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New York Economic Handbook 1997

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

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*Faculty and staff in the Department of Agricultural, Resource, and Managerial Economics, Cornell University.

This publication contains information pertaining to the general economic situation and New York agriculture. It is prepared primarily for use of professional agricultural workers in New York State. USDA reports provide current reference material pertaining to the nation's agricultural situation.

Current Economic Situation is a monthly release that carries the latest figures for selected economic indicators and highlights current developments. This release is a supplement to the Economic Handbook and is available to anyone. To request being added to the mailing list, write to the Department Extension Program Secretary, Department of Agricultural, Resource, and Managerial Economics, Warren Hall, Cornell University, Ithaca, NY 14853-7801.

Chapter 1. Economic Situation

John R. Brake, W.I. Myers Professor of Agricultural Finance

The U.S. economy turned in a rather good performance in 1996. For the year ended in third quarter 1996, economic growth at 2.7% was modest but appeared to be sustainable. Industrial production continued its rise and stood about 27% above 1987. The consumer price index rose about 2.9% in the year ended September 1996, but the underlying rate of inflation excluding food and energy was about 2.6%, consistent with the last several years.

Meanwhile, the unemployment rate by fall 1996 was about 5.2%, its lowest in several years. Employment growth was strong as civilian employment reached 127 million in August 1996. This represents a 2.2 million gain over the past year and an 8.3 million employment gain since 1990.

Interest rates were above the recent lows of 1993, yet well below their 1990 levels. The home mortgage rate in 1996, for example, was about 8% compared to 7.2% in 1993 and 10.05% in 1990. The Federal Government deficit in fiscal year 1996 came in at $107 billion, the lowest current dollar figure since 1981. Further, at 1.4% of GDP, the 1996 deficit was the lowest percentage of GDP since 1974. Perhaps the most negative aspect of the economic situation was the pesky U.S. balance of trade in goods and services which is forecast to be the highest since the late 1980s.

Net farm income was strong in 1996 as well. The estimated $50.8 billion 1996 net farm income is the highest current dollar figure ever; but, corrected for inflation, it was still 11% below the real net farm income of 1989. The relatively favorable net farm income related directly to the higher prices for grains in 1995. Both corn and wheat prices reached their highest levels in years. Following the grain situation, milk prices also made a strong upward move to near $16.00 for 3.6% b.f., in the New York 201-210 mile zone by fall.

Following pages provide detail on the U.S. economy and the U.S. farm economy over the past year. The concluding section on page 1-15 includes my forecast for 1997.

The U.S. Economy

Figure 1-1 shows gross domestic product (GDP) in current and real dollars since 1982. In current dollars, GDP has grown from about $3.2 trillion in 1982 to about $7.5 trillion in 1996. Corrected for inflation, GDP has risen from about $4.6 trillion 1992 dollars in 1982 to slightly over $6.8 trillion 1992 dollars in 1996. In the second quarter of 1996, current dollar GDP rose at a 6.5% annual rate while real GDP rose at a 4.7% annual rate.

Table 1-1 includes the major components of GDP. All components of GDP moved higher in 1996, but increases in personal consumption expenditures (PCE) provided the bulk of the increase in GDP. Components of personal consumption expenditures include the categories of durables (13%), nondurables (31%) and services (56%). Within the durables, motor vehicles and parts are 5% of PCE and furniture is 6% of PCE. The major items in nondurables are food at 15% of PCE, and clothing/shoes at 6% of PCE. Under services, the two major items are housing and medical services, both at 15% of PCE. Government purchases of goods and services were also higher. Gross private domestic investment which includes nonresidential fixed investment, residential fixed investment, and changes in business inventories, moved up as well.

FIGURE 1-1. GROSS DOMESTIC PRODUCT, 1982-1996

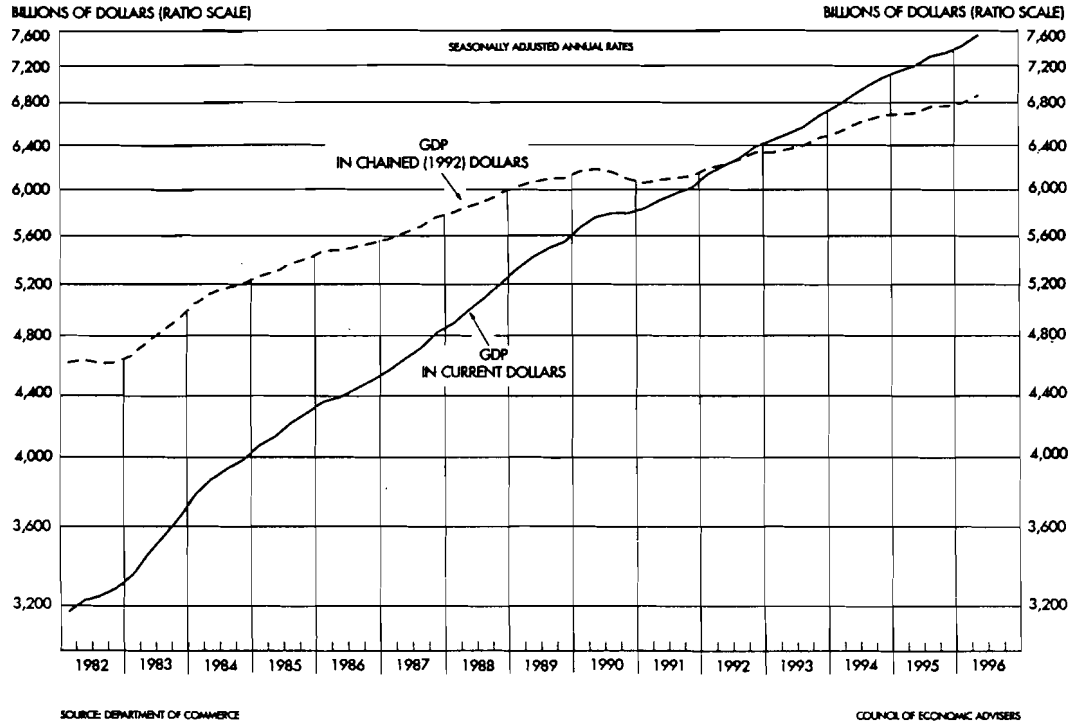
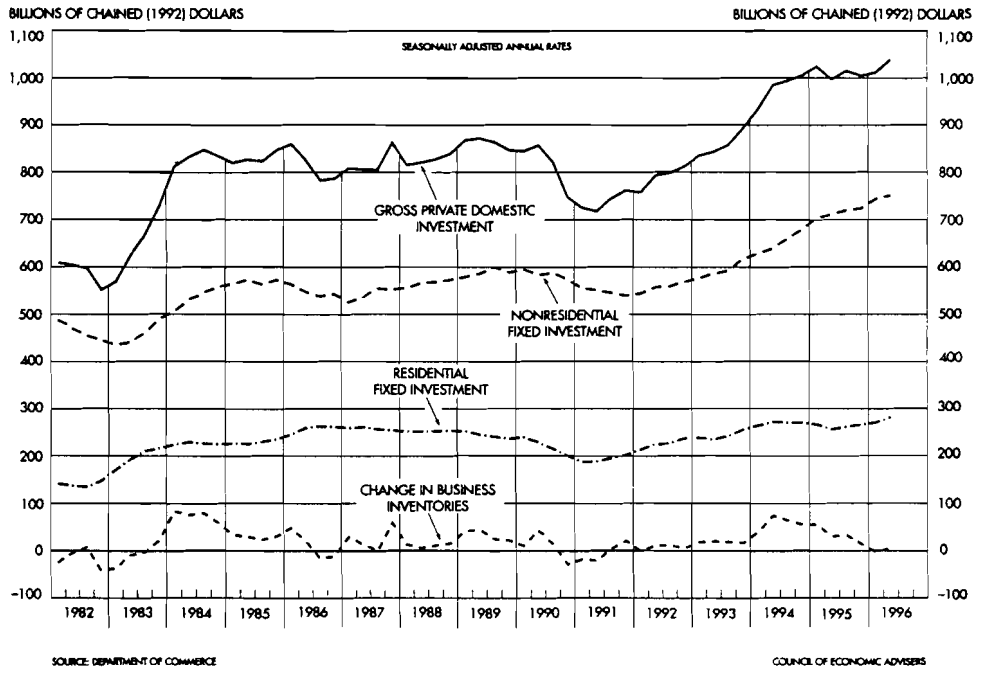


TABLE 1-1. COMPONENTS OF GROSS DOMESTIC PRODUCT, 1986-1996

Year	Gross domestic product	Personal consumption expenditures	Gross private domestic investment	Government purchases of goods and services	Net exports of goods and services
		billions of current dollars			
1986	4,422	2,893	722	938	-132
1987	4,692	3,094	747	992	-142
1988	5,050	3,350	774	1,032	-106
1989	5,439	3,595	829	1,095	-80
1990	5,744	3,839	800	1,176	-71
1991	5,917	3,975	736	1,226	-20
1992	6,244	4,220	790	1,264	-30
1993	6,553	4,454	871	1,290	-63
1994	6,936	4,701	1,014	1,315	-94
1995	7,254	4,925	1,065	1,358	-95
1996[a]	7,548	5,140	1,097	1,410	-100

[a] Annualized rate for second quarter, 1996.

FIGURE 1-2. COMPONENTS OF GROSS PRIVATE DOMESTIC INVESTMENT, 1992 DOLLARS



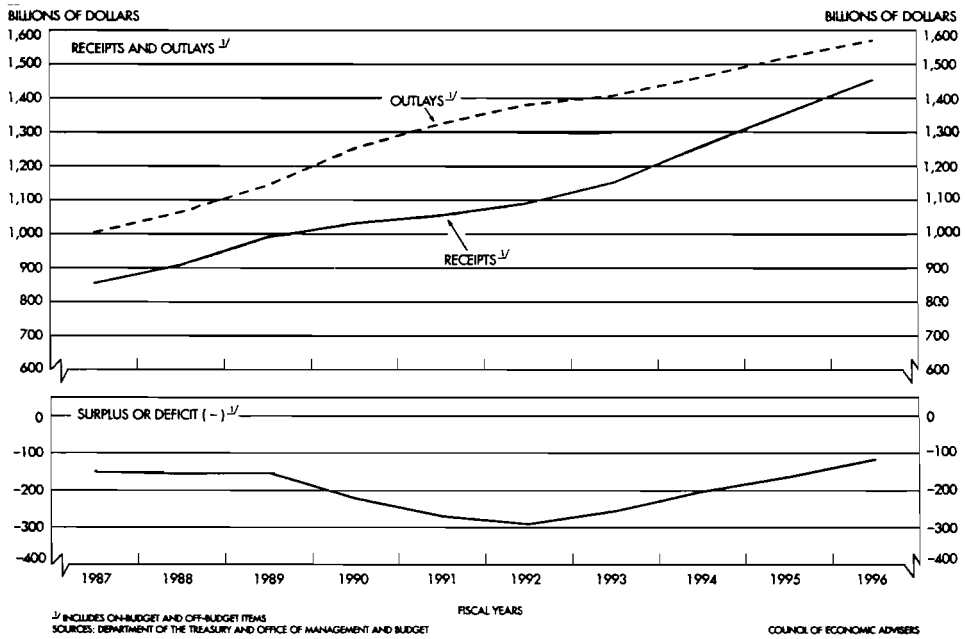
As noted in Figure 1-2, all components of gross private domestic investment moved up in 1996, but nonresidential fixed investment has been particularly strong since 1992. Business inventories have remained relatively stable in 1996. The value of total new construction in 1996 was at the highest level of the past 10 years (Table 1-2). New private housing and private housing permits, while below 1986, were at the highest levels of the 1990s in 1996, and new private home sales were at the highest levels of the past 10 years.

TABLE 1-2. NEW CONSTRUCTION 1986-96

Year	Total new construction	Private residential	Private commercial industrial	Federal, state & local	New private housing	Private housing permits	New private homes sold
	billions of dollars				*1,000 units*		
1986	430	187	106	85	1,805	1,769	750
1987	442	195	104	91	1,621	1,535	671
1988	456	198	110	95	1,488	1,456	676
1989	470	197	118	98	1,376	1,338	650
1990	468	183	119	108	1,193	1,111	534
1991	424	158	94	110	1,014	949	509
1992	452	188	82	116	1,200	1,095	610
1993	483	210	84	120	1,288	1,199	666
1994	527	239	93	127	1,457	1,372	670
1995	547	237	107	137	1,354	1,332	667
1996[a]	555	244	104	139	1,460	1,457	795

[a] Annualized rate for July, 1996.

FIGURE 1-3. FEDERAL GOVERNMENT RECEIPTS, OUTLAYS AND DEFICIT, 1987-1996



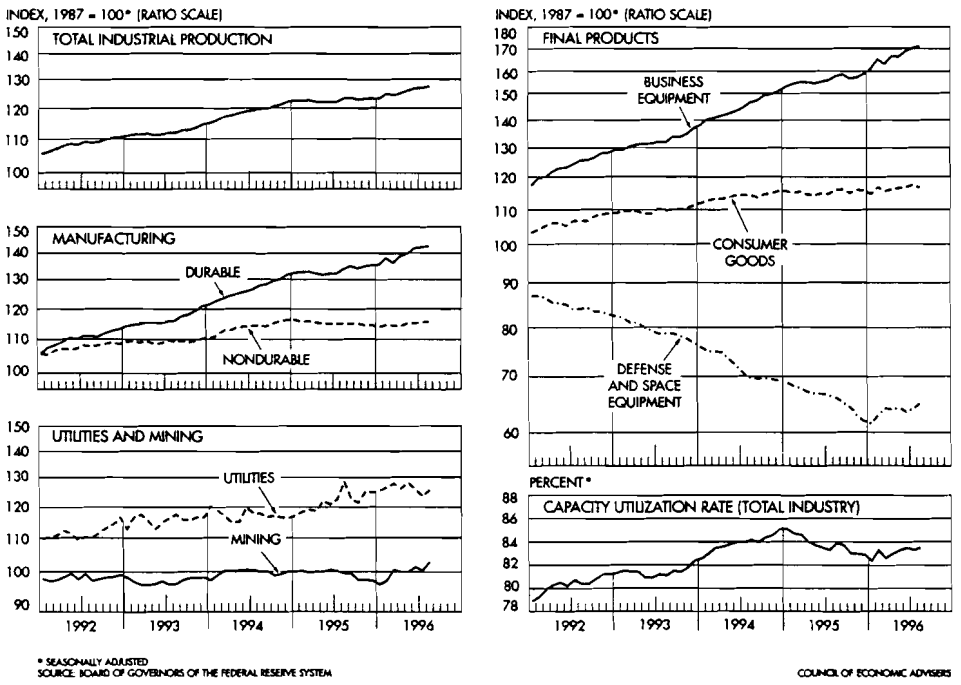
A relatively strong economy in 1995 and 1996 coupled with the continuing provisions of the Omnibus Budget Reduction Act of 1993 brought the Federal budget deficit in fiscal year 1996 to its lowest level since 1981. As a percentage of gross domestic product, the $107 billion deficit in FY96 amounted to only 1.4%, the lowest percentage of GDP since 1974. Unfortunately, projections are for the deficit again to increase starting in fiscal year 1997. At the end of fiscal year 1996, the gross Federal debt stood at $5.17 trillion dollars, about 69% of gross domestic product.

TABLE 1-3. FEDERAL FINANCES AND GROSS DEBT, SELECTED YEARS

Fiscal year	Receipts	Outlays	Deficit	Gross Federal debt
		billions of dollars		
1980	517	591	-74	909
1985	734	946	-212	1,818
1987	854	1,004	-150	2,346
1989	991	1,143	-152	2,868
1990	1,031	1,252	-221	3,207
1991	1,054	1,324	-269	3,598
1992	1,090	1,381	-290	4,002
1993	1,154	1,409	-255	4,351
1994	1,258	1,461	-203	4,644
1995	1,355	1,519	-164	4,921
1996	1,453	1,560	-107	5,170
1997[a]			-155	

[a] Estimates from *The Economic and Budget Outlook,* Congressional Budget Office.

FIGURE 1-4. MEASURES OF INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION, 1992-1996



As shown in Figure 1-4, industrial production continued to rise in 1996 with only the utilities sector leveling off. Defense and space rose again after four consecutive years of decline. The only manufacturing sector to show a decline in 1996 was apparel products (Table 1-4).

TABLE 1-4. INDUSTRIAL PRODUCTION, SELECTED MANUFACTURES, 1986-96

Year	Iron and steel	Fabricated metals	Industrial machinery & equipment	Electrical machinery	Motor vehicles and parts	Apparel products	Chemicals & products	Foods
				1987 = 100				
1986	90.8	93.8	90.3	94.3	98.5	96.3	94.6	97.4
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	112.7	104.2	113.0	108.5	105.7	98.1	106.0	101.5
1989	111.2	102.8	117.3	111.0	106.9	95.0	109.2	102.5
1990	111.5	99.5	117.6	111.4	101.0	92.2	111.8	103.7
1991	100.5	94.5	114.7	113.9	94.4	92.7	110.5	105.3
1992	104.7	99.0	124.0	123.5	107.4	95.0	114.4	106.9
1993	111.9	103.1	138.1	134.1	122.9	97.1	115.4	109.5
1994	119.3	110.5	157.7	154.3	141.2	100.1	121.3	113.2
1995	122.4	113.9	177.8	174.9	141.9	95.7	125.0	115.3
1996[a]	126.1	117.0	205.4	191.7	154.1	89.6	129.2	115.8

[a] Annualized rate for July, 1996.

TABLE 1-5. CORPORATE PROFITS BEFORE AND AFTER TAXES, 1986-1996		
Year	Profits BEFORE taxes	Profits AFTER taxes
	- - - - - - *billions of dollars* - - - - - -	
1986	223	116
1987	294	166
1988	354	217
1989	348	207
1990	372	231
1991	374	241
1992	406	263
1993	464	300
1994	531	336
1995	599	380
1996, 1st Q	642	409
1996, 2nd Q	645	408

On the strength of strong industrial production and strong corporate profits (Table 1-5), the stock market turned in a particularly strong performance in 1996, setting new high prices over much of the year. While higher than 1992 and 1993, the earnings-price ratio in 1996 was still below 1988-1990.

FIGURE 1-5. COMMON STOCK PRICES AND E-P RATIOS, NYSE, 1988-1996

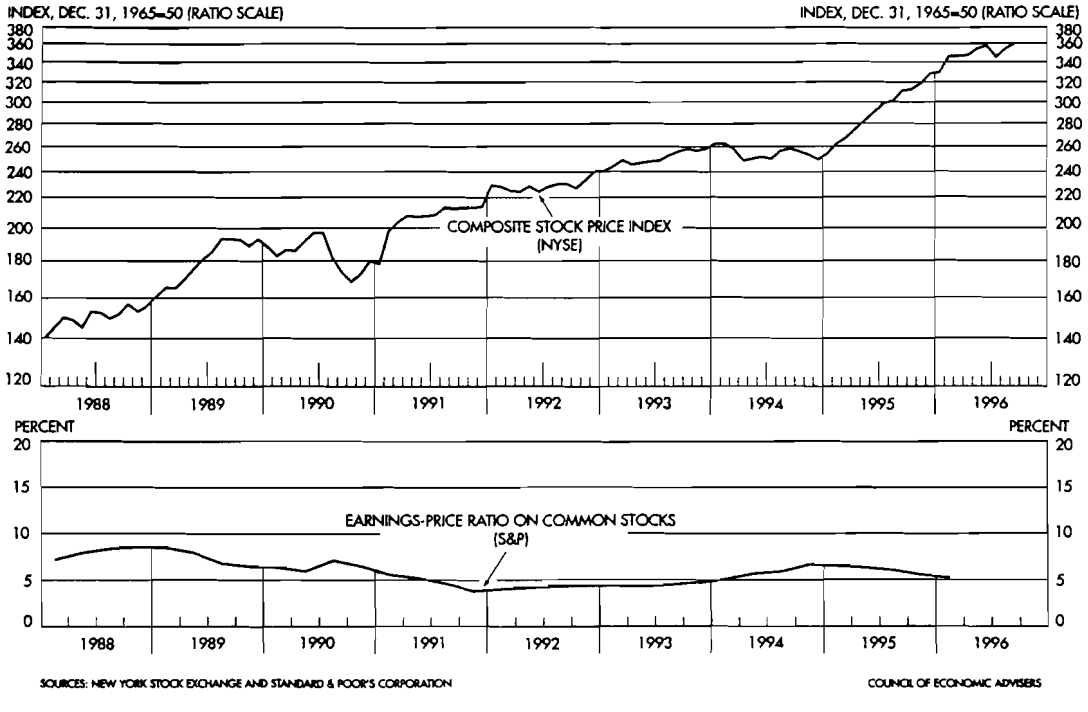
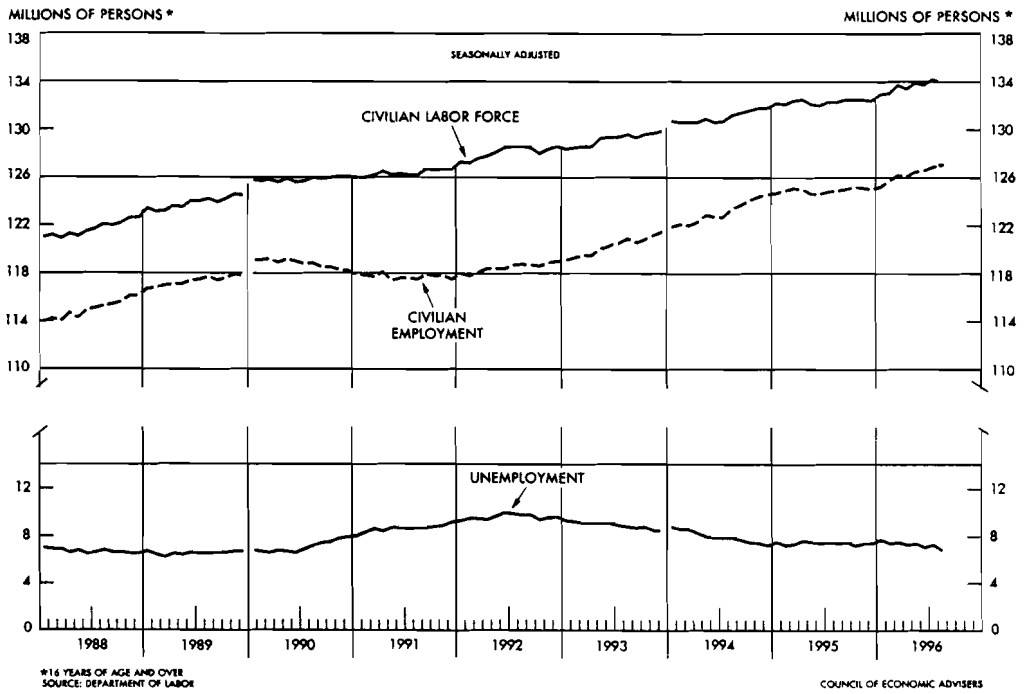


FIGURE 1-6. U.S. EMPLOYMENT AND UNEMPLOYMENT, 1988-1996



By August 1996, civilian employment went above 127 million, some 9 million above the level of late 1991, the end of the last recession (Figure 1-6). The business expansion since 1991 is one of the longest sustained business expansions ever. Along with the increasing employment numbers, the unemployment rate has dropped to just over 5% this past summer. In the past, unemployment rates below 5.5% have been considered inflationary, but by fall of 1996, there was still no sign of increasing inflation. That is, perhaps, a surprising result given that unit labor costs have risen almost 10% in the past four years. Still, in terms of real compensation, in 1996 workers just caught up with the their 1992 compensation rate per hour (Table 1-6).

TABLE 1-6. INDEX OF LABOR PRODUCTIVITY AND RELATED DATA, BUSINESS SECTOR, 1986-96

Year	Total output	Output per hour	Compensation per hour	Real compensation per hour	Unit labor costs
			1992 = 100; quarterly data seasonally adjusted		
1986	88.6	94.2	77.0	98.5	81.7
1987	91.1	94.1	79.9	98.7	84.9
1988	94.6	94.6	83.5	99.0	88.3
1989	97.8	95.3	85.8	97.1	90.0
1990	98.7	96.1	90.7	97.4	94.4
1991	96.9	96.7	95.1	97.9	98.3
1992	100.0	100.0	100.0	100.0	100.0
1993	102.7	100.2	102.5	99.5	102.3
1994	107.0	100.7	104.5	99.0	103.8
1995	109.6	101.2	108.2	99.7	107.0
1996[a]	112.4	102.1	111.9	100.3	109.6

[a] Second quarter. Source: Department of Labor, Bureau of Labor Statistics. Note the base year change to 1992.

TABLE 1-7. CONSUMER AND PRODUCER PRICE INDICES, 1986-1996					
	Consumer price index		Producer price index		
Year	All items	Food	All finished goods	All intermediate goods	All crude materials
	(1982-84 = 100)			*(1982 = 100)*	
1986	109.6	109.0	103.2	99.1	87.7
1987	113.6	113.5	105.4	101.5	93.7
1988	118.3	118.2	108.0	107.1	96.0
1989	124.0	125.1	113.6	112.0	103.1
1990	130.7	132.4	119.2	114.5	108.9
1991	136.2	136.3	121.7	114.4	101.2
1992	140.3	137.9	123.2	114.7	100.4
1993	144.5	140.9	124.7	116.2	102.4
1994	148.2	144.3	125.5	118.5	101.8
1995	152.4	148.4	127.9	124.9	102.7
1996[a]	157.0	153.8	131.0	125.3	114.0

[a] July index number. Source: Department of Commerce; Council of Economic Advisers.

Consumer prices in all of 1995 were up 2.8% over year earlier (Table 1-7). However, from September 1995 to September 1996, the consumer price index rose 3.0%. Food and energy prices were major contributors to the rising prices in late 1995 and 1996 as shown in Table 1-8. Consumer prices less the food and energy components, often considered a better indication of the underlying rate of inflation, rose at a 2.8% rate from September 1995 to September 1996. The producer price index told a similar story. Prices of all finished goods were up 2.5% in 1995 and 2.9% from September 1995 to September 1996.

As shown in Table 1-8, the other component contributing to a rise in the overall index was medical care which rose at a 3.6% annual rate from July 1995 to July 1996. The only price decrease came in apparel where prices were 0.1% lower than year earlier. Housing costs, the major component in the CPI, increased by 3%.

TABLE 1-8. RELATIVE IMPORTANCE OF, AND CHANGES IN, CPI COMPONENTS			
Component	December 1995 weights in the price index	July 1996 price Index	% Change in component from July 1995 to July 1996
	percent	*1982-84=100*	*percent*
Housing	41.3	152.9	+3.0
Transportation	17.0	143.4	+2.4
Food	15.8	153.8	+3.4
Apparel	5.5	131.7	-0.1
Medical Care	7.4	228.9	+3.6
Energy	6.7	109.8	+4.2
All Other	6.3	N.A.	N.A.
Total	100.0	157.0	+3.0

TABLE 1-9. CONSUMER INSTALLMENT CREDIT AND PERSONAL CONSUMPTION EXPENDITURES, 1986-1996

Date	Personal consumption expenditures[a]	Installment & non real estate credit outstanding	Auto loans	Auto loans as a percent of total installment credit	Total installment credit as a percent of personal consumption expenditures
	- - - billions of dollars - - -			*- - - percent - - -*	
December 1986	2,893	639	247	38.7	22.1
December 1987	3,094	672	266	39.6	21.7
December 1988	3,350	730	286	39.2	21.8
December 1989	3,595	782	291	37.2	21.8
December 1990	3,839	796	282	35.4	20.7
December 1991	3,975	781	259	33.2	19.6
December 1992	4,220	785	257	32.7	18.6
December 1993	4,454	844	280	33.2	18.9
December 1994	4,701	966	317	32.8	20.5
December 1995	4,925	1,103	351	31.8	22.4
December 1996[b]	5,210	1,215	386	31.8	23.3

[a] Annual totals.
[b] Forecast.

Personal consumption expenditures of the nation's consumers have increased 31% in the past five years from $3.975 trillion in 1991 to over $5.2 trillion in 1996 as shown in Table 1-9. Meanwhile, outstanding installment and non real estate credit increased 55% from 1991 to $1.215 trillion in 1996. Total installment credit as a percentage of personal consumtion expenditures rose from 18.6% in 1992 to 23.3% in 1996, the highest figure of the past ten years. Auto loans decreased as a percentage of total installment credit over that period. As noted in Figure 1-7, however, the savings rate as a percentage of disposable personal income in 1996 is about average for the past 10 years and is higher than in either 1993 or 1994.

FIGURE 1-7. Savings as a % of Disposable Income

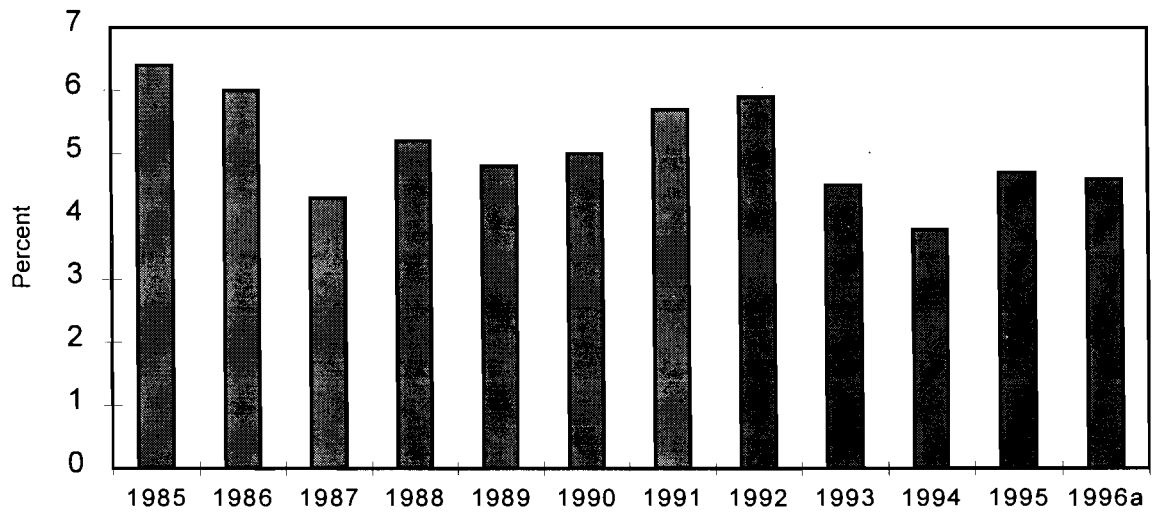
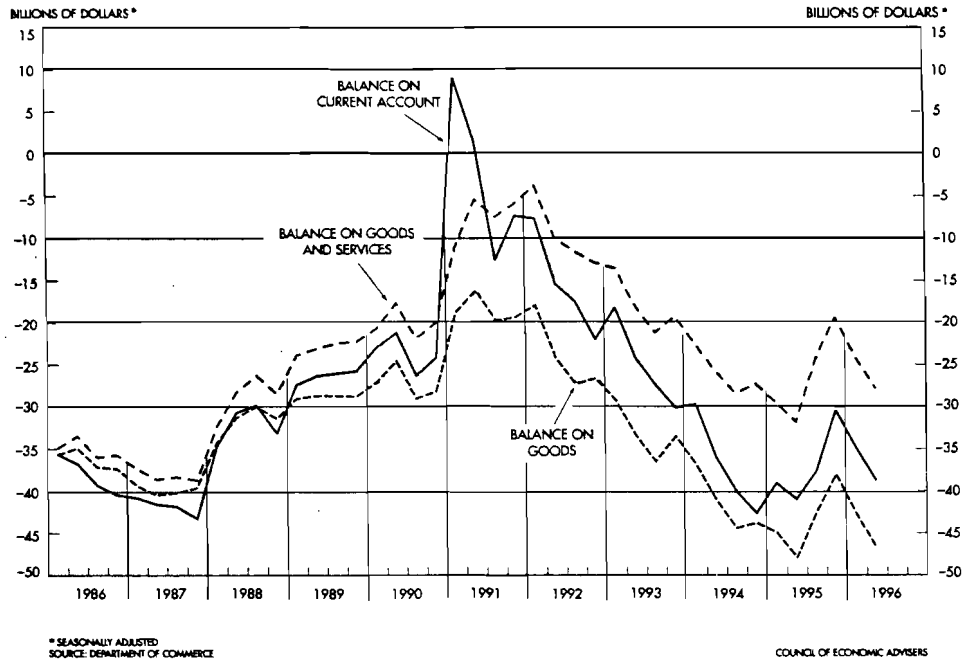


FIGURE 1-8. U.S. BALANCE OF TRADE, 1986-1996



As noted in Figure 1-8, from 1988 to 1991 the quarterly U.S balance of trade on goods as well as goods and services decreased (became less negative). Since 1991 and except for a brief upturn in 1995, the quarterly deficit trend has become larger (more negative). Table 1-10 indicates that, since 1987, the U.S. industrial sector has outperformed all other major industrial countries and, by June, productivity was 26% greater than in 1987. By fall, U.S. productivity was 27% above 1987. France, Japan and Germany in mid 1996 were still below their production of 1990.

TABLE 1-10. INDUSTRIAL PRODUCTION, MAJOR INDUSTRIALIZED COUNTRIES, 1986-96

Year	United States	Canada	Japan	France	Germany	Italy	United Kingdom
			Index of Industrial Production (1987=100; seasonally adjusted)				
1986	95.3	95.4	96.6	98.0	99.6	96.2	96.9
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	104.4	105.3	109.4	104.6	103.9	105.9	104.8
1989	106.0	105.2	115.7	108.5	108.8	109.2	107.0
1990	106.0	101.7	120.6	110.1	114.5	109.4	106.7
1991	104.2	97.4	122.9	108.7	117.8	108.4	102.8
1992	107.7	98.5	115.8	107.5	115.8	108.2	102.7
1993	111.5	102.9	111.0	103.4	107.1	105.5	104.9
1994	118.1	110.1	112.3	107.3	110.4	111.0	110.1
1995	121.9	113.8	115.8	109.0	110.0	116.8	113.0
1996[a]	126.2	114.6	115.6	109.4	112.2	113.6x	113.6

[a] As of 6/96.

Farm Sector Overview--Trends and Perspective

The nation's farmers experienced a rather good year in 1996. Historically low stocks of corn and wheat in late 1995 and 1996 brought sharply higher prices, Table 1-11 and Figure 1-9. And, while the increased feed prices led to lower livestock prices and liquidation from the sector in late 1995, 1996 followed with a turnaround in the livestock sector as well.

TABLE 1-11. PRICES RECEIVED AND PAID BY FARMERS, 1986-1996

Year	Prices received by farmers			Prices paid by farmers			Ratio
	Crops	Livestock	All farm products	Production items	Production items incl. interest, taxes & wage rates	All inputs and services	
	(1990-92 = 100; not seasonally adjusted)						*percent*
1986	87	88	87	86	85	85	103
1987	86	91	89	87	87	87	102
1988	104	93	99	90	92	91	108
1989	109	100	104	95	97	96	108
1990	103	105	104	99	99	99	105
1991	101	99	100	100	100	100	99
1992	101	97	98	101	101	101	97
1993	102	100	101	103	102	102	98
1994	105	95	100	106	106	106	94
1995	112	92	102	109	109	109	92
1996[a]	124	105	115	115	114	115	100

a 9/96.

FIGURE 1-9. PRICES RECEIVED AND PAID BY FARMERS, 1988-1996

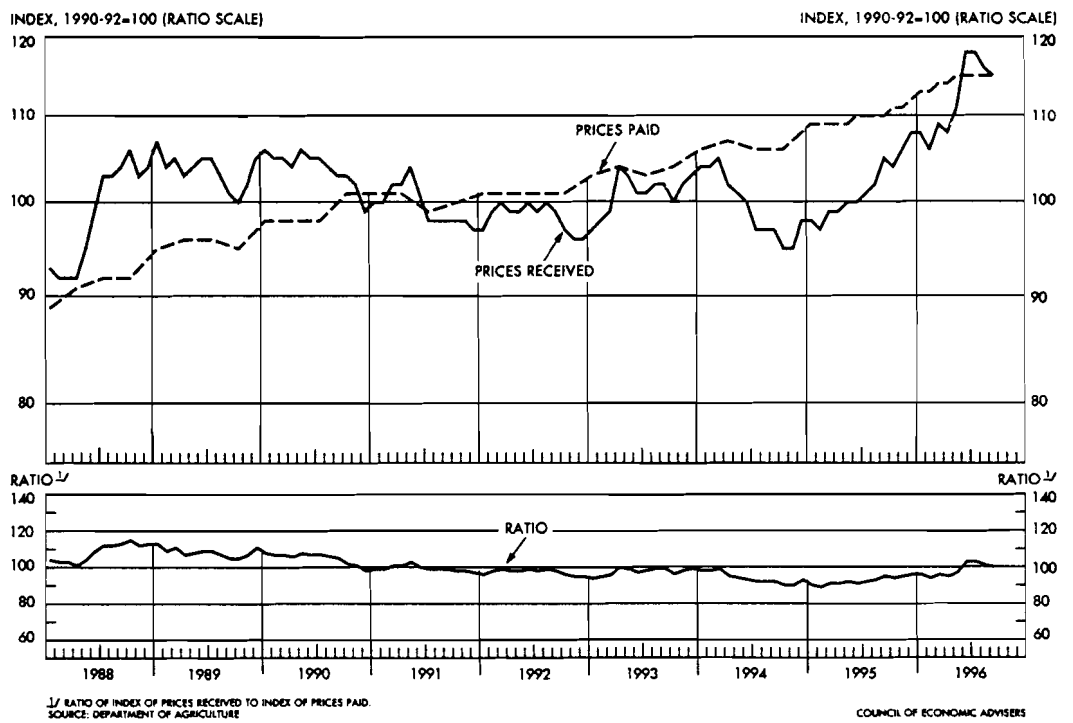
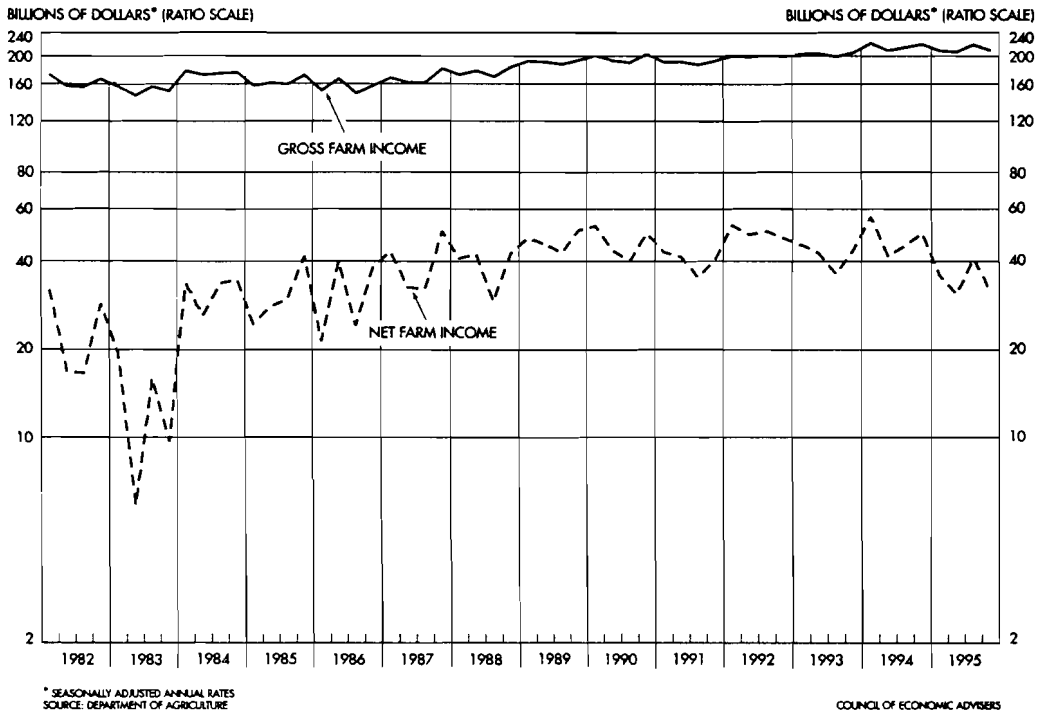


FIGURE 1-10. U.S. GROSS AND NET FARM INCOME, 1982-1995



With the improved prices in 1996, gross farm income was forecast to rise over $23 billion, net cash farm income was forecast to rise over $9 billion, and net farm income is expected to be up $16 billion from 1995. The forecast $50.8 billion in 1996 would be the highest current dollar net farm income ever. However, with increased production of major crops summer and fall of 1996, prices have fallen and that will put a damper on net farm income next year.

TABLE 1-12. U.S. AND NEW YORK NET FARM INCOME, 1985-1996

Year	United States				New York
	Gross farm income	Total farm expenses	Net cash income	Net farm Income	Net farm income
	billions of dollars				*millions of dollars*
1985	161.2	132.0	47.1	28.8	383
1986	156.1	125.2	47.9	30.9	530
1987	168.4	131.0	52.0	37.4	626
1988	177.9	139.9	52.5	38.0	520
1989	191.9	146.7	52.8	45.3	647
1990	198.2	153.4	52.9	44.8	602
1991	191.9	153.3	50.3	38.5	484
1992	200.6	152.5	55.5	48.0	577
1993	204.2	160.5	58.9	43.6	591
1994	215.8	167.4	50.5	48.4	420
1995	210.4	175.6	48.8	34.8	364
1996[a]	233.2	182.4	58.0	50.8	N.A.

[a] Forecast. Source: ERS, USDA. Data have been revised since last year.

Trends in farm structure that have been ongoing for years are evident in Table 1-13. Over time more farms move into the larger farm size categories; and, except for the very smallest farm size category, farm numbers continue to decrease in the smaller value of sales classes. For example, from 1991 to 1995 farms with more than $1 million in value of sales increased in number from 12,000 to 17,000. There were more farms in each value of sales class above $100,000 in 1995 than in 1991. However, farm numbers decreased in the $20,000 to $100,000 value of sales classes.

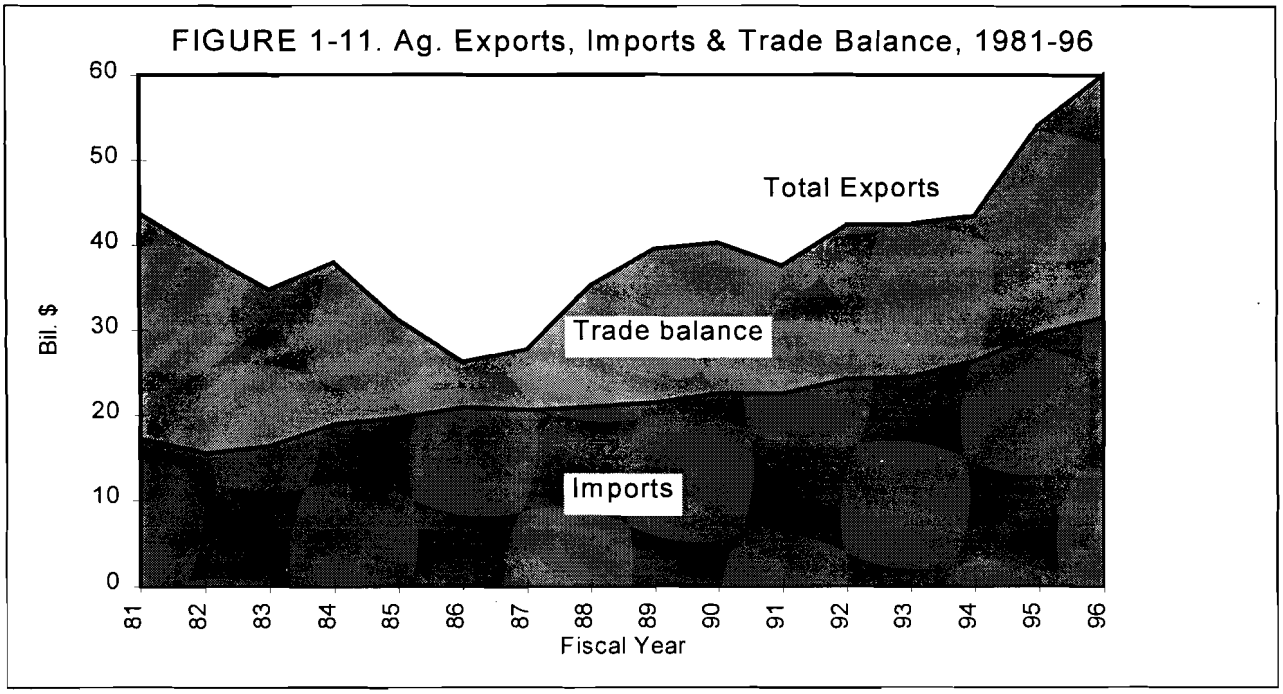
The distribution of income is noteworthy as well. Farms with over $1 million in value of sales received 35% of the net cash farm income in 1995, up from 20% in 1991. In 1991, 1.9% of the farms received 36.1% of net cash income, but in 1995 2.3% of farms earned 49.3% of the net cash income from farming. Those farms with value of sales greater than $250,000 made up about 6% of farm numbers but produced almost 65% of net cash income. At the other end of the spectrum, in 1995 the 61.5% of farms with the lowest value of sales per farm received only 2.9% of net cash farm income.

These figures are not to demonstrate problems or disparities but simply to illustrate the tremendous range in farm sizes and the relatively large part of total production that comes from a relatively small number of farm businesses.

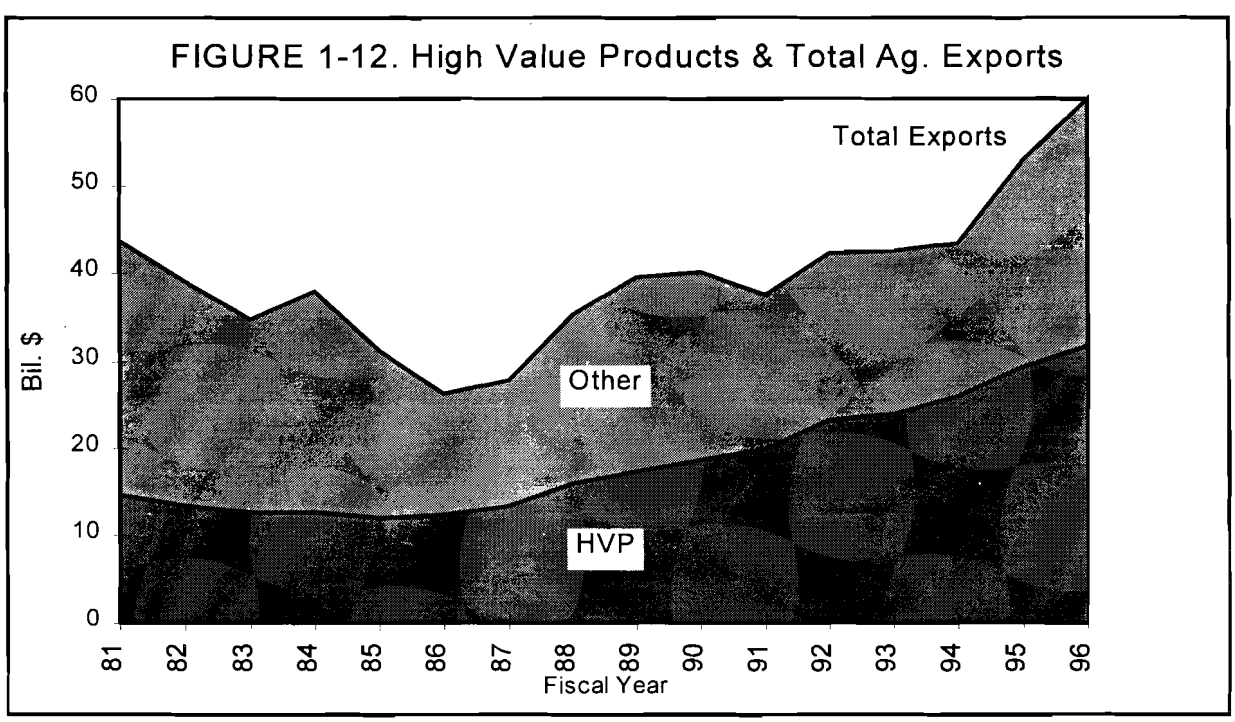
TABLE 1-13. NUMBER OF FARMS AND FARM INCOME BY VALUE OF SALES, 1991 AND 1995

		Value of sales per farm						
Item	Units	$1M and Over	$500,000 to $999,999	$250,000 to $499,999	$100,000 to $249,999	$40,000 to $99,999	$20,000 to $39,999	Less than $20,000
				1991				
Number of Farms	Thou.	12	29	70	217	312	234	1,244
Gross Cash Income	Bil. $	36.4	23.9	29.7	43.6	29.0	10.4	11.4
Net Cash Income	Bil. $	10.2	8.0	9.5	12.6	9.1	3.2	-2.2
NCI/Farm	Thou. $	846	277	136	58	29	14	-1.8
					Percent of Total			
No. of Farms	%	0.6	1.3	3.3	10.2	14.7	11.1	58.7
Net Cash Income	%	20.1	16.0	18.9	25.1	18.1	6.3	-4.5
				1995				
Number of Farms	Thou.	17	30	75	219	260	196	1,273
Gross Cash Income	Bil. $	58.9	25.1	30.0	42.9	22.4	8.3	16.3
Net Cash Income	Bil. $	17.1	6.9	7.0	9.9	4.9	1.5	1.4
NCI/Farm	Thou. $	1,006	230	93	45	19	8	0
					Percent of Total			
No. of Farms	%	0.8	1.5	3.6	10.6	12.6	9.4	61.5
Net Cash Income	%	35.1	14.2	14.4	20.4	9.9	3.2	2.9

[a] NCI is net cash income. Source: ERS, USDA.



Agricultural exports are forecast to be up another $6 billion in fiscal year 1996 to $60 billion, the highest level ever (Figure 1-11). That would represent a 38% increase over FY1994. Agricultural imports are forecast to reach $31.5 billion in FY 1996, and the resulting agricultural trade balance of $28.5 billion is also a record. Importantly, the trend is toward exports of high-value products rather than bulk products as shown in Figure 1-12. Exports of high-value products have increased 150% the past 10 years.



Summary and Forecast for 1997

The U.S. economy deserves high grades for its 1996 performance. If the fourth quarter comes in at 3% to 3.5% growth, which is my expectation, then real GDP growth for all of 1996 will be about 3%, a relatively strong showing. The industrial sector reached 127% of its 1987 level this past fall, and that's the largest gain over 1987 levels of production of any industrialized country in the world.

Employment continues to rise. The U.S. economy added 8.3 million people to civilian employment since 1990. Further, the unemployment rate worked its way down to 5.1% by late summer and remained at 5.2% into the fall. Even with the low unemployment rate, inflation has been modest. As measured by the CPI, inflation is expected to be 2.9 to 3% for the year, but the "core rate" of inflation, that is, the CPI less food and energy, will likely be about 2.6% to 2.7% for the year.

Interest rates trended upward from February to midsummer but have eased back slightly since then. Three month Treasury Bills averaged about 5% for the first 10 months of 1996. Thirty year Treasuries started the year around 6%, reached over 7% by summer, but eased back to about 6.5% by mid November.

Following is my forecast for 1997:

- **Gross domestic product will grow by 2.8% to 3.2%.** Economic growth almost came to a standstill in the fourth quarter of 1995. Since then, growth in each quarter has been above 2%, and second quarter of 1996 was 4.7%. I expect fourth quarter to be between 3% and 3.5%. With slightly lower interest rates in 1997, continued low unemployment, and strong consumer confidence in the economy, growth in GDP should rise modestly. The Federal Reserve Board will be watching for any signs of increased inflation or overly strong growth and will raise interest rates at the first suggestion of problems.

- **Inflation will remain under control at about 3% to perhaps 3.2%.** Inflation has remained within the 2.5% to 3.5% range since 1991. Somewhat surprisingly, even when the unemployment rate reached 5.1% last summer, inflation remained steady at just under 3%. While I wouldn't bet the farm on an increase in the rate of inflation, it would be unusual if stronger growth and low unemployment weren't to exert some upward pressure on the rate of inflation.

- **Interest rates will be lower by early 1997.** By late fall of 1996, low inflation and a modestly growing economy were already leading to lower interest rates. My expectation is that 3 month Treasury Bills will move to near 4.5%, and 30 year Treasuries will move to about 6% in the first half of 1997. If inflation and growth follow the expected path, interest rates could rise slightly in the second half of 1997.

- **The unemployment rate will, for the most part, remain in the 5.2-5.5% range**. There is little evidence as of this writing to suggest that the unemployment rate will rise substantially. And, at 5.2% there is little reason to expect further decline. While there is still some downsizing taking place at larger firms, most displaced workers do find new jobs, though quite often at lower pay.

- **U.S. net farm income will fall 5% or more in 1997.** The lower prices for major farm crops such as corn, wheat and soybeans in 1997 will bring net farm income down by 5%, perhaps even 10%, from the levels of 1996. Also, milk prices are likely headed lower after reaching their highs in late fall. Most major farm product prices will remain above levels of 1995 but below 1996, as will net farm income. Input prices will continue to increase at least at the rate of inflation, also adding pressure to net farm income.

Chapter 2. Marketing Costs

Gene A. German, Professor
Kristen S. Park, Extension Support Specialist

The American consumer continues to demand more and more prepared foods and has demonstrated a willingness to pay for this added convenience. Many new types of retail formats have emerged that specialize in providing consumers with ready-to-eat meals that are purchased as "carry-out food" and designed to be consumed at home rather than in a restaurant.

These new carry-out food stores have prompted the traditional supermarket to expand its offerings of prepared foods. Food sold in this form has greater labor costs due to the preparation and packaging involved. This trend is expected to add to the overall marketing costs of food and agricultural products in the U.S.

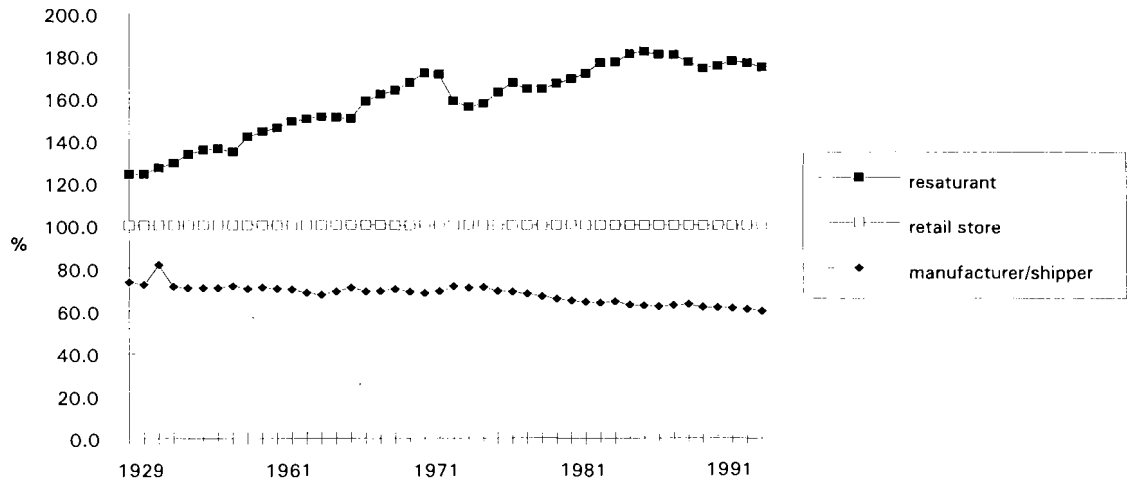
While prepared foods are adding to marketing costs, the food distribution industry continues to strive to lower costs by: 1) improving the process of introducing new products into the market, 2) developing better methods of distribution, including computer assisted ordering by food wholesalers and retailers, 3) streamlining advertising and promotional activities, such as eliminating manufacturer coupons for consumers (see Figure 2-2), and 4) eliminating duplicate products in the food system that add to the cost of inventory for food retailers and wholesalers.

Since 1929 marketing costs between the three stages of the food system, manufacturing, retailing, and restaurant, have been steadily increasing, broadening the price gaps between each stage of the food system (Figure 2-1). The price gap between manufacturers and retailers has been increasing due to a number of factors which could include: increasing proliferation of new products, marketing and promotions, and increased packaging demands. The gap has also been steadily increasing between retail stores and restaurants due to factors which could include: the increasing demand for food-away-from-home and the subsequent increase in fast food formats, additional processing, handling and transportation built into the fast food formats, and the demand for more convenient packaging and portion sizes from the food service industry.

For more than 25 years the number of manufacturer coupons distributed to consumers increased and the percent of the coupons actually used or redeemed by consumer declined. This trend continued until 1993 when the number of manufacturer coupons that consumer received through various media actually declined. This decline was significant because it reversed such a long trend and many feel that the drop in coupon distribution in 1993 marks the beginning of a downward trend.

Support for this idea of a downward trend or decline in the number of manufacturer coupons distributed is supported by two important developments in the food system. First, there has been a widespread change in the marketing strategies of food manufacturers relating to pricing policies and promotional activities led by Proctor and Gamble's (P&G) Everyday Low Pricing strategy. Many manufacturers have followed P&G's lead by reducing spending on trade and consumer promotions (including coupons) and focusing efforts on an everyday low price strategy. This reduction in spending on consumer promotions means fewer coupon promotion and fewer coupons going out to consumers.

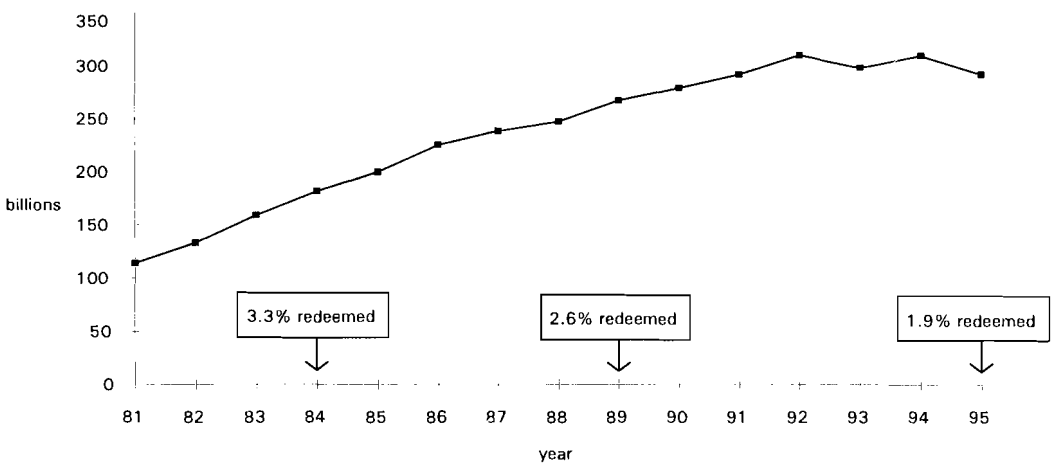
FIGURE 2-1. RELATIVE PRICES OF FOOD AT THREE STAGES OF THE SYSTEM



Source: USDA-ERS, Putnam, Judith Jones and Jane E. Allshouse, *Food Consumption, Prices, and Expenditures*, data file supplement, 2/96.

Secondly, many retailers in recent years have instituted frequent shopper programs that provide consumers with discounts on products that they purchase in retail stores. These discounts are in the form of "electronic coupons" which have replaced some of the paper coupons of the past. As frequent shopper programs expand, many feel that the use of discounts in the form of electronic coupons will continue to replace traditional paper coupons that were distributed in various mass media.

TABLE 2-2. GROCERY COUPON DISTRIBUTION



Source: NCH Promotional Services

Total sales from the U.S. food marketing sector in 1995 were $862 billion, an increase of $37 billion or 4.5 percent from 1994 to 1995 (Table 2-1). Most of the increases in the food marketing sector sales came from retail, food service and that portion of nonfood sales sold within the food marketing channels (e.g. paper goods, pet foods, etc.). Packaged alcoholic beverages which are sold in liquor stores and other retail stores were also up slightly. Conversely sales from alcoholic drinks sold in restaurants and bars were stagnant.

TABLE 2-1. FOOD MARKETING SALES, 1995

Sector	Sales 1994	Sales 1995
	--$ billion--	
Retail food	336	360
Food service	303	310
Nonfood	100	105
Packaged alcoholic beverages	48	49
Alcoholic drinks	38	38
Total	825	862

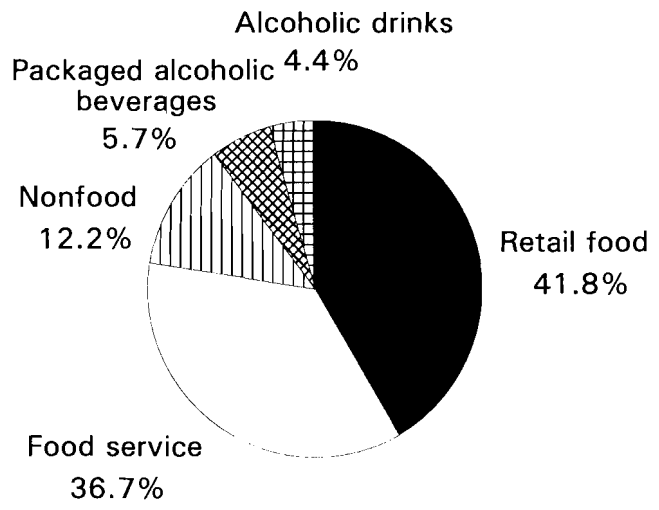
Source: USDA-ERS, Gallo, Anthony, Food and Consumer Economics Division, 1996.

Retail food sales still accounted for the major portion of the food marketing sales, at 41.8 percent (Figure 2-3). This portion increased from 1994 when retail food sales accounted for 40.7 percent of total food marketing sales and is a change in direction from a trend toward increases in food sales through the food service industry. The portion of sales through food service actually decreased slightly from 36.7 percent in 1994 to 36.0 percent in 1995.

It is not clear whether this reversal will continue in years to come as consumers continue to demand the ultra in convenience in the form of prepared foods and even prepared meals which have traditionally been offered by the food service industry. Supermarkets have recently begun to emerge from offering traditional, packaged foods to offering prepared fresh foods which the industry now refers to as meal solutions. Meal solutions within the supermarket are available chilled in the refrigerated case or fully cooked and heated in food kiosks within the store. In this way, the supermarket is preparing to compete for the food-away-from-home consumer dollars.

The portion from nonfood sales increased very slightly from 12.1 to 12.2 percent between 1994 and 1995, and the portion from packaged alcoholic beverages and alcoholic drinks decreased very slightly from 5.8 to 5.7 percent and from 4.6 to 4.4 percent respectively.

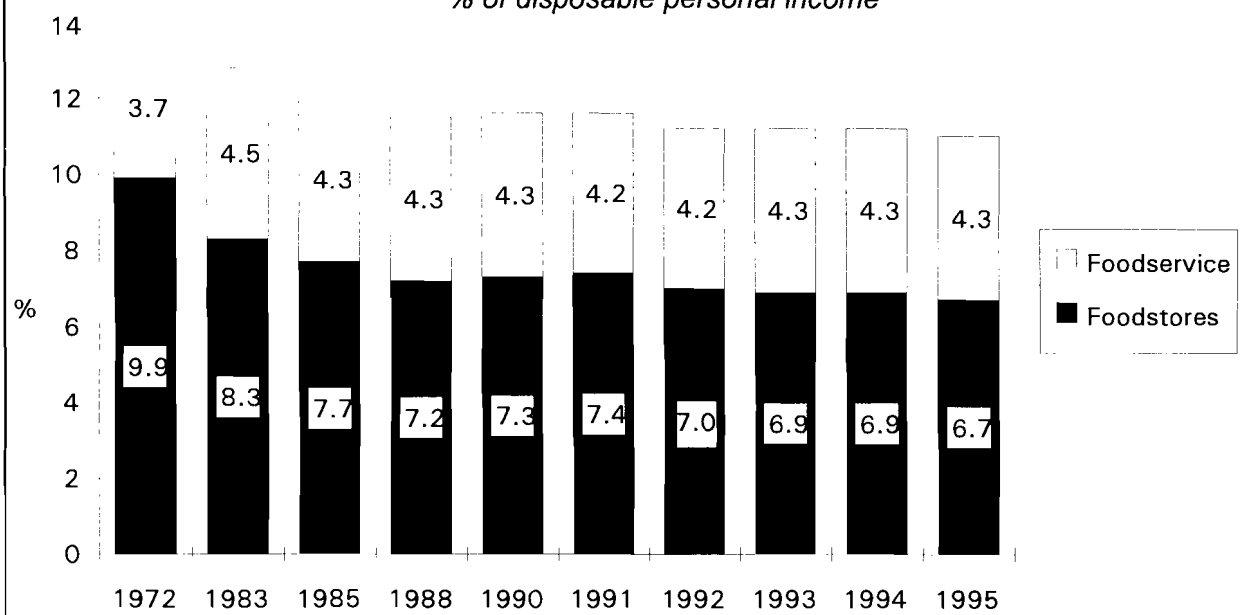
FIGURE 2-3. FOOD MARKETING SECTORS
as percent of total marketing sales



Source: USDA-ERS, Gallo, Anthony, Food and Consumer Economics Division, 1996.

Revisions in the percentage of disposable income spent on food are contained in Figure 2-4 and slightly alter numbers presented in past *Outlook Handbooks* of what portion of their desposable income the U.S. population spent on food. In 1995, the U.S. spent a total of 11.0 percent of its total disposable income on food. This was down slightly from 11.2 percent in 1994. The share of disposable income spent in food stores in 1995 was 6.7 percent of disposable income, down from 6.9 percent in 1994. Food service's share remained constant in 1995 at 4.3 percent (the same as in 1994 and in 1993).

FIGURE 2-4. FOOD MARKETING SYSTEM'S SHARE OF DISPOSABLE PERSONAL INCOME
% of disposable personal income

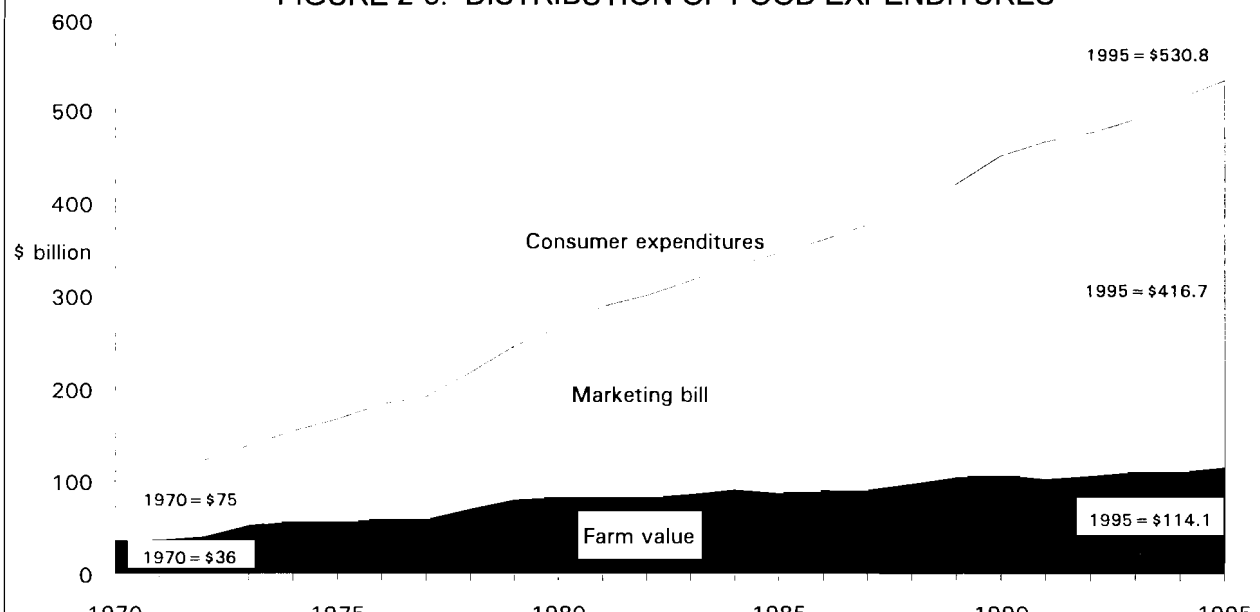


Source: USDA-ERS, Gallo, Anthony, Food and Consumer Economics Division, 1996.

In 1995, consumers spent $530.8 billion on food from U.S. farms (Figure 2-5). Consumers' U.S. food expenditure can be divided into the farm value share and marketing expenditures. The farm value share is the portion of consumers' food expenditures that farmers receive. In 1995, this amounted to $114.1 or 21.5 percent of total expenditures up slightly from 21.4 percent in 1994. In 1970, the farm share was 32 percent of consumers' U.S. food expenditures.

The marketing bill is the portion of the food expenditures spent on marketing functions including: processing, wholesaling, transportation, and retailing. In 1995, the marketing bill amounted to $416.7 billion or 78.5 percent of U.S. food expenditures. Although the marketing bill share decreased slightly between 1994 and 1995, in general, the portion spent on marketing functions has been increasing steadily. In 1970, marketing constituted 68 percent of consumer expenditures on food from U.S. farms.

FIGURE 2-5. DISTRIBUTION OF FOOD EXPENDITURES



Source: Elitzak, Howard, *Food Cost Review*, 1995. USDA-ERS, Food and Consumer Economics Division, April 1996.

The products for which farmers receive the greatest share tend to be animal products (Table 2-2). Reasons include minimal further processing and a shorter marketing channel. Food products requiring more processing, transportation or wholesaling activities such as bread and rice return a smaller share to the farm level.

Most of the selected animal products experienced a decrease in their farm share of retail price in 1995 with the exception of eggs which saw and increase in its farm share. Egg producers also received the highest share, 60¢, out of every dollar consumers spend on eggs. Egg farms perform more of the marketing functions themselves by performing grading and packing functions and by marketing more product directly to the retail chains and bypassing repackers and wholesalers. Conversely, adequate supplies of beef, broilers, and milk in 1995 could have contributed to their farm share decline.

Apples and lettuce gained farm share while grapefruit held steady. Grains required for bread as well as other products require many more value added, marketing functions before consumption such as

additional inventory, processing, transportation, packaging and retailing activities. These products typically return a smaller share to the farm level. The farm share for wheat flour, peanut butter and bread all increased in 1995 while other reported food products lost farm share.

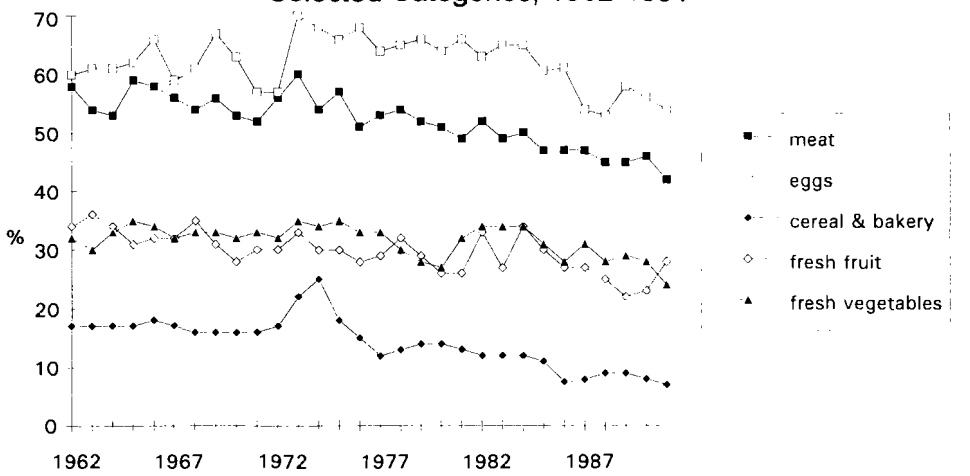
TABLE 2-2. FARM VALUE SHARE FOR SELECTED FOODS

Food	1995 Farm share of retail price
Animal products:	
Eggs, grade A large, 1 dz.	60
Beef, choice, 1 lb.	49
Chicken, broiler, 1 lb	53
Milk, 1/2 gallon	41
Cheese, natural cheddar, 1 lb	34
Fruit and vegetables:	
Fresh--	
Apples, red delicious	25
Grapefruit	18
Lettuce, 1 lb.	23
Frozen--	
Orange juice conc., 12 fl oz	40
Crop products	
Sugar	34
Flour, wheat, 5 lb.	35
Rice, long grain, 1 lb.	21
Prepared foods	
Peanut butter, 1 lb.	27
Bread, 1 lb.	8

Source: Elitzak, Howard, *Food Cost Review*, 1995. USDA-ERS, Food and Consumer Economics Division, April 1996.

Despite increases in some individual product farm shares during 1995, all major product categories have exhibited a decline in farm share since 1962 (Figure 2-6). Again, due to continued consumer demand for added convenience, marketing share will most likely continue to grow in the future.

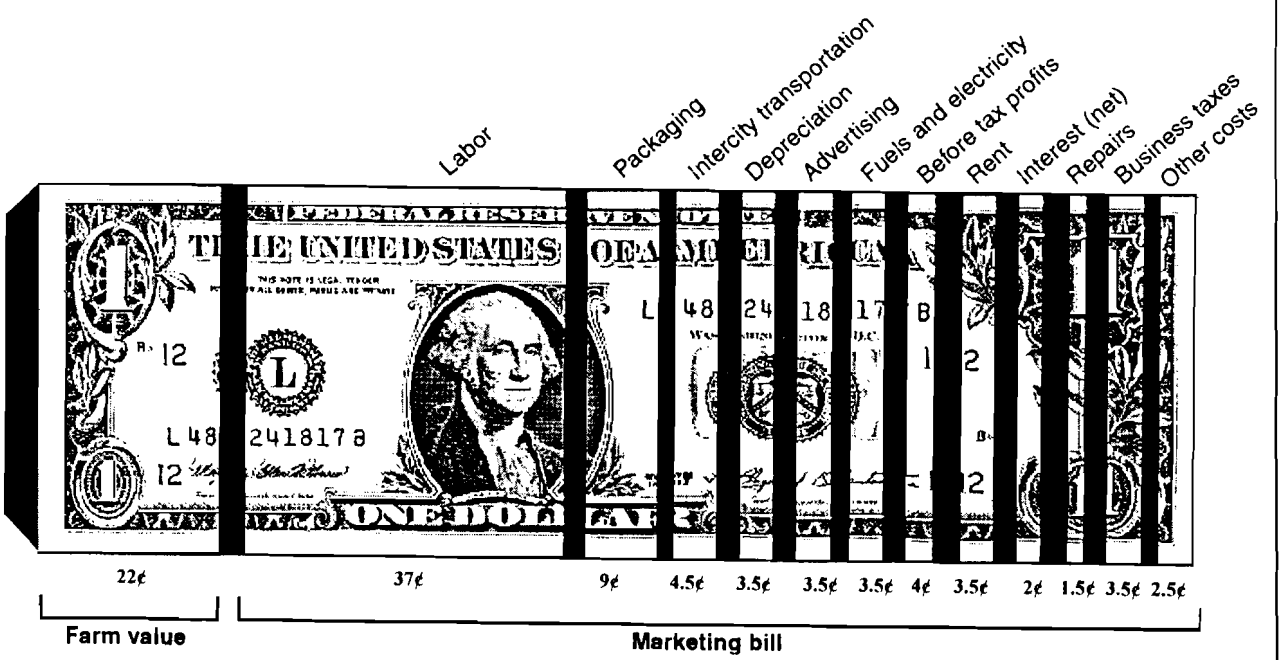
FIGURE 2-6. FARM SHARE OF RETAIL PRICE
Selected Categories, 1962-1991



Source: USDA-ERS, Food and Consumer Economics Division, 1996.

The average farmer received 22¢ out of every dollar consumers spent on food in 1995 (Figure 2-7). By far the largest marketing expense in the food system is labor. The labor involved in marketing alone accounted for 37 percent of the total food bill in 1995, equal to 1994, which is larger than the farm value returned to farmers for their products. Packaging was the next largest component of the food bill and increased to 9¢ in 1995 from 8¢ in 1994 due to large increases in paper product costs. After-tax profits also increased in 1995 from 3¢ to 4¢. Items which fell in 1995 included advertising, interest and other costs.

FIGURE 2-7. WHAT A DOLLAR SPENT ON FOOD PAID FOR IN 1995



Includes food eaten at home and away from home. Other costs include property taxes and insurance, accounting and professional services, promotion, bad debts, and many miscellaneous items
Source: Elitzak, Howard, *Food Cost Review*, 1995. USDA-ERS, Food and Consumer Economics Division, April 1996.

Chapter 3. Cooperatives

Bruce L. Anderson, Professor
Brian M. Henehan, Senior Extension Associate

U.S. Situation

The most complete data available on U.S. agricultural cooperatives are collected through an annual survey of marketing, farm supply and selected service cooperatives conducted by the Cooperative Service of RB-CS, USDA. Results of the most recent survey are summarized in Table 3-1.

Table 3-1. UNITED STATES AGRICULTURAL COOPERATIVE NUMBERS, BUSINESS VOLUME, AND NET INCOME 1994-95[1]

Major Business Activity	Number		Net Volume ($ billion)		Net Income ($ million)	
	1994	1995	1994	1995	1994	1995
Marketing	2,173	2,085	65.5	69.5	1,003.5	1,417.5
Farm Supply	1,497	1,447	20.8	21.2	828.0	804.7
Related Service	504	474	3.0	3.5	131.3	135.6
TOTAL	4,174	4,006	89.3	94.3	1,962.9	2,357.8

[1] Totals may not add due to rounding.
Source: Farmer Cooperatives, Rural Business and Cooperative Development Service, USDA, Washington, DC, September, 1995 and Rural Business - Cooperative Service, USDA, Farmer Cooperative Statistics, preliminary release, Washington, D.C., 1996.

The number of cooperatives in the United States has continued to decline to a total of 4,006 in 1995, a net decrease of 168 associations. This is primarily due to ongoing consolidation and merger of local marketing and supply cooperatives in the Mid-west. Total net business volume which excludes intercooperative business amounted to $94.3 billion, surpassing the record $89.3 billion in 1994. Total net income for 1995 was $2.36 billion, up significantly from the previous high of $1.96 billion in 1994.

Combined assets in 1995 for all cooperatives totaled $40.3 billion, a 12 percent increase from 1994. Net worth totaled $15.5 billion, up nearly 7 percent. Total liabilities of $23.6 billion increased more than 16 percent from the previous year.

Estimated number of full-time employees in cooperatives for 1995 totaled 186,951 up from 174,690 in 1994.

New York State Situation

Data for agricultural cooperatives headquartered in New York State were obtained from the Cooperative Services' survey cited previously. State level data are collected every other year. The most current statistics available are for 1993 and 1995. Table 3-2 summarizes cooperative numbers and business volume for New York State.

Table 3-2. NEW YORK STATE AGRICULTURAL COOPERATIVE NUMBERS AND NET BUSINESS VOLUME BY MAJOR BUSINESS ACTIVITY, 1993 and 1995[1].

Major Business Activity	Number Headquartered in State		Net Volume	
	1993	1995	1993	1995
			($ million)	
Marketing:				
Dairy	63	61	1,154.8	1,228.8
Fruit & Vegetable	11	10	178.4	293.0
Other Marketing[2]	8	7	136.8	81.2
TOTAL MARKETING	82	78	1,287.9	1,603.0
Supply:				
Crop Protectants			26.6	13.4
Feed			190.7	123.8
Fertilizer			33.9	24.1
Petroleum			218.8	143.2
Seed			20.4	7.6
Other Supplies			177.8	136.0
TOTAL SUPPLY	21	12	668.2	448.3
Service[3]	5	5	101.7	201.9
TOTAL	108	95	2,240.0	2,253.2

Source: Farmer Cooperative Statistics, 1993, CS Service Report 43, USDA, CS, RDA, Washington, DC., November 1994 and Farmer Cooperative Statistics, 1995, CS Service Report, USDA, RB-CS, Washington, DC, November 1996.

[1] Totals may not add due to rounding.

[2] Includes wool, poultry, dry bean, grains, livestock and miscellaneous.

[3] Includes those cooperatives that provide services related to cooperative marketing and purchasing.

The number of agricultural cooperatives in New York State in 1995 showed a net decrease of 13 cooperatives from 1993 with a decrease in dairy cooperatives and a significant decrease in the number of supply cooperatives due to a major regional supply cooperative's restructuring. Total net business volume increased by $13 million, an increase of less than one percent from 1993. Supply cooperative volume decreased by $220 million while cooperative marketing volume increased by over $275 million. Dairy and fruit & vegetable marketing cooperatives showed substantial increases in volume over the two year period. Total volume of other marketing cooperatives declined particularly in the livestock industry, in part due to the merger of a livestock cooperative.

New York Cooperative Performance

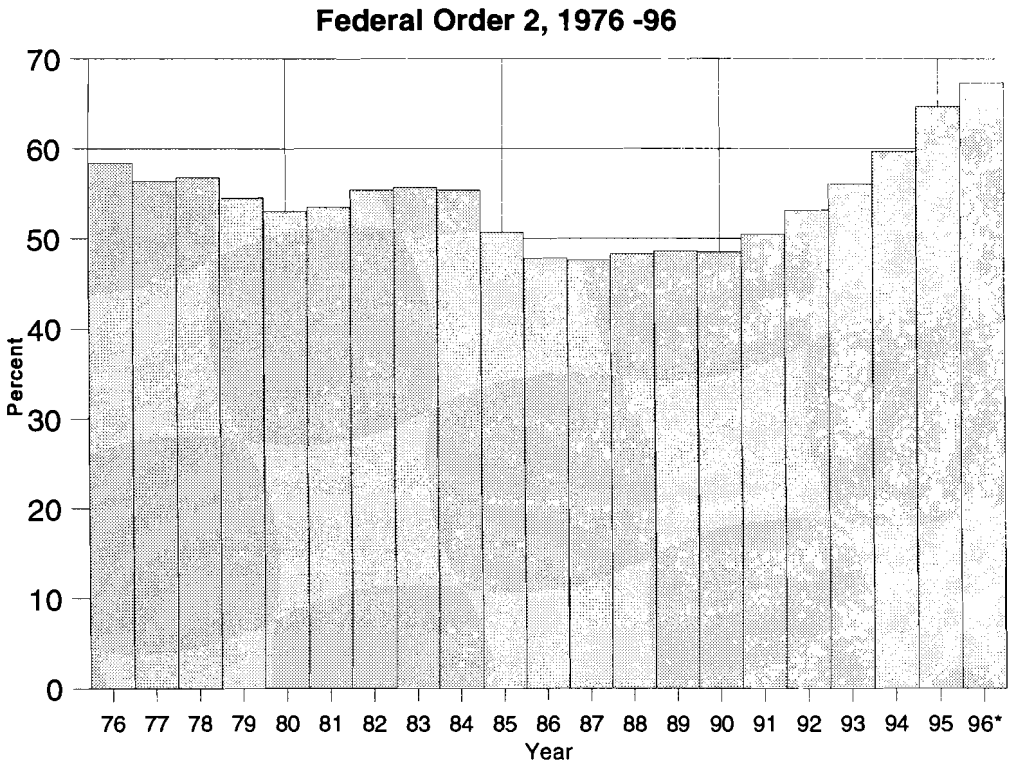
In general, major cooperatives operating in New York had good financial performance in 1996. We will start by examining cooperative share of producer milk receipts, review important developments in cooperatives, and finally look at some major factors likely to influence cooperatives in the coming year.

As indicated by Figure 3-1, the proportion of milk receipts handled by Milk Marketing Order 2 dairy cooperatives showed another significant increase in 1996. Nearly two-thirds of all milk is now marketed through cooperatives. This is the highest cooperative share in recent history, and is up almost 20 percentage points from less than a decade ago.

The increase in dairy cooperatives' marketing share is due to aggressive membership recruitment and fewer proprietary alternatives.

Elsewhere among dairy related cooperatives things are changing. Cooperative consolidation has been a keynote of 1996.

Figure 3-1. COOPERATIVE SHARE OF PRODUCER MILK RECEIPTS



* 1996 based on first six months
Source: Market Administrator's Office, NY-NJ Federal Milk Marketing Order.

On April 1, Eastern Artificial Insemination Cooperative merged with similar organizations from Pennsylvania and Louisiana to form Genex, Inc. At the same time Genex joined Cooperative Research

Incorporated (CRI). CRI is a holding cooperative of two other artificial insemination cooperatives and a dairy herd improvement cooperative, headquartered in Madison, Wisconsin.

In recent weeks Northeast Dairy Herd Improvement Association (NeDHIA) announced it will form an alliance with Dairylea, a major bargaining cooperative in the Northeast. NeDHIA will become a subsidiary of Dairylea, but leave the not-for-profit assets in a separate organization. Specific synergies seem limited to each organization's laboratory services, and some potential savings in administrative costs.

Both these developments are driven by the reduced number of dairy farmers and the need to spread increased fixed costs over a greater volume. This trend is likely to continue, especially if cooperatives are managed to improve the cash flow of their members.

Perhaps it is time to review the five ways cooperatives can benefit members. First, cooperatives can pay (if a marketing cooperative) or charge (if a supply/service cooperative) better prices. Typically, this encourages competitors to meet the cooperative's prices, therefore making the better prices available to both members and non-members.

The second way to return benefits to cooperative members is through patronage refunds. They are a distribution of the cooperative's net income based on the each members' use of the cooperative.

Third, cooperatives can pay a dividend on the amount of equity each member has invested in the cooperative. Most organizations prefer to pay patronage refunds rather than a dividend on equity, since a member's patronage may not be equal to their equity.

The fourth way for a cooperative to benefit members is by providing unique services.

Finally, a cooperative benefits members by its mere existence, and improving the competitiveness of the market in which it operates although this benefit is also available to both members and non-members.

It should be noted that the primary way for cooperatives to benefit members based on usage is by paying a patronage refund. Unfortunately, many cooperatives in New York did not pay a patronage refund in 1996.

Of the four major dairy cooperatives operating in New York, only two paid a patronage refund. While all four organizations had financially successful years, margins were thin and net income was primarily used to add to cooperative equity.

The major supply cooperative in the Northeast reported a significant turn-around, turning a $25 million pre-tax loss from 1995 into a $15 million pre-tax positive net income in 1996. Customer satisfaction seems to have improved and continued progress in improved performance is expected in 1997. Over the last year the cooperative has announced several joint ventures and strategic alliances which have provided synergies and cost savings.

The major vegetable and fruit processing cooperative in the state reported a loss and passed on that loss through lower prices to members. The primary reasons for this loss were high interest costs, due to its recent purchase of a processing company via a leveraged buy-out, and poor performance of a west coast division. Poor earnings performance was not unique to this cooperative; in 1996 most companies processing vegetables and fruits reported lower earnings. The recent sale of a can manufacturing operation will allow this cooperative to reduce its debt.

The major grape cooperative in New York reported increased sales and net income. However, this was after four straight years of increased production. As a result, per ton proceeds to members were down. Despite a very late, but relatively successful harvest, grape supply is expected to be tight. New product introductions have been successful, and demand for grape juice products appears to be strong.

The farm credit cooperatives in the northeast have made a smooth transition of their 1995 merger into CoBank. As a part of a continuous attempt to reduce operating costs, additional association mergers are on the horizon. Low interest rates had a favorable impact on earnings, but now as a part of a geographically larger organization, other factors (allowances for hedge-to-arrive contracts in the mid-west) may influence final results.

Cooperative Outlook

A year ago the Farm Bill posed major uncertainty for all cooperatives associated with the dairy industry. Now the Farm Bill is a "done deal", but milk marketing order mergers still present some uncertainty. While there are two more years before any merger decisions will be implemented, much attention will be focused on the impact of order mergers in the Northeast.

Subtly, the Farm Bill encouraged farmers to become more "market oriented". Fruit and vegetable cooperatives have historically been market driven, due to lack of dependence on government programs. Dairy related cooperatives will need to make the strategic changes that position them to handle greater market risk and compete in global markets. Recent consolidations of dairy related organizations are probably just a first step. Expect more cooperative consolidations in the future, whether through mergers, joint ventures, or strategic alliances. There is an increased need to spread fixed costs over more sales.

With only a few exceptions, Northeast cooperatives have not been aggressive in entering the world market. While there is a very steep learning curve in global marketing, be prepared for Northeast cooperatives to join the international competition.

1996 was a year of moderate, steady economic growth, and cooperatives benefited from it. In general, New York cooperatives faired relatively well. Pending any dramatic changes in the economy, 1997 should continue to contribute to the financial health of New York cooperatives.

Chapter 4. Finance

Eddy L. LaDue, Professor

Table 4-1. United States Farm Balance Sheet
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1994	1995
				billion dollars			
Assets							
Real Estate	202	384	783	586	626	706	756
Livestock	24	29	61	47	71	68	55
Machinery	30	57	80	83	85	88	87
Crops[a]	9	21	33	23	23	23	25
Purchased Inputs	c	c	c	1	3	5	3
Financial Assets	14	20	26	33	38	48	46
Total	279	511	983	773	846	938	972
Liabilities & Equity							
Real Estate Debt	28	45	90	100	75	78	79
Nonreal Estate Debt[b]	21	40	77	78	63	69	72
Total	49	85	167	178	138	147	151
Owner Equity	230	426	816	595	708	791	821
Total	279	511	983	773	846	938	972
Percent Equity	82	83	83	77	84	84	84

[a] Excludes crops under CCC loan.
[b] Excludes CCC loans.
[c] Not available.

Table 4-2. Changes in Structure, United States Farm Balance Sheet
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1994	1995
				percent of total			
Assets							
Real Estate	72	75	80	76	74	75	78
Livestock	9	6	6	6	8	7	6
Machinery	11	11	8	11	10	10	9
All Other[a]	8	8	6	7	8	8	7
Total	100	100	100	100	100	100	100
Liabilities							
Real Estate Debt	57	53	54	56	54	53	52
Nonreal Estate Debt[b]	43	47	46	44	46	47	48
Total	100	100	100	100	100	100	100

[a] Excludes crops under CCC loan.
[b] Excludes CCC loans.

Source: Agricultural Income and Finance, Economic Research Service, USDA, A1S-62, September 1996.

Table 4-3. Distribution of United States Farm Debt by Lender
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1994	1995
				billion dollars			
Real Estate							
Farm Credit System	6.4	14.5	33.2	42.2	25.8	24.6	24.8
Individuals & Others	10.3	15.8	27.8	25.8	15.1	17.5	18.0
Commercial Banks	3.3	5.6	7.8	10.7	16.2	21.1	22.2
Farm Service Agency	2.2	3.0	7.4	9.8	7.6	5.4	5.0
Insurance Companies	5.1	6.2	12.0	11.3	9.7	9.0	9.1
CCC-Storage	.2	.2	1.5	.3	a	0	0
Total	27.5	45.3	89.7	100.1	74.4	77.6	79.1
Nonreal Estate[b]							
Commercial Banks	10.5	19.0	30.0	33.7	31.3	36.7	37.7
Farm Service Agency	.7	1.6	10.0	14.7	9.4	6.0	5.1
Merchants & Dealers	4.7	8.4	17.4	15.1	12.7	15.2	16.2
Farm Credit System	5.3	10.7	19.7	14.0	9.8	11.2	12.5
Total	21.2	39.7	77.1	77.5	63.2	69.1	71.5

[a] Less than .05 billion.
[b] Excludes crops under CCC loan.

Table 4-4. Market Share of United States Farm Debt by Lender
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1994	1995
				percent of total			
Farm Credit System	24	30	32	32	26	24	25
Commercial Banks	28	29	23	25	35	40	40
Farm Service Agency	6	5	11	14	12	8	7
Insurance Companies	11	7	7	6	7	6	6
Individuals & Others	31	29	27	23	20	22	22
Total[a]	100	100	100	100	100	100	100

[a] Excludes crops under CCC loan.

Source: Agricultural Income and Finance, Economic Research Service, USDA, AIS-62 September 1996.

Table 4-5. New York Farm Balance Sheet
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1994	1995
				million dollars			
Assets							
Real Estate	2614	4881	6178	6520	7908	8786	8527
Livestock	536	653	1527	983	1258	1242	1139
Machinery	785	1303	1718	1875	1842	1830	1802
Crops[a]	204	396	561	491	535	351	289
Purchased Inputs	c	c	c	27	69	118	73
Financial Assets	135	140	145	175	197	272	261
Coop. Investments	180	341	462	493	470	446	422
Total	4454	7714	10591	10564	11966	13045	12513
Liabilities & Equity							
Real Estate Debt	353	634	1038	1125	892	879	854
Nonreal Estate Debt[b]	411	748	1582	1472	1268	1271	1318
Total	764	1382	2620	2597	2160	2150	2172
Owner Equity	3690	6332	7971	7967	9806	10895	10341
Total	4454	7714	10591	10564	11966	13045	12513
Percent Equity	83	82	75	75	82	84	83

[a] Excludes crops under CCC loan.
[b] Excludes CCC loans. All FmHA Emergency Loans are classified as nonreal estate. Total includes some nonreal estate loans made by New York City institutions to businesses outside New York State.
[c] Not available.

Table 4-6. Changes in Structure, New York Farm Balance Sheet
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1994	1995
				percent of total			
Assets							
Real Estate	59	63	58	62	64	67	68
Livestock	12	9	15	9	10	10	9
Machinery	17	17	16	18	15	14	15
All Other	12	11	11	11	11	9	8
Total[a]	100	100	100	100	100	100	100
Liabilities							
Real Estate Debt	46	46	40	43	41	41	39
Nonreal Estate Debt[b]	54	54	60	57	59	59	61
Total	100	100	100	100	100	100	100

[a] Excludes crops under CCC loan.
[b] Excludes CCC loans. All FmHA Emergency Loans are classified as nonreal estate. Total includes some nonreal estate loans made by New York City institutions to businesses outside New York State.

Source: Economic Research Service, USDA. Data revised November 1996.

Table 4-7. New York Farm Debt by Lender
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1994	1995
				million dollars			
Real Estate							
Farm Credit System	98	262	367	449	403	346	332
Individuals & Others	142	214	373	363	215	249	256
Commercial Banks	69	101	108	89	115	156	146
Farm Service Agency	34	45	145	192	155	124	116
Insurance Companies	7	8	26	26	9	4	4
CCC - Storage	3	4	19	6	a	0	0
Total	353	634	1038	1125	897	879	854
Nonreal Estate							
Commercial Banks	155	266	632	597	417	347	374
Farm Service Agency	26	37	284	287	219	196	176
Merchants & Dealers	91	164	338	257	216	257	274
Farm Credit System	139	281	328	331	416	471	494
Total[b]	411	748	1582	1472	1268	1271	1318

[a] Less than .5 million.

[b] Excludes CCC loans. All FmHA Emergency Loans are classfied as nonreal estate. Total includes some nonreal estate loans made by New York City institutions to businesses outside New York State.

Table 4-8. Market Share of New York Farm Debt by Lender
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1994	1995
				percent of total			
Farm Credit System	31	39	27	30	38	38	38
Commercial Banks	29	27	28	26	25	23	24
Farm Service Agency	8	6	17	19	17	15	14
Insurance Companies	1	1	1	1	a	a	a
Individuals & Others	31	27	27	24	20	24	24
Total	100	100	100	100	100	100	100

[a] Less than .5 percent.

Source: Economic Research Service, USDA. Data revised November 1996.

Table 4-9. Nonaccrual and Nonperforming Loans Farm Credit System, December 31

Year	Nonaccrual	Nonperforming
	percent of loan volume	
1988	6.5	12.3
1989	5.1	11.0
1990	4.5	9.7
1991	3.7	8.0
1992	2.7	6.0
1993	2.3	4.2
1994	1.9	2.9
1995	1.4	2.1
1996 (6/30)	1.2	1.8

Source: Annual and Quarterly Reports.

Table 4-10. Nonaccrural, Nonperforming, and Total Delinquent Farm Nonreal Estate Loans United States Commercial Banks, December 31

Year	Nonaccrual	Nonperforming[a]	Delinquent[b]
		percent of loan volume	
1982	1.3	2.5	5.1
1983	2.7	3.8	6.3
1984	4.1	5.2	7.8
1985	6.1	7.3	10.1
1986	5.9	7.0	9.4
1987	4.2	4.8	6.5
1988	2.9	3.3	4.5
1989	1.9	2.3	3.7
1990	1.6	1.9	3.1
1991	1.6	1.9	3.2
1992	1.5	1.8	2.8
1993	1.2	1.4	2.2
1994	0.9	1.1	2.0
1995	0.9	1.1	2.1
1996 (6/30)	1.1	1.6	2.8

[a] Includes nonaccrural and past due 90 days but accruing.
[b] Includes nonperforming and past due 30 to 89 days but accruing.

Source: Agricultural Financial Databook, Board of Governors of the Federal Reserve System.

Table 4-11. Delinquent Major Farm Progam Direct Loans Farm Service Agency

Date	Farm Ownership[a]		Operaing Loans[a]		Emergency Loans		Economic Emergency		Soil and Water[a]	
	U.S.	N.Y.	U.S.	N.Y.	U.S.	N.Y.	U.S.	N.Y.	U.S.	N.Y.
	percent of loan volume									
9/30/83	3	4	13	8	25	13	16	11	7	4
9/30/84	4	4	17	11	32	22	20	15	9	5
9/30/85	5	5	13	10	37	25	23	19	11	7
9/30/86	5	5	16	12	41	31	27	25	12	9
9/30/87	6	7	19	14	45	34	31	34	14	10
9/30/88	8	9	25	19	57	38	42	45	20	12
9/30/89	9	10	26	20	60	41	44	51	23	13
9/30/90	7	9	23	17	60	37	42	50	18	10
9/30/91	7	9	24	16	61	38	42	51	18	11
9/30/92	7	9	25	19	61	41	42	55	19	9
9/30/93	7	10	24	19	62	40	40	61	18	10
9/30/94	6	11	23	18	60	41	40	63	17	11
9/30/95	6	12	23	20	60	38	39	62	18	13
9/30/96	6	13	21	19	48	37	36	65	17	14

[a] Includes limited resource loans.

Source: FmHA Report Code 616.

The value of U.S. farm assets continued to increase in 1995. Real estate price rises of about seven percent more than offset declines in livestock values to result in a four percent increase in total assets. Recent high grain prices have placed upward pressure on farmland values in the midwest resulting in increased real estate prices for 1996. This combined with some recovery of livestock prices will result in at least another four percent rise in 1996.

Total U.S. farm debt also increased in 1995, with modest expansions of both real estate and nonreal estate debt resulting in a total rise of about three percent. The Farm Service Agency (formerly FmHA) continued to see modest shrink in its portfolio while all other lenders shared in increased total farm debt. Similar trends at similar rates appear to be occurring during 1996 and will likely continue into 1997. Commercial banks continue to be the dominant lender with a 40 percent market share.

In contrast to the U.S. situation, the value of New York farm assets continued a modest downward slide in 1995. Livestock asset values declined eight percent while real estate values declined by three percent. Debt increased about one percent with a shift to more nonreal estate lending. Similar to the national level experience, the Farm Service Agency experienced modest decline in loan volume while the other lenders shared the slight increases.

At the national level, Farm Credit System loan quality continues to improve. Quality is now nearly up to the strong levels maintained by commercial banks for the past few years. Delinquency rates of the Farm Service Agency improved somewhat during 1996. Although the dollar amount of FSA delinquencies has declined sharply in recent years, the decline in loan volume resulting from reduced lending keeps the delinquency rates high. The delinquencies for the FSA are for direct loans only. They do not include guaranteed loans which are becoming an increasing proportion of the portfolio and have much lower delinquency rates.

FIGURE 4-1. ANNUAL AVERAGE SHORT TERM INTEREST RATES

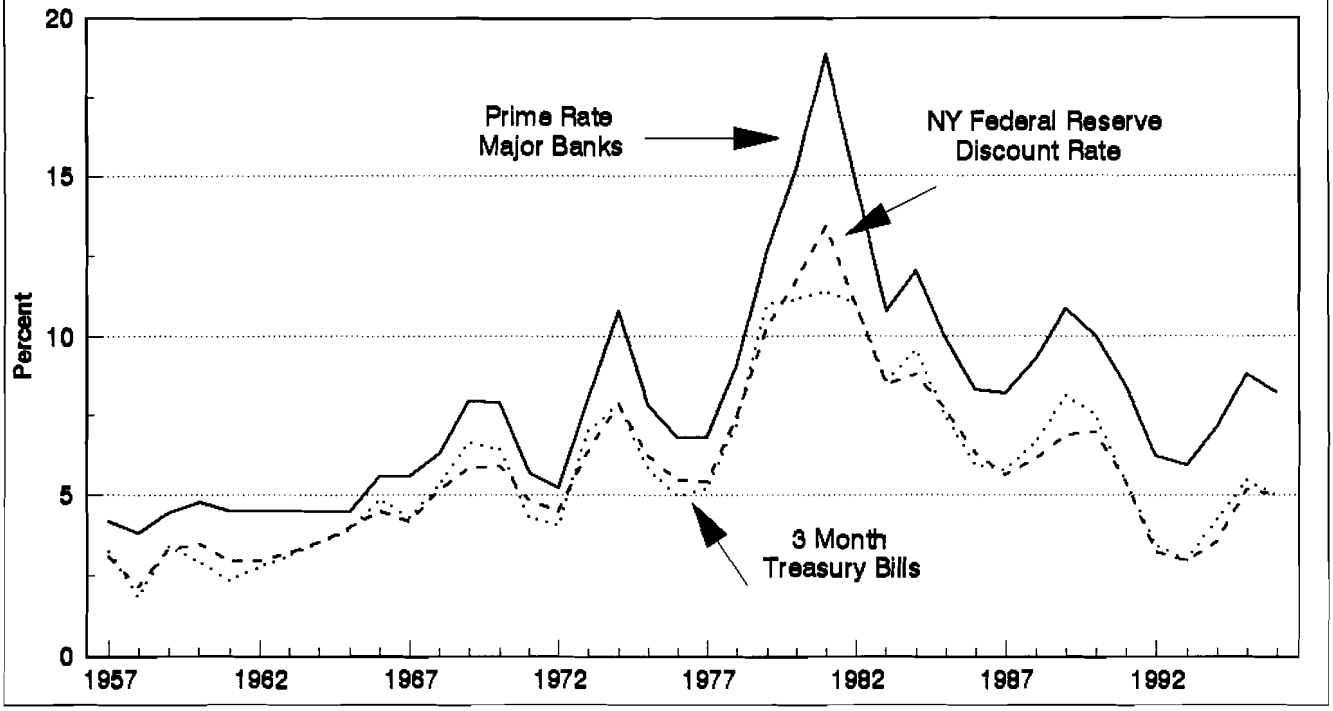
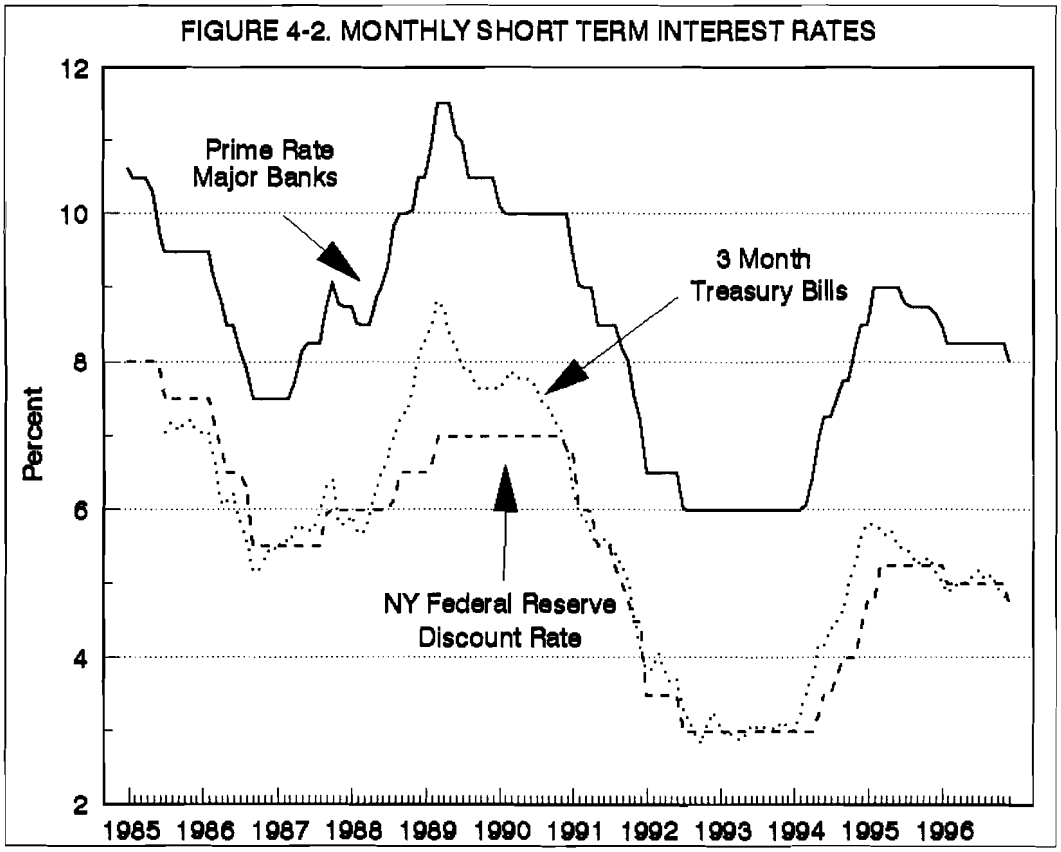
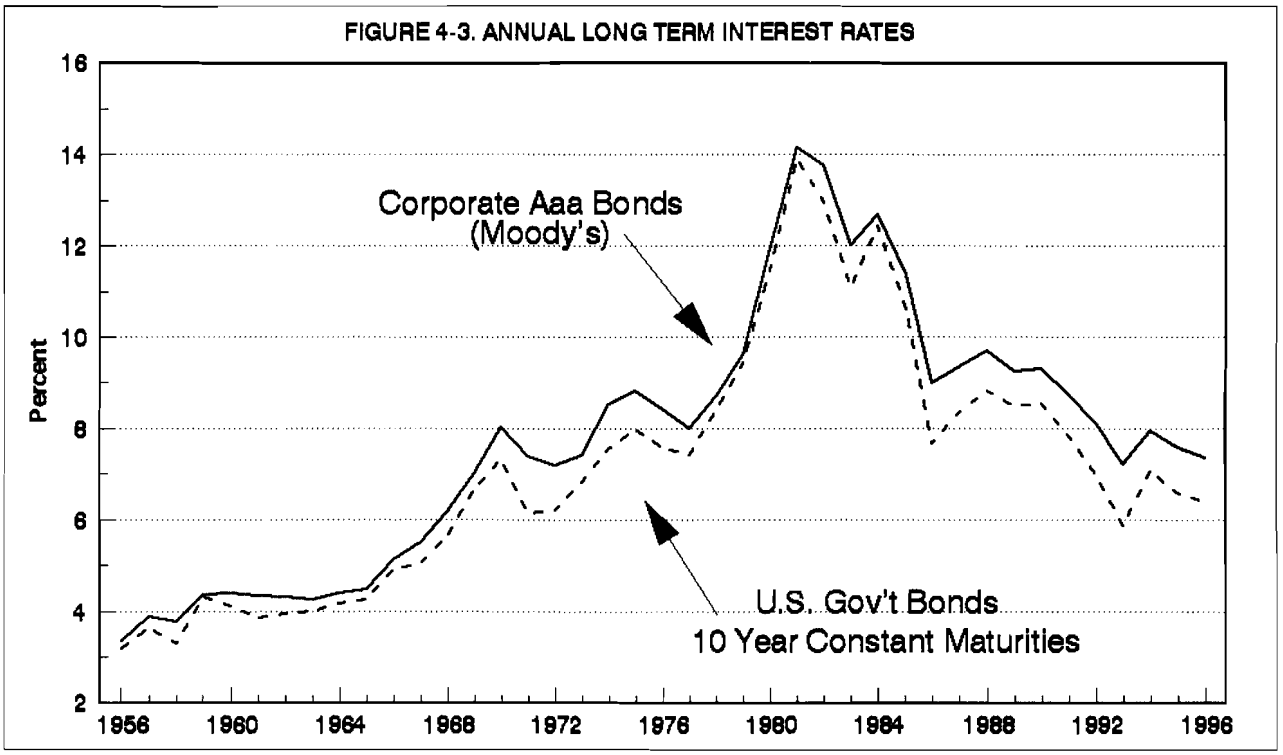


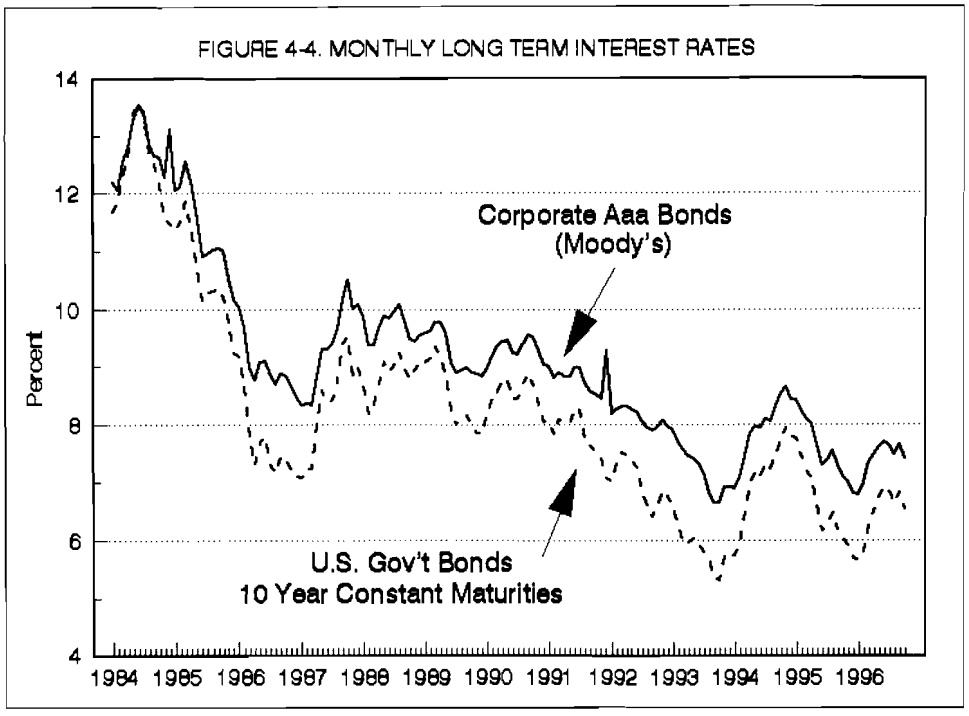
FIGURE 4-2. MONTHLY SHORT TERM INTEREST RATES



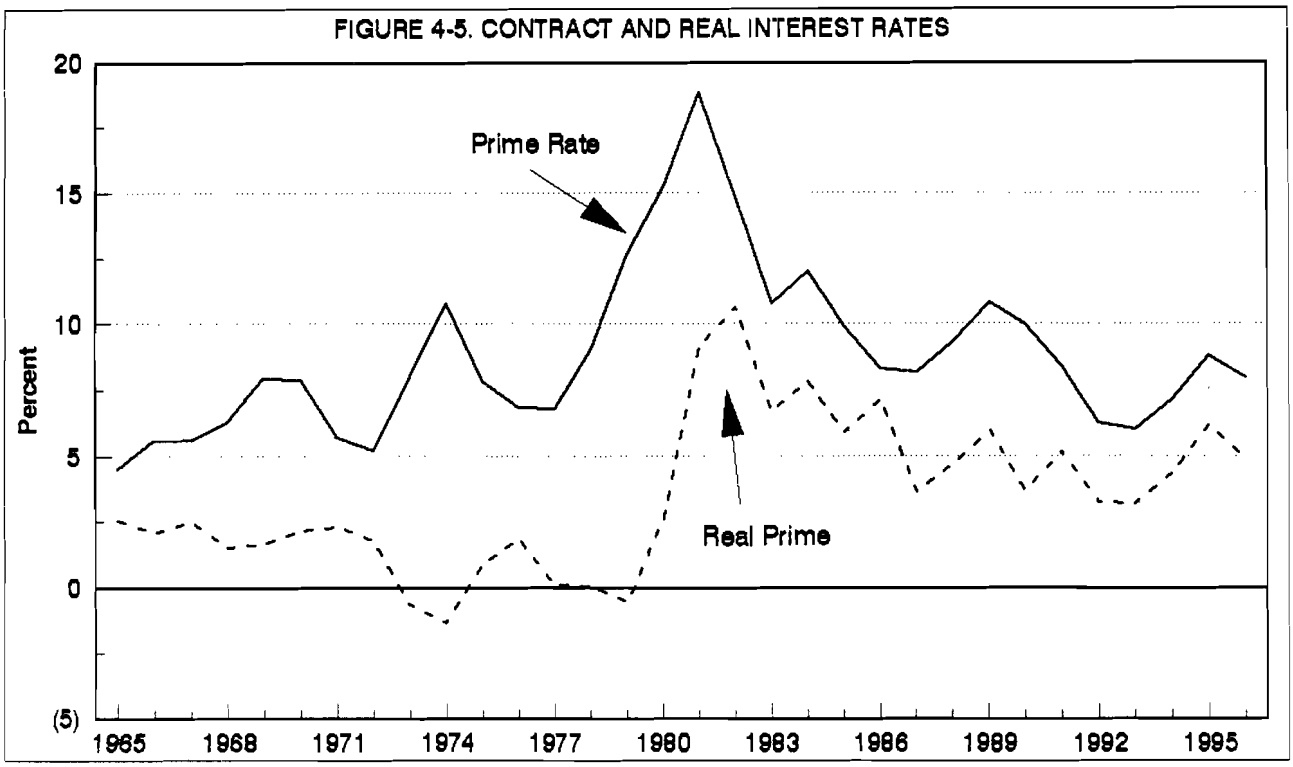
3 Month Treasury Bills		
	1995	1996
Jan.	5.81	5.02
Feb.	5.80	4.87
Mar.	5.73	4.96
Apr.	5.67	4.99
May	5.70	5.02
June	5.50	5.11
July	5.47	5.17
Aug.	5.41	5.06
Sept	5.26	5.12
Oct.	5.30	4.97
Nov.	5.35	
Dec.	5.16	



Following the achievement of historic lows in 1992 and 1993, basic short term interest rates rose sharply in late 1994 and early 1995 and then settled down slightly in late 1995 and into early 1996. Following a modest decline in early 1996, rates were remarkably constant throughout most of the year. Significant change did not occur until late in the last quarter when rates declined.



U.S. Govt. Bonds 10 Year Constant Maturity		
	1995	1996
Jan	7.78	6.80
Feb	7.47	6.99
Mar	7.20	7.35
Apr	7.06	7.50
May	6.63	7.62
June	6.17	7.71
July	6.28	7.65
Aug	6.49	7.49
Sept	6.20	7.68
Oct	6.04	7.42
Nov	5.93	
Dec	5.71	



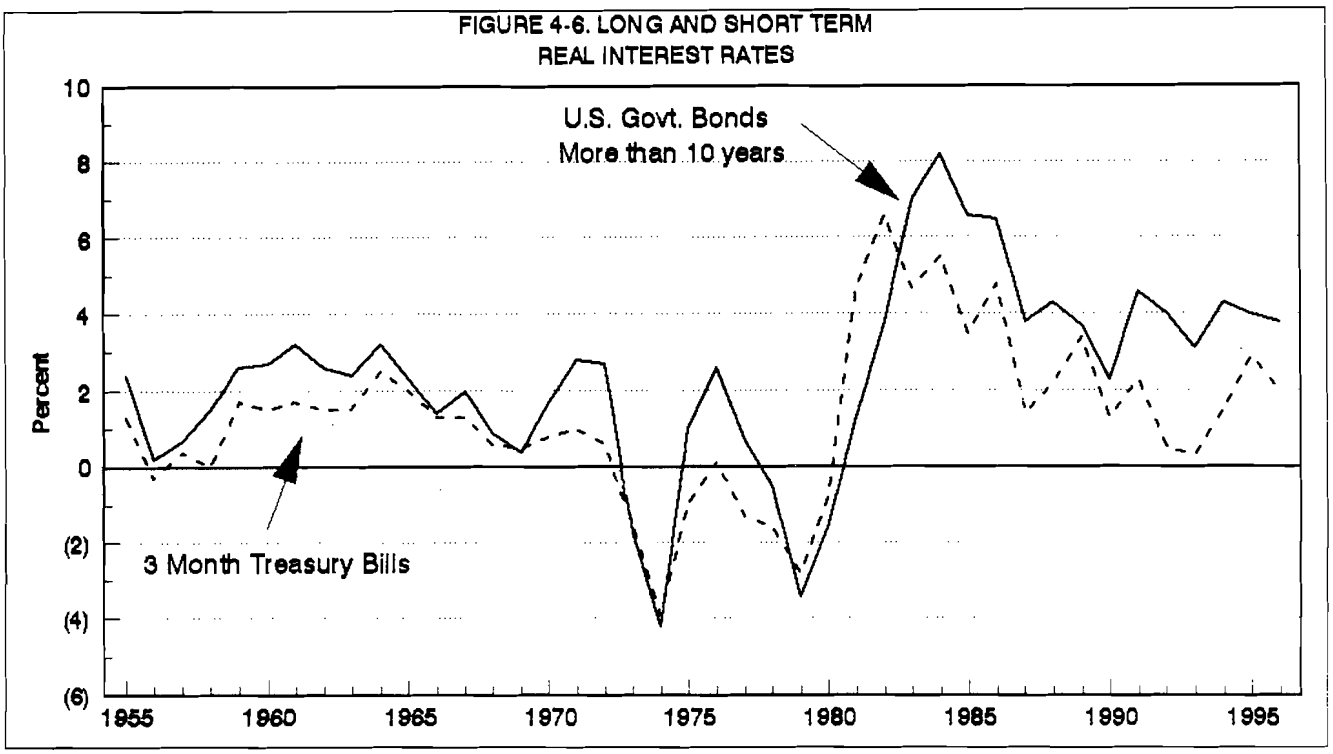
From an annual perspective, basic long term rates also achieved a low in 1993, rose sharply in 1994, declined modestly in 1995 and settled a little further in 1996. During 1996, monthly long term rates rose slightly early in the year and declined during the last quarter.

With both interest rates and inflation rates experiencing only modest change, real interest rates (interest rates adjusted for the current rate of inflation) experienced little change. The real rate on treasury bills of approximately two percent is close to expected normal levels. The four percent real rate on long term funds experienced during most of 1996 indicates that the markets are expecting higher rates of inflation in future years. Nominal rate declines in late 1996 may represent a reduction of that inflation premium.

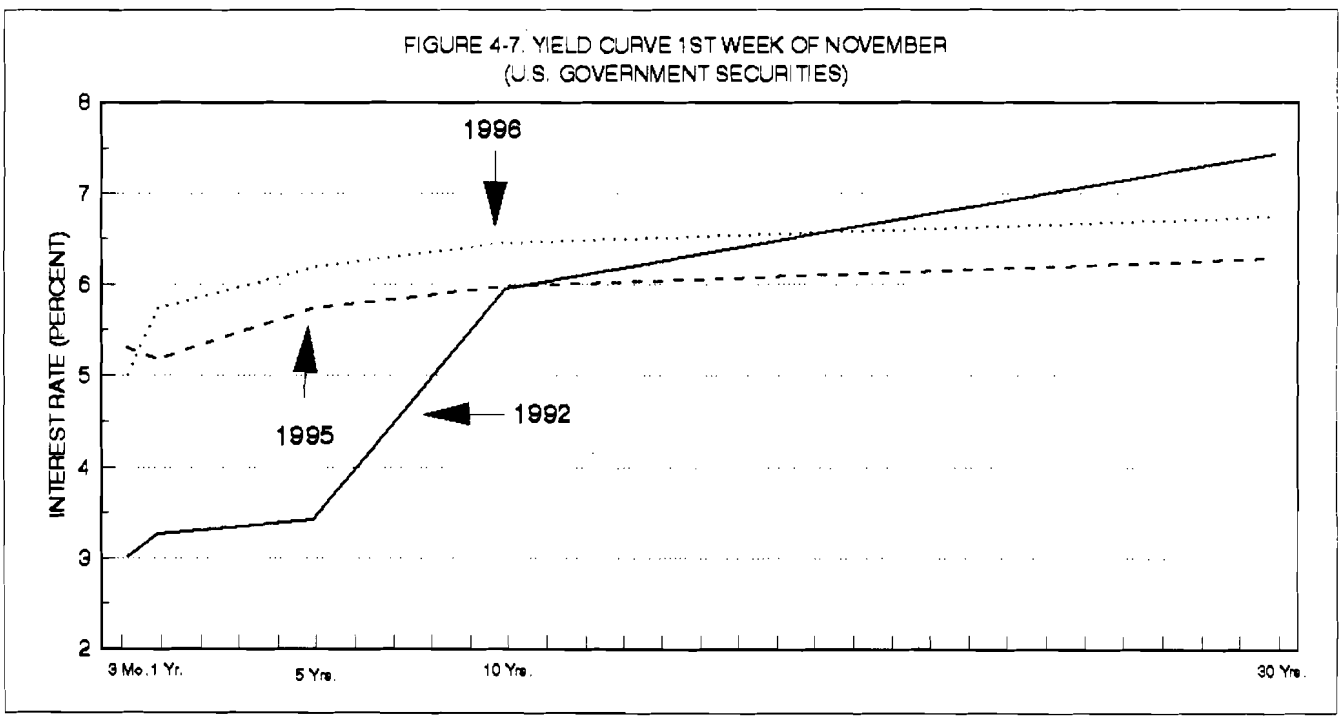
The yield curve which had flattened sharply from 1992 to 1995 became somewhat steeper in 1996. Long term rates that were only about one percent above short term rates are now one and one-half to two percent higher. This means that the short run cost of using a fixed rate loan rather than a variable rate loan was higher in 1996 than 1995.

Basic interest rates are expected to move lower during late 1996 and very early 1997. This is the result of continued modest inflation, at less than 3 percent, and economic growth, at rates that, while robust, are not high enough to put significant upward pressure on rates. With inflation remaining under control and growth close to the Federal Reserve Board targets, the FED is likely to allow rates to decline.

The path of interest rates after early 1997 will depend on the growth and inflation rates experienced at that time. If growth continues at rates in the 2 to 3 percent range and inflation remains under control, interest rates could remain at near late 1996 levels during 1997. However, it is currently expected that growth will likely exceed the 3 percent level, which will increase loan demand. The unemployment level is low, and when combined with strong economic growth, will likely put upward pressure on prices. Thus, some increase in inflation would occur. Under this scenario, interest rates could be expected to rise in 1997. Unless the growth rate exceeds current expectations or some other inflation factor enters, the rise is likely to be modest, possibly resulting in a return to 1996 rate levels.



Most farm level interest rates should decline during late 1996 and early 1997. Declines of as much as one-half percent could be expected. Rates tied to basic market rates, such as treasury bills, are more likely to decline than administered rates, such as the prime. Farmers seeking funding during this period should explore all alternatives for funding to be sure they are getting the best deal. Rates could easily start up again by the beginning of the second quarter of 1997. This may be a good year to tie down funding early in the year. Waiting until May or June may be too late to get the best rates.



Chapter 5. Grain and Feed

John R. Brake, W.I. Myers Professor of Agricultural Finance

The world grain situation was unusually tight in 1995-1996, but with improved crop production in 1996 the situation has eased considerably. Ending stocks for the 1995-1996 crop year were at, or near, all time lows for both wheat and corn, pushing prices to perhaps the highest levels ever. As shown in Table 5-1, world wheat stocks in 1995-96 were down to only 19% of use, and corn stocks dipped to only 12% of annual use.

TABLE 5-1. WORLD PRODUCTION, USE AND ENDING STOCKS OF WHEAT AND CORN, 1986-96

	Wheat					Corn				
Year	Production	Use	Export trade	Ending stocks	Stocks as % of use	Production	Use	Export trade	Ending stocks	Stocks as % of use
	- - - million metric tons - - -				*percent*	*- - - million metric tons - - -*				*percent*
1986-87	524	516	91	179	35	475	457	57	163	36
1987-88	496	525	112	150	29	450	467	57	149	32
1988-89	495	525	103	120	23	401	460	66	89	19
1989-90	538	532	102	121	23	461	477	74	73	15
1990-91	588	564	102	145	26	478	471	59	80	17
1991-92	542	559	123	129	23	487	488	67	79	16
1992-93	562	545	124	147	27	533	509	70	105	21
1993-94	559	563	118	141	25	471	506	67	72	14
1994-95	525	549	111	114	21	560	539	72	93	17
1995-96[a]	536	549	108	105	19	513	543	76	63	12
1996-97[b]	581	569	105	117	21	571	555	68	79	14

[a] Preliminary. [b] Forecast.

Source: Various issues of *World Agricultural Supply and Demand Estimates*, ERS and FAS, USDA.

As shown in Table 5-2 on the following page, the U.S. situation for wheat and corn was quite similar to that of the world. U.S. wheat stocks at the end of the 1995-1996 crop year were down to 16% of annual use, and corn stocks were down to only 6% of annual use. Both wheat and corn prices reached their highest level for any year at least since 1974. Also, as a result of both the world and U.S. situation, at one point in late spring of 1996 U.S. wheat prices went over $7 per bushel while U.S. corn prices went above $5.

Substantially improved production of both crops in 1996, however, has improved the forecast for ending stocks in 1997 and has brought prices down to substantially lower levels. The 1996 wheat crop was about 100 million bushels larger than the 1995 crop, and the 1996 corn crop came in at almost 1.9 billion bushels more than the 1995 crop. With the substantially larger corn crop being harvested, by mid November 1996 the corn futures market had moved back into the $2.50 to $2.60 range. USDA's November corn forecast was that the price of corn would average $2.50 to $2.90 for the 1996-97 crop year, and that may still be a bit too high when compared to prices in previous years with similar levels of ending stocks.

TABLE 5-2. PRODUCTION, ENDING STOCKS AND PRICES, WHEAT AND CORN, U.S., 1986-96

Year	Wheat				Corn			
	Production	Ending stocks	Stocks as % of use	Average price per bu.	Production	Ending stocks	Stocks as % of use	Average price per bu.
	million bushels		*percent*	*dollars*	*million bushels*		*percent*	*dollars*
1986-87	2,091	1,821	83	2.42	8,226	4,882	66	1.50
1987-88	2,108	1,261	47	2.57	7,131	4,259	56	1.94
1988-89	1,812	702	29	3.72	4,929	1,930	27	2.54
1989-90	2,037	536	24	3.72	7,526	1,344	17	2.36
1990-91	2,736	866	35	2.61	7,934	1,521	20	2.28
1991-92	1,981	472	20	3.00	7,475	1,100	14	2.37
1992-93	2,459	529	21	3.24	9,482	2,113	25	2.07
1993-94	2,396	568	23	3.26	6,336	850	11	2.50
1994-95	2,321	507	20	3.45	10,103	1,558	17	2.26
1995-96[a]	2,183	376	16	4.55	7,374	426	6	3.24
1996-97[b]	2,282	435	19	4.30	9,265	1,107	13	2.70

[a] Preliminary. [b] Forecast.
Source: Various issues of *World Agricultural Supply and Demand Estimates*, ERS & FAS, USDA.

Table 5-3 shows that production of major field crops for both the U.S. and New York was up in 1996. Similar to corn, U.S. grain sorghum production is much higher in 1996. New York corn grain production increased more than 20% from a year earlier, but winter wheat yields were off substantially in 1996 from 1995.

TABLE 5-3. CROP PRODUCTION, UNITED STATES AND NEW YORK, 1994-96[a]

Crop	Acres Harvested			Yield per Acre			Production		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
United States	*million acres*			*bushels*			*million bushels*		
Corn grain	72.9	65.0	73.3	138.6	113.5	126.5	10,103	7,374	9,265
Sorghum	8.9	8.3	12.0	72.8	55.6	68.4	649	460	820
Oats	4.0	3.0	2.7	57.1	54.7	57.8	229	162	155
Barley	6.7	6.3	6.8	56.2	57.6	58.5	375	360	397
Wheat	61.8	60.9	62.9	37.6	35.8	36.3	2,321	2,183	2,282
Soybeans	60.9	61.6	63.4	41.4	35.3	37.9	2,517	2,177	2,403
New York	*thousand acres*			*bushels*			*thousand bushels*		
Corn grain	590	610	700	116	105	111	68,440	64,050	77,700
Oats	110	90	75	64	59	57	7,040	5,310	4,275
Wheat	115	125	150	53	55	43	6,095	6,875	6,450
				tons			*thousand tons*		
Corn silage	520	485	N.A.	15.8	14.0	N.A.	8,216	6,790	N.A.
All hay	1,660	1,600	1,550	2.39	2.16	2.31	3,961	3,448	3,583
Alfalfa hay[b]	620	650	690	2.95	2.60	2.70	1,829	1,690	1,863

[a] All 1996 data are preliminary. U.S. estimates as of 11/12/96; NY estimates as of 10/12/96.
[b] Includes alfalfa mixtures.
Source: USDA *World Agricultural Supply and Demand Estimates* and New York Crop Reporting Service.

TABLE 5-4. U.S. CORN AND FEED GRAIN BALANCE SHEETS, 1993-94 THROUGH 1996-97				
Item	1993-94	1994-95	1995-96 (est.)	1996-97 (proj.)
Supply		**CORN** *(million bushels)*		
Beginning Stocks (Sept. 1)	2,113	850	1,558	426
Production	6,336	10,103	7,374	9,265
Imports	21	10	17	10
Total	8,478	10,962	8,949	9,702
Disappearance				
Feed and Residual	4,704	5,536	4,725	4,975
Food, Industrial and Seed	1.588	1,691	1,583	1,670
Total Domestic	6,292	7,227	6,307	6,645
Exports	1,328	2,177	2,215	1,950
Total Disappearance	7,620	9,405	8,522	8,595
Ending Stocks (Aug. 30)	850	1,558	426	1,107
Season average farm price	$2.50	$2.26	$3.24	$2.50-$2.90
Supply		**FEED GRAINS**[a] *(million metric tons)*		
Beginning Stocks (Sept. 1)	63.1	27.4	45.3	14.4
Production	186.2	284.6	209.2	267.1
Imports	3.9	3.3	3.3	2.7
Total	253.2	315.2	315.2	284.2
Disappearance				
Feed and Residual	139.3	159.1	134.3	146.7
Food, Industrial and Seed	46.2	48.4	45.7	47.9
Total Domestic	185.5	207.5	180.0	194.6
Exports	40.3	62.4	62.7	56.1
Total Disappearance	225.8	269.9	242.8	250.7
Ending Stocks	27.4	45.3	14.4	33.6

[a] Marketing year beginning September 1 for corn and sorghum, June 1 for barley and oats.
Source: *World Agricultural Supply and Demand Estimates*, USDA, November 12, 1996.

The corn crop has been in a small crop, big crop, small crop, big crop mode for the last four years. The 1993 crop at 6.3 billion bushels was well below average. That was followed by the 10.1 billion bushel largest crop ever. Then came 1995 with another small crop followed by 1996's crop which surpassed 9.2 billion bushels. The 1995-96 ending stocks of 426 million bushels were the lowest ending stocks in many, many years. Apparently one of the factors that pushed prices briefly to $5 in the spring of 1996 was that exports continued at very high levels even in the face of spiraling prices. Also contributing to the stronger corn prices was the overall feed grain situation. Ending stocks of feed grains in 1996 were less than one-third of ending stocks the previous year. In short, all feed grains stocks were at unusually low levels.

The corn supply is markedly better in 1996-97, and ending stocks next August are expected to rebound to levels somewhat above the ending stocks in 1994. Also, with substantially increased production of other feed grains, there is little concern about having sufficient feed supplies over the next year. Still, if the cycle of the last four years were to continue, the 1997 crop would be on the low end of the production cycle rather than the high end, and supplies would be starting out at a lower level than in 1994-95.

TABLE 5-5. U.S. WHEAT AND SOYBEAN BALANCE SHEETS, 1993-94 THROUGH 1996-97				
Item	1993-94	1994-95	1995-96 (est.)	1996-97 (proj.)
Supply		**WHEAT** (*million bushels*)		
Beginning Stocks (Sept. 1)	531	568	507	376
Production	2,396	2,321	2,183	2,282
Imports	109	92	68	70
Total	3,036	2,981	2,757	2,728
Disappearance				
Food	869	853	884	910
Seed	96	89	104	108
Feed and Residual	274	344	152	325
Total Domestic	1,240	1,287	1,140	1,343
Exports	1,228	1,188	1,241	950
Total Disappearance	2,467	2,475	2,381	2,293
Ending Stocks (May 31)	568	507	376	435
Season average farm price	$3.26	$3.45	$4.55	$4.10-$4.50
Supply		**SOYBEANS** (*million bushels*)		
Beginning Stocks (Sept. 1)	292	209	335	183
Production	1,871	2,517	2,177	2,403
Imports	6	5	5	4
Total	2,170	2,731	2,517	2,590
Disappearance				
Crushings	1,276	1,405	1,370	1,390
Exports	589	838	845	870
Seed, Feed	67	72	72	70
Residual	29	81	46	50
Total Disappearance	1,961	2.396	2,333	2,380
Ending Stocks (Aug. 30)	209	335	183	210
Season average farm price	$6.40	$5.48	$6.77	$6.15-$6.85

Source: *World Agricultural Supply and Demand Estimates*, USDA, November 12, 1996.

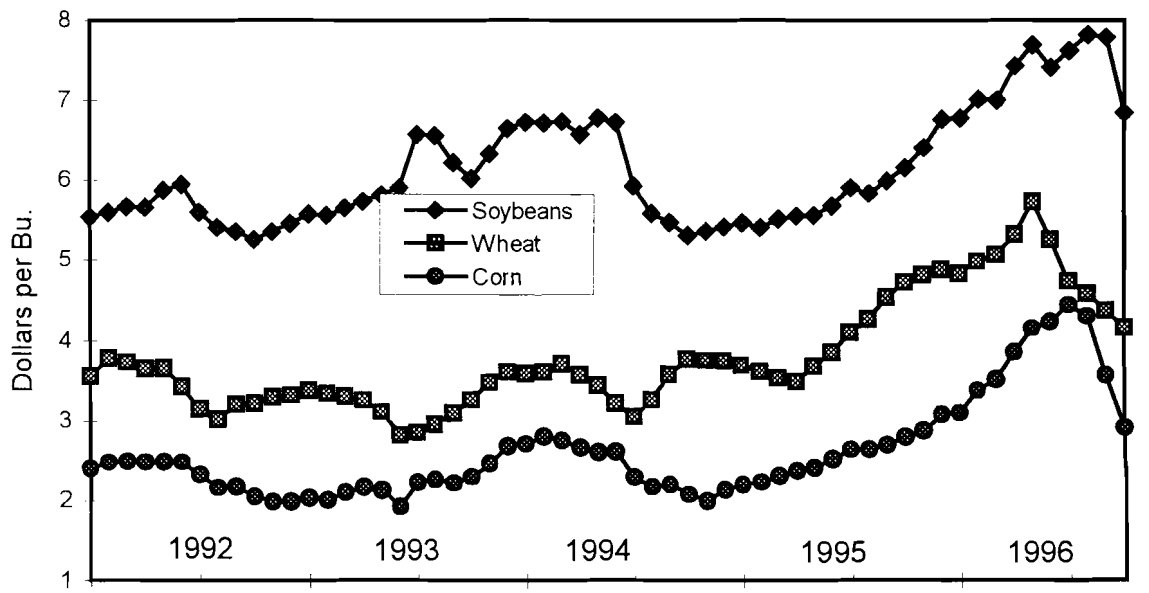
As shown in Table 5-5, wheat production has varied from almost 2.4 billion bushels in 1993 to just under 2.2 billion bushels in 1995. Ending stocks have been as high as 568 million bushels in 1994 to as low as 376 million in 1996. Food use of wheat has increased slowly from year to year and is expected to surpass 900 million bushels for the first time in 1996-97. With the short supply of wheat in 1995-96, feed use dropped substantially. Exports over the past four years have generally been about 1.2 billion bushels, but the forecast is that exports will drop off in the current year with improved wheat production in a number of other wheat-producing countries. Note, however, that if exports should not drop off as expected, projected ending stocks would likely drop and prices could become volatile. Even with the forecast for much lower exports, ending stocks in 1997 are still expected to be somewhat below those of 1994 and 1995.

The soybean balance sheet shows how production variability over the past four years has affected utilization, ending stocks and prices. The small 1993 crop brought relatively strong prices, but the large 1994 crop pushed up exports and restored ending stocks. A smaller crop in 1995 led to much lower ending stocks when exports remained strong. The 1996 crop is somewhat improved from 1995, and ending stocks are forecast to be near those of 1993-94. Prices are also forecast to be near the prices of 1993-94.

Figure 5-1 shows monthly prices for corn, wheat and soybeans since the start of 1992. Soybean prices were strong from mid-1993 to mid-1994 for reasons shown in the table on the previous page. The short crop in 1993 was recognized by the summer of 1993, but prices came back to lower levels by summer of 1994 when it became evident that a larger crop was in process. The situation repeated to some extent in 1995 as poor crop prospects were recognized in the latter part of the year. When soybean exports continued to be strong in late 1995 and early 1996, prices moved to the highest levels in many years.

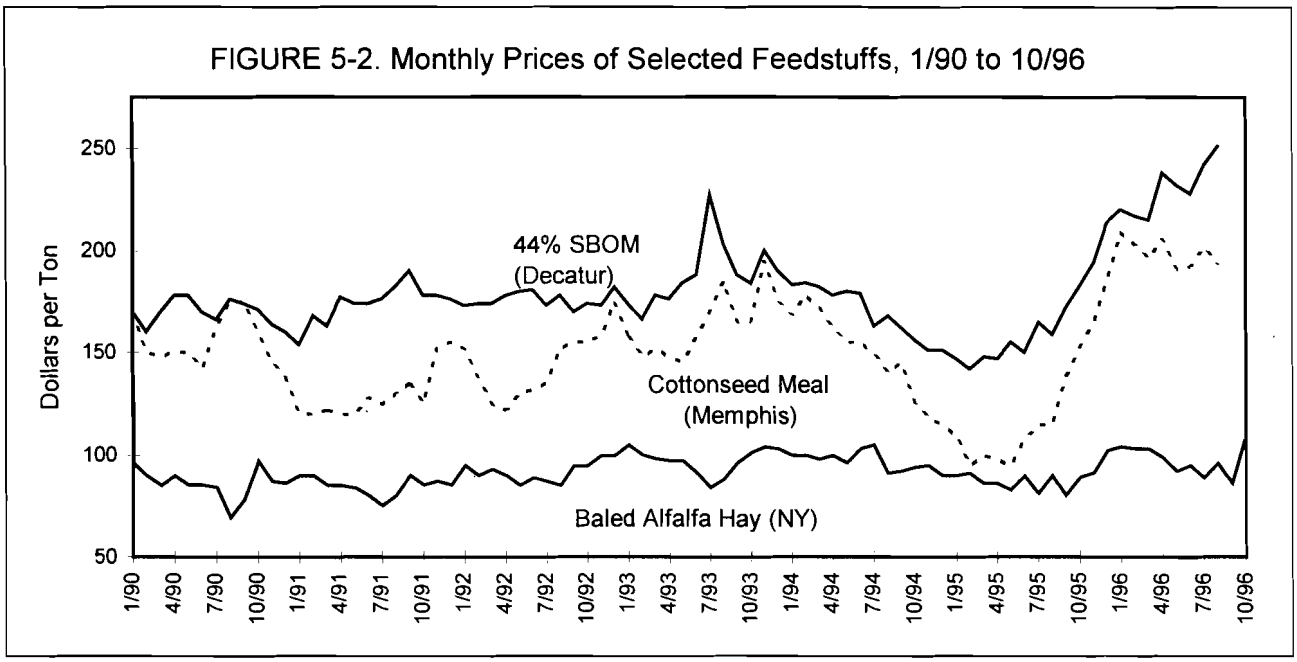
Wheat prices have tended to have a yearly seasonality to them over the past five years. Prices have strengthened in the late summer and fall after moving down somewhat in the late winter to early summer. Wheat prices remained in the $3 to $4 range for the most part until summer of 1995 when, like soybeans and corn, prices moved strongly higher. By spring of 1996 wheat prices hit their high, and since then prices have dropped substantially.

FIGURE 5-1. Prices Received: Corn, Wheat & Soybeans, 1992-96

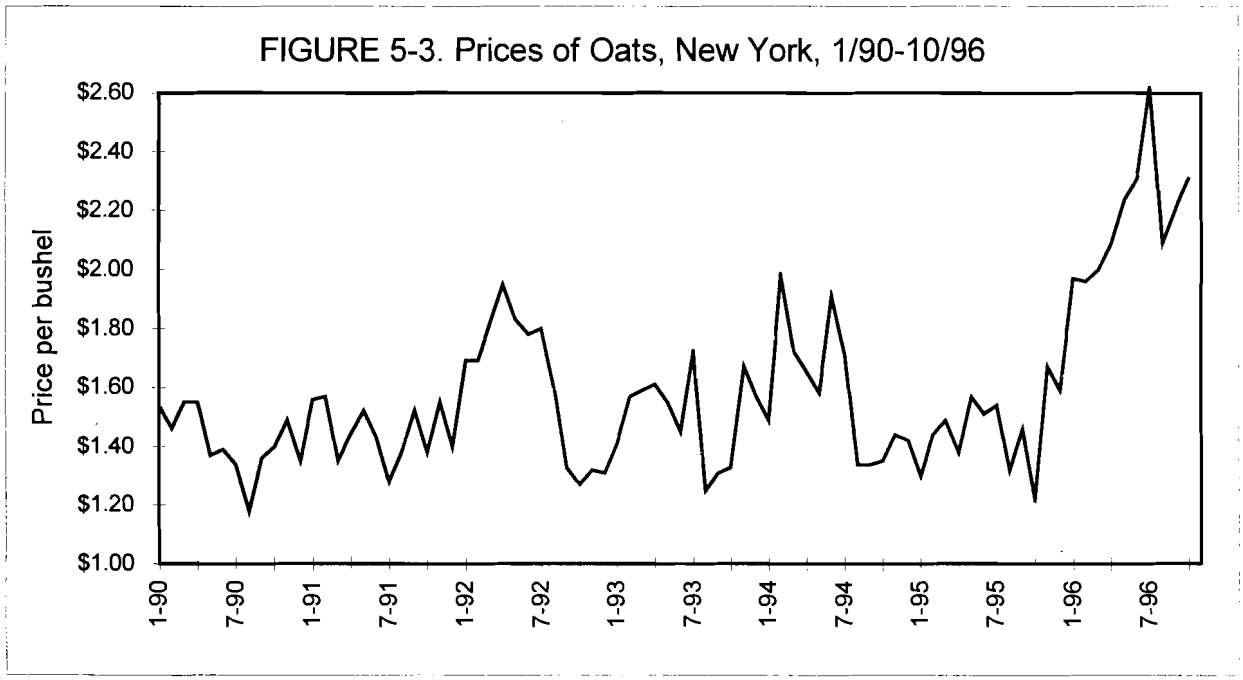


Even with the small 1993 crop, corn prices remained largely within the $2 to $3 range from 1992 until fall of 1995 when the small 1995 corn crop began to push prices higher. While prices moved slowly higher in the fall of 1995, it wasn't until late winter and early spring of 1996 that continued strong exports and feed use had the effect of pushing prices sharply higher. By summer nationwide prices were well above $4, but then as the fall harvest approached and the threat of early frost receded, prices of corn began to move lower. By late fall, December 1996 futures, which peaked at $3.89 per bushel in June of 1996, had dropped below $2.60.

With the relatively poor production of many crops in 1995, most feed prices moved higher. As shown in Figure 5-2 on the next page, prices of 44% soybean oil meal and cottonseed meal both moved strongly higher in the fall of 1995. SBOM prices relate directly to soybean prices, and prices of cottonseed meal, a close substitute for SBOM, tend to follow. Even prices of alfalfa hay in New York moved up into the $100 per ton range in the late months of 1995 and early 1996.



Production of oats fell off in 1995 as with many other field crops. The result for New York prices is shown in Figure 5-3. As the short supplies of corn and other feed grains became evident in late 1995 and into the first half of 1996, prices of oats rose strongly, at one point crossing the $2.60 mark in New York. By late summer of 1996, prices of oats had fallen back within the $2.20 to $2.30 range.



Chapter 6. Dairy — Markets and Policy

Mark W. Stephenson, Senior Extension Associate

1997 Dairy Outlook

Positive Factors:

- Lower concentrate prices than in 1995–96
- Continued strength in milk price
- Strong economy and consumer demand

Negative Factors:

- Poor quality of forage
- Grain prices are still higher than more "normal" years
- Few heifers available for replacement

Uncertainties:

- Federal Milk Marketing Order reform process
- New England Dairy Compact

New York Dairy Situation and Outlook
1994, 1995, Preliminary 1996, and Projected 1997

Item	1994	1995	1996	1997	Percent Change 95-96	Percent Change 96-97
Number of milk cows (thousand head)	718	703	702	698	-0.1	-0.6
Milk per cow (lbs.)	15,905	16,562	16,600	16,900	0.2	1.8
Total milk production (million lbs.)	11,420	11,643	11,653	11,796	0.1	1.2
Blended milk price ($/cwt.) [a]	12.98	12.56	14.44	14.11	15.0	-2.3

[a] New York–New Jersey blend price, 201–210 mile zone, 3.5 percent fat, this price excludes any premiums or assessments. The effective blend price after milk price assessments is $12..81 for 1994; $12.41 for 1995 and $14.41 for 1996, assuming no refund.

Table 1. U.S. Milk Supply and Utilization, 1990–1997.

	1990	1991	1992*	1993	1994	1995[a]	1996*[b]	1997[c]
Supply								
Cows Numbers (thous.)	9,993	9,826	9,688	9,589	9,500	9,461	9,364	9,270
Production/cow (lbs)	14,782	15,031	15,574	15,704	16,175	16,451	16,453	16,820
Production	147.7	147.7	150.9	150.6	153.7	155.6	154.1	155.9
Farm Use	2.0	2.0	1.9	1.8	1.7	1.6	1.5	1.5
Marketings	145.7	145.7	149.0	148.8	152.0	154.0	152.6	154.4
Beginning Commercial Stocks	4.1	5.1	4.5	4.7	4.5	4.3	4.1	4.4
Imports	2.7	2.6	2.5	2.8	2.9	2.9	2.6	2.4
Total Supply	**152.5**	**153.5**	**156.0**	**156.3**	**159.4**	**161.2**	**159.3**	**161.2**
Utilization								
Commercial Disappearance	138.4	138.6	141.3	145.1	150.3	155.0	154.7	155.6
Ending Commercial Stocks	5.1	4.5	4.7	4.5	4.3	4.1	4.4	4.1
DEIP	0.0	0.7	1.5	1.4	2.4	1.9	0.2	1.5
Net Removals (excluding DEIP)	9.0	9.7	8.4	5.3	2.4	0.2	0.0	0.0
Total Use	**152.5**	**153.5**	**156.0**	**156.3**	**159.4**	**161.2**	**159.3**	**161.2**

Source: Dairy Situation and Outlook, Milk Production, and Dairy Market News, U.S. Department of Agriculture. Note that total may not add exactly due to rounding.

* Leap year.
[a] Revised.
[b] Based on preliminary USDA data and Cornell estimates.
[c] Projected by Mark Stephenson.

The U.S. Dairy Situation and Outlook

Milk Supplies

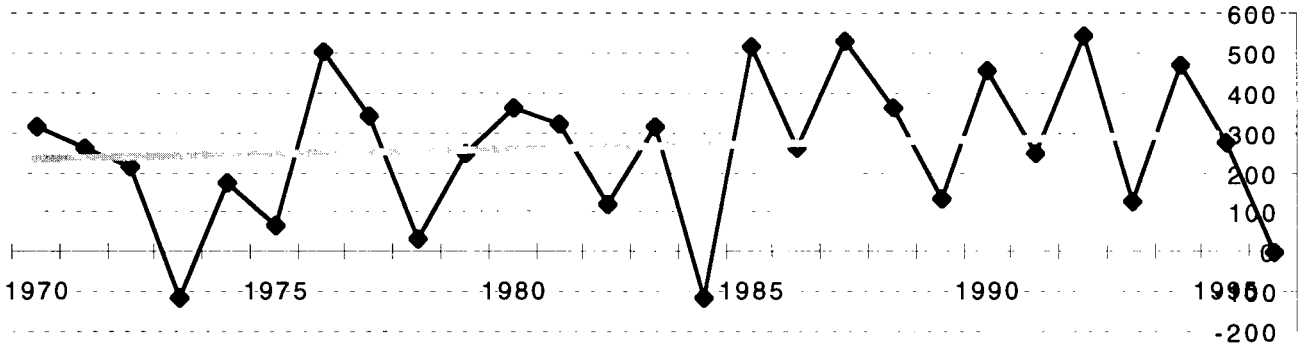
What a strange year 1996 has been for the dairy industry! This time last year, I was anticipating most of the factors that have contributed to the dramatic price movements that we have witnessed and the direction of price movement was correctly forecast. However, I am unaware of anyone who had the foresight to capture the magnitude of milk price increases that we have experienced this summer and fall.

The poor 1995-96 harvest and small carry over of grain stocks resulted in high feed prices for much of this past year. A winter and spring drought in the Southwest and Plains states fueled fears that wheat and corn shortages would continue through the 1996-97 harvest. And, a cold wet spring in many other regions of the country delayed corn planting and alfalfa harvest. These factors resulted in record high grain prices and poor quality first cutting hay.

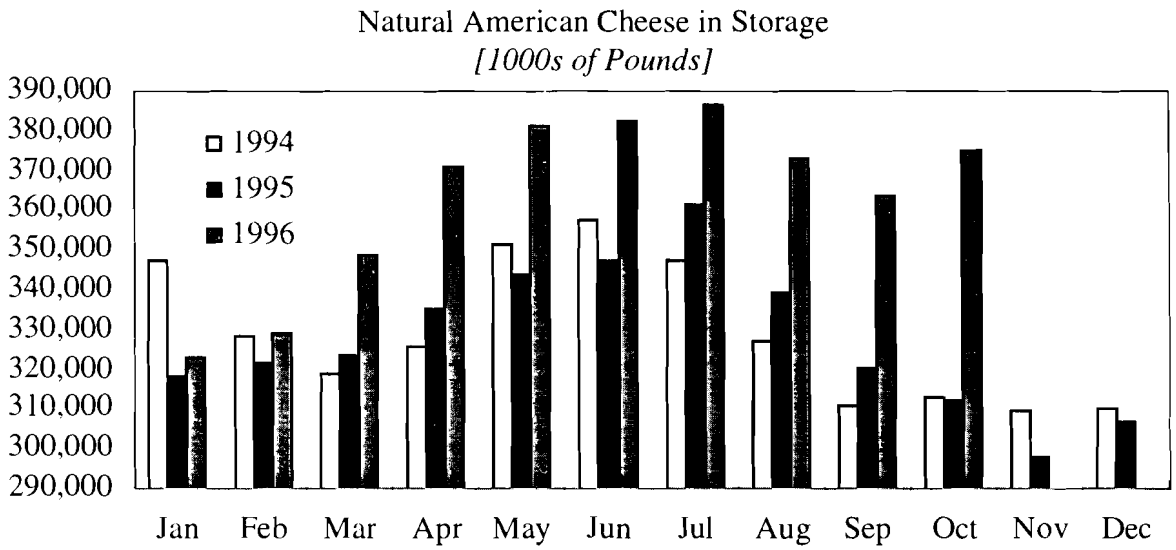
The high grain costs were evidenced in the cost of one hundred pounds of concentrate fed to dairy cattle. Nationally, this valued peaked in July at $9.87, a value that was $2.21 more than a year earlier. A predictable farm-level response to these high prices is the reduction in the amount fed. In January national average grain feeding was 18.8 pounds of concentrate per cow per day. That number has been declining every month this year with the most recent survey in October showing only 18.0 pounds per cow per day being fed.

An obvious result of reduced concentrate feeding is the loss of milk production per cow. Long-term trends in the industry lead us to expect that better genetics and management practices yield about a two percent increase in pounds per cow per year. This year, production per cow will be little better than it was last year—a phenomenon that we haven't seen in a very long time. Nominal yield increases and a typical one percent decline in cow numbers will give us a slight annual milk production loss compared with last year.

Change in Pounds of Milk per Cow per Year



Cheese makers had correctly anticipated milk shortages. Cheese inventories normally build through the summer and into the fall as manufacturers prepare for the strong seasonal demand of the holidays. This year, manufacturers expected tight milk supplies and were building inventories earlier than normal. To do that, they had to be willing to pay more for milk would be the case with customary supply levels. These conditions gave us milk, cheese and butter prices that were higher than we have ever had. It also set the stage for a dramatic drop in prices.

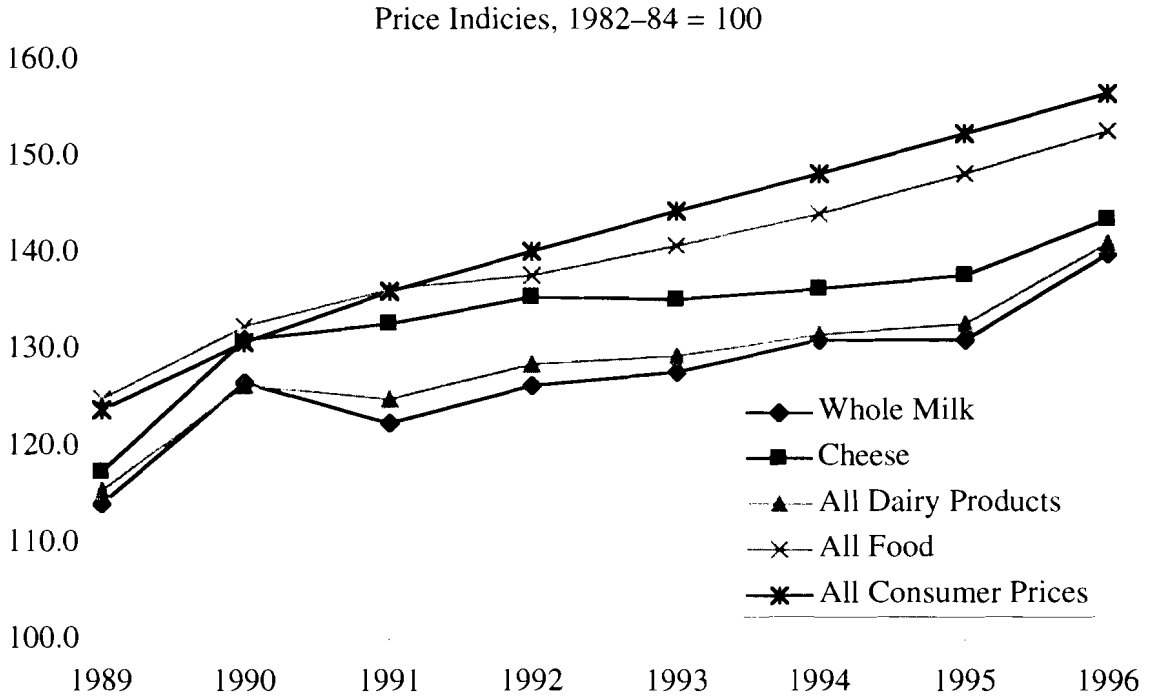


With volatile prices over the past five or six years, the dairy industry has chosen to hold smaller inventories of product. Many processors absorbed large losses in inventory value when milk (and cheese) prices dropped dramatically in 1990. It was against this trend toward smaller inventory that we witnessed the buildup of product in cold storage this fall. By October, processors had twenty percent more American cheese in their warehouses than they did a year ago. This was enough aged cheese to see them through the holiday sales period and the price of cheese (and milk) began to drop.

Milk Demand

As dairy product prices were climbing toward record levels, many industry observers were wondering what consumer reaction would be. We often observe that much of the volatility in farm and commodity prices is dampened by the time the product arrives at retail. Part of the explanation for this is that not all of the cost of the retail product is the raw ingredient price. For example, the value of farm milk in a gallon on the store shelves is about half of the retail cost so that if farm milk prices increase by 30 percent, we would expect about a 15 percent increase at retail. Manufacturers and

retailers are also hesitant to move consumer prices dramatically, and so absorb some losses as prices are rising and a little more margin when prices are falling. Nonetheless, retail prices did rise. The consumer price and all food index has risen at a fairly normal rate in 1996. However, the chart below shows that all dairy product prices have risen at a steeper rate than the CPI and all food and more rapidly than recent trends.

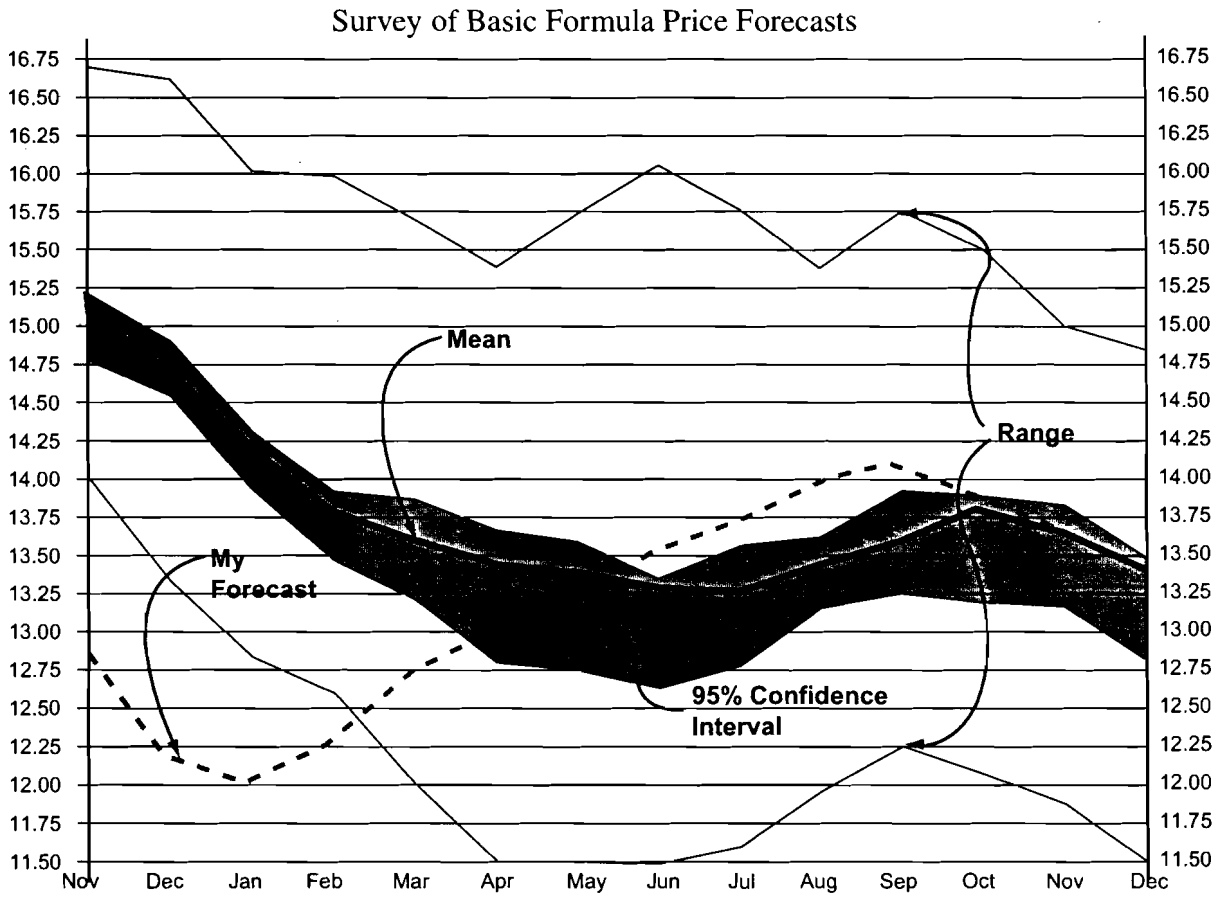


With a strong economy, demand for dairy products held quite well in the face of these higher prices. However, common sense would tell us that at some price, consumers will look for replacement products. I am projecting commercial disappearance on a milkfat basis to be very similar to year earlier levels. Over the past five years, we have come to expect about a two percent annual increase in total demand for dairy products. Flat demand is a loss from that standpoint, but consumers did not back away from dairy products in the way that many folks thought would happen.

Milk Prices

Looking back over the price forecasts of a year ago, the basic formula price of milk was correctly forecast for the first two months of 1996 and it appears that it will be about correctly forecast for the last two months. It was really the spectacular rise from March through September and the steep decline in October and November that really caught the industry off guard.

Looking ahead, I see grain prices that have fallen with a larger than expected harvest. However, with the milk prices that are suggested by the current cheese prices, I think that farms will respond with tight milk supplies again this spring. As cheese makers work off their inventory and are ready to make cheese again after the first of the year, I don't believe that the milk prices will stay low for long. It is my expectation that the basic formula price for milk will bottom out in December or January and begin to rise quickly into the spring months.



In September, I surveyed price forecasters from around the country for their monthly forecast BFP. Less than a month after the survey, cheese and butter prices began to fall and I'm sure that most of them would like to update their forecast at this time. My *revised* price forecasts for 1997 are shown in the graphic and while I am not expecting $15.00 milk in any month, I am far from pessimistic. In fact, I am expecting the basic formula price to average only 25-30¢ less per hundredweight than it did in our record-setting year of 1996. Part of the reason for a strong forecast milk price is that while forage and grain prices have dropped, both grains and excellent quality hay are more expensive than they have been in recent years (with the exception of 1996). In the far west, dairy farming relies on purchased forages and grains and for them, high feed prices will put a damper on production. In the Northeast, where most farms grow their forages and much of the grain, milk production should rebound from the tightness of 1996.

Dairy Policy

On April 4, 1996, President Clinton signed into law the delayed and contentious farm bill known as the Federal Agriculture Improvement and Reform Act of 1996 (FAIR Act). While there had been many radical proposals for dairy provisions, what we actually had when the dust had settled was modest reform. There were probably two sections of the bill that were most important to the dairy industry.

The price support program will be reduced 15¢ per cwt. per year beginning at $10.35 in 1996 and ending at $9.90 in 1999. After 1999, the price support program will be gone entirely. The Secretary is required to refund to producers the entire assessment collected through April if annual marketings in 1997 do not exceed annual marketings in 1996. It is unlikely that the loss of the support program will even be noticed as market prices have been so much higher than support levels since 1988.

Perhaps the greatest challenge for the dairy industry from the FAIR Act is the mandated consolidation and reform of Federal Milk Marketing Orders. The act specifies that the current number of orders be reduced from 32 to no less than 10 and no more than 14. To accomplish this task, four committees have been appointed by the Dairy Division of the Agricultural Marketing Service. One of the committees is considering a replacement for the basic formula price; one is looking at price structure; one is determining uniform provisions for the new orders; and one is reviewing dairy product classification.

The findings of these committees and a proposal for merged orders will be offered after the first of December, 1996. The industry will have more than a year to react to the proposal and make modifications. In January of 1999, producers will have to vote on the recommended decision of the Secretary of Agriculture for the reform to be implemented by April 4, 1999.

Summary

Even given the strange year that 1996 was, several good things have happened. We explored higher prices than we have ever seen in our dairy industry and we came through the experience quite well. Consumers did finally react to those prices, but demand was surprisingly strong throughout the year. Cheese makers did hold more inventory than they have in recent years, and if they begin to hold a little more product on a regular basis, milk prices may be less volatile than they have been. Finally, profits on dairy farms that grow much of their feed supply has been good in 1996 and I expect that 1997 will be a repeat year for them.

Table 2. National Farm Prices for Milk; CCC Purchase, Wholesale, and Retail Prices for Cheddar Cheese, Butter, and Nonfat Dry Milk; and Selected Retail Price Indices, 1988–1995.

	1989	1990	1991	1992	1993	1994	1995[a]	1996
Farm Milk ($/cwt.):								
All Milk (ave. fat)	13.56	13.74	12.27	13.15	12.84	13.01	12.78	14.74
M–W or BFP (3.5%)	12.37	12.21	11.05	11.88	11.80	12.03	11.83	13.56
Support (3.5%)	10.47	9.89	9.90	9.96	9.98	9.99	9.99	10.25
Milk Price: Concentrate Value	1.65	1.72	1.58	1.69	1.65	1.63	1.63	1.55
Assessment	0.00	0.01	0.05	0.13	0.15	0.17	0.15	0.03
Cheddar Cheese, Blocks ($/lb.):								
CCC Purchase	1.166	1.111	1.110	1.116	1.119	1.120	1.120	1.145
Wholesale, National Cheese Exchange	1.350	1.315	1.204	1.282	1.286	1.287	1.304	1.469
Butter ($/lb.):								
CCC Purchase, Grade A or higher, Chicago	1.263	1.017	0.983	0.807	0.708	0.668	0.770	0.650
Wholesale, Gr. A, Chicago Merc. Exchange	1.269	1.006	0.983	0.815	0.744	0.674	0.751	0.985
Nonfat Dry Milk								
CCC Purchase, Unfortified ($/lb.)	0.774	0.831	0.850	0.948	1.002	1.034	1.034	1.065
Wholesale, Central States	1.055	1.066	0.942	1.092	1.120	1.079	1.086	1.230
Retail Price Indices (1982–84=100.0)								
Whole Milk	114.3	126.7	122.4	126.4	127.9	131.2	131.2	140.0
Cheese	117.6	131.2	132.8	135.5	135.3	136.4	137.9	143.6
All Dairy Products	115.6	126.5	125.1	128.5	129.4	131.7	132.8	141.2
All Food	125.1	132.4	136.3	137.9	140.9	144.3	148.4	152.9
All Consumer Prices	124.0	130.7	136.2	140.3	144.5	148.2	152.4	156.8

Source: Dairy Situation and Outlook, Dairy Market News, and Federal Milk Order Market Statistics, U.S. Department of Agriculture.

[a] Revised.

[b] Estimated by Mark Stephenson.

[c] The Federal Agriculture Improvement and Reform Act of 1996 terminated the authority to assess marketings of milk on and after May 1, 1996.

The Northeast Dairy Situation and Outlook

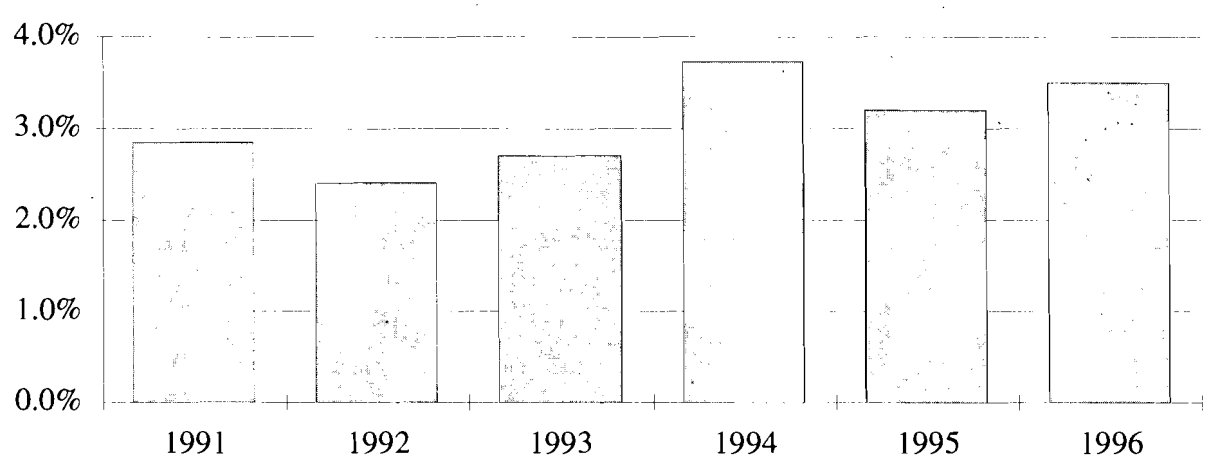
Number of Producers Delivering Milk
Northeast Federal and State Marketing Orders*
1990–1996

Markets	1990	1991	1992	1993	1994	1995[a]	1996[b]
New York-New Jersey	13261	12730	12161	12046	11609	11352	10865
New England	4893	4795	4686	4456	4133	4102	4053
Middle Atlantic	5509	5458	5546	5396	5292	4967	4868
E. Ohio-W. Pennsylvania	4889	4685	4553	4357	4205	3983	3700
Western New York	853	838	822	705	640	583	555
Regional Total	31395	30497	29760	28953	27873	26982	26037

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.
* Simple average for 12 months.
[a] Revised.
[b] Projected.

In the five federal and state orders shown above, farm loss has averaged about three percent per year over the period from 1990–1995. In 1994, farm loss approached four percent balancing the smaller losses in 1992–1993. This year, we are also at slightly higher levels of loss. For any particular order, losses may appear to be higher than the actual loss of farm numbers. For example, in August, a large fluid plant was pooled on the Middle Atlantic order that had previously been in the New York–New Jersey order. This makes farm loss look higher in Order #2 than it really is.

Annual Percent Loss of Dairy Farms in Region

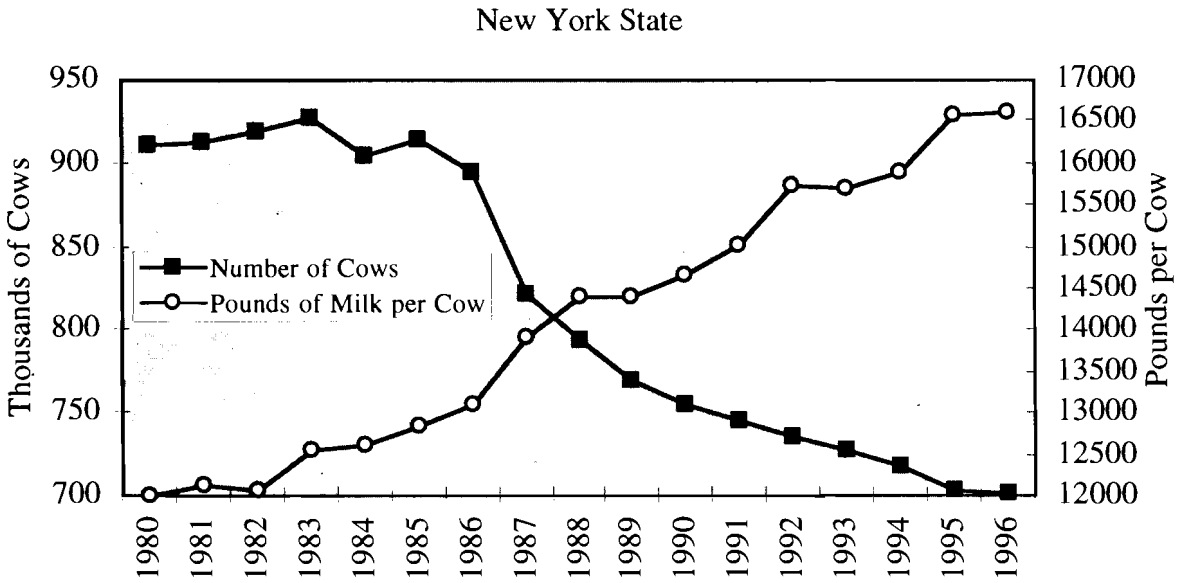


Receipts of Milk from Producers by Regulated Handlers, Million Pounds
Northeast Federal and State Marketing Orders
1990–1996

Markets	1990	1991	1992	1993	1994	1995[a]	1996[b]
			[million pounds]				
New York-New Jersey	11125	11075	11254	11452	11519	11935	11746
New England	5114	5309	5478	5345	5099	5370	5388
Middle Atlantic	5899	6222	6543	6381	6295	6210	6094
E. Ohio-W. Pennsylvania	3547	3517	3622	3546	3575	3476	3299
Western New York	1199	1228	1273	1117	1057	969	968
Regional Total	26884	27351	28170	27841	27545	27960	27495

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.
[a] Revised.
[b] Projected.

Milk production in the federal and state orders is projected to be down by nearly two percent over year earlier levels. The NASS values for New York will show milk production about level with year earlier levels. This is not a discrepancy as many loads of Northeast milk moved into the Southeast this summer in response to heat related shortages and a new transportation credit in the Southeast federal order that helped offset the cost of moving milk—milk was produced here but not all of it stayed in the region. The chart below shows that the flat 1996 milk production was largely a result of smaller than average increases in pounds of milk per cow.



Source: Milk Production, US Department of Agriculture.

Producer Milk Used in Class I by Regulated Handlers, Million Pounds
Northeast Federal and State Marketing Orders
1990–1996

Markets	1990	1991	1992	1993	1994	1995[a]	1996[b]
			[million pounds]				
New York-New Jersey	4487	4477	4434	4604	4779	4804	4813
New England	2810	2746	2686	2626	2518	2574	2602
Middle Atlantic	3131	3155	3143	2877	2825	2774	2922
E. Ohio-W. Pennsylvania	1927	1872	1866	1820	1790	1794	1738
Western New York	501	492	472	452	432	435	427
Regional Total	12856	12742	12601	12379	12344	12381	12502

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.
[a] Revised.
[b] Projected.

Per capita sales of fluid milk have been declining for several years but until recently, population growth has been adequate to maintain total sales. A decline in total volume of fluid milk sales spurred processors to fund a promotion program in1994 to increase consumption. Cause and effect is hard to determine, but total class I sales in the region are up for the second year in a row. A large percentage gain in fluid sales in the Middle Atlantic order and the correspondingly small gain in New York–New Jersey has more to do with plant pooling than any real trend in consumption.

Percent Class I Utilization by Regulated Handlers
Northeast Federal and State Marketing Orders
1990–1996

Markets	1990	1991	1992	1993	1994	1995[a]	1996[b]
New York-New Jersey	40	40	39	40	41	40	41
New England	55	52	49	49	49	48	48
Middle Atlantic	53	51	48	45	45	45	48
E. Ohio-W. Pennsylvania	54	53	52	51	50	52	53
Western New York	42	40	37	40	41	45	44
Regional Average	47.8	46.6	44.7	44.5	44.8	44.3	45.5

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.
[a] Revised.
[b] Projected.

Minimum Class I Prices for 3.5% Milk
Northeast Federal and State Marketing Orders
1990–1996

Markets	1990	1991	1992	1993	1994	1995[a]	1996[b]
				[$/cwt.]			
New York-New Jersey [1]	15.52	13.16	14.41	14.04	14.59	14.04	16.05
New England [2]	15.49	13.23	14.51	14.14	14.69	14.14	16.14
Middle Atlantic [3]	16.00	13.74	15.02	14.65	15.20	14.65	16.65
E. Ohio-W. Pennsylvania [3]	14.97	12.71	14.00	13.62	14.17	13.62	15.66
Western New York [3]	15.27	13.00	14.29	13.92	14.47	13.92	15.94

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.
[a] Revised.
[b] Projected.
[1] 201–210 mile zone.
[2] 21st zone.
[3] Priced at major city in the marketing area.

In 1993, Class III–A was introduced for milk used in manufacturing nonfat dry milk. For this reason, the 1994–1996 values shown in the table below differ from one another according to the amount of Class III–A product pooled on an order. In some years, the III–A price has pulled the weighted average manufacturing price down by more than 75¢ in some orders. However, strong III-A prices (more than class III in some months) did not have such an impact this year.

Minimum Manufacturing Prices for 3.5% Milk
Northeast Federal and State Marketing Orders
1990–1996

Markets	1990	1991	1992	1993	1994[c]	1995[a, c]	1996[b, c]
				[cwt]			
New York-New Jersey [1]	12.21	11.06	11.88 [4]	11.80	11.59	11.77	13.45
New England [2]	12.21	11.06	11.88 [4]	11.80	10.99	11.44	13.56
Middle Atlantic [3]	12.23	11.08	11.90 [4]	11.51	11.50	11.60	13.51
E. Ohio-W. Pennsylvania [3]	12.21	11.06	11.88	11.80	11.97	11.82	13.77
Western New York [3]	12.16	11.01	11.83	11.75	11.96	11.48	13.50

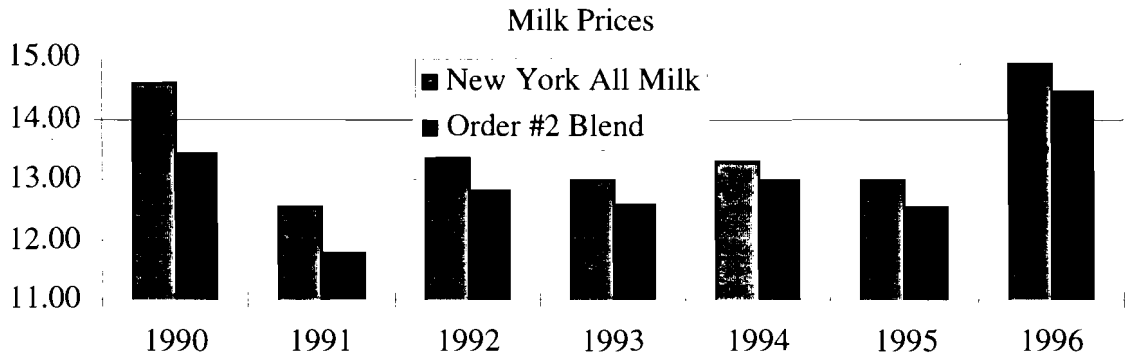
Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.
[a] Revised.
[b] Projected.
[c] Weighted average blend of Class III and Class III–A prices.
[1] 201–210 mile zone.
[2] 21st zone.
[3] Priced at major city in the marketing area.
[4] Class II price prior to April 1, 1991, Class III price effective April 1, 1991.

Minimum Blend Prices for 3.5% Milk
Northeast Federal and State Marketing Orders
1990–1996

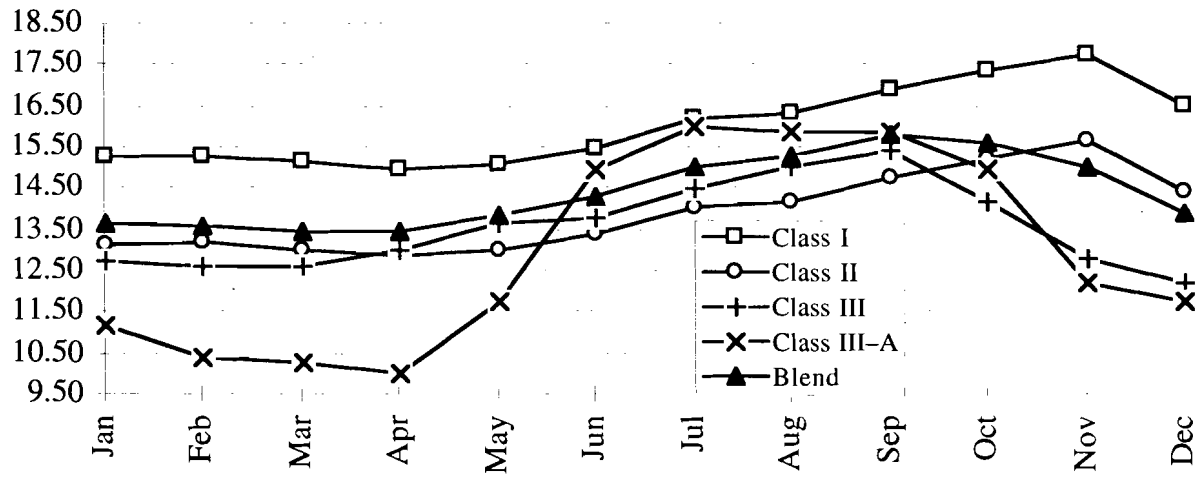
Markets	1990	1991	1992	1993	1994	1995[a]	1996[b]
New York-New Jersey [1]	13.44	11.79	12.81	12.61	12.98	12.56	14.47
New England [2]	13.95	12.07	13.08	12.79	13.10	12.66	14.72
Middle Atlantic [3]	14.27	12.45	13.49	13.11	13.35	12.97	15.04
E. Ohio-W. Pennsylvania [3]	13.84	11.95	13.01	12.78	13.12	12.75	14.82
Western New York [3]	13.46	11.77	12.69	12.58	12.88	12.60	14.62
Regional Average	13.79	12.01	13.02	12.77	13.09	12.71	14.73

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.
[a] Revised.
[b] Projected.
[1] 201–210 mile zone.
[2] 21st zone.
[3] Priced at major city in the marketing area.

As seen in the chart below, the all–milk price has moved closer to the blend price in the New York–New Jersey order over the past few years. This is largely because of the erosion of premiums being paid to producers. For any individual farm, the difference between their 1994 or 1995 pay price and the Order 2 blend price is a good increment to use to project 1995 farm prices. I am estimating blended milk prices to be about 33¢ per cwt lower in 1997 than they will be in 1996.

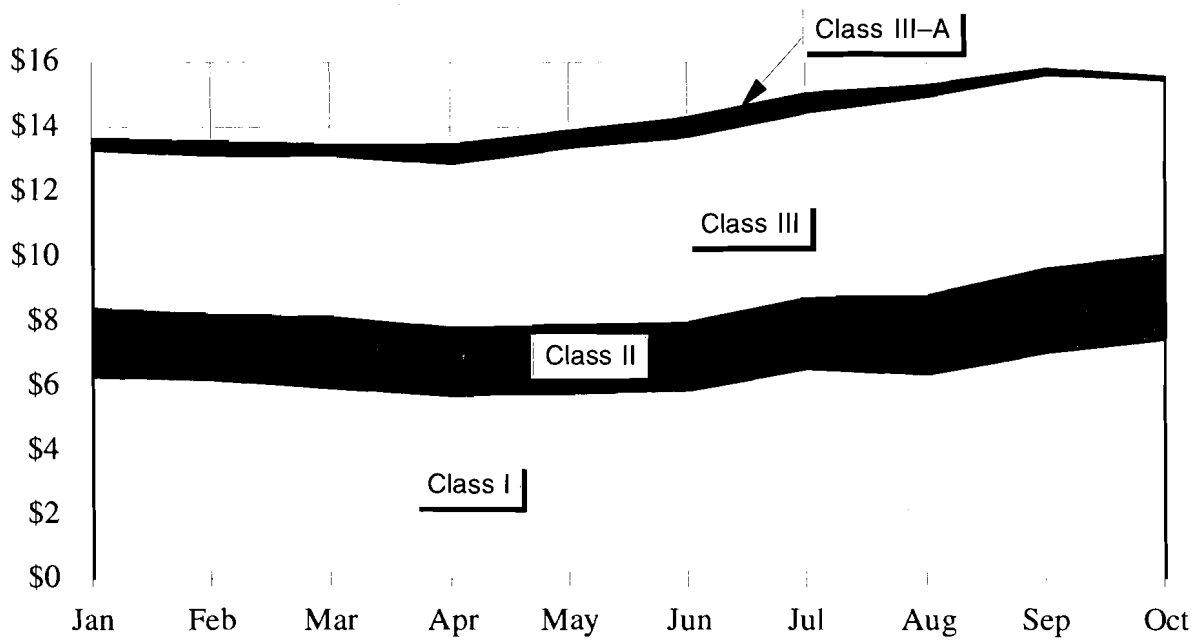


1996 New York–New Jersey Class Prices
3.5% milk fat, 201–210 mile zone



As shown in the chart above, class prices do not move in lockstep. Because of this and because of seasonal differences, the impact on farm prices depends differs from month to month. It is rare, but in June–August, the chart above indicates that the III–A price had a positive effect on the blend, and has been above the class III price from June through October. The chart below shows that Class I, or fluid milk, and Class III, predominantly milk used for cheese, have the largest impacts on blend prices in the New York–New Jersey order.

1996 New York–New Jersey Milk Price
Class Contribution to Blend
3.5% milk fat, 201–210 mile zone



MILK PRICE PROJECTIONS*
New York-New Jersey Blend Price, 3.5 Percent, 201-210 Mile Zone
Last Quarter 1994 – 1995

Month	1995	1996	Difference
	(dollars per hundredweight)		
October	12.93	15.62	2.69
November	13.37	15.06[a]	1.69
December	13.64	13.96[a]	0.32
Fourth Quarter Average	13.31	14.88	1.57
Annual Average	***12.56***	***14.44***	***1.88***

Month	1996	1997[a]	Difference
	(dollars per hundredweight)		
January	13.69	13.23	-0.46
February	13.59	13.06	-0.53
March	13.48	13.27	-0.21
First Quarter Average	13.59	13.19	-0.40
April	13.48	13.45	-0.03
May	13.90	13.72	-0.18
June	14.31	13.96	-0.35
Second Quarter Average	13.90	13.71	-0.19
July	15.06	14.35	-0.71
August	15.30	14.70	-0.60
September	15.81	15.02	-0.79
Third Quarter Average	15.39	14.69	-0.70
October	15.62	15.06	-0.56
November	15.06[a]	14.94	-0.12
December	13.96[a]	14.58	0.62
Fourth Quarter Average	14.88	14.86	-0.02
Annual Average	***14.44***[a]	***14.11***[a]	***-0.33***

* Totals May not add due to rounding.
[a] Projected.

Chapter 7. Dairy -- Farm Management

Wayne A. Knoblauch, Professor
Stuart F. Smith, Senior Extension Associate
Linda D. Putnam, Extension Support Specialist

Herd Size Comparisons

Data from the 321 New York dairy farms that participated in the Dairy Farm Business Summary (DFBS) Project in 1995 have been sorted into nine herd size categories with the averages for the farms in each category presented in Tables 7-1 and 7-2. Note that after the less than 40 cow category, the herd size categories increase by 15 cows up to 100 cows, then by 50 cows up to 200 cows and by 100 up to 300 cows. The 300 or more cow category contains the greatest herd size range with one herd exceeding 2000 cows.

As herd size increases, the average profitability generally increases (Table 7-1). Net farm income without appreciation averaged $7,400 per farm for the less than 40 cow farms and $202,491 per farm for those with 300 cows and over. This relationship generally holds for all measures of profitability including rate of return on capital.

It is more than size of herd that determines profitability on dairy farms. If size were the only factor, net farm income per cow would be constant throughout all size categories. Farms with 70 to 84 cows averaged $417 net farm income per cow while the 150 to 199 cow dairy farms averaged only $283 net farm income per cow. The 300 and over herd size category had the second highest net farm income per cow at $356. Other factors that affect profitability and their relationship to size are shown in Table 7-2.

TABLE 7-1. COWS PER FARM AND FARM FAMILY INCOME MEASURES
321 New York Dairy Farms, 1995

Number of Cows	Number of Farms	Avg. No. of Cows	Net Farm Income w/o Apprec.	Net Farm Income Per Cow	Labor & Management Inc./Oper.	Return to all Capital w/o Apprec.
Under 40	17	33	$7,400	$224	$-4,233	-3.4%
40 to 54	42	47	9,893	210	-7,690	-3.3%
55 to 69	44	62	15,398	248	-7,058	-1.2%
70 to 84	28	76	31,702	417	6,970	1.3%
85 to 99	17	91	21,668	238	-6,209	0.5%
100 to 149	72	120	36,939	308	4,380	2.2%
150 to 199	30	172	48,748	283	4,937	3.2%
200 to 299	36	241	70,997	295	17,720	5.1%
300 & over	35	568	202,491	356	51,752	7.6%

As herd size increased to 70 to 84 cows, net farm income per cow generally increased. Net farm income per cow increased as economies were attained while utilizing family labor. Farms with over 84 cows saw purchased inputs increase per cow before economies of size again appeared. Net farm income per cow will increase as farms become larger if the costs of increased purchased inputs are offset by greater and more efficient production.

The dairy farms with 70 to 84 cows averaged 19,136 pounds of milk sold per cow, 2,260 pounds more per cow than the average of all the smaller farms in the study (Table 7-2). The operating costs of producing milk were $9.70 per hundredweight on this group of farms, the lowest of all size categories.

Note: All data in this section are from the New York Dairy Farm Business Summary and Analysis Project unless a specific source is specified.

TABLE 7-2. COWS PER FARM AND RELATED FARM FACTORS
321 New York Dairy Farms, 1995

Number of Cows	Avg. No. of Cows	Milk Sold Per Cow (lbs.)	Milk Sold Per Worker (cwt.)	Till-able Acres Per Cow	Forage DM Per Cow (tons)	Farm Capital Per Cow	Cost of Producing Milk/Cwt.	
							Oper.	Total
Under 40	33	15,961	3,285	4.02	6.10	$7,977	$9.82	$17.19
40 to 54	47	17,009	4,044	3.26	6.54	7,801	10.44	17.06
55 to 69	62	17,661	4,577	3.20	7.34	7,856	10.37	15.96
70 to 84	76	19,136	5,524	3.17	7.64	6,946	9.70	14.40
85 to 99	91	18,267	5,565	3.29	8.34	7,310	10.40	15.30
100 to 149	120	19,231	6,197	3.04	7.77	6,712	10.41	14.38
150 to 199	172	19,517	6,632	2.80	8.04	6,815	10.68	14.04
200 to 299	241	20,837	8,471	2.25	6.92	5,511	10.74	13.46
300 & over	568	21,742	9,842	1.94	7.31	5,686	10.27	12.68

With 21,742 pounds of milk sold per cow, farms with 300 and more cows averaged more milk sold per cow than any other size category and 18 percent more than the average of all herds in the summary with less than 300 cows.

The ability to reach high levels of milk output per cow with large herds is a major key to high profitability. Three times a day milking (3X) is a herd management practice commonly used to increase milk output per cow in large herds. Many dairy farmers who have been willing and able to employ and manage the labor required to milk 3X have been successful. Only three percent of the 148 DFBS farms with less than 100 cows used a milking frequency greater than 2X. As herd size increased, the percent of herds using a higher milking frequency increased. Farms with 100 to 149 cows reported 15 percent of the herds milking more often than 2X, the 150-199 cow herds reported 17 percent, 200-299 cow herds reported 50 percent and the 300 cow and larger herds reported 69 percent exceeding the 2X milking frequency.

A new technology, bovine somatotropin (bST), was used on a much larger proportion of the large herd farms. bST was used sometime during 1995 on 28 percent of the herds with less than 100 cows, 71 percent of the farms with 100 to 299 cows and on 91 percent of the farms with 300 cows and more.

Milk output per worker has always shown a strong correlation with farm profitability. The farms with 100 cows or more averaged over 770,000 pounds of milk sold per worker while the farms with less than 100 cows averaged less than 500,000 pounds per worker. In addition to achieving the highest productivity per cow and per worker, the largest farms practiced the most efficient use of cropland with 1.94 tillable acres per cow, and the second most efficient use of farm capital with an average investment of $5,686 per cow.

The last column in Table 7-2 may be the most important in explaining why profits were significantly higher on the 300 plus cow farms. The 35 farms with 300 and more cows held their average total costs of producing milk to $12.68 per hundredweight, $2.28 below the $14.96 average for the remaining 286 dairy farms. The lower average costs of production plus a similar milk price gave the managers of the 300 plus cow dairy farms profit margins (milk price less total cost of producing milk) that averaged $2.27 per hundredweight above the average of the other 286 DFBS farms.

Ten-Year Comparisons

The total cost of producing milk on DFBS farms has increased only $0.24 per cwt. over the past 10 years (Table 7-3). However, in the intervening years, total cost of production had increased before exhibiting a downward trend. Over the past 10 years milk sold per cow has increased 25 percent and labor efficiency by 16 percent on DFBS farms (Table 7-4). Farm net worth has increased significantly , while percent equity has been stable.

TABLE 7-3. TEN YEAR COMPARISON: AVERAGE COST OF PRODUCING MILK PER HUNDREDWEIGHT
New York Dairy Farms, 1986 to 1995

Item	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Operating Expenses										
Hired labor	$ 1.38	$ 1.49	$ 1.46	$ 1.62	$ 1.77	$ 1.74	$ 1.80	$ 1.86	$ 1.80	$1.78
Purchased feed	3.15	3.26	3.73	4.02	4.28	3.88	3.92	3.85	3.89	3.71
Machinery repair, vehicle expense & rent	.79	.92	.87	.96	1.11	.93	.97	.93	.92	.85
Fuel, oil & grease	.34	.35	.34	.33	.41	.37	.35	.34	.31	.27
Replacement livestock	.13	.13	.11	.17	.20	.15	.21	.17	.21	.15
Breeding fees	.19	.19	.18	.18	.19	.18	.18	.19	.17	.15
Veterinary & medicine	.28	.28	.28	.30	.32	.33	.35	.37	.40	.39
Milk marketing	.84	.74	.52	.49	.53	.58	.63	.64	.67	.70
Other dairy expenses	.52	.53	.56	.60	.68	.65	.70	.72	.88	.92
Lime & fertilizer	.49	.50	.51	.50	.50	.40	.37	.36	.33	.31
Seeds & plants	.21	.21	.21	.22	.22	.20	.21	.20	.19	.19
Spray & other crop expense	.20	.19	.19	.21	.22	.20	.21	.20	.20	.20
Land, building & fence repair	.16	.20	.22	.27	.32	.19	.24	.21	.21	.16
Taxes	.33	.35	.35	.36	.37	.38	.35	.34	.29	.27
Insurance	.22	.22	.23	.23	.24	.23	.22	.20	.18	.17
Utilities (farm share)	.39	.38	.38	.39	.39	.39	.38	.39	.38	.38
Interest paid	1.18	1.04	1.02	1.06	1.05	1.07	.88	.80	.81	.94
Misc. (including rent)	.41	.45	.41	.43	.47	.43	.44	.41	.40	.40
Total Operating Expenses	$11.22	$11.43	$11.57	$12.34	$13.27	$12.30	$12.41	$12.18	$12.24	$11.94
Less: Nonmilk cash receipts	1.52	1.84	1.86	1.75	1.75	1.73	1.67	1.65	1.30	1.15
Increase in grown feed & supplies	.01	.16	.16	.02	.26	.04	.23	.13	.25	.14
Increase in livestock	.12	.10	.08	.12	.15	.18	.08	.22	.21	.25
OPERATING COST OF MILK PRODUCTION	$ 9.57	$ 9.33	$ 9.47	$10.45	$11.11	$10.35	$10.43	$10.18	$10.47	$10.40
Overhead Expenses										
Depreciation: machinery & buildings	$ 1.54	$ 1.43	$ 1.31	$ 1.31	$1.35	$ 1.28	$ 1.19	$ 1.17	$ 1.13	$1.07
Unpaid labor	.13	.10	.11	.12	.19	.18	.16	.15	.12	.12
Operator(s) labor [a]	.86	.87	.95	.98	1.10	1.06	.99	1.00	.86	.92
Operator(s) management (5% of cash receipts)	.71	.74	.74	.81	.85	.73	.76	.74	.73	.70
Interest on farm equity capital (5%)	1.10	1.15	1.19	1.24	1.24	1.20	1.11	1.11	1.00	.94
Total Overhead Expenses	$ 4.34	$ 4.28	$ 4.30	$ 4.46	$ 4.73	$ 4.45	$ 4.21	$ 4.17	$ 3.84	$ 3.75
TOTAL COST OF MILK PRODUCTION	$13.91	$13.61	$13.77	$14.91	$15.84	$14.80	$14.64	$14.35	$14.31	$14.15
AVERAGE FARM PRICE OF MILK	$12.65	$12.89	$13.03	$14.53	$14.93	$12.95	$13.58	$13.14	$13.44	$13.03
Return per cwt. to operator labor, capital & mgmt.	$ 1.41	$ 2.04	$ 2.14	$ 2.65	$ 2.28	$ 1.14	$ 1.80	$ 1.64	$ 1.72	$ 1.44
Rate of return on farm equity capital	-0.7%	1.9%	1.8%	3.3%	1.3%	-2.7%	0.2%	-0.4%	0.6%	-1.0%

[a] 1986 = $850/month, 1987 = $900/month, 1988 = $1,000/month, 1989 = $1,050/month, 1990 = $1,250/month,1991 = $1,300/month, 1992 = $1,350/month, 1993 = $1,400/month, and 1994 and 1995 = $1,450/month of operator labor.

TABLE 7-4. TEN YEAR COMPARISON: SELECTED BUSINESS FACTORS
New York Dairy Farms, 1986 to 1995

Item	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Number of farms	414	426	406	409	395	407	357	343	321	321
Cropping Program										
Total tillable acres	288	305	302	316	325	330	346	351	392	399
Tillable acres rented	100	105	104	117	121	124	135	135	159	166
Hay crop acres	147	153	156	164	166	169	171	182	195	197
Corn silage acres	67	67	74	81	82	88	98	96	110	117
Hay crop, tons DM/acre	2.7	2.7	2.6	2.6	2.7	2.4	2.8	2.7	3.0	2.8
Corn silage, tons/acre	14.3	16.2	14.1	13.4	14.4	13.7	14.5	14.9	16.4	15.6
Fert. & lime exp./tillable acre	$26	$27	$29	$29	$29	$25	$25	$25	$25	$25
Machinery cost/cow	$400	$413	$398	$425	$483	$438	$444	$430	$438	$402
Dairy Analysis										
Number of cows	95	101	102	104	107	111	123	130	151	160
Number of heifers	77	79	82	83	87	92	96	100	116	121
Milk sold, cwt.	15,374	16,498	17,200	17,975	19,005	20,060	23,130	24,448	30,335	32,362
Milk sold/cow, lbs.	16,237	16,351	16,882	17,259	17,720	18,027	18,789	18,858	20,091	20,269
Purchased dairy feed/cwt. milk	$3.10	$3.21	$3.71	$3.99	$4.27	$3.87	$3.91	$3.85	$3.89	$3.70
Purc. grain & conc. as % of milk receipts	24%	24%	28%	27%	28%	29%	28%	29%	28%	27%
Purc. feed & crop exp/cwt. milk	$4.00	$4.11	$4.62	$4.92	$5.21	$4.67	$4.70	$4.61	$4.61	$4.39
Capital Efficiency										
Farm capital/cow	$5,792	$5,894	$6,133	$6,407	$6,556	$6,688	$6,587	$6,462	$6,398	$6,264
Real estate/cow	$2,758	$2,805	$2,902	$2,977	$2,977	$3,063	$3,015	$2,932	$2,859	$2,763
Mach. invest./cow	$1,062	$1,057	$1,083	$1,154	$1,233	$1,267	$1,203	$1,165	$1,150	$1,098
Asset turnover ratio	.43	.45	.45	.48	.48	.43	.47	.46	.50	.49
Labor Efficiency										
Worker equivalent	3.17	3.19	3.17	3.30	3.37	3.38	3.60	3.68	4.02	4.40
Operator/manager equivalent	1.33	1.32	1.35	1.39	1.39	1.37	1.41	1.45	1.49	1.56
Milk sold/worker, lbs.	497,555	516,728	542,708	544,598	563,349	593,297	641,893	664,868	755,178	736,269
Cows/worker	31	32	32	32	32	33	34	35	38	36
Labor cost/cow	$385	$400	$426	$469	$541	$538	$552	$568	$558	$570
Profitability & Financial Analysis										
Labor & mgmt. income/operator	$3,837	$11,042	$11,911	$18,004	$14,328	$-955	$11,254	$9,000	$14,789	$10,346
Farm net worth	$348,909	$398,209	$426,123	$468,848	$471,322	$480,131	$515,215	$542,126	$608,749	$624,261
Percent equity	62%	65%	66%	68%	66%	64%	64%	65%	63%	61%

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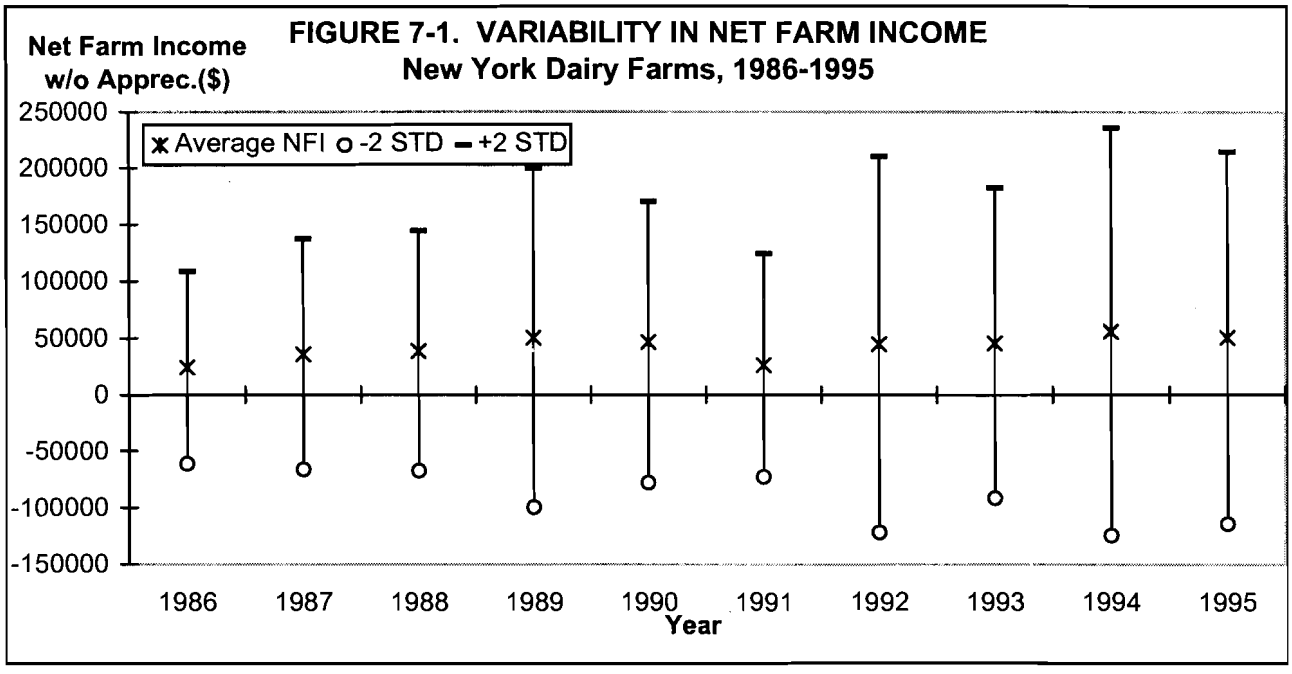
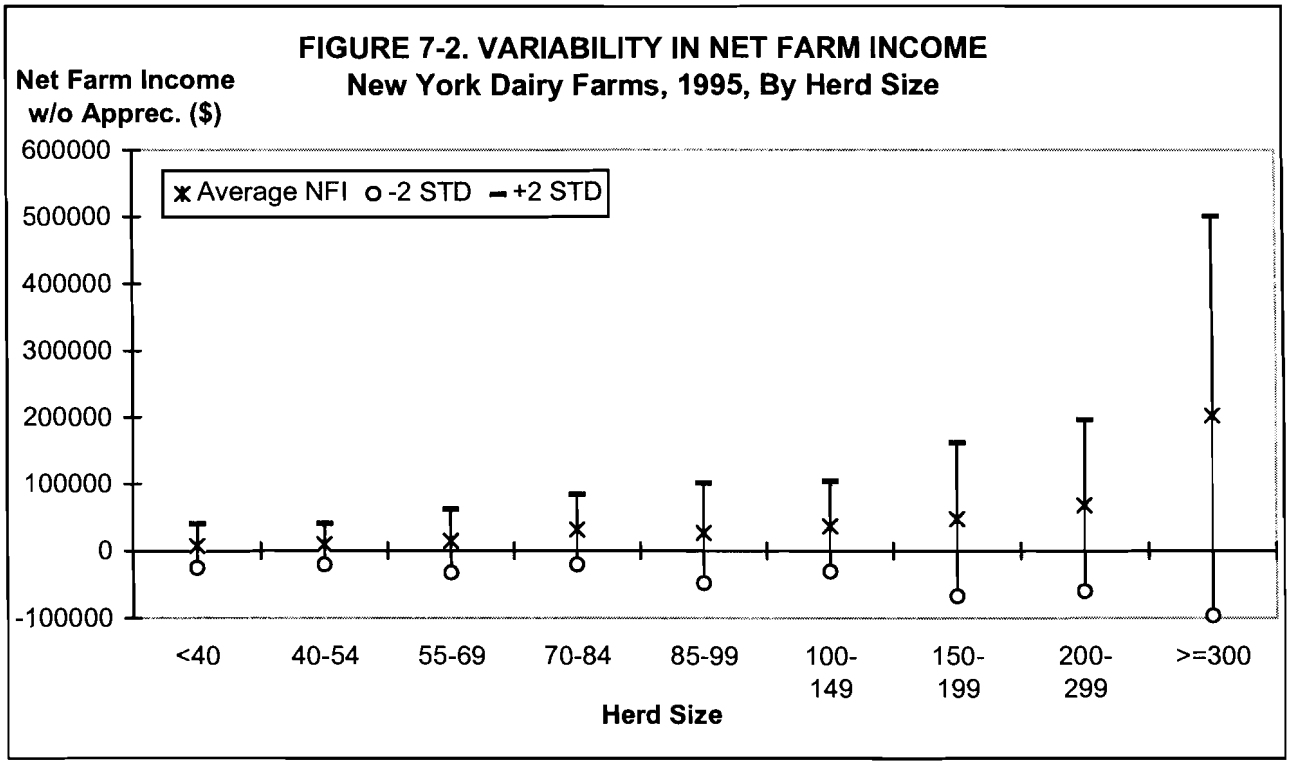
Distribution of Income





The range in individual farm profitability has been increasing over time. Figure 7-1 shows the average net farm income, plus and minus two standard deviations, over the past ten years. Figure 7-2 shows the variability in net farm income by herd size in 1995, again plus and minus two standard deviations. The range in profit for larger farms is significantly greater than for smaller farms.

TABLE 7-5. COMPARISON OF FARM BUSINESS SUMMARY DATA
Same 74 New York Dairy Farms, 1986 - 1995

Selected Factors	1986	1987	1988	1989
Milk receipts per cwt. milk	$12.68	$12.77	$13.17	$14.56
Size of Business				
Average number of cows	112	119	125	133
Average number of heifers	91	92	99	102
Milk sold, cwt.	19,043	20,654	22,308	24,530
Worker equivalent	3.36	3.40	3.58	3.77
Total tillable acres	322	325	336	341
Rates of Production				
Milk sold per cow, lbs.	17,015	17,392	17,845	18,397
Hay DM per acre, tons	3.0	3.0	2.9	2.8
Corn silage per acre, tons	15	17	14	13
Labor Efficiency				
Cows per worker	33	35	35	35
Milk sold per worker, lbs.	566,767	606,702	623,860	650,683
Cost Control				
Grain & concen. purchased as % of milk sales	22%	23%	27%	26%
Dairy feed & crop expense per cwt. milk	$3.86	$4.03	$4.42	$4.70
Operating cost of producing cwt. milk	$9.13	$8.62	$8.96	$9.97
Total cost of producing cwt. milk	$13.25	$12.47	$12.74	$13.72
Hired labor cost per cwt.	$1.49	$1.64	$1.68	$1.93
Interest paid per cwt.	$1.00	$0.89	$0.89	$0.88
Labor & machinery costs per cow	$798	$818	$834	$905
Capital Efficiency				
Farm capital per cow	$5,744	$5,814	$5,979	$6,104
Machinery & equipment per cow	1,055	1,047	1,043	1,093
Real estate per cow	2,685	2,691	2,726	2,713
Livestock investment per cow	1,154	1,180	1,244	1,309
Asset turnover ratio	0.46	0.50	0.50	0.54
Profitability				
Net farm income without appreciation	$37,550	$57,081	$64,180	$81,156
Net farm income with appreciation	52,602	84,084	84,703	112,040
Labor & management income per operator/manager	11,460	25,513	28,595	38,548
Rate return on:				
Equity capital with appreciation	6.0%	12.3%	11.1%	14.3%
All capital with appreciation	6.9%	10.8%	10.0%	12.4%
All capital without appreciation	4.5%	6.8%	7.3%	8.6%
Financial Summary, End Year				
Farm net worth	$427,437	$480,093	$520,096	$592,153
Change in net worth with appreciation	$23,191	$54,168	$46,949	$70,430
Debt to asset ratio	0.35	0.33	0.33	0.30
Farm debt per cow	$2,029	$1,953	$1,984	$1,823

Farms participating in the DFBS each of the last 10 years have increased size of business, labor efficiency and milk sold per cow (Table 7-5). Increases in efficiency have enabled these farms to show only a $0.01 per cwt. increase in the total cost of producing milk. While net farm income has increased, rates of return on capital have not.

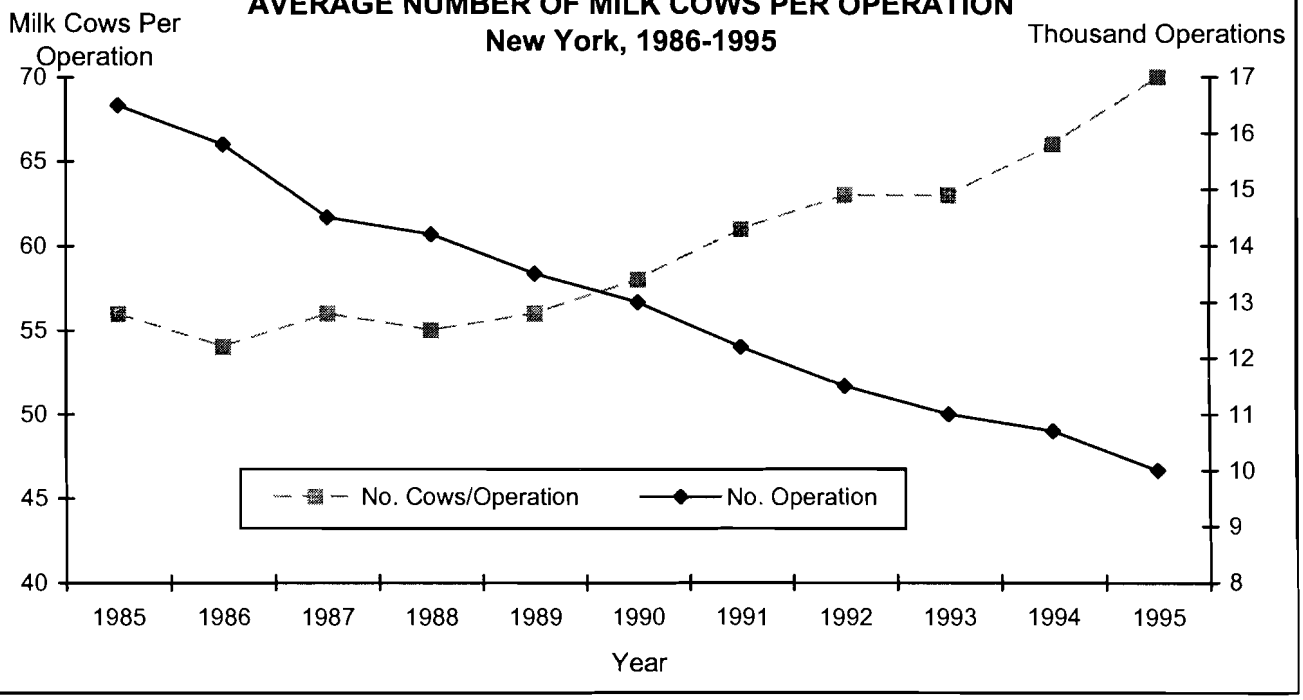
TABLE 7-5. COMPARISON OF FARM BUSINESS SUMMARY DATA (Continued)
Same 74 New York Dairy Farms, 1986 - 1995

1990	1991	1992	1993	1994	1995
$14.94	$13.05	$13.60	$13.19	$13.42	$12.99
139	148	167	185	199	213
112	123	125	137	153	162
25,831	27,743	32,276	35,890	41,429	44,738
3.93	4.19	4.51	4.83	4.96	5.18
383	395	401	421	440	460
18,587	18,812	19,353	19,356	20,785	20,984
3.1	2.8	3.1	3.1	3.3	3.0
14	14	15	16	17	17
35	35	37	38	40	41
656,993	662,024	716,367	742,809	835,046	863,678
27%	28%	27%	28%	27%	26%
$5.02	$4.68	$4.50	$4.44	$4.36	$4.16
$10.86	$10.18	$10.11	$10.14	$10.11	$10.14
$14.81	$14.09	$13.57	$13.51	$13.29	$13.26
$2.15	$2.21	$2.23	$2.28	$2.16	$2.10
$0.91	$1.01	$0.79	$0.80	$0.79	$0.89
$1,033	$1,000	$981	$982	$993	$964
$6,473	$6,699	$6,435	$6,306	$6,363	$6,290
1,172	1,228	1,154	1,124	1,150	1,133
2,903	3,053	2,941	2,876	2,880	2,787
1,380	1,426	1,406	1,393	1,428	1,428
0.51	0.47	0.51	0.49	0.52	0.51
$70,950	$40,722	$74,436	$65,579	$86,856	$75,432
85,610	64,001	97,938	82,538	107,504	98,040
27,226	4,510	26,672	18,212	30,929	19,866
8.0%	4.1%	8.6%	5.7%	8.1%	6.3%
8.0%	5.5%	7.8%	6.0%	7.7%	6.8%
6.3%	3.1%	5.6%	4.6%	6.0%	5.1%
$616,529	$638,899	$702,437	$739,494	$800,759	$842,625
$22,352	$13,126	$49,492	$31,383	$51,863	$42,551
0.35	0.37	0.37	0.39	0.39	0.38
$2,333	$2,358	$2,341	$2,415	$2,457	$2,350

Debt to asset ratio has remained stable while debt per cow increased and farm net worth almost doubled. During this time, crop yields have not increased, while purchased grain and concentrate as a percent of milk sales has increased slightly.

Milk Cow Operations and Milk Cow Inventory

FIGURE 7-3. NUMBER OF OPERATIONS WITH MILK COWS AND AVERAGE NUMBER OF MILK COWS PER OPERATION
New York, 1986-1995



As the number of milk cow operations decreases, the average number of milk cows per operation increases as shown by the above chart. There were 5,800 less milk cow operations in 1995 than there were in 1986. The average number of milk cows per operation has increased by 16 cows, or 29 percent over the same period. On January 1, 1996, 39 percent of the total milk cows were in herds with 50-99 head, 45 percent were in herds with over 100 milk cows, and 16 percent were in herds with less than 50 head.

TABLE 7-6. MILK COW OPERATIONS AND MILK COW INVENTORY by Herd Size, 1986 to 1996

	MILK COW OPERATIONS BY HERD SIZE & TOTAL, 1986-1995 (Number of Milk Cows in Herd)							MILK COWS ON FARMS, JAN. 1 BY HERD SIZE & TOTAL, 1987-1996 (Number of Milk Cows in Herd)						
Year	1-29	30-49	50-99	100-199[a]	200 plus	Total	Year	1-29	30-49	50-99	100-199[a]	200 plus	Total
	(Number of Operations)							(Thousand Head)					
1986	4,300	4,300	5,300	1,900		15,800	1987	42	168	355	290		855
1987	3,300	4,300	5,000	1,900		14,500	1988	32	171	332	281		816
1988	3,200	3,850	5,300	1,850		14,200	1989	30	144	335	271		780
1989	2,700	3,400	5,400	2,000		13,500	1990	29	121	321	289		760
1990	2,650	3,150	5,300	1,900		13,000	1991	27	116	319	288		750
1991	2,500	2,900	5,000	1,800		12,200	1992	24	111	314	291		740
1992	2,600	2,600	4,400	1,900		11,500	1993	27	97	300	306		730
1993	2,400	2,500	4,200	1,500	400	11,000	1994	22	87	297	189	130	725
1994	2,400	2,200	4,200	1,500	400	10,700	1995	21	92	277	178	142	710
1995	2,100	2,200	4,000	1,300	400	10,000	1996	21	91	273	175	140	700

[a]100 plus category prior to 1993.
Source: NYASS, New York Agricultural Statistics, 1995-1996.

Prices Paid and Received by New York Dairy Farmers

The prices dairy farmers pay for a given quantity of goods and services has a major influence on farm production costs. The astute manager will keep close watch on unit costs and utilize the most economical goods and services. The table below shows average prices of selected goods and services used on New York dairy farms.

TABLE 7-7. PRICES PAID AND RECEIVED BY NEW YORK FARMERS FOR SELECTED ITEMS
Northeast[a], 1986-1996

Year	Mixed Dairy Feed 16% Protein	Soybean Meal 44% Protein	Fertilizer, Urea 45-46%N	Fertilizer 10-20-20	Seed Corn, Hybrid[b]	Tractor 50-59PTO[b]
	($/ton)	($/cwt)	($/ton)	($/ton)	($/80,000) Kernels	($)
1986	163	11.60	200	180	65.60	16,550
1987	153	12.00	190	184	64.90	16,650
1988	181	15.65	208	206	64.20	17,150
1989	189	15.88	227	207	71.40	17,350
1990	177	13.25	215	199	69.90	17,950
1991	172	12.90	243	205	70.20	18,650
1992	174	12.70	221	194	71.80	18,850
1993	171	13.35	226	185	72.70	19,200
1994	181	14.10	233	192	73.40	19,700
1995	175[c]	12.80[c]	316[c]	223[c]	77.10	20,100
1996	226	15.80	328	228	77.70	20,600

					Prices Received	
Year	Diesel Fuel	Gasoline, Unleaded, Bulk Delivery[d]	NY Wage Rate All Hired Farm Workers	Ground Limestone Spread on Field	Alfalfa Hay Baled[e]	Corn Grain[f]
	($/gal)	($/gal)	($/hr)	($/ton)	($/ton)	($/bu)
1986	0.84	0.94	4.41	23.30	N/A	1.76
1987	0.77	0.91	4.60	24.30	N/A	2.20
1988	0.81	0.94	5.02	23.30	N/A	2.83
1989	0.83	1.05	5.25	24.30	88.00	2.80
1990	1.08	1.19	5.51	25.30	85.50	2.44
1991	1.00	1.25	6.06	23.10	84.50	2.70
1992	0.91	1.18	5.76	25.70	95.50	2.30
1993	0.90	1.20	6.16	26.60	97.00	2.85
1994	0.85	1.14	6.61	27.10	98.00	2.30
1995	0.85[c]	1.17[c]	6.54	22.30[c]	93.50	3.65
1996	1.02	1.30	6.95	23.30	----	----

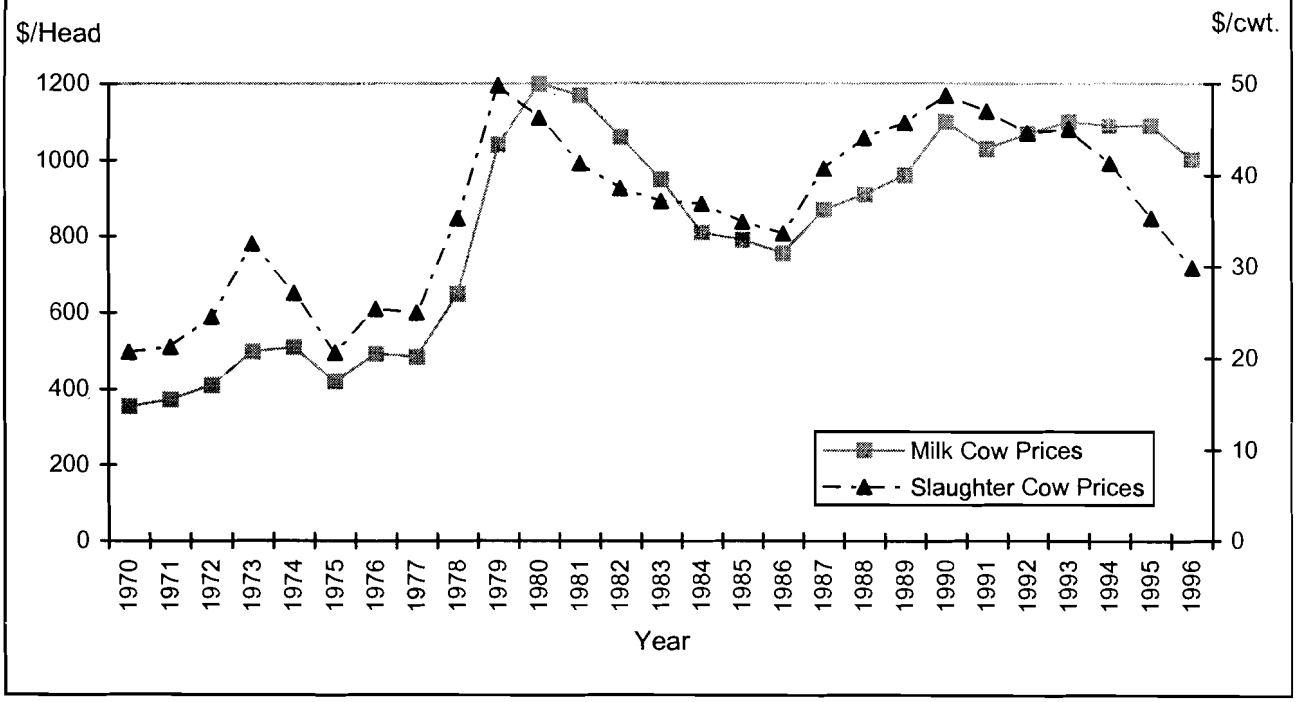
SOURCE: NYASS, New York Agricultural Statistics.
USDA, NASS, Agricultural Prices.
[a]Northeast region includes New England, New York, Pennsylvania, New Jersey, Maryland, and Delaware.
[b]United States average.
[c]Prices prior to 1995 are annual averages. Beginning 1995, prices refer to April 1.
[d]Prices prior to 1993 represent gasoline, regular, bulk delivery.
[e]Marketing year average, June through May.
[f]Marketing year average, October through September.

Milk cow prices remained level for the first part of 1995 then declined to $1,010 in December. In 1996, milk cow prices were reported quarterly but appear to remain constant most of the year. Slaughter cow prices averaged $6.72 per hundredweight lower than a year earlier. Calf prices averaged about $27.82 per hundredweight lower in 1996 compared to 1995. Beef cattle prices average $9.07 per hundredweight lower than a year earlier.

TABLE 7-8. PRICES RECEIVED BY NEW YORK FARMERS FOR SELECTED LIVESTOCK 1995 & 1996

	Milk Cows $/Head		Slaughter Cows $/Cwt.		Calves $/Cwt.		Beef Cattle $/Cwt.	
Month	1995	1996	1995	1996	1995	1996	1995	1996
January	$ 1,100	$ 1,010	$39.10	$30.10	$71.00	$52.00	$41.60	$31.40
February	1,110	---	41.10	31.10	78.00	48.00	43.30	32.50
March	1,110	---	38.60	30.00	80.00	43.20	40.80	31.00
April	1,110	1,000	37.90	29.70	81.00	51.40	40.00	31.10
May	1,110	---	37.60	31.00	83.00	60.40	40.10	32.20
June	1,120	---	37.80	29.60	80.00	44.90	40.00	30.70
July	1,110	1,000	35.50	29.80	57.50	33.20	37.40	30.80
August	1,090	---	35.00	30.80	62.00	31.70	37.00	
September	1,080	---	32.50	30.00	60.50	37.80	34.50	
October	1,050	1,030	31.40		59.00		33.40	
November	1,030	---	28.80		56.00		30.50	
December	1,010	---	29.80		57.00		31.50	

FIGURE 7-4. MILK COW AND SLAUGHTER COW PRICES New York, 1970-1995



SOURCE: New York Agricultural Statistics.

TABLE 7-9. MILK PRODUCTION CASH COSTS AND RETURNS BY REGION
$ Per Hundredweight, 1995

Item	Northeast	Southeast	Upper Midwest	Corn Belt	Southern Plains	Pacific
Gross value of production:						
Milk	13.26	14.94	12.83	12.91	13.00	11.91
Cattle	0.78	0.98	1.00	1.10	0.88	0.64
Other income	0.50	0.49	0.76	0.51	0.41	0.55
Total, gross value of production	14.54	16.41	14.59	14.52	14.29	13.10
Cash expenses:						
Feed						
Concentrates	3.48	5.26	3.53	3.77	4.59	2.89
By-products	0.04	0.46	0.11	0.24	0.18	0.43
Liquid whey	0.14	0.05	0.16	0.24	0.01	0.05
Hay	1.28	0.64	0.96	1.46	1.97	2.27
Silage	1.75	0.91	1.38	1.14	0.10	0.91
Pasture and other forage	0.03	0.07	0.13	0.11	0.07	0.19
Total feed costs	6.72	7.39	6.27	6.96	6.92	6.74
Other						
Hauling	0.75	0.96	0.26	0.43	0.61	0.41
Artificial insemination	0.21	0.12	0.16	0.12	0.05	0.12
Veterinary and medicine	0.49	0.49	0.44	0.40	0.20	0.21
Bedding and litter	0.38	0.01	0.32	0.32	0.00	0.05
Marketing	0.49	0.53	0.26	0.30	0.27	0.47
Custom services and supplies	0.60	0.65	0.34	0.38	0.32	0.42
Fuel, lube, and electricity	0.65	0.31	0.57	0.52	0.44	0.27
Machinery and building repairs	0.95	0.63	1.04	0.91	0.44	0.31
Hired labor	0.64	1.36	0.58	0.64	0.81	0.57
DHIA fees	0.11	0.05	0.07	0.07	0.05	0.07
Dairy assessment	0.16	0.16	0.16	0.16	0.16	0.16
Total, variable cash expenses	12.15	12.66	10.47	11.21	10.27	9.80
General farm overhead	0.55	0.66	0.67	0.59	0.47	0.34
Taxes and insurance	0.40	0.33	0.38	0.27	0.15	0.12
Interest	0.77	0.58	1.14	0.70	0.59	0.63
Total, fixed cash expenses	1.72	1.57	2.19	1.56	1.21	1.09
Total, cash expenses	13.87	14.23	12.66	12.77	11.48	10.89
Gross value of production less cash exp.	0.67	2.18	1.93	1.75	2.81	2.21
Economics (full ownership) costs:						
Variable cash expenses	12.15	12.66	10.47	11.21	10.27	9.80
General farm overhead	0.55	0.66	0.67	0.59	0.47	0.34
Taxes and insurance	0.40	0.33	0.38	0.27	0.15	0.12
Capital replacement	2.09	2.56	2.41	2.18	2.19	1.42
Operating capital	0.12	0.12	0.10	0.11	0.10	0.09
Other nonland capital	0.91	1.66	1.08	0.95	0.96	0.65
Land	0.00	0.00	0.01	0.01	0.00	0.01
Unpaid labor	1.55	0.24	1.52	2.03	0.69	0.31
Total, economic costs	17.77	18.23	16.64	17.35	14.83	12.74
Residual returns to management and risk	-3.23	-1.82	-2.05	-2.83	-0.54	0.36

Source: USDA, ERS, Costs of Production

TABLE 7-10. COMPARISON OF DAIRY FARM BUSINESS DATA BY REGION
321 New York Dairy Farms, 1995

Item	Western & Central Plateau Region	Western & Central Plain Region	Northern New York	Central Valleys	No. Hudson & Southeastern NY
Number of farms	67	77	40	57	80
ACCRUAL EXPENSES					
Hired labor	$35,325	$138,480	$26,379	$22,216	$39,072
Feed	84,790	239,448	77,128	72,009	89,281
Machinery	26,975	65,480	26,575	24,717	29,455
Livestock	43,659	157,351	42,055	41,537	62,435
Crops	14,167	42,271	16,257	15,886	18,544
Real estate	17,732	36,625	16,078	16,937	16,664
Other	36,178	106,201	38,510	35,396	38,406
Total Operating Expenses	$258,826	$785,856	$242,982	$228,698	$293,857
Expansion livestock	4,373	27,042	2,140	2,934	3,363
Machinery depreciation	15,378	33,219	16,396	14,607	14,172
Building depreciation	10,155	35,609	8,921	6,658	8,467
Total Accrual Expenses	$288,732	$881,726	$270,439	$252,897	$319,859
ACCRUAL RECEIPTS					
Milk sales	$274,693	$860,166	$273,770	$256,622	$313,830
Livestock	28,437	90,474	19,915	20,732	28,470
Crops	1,327	24,454	9,744	1,802	1,359
All other	8,720	16,708	6,545	7,542	8,929
Total Accrual Receipts	$313,177	$991,802	$309,974	$286,698	$352,588
PROFITABILITY ANALYSIS					
Net farm income (w/o appreciation)	$24,445	$110,076	$39,535	$33,801	$32,729
Net farm income (w/ appreciation)	$38,933	$137,234	$48,939	$35,324	$34,561
Labor & management income	$-2,859	$58,672	$12,131	$9,200	$-1,939
Number of operators	1.43	1.74	1.50	1.61	1.41
Labor & mgmt. income/operator	$-1,999	$33,720	$8,087	$5,714	$-1,375
BUSINESS FACTORS					
Worker equivalent	3.59	7.35	3.18	3.28	3.64
Number of cows	114	311	110	103	118
Number of heifers	96	221	86	79	94
Acres of hay crops[a]	183	254	182	156	192
Acres of corn silage[a]	84	214	77	75	101
Total tillable acres	325	635	331	297	341
Pounds of milk sold	2,136,921	6,669,893	2,122,197	1,953,635	2,322,787
Pounds of milk sold/cow	18,814	21,471	19,240	19,019	19,651
Tons hay crop dry matter/acre	2.3	3.7	2.9	2.7	2.2
Tons corn silage/acre	12.9	18.3	15.8	13.1	13.2
Cows/worker	32	42	35	31	32
Pounds of milk sold/worker	596,073	907,553	667,532	596,075	638,438
% grain & conc. of milk receipts	29%	27%	27%	27%	28%
Feed & crop expense/cwt. milk	$4.63	$4.22	$4.40	$4.48	$4.64
Fertilizer & lime/crop acre	$19.91	$27.08	$20.35	$27.43	$27.18
Machinery cost/tillable acre	$149	$177	$152	$157	$149

*Average of all farms in the region, not only those producing the crop.

FIGURE 7-5. PERCENT INCREASE IN MILK PRODUCTION
Five Regions in New York, 1985-1995

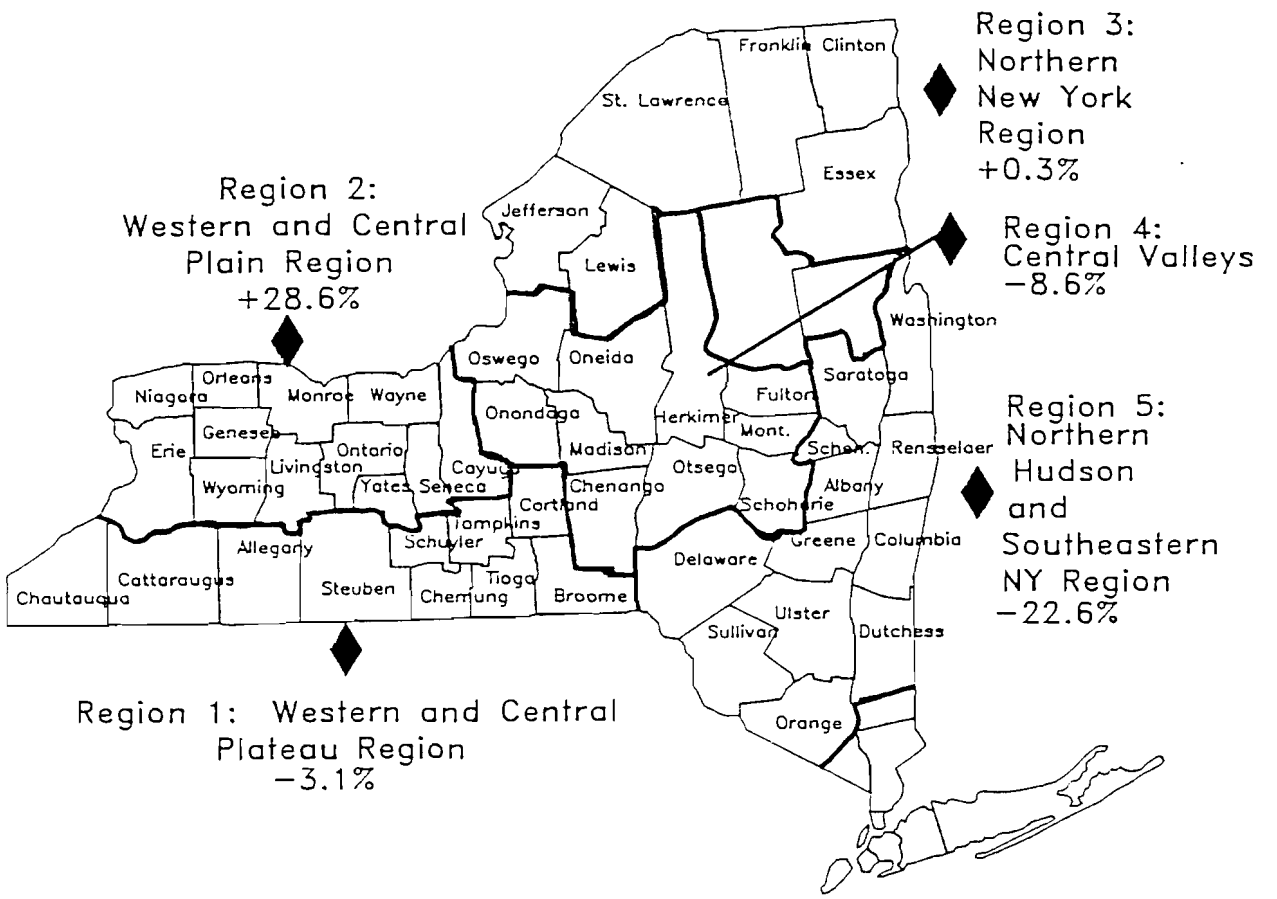


TABLE 7-11. MILK PRODUCTION & AVERAGE COST OF PRODUCING MILK
Five Regions of New York, 1995

Item	Region[a] 1	2	3	4	5
Milk Production[b]			(million pounds)		
1985	2,213.4	2,382.9	2,184.5	3,037.8	1,884.8
1995	2,145.4	3,065.2	2,191.0	2,777.8	1,459.0
Percent change	-3.1%	+28.6%	+0.3%	-8.6%	-22.6%
Cost of Producing Milk			($ per hundredweight milk)		
Operating cost	$10.52	$10.21	$9.84	$10.32	$11.13
Total cost	14.54	12.80	14.01	14.50	14.86
Average price received	12.85	12.90	12.90	13.14	13.51
Return per cwt. to operator labor, management & capital	$0.95	$1.60	$1.68	$1.59	$1.20

[a]See Figure 7-5 for region descriptions.
[b]Source: New York Agricultural Statistics Service, Milk-County Estimates.

Rotational Grazing Farms VS. Non-Rotational Grazing Farms, Dairy Farm Business Summary (DFBS) Data

A rotational grazing farm is defined as a farm where the dairy herd was on pasture for three months or more and was moved to a new paddock every third day or less.

Three Year Comparison of Same Grazing vs. Non-grazing Farms

Seventeen Dairy Farm Business Summary (DFBS) farms indicated they used rotational grazing in 1993, 1994, and 1995 (Table 7-12). The control group (Table 7-13) is a random selection of 17 non-grazing dairy farms of similar size, from the same and adjacent counties, that participated in DFBS in 1993, 1994, and 1995.

The 17 rotational grazing farms, on average, had lower operating costs per hundredweight of milk sold than non-rotational grazing farms in 1993 through 1995. However, the total cost per cwt. was slightly higher on the rotational grazing farms. Purchased dairy feed costs averaged about $0.20 per hundredweight higher on the rotational grazing farms. Net farm income for the rotational grazing farms averaged about $8,500 higher than the average net farm income for non-rotational grazing farms.

The cost of producing milk declined on grazing and non-grazing farms from 1993 to 1995. 1995 labor and machinery costs dropped more on grazing farms than on non-grazing farms. Farm capital invested per cow is lower on the grazing farms and has declined since 1993.

All Rotational Grazing Farms Compared to Non-grazing Control Farms, 1994 and 1995

In 1995, 60 of the DFBS farms were rotational grazing compared to 41 in 1994. The farms using rotational grazing are compared with a control group of non-rotational grazing farms in Table 7-14. The control group is a random selection of non-grazing dairy farms of similar size; from the same and adjacent counties. Forty of the rotational grazing farms were DFBS cooperators in 1994 and 1995. Only 10 of the same non-rotational grazing farms are included in the 1994 and 1995 control group.

In 1994, average milk output per cow and per worker, and measures of capital efficiency were very similar on rotational grazing and non-grazing farms. The average operating cost of producing milk was not higher on non-rotational grazing farms even though purchased grain and machinery costs per cow were substantially higher. The total cost of producing milk averaged 22 cents per cwt. less on non-rotational grazing farms primarily due to lower valued operator resources. Profits averaged somewhat higher on the non-rotational grazing farms in 1994.

In 1995, average milk sold per cow and per worker were higher on the non-grazing farms while capital invested per cow, per worker and per cwt. of milk sold were lower on the rotational grazing farms. The operating cost of producing milk averaged 23 cents per cwt. less on the grazing farms and total costs of producing milk averaged 32 cents below the average for non-grazing farms. Lower production costs lead to somewhat higher 1995 profits on the rotational grazing farms compared to non-grazing farms.

TABLE 7-12. PROGRESS OF THE 17 NEW YORK DAIRY FARMS WHO USED ROTATIONAL GRAZING 1993 - 1995 DFBS, 1993, 1994 & 1995

Item	1993 Average	1994 Average	1995 Average
Business Size			
Number of cows	60	60	64
Number of heifers	46	48	49
Milk sold/lbs.	1,125,568	1,143,647	1,232,337
Worker equivalent	2.34	2.38	2.51
Tillable acres	213	214	215
Total hay crop acres	126	120	137
Corn silage acres	32	27	26
Tillable pasture acres	22	28	23
Non-tillable pasture acres	57	55	55
Production			
Milk sold per cow, lbs.	18,833	19,005	19,309
Milk sold per worker, lbs.	480,328	481,178	490,645
Total hay crop, tons DM/acre	2.2	2.7	2.3
Corn silage, tons/acres	14.1	15.8	13.5
Forage DM harvested/cow, tons	7.0	7.8	7.0
Resource Efficiency			
Cows per worker	26	25	25
Farm capital per cow	$7,690	$7,762	$7,473
Farm debt per cow	$2,564	$2,490	$2,150
Tillable acres per cow	3.56	3.55	3.37
Tillable pasture, acres/cow	0.37	0.47	0.36
Non-tillable pasture, acres/cow	0.95	0.92	0.86
Cost of Producing Milk			
Operating cost/cwt.	$8.99	$9.25	$9.38
Purchased input costs/cwt.	$10.53	$10.75	$10.66
Total costs/cwt.	$15.74	$15.76	$15.34
Selected Costs & Returns Per Cwt.			
Purchased dairy feed	$3.83	$3.81	$3.51
Crop expenses	$0.78	$0.78	$0.65
Breeding and veterinary	$0.56	$0.53	$0.56
Milk marketing	$0.76	$0.79	$0.75
Labor & machinery costs	$6.20	$6.44	$5.90
Total labor costs	$3.52	$3.70	$3.59
Total machinery costs	$2.68	$2.74	$2.31
Taxes, rent, utilities, insurance & interest	$2.24	$2.18	$2.08
Value of inventory growth	$0.36	$0.73	$-0.01
Total non-milk receipts	$2.35	$2.22	$1.31
Average milk price received	$12.99	$13.34	$12.93
Profitability			
Net farm income (w/o appreciation)	$27,688	$29,678	$27,990
Labor & management income/operator	$4,424	$5,194	$3,312
Return on equity capital (w/ appreciation)	-2.7%	-0.5%	-2.3%
Return on all capital (w/ appreciation)	0.4%	1.6%	0.6%

TABLE 7-13. PROGRESS OF THE SAME 17 NON-GRAZING NEW YORK DAIRY FARMS WITH SIMILAR SIZE & LOCATION AS GRAZED FARMS DFBS, 1993 1994 & 1995

Item	1993 Average	1994 Average	1995 Average
Business Size			
Number of cows	62	64	64
Number of heifers	55	53	54
Milk sold/lbs.	1,108,598	1,143,320	1,177,399
Worker equivalent	2.15	2.20	2.27
Tillable acres	196	203	211
Total hay crop acres	113	122	127
Corn silage acres	38	39	41
Tillable pasture acres	7	6	5
Non-tillable pasture acres	59	62	62
Production			
Milk sold per cow, lbs.	17,881	17,815	18,448
Milk sold per worker, lbs.	516,321	520,142	517,895
Total hay crop, tons DM/acre	2.6	3.0	2.6
Corn silage, tons/acres	13.9	16.2	14.3
Forage DM harvested/cow, tons	8.0	9.2	8.4
Resource Efficiency			
Cows per worker	29	29	28
Farm capital per cow	$8,274	$8,019	$8,154
Farm debt per cow	$1,690	$1,718	$1,472
Tillable acres per cow	3.16	3.16	3.31
Tillable pasture, acres/cow	0.11	0.09	0.08
Non-tillable pasture, acres/cow	0.95	0.97	0.97
Cost of Producing Milk			
Operating cost/cwt.	$10.22	$10.35	$9.89
Purchased input costs/cwt.	$11.46	$11.65	$11.11
Total costs/cwt.	$15.57	$15.73	$15.32
Selected Costs & Returns Per Cwt.			
Purchased dairy feed	$3.73	$3.60	$3.26
Crop expenses	$0.80	$0.87	$0.88
Breeding and veterinary	$0.59	$0.59	$0.57
Milk marketing	$0.67	$0.77	$0.81
Labor & machinery costs	$6.09	$6.25	$6.16
Total labor costs	$3.34	$3.40	$3.56
Total machinery costs	$2.75	$2.85	$2.60
Taxes, rent, utilities, insurance & interest	$2.04	$1.98	$2.05
Value of inventory growth	$-0.01	$0.15	$0.25
Total non-milk receipts	$1.81	$1.64	$1.70
Average milk price received	$12.95	$13.54	$12.95
Profitability			
Net farm income (w/o appreciation)	$16,517	$21,584	$21,652
Labor & management income/operator	$-4,923	$-1,255	$-2,647
Return on equity capital (w/ appreciation)	-0.5%	0.4%	-0.2%
Return on all capital (w/ appreciation)	1.2%	2.0%	1.5%

TABLE 7-14. ROTATIONAL GRAZING FARMS VS. NON-ROTATIONAL GRAZING FARMS
New York State Dairy Farms, 1994 & 1995

Item	1994		1995	
	Rotational Grazing Farms	Non-Grazing Farms	Rotational Grazing Farms	Non-Grazing Farms
Number of farms	41	41	60	60
Business Size & Production				
Number of cows	72	71	69	70
Number of heifers	55	60	51	56
Milk sold, lbs.	1,323,408	1,318,148	1,221,804	1,280,851
Milk sold/cow, lbs.	18,337	18,470	17,609	18,399
Milk plant test, % butterfat	3.6%	3.6%	3.6%	3.7%
Tillable acres, total	227	227	217	223
Hay crop, tons DM/acre	2.6	2.5	2.1	2.4
Corn silage, tons/acre	14.8	16.5	12.8	14.0
Forage DM/cow, tons	7.0	9.0	6.0	7.5
Labor & Capital Efficiency				
Worker equivalent	2.44	2.46	2.44	2.46
Milk sold/worker, lbs.	542,195	536,374	500,996	519,733
Cows/worker	29	29	28	28
Farm capital/worker	$204,584	$200,935	$183,256	$204,015
Farm capital/cow	$6,916	$6,916	$6,440	$7,224
Farm capital/cwt. milk	$38	$37	$37	$39
Milk Production Costs & Returns				
Selected costs/cwt.:				
Hired labor	$1.20	$1.20	$0.96	$0.93
Grain & concentrate	$3.79	$4.13	$3.58	$3.77
Purchased roughage	$0.14	$0.05	$0.13	$0.19
Replacements purchased	$0.10	$0.13	$0.06	$0.18
Vet & medicine	$0.32	$0.33	$0.33	$0.34
Milk marketing	$0.69	$0.76	$0.68	$0.77
Other dairy expenses	$0.87	$0.77	$0.89	$0.89
Operating cost/cwt.	$9.96	$9.94	$9.93	$10.16
Total labor cost/cwt.	$3.29	$3.32	$3.41	$3.28
Operator resources/cwt.	$3.53	$3.39	$3.38	$3.52
Total cost/cwt.	$15.04	$14.82	$14.90	$15.22
Average farm price/cwt.	$13.16	$13.31	$12.87	$12.92
Return over total costs/cwt.	$-1.88	$-1.51	$-2.03	$-2.30
Related Cost Factors				
Hired labor/cow	$219	$221	$169	$171
Total labor/cow	$602	$613	$600	$603
Purchased dairy feed/cow	$720	$772	$652	$729
Purchased grain & concentrate as % of milk receipts	29%	31%	28%	29%
Vet & medicine/cow	$58	$62	$59	$63
Machinery costs/cow	$467	$483	$425	$433
Profitability Analysis				
Net farm income (w/o appreciation)	$25,778	$28,168	$21,531	$19,934
Labor & mgmt. income/operator	$4,504	$5,327	$1,989	$-1,646
Rates of return on:				
Equity capital with appreciation	-0.5%	1.5%	-2.7%	-1.9%
All capital with appreciation	2.2%	3.1%	1.0%	0.9%

Chapter 8. Fruit

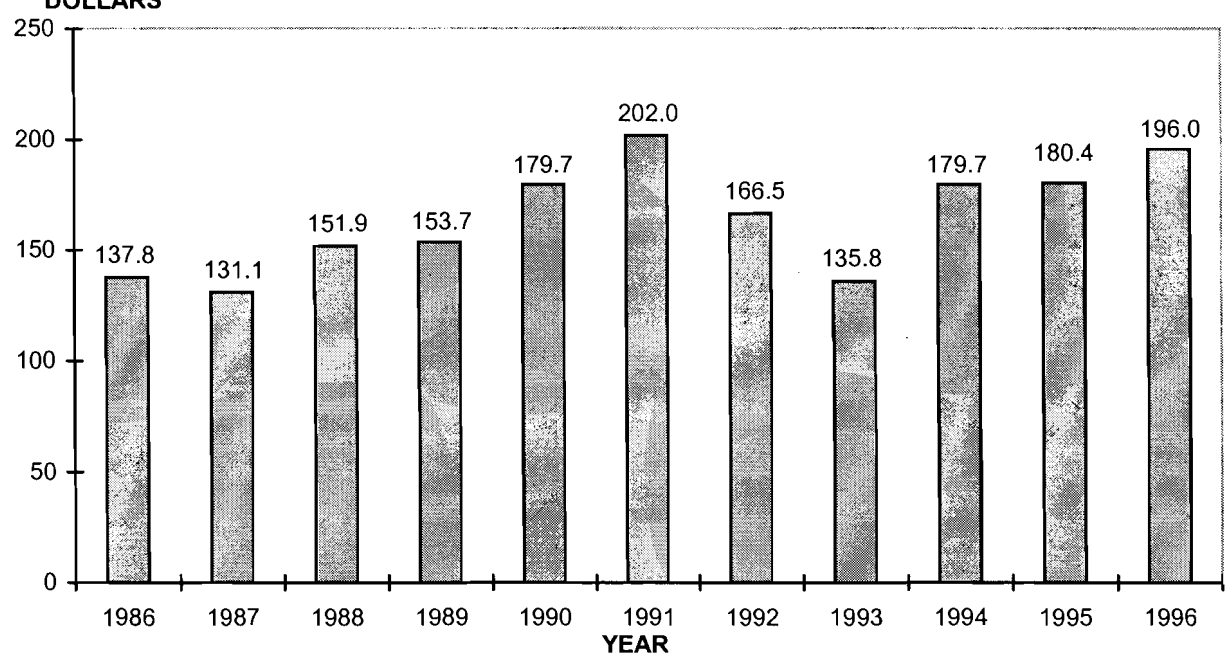
Gerald B. White, Professor

The total production of the 6 tree and vine crops which are important to New York's agricultural economy was projected to decrease by 3 percent nationally. The national production of apples, tart cherries, pears, peaches and sweet cherries were forecast to decrease compared with last year's production, while increased production was forecast for grapes. The national production of apples was forecast at 252.6 million bushels, down 1 percent from 1995. Grape production was expected to total 5,964 thousand tons, a marginal increase of one-half percent.

In New York, apple production is indicated to be 25.0 million bushels, down 5 percent from last year. Indicated production is 1 percent below the average production of the last 5 years. Grape production of 195 thousand tons was estimated, 18 percent above last year. Total production of the six major fruit and vine crops of 755 thousand tons is projected for the State, just about the same as the previous year. Total production is at a near normal level.

The utilized value of the major fruit tree and vine crops in New York for the last nine years and the projected value for 1996 is shown below. Reduced national non-citrus output, a short apple crop in the eastern US, a moderate-sized European apple crop, a short pear crop, and low inventories of processed products at the beginning of the harvest are factors which point to high prices for New York growers for the 1996 crop. A short national crop of Concord and Niagaras and a strong market for premium wine varieties, both hybrids and *vinifera*, will boost the value of the state's grape crop. Consequently, the value of production is estimated at $196 million, an increase of 9 percent from last year.

FIGURE 8-1. VALUE OF PRODUCTION OF MAJOR TREE FRUIT & VINE CROPS
New York, 1986-1995 and 1996 (projected)



Source: New York Agricultural Statistics, 1995-1996.

TABLE 8-1. COMMERCIAL NONCITRUS FRUIT PRODUCTION
New York and United States

Fruit	New York				United States			
	1993	1994	1995	1996*	1993	1994	1995	1996*
	thousand tons							
Apples	435	550	555	525	5,342	5,750	5,368	5,304
Grapes	118	190	165	195	6,023	5,874	5,936	5,964
Tart Cherries	8	13	16	13	162	152	198	124
Pears	15	16	15	15	948	1,046	948	783
Peaches	5	4	6	6	1,330	1,257	1,151	997
Sweet Cherries	1	1	1	1	169	207	165	133
Total New York's Major Fruit Crops	582	774	758	755	13,974	14,286	13,766	13,305

*indicated

TABLE 8-2. AVERAGE FARM PRICES OF NONCITRUS FRUITS
New York and United States

Fruit	New York				United States			
	1992	1993	1994	1995	1992	1993	1994	1995
	dollars per ton							
Apples								
Fresh	284	348	360	374	390	368	372	476
Processed	129	133	135	141	130	107	114	158
All Sales	198	232	236	242	272	258	258	334
Grapes	221	222	213	222	306	333	321	341
Tart Cherries	364	206	248	162	352	242	326	122
Pears	305	261	303	372	295	245	223	268
Peaches	524	592	502	414	304	320	266	372
Sweet Cherries	976	850	850	960	915	1,190	1,040	1,260

TABLE 8-3. VALUE OF UTILIZED PRODUCTION, NONCITRUS FRUITS
New York and United States

Fruit	New York				United States			
	1992	1993	1994	1995	1992	1993	1994	1995
	million dollars							
Apples								
Fresh	73.8	69.6	88.2	88.8	1,122	1,126	1,184	1,389
Processed	42.3	31.5	41.5	45.1	306	237	283	373
All Sales*	116.1	101.1	129.7	133.9	1,428	1,364	1,467	1,761
Grapes	37.6	26.2	39.8	36.3	1,849	2,005	1,883	2,024
Tart Cherries	4.0	1.6	2.9	1.6	55	33	48	19
Pears	4.7	3.8	4.8	5.4	272	232	233	254
Peaches	3.6	2.7	1.8	2.3	379	399	315	407
Sweet Cherries	0.5	0.6	0.7	1.0	175	191	201	193
Total New York's Major Fruit Crops*	166.5	136.0	179.7	180.5	4,158	4,224	4,117	4,658

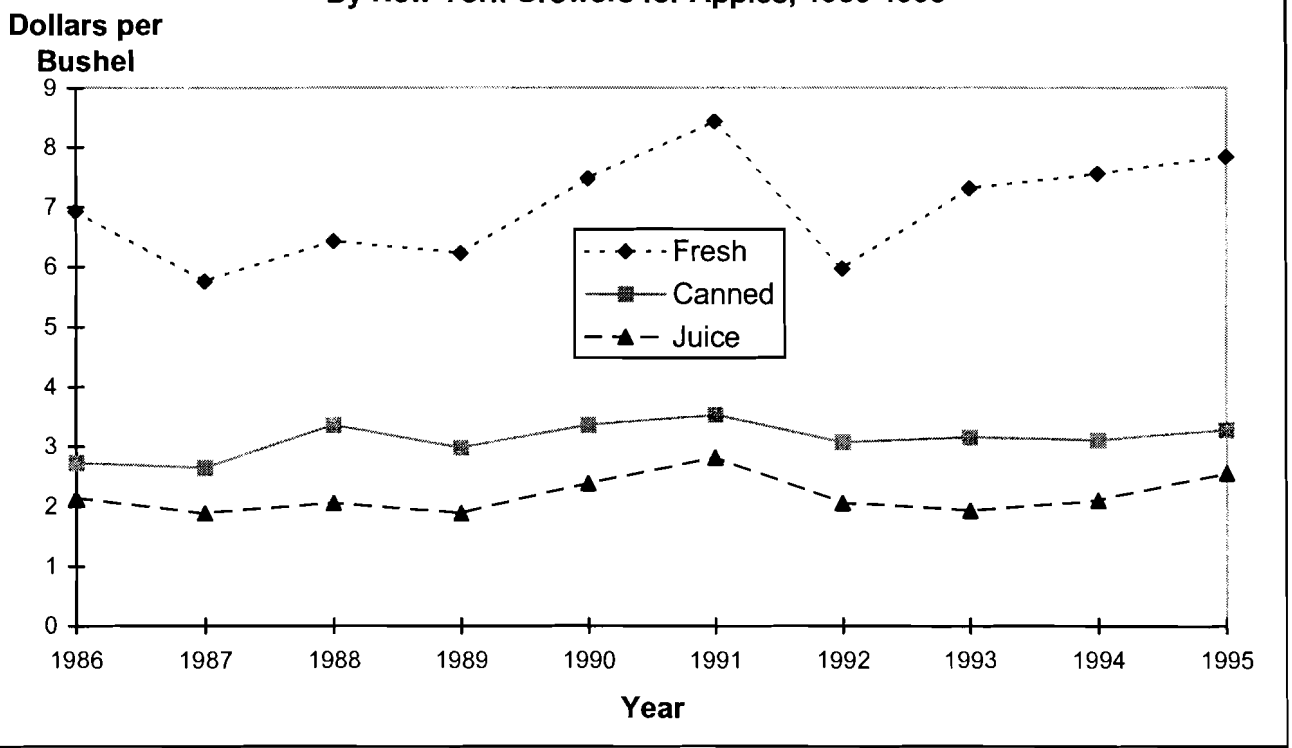
*May not add from total of fresh and processed due to rounding errors.
Source: NASS, USDA, Noncitrus Fruits and Nuts 1994 Summary, July 1995.

TABLE 8-4. APPLE PRODUCTION, UNITED STATES, 1991-1995, Five-Year Average Production, and 1996 Forecast 1,000 42-Pound Bushels

States/Regions	5-Year Average 1991-1995*	1995*	1996 USDA Estimate**	1996 Compared to USDA 5-Year Average % Change	1996 vs. 1995 % Change
Maine	1,538	1,548	1,381	-10.2	-10.8
New Hampshire	1,026	1,048	976	-4.9	-6.8
Vermont	1,086	1,071	1,048	-3.5	-2.2
Massachusetts	1,588	1,548	1,476	-7.0	-4.6
Rhode Island	127	107	107	-15.5	0.0
Connecticut	638	488	524	-17.9	7.3
New York	25,238	26,429	25,000	-0.9	-5.4
New Jersey	1,748	1,786	1,310	-25.1	-26.7
Pennsylvania	11,429	11,905	9,524	-16.7	-20.0
Delaware	529	262	476	-9.9	81.8
Maryland	971	833	714	-26.5	-14.3
Virginia	8,881	9,524	7,143	-19.6	-25.0
West Virginia	4,476	4,167	2,738	-38.8	-34.3
North Carolina	6,381	6,429	4,286	-32.8	-33.3
South Carolina	1,405	1,429	952	-32.2	-33.3
Georgia	700	714	524	-25.2	-26.7
Total East	**67,760**	**69,286**	**58,179**	**-14.1**	**-16.0**
Ohio	2,452	2,857	2,143	-12.6	-25.0
Indiana	1,595	1,786	1,143	-28.4	-36.0
Illinois	1,781	1,905	1,667	-6.4	-12.5
Michigan	24,857	29,048	17,262	-30.6	-40.6
Wisconsin	1,536	1,369	1,167	-24.0	-14.8
Minnesota	584	524	476	-18.5	-9.1
Iowa	255	238	190	-25.2	-20.0
Missouri	948	905	810	-14.6	-10.5
Kansas	152	155	95	-37.5	-38.5
Kentucky	390	405	333	-14.6	-17.6
Tennessee	338	381	262	-22.6	-31.2
Arkansas	229	238	167	-27.1	-30.0
Total Central	**35,118**	**39,810**	**25,714**	**-26.8**	**-35.4**
Total East & Central	**102,878**	**109,095**	**83,893**	**-18.5**	**-23.1**
Colorado	1,891	1,310	714	-62.2	-45.5
New Mexico	168	71	NA	N.A	N.A
Utah	1,105	476	1,190	7.8	150.0
Idaho	3,000	1,786	4,048	34.9	125.7
Washington	118,095	119,048	133,333	12.9	12.0
Oregon	3,786	3,333	4,405	16.4	32.1
California	21,048	20,238	22,619	7.5	11.8
Arizona	1,348	262	2,381	76.7	809.1
Total West	**150,440**	**146,524**	**168,690**	**12.1**	**15.1**
TOTAL U.S.	**253,318**	**255,619**	**252,583**	**-0.3**	**-1.2**

*1995 and 5-year average production from NASS, USDA, Non-Citrus Fruits and Nuts Summary July 1996.
**NASS, USDA, Crop Production, October 1, 1996.

FIGURE 8-2. AVERAGE ANNUAL PRICES RECEIVED By New York Growers for Apples, 1986-1995



SOURCE: New York Agricultural Statistics, 1995-1996.

Over the past 10 years, prices for processed apples have been fairly constant, while fresh apple prices have more pronounced fluctuations due to particular supply and demand conditions in a given year. In 1995, prices for fresh, canned and juice apples all increaased. The average price increase for all apples utilized was about 3 percent, or 13 cents per bushel. The value of the 1995 apple crop was a record 133.9 million dollars.

In October 1996, the average price for fresh apples in New York State was the same as 1995; however, prices have strengthened as the season progressed. Prospects for fresh apple exports from New York to Europe and South America appear favorable. Exports last year amounted to 885 thousand bushels, 8 percent of the state's fresh utilization. Exports in Europe have been enhanced by promotion programs designed to promote U.S. apple varieties. By the end of the marketing season next summer, New York's average price for fresh apples from the 1996 crop should be up approximately 7 percent above last year.

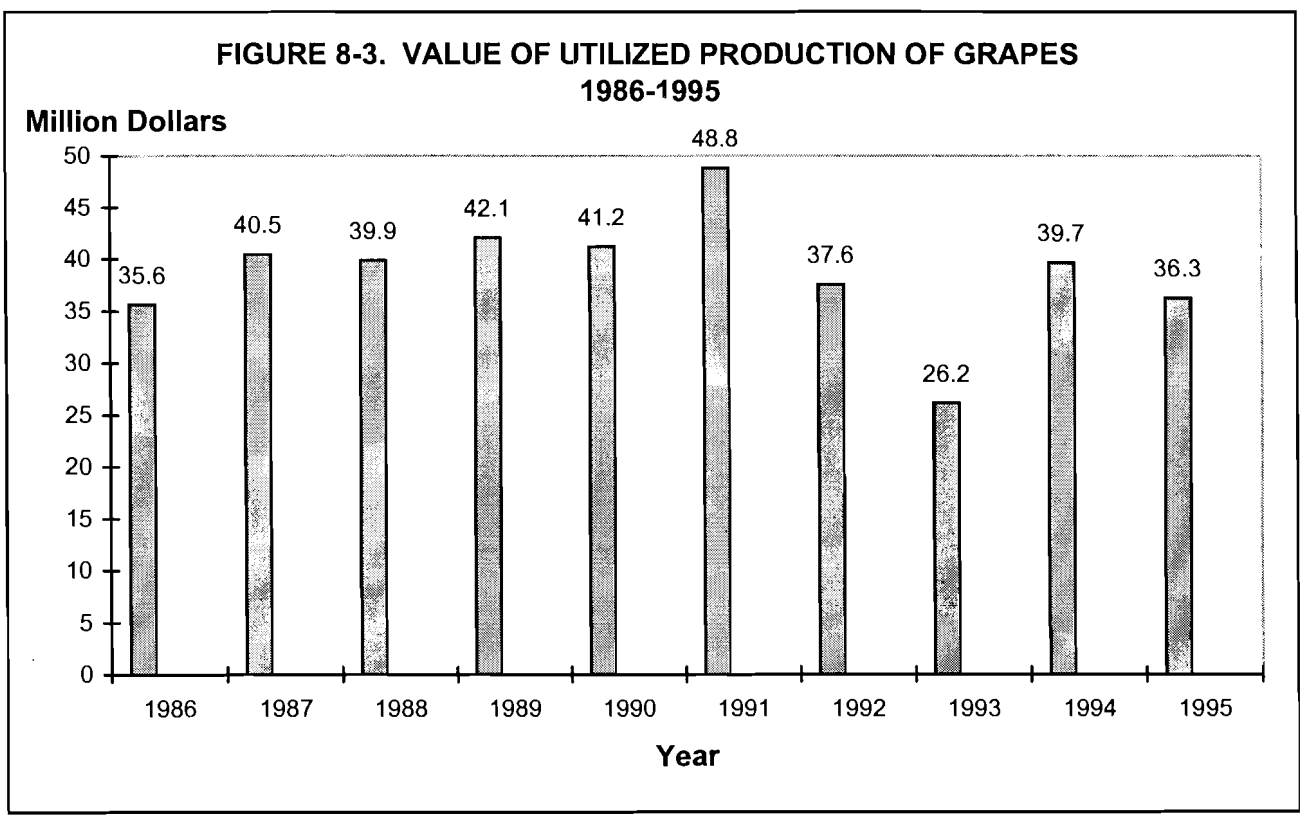
Processing apple prices were substantially higher in 1996. Prices increased as the season progressed. Juice prices started at about 5.5 cents per pound, but strengthened in response to a tightening of the eastern apple supply and strength of the world apple juice concentrate market. The price of apples for juice had reached 8.25 cents per pound in November, and may be headed to 10 cents per pound in 1997. The average price for processed apples should be well above the record 7.65 cents per pound attained in 1991.

Thus apple growers viewed positive earning prospects for the rest of the marketing season. Higher prices for both fresh and processing apples will boost the value of the state's crop to even higher than the 1995 record crop value of $133.9 million. Record fall processing apple prices were partially offset by lower yields due to weather conditions; however, harvest expenses were less because there were fewer apples to pick and deliver. (The assistance of Alison DeMarree, Area Specialist, Cornell Cooperative Extension, is acknowledged for this section of the handbook.)

Grapes

The value of utilized production for grapes in New York increased rapidly during the 1960's and early 1970's, reaching a peak of $45.9 million in 1978. For several years after 1978, the value was generally declining and reached a low of $25.9 million in 1985. Between 1986 and 1991, the State's industry recovered, fueled by a lower-valued dollar which increased the prices of competing imports of wine and juice; and new product development, promotion, and development of export markets in the grape juice sector. These positive factors have been somewhat offset by the continued erosion of the nonpremium wine sector. Wine cooler volume dropped 82 percent from 1987 to 1994 and has virtually been replaced as a product category by malt-based coolers. The additional federal excise tax levy of 90¢ per gallon at the producer level affected sales in 1991, particularly for less expensive wines. Nevertheless, the value of utilized production in New York in 1991 reached a record level of $48.8 million, fueled by a large, high quality grape crop. In 1992, utilized value decreased to $37.6 million as both production and prices declined from the banner year of 1991. An extremely short crop, as well as low prices, led to a utilized value of only $26.2 in 1993. In 1994, production rebounded to 190 thousand tons. Although the average price declined, the value of the crop rebounded to $39.8 million. A smaller than average crop in 1995 and lower prices for juice grapes caused the crop value to fall to $36.3 million.

Prospects for the utilized value of the State's 1996 crop are for a increased crop value in the $44-47 million range. Indicated production was 195 thousand tons, up 18 percent from 1995. The average price received for the 1996 crop will probably increase about 10 percent. The crop value realized could be the second highest on record.

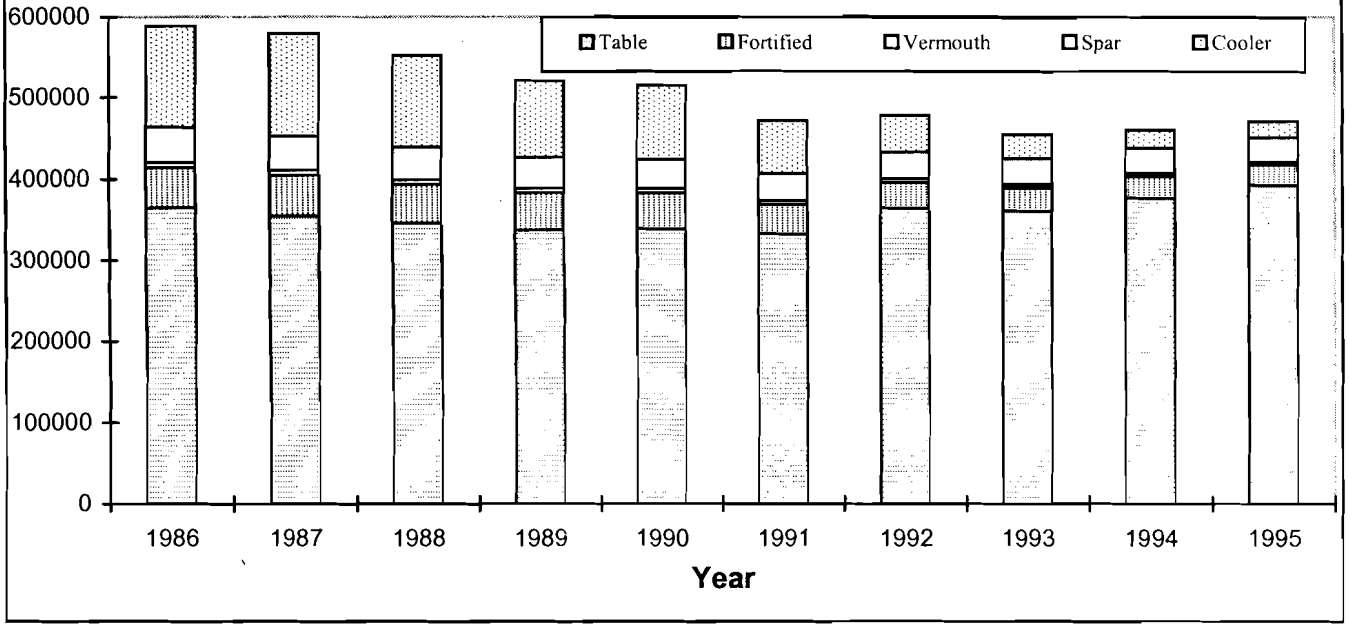


Source: New York Agricultural Statistics, 1995-1996.

Total wine consumption for 1995 increased 2.3 percent (the last calendar year for which consumption figure are available). The increase in volume was driven by the second consecutive strong gain in the table wine category (+4.2 percent). Fast growth in terms of retail bottle price is being attained by premium wine (considered to be varietals or appellation wine from well-known regions around the world, selling for $5.76 per bottle and up) which registered annual compounded growth rates of 10 to 16 percent over the last ten years. Growth in the more expensive categories is consistent with an international trend toward consumers drinking less wine in total, but being willing to pay a higher price per bottle.

This trend bodes well for the growing small premium winery sector of New York.

TABLE 8-4. WINE ENTERING DISTRIBUTION CHANNEL, U.S., 1986-1995



Source: Wines & Vines, July 1996.

Concords are the predominant variety grown and processed in New York. There were 111,000 tons of Concords from New York processed in 1995 (see page 8-7). Over the past five years, Concords have comprised 72 percent of total tonnage utilized. The second leading variety is Niagara with 7.3 percent of tonnage followed by Catawba with 6.0 percent. Over the last 5 years, the utilization of Niagara has increased significantly while the utilization of Catawba has decreased significantly.

Prices for most American and French-American hybrid varieties rebounded in the late 1980's from the disastrous 1985 season of low prices and low production. Prices for grapes used for juice (mainly Concord and Niagara, as well as some Catawba) improved until the very large 1991 crop. Varieties used mainly in nonpremium table wine, such as Delaware and Dutchess, while higher than in 1985, have been stable in recent years (see page 8-7). The prices for most hybrid grape varieties have been relatively stable over the last five years.

Vitis Vinifera prices are heavily influenced by the price for Reisling and Chardonnay, which are harvested in larger quantities than other *vinifera* varieties. Most Reisling and Chardonnay grapes sold in the $800 - 1,000 per ton range, while red *vinifera* varieties sold for $1,200 - 1,500 per ton in recent years. The price for all *vinifera* has averaged $1,009 for the last 5 years.

TABLE 8-5. GRAPES: NEW YORK GROWN
Received By Wineries and Processing Plants, 1991-1995

Variety	1991	1992	1993	1994	1995	5-Year Avg.
			tons			
Concord	134,357	123,919	82,914	136,000	111,000	117,638
Niagara	9,934	9,676	9,623	15,300	15,600	12,027
Catawba	13,252	10,124	6,636	10,116	8,700	9,766
Elvira	4,501	3,606	3,533	4,826	4,600	4,213
Delaware	4,051	1,937	2,704	12,316	2,350	2,612
Dutchess	550	364	223	298	250	337
Aurora	7,963	7,204	3,121	6,282	5,250	5,964
de Chaunac	2,611	1,385	1,363	1,126	1,450	1,587
Baco Noir	1,695	1,449	824	923	1,300	1,238
Seyval Blanc	1,361	1,215	575	678	900	946
Cayuga White	1,107	1,143	313	523	740	765
Rougeon	1,046	587	414	735	800	716
Vitis Vin.(all)	2,919	2,422	1,115	1,134	3,435	2,205
Other varieties	3,653	2,969	1,939	2,743	2,625	2,786
Total, all varieties	189,000	168,000	115,000	183,000	159,000	162,800

SOURCE: New York Agricultural Statistics, 1994-1995.

TABLE 8-6. GRAPES: PRICES PAID FOR NEW YORK GROWN GRAPES PROCESSED 1991-1995

Variety	1991	1992	1993	1994	1995	5-Year Avg.
American Varieties						
Catawba	203	200	203	205	210	204
Concord	246	206	206	195*	195*	210
Delaware	199	189	200	205	200	199
Dutchess	180	181	195	200	200	191
Elvira	199	196	201	210	210	203
Niagara	223	215	208	213	190	210
French American Hybrid						
Aurora	192	183	205	230	220	206
Baco Noir	293	246	252	270	260	264
Cayuga White	262	242	295	290	240	266
de Chaunac	229	227	245	260	250	242
Rougeon	223	238	252	270	270	251
Seyval Blanc	273	287	250	280	280	274
Vitis Vinifera						
All varieties	1,108	1,055	1,002	1,000	980	1,029
TOTAL	251	218	215	207	216	221

*Preliminary estimates of future payments by cooperatives have been included based upon historical data.
SOURCE: Fruit, 975-2-96, NY Agricultural Statistics Service.

The prices of grapes utilized for fresh use, wine, and juice are shown below. In the early 1980's, the price of grapes utilized for wine generally exceeded the price of grapes utilized for juice by $100 or more per ton. Since 1985, the price for grapes utilized in juice has been about equal to the price of grapes utilized for wine until 1992-1995, when large national crops of Concords and Niagaras pushed down juice grape prices.

The national crop of Concords and Niagara grapes was substantially down in 1996 due to freeze damage in Washington State at the end of January and early February. The Washington crop was indicated to be 150,000 tons (for all varieties), down 53 percent from last year's big crop. The total crop received by National Grape Cooperative was down by 17 percent.

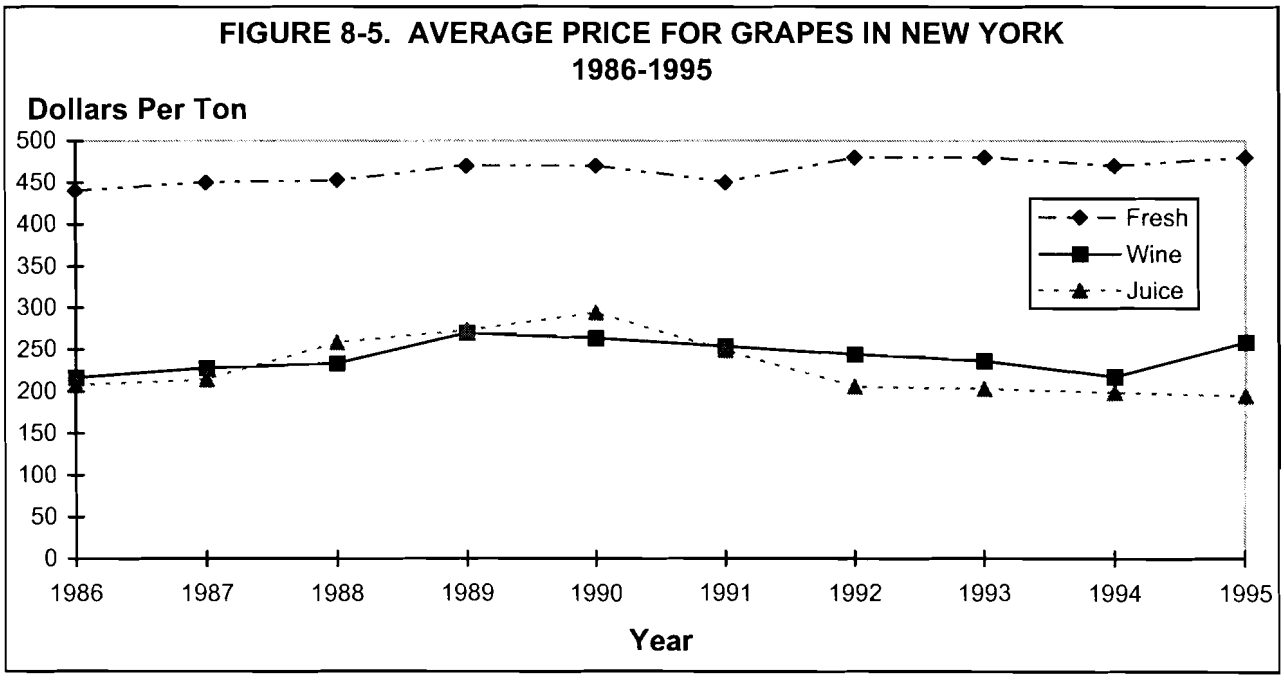
The 1996 harvest in New York was difficult due to the large crop and unfavorable weather. Perhaps as much as 1,000 tons of juice grapes were left in the vineyard due to insufficient ripening. Grape processors lowered sugar standards as the season progressed to utilize the crop.

The financial status of juice grape growers improved with the 1996 harvest. National Grape Cooperative paid a harvest cash advance of $90 per ton, compared to $80 per ton last year. (However, the amount actually received by growers will be adjusted downward to reflect the lower sugar levels.) Net cash prices will probably be up 15 percent from last year, and yields increased by 25-30 percent. Overall profitability should rebound from 1995's dismal returns.

Canandaigua Wine Company (the major purchaser of the State's wine grapes) paid similar prices as last year except for Concords (+10 percent) and Chardonnay (+43 percent). The contract situation with Canandaigua stabilized, and the company also bought some of the juice grape varieties which did not meet the processors' sugar standards.

The small winery sector of the State's grape industry continued its strong performance. Several of the Finger Lakes' largest small wineries stepped up their tonnage bought from area growers. Prices advanced for most premium wine varieties, both hybrid and *vinifera*. The average price paid per ton for vinifera probably advanced by $100. Weather disasters in Virginia and Washington state meant that buyers from other eastern and midwestern states were buying from the state's growers. The state's well managed wineries can look for strong sales increases in the coming year considering the strong consumer demand for premium wines. (The assistance of Barry Shaffer and David Peterson, Area Specialists, Cornell Cooperative Extension, is acknowledged for this section of the handbook.)

FIGURE 8-5. AVERAGE PRICE FOR GRAPES IN NEW YORK 1986-1995



Source: New York Agricultural Statistics, 1995-1996.

Chapter 9: Vegetables

Enrique E. Figueroa, Associate Professor

SITUATION

Table I presents the farm value of production of the New York potato and vegetable crops. The production value of potatoes, in 1995, was nearly 8% lower than the five year average and fresh market vegetable production value was nearly 10% lower than the five year average. However, processed vegetable production value was nearly 21% **higher** than the five year average. Overall, the total production value of potatoes and vegetables was nearly five percent lower than the five year average.

The decline in potato production value was almost entirely due to lower prices since production in 1995 was nearly identical to production in 1994. Similarly, fresh market onion production value declined because of lower prices--onion production in 1995 was higher than in 1994. Conversely, fresh market sweet corn prices were nearly 50% higher in 1995 than in 1994 and production declined by 16%. Fresh market cabbage prices were higher in 1995 as compared to 1994 and production was the same in both years.

Clearly, processed vegetables in New York had their best production value year in 1995. Green peas and sweet corn had both higher prices and higher production in 1995 versus 1994. The production value of both snap beans and sweet corn increased by 22% in 1995.

Figure I, presents the same information as found in Table I. It is likely that in 1996 the production value of processed vegetables will surpass the production value of potatoes. The problem with potato blight and the increased production and higher prices for processed vegetables would be the primary contributing factors to the switch. Since 1990, the production value of fresh market vegetables has not changed appreciably.

TABLE I: POTATOES AND VEGETABLES: NEW YORK STATE FARM VALUE OF PRODUCTION, 1990 - 1995

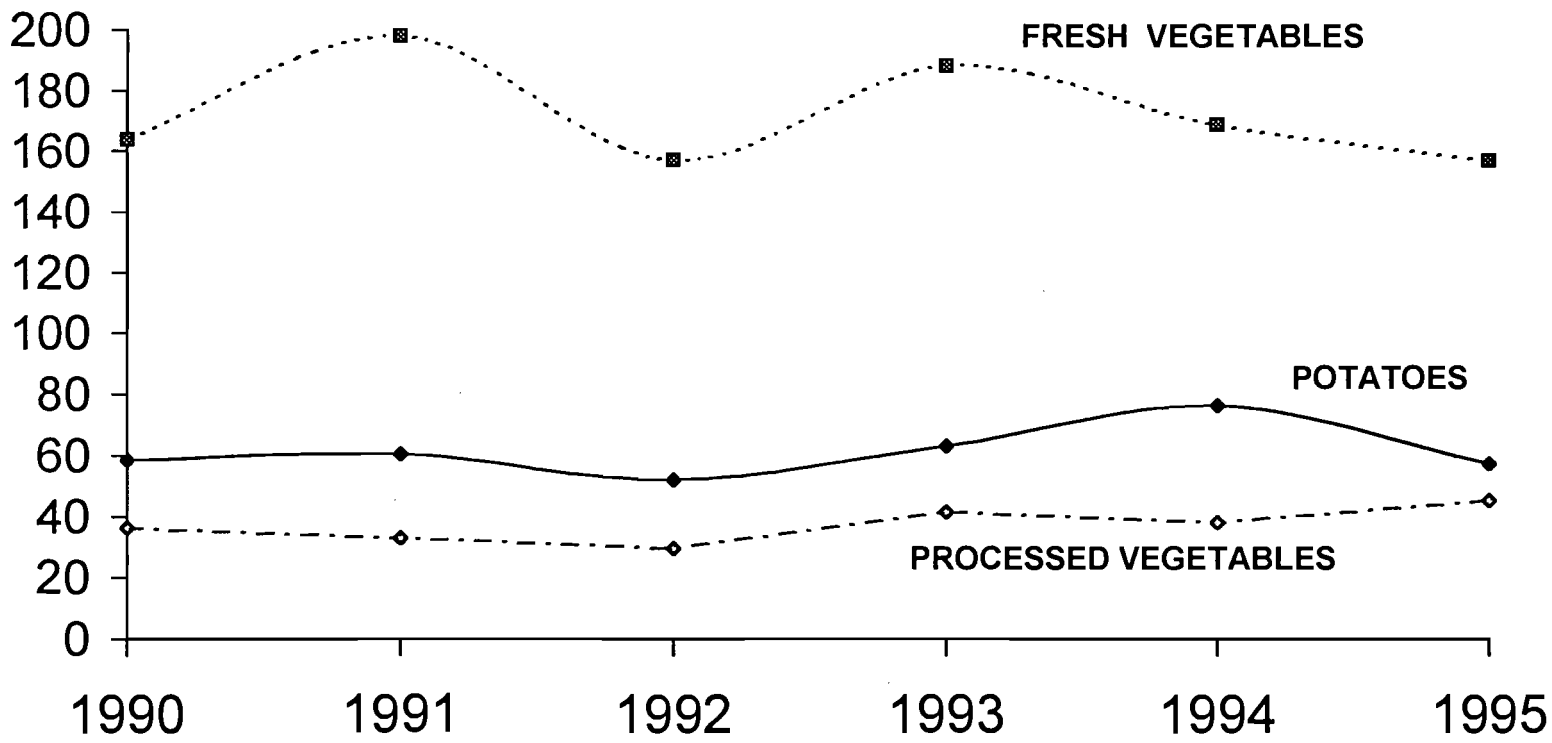
	1990	1991	1992	1993	1994	1995[1]	Five-Year Average (1991-1995)
	millions of dollars						
Potatoes:							
Long Island	13.7	14.8	12.7	14.0	14.3	*	*
Upstate	44.8	45.7	39.3	49.0	61.9	*	*
Subtotal	58.5	60.5	52.0	63.0	76.2	57.3	61.80
Vegetables:							
Fresh Market	163.9	197.8	157.0	187.9	168.5	156.8	173.60
Processing	36.4	33.0	29.6	41.4	38.0	45.3	37.46
Subtotal	200.3	230.8	186.6	229.3	206.5	202.1	211.06
TOTAL	258.8	291.3	238.6	292.3	282.7	259.4	272.86

[1] Preliminary.
*New York Agricultural Statistics 1995-1996 stopped reporting for both production areas.
Source: New York Agricultural Statistics 1995-1996, New York State Agriculture and Markets, Division of Statistics, July 1996.

Figure I

POTATOES AND VEGETABLES: NEW YORK STATE FARM VALUE OF PRODUCTION, 1990 - 1995

(millions of dollars)



Source: New York Agricultural Statistics 1995-1996, New York State Agricultural and Markets, Division of Statistics, July 1996.

The onion industry, particularly the Orange county onion industry, suffered significant weather related losses in 1996. Also, New York State sweet corn producers had difficulty getting in their crop and therefore prices were significantly lower than in 1995 because product was marketed late. Prices for potatoes and fresh market cabbage were similar to 1995 prices. Continuing the increases in 1995, the value of processed vegetable should be higher in 1996.

Table II presents U.S. and New York fall potato production and value (as of 1995, the New York State Department of Agricultural and Markets discontinued reporting separate production and value for Long Island and Upstate potatoes). In New York, the average cwt. price for potatoes in 1995 was $7.45 while in 1994 the average price was $9.77. In the U.S., the comparable prices were $6.43 and $5.10, respectively. As in the past, New York potato prices moved in opposite directions to national potato prices. The value of national fall potato production increased 22% in 1995 even though production declined by 4%. Since 1992, national potato production has increased, on average 2.3% per year, while production value has increased by 10.2% per year. Conversely, New York potato production has decreased by 0.5% per year, while production value has increased by 5.8% per year. Michigan, Minnesota, and Washington have the largest percentage increases in potato production in the country, but Idaho is still the dominant producer.

TABLE II: U.S. FALL POTATOES: PRODUCTION AND CROP VALUE

	Production				Crop Value			
	1992	1993	1994	1995	1992	1993	1994	1995
	1,000 cwt.				million dollars			
New York:								
Long Is.	1,984	1,643	1,617	7,695*	12.69	13.97	14.31	57.3*
Upstate	5,824	6,050	6,188		39.31	49.01	61.88	
California	5,600	4,800	5,600	5,330	43.96	44.88	33.88	51.4
Colorado	22,110	25,270	25,795	23,808	89.55	155.41	91.57	148.8
Idaho	127,050	126,192	138,801	132,657	654.31	586.79	687.06	822.5
Maine	24,300	19,890	18,375	17,160	123.93	142.21	112.09	109.8
Michigan	10,800	11,780	11,310	16,350	69.12	84.82	74.65	112.8
Minnesota	16,080	12,650	17,755	20,790	69.95	71.47	85.22	109.1
North Dakota	27,690	21,090	28,200	25,410	125.99	131.81	128.31	137.2
Oregon	21,075	23,103	27,514	24,788	115.45	132.04	130.73	166.3
Pennsylvania	4,940	4,600	3,780	4,080	33.35	37.49	28.73	29.4
Washington	69,300	88,500	88,920	80,850	346.50	469.05	422.37	553.8
Wisconsin	25,160	22,588	25,740	26,000	123.28	149.08	128.70	166.4
Other	17,612	60,537	20,050	18,091	112.04	117.13	123.56	125.5
Total-Fall	379,525	428,693	419,645	403,009	1,959.4	2,185.2	2,123.06	2,590.3

*Sub-State estimates were dropped in 1995, represents value for entire state.
Source: Potatoes, Agricultural Statistics Board, National Agricultural Statistical Service, United States Department Agriculture. September, 1996.

Table III presents New York onion production by area. It is evident that Orange county production declined by 40% in 1996 and is 40% lower than the five year average. Total State production declined by 26% and is 22% lower than the five year average. The combination of a very wet spring and summer, not only reduced yields, but harvested production did not store well. The other production areas, with the exception of Ontario county, did not experience as large production declines as Orange county. Historically, Orange county has produced nearly 50% of the onions produced in New York, but in 1996 Orange county production represented only 38% of state production.

TABLE III: NEW YORK ONION PRODUCTION BY AREA, 1991-1996.

	1991	1992	1993	1994	1995	1996[1]	Five-Yr. Average (1992-96)
	----------1,000 hundredweight----------						
Orange*	1,674	2,090	1,560	1,624	1,881	1,127	1,656.4
Orleans-Genesee*	608	975	810	806	864	720	835.0
Oswego*	722	660	684	703	630	599	655.2
Madison*	110	184	150	196	160	150	168.0
Steuben-Yates-Ontario	298	396	420	416	416	293	388.2
Wayne & Other	128	87	96	99	82	75	87.6
TOTAL	3,540	4,392	3,720	3,844	4,032	2,964	3,790.4

1- October 10, 1996 estimate.
* - Includes seed and set onions.
Source: New York Agriculture and Markets, "Vegetables," New York Agricultural Statistics, Division of Statistics, October 10, 1996.

Table IV presents U.S. production and crop value of storage onions. Because of poor yields in New York State, the state's percentage of national storage onion production fell from its historic 8% share to 6% in 1996. Prices for New York State onions have declined every year since 1993, when the average price for New

TABLE IV: U.S. STORAGE ONIONS: PRODUCTION AND CROP VALUE

	Production				Crop Value			
	1993	1994	1995	1996[1]	1993	1994	1995	1996
	----------1,000 cwt.----------				----------million dollars----------			
New York	3,720	3,844	4,032	2,964	74.8	44.5	39.7	32.6[2]
Colorado	5,735	6,125	6,141	6,120	102.0	67.1	59.0	
Idaho & Malheur Co.	10,638	12,925	12,615	12,108	120.3	141.9	81.0	
Michigan	2,201	2,178	1,856	1,980	26.9	16.1	15.6	
Oregon	2,436	2,898	2,720	2,500	42.6	29.4	26.2	
Washington	4,655	5,450	6,125	6,370	76.2	53.7	45.0	
Other	1,413	1,959	1,686	2,046	16.3	12.5	10.6	
Subtotal	30,798	35,379	35,175	34,088	459.1	365.2	277.1	
California	13,035	12,710	12,658	13,640	102.3	78.5	84.5	
TOTAL	43,833	48,089	47,833	47,728	561.4	443.7	361.6	

1 Preliminary.
2 Based on fall prices.
Source: Vegetables, 1993 Summary. Agricultural Statistics Board. National Agricultural Statistics Service. United States Department of Agriculture. January 1994.

York State onions reached $20.10 per cwt. In 1995, the average price for New York State onions was $9.95 per cwt., while the national average price was $7.56. This year, fall prices for New York State onions are approximately $7.50 per cwt. National storage onion production is nearly 48 million cwt., with Idaho and Malheur County, Oregon producing 25% of the national crop and California an additional 25%. Over the last five years, the state of Washington has increased (in percentage terms) onion production the most.

Table V presents the value of production for the primary vegetables (strawberries are included because historically they have been included in the table) produced in New York State. The vegetables are listed in descending order with respect to the value of production--i.e. potatoes are number one in 1995 at 57.3 million dollars, representing 21.6% of the total vegetable production value listed in the table. Column 2 lists the average value of production over the last 20 years; while column 3 presents the value and year when the particular vegetable obtained its highest production value over the last 20 years. For example, fresh market sweet corn, processed sweet corn, and processed green peas had their highest crop value year in 1995. Column 4 presents the trend value (statistically significant) over the past 20 years. Only two of the listed vegetables have had a negative trend: processed snap beans declining, on average, by $300,000 per year and lettuce declining by $229,000 per year. Potatoes, cauliflower, beets, and kraut cabbage have had no trend over the past 20 years. Fresh market cabbage has the largest trend at $1.5 million per year followed by fresh market sweet corn at $1.1 million per year. The growth trend for onions is slightly over $1 million per year while the production value of processed sweet corn and strawberries has had a half-million dollar per year growth trend. It is likely that the vegetables with a zero trend have actually declined in "real" value because the trend analyses is done on nominal dollars--i.e. not discounting for inflation.

In 1995, the production value of the vegetables listed on Table V totaled $267.2 million, 7.1% higher than the 20 year average. The production value of the basket of the vegetables listed has grown by $5 million per year over the past 20 years (bottom row of Table V). It is foreseeable that lettuce and processed snap bean production in the state of New York will soon decline to uncommercial levels. Conversely, fresh market sweet corn, fresh market cabbage, and storage onion production will likely continue to increase--indeed these are the three vegetables markets that New York has historically competed well in

Figure II presents national per capita utilization of fresh market potatoes, sweet corn (all forms), and fresh market cabbage--i.e. the three principal vegetables for New York State. Fresh market potato utilization continues to be 50 pounds per person while sweet corn utilization is over 28 pounds per person. Fresh market cabbage utilization is forecast to be 9.4 pounds in 1996 while in 1975 utilization was 9.1 pounds. In short, the national utilization of the three principal vegetables in New York has been rather flat over the past 25 years.

Figure III presents the national per capita utilization figures for canned, frozen, and fresh market sweet corn as well as figures for fresh market onions and processed snap beans. Canned sweet corn utilization has stabilized at 10.5 pounds per person while frozen sweet corn utilization continues to increase--currently estimated at 10 pounds--and fresh market sweet corn utilization is at 7.7 pounds in 1996, nearly identical to the 7.8 pounds in 1975. The clear gainer is the utilization of onions which currently stands at 17.4 pounds per person, nearly 7 pounds higher than 1975. Though the increase in the utilization of onions can be attributed to "sweet onion" consumption, New York State onion producers have benefited from the increase utilization through the increase in prices.

TABLE V: COMMODITY RANKING OF VALUE OF NEW YORK STATE VEGETABLE PRODUCTION IN 1995

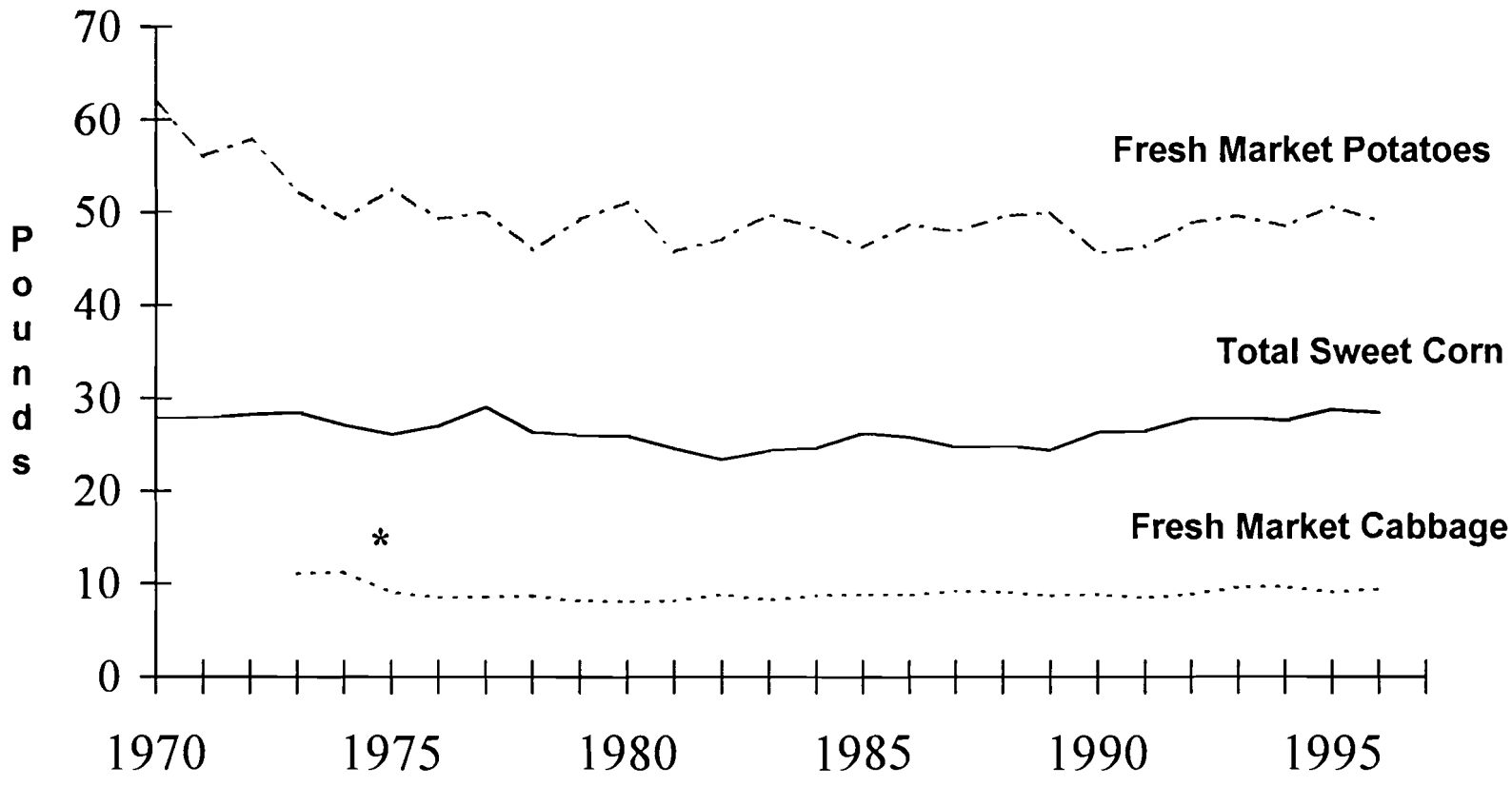
Commodity	Value of 1995 Production	1976-1995 Avg. Value	Highest Value In Past 20 Yrs.	20 Yr. Value Trend Per Yr.	Value Share in 1995
	millions of dollars				%
Potatoes	57.328	61.616	(1980) 97.628	zero	21.6
Cabbage	45.558	35.143	(1991) 56.762	1.516	17.0
Onions	39.672	45.542	(1993) 74.834	1.079	14.8
Sweet Corn (fresh)	38.556	21.121	(1995) 38.556	1.129	14.4
Sweet Corn (processed)	16.435	8.483	(1995) 16.435	0.529	6.1
Snap Beans (processed)	12.677	13.572	(1980) 19.134	-(0.301)	4.7
Green Peas (processed)	9.546	4.565	(1995) 9.546	0.276	3.6
Strawberries	8.988	8.704	(1993) 22.032	0.496	3.4
Snap Beans (fresh)	8.701	7.624	(1994) 13.572	0.181	3.3
Tomatoes	7.380	10.754	(1988) 17.434	0.260	2.8
Cucumbers	6.674	5.343	(1992) 8.901	0.241	2.5
Cauliflower	4.799	7.359	(1984) 11.667	zero	1.8
Carrots (fresh)	3.360	4.253*	(1992)* 7.807	0.175*	1.3
Beets	2.548	2.068	(1979) 2.950	zero	1.0
Lettuce	2.093	8.051	(1981) 13.412	-(0.229)	0.8
Cabbage (Kraut)	2.030	2.398	(1993) 3.577	zero	0.8
Carrots (processed)	0.901	--			0.3
TOTALS	**267.249**	**249.496**	**(1993) 312.462**	**5.047**	**100.00**

* -- For both Fresh and Processed Carrots

Source: NY Agricultural Statistics 1995-1996, NY Agriculture and Markets, Division of Statistics, July 1996.

Figure II

U. S. PER CAPITA UTILIZATION OF NEW YORK PRIMARY VEGETABLES, IN POUNDS, 1970-1995

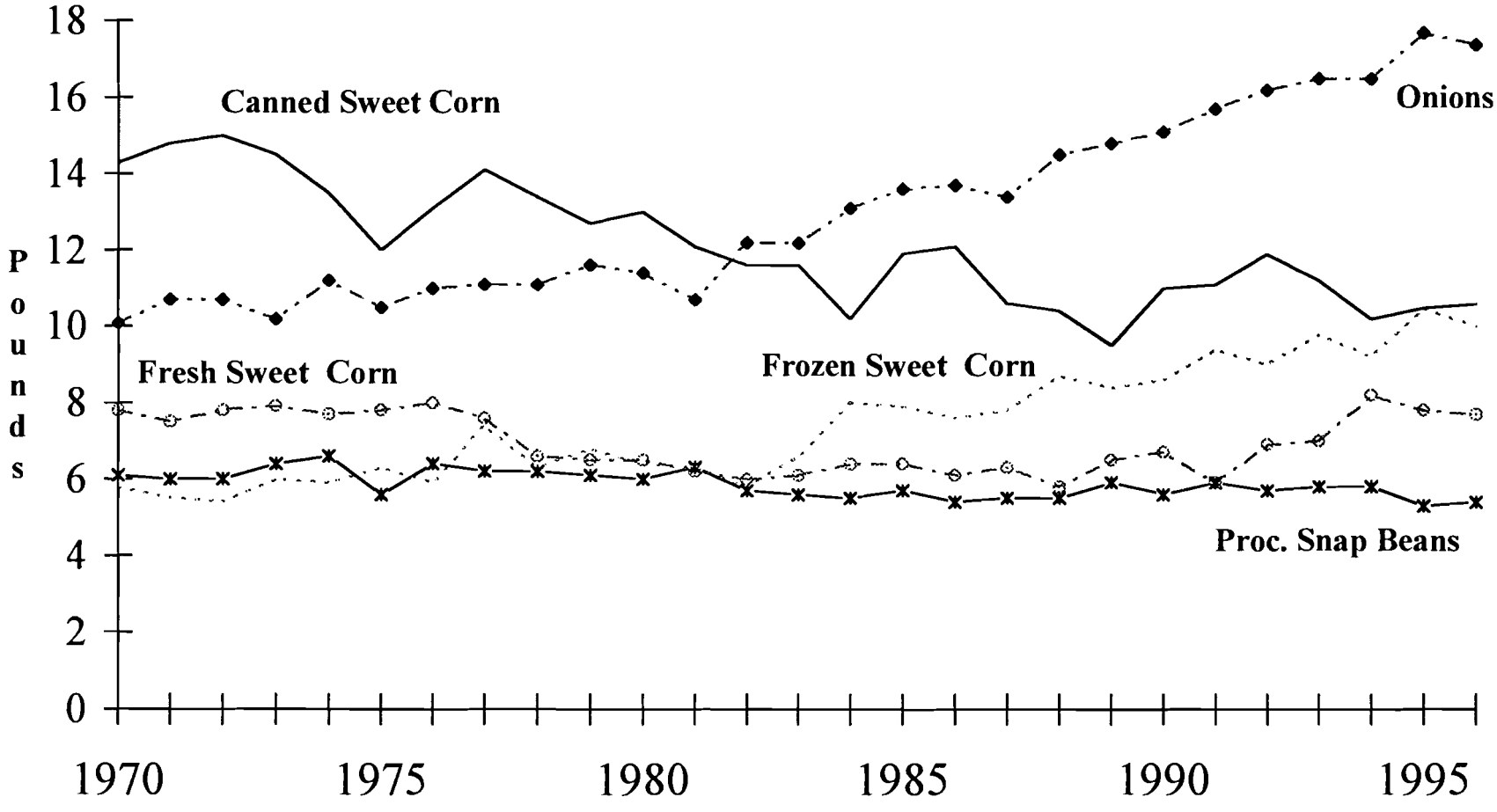


*-- Data not available prior to 1973

Source: Vegetables and Specialities: Situation and Outlook Report, USDA, Economic Research Service, VGS-266, July 1996.

Figure III

U.S. PER CAPITA UTILIZATION OF NEW YORK VEGETABLES, IN POUNDS, 1970 - 1995



Source: Vegetables and Specialties: Situation and Outlook Report, USDA, Economic Research Service, VGS-266, July 1996

OUTLOOK

Perhaps the principal issue facing the New York State vegetable industry is the implementation and enforcement of pesticide registry legislation. As most individuals familiar with New York State agricultural know, pesticide registry legislation was passed in 1996. However, as of now the state legislature has not passed appropriations for the implementation and enforcement of the bill. If, and when, the legislation is implemented and enforced, New York State vegetable producers will be faced with increased costs directly attributed to the paperwork requirements of the legislation. In addition, the uncertainty surrounding "citizen suit" legislation can complicate matters with the New York State vegetable industry.

Another development in the horizon is the program embarked upon by a New York State supermarket chain in conjunction with a state processing vegetable firm and Cornell's IPM Program. The program, begun in 1995, encouraged fresh market sweet corn producers to market their IPM grown corn through a promotional program instituted by the supermarket chain. The corn was marketed with Cornell's IPM Program logo prominently displayed at retail. Before the end of 1996, the same supermarket chain in conjunction with the same vegetable processing firm will market canned vegetables with Cornell's IPM Program logo on the label. It is a marketing development that potentially could affect New York State vegetable producers--i.e. if the public identifies IPM grown vegetables as differentiated products, then the demand for IPM grown vegetables will increase.

Thirdly, the New York State Vegetable Growers Association initiated the Fresh Market Research Fund. This fund is supported through voluntary contributions and is intended to support research on New York State vegetables. Continued support for the fund will no doubt add research dollars to New York State vegetable industry. However, both potato producers and fresh market cabbage producers have had informal discussions regarding the enactment of respective state based market orders. At this point, it is to early to ascertain what the enactment, if they are enacted, of these market orders could mean to the Fresh Market Research Fund.

Finally, New York State Vegetable growers should consider the impact of the "downsizing" of the New York State Department of Agriculture and Markets. The personnel and divisions of the current New York State Department of Agriculture and Markets are significantly different today than they were, say, five years ago. Of particular importance is the loss of the New York State Market News Service which provided timely price data for New York State Agricultural products. Small and medium sized vegetable producers have been impacted more than large growers, simply because they lack the resources to obtain the price information.

In closing, national demand for the principal New York State vegetables will increase or remain constant in 1997. The competitive position of New York State vegetable producers will remain similar to their position in 1996. However, the enforcement and implementation of the pesticide registry legislation will create more paper requirements, and therefore costs, for New York vegetable producers.

Chapter 10. Ornamentals

Enrique E. Figueroa, Associate Professor

SITUATION

Table 1 presents the summary of the wholesale value of sales of the U.S. floriculture crop. The Cut Flower category declined by 7.6 % in 1995 and the Cut Greens category declined by 5.5%. All other categories increased in 1995, though the increases were modest compared to prior year increases. In 1995, the total wholesale value of U.S. floriculture crops surpassed, for the first time, the $3 billion mark. The Bedding Plant category continued to dominate the floriculture sector and in 1995 represented nearly 44% of the entire value of the floriculture crops in the U.S. Potted Flowering Plants are the second largest category at 22.5% and Cut Flowers are third at 13.5% of total U.S. floriculture crop value. The domestic Cut Flower value continued to decline, as imported cut flowers continued to increase their market share of U.S. cut flower expenditures.

The U.S. "broader" ornamentals industry likely grew in 1995. The term "likely" is used because national statistics for all products under the ornamentals designation are not collected by the USDA. However, anecdotal as well as trade reports suggest that the "broader" ornamentals industry responded to a growing economy and will likely grow by 2-3% in 1996. Also, the Southeastern part of the U.S. grew relatively more than the Northeast and Far West.

TABLE I: SUMMARY OF U.S. FLORICULTURE CROPS WHOLESALE VALUE OF SALES, 1994 AND 1995 - MILLIONS OF DOLLARS

Category	1994		1995		
	Value $	Percent of Total	Value $	Percent of Total	De/Increase Over 1994 (%)
Cut Flowers	442.3	14.8	408.7	13.5	-7.6
Potted Flowering Plants	662.5	22.0	679.0	22.5	+2.5
Foliage Plants	489.3	16.3	496.2	16.4	+1.4
Bedding Plants	1,280.1	42.8	1,324.9	43.8	+3.5
Cut Greens	119.2	4.0	112.6	3.7	-5.5
Total Value	**2,993.4**	**100.0%**	**3,021.4**	**100.0%**	**+0.9**

Source: Floriculture Crops - 1995 Summary, U.S. Department of Agriculture, National Agricultural Statistics Service, Agricultural Statistics Board, April 1996.

Table 2 presents figures specific to the New York State's floriculture industry. Similarly to the national figures, the Cut Flower category in New York State declined by 5.6% in wholesale value and the number of growers producing Cut Flowers also declined. More than 50% of the wholesale value of Cut Flowers in New York can be attributed to Hybrid Tea roses. Chrysanthemum, Gladiola, and Sweetheart rose production value continued to decline in 1995. The Potted Flowering Plants category reached nearly $32 million dollars, but the category still declined by 4% (the 1994 figure reported last year was $31.2 million, but the figure was adjusted upward this year). Finished Florist Azaleas represented 32% of the Potted Flowering Plants category while Poinsettias represented 25%. However, the quantity of Poinsettias produce in 1995 was 16.5% lower

TABLE II: COMMERCIAL PRODUCERS, QUANTITIES SOLD, AND WHOLESALE VALUE OF SELECTED FLORICULTURE CROPS, NEW YORK, 1995

	Reporting Producers[1] Number	Quantity Sold		Wholesale Value $1,000
Cut Flowers				
Chrysanthemums				
Standard	9	350,000	blooms	218
Pompon	9	23,000	bunches	87
Gladioli	8	83,000	spikes	33
Roses				
Hybrid Tea	7	7,069,000	blooms	4,810
Sweetheart	4	861,000	blooms	328
Other Cut Flowers	30	----		2,069
Sub-total				7,545
				(-5.6%)[2]
Potted Flowering Plants				
African Violets	16	1,301,000	pots	1,537
Chrysanthemums[3]	64	1,398,000	pots	2,793
Cyclamen	30	441,000	flats	1,219
Finished Florist Azaleas	37	4,233,000	pots	10,232
Easter Lilies	70	547,000	pots	1,975
Kalanchoe	9	63,000	flats	118
Other Lilies	29	184,000	pots	981
Poinsettias	119	2,627,000	pots	8,006
Other Potted Flowering[4]	67	1,467,000	flats	5,083
Sub-Total				31,994
				(-3.8%)
Foliage Plants For Indoor/Patio Use				
Potted Foliage	41		------	1,242
Foliage Hanging Baskets	50	180,000	baskets	923
Sub-Total				2,165
				(-11.7%)

Table II (cont.)	Reporting Producers[1] Number	Quantity Sold		Wholesale Value $1000
Bedding Garden Plants				
Geraniums (flats)	46	153,000	flats	1,547
Impatiens (flats)	139	1,261,000	flats	10,277
New Guinea Impatiens (flats)	27	156,000	flats	1,548
Petunias (flats)	133	421,000	flats	3,511
Other Flowering and Foliar Plants	166	2,281,000	flats	17,906
Vegetable Type Plants	145	518,000	pots	4,134
Hardy Garden Chrysanthemums	120	2,255,000	pots	3,861
Geraniums Potted(cuttings)	152	7,427,000	pots	7,321
Geraniums Potted(seed)	43	3,494,000	pots	2,851
Impatiens Potted	42	462,000	pots	446
New Guinea Impatiens Potted	102	896,000	pots	1,292
Petunias Potted	25	84,000	pots	104
Other Potted and Foliar Plants Potted	109	3,660,000	baskets	5,365
Vegetable Plants Potted	64	1,083,000	baskets	1,182
Flowering Hanging Baskets	159	472,000	baskets	3,177
Sub-Total				64,516
				(+4.0%)
Other Hanging Baskets	--	673,000	baskets	3,995
				(-2.0%)
Total of Reported Floriculture Crops				**110,165**
				(+0.4%)

1 --More than $10,000 in gross sales of all floriculture crops.

2 -- Percentage change from 1994 sales.

3 -- Excluding Handy / Garden Mums

4 -- Excluding Blooming Annuals

Source: New York Agricultural Statistics, 1995-1996, NYS Dept. of Agriculture & Markets, Division of Statistics, in cooperation with USDA, National Agriculture Statistics Service, July 1995.

than in 1994 as was the wholesale value and therefore the unit price of Poinsettias was constant.

The Foliage Plants For Indoor/Patio Use category represents less than 2% of the state's floriculture crop value and it continues to decline; declining by 11.7% in 1995. The number of growers producing (reporting) plants in this category dropped to 91 in 1995 from 108 in 1994.

The Bedding Garden Plants category is by far the largest category, representing nearly 60% of total state floriculture crop value. Impatience (flats) are the single largest items in this category, representing 16% of the category value. It is the only category where growth took place between 1994 and 1995--increasing by 4%. A new set of items is now reported by the New York State Department of Agriculture and Markets and they are listed in the "Other Hanging Baskets" category. Total floriculture crop value in 1995 was relatively flat as compared to 1994 and the value for the 1996 crop will likely be 1-2% higher than in 1995.

--OUTLOOK

The general economy and its performance in the Northeast will play a significant role in the demand for ornamental products in the Northeast. The growth of the U.S. economy in 1996, though muted somewhat in the Northeast, has increased the demand for landscape plants and other ornamentals. Also, the increased popularity of gardening--both vegetable and ornamental--will continue and therefore the demand for gardening related products will increase. The scale of floriculture production in New York will likely increase because of competitive pressures from other producing regions.

OTHER A.R.M.E. EXTENSION BULLETINS

No. 96-11	Dairy Farm Business Summary Central Valleys Region 1995	Eddy L. LaDue Stuart F. Smith Karen Livingston James A. Hilson A.Edward Staehr Thomas Weeks Jacqueline M. Hilts Charles Z. Radick Linda D. Putnam
No. 96-12	Dairy Farm Business Summary Southeastern New York Region 1995	Robert A. Milligan Linda D. Putnam Colleen A. McKeon Stephen E. Hadcock Larry R. Hulle Paul Cerosaletti Mariane Kiraly
No. 96-13	Bibliography of Horticultural Product Marketing and Related Topic Papers Third Edition	Enrique E. Figueroa
No. 96-14	Trade Liberalization and the U.S. and Canadian Dairy Industries	Maurice A. Doyon Andrew M. Novakovic
No. 96-15	A Comparative Assessment of the Milk Hauling Sector in the US and Argentina	Edith Depetris de Guiguet James Edward Pratt
No. 96-16	Dairy Farm Business Summary Eastern New York Renter Summary 1996	Stuart F. Smith Linda D. Putnam
No. 96-17	Income Tax Myths, Truths, and Examples Concerning Farm Property Dispositions	Stuart Smith
No. 96-18	Farm Income Tax Management and Reporting Reference Manual	Stuart F. Smith Charles H. Cuykendall