs do not pile up	1
Accumulate manure for a week then spread	1
Time off to recharge	1
Use small barn	1

[a] Totals more than 100% because some respondents listed more than one labor practice.

Most of the equipment purchased for reducing labor needs was mentioned by livestock farm operators. Since they used less hired labor, they frequently substituted machinery and equipment for hired labor. On the other hand the horticulture farms listed fewer equipment purchases. Their crops needed more manual labor and many of the jobs were not easily mechanized. Items like plastic mulch saved labor on the horticulture farms.

Table H7. Equipment Purchased for Reducing Labor Needs
76 New York State Small Farms, 2000-2001

Equipment	Percent Giving This Response[a]
No equipment purchased for labor savings	42
Power feed cart	16
Skid steer	9
Equipment was purchased but not identified	9
Big round bales	8
Total mixed ration equipment	5
Pipe line	4
Automatic take off	3
Baleage	3
Plastic mulch	3
Transplanter	3
Silo unloader	3
Vegetable crop weeder	1
4-wheeler	1
Rock picker	1
Elevator	1
Grain mixer	1
Seeder cultivator	1
Bedding chopper	1
Excess machine capacity	1
Multi-pill gun	1
Special sprayer	1
Robot feeder	1
Large bale wagon	1
Mechanized feeder	1

[a] Totals more than 100% because some respondents listed more than one piece of equipment.

Develop work routines

Some people accomplish much more in a day than others. In some cases accomplishing more is the result of working harder, but in many others, it is the result of working smarter. Tasks are often done in a particular way because "that is the way we have always done it." Nearly forty percent of the successful small farms had developed specific labor routines designed to increase their work efficiency (Table H8). Developing these routines usually involves stepping back and asking how the order and frequency of the various tasks can be changed to reduce labor. In some cases having some one who does not work on the farm review the work routines and make suggestions for improvement is most effective.

Eighteen percent of the farms had personally developed barn routines designed to reduce labor (Table H8). Some wrote down the routines to insure that they were followed. A few farmers mentioned arranging the storage of hay in ways to make efficient removal. One farmer listed use of a TMR (total mixed ration) as a labor saving routine as it reduced many feeding tasks into one.

Table H8. Designed Special Routines for Labor Savings
76 New York State Small Farms, 2000-2001

Routines	Percent Giving This Response[a]
No special routines for labor savings	61
Personally developed barn routine	18
Indicated routines but not specifically identified	13
Written down labor routine	3
Hay storage for efficient removal	3
One TMR for all cows	1
Weekly harvest and marketing routine	1
Strip till for vegetables	1

[a] Totals more than 100% because respondents listed more than one routine.

Let the customer do the work

Horticulture farms are constantly faced with scheduling hired pickers to pick the produce that is ripe and/or that can be sold today or tomorrow, or before perishing. Many horticultural operations have found ways to allow the customer to do a significant amount of the work. These farms where produce is primary have turned to U-pick options to reduce hired labor needs and to match sales with harvesting. If a customer picks a product, it is sold product and does not become a perishable inventory item waiting so be sold with a harvesting expense incurred.

U-pick operations manage to harvest large quantities of fruit with a quite limited hired labor force. U-pick solves the problem of finding labor, but it does not reduce the management job required of the operator. The operator's job at picking time becomes customer management instead of labor management. Livestock farms that developed a supplemental source of income by growing various kinds of berries are using U-pick as their sole harvesting labor source for that enterprise.

Other operators reduced the price charged for the product or service if the customer did some of the work. For example, the operator of a consumer supported agriculture operation reduced the price for the season's vegetables if the customer agreed to do a certain amount of weeding. A horse boarding operation reduced the price if the customer cleaned the manure from the rented stall.

Construct labor saving structures

Forty percent of the farmers had constructed special labor saving structures and all viewed them as being very important to the success of their farm (Table H4). The most frequently mentioned structure was an efficient heifer barn. Many farms make use of existing barns for heifers. In many cases these barns were not designed for heifers and

have not been renovated to make heifer care efficient. These farms found that renovating or replacing these barns to provide efficient heifer housing saved considerable labor.

Renovation or adding to the existing milking barn, including adding a flat parlor, allowed some farms to improve labor efficiency. While these changes often did not make the farms as efficient as a new barn, they allowed significant improvement in labor efficiency with modest cost. Even as small a change as adding tile mangers was viewed as saving considerable labor.

Dry hay is generally a high labor crop, both in harvesting and feeding. Some farmers built a larger silo so that more of the hay crop could be harvested and fed as silage. Others developed methods of making hay feeding more efficient. The techniques used included construction of a hay feeding shed, development of a platform to make feeding of big bales efficient and doing the feeding in an outside feeding area similar to that used with free stall barns.

Vegetable farmers found storage and packing buildings and changes to buildings improved labor efficiency. Some added new washing facilities with tabletop counters and drains that allowed the produce to be washed easier, quicker and cleaner than the hose and bucket methods.

Table H9. Structures Constructed for Labor Savings
76 New York State Small Farms, 2000-2001

Structures	Percent Giving This Response[a]
No structures constructed for labor savings	61
Efficient heifer barn	14
Efficient dairy barn renovation or addition	8
Flat barn parlor	3
Long-term manure storage facility	3
Bigger silo for less hay	3
Building with a vegetable packaging line	3
Outside feeding area like a freestall barn	3
Hay feeding shed	1
Round bale platform to load feeder	1
New efficient barn	1
Efficient vegetable building	1
Grain bin for heifers	1
Wagon for feeding range chickens	1
Tile mangers	1

[a] Totals more than 100% because respondents listed more than one structure.

Avoid labor-consuming activities

About a quarter of the small farms visited reported that they had identified activities that they avoid or "do not do" without significant loss to the business. They did not say that these activities had no value, only that doing them was not worth the labor and other costs of doing them. Feeding only once per day avoids the labor of multi daily

feedings. A TMR fed once per day worked for some farmers unless the weather was so hot that the feed spoiled.

Rotational grazing to avoid the labor of harvesting the feed and barn chores of feeding the animals and removing the manure was successfully used on a number of farms. Maintenance of a seasonal herd was useful on some farms. With a seasonal herd calving occurs during a short period of the year, allowing maximum use of pasture, and chores are reduced during a part of the winter.

Horticulture farms mentioned not weeding close to harvest because any added yield was insufficient to offset the value of the labor required. One farmer avoided tillage operations by using a special plow.

Table H10. Labor Consuming Activities Avoided
76 New York State Small Farms, 2000-2001

Activities Avoided	Percent Giving This Response[a]
No special labor consuming activities avoided	75
Labor consuming activities avoided but not identified	4
Only feed once per day	3
Round baler to avoid bale handling	3
Rotational grazing, no feeding or barn chores	3
2x milking, not 3 times daily	3
Good records to spot problems before they develop	1
Only rent land close to farm	1
Seasonal herd, group calving and breeding activities	1
Do not weed close to harvest	1
Special plow to avoid fitting fields	1
Feed outside	1
Conventional feeding, avoid high labor TMR	1
More silage, less hay	1
No rock picking	1

[a] Totals more than 100% because respondents listed more than one activity.

Custom hire to avoid labor peaks

One way to improve the efficiency with which labor works is to keep the work load relatively even, so that the small farm labor force can handle the work on a continuing basis. Some farms accomplished this by custom hiring jobs that would cause peak labor demands. On dairy farms, the job most frequently custom hired was silage harvest. The custom operator provided labor as well as machines, and this avoided a peak demand for farm labor.

Nearly 50 percent of the small farms hire some custom work done on their farms. Custom work provided a source of trained labor as well as reduced investment. Some of the farms found that custom operators were better trained and more efficient in performing the task compared to the hired labor they would b able to hire to operate the machine if it was owned. Even if the farm owned a small baler, some farms hired custom baling

because it gave the farm an additional labor source during a critical harvest period.

Hire full time labor to avoid continual retraining

Counter to the views of most of the small farm operators, a few farmers indicated that one of the keys to their success was hiring a full time employee.
This avoided the continual hiring and retraining required with part time employees and high school students. Labor was available on a more continuing basis. Because it provided more labor than might be hire if the farm depended on high school students, there was more opportunity for free time and vacations. One farm had the same hired person for thirty-five continuous years and felt that he was a key to their success. There were more benefits than the savings in training. Operators liked the benefits of more free time and opportunities to take vacations or days off knowing they had a knowledgeable employee in charge who had been through the many challenges of daily farming tasks.

Summary and Highlights: Labor Management

1. Average labor use on these small farms equaled two full time workers.
2. Most of the operators worked over 60 hours per week.
3. Many small farmers organize their farm to avoid hiring labor by purchasing labor saving equipment and structures, designing special work routines and avoiding labor consuming activities.
4. Many farms make maximum use of family labor and hire only high school students and seasonal labor.
5. Horticulture farms reduced labor needs by letting the customers do the harvesting with u-pick or charging lower prices to those who help weed and harvest (for CSA farms).
6. Some dairy farms used rotational grazing or seasonal herds to reduce labor demands.

COST CONTROL

The contribution of the farm business to the economic well being of the family is determined as receipts minus costs. Since the level of costs is one half of the equation, one important aspect of maintaining a successful small farm often involves a focus on cost control.

The small farms interviewed generally believed that they were successful in controlling costs. About 40 percent indicated that their costs were lower than those of similar operations in their region (Table I1) were. A few farms believed that their costs were average and a few thought their costs were higher, even though they were successful farms. A third of the farms did not know whether their costs were higher or lower than others were. Most of these farms had enterprises or products that were sufficiently different from their neighbors that it was difficult to compare and/or little or no data were generally available to assess the level of costs on other farms.

Table I1. Level of Operating Cost Compared to Similar Operations
76 New York State Small Farms, 2000-2001

Level	Percent Giving This Response
Higher	14
The same	13
Lower	40
Unknown	33

Those farms reporting lower costs achieved this by employing a number of different techniques or strategies. The most frequently used single technique was to employ less hired labor (Table I2). This may involve greater use of family labor, either by having more family labor available or by making the most effective use of it, or organizing the farm to reduce the total labor requirement.

Another frequently mentioned reason for having lower costs involved a continued focus on cost control in all areas. This was often as much a frame of mind as an attempt to focus on all the cost items on the farm. That is, the farmer was cognizant of costs as each activity on the farm was conducted. It also recognizes that at any point in time any cost item can get out of control, so continued monitoring of all costs becomes an effective method of cost control.

Some farmers believed that rotational grazing allowed them to maintain costs below those of farms who harvested all their forage, fed it to the animals and hauled away the manure. For others, a key to low costs was doing their own repairs. People with mechanical or carpenter abilities can control machinery and building repair costs by doing the work themselves on the farm. Farmers indicated that they or their workers did an average of 80 percent of the repairs on the farm.

The reasons farmers listed for lower operating costs (Table I2) show that what is best for one farm is not necessarily the best for others. Some farms believed that growing their own grain lowered costs. Others indicated that not growing any crops was best for them. Similarly, some farmers said raising their own heifers lowered costs, while others indicated that not raising any heifers kept their costs down. Different sets of resources make alternate solutions optimal.

Those farmers with higher costs than their neighbors with similar businesses listed several reasons for their higher costs (Table I3). Some were comparing themselves to their larger neighbors and indicated that their costs were higher because their businesses were smaller. Others had higher costs because they were doing more functions. For example, they were doing more marketing, they were putting their fruit on trellises, they had higher levels of production or they were putting effort into the appearance of their farm. These farms were spending more with the expectation that the expenditure would result in sufficiently higher revenues to increase net income.

Table I2. Reasons Why Level of Operating Costs is Lower than Similar Farms
30 New York State Small Farms With Lower Costs, 2000-2001

Reasons	Percent Giving This Response[a]
Use less hired labor	20
Focus on cost control in all areas	20
Rotational grazing	10
Do own repairs	10
General low use of inputs	7
Grow own grain	7
More mechanized	3
High production level	3
Adjust feed with milk price change	3
High labor efficiency	3
Raise own heifers	3
Limit number of sprays	3
Feed outside	3
Tasks done with farm labor, not off-farm hired	3
Resource balancing	3
No crops or heifers	3
Low purchased feed	3

[a] Totals more than 100% because some respondents listed more than one reason.

Table I3. Reasons Why Level of Operating Costs are Higher than Similar Farms
11 New York State Small Farms With Higher Costs, 2000-2001

Reasons	Percent Giving This Response[a]
Smaller business	27
Do more marketing	9
Trellised fruit	9
High wage rates	9
More operator time off	9
Strive for high production	9
Positioning to expand	9
More outsourcing and custom hiring	9
High machinery investment	9
Money spent on appearance	9

[a] Totals more than 100% because some respondents listed more than one reason.

The successful small farmers were first asked to list the practices they used to control operating costs. Although many of the responses focused narrowly on reducing the cost of inputs, a wide variety of cost minimizing techniques were listed (Table I4).

Table I4. Practices Used to Control Farm Operating Costs
76 New York State Small Farms, 2000-2001

Practices	Percent Giving This Response[a]
Shop for lowest price	20
Forward purchasing to get a discount	18
Take advantage of cash discounts	16
Minimize purchased inputs	13
Buy in bulk	13
Rotational grazing	8
Track cost of production	8
No special cost control practices	8
Low debt	5
Attention to detail	5
Member of a buying group	5
Do tasks with farm labor	4
Use reputable sources for input purchases	4
Measure to minimize waste	4
Tax management, EIC[b] or reduced tax breaks	4
High quality forage	4
Evaluate capital purchases to control operating costs	4
Feed dairy outside	3
Minimize equipment	3
Grow own grain	3
Hire custom work	3
Use consultants	1
Buy used machinery	1
Willingness to change business to reduce costs	1
Rent machinery	1
Harvest unwanted crops from others land	1
Grassland livestock rotation	1
Interest free financing	1
Preventative maintenance	1

[a] Totals more than 100% because some respondents listed more than one practice.
[b] Earned income tax credit.

After indicating the cost control strategies that were important to their farm, the farmers were asked to react to a number of practices that had been identified by extension personnel as being potentially important on small farms. For each of these management practices, the farmer was asked to indicate whether she/he used it and its importance on his/her farm (Table I5). In some cases, the list included practices that the farmer thought were important but had not thought of when asked for important practices. In other cases, the practice was not used, or was considered unimportant.

The most frequently used cost control practices included forward purchasing, tracking production costs and mechanization. Those practices that were deemed most important to success were tracking production costs, making use of unpaid family members and doing tasks with farm labor (not hiring mechanics, electricians, artificial breeders, etc.).

Table I5. Level of Use and Importance of Selected Cost Control Practices
76 New York State Small Farms, 2000-2001

Practices	Percentage of Use	Level of Importance[a]
Forward purchasing (to get discount)	63	3.9
Track production costs	61	4.5
Mechanization	61	4.1
Do tasks with farm labor	51	4.4
Use unpaid family members	41	4.5
Use seasonal labor	39	4.3
Track cost of new technology	37	4.3
Use consultants	34	3.7
Member of buying group	13	3.7

[a] On a scale where 1 is not important and 5 is very important as indicated by those who use the practice.

Shop for lowest cost

The most frequently mentioned method of cost control was shopping for the lowest cost for farm inputs. This involved putting effort into the buying process and identifying methods of obtaining the lowest price. Always buying at the nearest location where they are used to getting your business is often not the best alternative. Besides shopping around, this strategy includes forward purchasing to get an early purchase discount and taking advantage of cash discounts.

Another approach to obtaining low costs for inputs involves buying in bulk or as a member of a buying group. These strategies make an effort to overcome one of the disadvantages of being small, that is the normal quantities required for most inputs are small. Buying bulk allows obtaining the prices larger farms are able to obtain, but requires more than normal storage for a small farm. Buying groups allow groups of small farmers to band together, buy large quantities, obtain volume discounts and share the gains.

Minimize purchased inputs

A tactic used by a number of the small farm operators was to minimize purchased inputs. Generally, this meant farming in ways that used fewer inputs or creating/growing more of the inputs on the farm. Rotational grazing was used to reduce the inputs needed. By allowing the cows to harvest the forage and spread the manure, the operator needed less machinery, labor, fuel, oil and other inputs. Farming less intensively by feeding less concentrate to dairy cows, using less fertilizer or reseeding hay or pasture less often was

also mentioned by a few. The key to use of these strategies is to be sure that the level of use of inputs is sufficient to generate a profitable level of production.

For a high proportion of the farms, minimizing purchased inputs was accomplished by growing or making the inputs on the farm. Doing tasks with farm labor instead of hiring them done reduces the need for hired labor. Machinery and building repairs and construction was frequently done by farm labor. Growing the needed grain on the farm or harvesting very high quality forage so that less grain is needed were practiced on some farms.

Good record keeping to control costs

Some farms made a strong point that the base for control of costs is good records. Records indicate the quantities used, the prices paid and historical cost levels. Knowing quantities used allows purchase of the correct quantities to reduce waste and deterioration of inputs before they are consumed. Knowing prices paid provide a basis for negotiating prices. Knowing the level of various costs on an annual or monthly basis allows the farmer to identify costs that are out of line in time to make management changes to get those costs back under control.

Minimize machinery investment

The importance of minimizing the investment in machinery was pointed out by a number of farmers in a variety of ways. A few specifically mentioned minimizing machinery investment as a strategy. Some suggested that capital purchases need to be very carefully evaluated to be sure that they are absolutely needed and that they will not make unreasonable additions to operating costs. While this suggestion applies to buildings as well as machinery, it is machinery and equipment that was of greatest concern to most of the farmers who listed this cost control method.

Other farmers mentioned buying used machinery as a method of reducing costs. Clearly, this is designed to reduce annual machinery depreciation since the lower initial investment reduces the amount of cost to be allocated over the life of the machine. This practice will reduce total per acre costs as long as the used machinery repair costs do not more than offset the lower depreciation.

Another approach to minimizing machinery investment is to custom hire the work done or rent the machinery. In either case the machine is used on the farm only the time period needed to get the work done and it is used on other farms for the rest of the time. Thus, the farm only needs to pay for the unit for the time period it is used on the farm.

Control interest costs

Interest costs can be avoided by not borrowing money. Some farms attributed their lower costs to having low or no debt. Not borrowing money as a strategy may work for mature farm businesses that have paid off any debt incurred to purchase the farm and other assets. If those farms generate sufficient internal capital to replace capital items as needed, interest costs can be avoided. Some farms avoid interest expense by reducing capital investment to the amount that can be financed by internally generated capital.

There is a downside to not borrowing money. It may lead to unfilled cow stalls or untimely harvested forages due to the lack of machinery, capacity of existing machinery or its downtime for repairs. Some of the more experienced farmers indicated that they felt that they could have earned more farm income if that had taken the risk and borrowed money for operating inputs and capital assets.

Farms that participated in community supported agriculture were able to get their customers to provide operating capital by requiring prepayment for produce. This turns out to be an interest free source of capital. Customer financing has, of course, been widely used in agriculture. For example, milk processors often do not pay for milk for over a month after it is delivered and sold, and farmer cooperatives are often financed by customers.

Attention to detail and quality

Some farm operators indicated that effective cost control required attention to a lot of little details across the full spectrum of costs, and not focusing only on one or two major cost control activities. A farm has lots of costs, all of which must be controlled. Paying attention to the details keeps a constant vigilance on all items and exercises continued control.

Closely related to detail is a focus on quality. High quality forage reduces feed costs. High quality feeding programs control an important cost of production. High quality produce reduces waste. High quality milking increases milk production. The higher costs of better quality are often offset by greater production, often resulting in higher receipts and net returns. Thus, a high quality focus throughout the operation may reduce costs and/or increase returns.

Summary and Highlights: Cost Control

1. Successful small farms frequently had lower costs than similar farms in their region.
2. The most frequently mentioned reasons for lower costs on these farms were use of less hired labor, more focus on cost control, rotational grazing and doing their own repairs.
3. The most frequently used strategies for controlling costs involved paying less for inputs by shopping around for lower prices, making forward purchases for discounts, taking advantage of cash discounts, bulk buying and participating in a buying group.
4. Some farms focused on reducing the level of inputs required by using lower input techniques, such as rotational grazing, less intensive feeding or fertilization and doing repairs with farm labor.
5. Buying used machinery, carefully evaluating purchases, doing repairs on the farm and custom hiring some jobs controlled machinery costs.
6. Interest costs were low on some farms because little or no money was borrowed.
7. Some farmers indicated that effective cost control was more attention to a lot of little details across the spectrum of costs, and a continued focus on quality, than a focus on one or two major cost control activities.

FINANCE AND INCOME

Two important aspects of the financial side of a farm business are the methods used in financing the business and the income generated for use by the farm family. Financing affects the performance of the business through its influence on the resources available and the principal and interest commitments that the family must meet.

Many small farms use some combination of farm and non-farm income to provide for the financial needs of the family. The optimal combination of farm and non-farm income depends on the characteristics of the farm and the farm family.

FINANCE

The capital to operate a farm comes from equity capital invested by the owners of the business and funds borrowed from firms or individuals outside the farm. How these funds are obtained and managed play an important part in the success of a family's farming enterprise and its contribution to family well-being.

Financing Method Used

The successful small farms interviewed used a variety of methods of financing and sources of capital that they felt made their business successful. When asked to indicate the financing methods that contributed to success, about one third of the farms listed avoiding borrowed capital (Table J1). Sixteen percent of the farms indicated they had no particular method of financing and nearly as many said they used a lender line of credit rather than dealer credit. Other farms had various sources of capital such as government loan programs, family financing, outside equity capital and internal financing through inventory buildup. Permanent lender relationships were considered important by some. Others used cost control measures to avoid the need for borrowed capital.

After indicating the financial management practices or strategies that were important to their farm, the farmers were asked to react to a number of practices that had been identified by extension personnel as being potentially important for small farm businesses. For each of these management practices, the farmer was asked to indicate whether she/he used it and its importance on his/her farm (Table J2). In some cases, the list included practices that the farmer thought were important but had not thought of when asked for important practices (reported in Table J1). In other cases, the practice was not used, or was considered unimportant.

The most frequently used financial management practice (82%) was preparation of annual financial statements (balance sheet showing the assets and liabilities of the farm, and an income and expense statement for the period). Often the operators said preparation of these statements was driven as a requirement by their lender.

The other practice with over 75 percent usage was getting competitive bids from dealers and/or contractors when purchasing capital assets. Both of these practices rated a 4.1 in importance on a scale of one to five with five being most important.

Table J1. Methods of Financing and/or Sources of Capital that are Important
76 New York State Small Farms, 2000-2001

Methods or Sources	Percent Giving This Response[a]
Avoid borrowing	34
No particular method used	16
Lender line of credit instead of dealer credit	13
Family/private borrowing	9
Establish lender relationship	8
Price quotes from several dealers	7
Conduct an economic assessment of purchase necessity	4
Take advantage of dealer interest rate discounts	4
Use government loan program	3
Sell low return assets for investments	3
Build inventories to finance production in low cash flow years	3
Outside equity capital investment	3
Forward selling/contracting	3
Use a financial consultant	1
Interest free loan on forage purchase	1
Bargain for lower interest rates	1
Rent land	1
Maintain good credit rating, pay on time	1
Inherit resources, farm	1
Get a cosigner on loans to reduce rate	1
Credit union, borrow against own resources	1
Leasing	1

[a] Totals more than 100% because respondents often listed more than one method or source.

The practice receiving the highest rating of importance by those who followed it was conducting an economic analysis of need. This practice was followed by slightly over 50 percent of the farms (Table J2). Another important practice, followed by more than half of the respondents was calculating the operating costs per unit. About 50 percent of the farms used computers. Few farms used accrual accounting. The farms that used accrual accounting said they accomplished this through participation in the Cornell Dairy Farm Business Summary project.

About one-third of the farms reported that they had a business plan. Many of these farms indicated that their business plans were not written, but were general plans that the farmers had in mind. For a few, their current plan was to retire and/or exit farming.

Table J2. Level of Use and Importance of Selected Financial Management Practices
76 New York State Small Farms, 2000-2001

Practices	Percentage of Use	Level of Importance[a]
Prepare annual financial statement	82	4.1
Price quotes from several dealers when purchasing assets	76	4.1
Calculate operating costs per unit	57	4.2
Conduct economic analysis of need	55	4.5
Use a computer	51	4.1
Use a financial consultant	34	4.2
Have a business plan	29	4.1
Accrual accounting	18	4.0

[a] On a scale where 1 is not important and 5 is very important as indicated by those who use the practice.

Lower interest rates

The successful small farmers used a number of methods to obtain lower interest rates. Many used a lender line of credit rather than dealer credit to get a lower rate (Table J1). Except in those cases where the dealer is providing truly lower rates as part of a promotion program, dealer rates are generally higher than would be available to a person with a reasonably good credit rating from an institutional lender. Some of the farms mentioned taking advantage of those special low dealer rates when they are available.

Some farmers used family borrowings or government loan programs. Both are often associated with lower interest rates than could be obtained through other sources.

One farmer who purchased all forages viewed this as an interest free loan because the supplier had to make all the investment in growing and storing the forage and the buyer only had to pay as the feed was used. Other approaches for obtaining lower rates included bargaining with lenders for lower rates and obtaining a cosigner on loans to lower the risk so that the lender would provide a lower rate.

Maintain credit availability

Many farmers felt that maintaining credit availability was important. One approach was to establish and maintain a close working relationship with their lender. By making sure that the lender understood the farmer's business and had faith in the borrower as a person, it was expected that the lender would be more likely to meet the farmer's needs. The primary reason given for preparing annual financial statements was because the lender required them to provide funding. One farmer specifically mentioned maintaining a good credit rating as an important financial technique.

Use non-traditional sources of credit

Another approach to obtaining the funds needed was to seek funding from non-traditional sources. Family/private borrowing was mentioned by a number of farmers. Family loans or investment are often provided in situations where commercial lenders

consider the risk too high for lending. Interest rates may also be lower, particularly for beginning or high-risk borrowers.

Obtaining equity capital investment from sources outside the farm family was also important in some situations. The challenge here is to find people or organizations with equity that are willing to invest in a small business where success is highly dependent on performance of one individual. In most cases the investor had a financial interest in having the farm succeed, such as contributing farm assets to the business as a way of selling the assets or as a buyer of products from the farm.

Obtaining the use of assets without owning them was also important on some farms. Renting, leasing and contracting for the use of assets were all used to obtain control of assets without making a financial investment.

Use customer financing for operating capital

Farms that used community supported agriculture or sold animals directly to the public were often able to require payment before the product was produced. This assured a market for the product, but it also provided the financing for the operating inputs. In these cases the farmer may need very little, if any, operating capital for the farming activities.

Avoid debt

The financial strategy most frequently mentioned by the small farmers was avoid debt (Table J1). Having little or no debt reduces or eliminates the cash flow requirements of principal and interest payments. From an income point of view it reduces or eliminates interest costs. This can be an important determinant of how much cash is left for family living.

About seventy percent of the farms reported they currently had low to no debt (Table J3). Thus, although only one-third mentioned avoiding debt as a strategy, twice that many actually had little or none. Only eleven percent of the farms classified their debt level as high.

Table J3. The Relative Amount of Farm Debt as Classified by the Operator
76 New York State Small Farms, 2000-2001

Level of Debt	Percent of Respondents
High	11
Medium	21
Low to none	68

Although low debt to some operators could be considered medium or high to others, the debt to asset ratios of the farms were very consistent with the farmer's relative ranking of debt levels (Table J4). Slightly over 70 percent of the operators indicated they had a debt to asset ratio below 30 percent. Practically all of those farms rated their debt levels as low. A few farms with over 60% debt levels rated their debt level as medium, likely indicating that their actual debt/asset ratio was likely close to 60%.

Table J4. The Amount of Debt, Relative to Assets as Classified by the Operator
76 New York State Small Farms, 2000-2001

Debt to Asset Ratio	All Farms	Farmer Ranking of Debt Level		
		High	Medium	Low
	Percent	------Percent of Respondents ------		
Greater than 60%	11	63	37	0
30% to 60%	18	14	72	14
Less than 30%	71	2	5	93

Nearly seventy five percent of the farms indicated that their success is affected by the amount of the farm debt (Table J5). However, there were farms at all debt levels that believed that the amount of debt was not important to their success. Some of these farms were reflecting the fact that debt allows the purchase of assets that may facilitate replacement of capital assets or allow investments to make the business larger or more profitable. In those cases debt may contribute to success rather than be a deterrent.

Table J5. Relationship Between Debt Level and Assessment of Whether Debt Affects Success?
76 New York State Small Farms, 2000-2001

Debt to Asset Ratio	Does Your Debt Level Affect Your Success?	
	Yes	No
	----------Percent of Respondents----------	
Less than 30%	78	22
30% to 60%	64	36
Greater than 60%	63	37
All farms	74	26

The farmers with little or no debt (debt/asset ratio under 30%) gave several reasons why they thought low or no debt contributed to their success. The most important factor, listed by nearly two-thirds of the farmers, was the reduced principal and interest cash outflows to creditors (Table J6). In the same vein, another ten percent of the farms indicated that the advantage was having the cash, not made on principal and interest payments, available for further asset purchases. That is, there were other good purposes for which the funds could be used. Only one farm indicated that limited debt reduced the resources that were available to generate further profits.

On the more personal side a few farmers mentioned the peace of mind, and the related reduced financial risk, aspects of low debt levels. With little debt there is little chance of losing the farm to creditors.

Strategies for Purchasing Assets

A very important aspect of financial management is the methods and strategies used in purchasing capital assets. Capital assets generally involve large amounts of money and investments represent commitment of funds for long periods of time. For example, purchase of land represents an indefinite commitment of funds and even the purchase of a

tractor represents commitment of funds for 5 to 15 years. Thus, decisions made can have a profound effect on the business. Because these farms were small, and most of the operators wanted to keep the farm small, the farmers focused their responses on purchases of machinery and buildings rather than land.

Table J6. Reasons Why Operators Felt that Their Low Debt Effected Their Success
42 New York State Small Farms with Debt/Asset Ratio 30 Percent or Below, 2000-2001

Reason	Percent Giving This Response[a]
Less principal and interest cash outflow	64
No reason given	12
Cash flow available to purchase assets	10
Peace of mind	7
Less financial risk in bad years	2
Increases dependence on non-farm income if had debt	2
Limits purchases	2
Debt will soon be paid off	2
Limited debt limits resources	2
No dependency on borrowed money	2

[a] Totals more than 100% because respondents listed more than one reason.

A wide array of decision analysis techniques was used on the participating farms (Table J7). The most frequent response (28%) was that replacement must be need driven. That is, items should be replaced only if there is a real need, either because the item is physically worn out or obsolete, or the repair costs are so high that replacement is the most economical alternative. "Wants" must be separated from "needs" and replacements purchased only if there is a need. For more information on machinery purchase strategies, see "What Successful Small Farmers Say" Report Number 6 "Machinery and Equipment".

While 20 percent did not use any particular analysis method, several based their decisions on budgets and cash flow. Many said they used a partial budget analysis (16%) which determined the true economic value of the investment. Others based their decisions strictly on cash flow analysis (12%), which determined whether the payments could be made, but not whether it would be profitable. An equal number used the payback method (12%), which determined how long it is expected for the investment to pay for itself. Some used a very extreme form of a cash flow analysis, which allowed the investment only if there is cash on hand for the purchase (11%).

To avoid the cash flow shock that can occur when several items need to be replaced in one year, some farms reported that they purchased a set amount of assets each year. Or, they finance only one project at a time with all other capital purchases waiting until that loan is paid off.

Table J7. Methods or Techniques Used in Deciding to Purchase Assets
76 New York State Small Farms, 2000-2001

Methods or Techniques	Percent Giving This Response[a]
Need for replacement	28
No particular method used	20
Partial budget	16
Cash flow analysis	12
Payback	12
Buy if you can pay cash	11
Buy if it improves labor efficiency	8
Buy if important to business	8
Buy if you can pay within the year	4
Outside consultant evaluation	4
Talk to a lot of people	3
Purchase a set amount each year	3
Net present value	3
Breakeven analysis	3
Search for lowest price	1
Cost/benefit analysis	1
One project at a time	1

[a] Totals more than 100% because some respondents listed more than one method or technique.

Getting outside input into the purchase decision was important to a number of farmers. Some used outside consultants to help evaluate major investments. In some cases this consultant was a loan officer or an extension agent. Other farmers indicated that it was important to talk to a lot of people and get ideas from a number of different perspectives. "Other farmers" were an important group to whom farmers talked to for ideas and recommendations.

Given the long hours most small farmers work, it is not surprising that improvements in labor efficiency were important elements in the investment decision for a number of farmers.

INCOME

Farm operator's total household income often comes from two sources, net farm income and non-farm income. Farm income is the income generated from the land, labor, management and capital assets of the farming business. The non-farm income comes from wages, salaries, non-farm investments and non-farm businesses. Total farm operator household income can vary widely dependent upon the characteristics of the farm and the amount and type of non-farm employment and investments.

Non-Farm Income

Non-farm income of farm families can be very important to the success of small farms. The non-farm income provides stability to the often-irregular farm cash flow, can supplement the farm cash flow to provide for the needs of the family, and may provide fringe benefits such as health insurance and retirement accounts.

The level of non-farm income varied widely on these farms (Table J8). Thirty-eight percent had no non-farm income. About a fifth had some non-farm income, but less than $10,000 annually. About an equal number had over $30,000 of income from non-farm sources.

Table J8. Distribution of Farms by Level of Annual Non-Farm Income
76 New York State Small Farms, 2000-2001

Level in Dollars	Percent of Farms
None	38
$1 to $10,000	19
$10,001-$20,000	14
$20,001-$30,000	9
Greater than $30,000	20

The farmer's assessment of the importance of non-farm income in meeting the goals of the farm family varied widely (Table J9). Nearly a third of those with non-farm income considered it insignificant. However, over half considered non-farm income important and a quarter believed that non-farm income was very significant for their family.

Table J9. Importance of Non-Farm Income to Success
47 New York State Small Farms with Non-Farm Income, 2000-2001

Importance	Percent Giving This Response
Insignificant	31
Small	14
Medium	15
Moderate	14
Very significant	26

Not surprisingly, most of the farmers with non-farm income under $10,000 were among those who indicated that it was not very important in meeting their goals. However, a large proportion of those with non-farm income at each of the levels above $10,000 felt that income was important in meeting their goals (Table J10). For example, 46 percent of the farms with $10,000 to $20,000 of non-farm income indicated that this was moderately to very important. Many farms indicated that even though the level of non-farm income was not a high absolute number by many people's standards, it was important in meeting their goals.

Table J10. Importance of Non-Farm Income by Level of Non-Farm Income
47 New York State Small Farms, 2000-2001[a]

Amount of Non-Farm Income	Importance of Non-Farm Income: Insignificant or Small	Medium	Moderate or Very Significant
	Percent of Respondents		
Less than $10,000	93	7	0
$10,000 - $20,000	27	27	46
$20,001 - $30,000	14	14	72
Greater than $30,000	27	13	60

[a] The other farms did not answer because they had no non-farm income.

Most operators were comfortable with their degree of dependence on non-farm income (Table J11). The operators who were uncomfortable with their degree of dependence on non-farm income were found in two camps: those with very little non-farm income and those with large amounts. Many of those with very little non-farm income felt that more was needed for them to meet their family living goals. Those with large amounts of non-farm income frequently preferred to obtain a higher proportion of their income from the farm. Thus, they were uncomfortable with what they considered their too high level of dependence on non-farm income.

Table J11. Comfort with Dependence on Non-Farm Income by Non-Farm Income Level
47 New York State Small Farms, 2000-2001 [a]

Operator Was Comfortable	Non-Farm Income Level: Less than $10,000	$10,000-20,000	$20,001-30,000	Greater than $30,000
	Percent of Respondents			
Yes	93	100	100	60
No	7	0	0	40
All	100	100	100	100

[a] The other farms did not answer because they had no non-farm income.

Farm Income

Net income from the farm that could be used for personal uses (family living) varied considerably (Table J12). Part of this variability was caused by differences in the sizes of the farming enterprise. Some of the farms were intentionally much smaller in size than others. Thirteen percent of the farms obtained less than $10,000 from the farm, while 38 percent of the farms had over $30,000 in farm income.

Table J12. Distribution of Farms by Level of Farm Income
76 New York State Small Farms, 2000-2001

Level of Farm Income	Percent of Farms
Less than $10,000	13
$10,000-$20,000	32
$20,001-$30,000	17
Greater than $30,000	38

Net farm income increased with farm size (Table J13). This did not necessarily mean that the larger farms were more efficient per unit of output. Larger farms benefited from having more units of product on which to earn income. Horticulture farms had higher net incomes for each level of gross sales than livestock farms. This is a normal occurrence because margins are generally higher on crop farms than livestock farms. Livestock farms purchase large amounts of feed and feeder livestock, which are resold as livestock and livestock products, resulting in lower levels of value added.

Table J13. Average Net Farm Income by Gross Income Level
76 New York State Small Farms, 2000-2001

Gross Income (dollars)	All Farms		Livestock Farms		Horticultural Farms	
	Average Gross	Net Income[a]	Average Gross	Net Income[a]	Average Gross	Net Income[a]
	dollars					
Less than 75,001	40,833	12,917	40,833	10,000	40,833	15,833
75,001- 150,000	118,179	24,286	126,043	23,043	110,000	30,000
150,001 - 250,000	198,567	29,444	199,042	28,485	193,333	40,000
Average	144,045	24,934	154,394	24,677	98,214	26,071

[a] Amount of farm income available for family use. Using the midpoint of the ranges in Table J 12, $5,000 for those with less than $10,000 and $40,000 for those over $30,000.

Income Available for Family Use

The total income available for family use includes the combination of farm and non-farm income. Total family income for these families varied with the importance the farm operator assigned to non-farm income (Table J14). Farm income tended to be relatively constant regardless of the perceived importance of non-farm income. Those farm families that relied completely on the farm for income generally had somewhat lower total incomes than those did that also had income from non-farm sources. Those with higher levels of non-farm income generally had higher total family incomes.

Table J14. Amount of Farm and Non-Farm Income by Importance of Non-farm Income
76 New York State Small Farms, 2000-2001 [a]

Income Source	Importance of Non-Farm Income				
	None	Insignificant or Small	Medium	Moderate	Very Significant
Non-Farm	$0	$14,048	$22,143	$25,714	$31,667
Farm	$25,577	$25,783	$25,000	$18,571	$25,417
Total	$25,577	$39,831	$47,143	$44,285	$57,084

[a] Using the midpoint of the ranges in Table J12, $5,000 for those with less than $10,000 and $40,000 for those over $30,000.

Some people assert that small farm businesses are not economically viable because net incomes are low. However, successful small farm operators and their families effectively combine farm and non-farm income to create total family incomes that would be considered quite respectable in many rural communities (Table J14). In

comparison, the USDA reports that the median family income in non-metropolitan counties of the US was $38,006 in 1998. Adjusted for inflation, this would equal about $40,210[14] in 2000. Average family income on these successful small farms was nearly at that level (Table J15). Also, average earnings per job in New York State non-metropolitan counties were $26,873 in 1999 ($27,840 in 2000 dollars[15]). The income from farming on these small farms, some of which were part time, was almost at that level. Clearly, many of the successful small-farm families achieved incomes that exceed the average income levels in their communities.

In interpreting the data in Tables J14 and J15 it must be remembered that the farmers provided the income data in the ranges shown in Table J12. Thus, the income data are estimates, particularly those in the over $30,000 and under $10,000 levels. However, these data should provide a good estimate of average income levels. Farms with higher farm incomes also reported higher non-farm incomes.

As the level of total family income increased, the proportion of that income that came from non-farm sources also increased (Table J15). This may be due the natural upper limits on the amount of income that can be generated by a small farm. A family that desires to keep the farm small is limited in the amount of family income that can be provided by of the farm. Increasing income beyond that point may require increased focus on non-farm income. Or, stated differently, as the income from the small farm rises it becomes increasingly difficult to generate additional farm income, and it may be easier to earn additional non-farm income. Lower income levels may also represent lifestyle choices. A farm may be organized to generate a variety of lifestyle benefits and a limited amount of income. Adding non-farm income is not perceived as necessary to provide the desired quality of life.

Table J15. Source and Distribution of Total Family Income
76 New York State Small Farms, 2000-2001 [a]

	Average	Source of Total Income	
Total Income Group	Total Income	Farm Income	Non-Farm Income
	----------Average Income (dollars) ----------		
Highest 20 %	66,000	33,000	33,000
2nd highest 20 %	46,667	28,667	18,000
Middle 20 %	40,000	30,333	9,667
Next to lowest 20%	28,667	23,000	5,667
Lowest 20 %	11,563	10,625	938
All farms	38,224	24,934	13,290

[a] Using the midpoint of the ranges in Table J12, $5,000 for those with less than $10,000 and $40,000 for those over $30,000.

[14] Using July Consumer Price Index (CPI) values for 1998 and 2000, prices increased 5.8%.
[15] Using 3.6% increase in CPI.

Summary and Highlights: Finance and Income

1. Methods used to obtain lower interest rates included (1) using a lender line of credit rather than dealer credit, (2) taking advantage of family and government credit, (3) bargaining for lower rates, and (4) getting a cosigner.
2. Most of the small farms prepared financial statements, but used them primarily for maintaining credit availability rather than as a financial management tool.
3. Avoiding debt or using only small amounts of debt was important to success on many farms. However, some farms at all debt levels believed that debt was not detrimental to success.
4. The replacement of capital assets (buildings and machinery) was generally limited to cases of dire need.
5. Most farmers based their capital investment decisions on one or more methods of financial analysis, such as cash flow budgets, partial budget analysis or the payback period.
6. Non-farm income was unimportant on many farms. One-third of the farms had no non-farm income.
7. Most farms were comfortable with their current dependence on non-farm income. Some with little non-farm income were concerned that it was too low. Others with high levels preferred to have a higher proportion of their income from the farm.
8. Total farm and non-farm income on many of these small farms was sufficient to provide a comfortable level of family living, and was comparable to incomes of other rural families.

CHANGE AND THE MOST IMPORTANT FACTORS FOR SUCCESS

A number of factors that contribute to success have been identified in "What Successful Small Farmers Say", Reports 1-9. However, some factors are more important than others, and some factors hinder success. In addition, the operator's perspective on change can influence the long run performance of the business.

Change

Change is an important part of daily living and success. Small farms are constantly subject to factors that may cause a business to change. Small farms can change in size, production, marketing, technology, labor, capital and a host of other ways. The farms surveyed expected to make a variety of changes in their business over the next five years in order to remain successful.

Slightly over one-fourth of the farms expected to have no changes in the next five years while nearly the same percentage expected to have a small expansion in the business. Some 17 percent of the farmers expected to exit the business by retirement or transfer to the next generation. Another 19 percent each had their own individual changes that they planning in the next five years. Many of these changes were oriented towards improved efficiency, improved markets, and improved production. Almost all the changes were oriented toward saving labor and/or improving profitability.

Table K1.Changes in the Business Expected to be Made in the Next Five Years to Remain Successful
76 New York State Small Farms, 2000-2001

	Percent of Farms Giving This Response[a]		
Changes	Livestock	Horticulture	All
No change expected	29	14	26
Small expansion to business	21	29	22
Retire	10	7	9
Transfer to next generation	8	7	8
Update facilities	8	7	8
Meet environmental regulation	6	0	5
Change to new varieties to meet the market	0	21	4
Construct heifer barn	5	0	4
Improve labor efficiency	5	7	4
Upgrade pipeline	3	0	3
Add processing enterprise, cheese	3	0	3
Diversify from dairy	3	0	3
Downsize	2	7	3
Go organic	3	0	3
Will change but what is unknown	3	0	3
Increase u-pick	0	7	1
Need to correct business weaknesses	1	0	1
Correct herd health problems	1	0	1
Build roadside stand	0	7	1
Install pit parlor	1	0	1
Grow less feed	1	0	1
Large expansion	1	0	1
Replace family labor	1	0	1
Upgrade milking system	1	0	1
More custom hiring	1	0	1
Upgrade record keeping	0	7	1
Purchase, not grow, forage	1	0	1
Make necessary changes to keep one person operation	1	0	1
Expand markets	0	7	1
More irrigation	0	7	1
Increase crop production	0	7	1
Improve crop production	1	0	1
Round bales	1	0	1
Manure management	1	0	1

[a] Total more than 100% because some respondents listed more than one change.

Years of experience in farming had little effect on the kinds of changes that farms expected to make in order to remain successful in the next five years (Table K2). But those farms with operators that had 25 years or more experience in farming were significantly less interested in a small expansion of the business than farmers with fewer years of farming. As one might expect those with the most years in farming were more likely to expect to retire or transfer of the farm to the next generation.

Table K2. Business Changes Expected in the Next 5 Years as Affected by Years in Farming
76 New York State Small Farms, 2000-2001

Changes	15 Years or less	16 Yrs. to 24 Yrs.	25 Years or more.
	----------Percent Indicating--------		
No change expected	24	30	29
Small expansion to business	28	26	13
Retire	0	7	17
Transfer to next generation	0	11	17
Update facilities	4	7	13
Number of farms	25	27	24

Farmer's basic perspective on change is often viewed as an important element in their adaptability to the shifting environment. The surveyed farmers were given the three choices to indicate their perspective on change in their everyday businesses (A, B and C in Table K3). The majority felt that change was a necessary part of doing business. One about one-fifth felt that change was an exciting challenge. A few found change difficult and believed that it hampered their success. Most of these successful farms were dealing with change, either because they liked the challenge or because they considered it necessary for a successful business.

Table K3. How Operators Find Dealing with Change
76 New York State Small Farms, 2000-2001

Attitude Toward Change[a]	Percent Giving This Response
A. Necessary part of doing business	55
B. An exciting challenge	21
C. Difficult issue that hampers success	11
D. Both necessary part and exciting challenge (A+B)	8
E. Both exciting challenge and difficult issue (B+C)	3
F. Both necessary and difficult issue (A+C)	1
G. Necessary, exciting challenge and difficult (A+B+C)	1

[a] A. B. and C. were the three attitudes toward change listed in the survey.

Other Factors Contributing to Success

The questions on factors that influenced the success of small farms that were asked in the survey of small farms (reported above and in "What Successful Small Farmers Say" Reports 1 through 9) covered many topics. However, there was no

certainty that the survey had covered all the topics. Thus, to identify any missing success factors, farmers were asked to list any important factors that had not been discussed. Slightly over 25 percent of the farms indicated the survey had covered all the factors and they could not think of any more to add (Table K4). The rest of the farmers indicated a number of additional contributors to success.

Personal characteristics

Many of the additional factors could be classed as "personal characteristics of the operator(s)." Twenty two percent indicated that a major contributor to success was that they "enjoyed farming". They succeeded because they enjoyed what they were doing. A number mentioned staying educated and learning from producer groups. This allowed them to understand the environment they faced, be aware of the alternatives available to them and be able to evaluate the value of opportunities for their particular business.

Personal ability to adjust was also important. This included ability to adjust the business to changes taking place in the agricultural environment and adjustment to changes in consumer demand and markets available to farmers. Not being the first nor last to adopt technology also relates to making appropriate adjustments to the business.

Attitude appears to be important. If you expect to succeed, you are more likely to do so. This was expressed in terms of "being optimistic", working with nature rather than against it, adjust to what is best for the business, self-motivation and faith in God.

Support

Success is also related to the level of support the operator receives. In many cases, the family provides this support. In a few cases neighbors and friends provide the support. Support can take two forms. Moral support can be important when things are not going well or when the days are particularly long or difficult. Support also takes the form of labor help at critical times. This can be particularly important when the operator provides nearly all of the labor for the farm and there is no hired labor to call upon.

Table K4. Factors That Were Not Discussed That Contribute to the Success of the Business 76 New York State Small Farms, 2000-2001

Factors	Percent Giving This Response[a]
All factors were discussed	26
Enjoy farming	22
Family support	18
Stay educated	8
Adjust to what is best for your business	8
Long run focus	5
Be optimistic	5
Adjust to market desires	5
Work with nature, not oppose it	3
Do not grow corn on dairy	3
Learn from producer groups	3
Careful spending	3
Don't keep up with the neighbors	3
Attention to detail	3
Unpaid family labor	3
Not first or last on new technology	3
Closely monitor cash flow	3
Keep operation simple	3
Manage risk	3
Operate as a business	3
Luck	1
Stay state of the art	1
Follow through on ideas	1
Communication with all workers	1
Good health	1
Self motivation	1
Match operation to machinery	1
Neighbor support	1
Winter calving to save on summer labor	1
Stress labor efficiency	1
Need equity to start	1
Faith in God	1
High quality service	1
Top production is not necessary	1

[a] Total more than 100% because some respondents listed more than one factor.

Factors Hindering Success

Making a farm successful frequently means overcoming factors that hinder success. Survey participants were asked to list the factors that they thought were important hindrances to the success of their farm.

Product price

The number one hindrance given was low product prices (Table K5). In order for the business to achieve a positive net income product prices must by above costs of production. Many believed that prices were lower than they should be. Others expressed the problem as too small margins, inability to set market prices and low priced imports, which reduced market prices. A closely related hindrance that was frequently mentioned was variability in the product price. Even if the average price is acceptable, variation in the price can cause financial and management problems for the operator.

Weather

Weather is a continuing problem for farmers. A major challenge in growing horticulture, forage and grain crops is dealing with the vagaries of the weather. Small farms are impacted just as much as any other farm.

Financial position

The financial position of the business limited some farmers. Several had insufficient equity. This either limited their ability to obtain the amount of credit they desired for operating or capital investment. A few were unwilling to borrow money and felt that this limited their success.

Limited resources

Some farms were handicapped by the limited quality of their resources. Some had obsolete buildings that made operation cumbersome and inefficient. Others were on soils that were limited in either quality or amount. In some cases the farm services available to the operators were limiting. Inability to hire labor for farm tasks was a problem in some communities.

Services were often a long distance from the operator, which increased the labor and time costs of obtaining input supplies, repair services or parts. This is a particular disadvantage for small farms that rely on used machinery, and, thus, may need to go for parts or services more frequently, and for whom the labor and mileage cost of each trip is larger relative to the value of the part obtained or total investment in machinery.

Economic conditions

A number of economic conditions other than product price were important to some small farmers. Urban land pressure increases land costs making purchase of more

land and paying the taxes on owned land more expensive. Generally high input costs make it more difficult for farmers to earn money farming. Income taxes use up funds that would otherwise be available for farm inputs or family living.

Table K5. Factors That Hinder the Success of the Farm Business
76 New York State Small Farms, 2000-2001

Factors	Percent Giving This Response[a]
Low product prices	21
Weather	14
Product price variability	12
No specific factor identified	9
Lack of equity	7
Obsolete buildings	7
Every day time commitment	7
Poor/limited soils	5
Urban land price pressure	5
High input costs	5
Can't control many risks	5
Long distance to farm services	4
Lack of good labor	4
Margin too small for error	4
Stress	3
Income taxes	3
Unwillingness to accept debt	3
Lack of time	3
Inability to set market price	1
Low priced imports	1
Lack of local production information	1
Differences in state pesticide regulation	1
Consultants not accountable	1
Limited market size	1
Poor labor management	1
Government regulation	1
Urbanization limits farm activities	1
Divorce	1
Family disagreement on management	1
Personal health	1

[a] Total more than 100% because some respondents listed more than one factor.

Personal limitations

Included in the factors that hinder the success of the small business were several that are personal in nature. Some farms listed stress, divorce, personal health and family disagreements on management as important. Any of these factors can have a very negative affect on success, income, and family life.

Factors Most Important to Success

All of the small farm operators completing the survey talked for well over an hour about their success factors in several areas of production, marketing, labor, machinery and economics. A number of factors that were important to success were identified in many areas. To identify which factors were really the most important for small farms, each operator was asked to list the two most important factors that contribute to the success of their business (Table K6).

Personal factors

The most important factors for success related to the personal characteristics of the operator. Strong family support came to the top of the list with over 25 percent listing this factor. This was followed closely by "enjoy farming", and "work hard" was rated very high. Other important personal characteristics include a determination to succeed, a personality for sales, sound progressive active management, education and good health. Thus, success was viewed as being a function more of the characteristics of the operator and his/her support system than any particular activity or enterprise conducted by the operator. This is consistent with the view that there are many ways to succeed on a small farm and those operators with the right personal characteristics will find one of those ways.

Do the job right

Success is determined to a great degree by the quality of job the farm operator does. Many expressed this as attention to detail. That is, being sure that all tasks are completed as they should be and done on time. Some focused on the final product of the farm. Production and marketing must be done in a way that results in a high quality product for sale to customers. Others, primarily dairy farmers focused on achieving high rates of production. Doing the job right was also expressed as timeliness and keeping assets in shape.

Control costs

Since most farmers have limited ability to influence the price received for their product, many focus on controlling costs. Cost control was frequently mentioned as one of the most important factors for success. A few farmers focused on control of interest costs by avoiding, or severely limiting, borrowed funds. Rotational grazing was also used to control costs on some farms.

Good basic management

Many farmers indicated that success was to a large degree a function of how good a job was done on the basic management functions. This included:

(1) Investment analysis. Several farmers mentioned the importance of conducting detailed economic analysis of alternatives.

(2) Enterprise selection for the greatest return.

(3) Sound, progressive, active management. A successful business results from strong efforts to make it successful, not just doing things as they have been done in the past.

(4) Good labor management and communication. To the degree that labor is used, that labor needs to be efficient to do quality work. Effective use of family labor is important on small farms.

(5) Good records. Records provide a basis for, and an evaluation of, management decisions.

(6) Effective use of consultants. Consultants can bring information and analysis to the farm and can broaden the perspective of the management team.

(7) Wide ranging information search. The decision can be no better than the quality of the information that goes into it. A wide search for information will often improve decisions.

(8) Strategic orientation. A long run approach, or looking at the "big picture", can help provide direction for the business. The farmers considered markets, technology, competition, consumer demand, risks and government programs for their products produced.

Strong marketing

A number of horticulture producers mentioned the importance of direct marketing in the success of their business. The ability to sell direct to the consumer and eliminate all middlemen strongly influenced the final price received for their products. Being knowledgeable about the products being sold contributes to the level of sales and price in these markets. For some, a strong marketing program involved finding a unique marketing approach. One that made the product different from that offered by others, and/or focused on a niche market that was unattractive or unavailable to other competitors.

Table K6. The Two Most Important Factors to the Success of the Farm Business
76 New York State Small Farms, 2000-2001

Factors	Percent Giving This Response[a]
Strong family support	26
Enjoy farming	17
Cost control	13
Hard work	9
Attention to detail	9
High equity / low debt	9
Determination to succeed	9
Quality product	9
Personality for sales	7
Rotational grazing	7
Enterprise selection for greatest return	5
High rates of production	5
Detailed economic analysis of alternatives	5
Direct marketing	5
No debt	4
Use procedures that fit your resources	4
God's blessings	3
Sound progressive active management	3
Good labor management, communication	3
Organic production	3
Records for management by exception	3
Timeliness	3
Strong neighbor support	3
Product knowledge	3
Rely on consultants	3
High quality land	3
Education	3
No raised replacements	3
Family borrowing	1
No crops	1
Control soil moisture, have irrigation and well drained soil	1
Wide ranging information search	1
Unique marketing approach	1
Long run approach to farming	1
Keep all assets in good shape	1
Grow all feed for dairy	1
Seasonal dairy	1
Off farm investments	1
Good lender relationship	1
Pasture and grass based farming	1
Initial equity to start	1
Good health	1
Long-term employees	1

[a] Total more than 100% because respondents listed up to two factors.

Summary and Highlights: Change and the Most Important Factors for Success

1. Personal factors, such as enjoying farming and the degree of family support, are the most important to the success of the small farms.
2. Other important factors to success are doing the job right, controlling costs, strong marketing and good basic management.
3. Low product prices was cited most often as a factor hindering success.
4. Most successful small farms expect to make only modest changes to their businesses in the next five years.
5. Most of the operators found dealing with change as a necessary part of doing business. Only one in five considered change an exciting challenge.
6. Many of the changes that are expected are in the areas of improving efficiency and reducing labor.

OTHER A.E.M. EXTENSION BULLETINS

EB No	Title	Fee (if applicable)	Author(s)
2001-19	Market Enhancement Programs Operated in New York's Key Competitor States and Provinces		Bills, N. L. and J. M. Scherer
2001-18	Agriculture-based Economic Development: Trends and Prospects for New York		Bills, N. L.
2001-17	A Compilation of *Smart Marketing* Articles, November 1999 – September 2001	($5.00)	Uva, W.
2001-16	New York Economic Handbook 2002	($7.00)	Extension Staff
2001-15	Income Tax Management and Reporting for Small Businesses and Farms		Cuykendall, C. H. and G. J. Bouchard
2001-14	Dairy Farm Business Summary: Eastern New York Renter Summary, 2000	($12.00)	Knoblauch, W. and L. D. Putnam
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2001-10	New York Small Herd Farms, 70 Cows or Fewer 2000	($12 ea.)	Knoblauch, W. A., L. D. Putnam, M. Kiraly, and J. Karszes
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2001-08	Northern New York Region 2000 Dairy Farm Business Summary	($8 ea.)	Knoblauch, W. A., L. D. Putnam, W. Van Loo, P. Murray, A. Deming, C. Nobles, M. Ames, and J. Karszes

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