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New York Economic Handbook 1996

AGRICULTURAL SITUATION AND OUTLOOK

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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.

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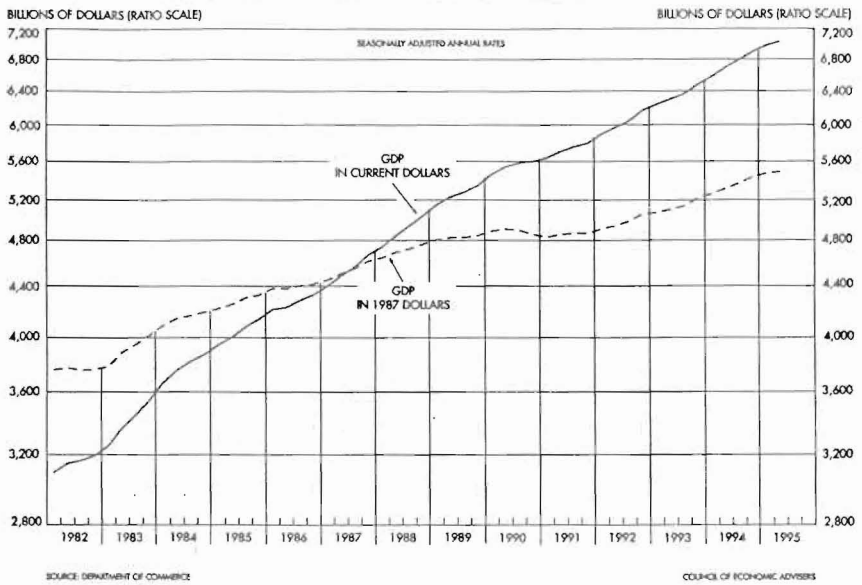
GROSS DOMESTIC PRODUCT AND COMPONENTS



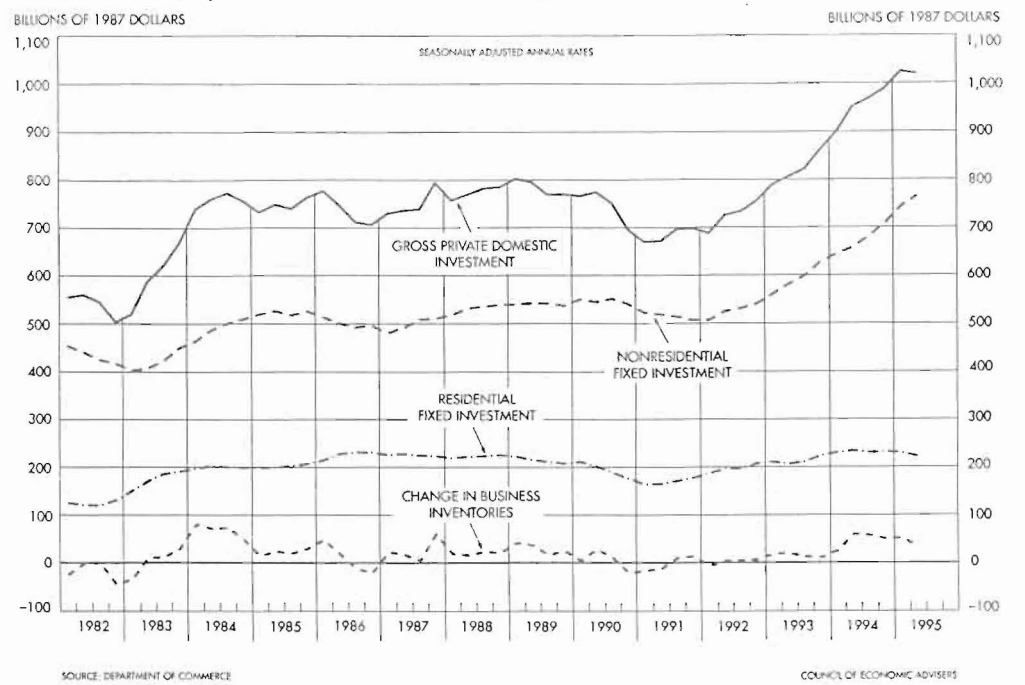
The real rate of growth in gross domestic product (GDP) averaged 4.1% in 1994 on the strength of a strong 5.1% real rate of growth in the fourth quarter. As expected, based on the Fed's monetary policies of increasing interest rates throughout 1994, the annualized real rate of growth in GDP slowed in 1995, to 2.7% in the first quarter and 1.3% in the second quarter. The first estimate of third quarter growth, however, moved up to 4.2%, suggesting that real GDP growth for all of 1995 may average 2.8-3.0%. Most sectors contributed to economic growth, though growth rates were slower than in the previous year. Only defense and space equipment were lower. In short, it appears Fed policies may have achieved the desired "soft landing" of the economy.

Real growth in GDP in 1996 is likely to be near or slightly above the 1995 rate. A flatter interest rate yield curve has spurred increased activity in construction and housing. Business inventories are up slightly, but inventory to sales ratios are still moderate compared to the past.

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				
1985	4,039	2,667	715	772	-116
1986	4,269	2,851	718	833	-133
1987	4,540	3,052	749	881	-143
1988	4,900	3,296	794	919	-108
1989	5,251	3,523	832	975	-80
1990	5,546	3,761	809	1,047	-71
1991	5,725	3,902	745	1,097	-20
1992	6,020	4,137	788	1,125	-30
1993	6,343	4,378	882	1,148	-65
1994	6,738	4,628	1,033	1,175	-98
1995[a]	7,030	4,851	1,094	1,210	-125

[a] Annualized rate for second quarter, 1994.

GROSS PRIVATE DOMESTIC INVESTMENT
(Constant 1987 dollars)



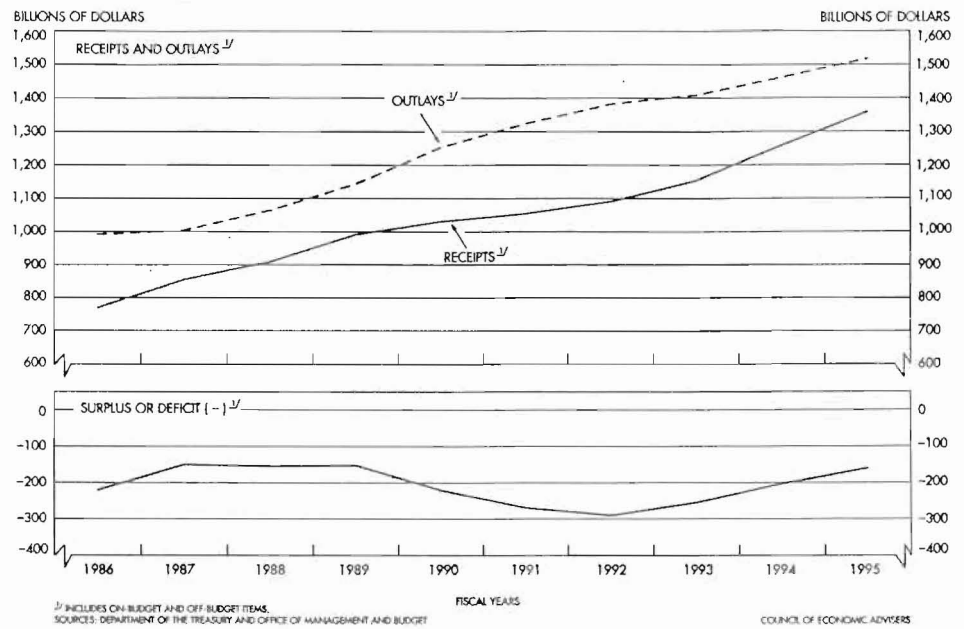
Gross private domestic investment has risen strongly since the trough in 1991. Nonresidential fixed investment has been particularly strong since 1991, and the trend is still strongly upward. Residential fixed investment leveled off with the higher interest rates of 1994 but remains above 1991 levels. Business inventories have risen in 1995 at about the same rate as in 1994. While private residential construction and private housing decreased due to the higher interest rates of 1994 and early 1995, other construction increased modestly. Total new construction is expected to be up about 4% in 1995. With the lowering of long term interest rates in 1995, private home sales are expected to reach a level about 10% above 1994.

NEW CONSTRUCTION 1985-95

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*		
1985	377	159	90	78	1,742	1,733	688
1986	408	187	84	85	1,805	1,769	750
1987	419	195	84	91	1,621	1,535	671
1988	432	198	88	95	1,488	1,456	676
1989	444	197	94	98	1,376	1,338	650
1990	442	183	96	108	1,193	1,111	534
1991	404	158	77	110	1,014	949	509
1992	435	188	66	119	1,200	1,095	610
1993	464	210	66	125	1,288	1,199	666
1994	507	239	74	130	1,457	1,372	670
1995[a]	528	237	85	141	1,362	1,333	740

[a] Annualized rate for June, July, and August.

FEDERAL FINANCE
The Federal Deficit and Debt



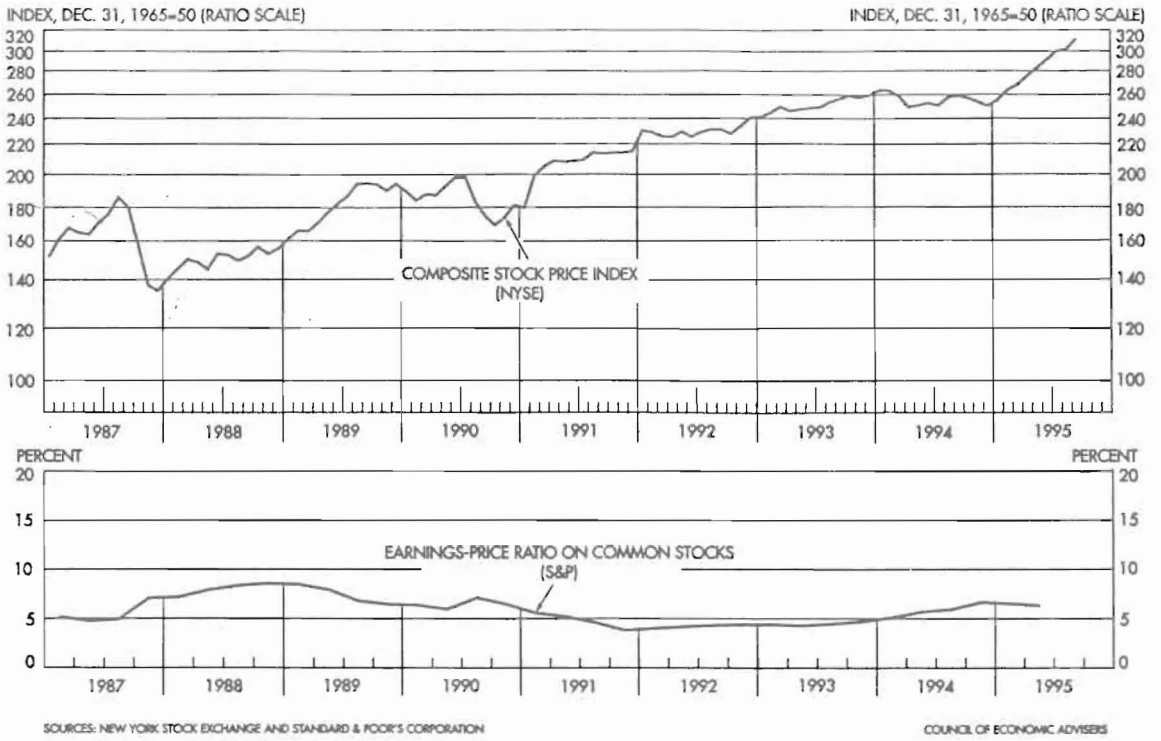
The Omnibus Budget Reduction Act of 1993 and an improving economy in 1993-95 narrowed the Federal deficit from $290 billion in FY92 to an estimated $160 billion in FY95. Without action to reduce future deficits, the annual deficit will start to increase again in FY96. While final details were not in place at the time of this writing, both Congress and the President were on record to eliminate the deficit within the next seven to ten years. It was expected that the Federal debt limit of $4,900 billion would be reached this past November. The $4,914 billion figure in the table below reflects the fact that a small part (approximately $40 billion) of the Federal debt is not subject to the debt limit.

FEDERAL GOVERNMENT FINANCES

Fiscal year	Receipts	Outlays	Deficit	Gross Federal debt
		billions of dollars		
1980	517	591	-74	909
1985	734	946	-212	1,817
1986	769	990	-221	2,120
1987	854	1,004	-150	2,346
1988	909	1,064	-155	2,601
1989	991	1,143	-153	2,868
1990	1,031	1,253	-221	3,206
1991	1,054	1,324	-270	3,598
1992	1,091	1,381	-290	4,002
1993	1,154	1,409	-255	4,351
1994	1,258	1,461	-203	4,644
1995[a]	1,358	1,518	-160	4,914
1996[b]	1,413	1,602	-189	N.A.

[a] Estimate from *Mid-Session Review of 1996 Budget.*
[b] Estimates from *The Economic and Budget Outlook,* Congressional Budget Office, 8/95.

COMMON STOCK PRICES AND YIELDS
NYSE, 1987-1995

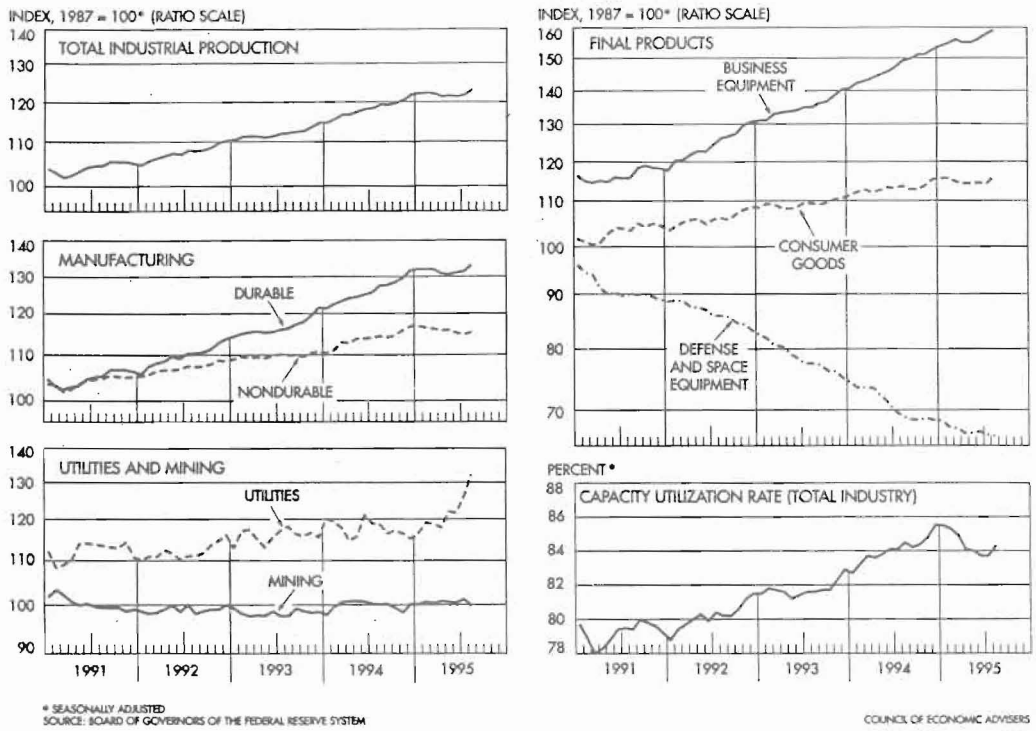


Common stock prices again set all time highs throughout much of 1995. The Dow Jones closed above 4850 in November 1995 after starting the year around 3900. Some of the biggest gains, however, came in the technology sector. The Nasdaq averages had reached 1067 by November 1995 after registering a low of 719 within the previous 12 months. Corporate profits continued to improve and reached historic highs in 1995, about 10% above 1994 levels. The PE ratio for S&P stocks at mid 1995 was 15.8, slightly below the 17.1 average for 1994.

CORPORATE PROFITS BEFORE AND AFTER TAXES, 1986-1995

Year	Profits BEFORE taxes	Profits AFTER taxes
	billions of dollars	
1986	218	111
1987	288	161
1988	348	211
1989	343	202
1990	366	227
1991	365	234
1992	396	256
1993	462	289
1994	524	322
1995, 1st Q	571	351
1995, 2nd Q	574	354

INDUSTRIAL PRODUCTION AND BUSINESS ACTIVITY



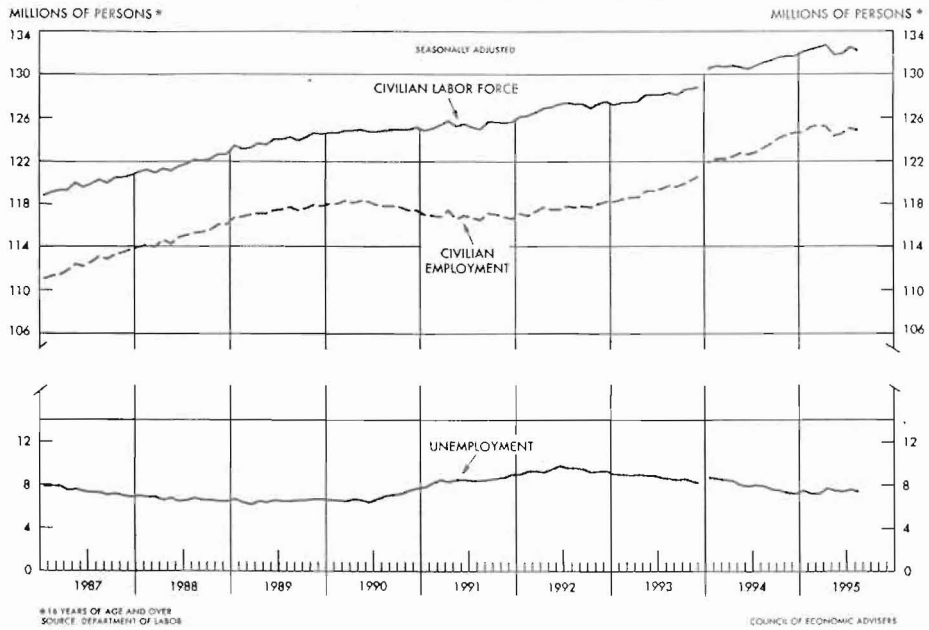
The Index of Industrial Production leveled off in 1995. Activity in several sectors was down from levels of 1994. Apparel products led the declining list followed by iron and steel and motor vehicles and parts. The industrial machinery and equipment sector continued its strong performance into 1995 led by Electrical machinery output which surged ahead strongly. Total industrial capacity utilization reached 85.5% in December 1994, but capacity utilization had fallen back to 84.3% by August 1995.

INDUSTRIAL PRODUCTION, SELECTED MANUFACTURES, 1985-95

Year	Iron and steel	Fabricated metals	Industrial machinery & equipment	Electrical machinery	Motor vehicles and parts	Apparel products	Chemicals & products	Foods
				1987 = 100				
1985	104.5	94.5	86.8	93.1	99.0	92.6	91.4	94.9
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	95.3	115.0	113.4	94.3	92.9	111.1	105.3
1992	105.1	98.8	124.6	121.9	107.4	95.0	114.7	107.0
1993	111.4	103.7	141.1	139.3	121.1	94.9	119.1	109.4
1994	118.3	110.8	159.9	160.0	137.9	96.3	124.1	112.8
1995[a]	116.3	114.4	175.7	182.0	135.2	90.6	128.0	115.4

[a] Annualized rate for June, July, and August.

EMPLOYMENT AND THE LABOR FORCE



In the 12 months from August 1994 to August 1995, civilian employment grew from 123.20 million to 124.78, a net addition of 1.58 million. The unemployment rate which had peaked at 7.4% for the 1992 year, dropped to 6.1% for all of 1994. By summer of 1995, the unemployment rate was at 5.6% and 5.7% each month. About 30% of the unemployed had been unemployed for 15 weeks or more. And, for 1995 to date, the employment to population ratio has averaged almost 63%, the highest rate since 62.7% in 1990. Many large firms continue to downsize, and an increasing number utilize temporary employees, "temps", whose benefits are less costly than full time employees.

Business sector total output in 1995 was more than 50% above 1982, and output per hour was more than 22% above 1982. While compensation per hour was up almost 70% over 1982, real compensation per hour was up only about 7% with relatively small gains the past two years.

INDEX OF PRODUCTIVITY AND RELATED DATA, BUSINESS SECTOR

Year	Total output	Output per hour	Compensation per hour	Real compensation per hour	Unit labor costs
		1982 = 100; quarterly data seasonally adjusted			
1984	112.6	104.8	108.3	100.6	103.4
1985	116.7	106.3	113.2	101.5	106.5
1986	119.9	108.5	118.8	104.6	109.5
1987	124.8	109.6	123.1	104.6	112.3
1988	130.1	110.7	128.5	104.8	116.0
1989	132.3	109.9	133.0	103.5	121.0
1990	133.3	110.7	140.6	103.8	127.1
1991	132.0	112.1	147.4	104.4	131.5
1992	135.5	115.5	154.9	106.6	134.2
1993	140.6	117.0	160.1	106.9	136.9
1994	148.4	119.4	164.5	107.1	137.8
1995[a]	154.0	122.7	169.5	107.4	138.1

[a] Second quarter.
Source: Department of Labor, Bureau of Labor Statistics.

CONSUMER AND PRODUCER PRICES

Year	Consumer price index		Producer price index		
	All items	Food	All finished goods	All intermediate goods	All crude materials
	(1982-84 = 100)		*(1982 = 100)*		
1985	107.6	105.6	104.7	102.7	95.8
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[a]	152.5	148.7	127.8	125.5	102.4

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

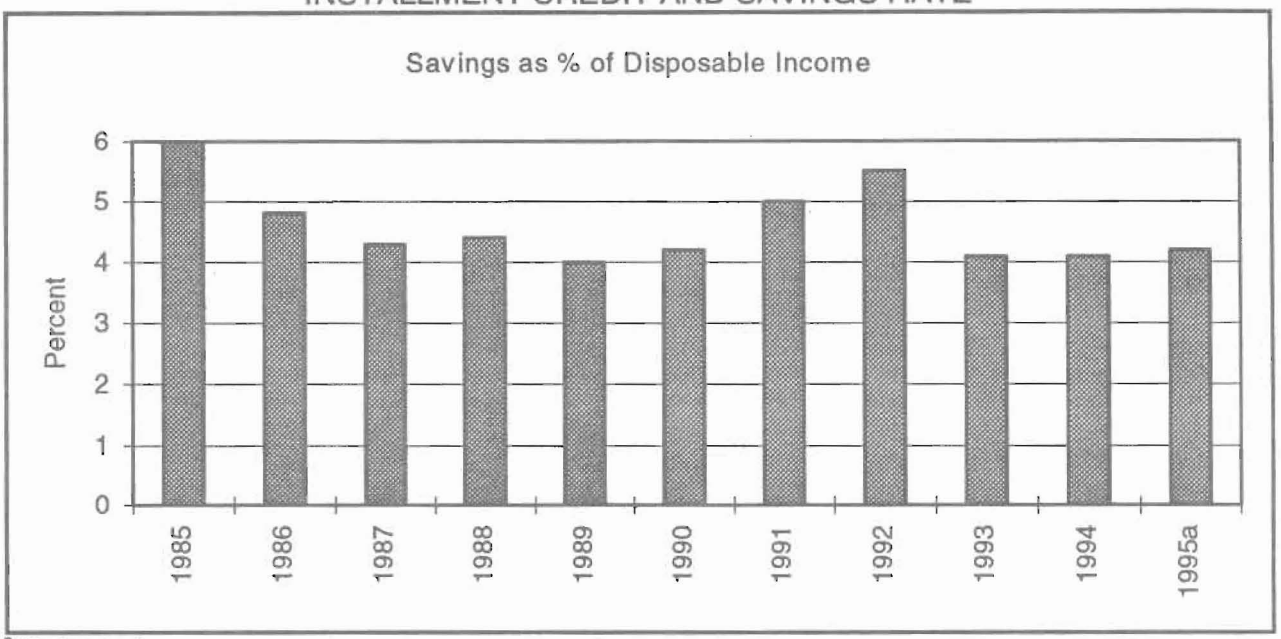
Consumer prices (CPI) for all items were up 2.6% for all of 1994 over 1993, the slowest rate of increase since 1986. Consumer prices in August 1995 were also 2.6% above August 1994 consumer prices. The rate of increase without food and energy prices included, sometimes considered a better measure of inflation, was 2.9% in the 12 months ending August 1995. The Producer Price Index, while increasing over time, has shown a substantially slower rate of increase than consumer prices. Prices of all crude materials have risen only slightly since 1982.

From mid-1994 to mid-1995, apparel prices have dropped, and prices of energy have increased more slowly than other components. Medical care contributed the most to price increases followed by transportation costs. Housing and food prices have risen the past year consistent with the rate of increase in the overall CPI.

RELATIVE IMPORTANCE OF COMPONENTS IN THE CPI

Component	December 1994 weights in the price index	July 1995 price Index	% Change in component from July 1994 to July 1995
	percent	*1982-84=100*	*percent*
Housing	41.2	148.5	2.6
Transportation	17.1	140.3	4.2
Food	15.7	148.7	2.8
Apparel	5.7	131.6	-1.9
Medical Care	7.3	221.0	4.7
Energy	7.0	105.6	1.1
All Other	6.0	N.A.	N.A.
Total	100.0	152.5	2.8

INSTALLMENT CREDIT AND SAVINGS RATE



[a] Estimated.

The savings rate as a percent of disposable income increased from 1989 through 1992; then it dropped off sharply in 1993 and 1994, but started to increase slightly in 1995. The decrease in the savings rate in 1993 and 1994 was undoubtedly a factor in the economic turnaround as consumers spent a high proportion of their incomes. The 4% or slightly higher savings rate of 1993-95 is low by historical standards but consistent with the 1987-90 period.

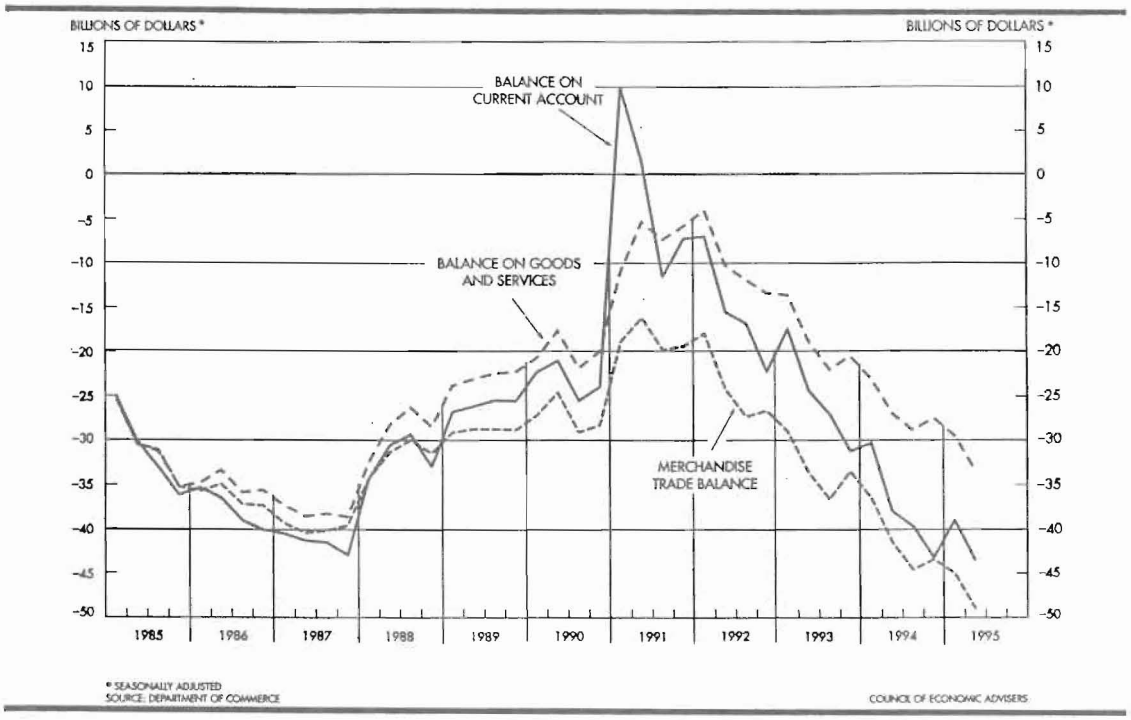
Total installment credit increased substantially in 1993 and large increases have continued into 1995. Auto loans increased sharply in 1993 and moved even higher through 1994 and 1995. Still, auto loans are a smaller proportion of total installment credit than in earlier years. Total installment credit is expected to be up sharply by the end of 1995 to the highest level in relation to personal consumption expenditures of any of the past 10 years.

CONSUMER INSTALLMENT CREDIT

Date	Personal consumption expenditures[a]	Total installment 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 1985	2,667	518	210	40.5	19.4
December 1986	2,851	572	248	43.4	20.1
December 1987	3,052	609	266	43.7	20.0
December 1988	3,296	663	285	43.0	20.1
December 1989	3,523	717	292	40.7	20.4
December 1990	3,761	735	283	38.5	19.5
December 1991	3,902	728	261	35.8	18.7
December 1992	4,137	731	258	35.3	17.6
December 1993	4,378	790	282	35.7	18.0
December 1994	4,628	903	317	35.1	19.5
December 1995[b]	4,925	1,020	350	34.3	20.7

[a] Annual totals.
[b] Forecast.

AN INTERNATIONAL VIEW
U.S. Trade Deficit, Quarterly Data, 1985-1995



From 1987-1991 the U.S. merchandise trade deficit (exports less imports of goods) decreased, but since 1991 the deficit has trended upward, reaching an all-time high of $166.1 billion in 1994. The positive contribution from services, travel and military transactions, however, cut the balance on goods and services to $106.2 billion, well below the all time high of $152.7 billion in 1987. The merchandise trade deficit for the first two quarters of 1995 exceeded the levels of comparable 1994 quarters, and it's likely that both the merchandise trade deficit and the balance on goods and services will be higher for 1995. Note below that all the major industrialized countries have recovered from their early 1990's recessions.

INDUSTRIAL PRODUCTION, MAJOR INDUSTRIALIZED COUNTRIES, 1985-95

Year	United States	Canada	Japan	France	Germany	Italy	United Kingdom
	Index of Industrial production (1987 = 100; seasonally adjusted)						
1985	94.4	96.1	96.8	97.2	97.7	92.9	94.6
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	108.9	108.8	109.2	107.0
1990	106.0	101.7	120.6	111.0	114.5	109.4	106.7
1991	104.3	97.4	122.9	111.0	118.7	108.4	102.8
1992	107.6	98.5	115.8	109.7	116.3	108.2	102.7
1993	112.0	102.9	111.0	105.6	107.4	105.5	104.7
1994	118.1	109.6	112.3	111.0	110.8	110.7	110.0
1995[a]	121.2	112.9	115.4	115.4	111.4	116.3	112.0

[a] As of 6/95.

NUMBER OF FARMS, FARM CASH INCOME AND FARM ASSETS, BY VALUE OF SALES, UNITED STATES, 1988 AND 1993

Item	Units	*Value of sales per farm*						
		$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
				1988				
Number of Farms	Thou.	12	21	60	218	312	248	1,327
Gross Cash Income	Bil. $	44.0	17.5	24.9	41.8	25.8	9.2	9.8
NCI[a]	Bil. $	13.3	6.1	9.5	15.5	8.4	2.5	-0.7
NCI/Farm	Thou. $	1,141	287	159	71	27	10	-0.5
Farm Assets	Bil. $	56.8	45.5	92.5	181.4	150.2	87.8	186.8
Farm Debt	Bil. $	11.9	10.6	16.3	35.2	27.0	11.4	26.9
Assets/Farm	Thou. $	4,887	2,156	1,554	834	482	354	141
				1993				
Number of Farms	Thou.	17	35	81	258	313	254	1,105
Gross Cash Income	Bil. $	53.0	24.4	29.6	43.3	25.5	9.1	12.2
NCI[a]	Bil. $	20.6	6.3	8.2	12.2	7.1	2.3	2.0
NCI/Farm	Thou. $	1,198	177	101	47	22	9	2
Farm Assets	Bil. $	68.8	63.2	109.5	195.6	154.3	90.7	205.9
Farm Debt	Bil. $	15.6	14.8	18.5	33.6	22.7	10.8	25.9
Assets/Farm	Thou. $	4,851	2,012	1,555	874	556	413	167

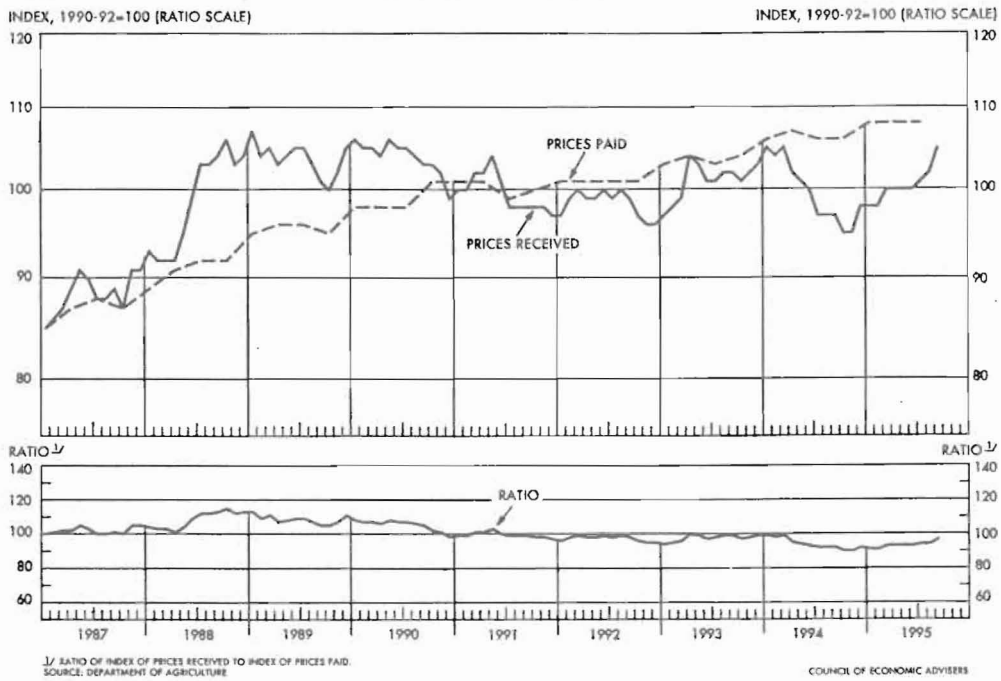
[a] NCI is net cash income.
Source: Economic Indicators of the Farm Sector, National Financial Summary, 1993, ERS, USDA, 12/94.

One way of looking at changes in farm structure is to compare characteristics for different size classes. The trend toward larger farms is evident in the table above. By 1993, a higher proportion of farms was in the larger size categories even though all categories except those with value of sales under $20,000 per year contained more farms than in 1988. Farm numbers increased by more than one-third in each of the three largest value of sales categories between 1988 and 1993. About 135,000 farms disappeared between 1988 and 1993; but with movement of many farms to larger size categories, the reduction in farm numbers in the smallest size group was even greater than 135,000.

As noted, in 1993 large numbers of farms moved over the dividing line into the next higher sales class. Typically, assets per farm decreased as the larger numbers of farms in the lower part of the size classes pulled the average down. Similarly, except for the largest size category, net cash income per farm also dropped as the numbers of farms below the midpoint of each size category increased relative to the numbers above the midpoint. With the loss of many farms from the smallest size category, total net cash income and net cash income per farm for that size category became positive between 1988 and 1993.

Since larger farms tend to have more debt than smaller farms, aggregate outstanding farm debt also shifted slightly toward the larger farm size classes from 1988 to 1993. That is, more of the total farm debt was associated with farms with gross incomes over $250,000 in 1993 than was true in 1988. Conversely, less of the total aggregate farm debt was associated with farms with gross incomes under $250,000 in 1993.

PRICES RECEIVED AND PAID BY FARMERS



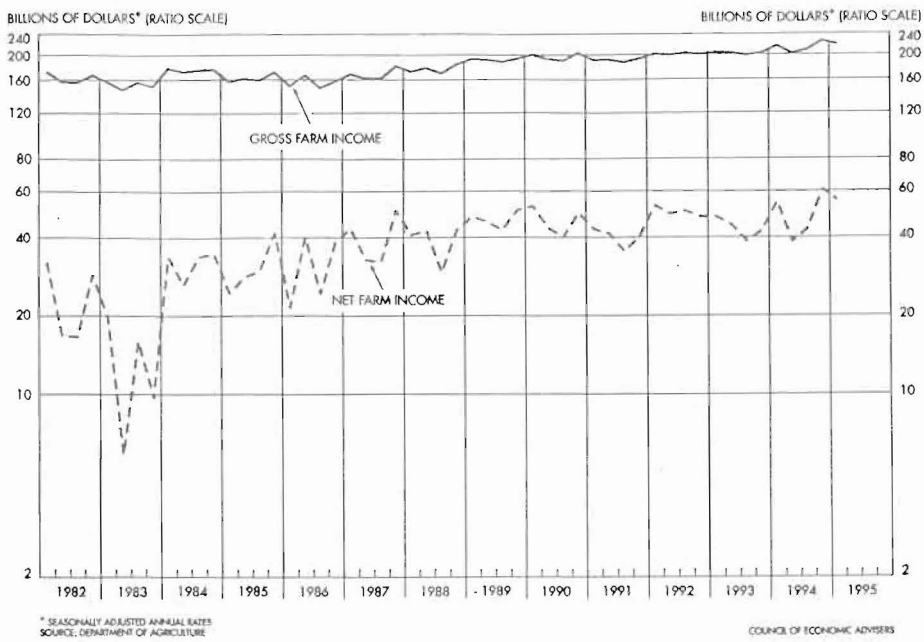
Prices received by farmers went in two directions in 1995. Prices received for crops moved sharply higher while prices received for livestock went lower, by midyear to the lowest levels since 1987. Prices received by farmers for all farm products, however, didn't keep pace with the increases in prices paid by farmers; so the ratio of prices received to prices paid in July 1995 was similar to 1994, at the lowest ratio in the past 11 years.

Both crop and livestock prices are likely to strengthen some by late fall and early winter. Corn and wheat supplies are tight, and beef, hog and milk prices were strengthening by late fall.

	Prices received by farmers			Prices paid by farmers			
Year	Crops	Livestock	All farm products	Production items	Production items, interest, taxes & wage rates	All inputs and services	Ratio
	(1990-92 = 100; not seasonally adjusted)						*percent*
1985	98	86	91	91	87	86	106
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	103	103	98
1994	105	95	100	106	106	106	94
1995[a]	113	91	101	107	107	108	94

[a] 7/95.

FARM INCOME AND EXPENSES



U. S. gross farm income reached the highest level ever in 1994 (current dollars). Net farm income at $49.7 billion almost matched the $50.1 billion level of 1992. The income pattern in 1995 and 1996 may be somewhat comparable to 1993 and 1994. Crop supplies are tight in late 1995 as they were in 1993 with correspondingly higher prices. The situation may well lead to higher gross and net farm incomes in 1996.

New York net farm income followed much the same pattern as that of the U.S. in 1992 through 1994. In 1995, production of several major New York crops was off. Corn production was down 21%, oats 25%, dry beans 12%, alfalfa hay 18% and grapes 8%. Production of other crops increased. Wheat production increased 13%, peaches 64%, tart cherries 15%, sweet cherries 11% and onions 5%.

	United States				New York
Year	Gross farm income	Total farm expenses	Net cash income	Net farm Income	Net farm income
	billions of dollars				*millions of dollars*
1984	168.0	142	37.4	26.1	295
1985	161.2	132	47.1	28.8	385
1986	156.1	125	47.8	31.0	533
1987	168.5	129	55.8	39.7	641
1988	175.8	138	53.9	38.0	533
1989	192.8	145	54,2	47.9	705
1990	198.2	151	55.1	46.9	660
1991	192.3	151	53.2	41.1	564
1992	200.2	150	57.4	50.1	649
1993	201.4	158	58.5	43.4	494
1994[a]	213.7	164	53.9	49.7	600
1995[b]	199	166	53	43	N.A.

[a] Preliminary. [b] Forecast midpoint.

Source: Agricultural Outlook, ERS, USDA, October 1994, and NY Agricultural Statistics, 7/95.

PRODUCTION, CARRYOVER STOCKS AND PRICES, WHEAT AND CORN, U.S., 1986-95

Year	Production	Ending stocks	Stocks as % of use	Average price per bu.	Production	Ending stocks	Stocks as % of use	Average price per bu.
	Wheat				Corn			
	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[a]	2,321	507	20	3.45	10,103	1,558	17	2.26
1995-96[b]	2,183	395	16	4.35	7,374	617	7	3.15

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

Both U.S. wheat and corn stocks in the 1995-96 year are expected to decline to the lowest levels in over 20 years. As a result, average prices for both crops are forecast to be at the highest levels since the early 70s. U.S. wheat prices for the crop year are expected to be in the range of $4.20 to $4.50 per bushel. Corn prices for 1995-96 are expected to be in the range of $2.95 to $3.35 per bushel. Prices for both crops are also affected by tight world stocks, forecast to be at the lowest levels since the early 1970s. The higher and more volatile prices may present opportunities for hedging and contracting for future sale.

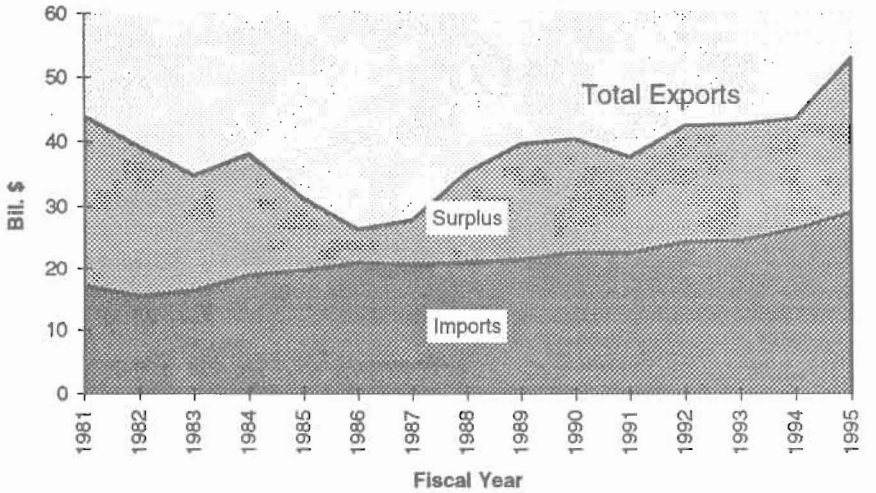
In 1994, the U.S. harvested its first 10 billion bushel corn crop, the largest U.S. corn crop in history by over 500 million bushels. While that bumper crop added substantially to stocks, spring flooding in 1995 led to reduced planted acreage, and the late-planted corn had lower yields. Consequently, the surplus built up in 1994 will rapidly disappear during 1995-96, and ending stocks are forecast to be somewhat below the low levels of 1993-94. With the flooding in early 1995, many acres that had been planned for corn were switched to soybeans. Hence, the soybean situation is not nearly as tight as corn.

WORLD PRODUCTION, USE AND STOCKS OF WHEAT AND CORN, 1985-95

Year	Production	Use	Export trade	Ending stocks	Stocks as % of use	Production	Use	Export trade	Ending stocks	Stocks as % of use
	Wheat					Corn				
	- - - million metric tons - - -				*percent*	*- - - million metric tons - - -*				*percent*
1985-86	495	490	85	171	35	479	424	54	145	34
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[a]	522	549	111	114	21	556	537	72	92	17
1995-96[b]	533	546	111	98	18	506	535	71	60	11

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

Ag. Exports, Imports and Trade Balance, 1981-1995

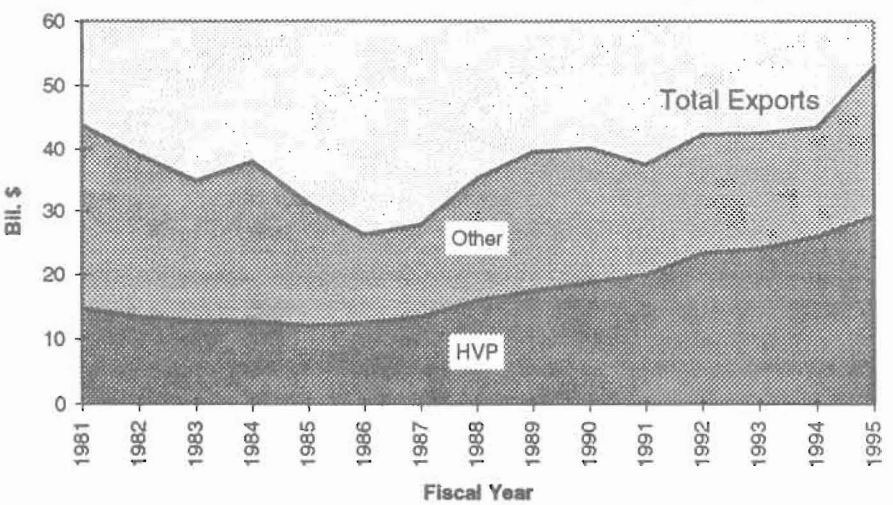


Agricultural exports are forecast to be up ten billion dollars in Fiscal Year 1995 to $53 billion, the highest ever, and a 22% increase over FY1994. Agricultural imports, however, have continued to grow rather steadily since 1982, also to the highest level in history in FY1995. Hence, while the surplus, or agricultural trade balance, was the highest in 1995 of any of the past dozen years, the FY1995 agricultural trade balance was still somewhat below the level of 1981, the previous largest surplus.

One of the interesting and important features of the exports situation is the continuing trend toward a higher proportion of total agricultural trade coming from high-value products rather than bulk products. The high-value products shown in the chart below refer primarily to meats, dairy, horticultural products, feed and fodder, oils and meal. Other, or bulk products, include grains, soybeans, cotton, and tobacco. In 1981, high-value products made up 33.6% of the $43.8 billion of exports, but by 1995 high-value products accounted for 55.3% of the $53 billion in exports.

The major components of change in the high-value export products include fruits, vegetables and meats. Exports of fruits and vegetables, the fastest growing component, gained 16% this past year and are expected to remain strong in FY 1996. U. S. exports of red meats and poultry have also set records every year since 1985 and reached $10.3 billion dollars in FY1995. Within the meats component, poultry exports grew from 800 million pounds in 1981 to 3,990 million pounds in 1995 while beef exports grew from 600 million pounds to 1,740 million pounds and pork from 110 million pounds to 730 million pounds.

High Value Products & Total U.S. Ag. Exports



OUTLOOK: SUMMARY AND PERSPECTIVE

The U.S. economy weakened in 1995 after turning in a 4.1% growth rate in 1994. As the strong growth of 1994 was unfolding, the monetary authorities raised interest rates several times to ward off inflation. The policies were effective, and inflation remained below 3%. However, the restrictive monetary policies slowed the annual rate of growth in gross domestic product (GDP) to 2.7%, 1.3% and 4.2% in the first three quarters of 1995. The annual rate of GDP growth for all of 1995 will likely be 2.8% to 3.0%.

Mixed signals were indicative of good, but slower, overall growth in 1995. Industrial production grew at about half the rate of 1994. Electrical equipment and industrial machinery and equipment remained strong, but the apparel, iron and steel, and motor vehicles and parts sectors were lower in 1995. Gross private domestic investment rose at about half the rate of year earlier, and spending for defense and space was lower. Personal consumption expenditures moved higher, but were up less than year earlier. And, while civilian employment rose 1.5 million to 125.1 million by September 1995 compared to year earlier, that was a substantially smaller growth in employment than the 4.3 million added the year before. Since September 1994, the unemployment rate has dropped, reaching 5.5% in October 1995.

Most industrialized economies were pulling out of their early 1990s recessions by 1995; yet, the U.S. merchandise trade deficit has continued to widen. While exports of U.S. products have increased, imports continue to increase even faster. The trade deficit also impacts the dollar exchange rate. The dollar set all time lows against the mark and the yen in mid 1995, but it has since recovered somewhat.

As noted earlier, monetary policies brought higher interest rates and slower economic growth in 1995. From January 1994 to the peak in January 1995, 3 month Treasury Bills rose from 3% to almost 6% while long term Treasuries rose from 6.24% to 7.93%. Since then, interest rates have fallen. In October 1995, 3 month T Bills were about 5.3%, and long term Treasury bond rates were about 6.35%. Note that long term rates decreased more than short rates. That is, the yield curve flattened consistent with lower expected future inflation rates.

Given my interpretation of economic events, my forecast for 1995 is as follows:

- **Gross domestic product will grow by 2.5% to 3%.** Economic growth has slowed considerably in 1995, to around 3%. While interest rates have moved lower throughout 1995, fall 1995 rates are still not low enough to be considered expansionary. Also, the Federal Reserve Board appears to consider a 2.5% rate of growth as a reasonable target. Consumers have been an important force driving economic growth the past six quarters, and much of their buying has been driven by installment credit. Relatively high current levels of installment credit may dampen consumer buying a bit in 1996.

- **Inflation will decrease to 2.5%, possibly less.** Inflation has diminished over the past 12 months and was down to 2.6% to 2.7% the last several months. Industrial capacity utilization has slackened slightly, and labor markets don't seem to be heating up even with the 5.5% unemployment rate. The flattened interest rate yield curve reflects lower anticipated future inflation.

- **Interest rates will fall further in 1996.** Interest rates have fallen during 1995 and further decreases are expected in 1996. Expect a 3 month Treasury Bill rate near 4.5% and a long term treasury rate near 5.5% by fall of 1995. Both figures are about three-fourths of one percent below rates of the first week in November, 1995. The forecast is based on moderate economic growth with low inflation,

- **The unemployment rate will remain around 5.5%-5.8%.** While the unemployment rate may rise slightly from the October 1995 rate of 5.5% consistent with a moderate growth economy, there is no apparent reason to expect a substantial increase in unemployment.

- **U.S. net farm income will increase by 5-10% in 1996 from 1995 levels.** Gross farm income will increase primarily due to higher crop prices and production in 1996. While gross farm income from livestock will change little, perhaps even decrease, crop receipts will push total gross farm income and net farm income higher. Input prices will continue to increase, led by substantially higher feed prices.

The U.S. food distribution system has undertaken an industry wide effort known as Efficient Consumer Response (ECR) which is intended to seek out ways to eliminate or reduce unnecessary and redundant marketing costs. This effort is focused on four specific areas of food distribution activities: 1) the reduction of costs that result from duplicate and redundant products carried in food stores, 2) improvement in the distribution system by utilizing better methods of product replenishment, 3) a more efficient use of advertising and promotional spending to promote food products, and 4) reduction in the cost of developing and introducing new products into the food distribution system.

Efforts to reduce marketing costs in these four areas has been a joint effort between food manufacturers and food retailers (and wholesalers). Food retailers (supermarkets) have undertaken this cost reduction effort due primarily to the improved system efficiencies that have been introduced by the general merchandise retailers such as Walmart. Walmart has been a pioneer in applying cost cutting measures through the application of computer technology in cooperation with its supplier companies. With Walmart's entry into the food business with its supercenters, supermarket companies have found it necessary to pursue similar cost cutting efforts to remain price competitive in the retail food market.

In November of 1995, Walmart operated 230 supercenters in the United States and announced plans to open an additional 110 such stores next year. These huge supercenter are typically 160,000 to 180,000 square feet in size and combine a traditional general merchandise store (such as Walmart) with a modern supermarket.

Will these innovative efforts mean lower food prices for consumers? Perhaps, but consumer demand for more built in conveniences in the food products they purchase will continue to add to overall marketing costs. Supermarkets are currently battling restaurants for a greater share of the consumers' "prepared foods" dollar. Take out prepared foods from supermarkets now account for 3.4 percent of total store sales an increase of 9.3 percent from the year before and a 6.1 percent increase from the year before that. This growing demand for prepared foods, purchased in supermarkets for home consumption is a labor intensive activity that adds to the marketing cost of food products.

Total U.S. food marketing sales were $825 billion in 1994 with retail food store sales accounting for 40.7 percent of the total, down from 41.4 percent in 1993 (Table 1). Sales through food service increased to 36.7 percent of total food sales up from 34.3 percent in 1993. This reflects a continuing trend in demand for prepared foods by American consumers.

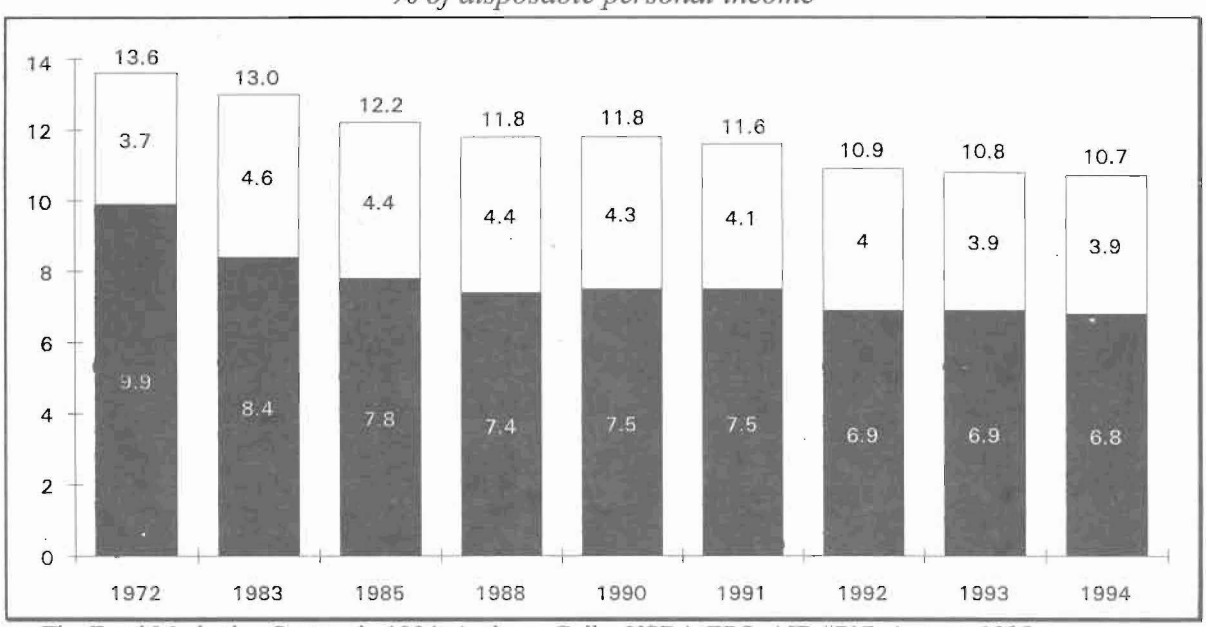
Table 1
Food marketing sales, 1994

Sector	Sales ($ billion)	Percent
Retail food	336	40.7
Food service	303	36.7
Nonfood	100	12.1
Packaged alcoholic beverages	48	5.8
Alcoholic drinks	38	4.6
Total	825	100.0

Source: The Food Marketing System in 1994, Anthony Gallo, USDA-ERS, AIB #717, August, 1995.

The percentage of disposable income spent on food continued to decline in 1994 when it reached a new low of 10.7 percent (Figure 1). The share of disposable income spent in food service establishments remained constant in 1994 at 3.9 percent (compared with 1993) while the share of disposable income spent in food stores dropped to an all time low of 6.8 percent.

Figure 1
Food expenditures as a share of disposable personal income
% of disposable personal income



Source: The Food Marketing System in 1994, Anthony Gallo, USDA-ERS, AIB #717, August, 1995.

At the same time total food expenditures as a percent of personal disposable income has decreased the portion of the food dollars spent on food away from home has increased (Table 2). In 1972, 27.2 percent of food expenditures were spent on food away from home, whereas in 1994, 36.4 percent was spent out of the home. However, the nineties may have seen a leveling off of this trend.

In 1990 money spent on food away from home amounted to 36.4 percent of the food bill which was the same as that spent in 1994.

Table 2
Share of food sales

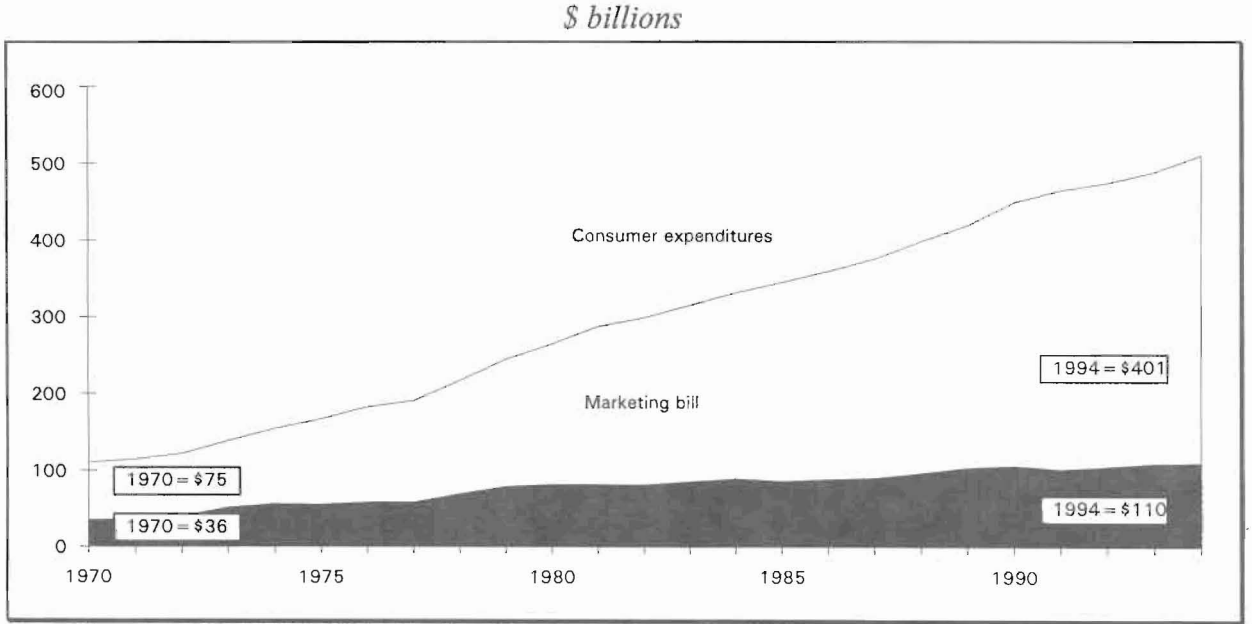
Source	1972	1990	1991	1992	1993	1994
Food at home	72.8	63.6	64.7	63.3	63.9	63.6
Food away from home	27.2	36.4	35.3	36.7	36.1	36.4

Source: The Food Marketing System in 1994, Anthony Gallo, USDA-ERS, AIB #717, August, 1995.

Consumers spent approximately $511 billion for food from U.S. farms in 1994 (Figure 2). The farm value share or the percent that farmers receive for every dollar that consumers spend was approximately 21 percent or $110 billion. The farm value share has been decreasing. In 1970, the farm share was 32 percent.

Of the $511 billion expenditure spent on food from U.S. farms, almost 79 percent was spent on marketing sectors including: processing, wholesaling, transporting , and retailing (Figure 2). This 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
Distribution of Food Expenditures
$ billions



Source: Clausen, 1995. USDA-ERS, Food and Consumer Economics Division

The farm products for which farmers receive the greatest farm value share tend to be animal products (Table 3). Egg producers receive the highest share, 58¢, out of every dollar consumers spend on eggs. Fewer marketing functions need to performed on products such as eggs, beef, chicken and milk than are normally required for other agricultural products. 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.

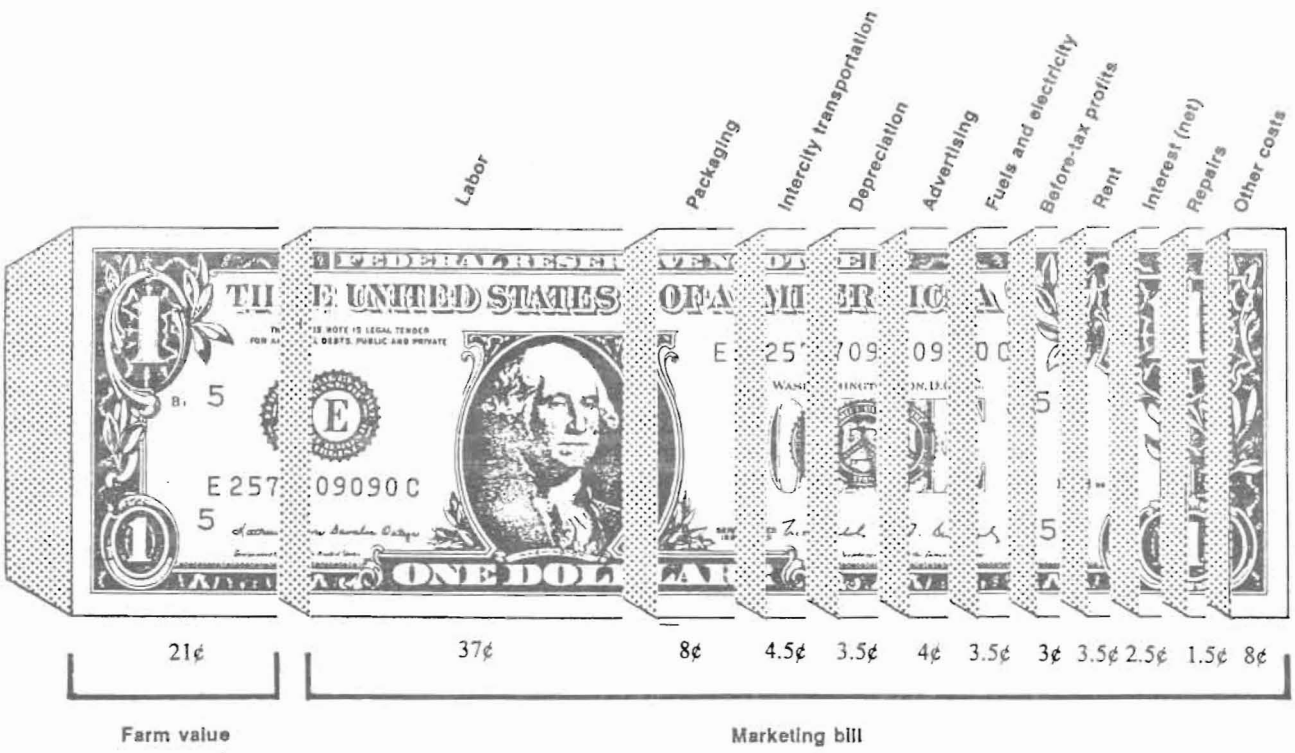
Table 3
Farm Value Share for Selected Foods

Food	1994 Farm share of retail price
Animal products:	
Eggs, grade A large, 1 dz.	58
Beef, choice, 1 lb.	52
Chicken, broiler, 1 lb	54
Milk, 1/2 gallon	42
Cheese, natural cheddar, 1 lb	35
Fruit and vegetables:	
Fresh--	
Apples, red delicious	21
Grapefruit	18
Lettuce, 1 lb.	18
Frozen--	
Orange juice conc., 12 fl oz	38
Crop products	
Sugar	37
Flour, wheat, 5 lb.	31
Rice, long grain, 1 lb.	22
Prepared foods	
Peanut butter, 1 lb.	26
Bread, 1 lb.	7

Source: Clausen, 1995. USDA-ERS, Food and Consumer Economics Division

The average farmer received 21¢ out of every dollar consumers spent on food in 1994 (Figure 3). By far the largest marketing expense in the food system is labor. The labor involved in marketing alone accounts for 37 percent of the total food bill which is larger than the farm value returned to farmers for their products. Packaging is the next largest component of the marketing activities and comprised 8 percent of the food costs or 10 percent of the marketing costs. Transportation between cities accounted for 4.5¢ and advertising added an additional 4¢ out of every dollar American consumers spent on food. All remaining costs accounted for an additional 25.5¢ of the food dollar.

Figure 3
What a dollar spent on food paid for in 1994



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: Clausen, 1995. USDA-ERS, Food and Consumer Economics Division

In 1994, agricultural imports and seafood products contributed an additional $37 billion to the $110 for U.S. agricultural products for a total of $148 (computed from unrounded values) billion in raw products to be transformed into consumer foods (Table 4). The U.S. marketing system then added a total of $603 billion in total marketing costs to these raw products.

The largest component of the value added category was retailing and wholesaling which accounted for $136 billion or 22.6 percent of the total. Processing costs contributed almost 20 percent or $120 billion of this $603 billion, while transporting services contributed 3.6 percent in added value. Other supporting sectors added 34.3 percent. Approximately 400,000 eating and drinking establishments also added $118 billion or 19.6 percent of the value added to raw agricultural products.

Table 4
Estimated value added in food marketing system, 1994[1]

Sector	value *($billion)*	percent
Agricultural products		
domestic	110	
seafood	9.5	
imported	27.5	
Total	148*	
Marketing functions		
processing	120	19.9
retailing and wholesaling	136	22.6
eating and drinking places	118	19.6
other supporting sectors	207	34.3
transporting	22	3.6
Total	603	100.0

[1] Revised from previous years to reflect new benchmarking
* computed from unrounded values
Source: The Food Marketing System in 1994, Anthony Gallo, USDA-ERS, AIB #717, August, 1995.

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 Services Program of, RBCDS, USDA. Results of the most recent survey are summarized in Table 1.

Table 1. United States Agricultural Cooperative Numbers, Business Volume, and Net Income 1993-94[1]

Major Business Activity	Number		Net Volume		Net Income	
	1993	1994	1993	1994	1993	1994
			($ billion)		($ million)	
Marketing	2,214	2,173	60.9	65.4	856.0	1,003.5
Farm Supply	1,547	1,497	19.2	20.8	435.9	828.0
Related Service	483	504	2.7	3.0	66.4	131.3
TOTAL	4,244	4,174	82.9	89.2	1,348.4	1,962.9

[1] Totals may not add due to rounding.

Source: Farmer Cooperative Statistics, 1993, CS Service Report 43, USDA, CS, RDA, Washington, DC, November 1994 and Farmer Cooperatives, Rural Business and Cooperative Development Service, USDA, Washington, DC, September, 1995.

The number of cooperatives in the United States has continued to decline to a total of 4,174 in 1994, a net decrease of 70 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 $89.2 billion, surpassing the record $82.9 billion in 1993. Total net income for 1994 was $1.96 billion, up significantly from $1.36 billion in 1993. Record net income for 1994 exceeded the previous high of $1.9 in 1980.

Combined assets in 1994 for all cooperatives totaled $35.7 billion, a 6.7 percent increase from 1993. Net worth totaled $15.5 billion, up 4.9 percent. Total liabilities were $20.2 billion in 1994 up 8 percent from the previous year.

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 1991 and 1993. Table 2 summarizes cooperative numbers and business volume for New York State.

Table 2. New York State Agricultural Cooperative Numbers and Net Business Volume by Major Business Activity, 1991 and 1993[1].

Major Business Activity	Number Headquartered in State		Net Volume	
	1991	1993	1991	1993
			($ million)	
Marketing:				
Dairy	65	63	966.4	1,154.8
Fruit & Vegetable	8	11	116.9	178.4
Livestock	5	4	61.3	89.0
Miscellaneous[2]	4	4	42.8	47.8
TOTAL MARKETING	82	82	1,287.9	1,327.3
Supply:				
Chemicals			32.4	26.6
Feed			202.3	190.7
Fertilizer			83.8	33.9
Petroleum			232.0	218.8
Seed			25.5	20.4
Other			203.3	177.8
TOTAL SUPPLY	82	21	779.4	668.2
	6	5	113.2	101.7
Service[3]	170	108	2,080.0	2,240.0
TOTAL				

Source: Farmer Cooperative Statistics, 1991, Service Report No. 33, USDA, ACS, Washington, DC., November, 1992 and Farmer Cooperative Statistics, 1993, CS Service Report 43, USDA, CS, RDA, Washington, DC., November 1994.

1 Totals may not add due to rounding.
2 Includes wool, poultry, dry bean, grains and miscellaneous.
3 Includes those cooperatives that provide services related to cooperative marketing and purchasing.

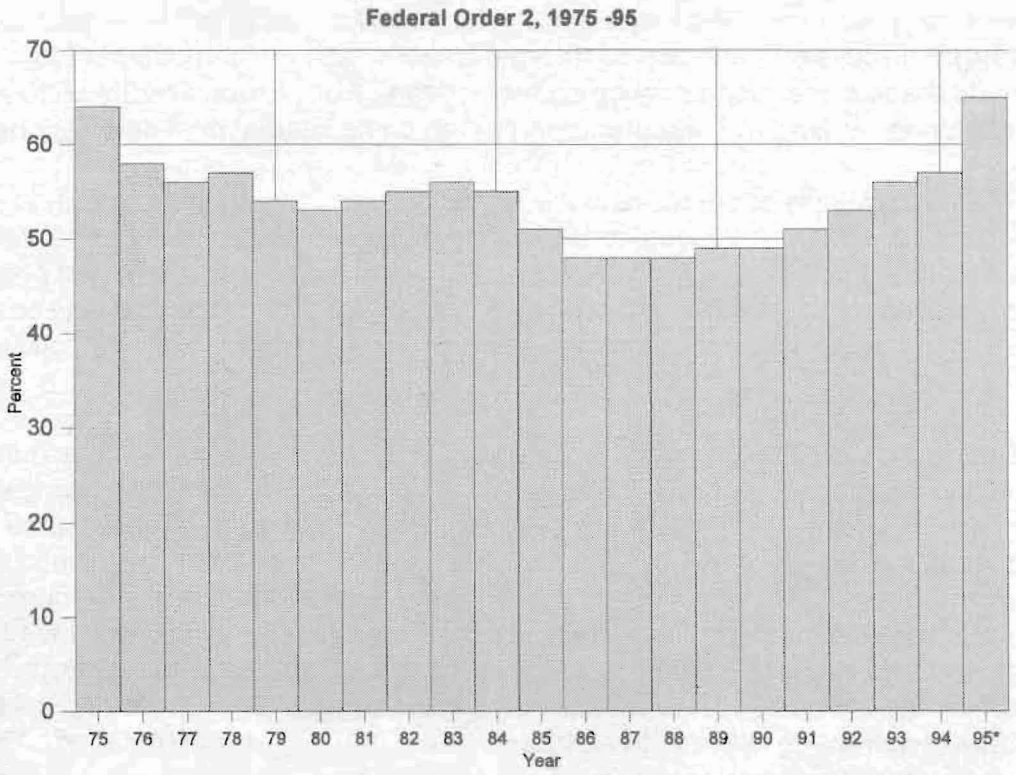
The number of agricultural cooperatives in New York State in 1993 showed a net decrease of 62 cooperatives with a decrease in dairy cooperatives and a significant decrease in the number of supply cooperatives due to a major supply cooperative's restructuring. Total net business volume increased by $160 million, an increase of 7.6 percent from 1991. Supply cooperative volume decreased while cooperative marketing volume increased. Dairy, fruit & vegetable and livestock cooperatives showed substantial increases in volume over the two year period.

New York Cooperative Performance

New York cooperatives had a mixed performance in 1995. We will first review 1995 developments in the various types of cooperatives, then look at major factors that are likely to have an impact on the year to come.

As usual we start our review with the dairy industry. Figure 1 illustrates the proportion of Order 2 milk marketed by Northeast cooperatives. The share of milk marketed by cooperatives continued to increase in 1995. Cooperative market share increased from a low of 47 percent in 1987 to 65 percent for June of 1995. Moreover, a major proprietary cheese manufacturer in Northern New York recently released approximately 200 producers. While some of those producers are not in Order 2, we anticipate an increase in next years' market share as some of those producers join Order 2 marketing cooperatives. Fewer proprietary alternatives combined with improved cooperative financial performance are the major reasons cooperative market share continues to grow. The increased number of larger farms belonging to cooperatives is also a factor in increased cooperative receipts.

Figure 1 Cooperative Share of Producer Milk Receipts



* 1995 based on first six months

Source: Market Administrator's Office, NY-NJ Federal Milk Marketing Order.

Sales of the major dairy bargaining cooperative again increased significantly in 1995. This was primarily due to increases in individual membership and the affiliation of small local cooperatives. Profitability also increased nicely, but was still less that 0.2 percent of sales. New York bargaining cooperatives are expected to benefit from membership recruitment following proprietary firms releasing producers.

During the year another major Northeast dairy bargaining cooperative merged with a processing cooperative that operates in several states and has an international joint venture. As a result of the merger its sales increased considerably and net income from operations exhibited a major increase. The other major dairy cooperatives processing milk and milk products in the Northeast experienced modest performance. Sales were more or less flat and profitability increased although they too are at rather low levels. One dairy organization that reported its first ever loss in 1994, showed a significant recovery.

Dairy service cooperatives, such as dairy herd improvement and artificial insemination had a difficult year as they continued to cope with competitive pricing and a decline in cow numbers. The dairy herd improvement cooperative has reacted pro-actively to the loosening of national dairy herd improvement competition rules and is seeking customers in adjoining states. Also, it made a major structural change in the way it processes it dairy records. The major artificial insemination cooperative continues to pursue merger discussions with two other organizations, and major movement to consummate these discussions may be on the horizon. Also, it has recently announced that it is exploring working with another organization on its international sales efforts.

The major supply cooperative in the region reported slightly lower sales, and a another loss for the year. Additional re-structuring has taken place, including strategic alliances with mid-western supply cooperatives. There are early signs that real progress to its financial problems may be on the horizon. A primary reason for the loss was continued charges from a discontinued milk operation that was brought back into its consolidated financial statements.

During the year the major fruit and vegetable cooperative in the state acquired the major fruit and vegetable processor. This occurred in November 1994, and was perhaps the first major U.S. acquisition of a public company by a cooperative. Performance for the year was stronger than the previous year. But because the organization assumed a significant amount of debt, in the form of subordinated debentures, returns to members through patronage refunds were less than the previous year. Yet the cooperative still paid a patronage refund of over thirteen percent of members' patronage to the organization. In recent months the cooperative has announced it has arranged for its preferred stock, which are its retained patronage refunds, to be traded on the NASDQ stock exchange. The purpose of this move is to provide members liquidity for their retained equity. This move does not reduce members' full control over the organization in any way. In the years to come this fruit and vegetable cooperatives must continue to improve earnings in order to retire the significant debt it is carrying.

The major grape processing cooperative had increased sales of about 20%, much due to the acquisition of a southeast food operation that offers many synergies. Total

earnings increased about ten percent for the year. However, returns per ton of grapes were down slightly due to an extremely large 1994 crop. While the 1995 crop was also large, late weather conditions did not result in as large a crop as was earlier predicted. In fact, although grape prices were generally lower, they showed a little more strength than was expected due to the large crop size and carry-over.

On January 1, 1995 the farm credit cooperatives in the northeast merged with the major cooperative bank in the U.S. They too had strong performance, despite the difficult economic situation facing farmers and growers. In addition to adjusting operations to the new organization, the credit cooperatives continued to institute an internal re-structuring of administrative operations. It is reported that this effort is showing good results.

Cooperative Outlook

Continued uncertainty about the Farm Bill and the U.S. economy will be to two major factors influencing Northeast agriculture and cooperatives, this is especially true for any dairy related cooperatives. A quick and dramatic change in farm policy could initially have a significant negative impact on dairy related cooperatives, as dairy farm income falls. This, in turn, will reduced the number of farmers that are the member/customers of these organizations. Many have made strides in re-organizing, re-structuring, merging, and forming strategic alliances. More such initiatives will be required almost under any current scenario of the Farm Bill. It is not apparent at this time that sufficient effort has been devoted to analyzing the impact of the Farm Bill on dairy related organizations, or that they have strategic plans in place to deal with its potential consequences.

The fruit and vegetable organizations seem to be better positioned and will feel little impact of the Farm Bill.

All organizations must continue to explore growth opportunities in order to spread their fixed and overhead costs. This includes new product development, international markets as well as merger and acquisition opportunities.

United States Farm Balance Sheet
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1993	1994
	billion dollars						
Assets							
Real Estate	202	384	783	586	626	679	714
Livestock	24	29	61	47	71	73	68
Machinery	30	57	80	83	85	85	86
Crops[a]	9	21	33	23	23	23	23
Purchased Inputs	c	c	c	1	3	4	5
Financial Assets	7	7	7	9	11	15	16
Coop. Investments	7	13	19	24	27	31	32
Total	279	511	983	773	846	910	944
Liabilities & Equity							
Real Estate Debt	28	45	90	100	75	75	77
Nonreal Estate Debt[b]	21	40	77	78	63	66	69
Total	49	85	167	178	138	141	146
Owner Equity	230	426	816	595	708	769	798
Total	279	511	983	773	846	910	944
Percent Equity	82	83	83	77	84	85	85

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

Changes in Structure, United States Farm Balance Sheet
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1993	1994
	percent of total						
Assets							
Real Estate	72	75	80	76	74	75	76
Livestock	9	6	6	6	8	8	7
Machinery	11	11	8	11	10	9	9
All Other[a]	8	8	6	7	8	8	8
Total	100	100	100	100	100	100	100
Liabilities							
Real Estate Debt	57	53	54	56	54	53	53
Nonreal Estate Debt[b]	43	47	46	44	46	47	47
Total	100	100	100	100	100	100	100

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

Source: Economic Research Service, USDA. Revised November 1995.

Distribution of United States Farm Debt by Lender
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1993	1994
	billion dollars						
Real Estate							
Farm Credit System	6.4	14.5	33.2	42.2	25.8	24.8	24.5
Individuals & Others	10.3	15.8	27.8	25.8	15.1	16.6	17.4
Commercial Banks	3.3	5.6	7.8	10.7	16.2	19.5	21.0
Farmers Home Admin.	2.2	3.0	7.4	9.8	7.6	5.8	5.4
Insurance Companies	5.1	6.2	12.0	11.3	9.7	9.0	9.0
CCC - Storage	.2	.2	1.5	.3	a	a	0
Total	27.5	45.3	89.7	100.1	74.4	75.7	77.3
Nonreal Estate[b]							
Commercial Banks	10.5	19.0	30.0	33.7	31.3	34.9	36.7
Farmers Home Admin.	.7	1.6	10.0	14.7	9.4	6.2	6.0
Merchants & Dealers	4.7	8.4	17.4	15.1	12.7	14.2	15.2
Farm Credit System	5.3	10.7	19.7	14.0	9.8	10.6	11.2
Total	21.2	39.7	77.1	77.5	63.2	65.9	69.1

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

Market Shares of United States Farm Debt by Lender
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1993	1994
	percent of total						
Farm Credit System	24	30	32	32	26	25	24
Commercial Banks	28	29	23	25	35	38	40
Farmers Home Admin.	6	5	11	14	12	9	8
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: Economic Research Service, USDA. Revised November 1995.

New York Farm Balance Sheet
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1993	1994
	million dollars						
Assets							
Real Estate	2614	4881	6178	6520	7908	9488	9091
Livestock	536	653	1527	983	1258	1294	1225
Machinery	785	1303	1718	1875	1842	1846	1800
Crops[a]	204	396	561	491	535	380	426
Purchased Inputs	c	c	c	27	69	98	117
Financial Assets	135	140	145	175	197	278	271
Coop. Investments	180	341	462	493	470	465	439
Total	4454	7714	10591	10564	11966	13849	13369
Liabilities & Equity							
Real Estate Debt	353	634	1038	1125	892	866	869
Nonreal Estate Debt[b]	411	748	1582	1472	1268	1225	1269
Total	764	1382	2620	2597	2160	2091	2138
Owner Equity	3690	6332	7971	7967	9806	11758	11231
Total	4454	7714	10591	10564	11966	13849	13369
Percent Equity	83	82	75	75	82	85	84

[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.

Changes in Structure, New York Farm Balance Sheet
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1993	1994
	percent of total						
Assets							
Real Estate	59	63	58	62	64	69	68
Livestock	12	9	15	9	10	9	9
Machinery	17	17	16	18	15	13	14
All Other	12	11	11	11	11	9	9
Total[a]	100	100	100	100	100	100	100
Liabilities							
Real Estate Debt	46	46	40	43	41	41	41
Nonreal Estate Debt[b]	54	54	60	57	59	59	59
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 1995.

New York Farm Debt by Lender
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1993	1994
	million dollars						
Real Estate							
Farm Credit System	98	262	367	449	403	343	339
Individuals & Others	142	214	373	363	215	236	247
Commercial Banks	69	101	108	89	115	156	155
Farmers Home Admin.	34	45	145	192	155	126	124
Insurance Companies	7	8	26	26	9	5	4
CCC - Storage	3	4	19	6	a	0	0
Total	353	634	1038	1125	897	866	869
Nonreal Estate							
Commercial Banks	155	266	632	597	417	341	347
Farmers Home Admin.	26	37	284	287	219	195	196
Merchants & Dealers	91	164	338	257	216	241	257
Farm Credit System	139	281	328	331	416	448	469
Total[b]	411	748	1582	1472	1268	1225	1269

[a] Less than .5 million.
[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.

Market Shares of New York Farm Debt by Lender
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1993	1994
	percent of total						
Farm Credit System	31	39	27	30	38	38	38
Commercial Banks	29	27	28	26	25	24	23
Farmers Home Admin.	8	6	17	19	17	15	15
Insurance Companies	1	1	1	1	a	a	a
Individuals & Others	31	27	27	24	20	23	24
Total	100	100	100	100	100	100	100

[a] Less than .5 percent.

Source: Economic Research Service, USDA. Data revised November 1995.

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(6/30)	1.7	2.6

Source: Annual and Quarterly Reports.

Nonaccrual, 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(6/30)	1.0	1.3	2.3

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

Delinquent Major Farm Program Direct Loans
Farm Service Agency

Date	Farm Ownership[a]		Operating 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

[a] Includes limited resource loans.

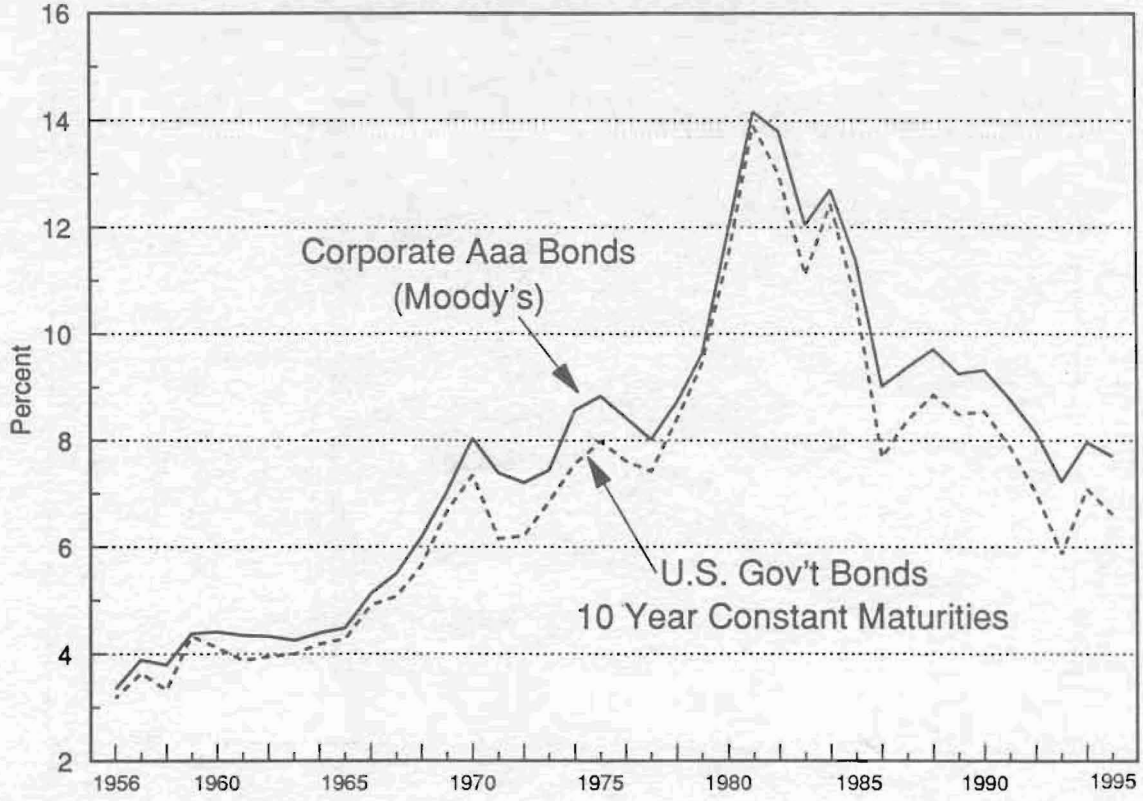
Source: FmHA Report Code 616.

The value of U.S. farm assets increased about four percent during 1994 with most of the change occurring in the value of farm real estate. Farm debt also rose about four percent with increases in loans by commercial banks, individuals and merchants more than offsetting declines by the Farm Credit System and the Farmers Home Administration. Commercial banks continue as the dominant U.S. lender with a 40 percent market share.

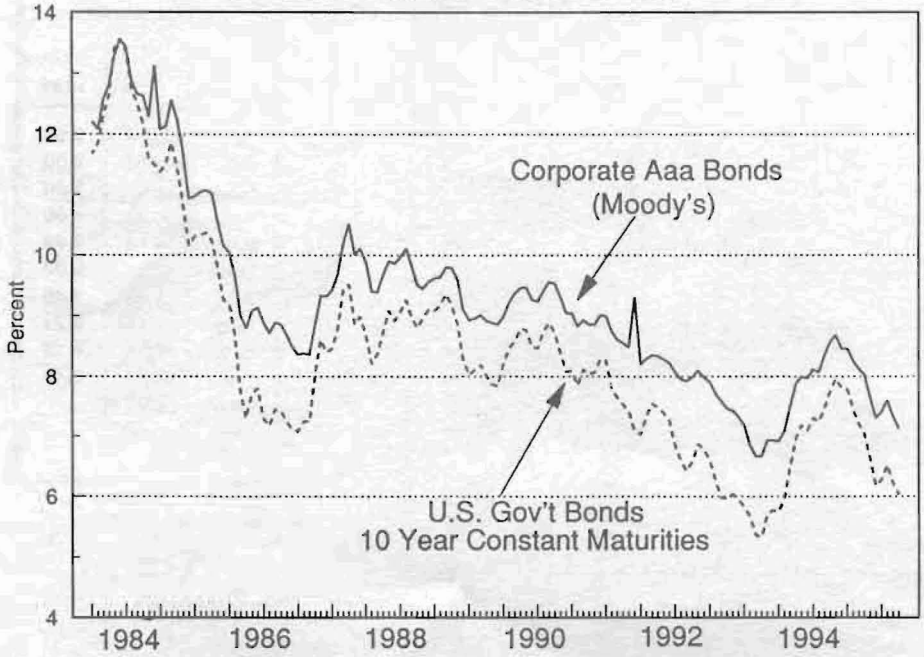
The value of New York farm assets declined very slightly during 1994, while the level of debt increased very slightly. The resulting slight equity drop resulted in the percent equity for all New York Farms falling from 85 to 84 percent. All lender groups except the Farmers Home Administration experienced small increases in total outstanding loans to farmers. Market shares were basically unchanged with the Farm Credit continuing as the dominant New York lender with 38 percent of the market.

At the national level, the Farm Credit System portfolio quality continued to improve while the commercial bank portfolio maintained its high quality status (second quarter delinquencies are normally slightly higher than year end values). Delinquencies of the Farm Service Agency (FSA), which as of 1995 has taken over the farmer loan programs of the former Farmers Home Administration, were basically unchanged. Emergency loans continue to experience very high delinquency levels. The FSA delinquencies are for direct loans made by FSA. It does not include guaranteed loans which are becoming an increasing proportion of the portfolio and have much lower delinquency rates.

Annual Long Term Interest Rates

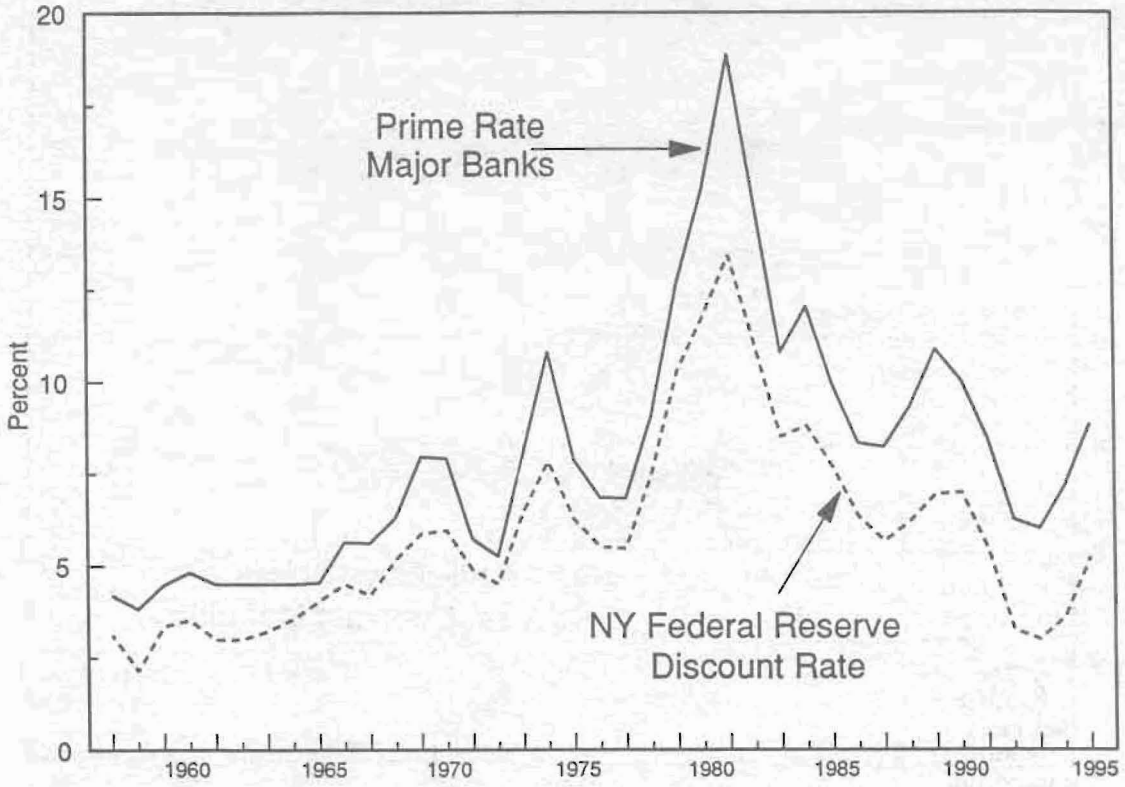


Monthly Long Term Interest Rates

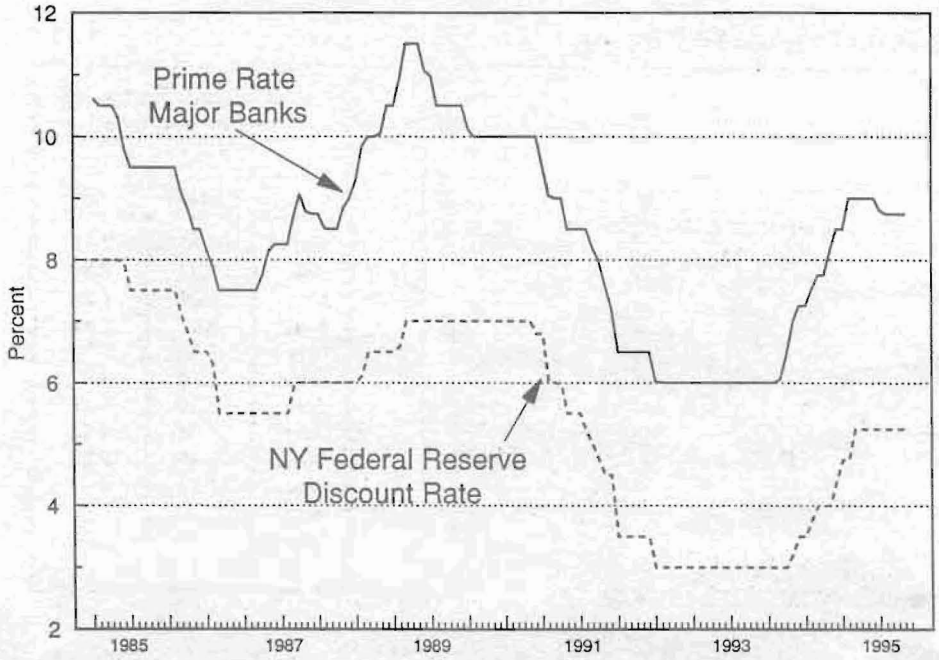


U.S. Govt. Bonds 10 Year Constant Maturity		
	1994	1995
Jan.	5.75	7.78
Feb.	5.97	7.47
Mar.	6.48	7.20
Apr.	6.97	7.06
May	7.18	6.63
June	7.10	6.17
July	7.30	6.28
Aug.	7.24	6.52
Sept.	7.46	5.22
Oct.	7.74	6.04
Nov.	7.96	
Dec.	7.81	

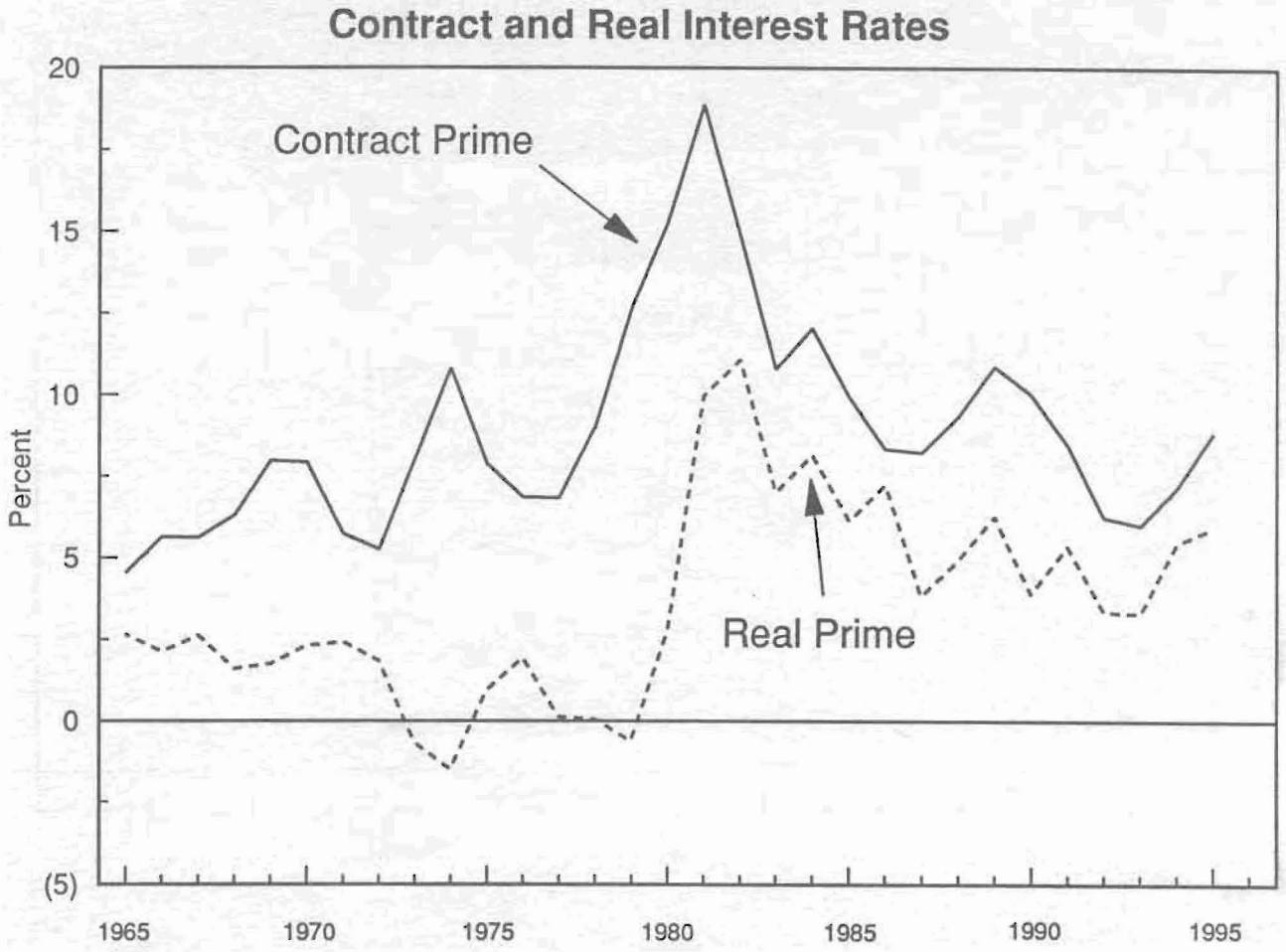
Annual Average Short Term Interest Rates



Monthly Short Term Interest Rates



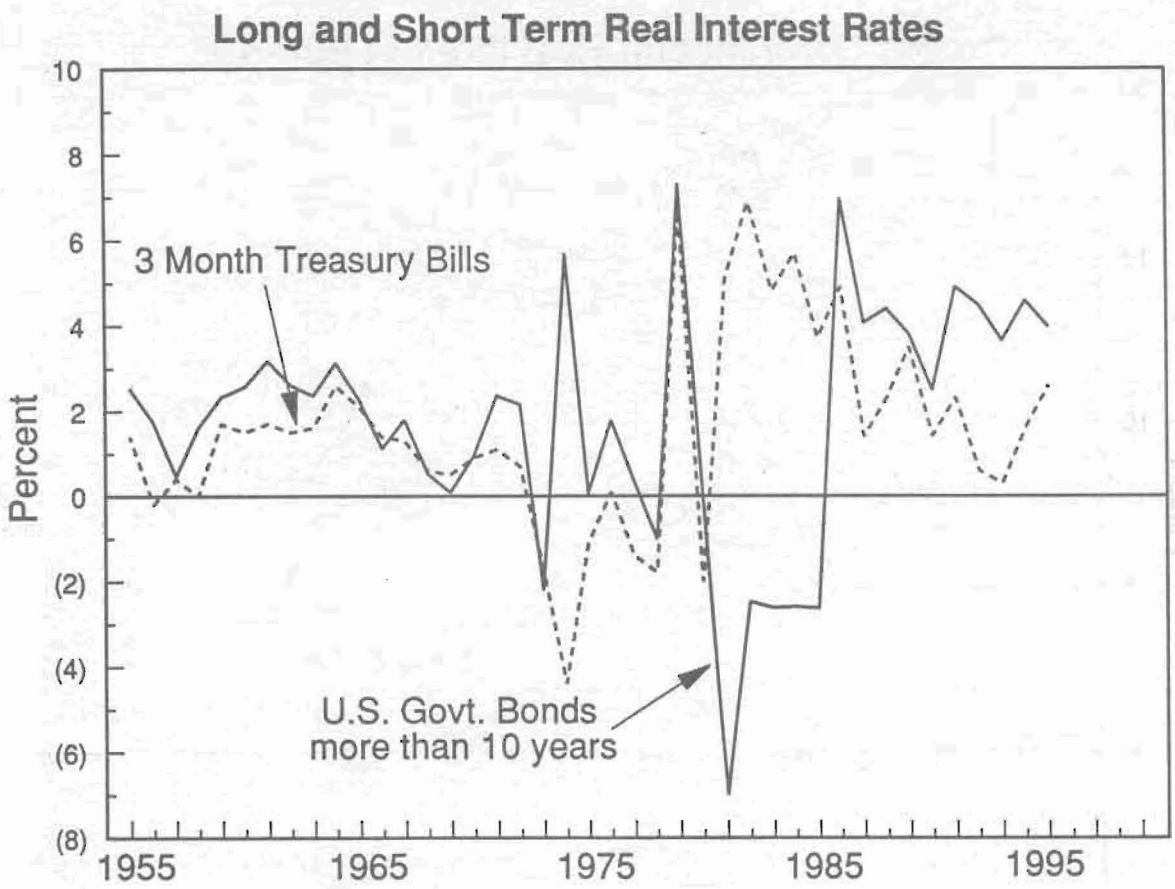
Prime Rate Major Banks		
	1994	1995
Jan.	6.00	8.50
Feb.	6.00	9.00
Mar.	6.06	9.00
Apr.	6.45	9.00
May	6.99	9.00
June	7.25	9.00
July	7.25	8.80
Aug.	7.51	8.75
Sept.	7.75	8.75
Oct.	7.75	8.75
Nov.	8.15	
Dec.	8.50	



Following historic lows that were maintained from 1992 into 1994, basic short term interest rates increased sharply during 1994. Rates continued to increase into early 1995 and then during the last half of 1995 declined modestly. By mid-November 1995 basic rates, such as three month treasury bills, had returned to approximately mid- November 1994 levels. Prime rates had declined from early 1995 highs, but were still well above year earlier levels.

After reaching the lowest levels in recent history in 1993, long term rates increased throughout late 1993 and nearly all of 1994. However, rates started down in late 1994 and continued to decline throughout 1995. By late 1995 long term rates had declined one and one-half to two percent from year earlier levels.

These changes in interest rates have resulted in a much flatter yield curve. That is, there is much less difference between short and long term rates. With long term money market rates only modestly higher than short term rates, lenders have an opportunity to offer farmers attractive long term fixed rate loans. Lenders should be able to offer ten to twenty year fixed rate loans at only one percent, or less, higher than variable rate loans. 1996 may be a good time to lock in a fixed rate on part of the borrowed funds used in many farm businesses.



The basic factors that influence interest rates all point towards lower interest rates, at least through early 1996. The expected somewhat slower growth of the economy should reduce loan demand and, thus, put downward pressure on interest rates. Slightly lower inflation rates should reduce the inflation premium that financial market participants expect. Also, since economic growth in the 2.5 to 3.0 percent range is close to apparent Federal Reserve Bank targets, and inflation appears to be under control, the FED is likely to lower short term rates to where they are expected to have a more neutral effect on growth. If growth continues to decline during 1996, rates might be pushed even lower to stimulate economic activity.

With these downward pressures on interest rates, basic short term interest rates, and thus, short and intermediate term interest rates paid by farmers, should decline by half to three-quarters of a percent. This decline is likely to occur during the first half of 1996.

Long term interest rates are also expected to decline through early 1996, possibly by as much as three-quarters of a percent. Such a decline would reduce long term rates to the recent historical low levels of 1993.

These lower rates may not last throughout 1996. The Federal Reserve Board appears to consider a 2.5% rate of growth of the economy a good target. Thus, they are likely to lower interest rates in late 1995 and early 1996 in order to halt the decline of the economy. Exactly how low rates need to go will depend upon actual economic performance. If the lower rates end up not only halting the decline, but actually result in more rapid growth by mid to late 1996, rates could start to increase again at that time. Alternately, if the economy continues to grow at or below the 2.5% rate, rates could stay at the lower levels throughout late 1996.

CROP PRODUCTION
United States and New York
1993-95 a/

Crop	Acres Harvested			Yield per Acre			Production		
	1993	1994	1995	1993	1994	1995	1993	1994	1995
United States	(million acres)			(bushels)			(million bushels)		
Corn grain	62.9	72.9	64.8	100.7	138.6	113.7	6,336	10,103	7,374
Sorghum	8.9	9.0	8.2	59.9	73.0	56.4	534	655	464
Oats	3.8	4.0	3.0	54.4	57.1	55.2	207	229	163
Barley	6.8	6.7	6.3	58.9	56.2	57.6	398	375	361
Wheat	62.7	61.8	60.9	38.2	37.6	35.9	2,396	2,321	2,183
Soybeans	57.3	60.9	61.7	32.6	41.4	35.4	1,871	2,517	2,183
New York	(thousand acres)			(bushels)			(thousand bushels)		
Corn grain	540	590	560	105	116	101	56,700	68,440	56,560
Oats	105	110	90	62	64	59	6,510	7,040	5,310
Wheat	85	115	125	46	53	55	3,910	6,095	6,875
					(tons)		(thousand tons)		
Corn silage	550	520	N.A.	14.20	15.8	N.A.	7,810	8,216	N.A.
All hay	1,750	1,660	1,700	2.06	2.39	2.05	3,605	3,961	3,480
Alfalfa hay b/	700	620	600	2.45	2.95	2.50	1,715	1,829	1,500

Source: USDA World Agricultural Supply and Demand Estimates and New York Crop Reporting Service.

a/ All 1995 data are preliminary. Estimates for the United States, as of November 9, 1995. New York estimates, as of October 1995, except for corn which is November, 1995.
b/ Includes alfalfa mixtures.

Harvested acreage of most U.S. crops was down in 1995 from 1994. Flooding throughout much of the Midwest in the spring of 1995 substantially reduced the acreage planted to corn. Sorghum, oats and barley acreage was also down. Corn yield dropped from 139 bushels per acre in 1994 to 114 bushels per acre in 1995. Sorghum yield was also much lower in 1995 at 56 bushels per acre compared to 73 in 1994. Some of the large reduction in corn acreage found its way into soybeans, but soybean yield was down as well in 1995 at 35 bushels per acre compared to 41 in 1994. Oats acreage was down, and yields were also down slightly from 1994. Wheat acreage was down a little in 1995, and yields dropped slightly from almost 38 bushels per acre in 1994 to about 36 bushels per acre in 1995.

With lower acreage and poorer yields across the U.S., all major grains had lower production in 1995 than year earlier. The 1994 corn crop of 10.1 billion bushels was the largest in history, but in 1995 corn production dropped off substantially to 7.374 billion bushels. Production of both wheat and soybeans dropped to 2.18 billion bushels; wheat production was down from 2.32 billion bushels in 1994, and soybeans were down from the 2.52 billion bushel largest soybean crop ever. Similarly, production of sorghum, oats and barley were off by 29%, 29% and 4% in 1995.

New York grain yields fared better than the U.S. While corn yields were down about 15 bushels per acre, statewide yields of oats and wheat were both higher than in 1994.

The New York corn for grain crop is estimated to be 56.56 million bushels, down about 17% from the 68.44 million bushels produced last year. Production of oats is off by about 25% from 7.04 million bushels last year to 5.31 million in 1995. Wheat production, however, was up a hefty 13% in 1995 at 6.88 million bushels compared to 6.1 million bushels last year.

The New York hay crop was also lower in 1995. Alfalfa hay production was down 18% to 1.5 million tons. Production of all hay, including alfalfa, was off 12% to 3.48 million tons from 3.96 million tons last year. These grain and hay production figures suggest that feed supplies in New York could be tight over the next six months.

CORN AND FEEDGRAIN BALANCE SHEETS, 1993-96

Item	1992/93	1993/94	1994/95 (Est.)	1995/96 (Proj.)
Supply		----- CORN (million bushels) -----		
Beginning Stocks (Sept. 1)	1,100	2,113	850	1,558
Production	9,477	6,336	10,103	7,374
Imports	7	21	10	10
Total	10,584	8,478	10,963	8,942
Disappearance				
Feed and Residual	5,296	4,704	5,512	4,575
Food, Ind. and Seed	1,511	1,588	1,693	1,700
Total Domestic	6,808	6,292	7,205	6,275
Exports	1,663	1,328	2,200	2,050
Total	8,471	7,620	9,405	8,325
Ending Stocks (Aug. 30)	2,113	850	1,558	617
Season average farm price	$2.07	$2.50	$2.26	$2.95-3.35
Supply		-- FEED GRAINS a/ (million metric tons) --		
Beginning Stocks	34.0	63.1	27.4	45.3
Production	277.1	186.2	284.8	209.3
Imports	1.2	3.9	3.3	3.3
Total supply	312.3	253.2	315.4	257.9
Disappearance				
Feed and Residual	154.0	139.3	158.4	131.4
Food, Ind. and Seed	44.1	46.2	48.8	49.0
Total Domestic	198.1	185.5	207.2	180.4
Exports	51.1	40.3	62.9	57.5
Total disappearance	249.3	225.8	270.1	237.9
Ending Stocks	63.1	27.4	45.3	20.0

Source: Agricultural Supply and Demand Estimates, USDA, November 8, 1995.

a/ Marketing year beginning September 1 for corn and sorghum, June 1 for barley and oats.

The large 1994 corn crop restored corn stocks to more comfortable levels, but even then, the increased feed use and substantially higher exports kept ending stocks from reaching the level that had been predicted earlier. In 1995, lower planted acreage and much lower yields led to production some 2.7 billion bushels below 1994. The result is that 1995-96 ending stocks are now forecast to be only 617 million bushels, barely a 4 week supply and the lowest percentage of use for over two decades. Prices will likely move into a range not seen since the early 1970s to ration the supply of corn, primarily through reduced feed use, over the crop year and until the new crop becomes available.

Feedgrain supplies are dominated by corn, so changes in supply and demand are similar. The total supply of feedgrains is off almost 19 percent from last year, but a more important figure is that ending feedgrain stocks are forecast at less than half of last year and only about 8% of use. Also, in order to have even that much in ending stocks, feed use will have to be reduced by 17% over the course of the year and exports will have to be cut back by almost 10%.

U.S. WHEAT AND SOYBEAN BALANCE SHEETS, 1993-96

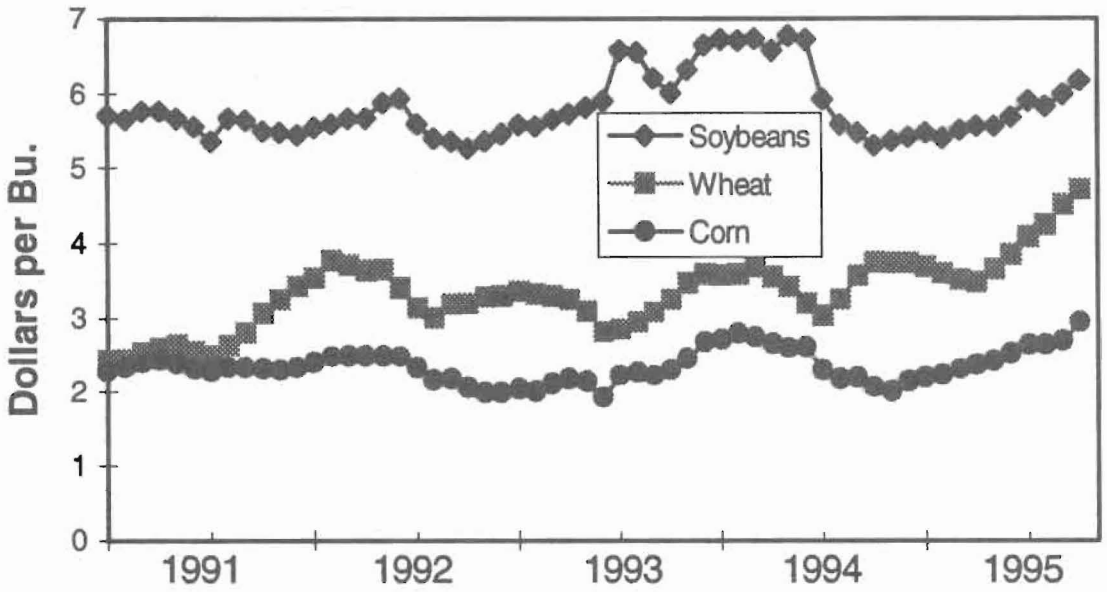
Item	1992/93	1993/94	1994/95 (Est.)	1995/96 (Proj.)
Supply		----- WHEAT (million bushels) -----		
Beginning Stocks (June 1)	475	531	568	507
Production	2,467	2,396	2,321	2,183
Imports	70	109	92	100
Total	3,012	3,036	2,981	2,790
Disappearance				
Food	834	869	852	865
Seed	99	96	89	105
Feed and Residual	194	274	345	225
Total domestic	1,128	1,240	1,287	1,195
Exports	1,354	1,228	1,188	1,200
Total	2,481	2,467	2,475	2,395
Ending Stocks (May 31)	531	568	507	395
Season average farm price	$3.24	$3.26	$3.45	$4.20-4.50
Supply		----- SOYBEANS (million bushels) -----		
Beginning Stocks (Sept. 1)	278	292	209	335
Production	2,190	1,871	2,517	2,183
Imports	2	6	5	5
Total	2,471	2,170	2,731	2,523
Disappearance				
Crushings	1,279	1,276	1,405	1,395
Exports	770	589	845	800
Seed, Feed	64	67	72	67
Residual	66	29	74	46
Total	2,179	1,961	2,396	2,308
Ending Stocks (Aug. 30)	292	209	335	215
Season average farm price	$5.56	$6.40	$5.45	$6.30-7.30

Source: Agricultural Supply and Demand Estimates, USDA, November 8, 1995.

United States wheat supplies have diminished the last two years. Total supply in 1993-94 was about 3.04 billion bushels, but by 1995 total supplies were down to 2.79 billion bushels. The lower supply will reduce the use of wheat for feed and residual purposes by about one-third. Food and seed use, on the other hand, are affected only modestly by the tight supplies. Forecast ending stocks on May 31, 1996 are only 395 million bushels, just slightly over 16% of annual use. Additional pressures arise from the world situation where ending wheat stocks are forecast at 18% of use. Both percentages are the lowest in well over 10 years.

While the 1995 soybean crop was hurt by an early fall frost in the upper Midwest, the supply at 2.52 billion bushels is still ample. Strong demand, however, is forecast to draw ending stocks down to 215 million bushels, a figure only slightly above the carryout at the end of the 1993-94 crop year. Crushings and exports are both expected to fall off from 1994-95 levels. The forecast is that 1995-96 average price will fall within the range of $6.30 to $7.30 per bushel.

PRICES RECEIVED, CORN, WHEAT & SOYBEANS, 1991-95

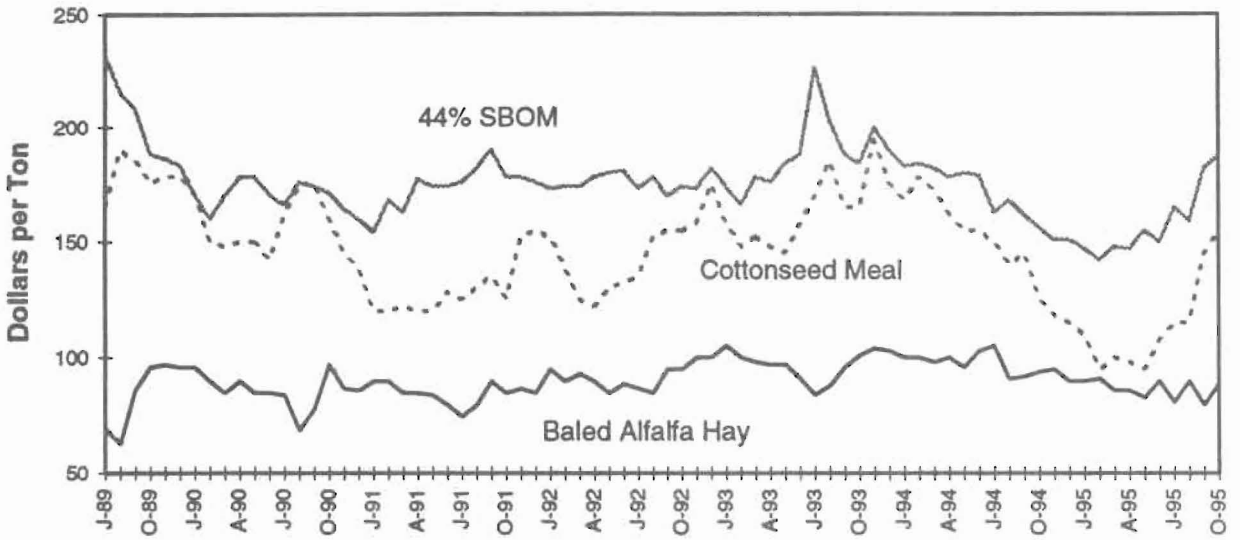


Corn prices were generally in the $2.20 to $2.50 range from 1991 to mid 1992. With a large corn crop in 1992, prices moved lower to around $2.00 in late 1992 and early 1993. The Midwest floods of 1993 led to a much smaller corn crop, and prices increased to a peak just under $3.00 per bushel. Then, as the bumper 1994 corn crop developed, corn prices began a downtrend to near $2.00 per bushel at harvest time. The relatively low corn prices of late 1994 stimulated exports and feed use; and as the higher consumption rates became evident, the price of corn strengthened into early 1995. Again, a very wet spring in much of the corn belt reduced planted acreage, and by late summer there were indications that the yield would be down substantially as well. By November, the mid-point of USDA's price forecast for the 1995-96 crop year had been raised to $3.15 per bushel, cash prices in Illinois were $3.20, and March 1996 corn futures had reached a high of $3.44 per bushel.

Wheat prices reflect an ongoing trend. Early 1991 prices were around $2.50 per bushel. Late in 1991, prices began to rise and peaked at just under $4.00 per bushel in early 1992. From mid 1992 through mid 1993 prices moved back to around $3.00. Then prices began to rise in late 1993, dropped off seasonally into mid 1994, and in late 1994 and 1995 moved upward again. As previous pages show, both U.S. and world production have been below consumption, and ending stocks have trended lower. By early November 1995, the cash price of number 2 soft red wheat at St. Louis had reached $4.97, and the cash price of hard wheat at Kansas City was $5.19. March 1996 Chicago Board of Trade wheat futures had reached $5.17. The mid-point of USDA's November price forecast for the 1995-96 crop year is $4.35 per bushel for all wheat, up $.90 from last year's average price of $3.45.

Soybean prices remained pretty much within a range of $5.00 to $6.00 until mid 1993. Then prices began to rise and reached a peak of around $6.75 per bushel in early 1994. With the substantially larger 1994 crop, prices dropped back into the $5.50 to $6.00 range from late 1994 into the early part of 1995. However, as 1995 progressed soybean prices began to move higher; and by early November 1995, cash prices were about $6.70 per bushel. The mid-point of USDA's November price forecast for the 1995-96 crop year is $6.80 per bushel, up from last year's average price of $5.45 and $.40 above the 1993-94 average price of $6.40.

Monthly Prices of Selected Feedstuffs, 7/89 to 10/95

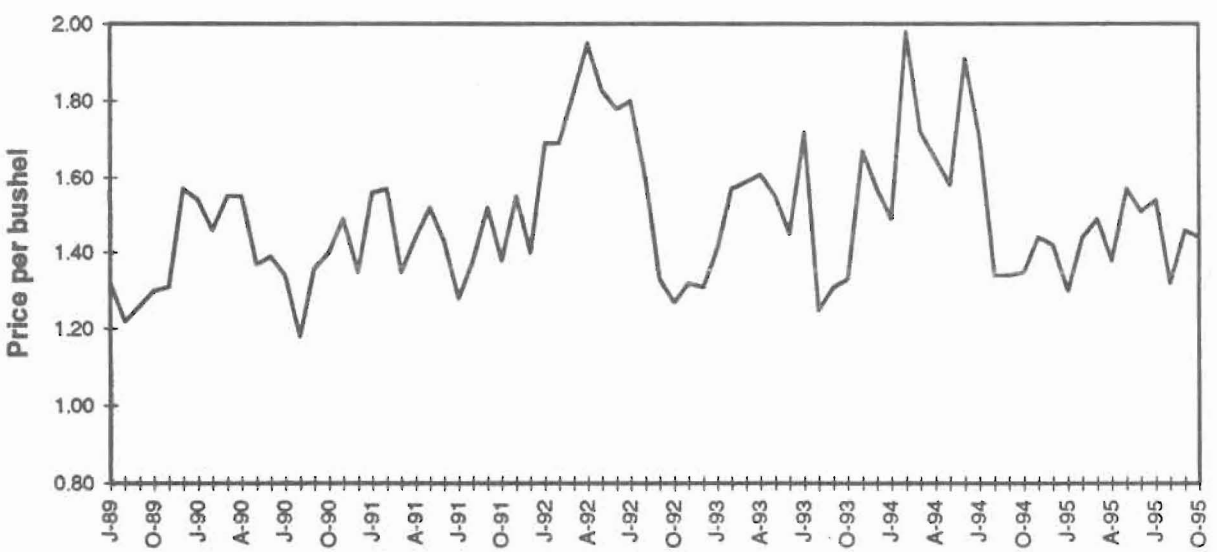


Note: Baled alfalfa hay is New York price, 44% soybean oil meal is Decatur, and Cottonseed meal is Memphis.

Prices of feedstuffs show considerable variation over time. Soybean oil meal, as might be expected, has a strong correlation with soybean prices. SBOM prices were high in 1993-94 when soybean prices were high, and SBOM was low in late 1994 and early 1995 when soybean prices were relatively low. The price of cottonseed meal, however, shows some effects from prices of SBOM, a substitute product. When SBOM moves sharply higher or lower, cottonseed meal tends to follow. Alfalfa hay tends to demonstrate a seasonality. Prices are typically at lows in July or August.

Oats prices, shown below, have a seasonal pattern much like that of alfalfa hay. Prices are at lows in July and August and then move higher, generally peaking in January to May.

Prices of Oats, New York, 7/89-10/95



1996 Dairy Outlook

Overview

Positive Factors:

- Higher milk prices
- Strong economy and commercial disappearance
- Low bred heifer prices

Negative Factors:

- High concentrate feed costs
- Some farms short of forages
- Low cull cow and calf prices

Uncertainties:

- Federal dairy policy

New York Dairy Situation and Outlook
1993, 1994, Preliminary 1995, and Projected 1996

Item	Year				Percent Change	
	1993	1994	1995	1996	94-95	95-96
Number of milk cows (thousand head)	727	718	703	695	-2.1	-1.1
Milk per cow (lbs.)	15,702	15,905	16,500	16,700	3.7	1.2
Total milk production (million lbs.)	11,415	11,420	11,600	11,607	1.6	0.1
Blended milk price ($/cwt.)[a]	12.61	12.98	12.57	12.81	-3.2	1.9

[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 $12.68 for 1992; $12.46 for 1993 and $12.82 for 1994, assuming no refund.

Table 1. U.S. Milk Supply and Utilization, 1989–1996.

	1989	1990	1991	1992*	1993	1994[a]	1995[b]	1996*[c]
Supply								
Cows Numbers (thous.)	10,046	9,993	9,826	9,688	9,589	9,525	9,517	9,469
Production/cow (lbs)	14,323	14,782	15,031	15,574	15,704	16,129	16,413	16,758
Production	143.9	147.7	147.7	150.9	150.6	153.6	156.2	158.7
Farm Use	2.1	2.0	2.0	1.9	1.8	1.8	1.7	1.6
Marketings	142.1	145.7	145.7	149.0	148.8	151.8	154.5	157.1
Beginning Commercial Stocks	4.3	4.1	5.1	4.5	4.7	4.6	4.3	4.4
Imports	2.5	2.7	2.6	2.5	2.8	2.9	3.0	3.3
Total Supply	**148.9**	**152.5**	**153.5**	**156.0**	**156.3**	**159.3**	**161.8**	**164.8**
Utilization								
Commercial Disappearance	135.4	138.4	138.6	141.3	145.0	150.2	155.3	158.6
Ending Commercial Stocks	4.1	5.1	4.5	4.7	4.6	4.3	4.4	4.1
DEIP	0.0	0.0	0.7	1.5	1.4	2.4	1.7	1.8
Net Removals (excluding DEIP)	9.4	9.0	9.7	8.4	5.3	2.4	0.4	0.3
Total Use	**148.9**	**152.5**	**153.5**	**156.0**	**156.3**	**159.3**	**161.8**	**164.8**

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.

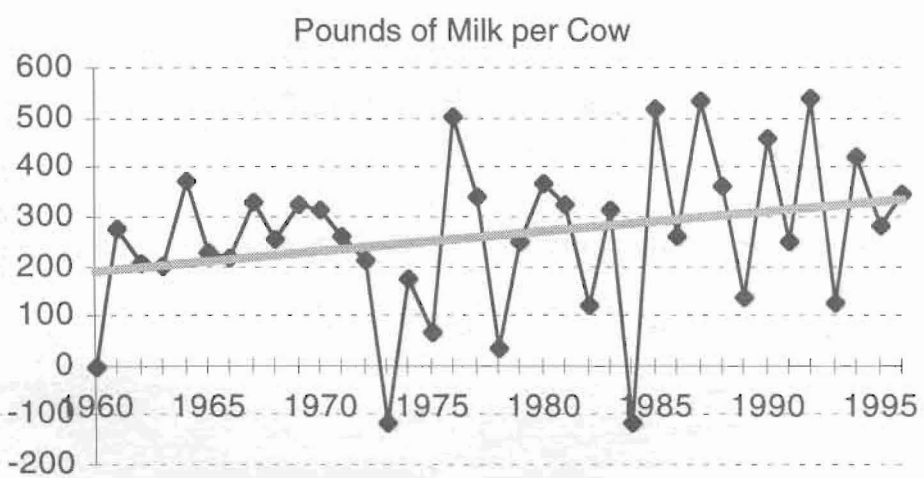
* Leap year.
[a] Preliminary.
[b] Based on preliminary USDA data and Cornell estimates.
[c] Projected by Mark Stephenson.

The U.S. Dairy Situation and Outlook

Milk Supplies

The 1994 harvest season was bountiful. Last year at this time I was talking about the large carry over of stocks, both forages and concentrates, that we would have in 1995. The ample forage seemed to suggest that dairy farmers would carry more animals than they might have otherwise done. In fact, the data at this time indicate that we may lose less than one tenth of one percent of the national herd in 1995 which would be the smallest cow loss in more than a decade. I also thought that the relatively inexpensive concentrates and continued adoption of rBST would be conducive to high levels of milk per cow. While I am projecting a fairly strong milk per cow increase of 285 pounds in 1995, it is less than expected. This summer's nationwide hot spell reduced milk yields in most states and we are only now beginning to see recovery. The chart below shows that annual increases in milk per cow are quite variable from year to year. However, we typically expect to see increases in milk yields—and the increases themselves have been increasing over time. A long–term trend would have given us a 325 pounds per cow increase this year and an additional increase of 3+ pounds per year after that. Taken together, the small cow loss and modest milk yield gains project a total production increase of about 1.7% over the 1994 level.

I am more pessimistic about production increases in 1996 than I was a year ago. A wet spring delayed field activities across the country. First cutting alfalfa in many areas has suffered from poor quality although quantities are adequate in most regions. Fall grain yields also point to delayed grain planting last spring. We are facing one of the smallest carry over stocks of corn this fall that we have seen in many years. Expect high feed prices as a result. Dry weather was a problem in much of the Northeast this



year, and in some parts of New York, drought conditions have left farmers with very short supplies of forages going into the winter. Even with the drought, New York has had stable milk production increases of about 2% in every month of 1995—something we haven't witnessed in several years. I am forecasting national increases in milk per cow that are very close to trend for 1996. I would have expected greater increases than trend due to rBST use and the genetic gain of two years that was not fully expressed in 1995, but high feed prices will dampen productivity gains. Areas of the country where forages are short will see somewhat higher cow losses. This should not be a problem for most states and total cow loss is forecast to be somewhat less than average. Low beef prices, which are expected to continue through 1996, will not make it attractive to cull dairy cows voluntarily. The forecast for 1996 is for a 1.6% increase in total milk production.

Milk Demand

In 1994, we saw commercial disappearance of dairy products increase by more than 3.6%. The US population is only growing at a rate of about 1% per year, so this represents a much larger per capita increase in consumption than we have usually seen. The average American is consuming about 600 pounds of milk equivalent in dairy products annually. Roughly 35% of that milk is in the form of a beverage product, 45% is made into cheese and the other 20% is comprised of other products such as ice cream, yogurt and butter. During 1995, butter was the category with the most dramatic consumption increases. Butter prices, even at the retail level, are half of what they were a decade ago and with the improved image of butterfat relative to margarine, sales are up 14% from year earlier levels. In 1995, world stocks of butter have been depleted as Russia and other countries have increased demand for the product and world suppliers like New Zealand and Australia have not fully recovered from the effects of drought in their countries. The US has been exporting butter without subsidy this year. Cheeses in general have done well in 1995 but Italian varieties, including Mozzarella, have posted the biggest gains in the cheese category. Fluid milk sales have been about stable and only nonfat dry milk, cottage cheese and frozen dairy products have had significant declines from year earlier sales. Overall, commercial disappearance on a total milk basis will have grown by about 3.4% in 1995. Without a significant increase in exports, we probably cannot sustain growth in commercial disappearance at the 3% level. However, as we expect continued growth in the US and world economies through the next year, I am forecasting a healthy growth in demand for US dairy products at the 2% level for 1996.

Dairy Policy

Radical departure from our current federal dairy policy was very nearly the outcome of this year's congressional budget debate. No program is, or should be, exempt from discussions of budget impact and this year, congressman Steve Gunderson, a Republican from Wisconsin, led the charge. He approaches dairy policy with the belief that farmers in the Upper Midwest have been disadvantaged by our current federal order system. Mr. Gunderson's first proposal outlined a very different federal order program which would have pooled all milk in this country under a single order containing six regions. Class I differentials in each region would have been determined by the percentage of milk used for fluid purposes. It also would have pooled and redistributed one dollar per hundredweight of class I milk nationally. Under this plan high utilization areas, such as the Southeast, would have lost current revenues to low utilization areas like the Upper Midwest. This proposal met with a great deal of opposition and congressman Gunderson subsequently discarded it in favor of his fallback position which was complete elimination of federal dairy programs.

So little dairy product has been purchased by the Commodity Credit Corporation in 1995 that loss of the price support program would hardly be noticed today, but loss of federal orders would have a large impact on the Northeast dairy industry. The price paid for milk by a fluid handler would certainly fall while the prices paid by cheese manufactures would have to rise to keep milk in their plants. Much of the Northeast's cheese and nonfat dry milk production would have been vulnerable to those changes and milk prices at the farm level would have fallen.

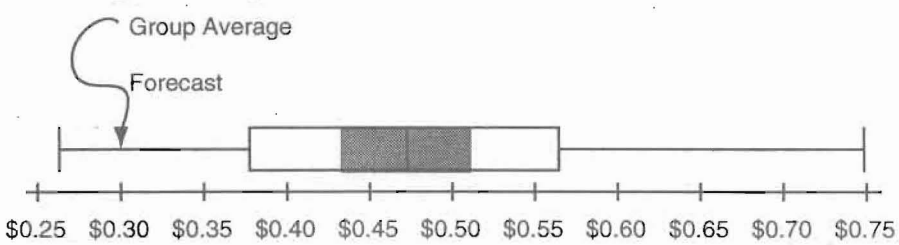
Price forecasts under a deregulation scenario would have been gloomy for this region of the country. Led by a New York congressional contingent, dairy became such a contentious issue that House and Senate leadership withdrew dairy policy from the budget reconciliation bill—good news for the short run, but the problems that divided our industry along regional lines remain unresolved. The Farm Bill will be written in 1996 and these issues will certainly be revisited at that time. I don't believe that any changes in dairy policy will be implemented in 1996, and my price forecasts are based on a status–quo assumption.

Milk Prices

Last year, I began surveying people in the dairy industry for their price forecasts. Over the last 5–6 years milk prices have become difficult to forecast as the industry has learned to manage inventories of storable dairy products with little help from the Commodity Credit Corporation. As we look back over the past 10 months, you can see from

the graphic below that even the best individual forecast was different from the actual basic formula price by an average of 26¢ in all months. You can also see that the group's average forecast in any month was better than all but 4 individuals and that it was only about 4¢ worse than the best forecast to date. If, as the saying goes, there is comfort in numbers, then there seems to be two sources of that comfort: those of us who are asked to predict milk prices as part of our job can find solace in the recognition that forecasting those prices has become a difficult task; and it also seems to be true that a group average is better in most cases than an individual effort.

Average Monthly Deviations from Actual Basic Formula Price



This year, I have also surveyed the group for their 1996 outlook and the results are presented at the bottom of the page. The range in forecasts is large, but the group average would suggest an increase of 12¢ per hundredweight over 1995 prices. I am even more optimistic during the first 8 months of the year than the group average and expect a 15–20¢ increase in annual average prices.

Basic Formula Price Forecasts for the Remainder of 1995 and 1996.

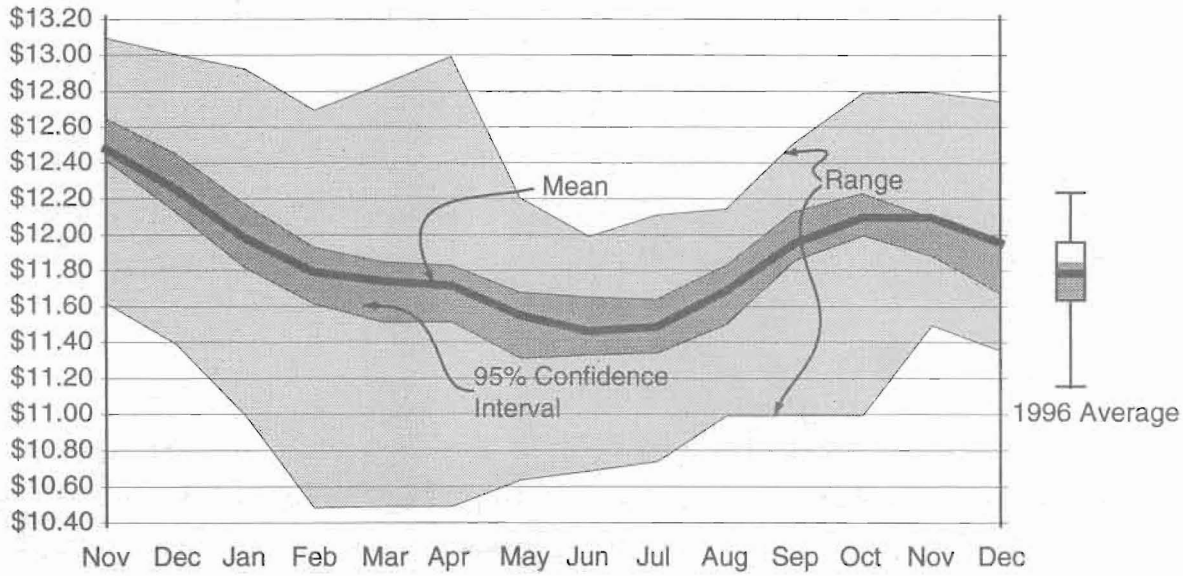


Table 2. National Farm Prices for Milk; CCC Purchase, Wholesale, and Retail Prices for Cheddar Cheese, Butter, and Nonfat Dry Milk; and Selected Retail Price Indices, 1988–1995.

	1988	1989	1990	1991	1992	1993	1994[a]	1995[b]
Farm Milk ($/cwt.):								
All Milk (ave. fat)	12.26	13.56	13.74	12.27	13.15	12.84	13.01	12.68
M–W or BFP (3.5%)	11.03	12.37	12.21	11.05	11.88	11.80	12.03	11.78
Support (3.5%)	10.33	10.47	9.89	9.90	9.96	9.98	9.99	9.99
Milk Price: Concentrate Value	1.58	1.65	1.72	1.58	1.69	1.65	1.63	1.63
Assessment	0.03	0.00	0.01	0.05	0.13	0.15	0.17	0.16
Cheddar Cheese, Blocks ($/lb.):								
CCC Purchase	1.153	1.166	1.111	1.110	1.116	1.119	1.120	1.120
Wholesale, National Cheese Exchange	1.210	1.350	1.315	1.204	1.282	1.286	1.287	1.300
Butter ($/lb.):								
CCC Purchase, Grade A or higher, Chicago	1.320	1.263	1.017	0.983	0.807	0.708	0.668	0.770
Wholesale, Gr. A, Chicago Merc. Exchange	1.316	1.269	1.006	0.983	0.815	0.744	0.674	0.681
Nonfat Dry Milk								
CCC Purchase, Unfortified ($/lb.)	0.728	0.774	0.831	0.850	0.948	1.002	1.034	1.034
Wholesale, Central States	0.802	1.055	1.066	0.942	1.092	1.120	1.079	1.074
Retail Price Indices (1982–84=100.0)								
Whole Milk	106.0	114.3	126.7	122.4	126.4	127.9	131.2	130.5
Cheese	109.2	117.6	131.2	132.8	135.5	135.3	136.4	137.4
All Dairy Products	108.3	115.6	126.5	125.1	128.5	129.4	131.7	132.4
All Food	118.2	125.1	132.4	136.3	137.9	140.9	144.3	148.8
All Consumer Prices	118.3	124.0	130.7	136.2	140.3	144.5	148.2	152.6

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.

The Northeast Dairy Situation and Outlook

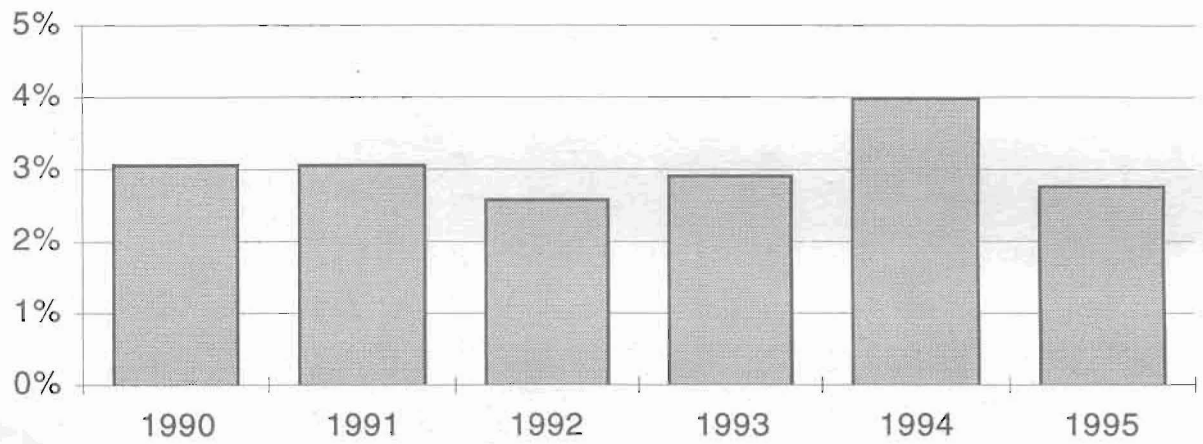
Number of Producers Delivering Milk
Northeast Federal and State Marketing Orders*
1989–1995

Markets	1989	1990	1991	1992	1993	1994[a]	1995[b]
New York-New Jersey	13570	13261	12730	12161	12046	11609	11350
New England	4934	4893	4795	4686	4456	4133	4100
Middle Atlantic	5741	5509	5458	5546	5396	5292	5030
E. Ohio-W. Pennsylvania	5175	4889	4685	4553	4357	4205	4100
Western New York	919	853	838	822	705	640	580
Regional Total	30339	29405	28506	27768	26960	25879	25160

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 3.1% per year over the period from 1989–1994. In 1994, farm loss was about 4% balancing the smaller losses in 1992–1993. This year, we return to more typical levels of attrition. The Western New York state order showed a higher percent loss of farms than other orders, but that may reflect more rapid restructuring in that region as indicated by a higher than average increase in milk marketed per farm.

Annual Percent Loss of Dairy Farms in Region

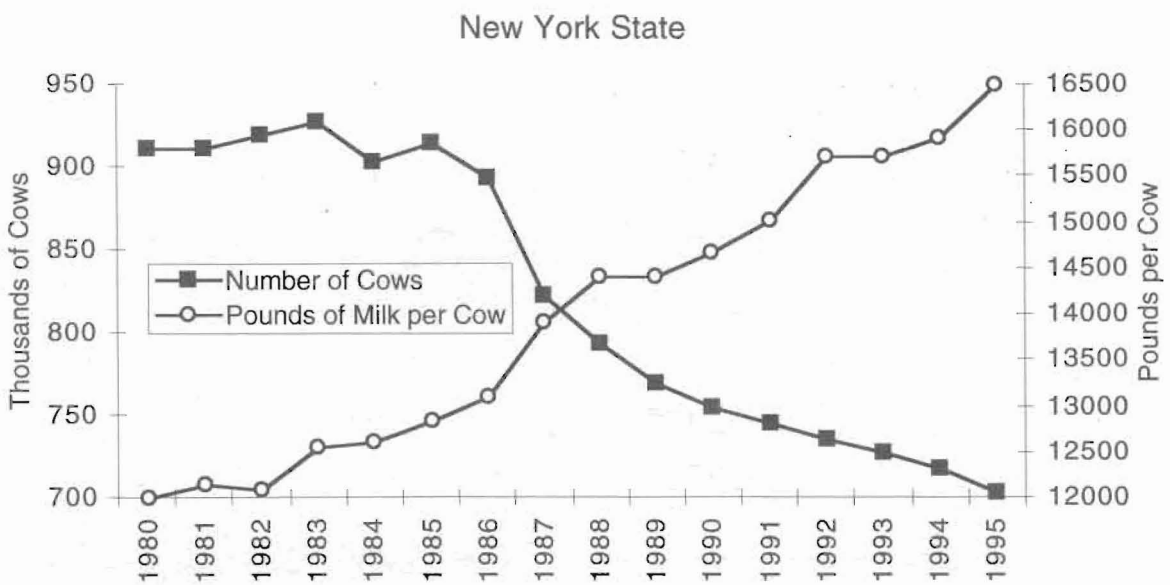


Receipts of Milk from Producers by Regulated Handlers, Million Pounds
Northeast Federal and State Marketing Orders
1989–1995

Markets	1989	1990	1991	1992	1993	1994[a]	1995[b]
			[million pounds]				
New York-New Jersey	11096	11125	11075	11254	11452	11519	11961
New England	4975	5114	5309	5478	5345	5099	5380
Middle Atlantic	5908	5899	6222	6543	6381	6295	6241
E. Ohio-W. Pennsylvania	3687	3547	3517	3622	3546	3575	3582
Western New York	1207	1199	1228	1273	1117	1057	923
Regional Total	26873	26884	27351	28170	27841	27545	28087

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 up by about 2% over year earlier levels. This reverses a trend that we have been watching over the previous two years. Focusing on New York, the New York–New Jersey and Western New York orders outpaced the regional growth with a nearly 2.5% increase in milk marketed. This is consistent with the New York milk production data from the National Agricultural Statistics Service. Stable and extensive use of rBST combined with abundant feed supplies last year are likely reasons for the milk production increase. The chart below shows that 1995 milk production increases were from greater than usual increases in 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
1989–1995

Markets	1989	1990	1991	1992	1993	1994[a]	1995[b]
			[million pounds]				
New York-New Jersey	4587	4487	4477	4434	4604	4779	4805
New England	2811	2810	2746	2686	2626	2518	2570
Middle Atlantic	3109	3131	3155	3143	2877	2825	2780
E. Ohio-W. Pennsylvania	2033	1927	1872	1866	1820	1790	1801
Western New York	513	501	492	472	452	432	430
Regional Total	13053	12856	12742	12601	12379	12344	12386

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 first time in many years. A large percentage gain in fluid sales in the New England 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
1989–1995

Markets	1989	1990	1991	1992	1993	1994[a]	1995[b]
New York-New Jersey	41	40	40	39	40	41	40
New England	57	55	52	49	49	49	48
Middle Atlantic	53	53	51	48	45	45	45
E. Ohio-W. Pennsylvania	55	54	53	52	51	50	50
Western New York	43	42	40	37	40	41	47
Regional Average	48.6	47.8	46.6	44.7	44.5	44.8	44.1

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
1989–1995

Markets	1989	1990	1991	1992	1993	1994[a]	1995[b]
				[$/cwt.]			
New York-New Jersey[1]	14.49	15.52	13.16	14.41	14.04	14.59	14.04
New England[2]	14.46	15.49	13.23	14.51	14.14	14.69	14.14
Middle Atlantic[3]	14.97	16.00	13.74	15.02	14.65	15.20	14.65
E. Ohio-W. Pennsylvania[3]	13.94	14.97	12.71	14.00	13.62	14.17	13.65
Western New York[3]	14.24	15.27	13.00	14.29	13.92	14.47	13.92

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 1994–1995 values shown in the table below differ from one another according to the amount of Class III–A product pooled on an order. This year in the Northeast, III–A has pulled the weighted average manufacturing price down by more than 75¢ in 1994 in some orders.

Minimum Manufacturing Prices for 3.5% Milk
Northeast Federal and State Marketing Orders
1989–1995

Markets	1989	1990	1991	1992	1993	1994[a, c]	1995[b, c]
				[$/cwt.]			
New York-New Jersey[1]	12.37	12.21	11.06[4]	11.88	11.80	11.59	11.39
New England[2]	12.37	12.21	11.06[4]	11.88	11.80	10.99	11.01
Middle Atlantic[3]	12.39	12.23	11.08[4]	11.90	11.51	11.50	11.22
E. Ohio-W. Pennsylvania[3]	12.37	12.21	11.06	11.88	11.80	11.97	11.79
Western New York[3]	12.32	12.16	11.01	11.83	11.75	11.96	11.36

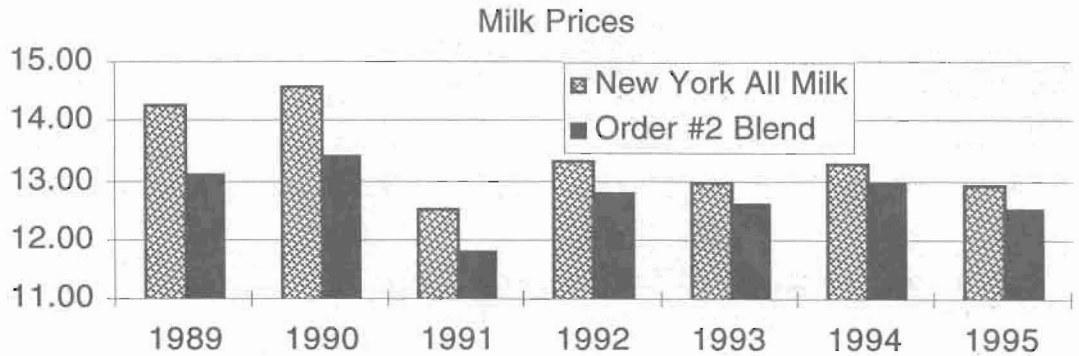
Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.
[a] Revised.
[b] Projected.
[c] Weighted average blend of Class III and Class III–A prices.
[1] 201–210 mile zone.
[2] 21st zone.
[3] Priced at major city in the marketing area.
[4] Class II price prior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

Minimum Blend Prices for 3.5% Milk
Northeast Federal and State Marketing Orders
1989–1995

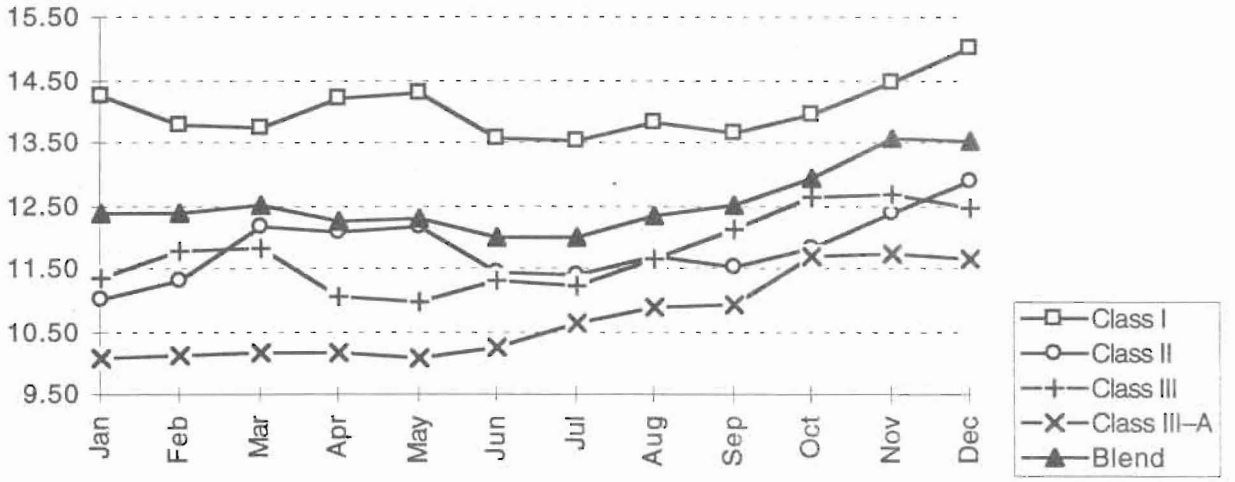
Markets	1989	1990	1991	1992	1993	1994[a]	1995[b]
New York-New Jersey[1]	13.10	13.44	11.79	12.81	12.61	12.98	12.53
New England[2]	13.45	13.95	12.07	13.08	12.79	13.10	12.66
Middle Atlantic[3]	13.75	14.27	12.45	13.49	13.11	13.35	12.85
E. Ohio-W. Pennsylvania[3]	13.24	13.84	11.95	13.01	12.78	13.12	12.75
Western New York[3]	13.04	13.46	11.77	12.69	12.58	12.88	12.55
Regional Average	13.32	13.79	12.01	13.02	12.77	13.09	12.67

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 25¢ per cwt higher in 1996 than they will be in 1995.

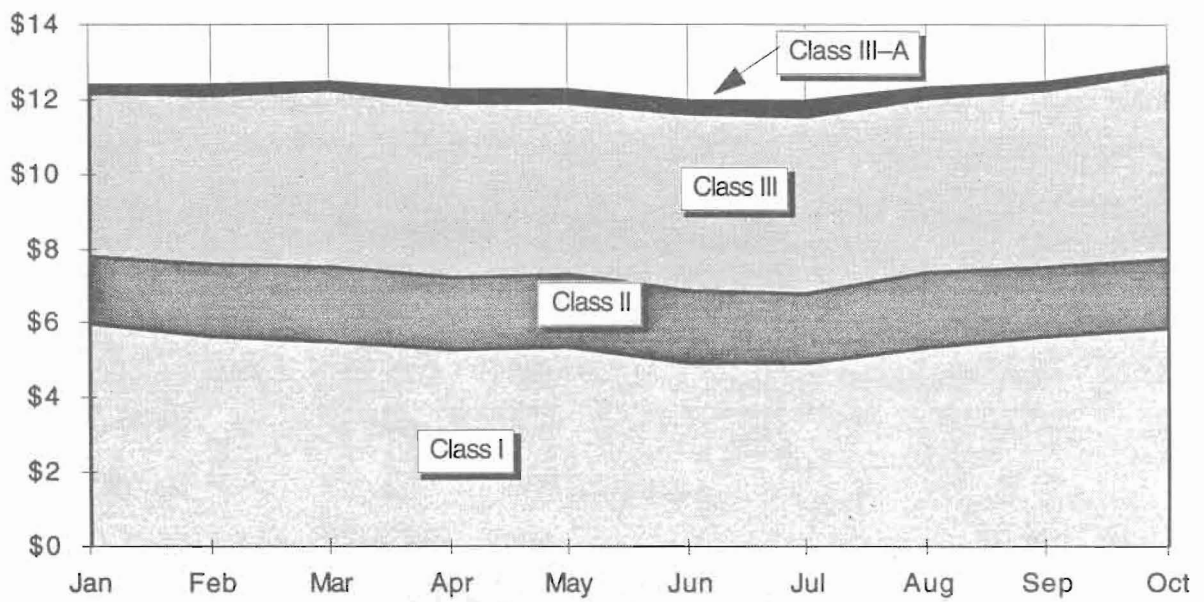


1995 New York–New Jersey Class Prices
3.5% milk fat, 201–210 mile zone



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. 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.

1995 New York–New Jersey Milk Price
Class Contribution to Blend
3.5% milk fat, 201–210 mile zone



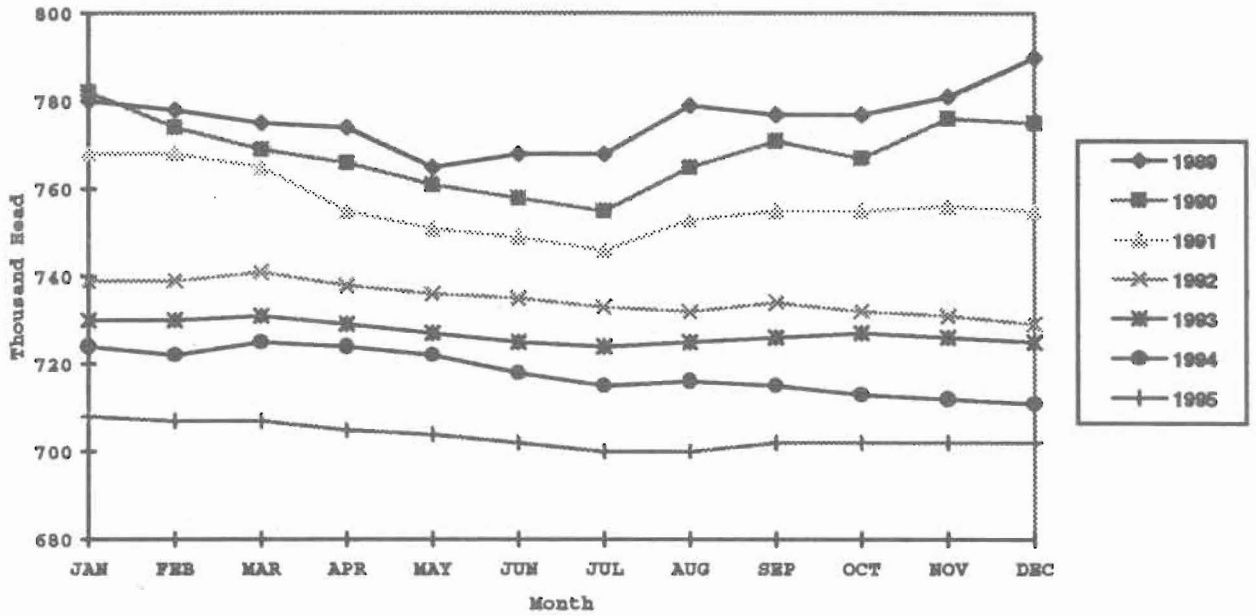
MILK PRICE PROJECTIONS*
New York-New Jersey Blend Price, 3.5 Percent, 201-210 Mile Zone
Last Quarter 1994 – 1995

Month	1994	1995	Difference
	(dollars per hundredweight)		
October	12.97	12.93	-0.04
November	13.03	13.58[a]	0.55
December	12.83	13.55[a]	0.72
Fourth Quarter Average	12.94	13.35	0.41
Annual Average	***12.99***	***12.57***	***-0.42***

Month	1995	1996[a]	Difference
	(dollars per hundredweight)		
January	12.39	13.33	0.94
February	12.39	13.08	0.69
March	12.51	12.91	0.40
First Quarter Average	12.43	13.11	0.68
April	12.25	12.69	0.44
May	12.30	12.51	0.21
June	12.02	12.33	0.31
Second Quarter Average	12.19	12.51	0.32
July	11.99	12.36	0.37
August	12.37	12.49	0.12
September	12.52	12.80	0.28
Third Quarter Average	12.29	12.55	0.26
October	12.93	13.06	0.13
November	13.58[a]	13.17	-0.41
December	13.55[a]	13.01	-0.54
Fourth Quarter Average	13.35	13.08	-0.27
Annual Average	***12.57***[a]	***12.81***[a]	***0.24***

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

Milk Cows on New York Farms, Monthly, 1989-1995



November-December 1995 estimated

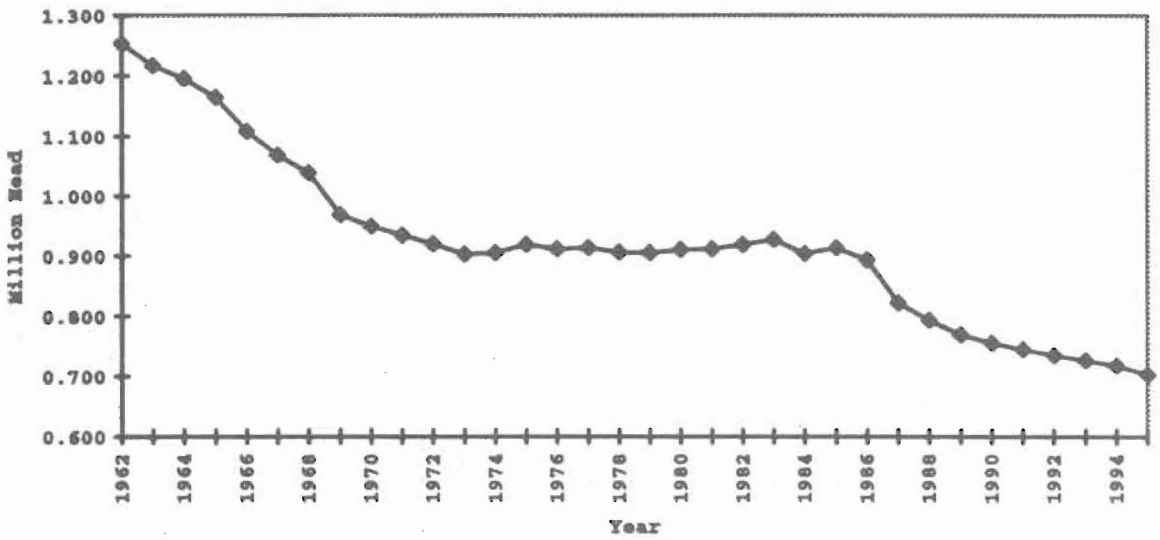
SOURCE: New York Agricultural Statistics.

During 1995, monthly cow numbers have been below the entire period from 1985 through 1994. Monthly cow numbers in New York increased during 1985, followed by a steady decline that began in January 1986 and continued uninterrupted through June 1987. Cow numbers stabilized the second half of 1987, declined through 1988 and stabilized again in 1989. In July 1995, the number of cows totaled 700,000, which was the lowest number for any month in New York since monthly records began in 1930. The number of cows in the State is projected to be stable through the remainder of the year.

The U.S. quarterly milk cow numbers have decreased in the second and third quarters of 1995 compared to 1994. In the third quarter of 1995, the number of cows in the U.S. averaged 9,520,000. That is 19,000 head less than a year earlier. The Northeast[1] comprised 18.4 percent of total U.S. milk cows or 1,751,600 head in the third quarter of 1995. This is 42,600 head less than a year earlier. The Northeast contributed to the 1994 to 1995 third quarter U.S. decrease in cow numbers of 0.2 percent.

[1]Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

Number of Milk Cows, New York, 1962-1995



SOURCE: New York Agricultural Statistics.

The average number of milk cows on New York farms for 1995 is estimated at 703,000 head, which is down 15,000 head from 1994. The projected average number of cows for 1996 is 695,000, or down 1.1 percent from 1995.

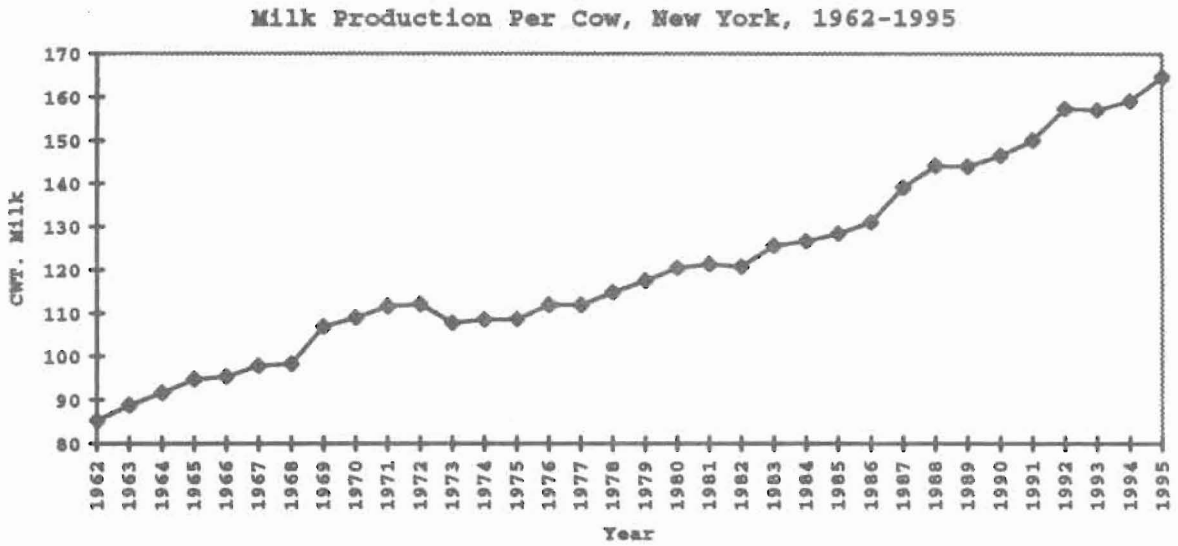
Heifers on New York farms as a percent of cow numbers on January 1, 1995 decreased 4.7 percentage points from 1994, to 40.1 percent. With a decrease to 285,000 head, milk cow replacement heifers were the smallest percent of the total New York herd since 1989.

Heifers on U.S. farms as a percent of cow numbers was 43.2 percent in January 1995, the same as 1994. July 1995 U.S. heifers as a percent of cow numbers was 41.1 percent, 0.6 percentage points below July 1994.

Year	New York Milk Cows, Annual Average	New York Milk Cows, January	New York Heifers, January	Heifers as Percent of Cow Numbers
	thousand head			percent
1985	914	910	425	46.7
1986	894	925	388	41.9
1987	822	855	355	41.5
1988	794	816	290	35.5
1989[1]	769	780	302	38.7
1990[1]	755	760	324	42.6
1991[1]	745	750	322	42.9
1992[1]	735	740	312	42.2
1993[1]	727	730	329	45.1
1994[1]	718	725	325	44.8
1995[2]	703	710	285	40.1
1996[3]	695			

[1]Revised [2]Preliminary [3]Projected

SOURCE: New York Agricultural Statistics



SOURCE: New York Agricultural Statistics.

Pounds of milk produced per cow in 1994 was up 1.3 percent from 1993. Milk per cow is expected to average 16,500 pounds in 1995, an increase of 3.7 percent, from 1994. This can be attributed to such factors as higher quality forage and bST usage. Milk production per cow has increased steadily since 1960 with the exception of 1973 and 1974, and small declines in 1982, 1989, and 1993.

Milk production per cow is projected to increase by 200 pounds or 1.2 percent in 1996 to 16,700 pounds. Short supplies of good quality forage, higher purchased feed prices, and that the major impacts of bST adoption are behind us are factors for the reduced rate of increase.

Year	N.Y. Milk Production Per Cow	Mixed Dairy Feed 16% Protein[1]	New York Milk-Feed Price Ratio[1]	New York All Hay, Baled[2]	U.S. Milk Production Per Cow
	pounds	$/ton		$/ton	pounds
1984	12,658	194	1.37	81.50	12,503
1985	12,836	164	1.59	75.50	12,994
1986	13,107	163	1.56	70.50	13,260
1987	13,916	153	1.68	72.00	13,819
1988	14,413	181	1.39	75.50	14,145
1989[3]	14,397	189	1.50	75.50	14,244
1990[3]	14,658	177	1.68	77.00	14,642
1991[3]	15,005	172	1.47	77.50	14,860
1992[3]	15,724	174	1.56	88.00	15,574
1993[3]	15,702	171	1.51	90.50	15,704
1994[3]	15,905	181	1.48	88.50	16,129
1995[4]	16,500	175[6]	--[7]	--	16,400
1996[5]	16,700	--	--	--	--

[1]1983-1985 is New York, 1986-1994 is Northeast. [2]Season average, June through May. [3]Revised [4]Preliminary [5]Projected [6]Beginning in 1995, prices paid surveys conducted annually in April. [7]Discontinued

SOURCE: New York Agricultural Statistics.

Total New York milk production in 1995 is estimated at 11,600 million pounds, up 1.6 percent from 1994. This increase is due to the 2.1 percent decrease in cow numbers and 3.7 percent increase in production per cow.

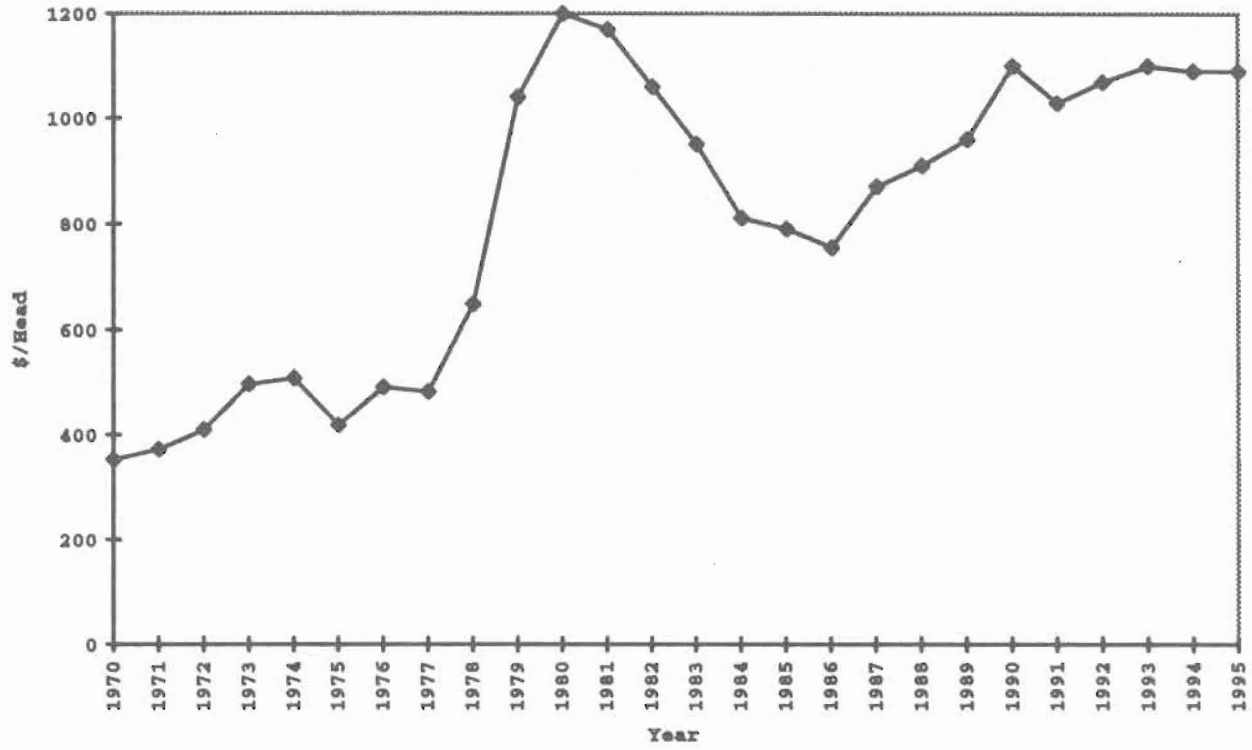
Total milk production is projected to increase only slightly in 1996 to 11,607 million pounds. This is a result of the factors discussed on the previous two pages in regard to cow numbers and production per cow.

United States total milk production was 153,626 million pounds in 1994. It is estimated that 1995 production will be about 156,000 million pounds.

Year	Total Milk Prod. New York	Total Milk Prod. U.S.	NY as % of U.S.	Year	Total Milk Prod. New York	Total Milk Prod. U.S.	NY as % of U.S.
	million pounds				million pounds		
1985	11,732	143,012	8.2	1991	11,179	148,477	7.5
1986	11,718	143,124	8.2	1992	11,557	150,885	7.7
1987	11,439	142,709	8.0	1993[1]	11,415	150,582	7.6
1988	11,444	145,152	7.9	1994[1]	11,420	153,626	7.4
1989	11,071	144,239	7.7	1995[2]	11,600	156,200	7.4
1990	11,067	148,313	7.5	1996[3]	11,607		

[1]Revised [2]Preliminary [3]Projected

Milk Cow Prices, New York, 1970-1995

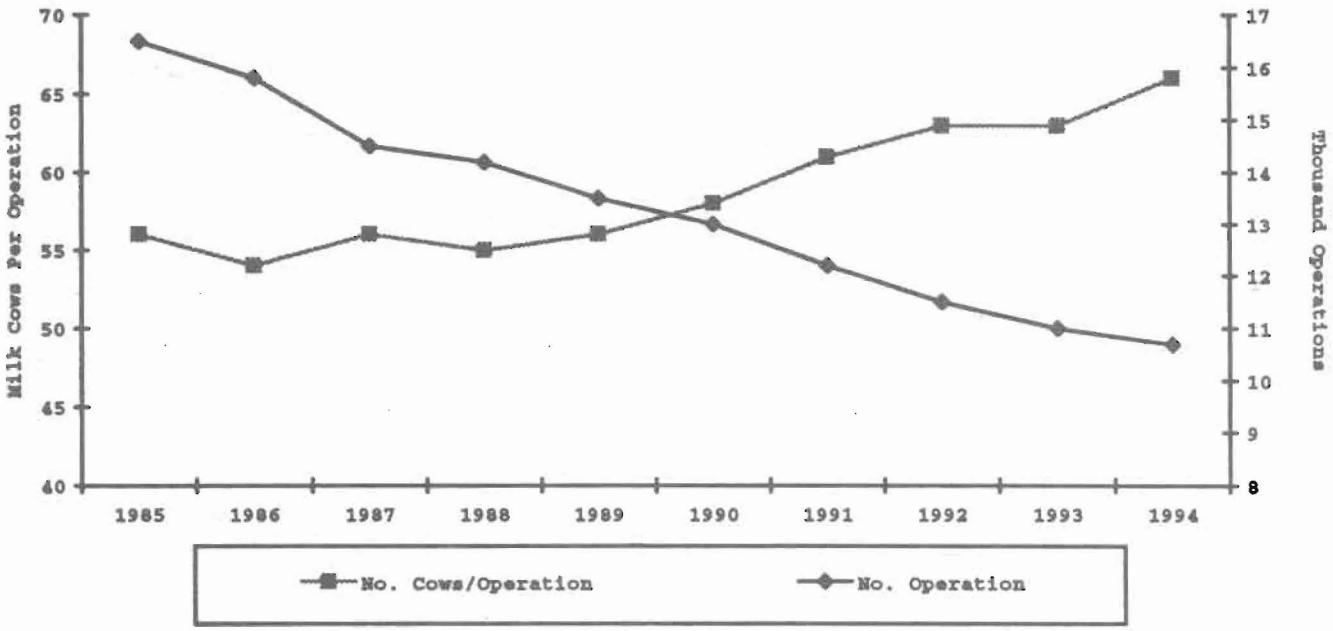


SOURCE: New York Agricultural Statistics.

Milk cow prices fluctuated throughout 1994 falling to $1,080 in September. In 1995, milk cow prices remained constant most of the first two quarters and fell to $1,050 per head in October. Monthly prices for milk cows averaged $5 a head higher than a year earlier. Slaughter cow prices averaged $4.30 per hundredweight lower than a year earlier. Calf prices averaged about $24.57 per hundredweight lower in 1995 compared to 1994.

	Milk Cows, $/Head		Slaughter Cows, $/Cwt		Calves, $/Cwt	
Month	1994	1995	1994	1995	1994	1995
January	$1,100	$1,100	$44.40	$39.00	$105.00	$71.00
February	1,100	1,110	45.20	41.10	106.00	78.00
March	1,090	1,110	44.20	38.60	96.00	80.00
April	1,090	1,110	43.30	37.90	99.00	81.00
May	1,110	1,110	42.70	37.60	112.00	83.00
June	1,110	1,120	40.90	37.80	112.00	80.00
July	1,090	1,110	40.40	35.50	85.00	-----
August	1,090	1,090	40.10	35.00	87.00	62.00
September	1,080	1,080	39.80	-----	84.00	-----
October	1,080	1,050	39.70	-----	89.50	-----
November	1,090		37.80		83.00	
December	1,100		37.60		80.00	

Number of Operations with Milk Cows and Average Number of Milk Cows per Operation, New York, 1985-1994



SOURCE: NYASS, New York Agricultural Statistics, 1993-1994

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 1994 than there were in 1985. The average number of milk cows per operation has increased by 10 cows, or 18 percent over the same period. On January 1, 1995, 40 percent of the total milk cows were in herds with 50-99 head, 44 percent were in herds with over 100 milk cows, and 16 percent were in herds with less than 50 head.

MILK COW OPERATIONS: BY HERD SIZE, 1985-1994

	Number of Milk Cows in Herd					
Year	1-29	30-49	50-99	100-199 1/	200 plus	Total
	number of operations					
1985	5,000	4,550	5,100	1,850		16,500
1986	4,300	4,300	5,300	1,900		15,800
1987	3,300	4,300	5,000	1,900		14,500
1988	3,200	3,850	5,300	1,850		14,200
1989	2,700	3,400	5,400	2,000		13,500
1990	2,650	3,150	5,300	1,900		13,000
1991	2,500	2,900	5,000	1,800		12,200
1992	2,600	2,600	4,400	1,900		11,500
1993	2,400	2,500	4,200	1,500	400	11,000
1994	2,400	2,200	4,200	1,500	400	10,700

MILK COWS JANUARY 1: INVENTORY BY HERD SIZE, 1986-1995

	Number of Milk Cows in Herd					
Year	1-29	30-49	50-99	100-199 1/	200 plus	Total
	thousand head					
1986	57	196	371	301		925
1987	42	168	355	290		855
1988	32	171	332	281		816
1989	30	144	335	271		780
1990	29	121	321	289		760
1991	27	116	319	288		750
1992	24	111	314	291		740
1993	27	97	300	306		730
1994	22	102	282	189	130	725
1995	21	92	284	185	128	710

1/100 plus category prior to 1993.

Since Bovine Somatatropin (bST) was approved for sale beginning in February of 1994, many in the dairy industry have been asking what impact bST has had not only on milk production per cow, but also on farm profitability. To address these questions, the production and financial records of the New York dairy farmers participating in the Cornell University Dairy Farm Business Summary (DFBS) project were analyzed.

Approximately 400 dairy farmers voluntarily participate in the DFBS project each year, and thus the farms participating are not a random or average sample of all New York dairy farms. Rather, on average, participating farms are larger, with higher rates of production and profitability. Farms that participated in testing of bST prior to final approval for use in 1994 were excluded from the sample used in the analysis.

Farms Studied

A comparison was made of the performance of the 259 dairy farms that were enrolled in the DFBS project for both years, 1993 and 1994. The farms were divided into four groups. The first group included dairy farms that did not use bST, the second group of farms used bST on less than 25 percent of the cow days (a cow day is recorded each day a cow is in the herd) from February through December of 1994, the third group used bST 25 percent or more of the cow days and the fourth group started but stopped using bST before the end of 1994. A comparison was then made between the year before adoption and the year of adoption for farms using bST. Farms using bST were also compared to the farms that did not use bST in each of the two years.

Results

The results of the comparison finds that the group of farmers that did not use bST increased herd size by four cows, did not increase milk sold per cow and saw operating costs of producing milk increase by $0.17 per hundredweight, while net farm income without appreciation increased by $2,789 per farm (See Table 1). Those farmers that used bST less than 25 percent of the cow days also increased herd size by four cows, but milk sold per cow increased by 689 pounds, while operating cost per hundredweight increased by $0.42 and net farm income without appreciation increased by $540.

Farmers that used bST more than 25 percent of the cow days increased herd size by 21 cows, increased milk sold per cow by 1,752 pounds and cost of producing milk increased by $0.22 per hundredweight while net farm income increased by $20,568. Seventy two of the 137 farmers using bST at the higher rate were DFBS participants in 1992, 1993 and 1994. From 1992 to 1993, milk sold per cow increased from 19,685 to 19,807 pounds without the use of bST, an increase of 122 pounds. This modest increase of 122 pounds of milk per cow was much less than the 1,752 pound increase they achieved with bST in 1994.

Those farmers that started using bST in 1994, but stopped before the end of the year, increased herd size by three cows, increased milk sold per cow by 106 pounds, saw cost of production increase by $0.60 per hundredweight with a net farm income decrease of $6,987.

Farms with higher rates of bST usage had larger herds, greater labor efficiency and profitability than the other groups of farms before bST was used. Farms using bST had feed costs as a percent of milk sales comparable to the other groups. Feed cost per hundredweight of milk sold was lower for the two groups using bST than for the group that did not use bST and lower than the group that

stopped using bST. Farms that used bST had a larger net worth, but higher debt to asset ratios and the high bST usage group had higher farm debt per cow than all groups except those that stopped using bST.

Veterinary and medicine expense per cow increased from 1993 to 1994 for all four groups. Interestingly the group that did not use bST recorded the largest percentage increase. The two groups that continued to use bST at the end of 1994 had the higher veterinary and medicine expense per cow in 1994, however, these two groups also had the higher expense in 1993, before the use of bST.

Summary

The farmers that have adopted and continued to use bST at the higher rate, had, on average, larger herds and were more profitable than the other farmers. Herd size increased 8.9 percent, pounds of milk sold per cow also increased 8.9 percent, veterinary and medicine expense increased, but less than for the group that did not use bST and net farm income per cow without appreciation increased from $336 in 1993 to $388 in 1994. Feed cost per hundredweight of milk sold decreased for farmers using bST, while feed cost increased for the farmers not using bST.

To conclude that bST adoption was the sole factor responsible for the change in performance from 1993 to 1994 would not be accurate. Although management practices such as milking frequency did not change from one year to the next on the farms that adopted bST, changes in other management practices or in nutrition and health programs could have changed, but are not detectable from the DFBS record.

The acquisition of bST is easily accomplished, yet changes in feeding program and selection of animals to be supplemented with bST requires increased management time. Many farmers that have adopted bST have achieved good production responses and increased economic returns. Some farmers have stopped using bST. The decision to use bST is an individual decision based on the farmer's preferences and assessment of potential returns.

The results presented in this article are descriptive of the experiences of farmers using and not using bST. Three additional research projects on this topic are being conducted. A statistical analysis on the experiences of dairy farmers using bST is being performed. DHIA records of these farms are being analyzed to assess the impact of bST on herd performance and health. Those who terminated the use of bST in 1994 are being surveyed to determine the reason(s) for the termination. The results of these efforts will be reported in future articles.

Performance of Farms Not Adopting and Adopting bST, New York, 1993 and 1994

Selected Factors	Level of bST Usage: Did not use bST, 137 Farms		≤25% of Herd, 24 Farms		>25% of Herd, 85 Farms		Stopped bST in 1994, 13 Farms	
	1993	1994	1993	1994	1993	1994	1993	1994
Size of Business								
Avg. # of cows	89	93	100	104	237	258	135	138
Avg. # of heifers	69	70	76	81	178	195	116	118
Milk sold, lbs.	1,600,654	1,658,515	1,963,535	2,102,733	4,676,475	5,541,468	2,670,266	2,756,558
Worker equiv.	2.77	2.76	3.51	3.63	5.94	6.28	3.74	3.83
Total tillable acres	276	280	321	327	558	582	371	373
Rates of Production								
Milk sold per cow, lbs.	17,926	17,918	19,570	20,259	19,716	21,468	19,814	19,920
Hay DM per acre, tons	2.34	2.62	2.70	2.97	3.14	3.36	3.11	3.46
Corn silage per acre, tons	14	16	15	16	16	17	17	17
Labor Efficiency								
Cows per worker	32	33	29	29	40	41	36	36
Milk sold per worker, lbs.	578,626	599,933	559,810	578,787	787,789	882,062	714,510	719,108
Cost Control								
Grain & conc. pur. as % mlk. sls.	29%	28%	28%	26%	29%	28%	30%	29%
Dairy feed & crop exp./cwt. milk	$ 4.58	$ 4.65	$ 4.69	$ 4.47	$ 4.68	$ 4.60	4.72	4.76
Labor and mach. costs per cow	$ 1,004	$ 1,015	$ 1,096	$ 1,132	$ 962	$ 979	994	1,050
Oper. cost of prod. milk per cwt.	$ 10.07	$ 10.24	$ 9.78	$ 10.20	$ 10.42	$ 10.64	9.80	10.40
Vet. & med. exp. per cow	$ 52.63	$ 57.86	$ 96.43	$ 99.37	$ 84.19	$ 86.48	69.34	74.12
Cap. Effic. (avg. per cow)								
Farm capital per cow	$ 6,763	$ 6,670	$ 7,092	$ 7,401	$ 6,108	$ 6,104	6771	6872
Mach. & equip. per cow	$ 1,343	$ 1,330	$ 1,335	$ 1,356	$ 1,003	$ 993	1304	1326
Asset turnover ratio	.41	.43	.45	.46	.52	.56	.45	.46
Profitability								
Net farm inc. w/o appr.	$ 29,836	$ 32,627	$ 43,955	$ 44,495	$ 79,528	$ 100,096	$ 53,614	$ 46,627
Net farm inc. w/ appr.	$ 37,946	$ 39,600	$ 55,353	$ 57,952	$ 97,884	$ 120,017	$ 64,609	$ 62,555
Labor & mgmt. inc. per op/mgr.	$ 3,899	$ 5,675	$ 8,594	$ 6,637	$ 20,604	$ 30,892	$ 15,835	$ 9,913
Rate return on equ. cap. w/appr.	1.52%	1.96%	2.19%	2.31%	5.99%	7.71%	4.02%	3.07%
Rate return on all cap. w/appr.	3.14%	3.48%	3.43%	3.73%	6.21%	7.30%	4.97%	4.57%
Financial Summary								
Farm net worth	$423,100	$ 432,026	$ 521,540	$ 560,764	$ 873,707	$ 952,733	$ 548,492	$ 571,794
Debt to asset ratio	.31	.31	.29	.29	.42	.41	.41	.41
Farm debt per cow	$ 2,062	$ 2,070	$ 2,071	$ 2,069	$ 2,517	$ 2,484	$ 2,821	$ 2,724

COMPARISON OF FARM BUSINESS SUMMARY DATA
Same 72 New York Dairy Farms, 1985 - 1994

Selected Factors	1985	1986	1987	1988
Milk receipts per cwt. milk	$12.82	$12.65	$12.80	$13.16
Size of Business				
Average number of cows	114	120	128	135
Average number of heifers	95	99	100	106
Milk sold, cwt.	19,352	20,582	22,285	24,180
Worker equivalent	3.51	3.61	3.65	3.82
Total tillable acres	336	342	345	357
Rates of Production				
Milk sold per cow, lbs.	17,032	17,088	17,416	17,937
Hay DM per acre, tons	3.0	3.0	3.0	2.9
Corn silage per acre, tons	15.6	15.0	16.9	14.2
Labor Efficiency				
Cows per worker	32	33	35	35
Milk sold per worker, lbs.	551,599	570,191	609,862	632,973
Cost Control				
Grain & concentrate purchased as % of milk sales	21%	23%	23%	27%
Dairy feed & crop expense per cwt. milk	$3.85	$3.89	$4.03	$4.49
Oper. cost of producing cwt. milk	$9.08	$9.10	$8.68	$9.04
Total cost of producing cwt. milk	$13.26	$13.20	$12.56	$12.76
Hired labor cost per cwt.	$1.48	$1.53	$1.67	$1.71
Interest paid per cwt.	$1.15	$1.02	$.92	$.91
Labor & machinery costs per cow	$826	$802	$828	$838
Capital Efficiency				
Farm capital per cow	$5,838	$5,701	$5,763	$5,932
Machinery & equipment per cow	$1,108	$1,065	$1,058	$1,066
Real estate per cow	$2,668	$2,619	$2,626	$2,656
Livestock investment per cow	$1,220	$1,167	$1,186	$1,243
Asset turnover ratio	.42	.46	.50	.50
Profitability				
Net farm income w/o apprec.	$39,593	$39,492	$59,115	$67,406
Net farm income w/ apprec.	$35,194	$55,501	$88,244	$86,264
Labor & management income per operator/manager	$12,126	$11,408	$24,896	$28,821
Rate return on:				
Equity capital w/apprec.	2.0%	6.1%	12.2%	10.4%
All capital w/ apprec.	4.7%	7.0%	10.7%	9.6%
All capital w/o apprec.	5.3%	4.6%	6.8%	7.3%
Financial Summary, End Year				
Farm net worth	$434,184	$457,311	$510,583	$553,480
Change in net worth w/ apprec.	$1,508	$24,898	$58,052	$48,319
Debt to asset ratio	0.35	0.35	0.33	0.33
Farm debt per cow	$1,953	$2,011	$1,949	$1,995

(continued)

COMPARISON OF FARM BUSINESS SUMMARY DATA
Same 72 New York Dairy Farms, 1985 - 1994

1989	1990	1991	1992	1993	1994
$14.56	$14.95	$13.03	$13.57	$13.17	$13.41
143	149	157	176	195	211
110	120	130	132	145	160
26,446	27,778	29,614	34,060	37,751	43,432
4.05	4.24	4.46	4.74	5.05	5.18
367	408	421	427	450	472
18,438	18,622	18,883	19,392	19,344	20,631
2.8	3.1	2.9	3.2	3.1	3.3
13.4	14.2	14.4	15.2	16.1	16.5
35	35	35	37	39	41
652,469	655,133	663,422	718,022	748,086	838,235
26%	27%	28%	27%	28%	27%
$4.69	$5.03	$4.67	$4.46	$4.41	$4.34
$9.81	$10.75	$10.23	$10.20	$10.12	$10.15
$13.53	$14.64	$14.09	$13.67	$13.49	$13.32
$1.97	$2.21	$2.25	$2.29	$2.33	$2.20
$.90	$.90	$1.00	$.80	$.80	$.79
$908	$1,033	$1,014	$1,004	$1,000	$1,004
$6,067	$6,422	$6,679	$6,483	$6,340	$6,340
$1,121	$1,197	$1,264	$1,187	$1,147	$1,174
$2,634	$2,806	$2,982	$2,937	$2,881	$2,833
$1,311	$1,384	$1,418	$1,400	$1,394	$1,420
.55	.52	.47	.50	.49	.52
$91,066	$78,820	$40,721	$73,316	$68,395	$88,645
$123,823	$94,042	$64,860	$97,649	$84,512	$109,037
$43,251	$30,818	$2,795	$23,852	$17,994	$30,418
15.1%	8.7%	4.0%	7.9%	5.5%	8.0%
13.1%	8.5%	5.4%	7.4%	5.9%	7.5%
9.3%	6.9%	3.1%	5.3%	4.6%	6.0%
$634,724	$664,179	$683,839	$753,903	$790,056	$847,671
$79,474	$27,702	$9,430	$53,283	$30,424	$51,845
0.30	0.34	0.36	0.36	0.38	0.38
$1,805	$2,249	$2,317	$2,315	$2,384	$2,433

TEN YEAR COMPARISON: SELECTED BUSINESS FACTORS
New York Dairy Farms, 1985 to 1994

Item	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Number of farms	404	414	426	406	409	395	407	357	343	321
Cropping Program										
Total tillable acres	280	288	305	302	316	325	330	346	351	392
Tillable acres rented	93	100	105	104	117	121	124	135	135	159
Hay crop acres	142	147	153	156	164	166	169	171	182	195
Corn silage acres	69	67	67	74	81	82	88	98	96	110
Hay crop, tons DM/acre	2.7	2.7	2.7	2.6	2.6	2.7	2.4	2.8	2.7	3.0
Corn silage, tons/acre	14.3	14.3	16.2	14.1	13.4	14.4	13.7	14.5	14.9	16.4
Fert. & lime exp. /tillable acre	$32	$26	$27	$29	$29	$29	$25	$25	$25	$25
Machinery cost/cow	$426	$400	$413	$398	$425	$483	$438	$444	$430	$438
Dairy Analysis										
Number of cows	89	95	101	102	104	107	111	123	130	151
Number of heifers	73	77	79	82	83	87	92	96	100	116
Milk sold, cwt.	14,001	15,374	16,498	17,200	17,975	19,005	20,060	23,130	24,448	30,335
Milk sold/cow, lbs.	15,679	16,237	16,351	16,882	17,259	17,720	18,027	18,789	18,858	20,091
Purchased dairy feed/cwt. milk	$3.04	$3.10	$3.21	$3.71	$3.99	$4.27	$3.87	$3.91	$3.85	$3.89
Purc. grain & conc. as % of milk receipts	23%	24%	24%	28%	27%	28%	29%	28%	29%	28%
Purc. feed & crop exp./cwt. milk	4.13	$4.00	$4.11	$4.62	$4.92	$5.21	$4.67	$4.70	$4.61	$4.61
Capital Efficiency										
Farm capital/cow	$5,801	$5,792	$5,894	$6,133	$6,407	$6,556	$6,688	$6,587	$6,462	$6,398
Real estate/cow	$2,726	$2,758	$2,805	$2,902	$2,977	$2,977	$3,063	$3,015	$2,932	$2,859
Mach. invest./cow	$1,083	$1,062	$1,057	$1,083	$1,154	$1,233	$1,267	$1,203	$1,165	$1,150
Asset turnover ratio	.40	.43	.45	.45	.48	.48	.43	.47	.46	.50
Labor Efficiency										
Worker equivalent	3.17	3.17	3.19	3.17	3.30	3.37	3.38	3.60	3.68	4.02
Operator/manager eq.	1.34	1.33	1.32	1.35	1.39	1.39	1.37	1.41	1.45	1.49
Milk sold/worker, lbs.	442,125	497,555	516,728	542,708	544,598	563,349	593,297	641,893	664,868	755,178
Cows/worker	28	31	32	32	32	32	33	34	35	38
Labor cost/cow	$387	$385	$400	$426	$469	$541	$538	$552	$568	$558
Profitability & Financial Analysis										
Labor & mgmt. income/oper.	$2,850	$3,837	$11,042	$11,911	$18,004	$14,328	$-955	$11,254	$9,000	$14,789
Farm net worth	$325,664	$348,909	$398,209	$426,123	$468,848	$471,322	$480,131	$515,215	$542,126	$608,749
Percent equity	63%	62%	65%	66%	68%	66%	64%	64%	65%	63%

TEN YEAR COMPARISON: AVERAGE COST OF PRODUCING MILK PER HUNDREDWEIGHT
New York Dairy Farms, 1985 to 1994

Item	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Operating Expenses										
Hired labor	$ 1.38	$ 1.38	$ 1.49	$ 1.46	$ 1.62	$ 1.77	$ 1.74	$ 1.80	$ 1.86	$ 1.80
Purchased feed	3.09	3.15	3.26	3.73	4.02	4.28	3.88	3.92	3.85	3.89
Machinery repairs & rent	.78	.75	.88	.83	.92	1.06	.89	.93	.89	.89
Auto expenses (farm share)	.03	.04	.04	.04	.04	.05	.04	.04	.04	.03
Fuel, oil & grease	.48	.34	.35	.34	.33	.41	.37	.35	.34	.31
Replacement livestock	.10	.13	.13	.11	.17	.20	.15	.21	.17	.21
Breeding fees	.20	.19	.19	.18	.18	.19	.18	.18	.19	.17
Veterinary & medicine	.27	.28	.28	.28	.30	.32	.33	.35	.37	.40
Milk marketing	.80	.84	.74	.52	.49	.53	.58	.63	.64	.67
Other dairy expenses	.53	.52	.53	.56	.60	.68	.65	.70	.72	.88
Lime & fertilizer	.63	.49	.50	.51	.50	.50	.40	.37	.36	.33
Seeds & plants	.23	.21	.21	.21	.22	.22	.20	.21	.20	.19
Spray & other crop expense	.22	.20	.19	.19	.21	.22	.20	.21	.20	.20
Land, building, fence repair	.17	.16	.20	.22	.27	.32	.19	.24	.21	.21
Taxes	.34	.33	.35	.35	.36	.37	.38	.35	.34	.29
Insurance	.22	.22	.22	.23	.23	.24	.23	.22	.20	.18
Telephone & elec. (farm share)	.37	.39	.38	.38	.39	.39	.39	.38	.39	.38
Interest paid	1.25	1.18	1.04	1.02	1.06	1.05	1.07	.88	.80	.81
Misc. (including rent)	.40	.41	.45	.41	.43	.47	.43	.44	.41	.40
Total Operating Expenses	$11.50	$11.22	$11.43	$11.57	$12.34	$13.27	$12.30	$12.41	$12.18	$12.24
Less: Nonmilk cash receipts	1.58	1.52	1.84	1.86	1.75	1.75	1.73	1.67	1.65	1.30
Increase in feed & supplies*	.05	.01	.16	.16	.02	.26	.04	.23	.13	.25
Increase in livestock	.18	.12	.10	.08	.12	.15	.18	.08	.22	.21
OPERATING COST OF MILK PRODUCTION	$ 9.69	$ 9.57	$ 9.33	$ 9.47	$10.45	$11.11	$10.35	$10.43	$10.18	$10.47
Overhead Expenses										
Depreciation: mach. & bldgs.	$ 1.64	$ 1.54	$ 1.43	$ 1.31	$ 1.31	$1.35	$ 1.28	$ 1.19	$ 1.17	$ 1.13
Unpaid labor	.12	.13	.10	.11	.12	.19	.18	.16	.15	.12
Operator(s) labor **	.97	.86	.87	.95	.98	1.10	1.06	.99	1.00	.86
Operator(s) mgmt. (5% of cash rec.)	.72	.71	.74	.74	.81	.85	.73	.76	.74	.73
Interest on farm eq. cap. (5%)	1.16	1.10	1.15	1.19	1.24	1.24	1.20	1.11	1.11	1.00
Total Overhead Expenses	$ 4.61	$ 4.34	$ 4.28	$ 4.30	$ 4.46	$ 4.73	$ 4.45	$ 4.21	$ 4.17	$ 4.84
TOTAL COST OF MILK PRODUCTION	$14.30	$13.91	$13.61	$13.77	$14.91	$15.84	$14.80	$14.64	$14.35	$15.31
AVERAGE FARM PRICE OF MILK	$12.90	$12.65	$12.89	$13.03	$14.53	$14.93	$12.95	$13.58	$13.14	$13.44
Return per cwt. to operator labor, capital, & management	$ 1.45	$ 1.41	$ 2.04	$ 2.14	$ 2.65	$ 2.28	$ 1.14	$ 1.80	$ 1.64	$1.72
Rate of return on farm eq. cap.	-1.0%	-0.7%	1.9%	1.8%	3.3%	1.3%	-2.7%	0.2%	-0.4%	0.6%

*Increase in grown feeds. **1985 = $800/month, 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 = $1,450/month of operator labor.

Herd Size Comparisons

The 321 New York dairy farms have been sorted into nine herd size categories and averages for the farms in each category are presented in Tables 46 through 50. 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 cows 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 (see the table below). Net farm income without appreciation averaged $13,630 per farm for the less than 40 cow farms and $216,491 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. Net farm income per cow is higher on farms with less than 100 cows than on farms averaging 100 cows or more. Farms with 85 to 99 cows averaged $475 net farm income per cow while the 200 to 299 cow dairy farms average only $302 net farm income per cow. Other factors that affect profitability and their relationship to the size classifications are shown in the table on the next page.

COWS PER FARM AND FARM FAMILY INCOME MEASURES
321 New York Dairy Farms, 1994

Number of Cows	Number of Farms	Ave. No. of Cows	Net Farm Income Without Apprec.	Net Farm Income Per Cow	Labor & Management Inc./Oper.	Return to all Capital Without Apprec.
Under 40	9	34	$13,630	$401	$-1,388	3.42%
40 to 54	47	46	19,047	414	477	-.17%
55 to 69	43	62	24,009	387	1,734	.65%
70 to 84	32	76	26,916	354	4,590	1.37%
85 to 99	23	93	44,147	475	10,700	2.46%
100 to 149	78	118	43,840	372	8,150	2.66%
150 to 199	30	170	57,060	336	10,486	3.65%
200 to 299	26	229	69,247	302	13,597	3.78%
300 & over	33	560	216,491	387	67,737	7.90%

As herd size increased from 40 to 299 cows, net farm income per cow generally declines. Net farm income per cow is expected to decline as family farms get larger because purchased inputs increase per cow. Purchased inputs per cow increase because more and more of the total labor and related services required by a growing farm business must be purchased rather than supplied by the family.

In 1994 the dairy farms with 85 to 99 cows did not fit the pattern of declining net farm income per cow as herd size increased. Another substantial increase in net farm income per cow occured on farms with 300 cows and more. Further analysis of these two size groups on the following page reveals reasons why farms in these size categories produced higher average net farm incomes per cow.

COWS PER FARM AND RELATED FARM FACTORS
321 New York Dairy Farms, 1994

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	34	17,663	3,351	4.19	7.67	$9,627	$9.52	$18.02
40 to 54	46	17,569	4,478	3.35	7.92	7,825	9.69	15.87
55 to 69	62	18,108	4,918	3.32	8.67	7,990	10.07	15.54
70 to 84	76	17,464	5,603	3.50	8.72	6,842	9.79	14.78
85 to 99	93	19,304	5,912	3.18	8.13	6,940	9.72	14.44
100 to 149	118	19,024	6,539	3.07	8.36	6,802	10.35	14.51
150 to 199	170	19,820	7,511	2.83	8.67	6,552	10.75	14.16
200 to 299	229	20,444	8,095	2.47	7.46	6,190	10.97	14.07
300 & over	560	21,647	10,238	1.92	7.22	5,647	10.58	12.93

The dairy farms with 85 to 99 cows averaged 19,304 pounds of milk sold per cow, 1600 pounds more per cow than the average of all the smaller farms in the study. The operating costs of producing milk were $9.72 per hundredweight on this group of farms, the lowest of all size categories above 54 cows.

The farms with 300 and more cows averaged more milk sold per cow than all size categories with less than 300 cows per farm. With 21,647 pounds of milk sold per cow, farms in the largest herd size group averaged 15 percent more milk output per cow than all other herds in the summary.

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 seven percent of the 154 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 37 percent, 200-299 cow herds reported 62 percent and the 300 cow and larger herds reported 82 percent exceeding the 2x milking frequency.

A new technology, bST, was used on a much larger proportion of the large herd farms. bST was used sometime during 1994 on 24 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 1.92 tillable acres per cow, and farm capital with an average investment of $5,647 per cow.

The last column in the above table may be the most important in explaining why profits were significantly higher on the 300 plus cow farms. The 33 farms with 300 and more cows held their average total costs of producing milk to $12.95 per hundredweight, $1.63 below the $14.58 average for the remaining 288 dairy farms. The lower average costs of production plus a $.03 per hundredweight higher average milk price gave the managers of the 300 plus cow dairy farms profit margins that averaged $1.68 per hundredweight above the average of the other 288 DFBS farms.

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.

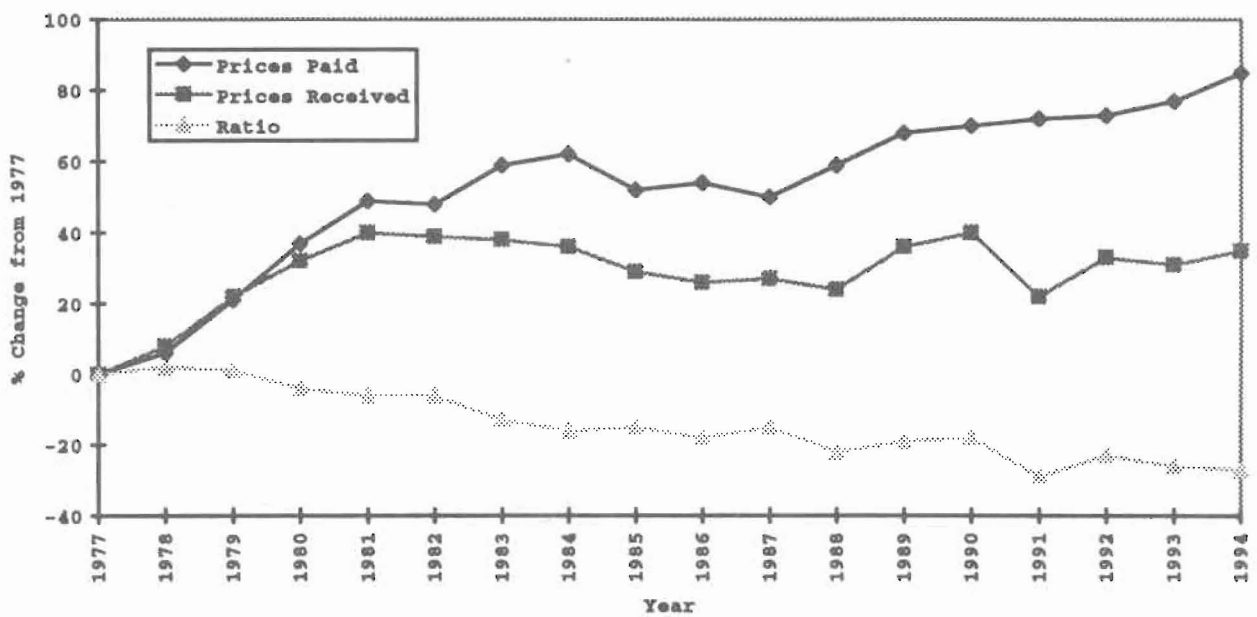
PRICES PAID BY NEW YORK FARMERS FOR SELECTED ITEMS, 1984-1994

Year	Mixed Dairy Feed 16% Protein ($/ton)	Fertilizer, Urea 45-46%N ($/ton)	Seed Corn, Hybrid* ($/80,000 kernels)	Diesel Fuel ($/gal)	Tractor 50-59 PTO* ($)	Wage Rate All Hired Farm Workers ($/hr)
1984	194.3	250	70.20	1.140	17,400	3.60
1985	164.2	238	67.30	1.080	16,800	4.01***
1986	162.9	200**	65.60	0.840**	16,550	4.41***
1987	152.8**	190**	64.90	0.765**	16,650	4.60***
1988	180.8**	208**	64.20	0.810**	17,150	5.02***
1989	188.5**	227**	71.40	0.828**	17,350	5.25***
1990	176.8**	215**	69.90	1.080**	17,950	5.51***
1991	171.8**	243**	70.20	0.995**	18,650	6.06***
1992	173.8**	221**	71.80	0.910**	18,850	5.76
1993	171.3**	226**	72.70	0.900**	19,200	6.20
1994	180.8**	233**	73.40	0.853**	19,800	6.64

SOURCE: NYASS, New York Agricultural Statistics. USDA, ASB, Agricultural Prices. *United States average. **Northeast region average. ***New York and New England combined, 1985-1991.

The table above shows average prices of selected goods and services used on New York dairy farms. The chart below shows the ratio of prices received for milk and prices paid by New York dairy farmers as a percent change from 1977. The ratio has been on a downward trend since 1978 except for slight increases in 1985, 1987, 1989, 1990 and 1992.

Ratio of Prices Received for Milk and Prices Paid by New York Dairy Farmers, 1977-1994



SOURCE: NYASS, New York Agricultural Statistics.

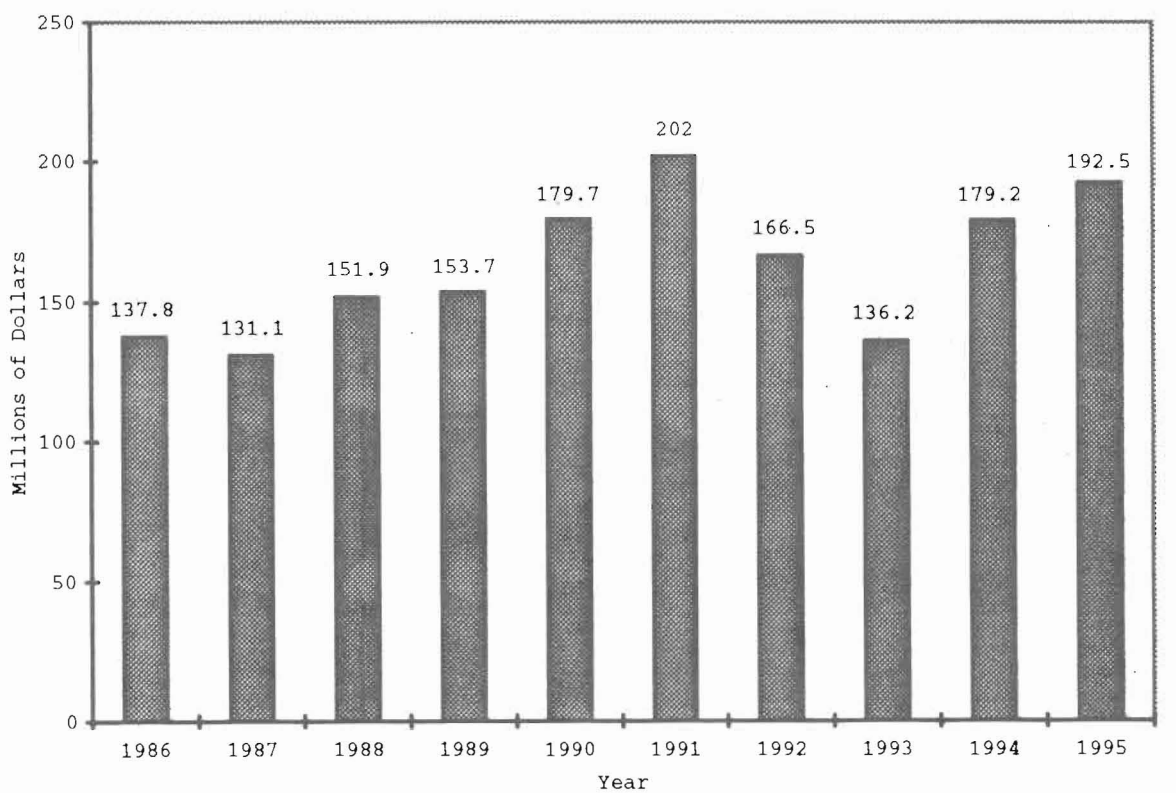
HIGHLIGHTS OF THE 1995 FRUIT OUTLOOK

The total production of the six tree and vine crops which are important to New York's agricultural economy was projected to decrease by two percent nationally. The national production of apples, grapes, pears, peaches and sweet cherries were forecast to decrease compared with last year's production, while increased production was forecast for tart cherries. The national production of apples was forecast at 265.1 million bushels, down two percent from 1994. Grape production was expected to total 5,777 thousand tons, a decrease of two percent from last year.

In New York, apple production is indicated to be 26.4 million bushels, up one percent from last year and 28 percent above the 1993 output. Indicated production is seven percent above the average production of the last five years. Grape production of 175 thousand tons was estimated, eight percent below last year. Total production of the six major fruit and vine crops of 768 thousand tons is projected for the State, just one percent below 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 1995 is shown below. With reduced national non-citrus crops and a reduced crop of apples in Europe, supplies are tight, and prices can be expected to strengthen by the season progresses. The value of production for New York is projected to increase to $192 million, up seven percent from the 1994 crop.

Value of Production of Major Tree Fruit and Vine Crops, New York, 1986-1994 and 1995 (projected)



COMMERCIAL NONCITRUS FRUIT PRODUCTION, NEW YORK AND UNITED STATES

Fruit	New York				United States			
	1992	1993	1994	1995*	1992	1993	1994	1995*
	thousand tons							
Apples	585	435	550	555	5,284	5,342	5,668	5,568
Grapes	180	118	190	175	6,052	6,023	5,877	5,777
Tart Cherries	16	8	13	15	168	162	144	196
Pears	17	15	16	16	923	948	1,046	963
Peaches	7	5	4	6	1,336	1,331	1,253	1,246
Sweet Cherries	1	1	1	1	205	169	207	111
Total New York's Major Fruit Crops	806	582	774	768	13,968	13,975	14,190	13,861

*indicated

AVERAGE FARM PRICES OF NONCITRUS FRUITS, NEW YORK AND UNITED STATES

Fruit	New York				United States			
	1991	1992	1993	1994	1991	1992	1993	1994
	dollars per ton							
Apples								
Fresh	402	284	348	360	502	390	368	364
Processed	153	129	133	135	171	130	107	112
All sales	254	198	232	236	358	272	258	256
Grapes	254	221	225	217	312	306	334	315
Tart Cherries	900	364	206	144	928	352	236	318
Pears	275	305	261	303	303	295	245	223
Peaches	548	524	592	502	314	304	320	266
Sweet Cherries	901	976	850	850	968	915	1,190	1,040

VALUE OF UTILIZED PRODUCTION, NONCITRUS FRUITS, NEW YORK AND UNITED STATES

Fruit	New York				United States			
	1991	1992	1993	1994	1991	1992	1993	1994
	million dollars							
Apples								
Fresh	84.4	73.8	69.6	88.2	1,375	1,122	1,126	1,158
Processed	48.5	42.3	31.5	41.5	358	306	237	269
All Sales*	132.9	116.1	101.1	129.7	1,733	1,428	1,364	1,427
Grapes	48.8	37.6	26.5	40.5	1,735	1,849	2,007	1,847
Tart Cherries	11.4	4.0	1.6	1.7	86	55	30	44
Pears	4.0	4.7	3.8	4.8	274	272	232	233
Peaches	3.7	3.6	2.7	1.8	394	379	399	313
Sweet Cherries	1.1	0.5	0.6	0.7	135	175	191	200
Total New York's Major Fruit Crops*	201.9	166.5	136.3	179.2	4,357	4,158	4,223	4,064

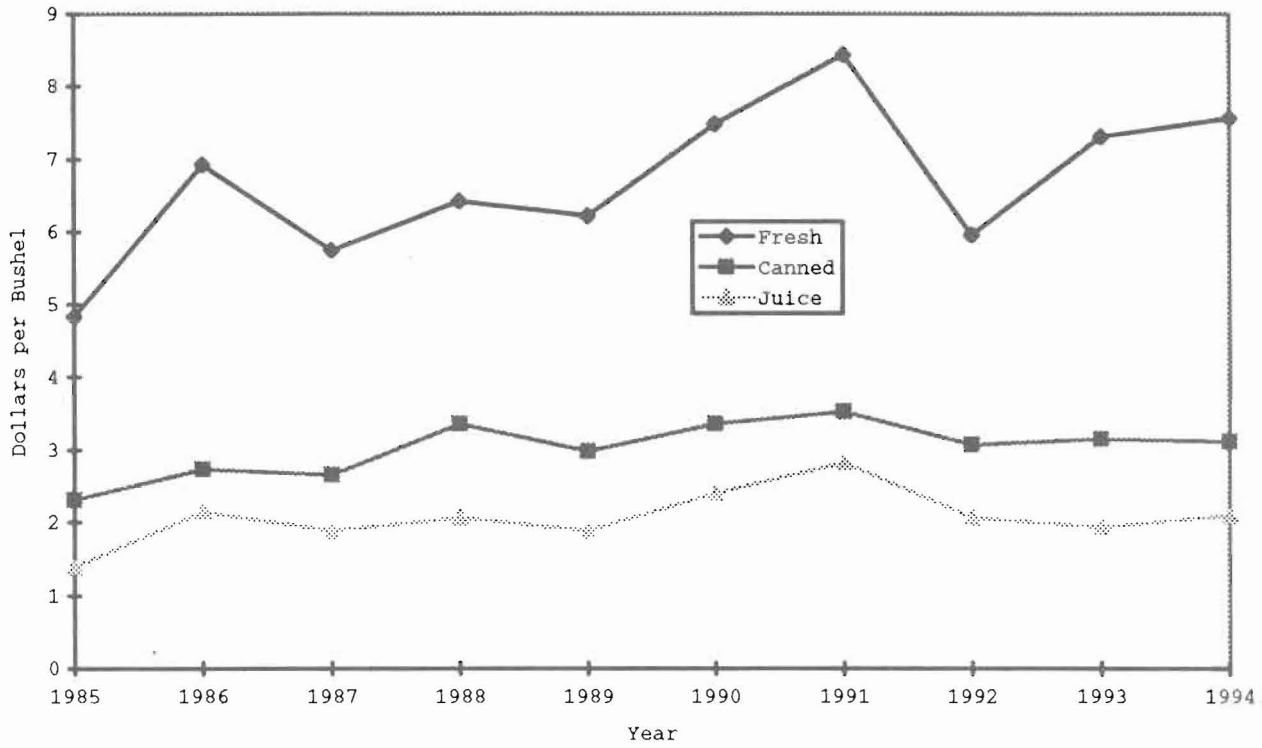
*May not add from total of fresh and processed due to rounding errors.
Source: NASS, USDA, Noncitrus Fruits and Nuts 1994 Summary, July 1995.

APPLE PRODUCTION, UNITED STATES, 1990-1994, FIVE-YEAR AVERAGE PRODUCTION, AND 1995 FORECAST, 1,000 42-POUND BUSHELS

States/Regions	5-Year Average	1994*	1995 USDA Estimate**	1995 Compared to USDA 5-Year Average (% Change)	1995 Compared to 1994 (% Change)
Maine	1,619	1,286	1,452	-10.3	12.9
New Hampshire	1,012	976	929	-8.2	-4.8
Vermont	1,076	1,000	976	-9.3	-2.4
Massachusetts	1,655	1,488	1,548	-6.5	4.0
Rhode Island	134	114	119	-11.1	4.4
Connecticut	693	595	547	-21.0	-8.1
New York	24,667	26,191	26,429	7.1	0.9
New Jersey	1,677	1,667	1,905	13.6	14.3
Pennsylvania	11,191	9,524	11,905	6.4	25.0
Delaware	557	476	500	-10.3	5.0
Maryland	962	833	1,143	18.8	37.2
Virginia	7,905	6,905	9,524	20.5	37.9
West Virginia	4,357	3,571	4,524	3.8	26.7
North Carolina	6,190	5,952	5,476	-11.5	-8.0
South Carolina	1,281	1,429	1,786	39.4	25.0
Georgia	662	619	833	25.8	34.6
Total East	**65,637**	**62,626**	**69,596**	**6.0**	**11.1**
Ohio	2,357	2,143	2,619	11.1	22.2
Indiana	1,510	1,191	1,714	13.5	43.9
Illinois	1,686	1,119	2,024	20.1	80.9
Michigan	22,619	24,286	29,048	28.4	19.6
Wisconsin	1,491	1,905	1,833	23.0	-3.8
Minnesota	574	552	571	-0.6	3.4
Iowa	252	286	190	-24.7	-33.6
Missouri	962	786	952	-1.0	21.1
Kansas	160	119	179	12.0	50.4
Kentucky	352	167	405	14.9	142.5
Tennessee	302	238	429	41.9	80.3
Arkansas	238	191	333	39.7	74.3
Total Central	**32,504**	**32,983**	**40,297**	**24.0**	**22.2**
Total East & Central	**98,141**	**95,609**	**98,141**	**0.0**	**2.6**
Colorado	1,795	2,024	1,667	-7.2	-17.6
New Mexico	186	191	NA	NA	-100.0
Utah	1,124	1,143	476	-57.6	-58.4
Idaho	3,429	3,929	1,667	-51.4	-57.6
Washington	116,429	135,714	123,810	6.3	-8.8
Oregon	3,976	4,762	3,333	-16.2	-30.0
California	20,714	25,000	23,810	14.9	-4.8
Arizona	1,600	1,524	NA	NA	-100.0
Total West	**149,254**	**174,287**	**154,763**	**3.7**	**-11.2**
TOTAL U.S.	**247,395**	**269,896**	**265,131**	**7.2**	**-1.8**

*1994 and 5-year averages from NASS, USDA, Non-Citrus Fruits and Nuts Summary revised as of July 1, 1995.
**NASS, USDA, Crop Production, October 1, 1995.

Average Annual Prices Received by New York Growers for Apples, 1985-1994



SOURCE: New York Agricultural Statistics, 1993-1994.

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 1994, prices were mixed. Fresh apple prices were up slightly in New York, canned apples were down slightly, and the price of juice apples increased.

In October 1995, the average price for fresh apples in New York State was up 25 percent over 1994, an exceptionally strong increase. Prospects for fresh apple exports from New York to Europe and South America, which have been in an upward trend, appear favorable. 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 1995 crop should be up approximately 10 percent above last year.

Processing apple prices, other than juice, were unchanged to marginally higher in 1995. Prices increased as the season progressed. Juice prices started at 4.5 to 5.0 cents per pound, but strengthened in response to a tightening of the U.S. apple supply and strength of the world apple juice concentrate market. The price of apples for juice had reached 7 cents per pound in November, and may be headed to 8 or 9 cents per pound in 1996.

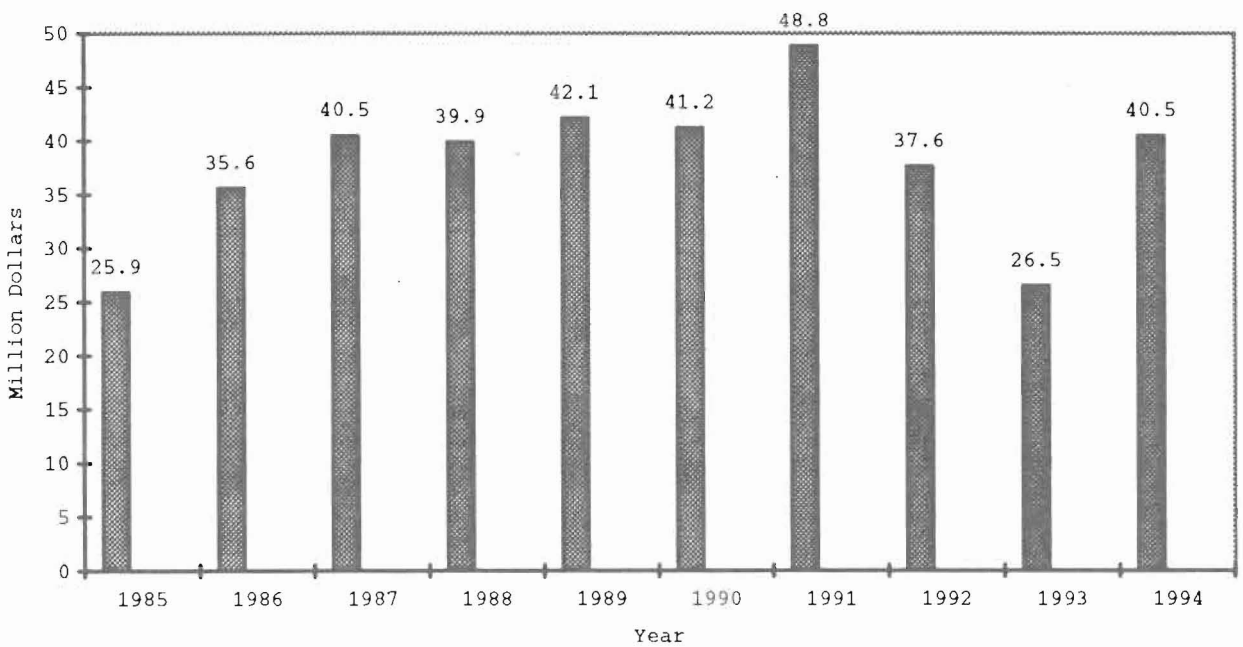
Thus apple growers viewed positive earning prospects for the rest of the marketing season, especially those whose markets are predominantly for fresh fruit. A large crop (7 percent above the average of the last 5 years) and higher prices for fresh and juice apples will boost the value of the stale's crop to even higher than the 1991 crop value of $133 million. However, profits will not be as high as in 1991 due to increased cost of key inputs such as, miticides, fungicides and labor.

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 (see Figure below). 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 molt-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 $26.5 in 1993. In 1994, production rebounded to 190 thousand tons. Although the average price declined, the value of the crop rebounded to $40.5 million.

Prospects for the utilized value of the State's 1995 crop are for a reduced crop value in the $33-37 million range. Indicated production was 175 thousand tons, down eight percent from 1994. The average price received for the 1995 crop will probably decrease as the erosion of prices for juice grapes and native variety wine grapes offsets higher prices for Vinifera and favored French-American hybrid wine varieties.

Value of Utilized Production of Grapes, 1985-1994

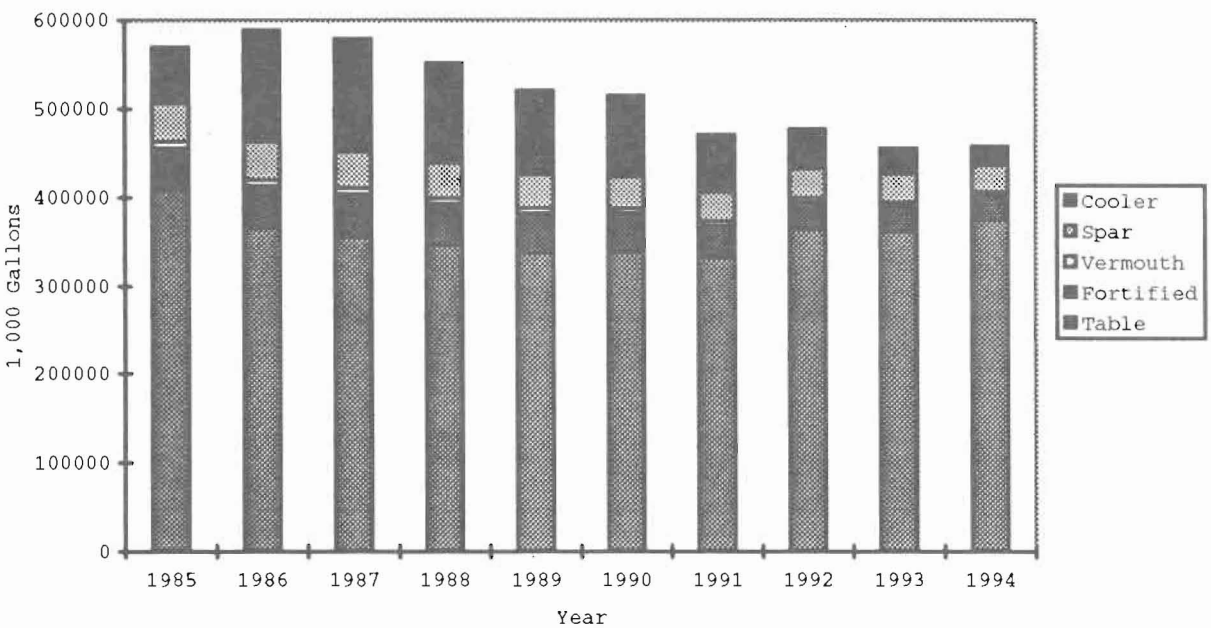


Source: New York Agricultural Statistics, 1994-1995.

Total wine consumption for 1994 increased 2.4 percent (the last calendar year for which consumption figure are available). The increase in volume was driven by a strong gain in the table wine category (+5.6%), marking the first significant volume gain for this category in 14 years. 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 have 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.

Wine Entering Distribution Channel, U.S., 1985-1994



Concords are the predominant variety grown and processed in New York. There were 135,955 tons of Concords from New York processed in 1994. Over the past five years, Concords have comprised 72 percent of total tonnage utilized. The second leading variety is Niagara with 6.7 percent of tonnage followed by Catawba with 6.3 percent.

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 declined in recent years. Most French-American varieties with the exception of Aurora and de Chaunac have held their own. Red varieties, such as Baco Noir and Maréchal Foch, benefited since 1991 from a general increase in interest in red wine among consumers due to the "French Paradox" telecast. The average price of Vinifera grapes declined since 1991, the net effect of decreased price for white varieties, especially Chardonnay, which offset higher prices for red Vinifera varieties.

GRAPES: NEW YORK GROWN, RECEIVED BY WINERIES AND PROCESSING PLANTS, 1990-94

Variety	1990	1991	1992	1993	1994	5-Year Avg.
				tons		
Concord	97,551	134,357	123,919	82,914	135,955	114,939
Niagara	9,188	9,934	9,676	9,623	15,250	10,734
Catawba	9,855	13,252	10,124	6,636	10,116	9,997
Elvira	3,662	4,501	3,606	3,533	4,826	4,026
Delaware	2,741	4,051	1937	2,407	2,316	2,690
Dutchess	461	550	364	223	298	379
Aurora	6,754	7,963	7,204	3,121	6,282	6,265
de Chaunac	2,010	2,611	1,385	1,363	1,126	1,699
Baco Noir	1,141	1,695	1,449	824	923	1,206
Seyval Blanc	1,311	1,361	1,215	575	678	1,028
Cayuga White	895	1,107	1,143	313	523	796
Rougeon	783	1,046	587	414	735	713
Vitis Vin.(all)	2,064	2,919	2,422	1,115	1,229	1,950
Other varieties	2,584	3,653	2,969	1,939	2,743	2,778
Total, all varieties	141,000	189,000	168,000	115,000	183,000	159,200

SOURCE: New York Agricultural Statistics, 1994-1995.

GRAPES: PRICES PAID FOR NEW YORK GROWN GRAPES PROCESSED, 1990-94

Variety	1990	1991	1992	1993	1994	5-Year Avg.
American Varieties						
Catawba	225	203	200	203	200	206
Concord	287	246	206	211*	202*	230
Delaware	222	199	189	200	205	203
Dutchess	214	180	181	195	197	193
Elvira	208	199	196	201	208	202
Niagara	262	223	215	208*	213*	224
French American Hybrid						
Aurora	220	192	183	205	224	205
Baco Noir	251	293	246	252	269	262
Cayuga White	272	262	242	295	286	271
de Chaunac	203	229	227	245	257	232
Rougeon	201	223	238	252	268	236
Seyval Blanc	259	273	287	250	278	269
Vitis Vinifera						
All varieties	1,050	1,108	1,055	1,002	993	1,042
Average of all varieties	282	251	218	218*	211*	236

*Preliminary estimates of future payments by cooperatives have been included based upon historical data.

SOURCE: Fruit, 975-2-95, 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 and 1993, when large national crops of Concords pushed down juice grape prices.

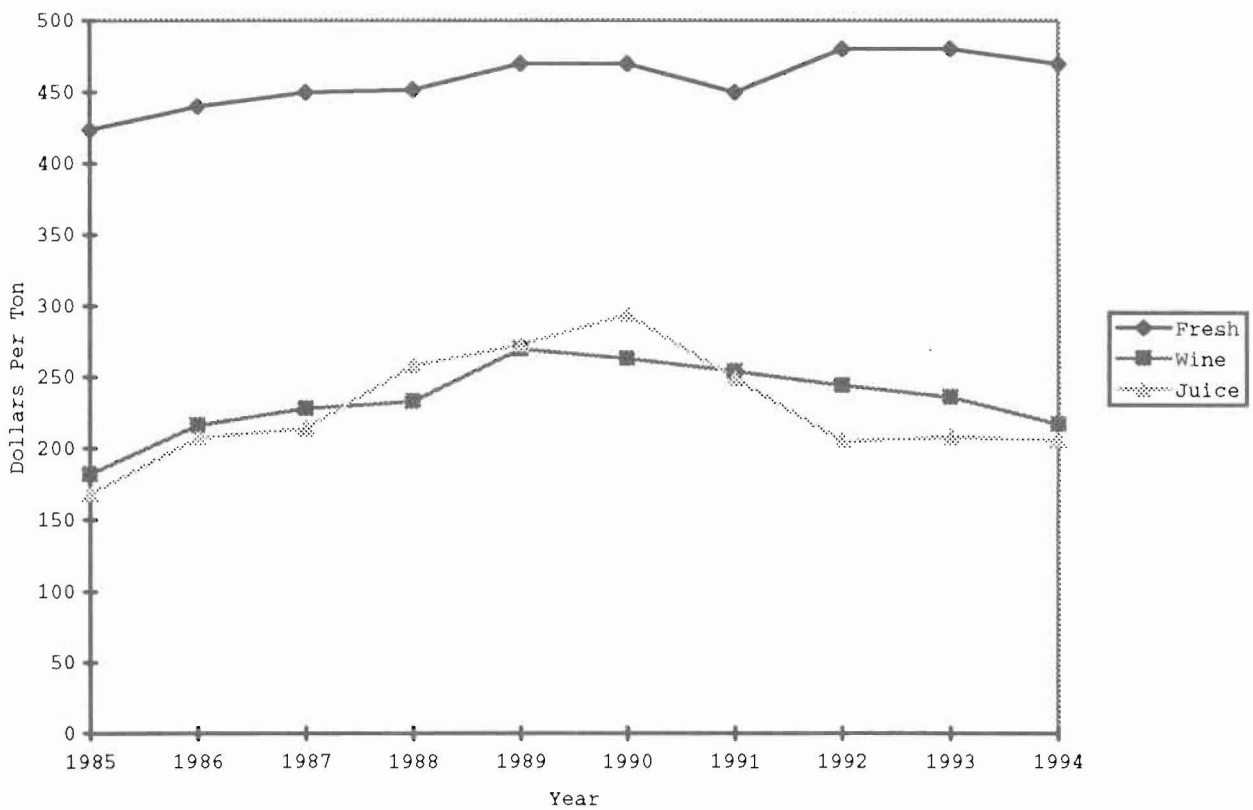
In 1995, there was generally a weak market for juice and bulk wine varieties. In the juice segment of the industry, movement of juice has been strong in recent months, and the carryover of juice coming into the new season decreased for the first time since 1989 --- a good sign for 1996 prices. Also, Niagara based products had increased sales. The future demand for Niagaras still looks bright, although the success of this variety may be hurting Concord sales. Still burdened by high production in recent years and substantial, although lower carryover inventory, cash prices weakened again in 1995 --- down 8 to 10 percent from last year. National Grape Cooperative paid a harvest cash advance of $80 per ton, the lowest in recent years. Many producers of varieties used in bulk wine entered harvest without knowing where they

would market their crop, the result of restructuring of contracts by Canandaigua Wine Company (the major buyer of bulk wine varieties). Most of these grapes eventually found a market, although often at a surplus price of $100-150 per ton. Price for most contracted native and hybrid varieties were similar or slightly higher than last year. About 125 acres of Native American varieties in the Finger Lakes were converted to organic production and sold at premium prices to a specialized juice processor. Some small Concord growers in the Finger Lakes successfully switched to table grape markets generally at a strong price.

A bright spot in the 1995 crop year was the small premium winery sector. There has been a growing demand in recent years for the quality hybrid varieties such as Cayuga White, Vidal Blanc, Seyval, Maréchal Foch, and Baco Noir. Prices in these markets were mostly in the $300-450 per ton range. Vinifera varieties also experienced strong demand and prices, especially for red varieties ($1,200-1,500 per ton) and Riesling $900-1,000 per ton). Growing demand for Riesling, small crops in the past two years, and the lack of new plantings has created a shortage of that variety. Chardonnay is no longer in surplus in inventories, but prices from most buyers remained in the $800-1,000 range.

Many premium wineries enjoyed record sales in 1995. The 1995 season was touted by wine makers as one of the best, with a nearly ideal balance between sugar, acid and flavor for most varieties. Considered in light of the strong consumer demand for premium table wines, the future appears bright for the small premium wineries. [The assistance of Barry Shaffer and David Peterson, Area Specialists, Cornell Cooperative Extension is acknowledged for this section of the Handbook].

Average Price for Grapes in New York Utilized for Fresh



Source: New York Agricultural Statistics, 1992-1993.

--SITUATION

Before entering the discussion on the situation of the New York State vegetable industry, readers need to be made aware of the changes in the figures found in the accompanying tables and/or graphs. The New York State Department of Agriculture & Markets reported **significant changes** in previously reported figures for vegetable crops. Some changes went as far back as 1985. The changes have taken place because data from the 1992 Census of Agriculture is more reliable and precise than the 'sample-based' data previously utilized. For example, the 1993-1994 edition of New York Agriculture Statistics reports that the 1993 farmgate value of fresh market cauliflower production was $14.5 million dollars. The latest edition of the same publication reports that the figure was $7.56 million dollars--nearly a 50% change. In general, figures for fresh market vegetables changed more than figures for processed vegetables. These developments serve to remind us of the limitations of 'sample-based' data even though it is the only data source available to us.

TABLE I: POTATOES AND VEGETABLES: NEW YORK STATE FARM VALUE OF PRODUCTION, 1989-1994

	1989	1990	1991	1992	1993	1994[1]	Five-Year Average (1990-1994)
	millions of dollars						
Potatoes:							
Long Island	16.8	13.7	14.8	12.7	14.0	14.3	13.90
Upstate	40.9	44.8	45.7	39.3	49.0	61.9	48.14
Subtotal	57.7	58.5	60.5	52.0	63.0	76.2	62.04
Vegetables:							
Fresh Market[2]	173.0	163.9	197.8	157.0	188.9	165.9	174.70
Processing	32.3	36.4	33.0	29.6	41.1	37.1	35.44
Subtotal	205.3	200.3	230.8	186.6	230.0	203	210.14
TOTAL	263.0	258.8	291.3	238.6	293.0	279.2	272.18

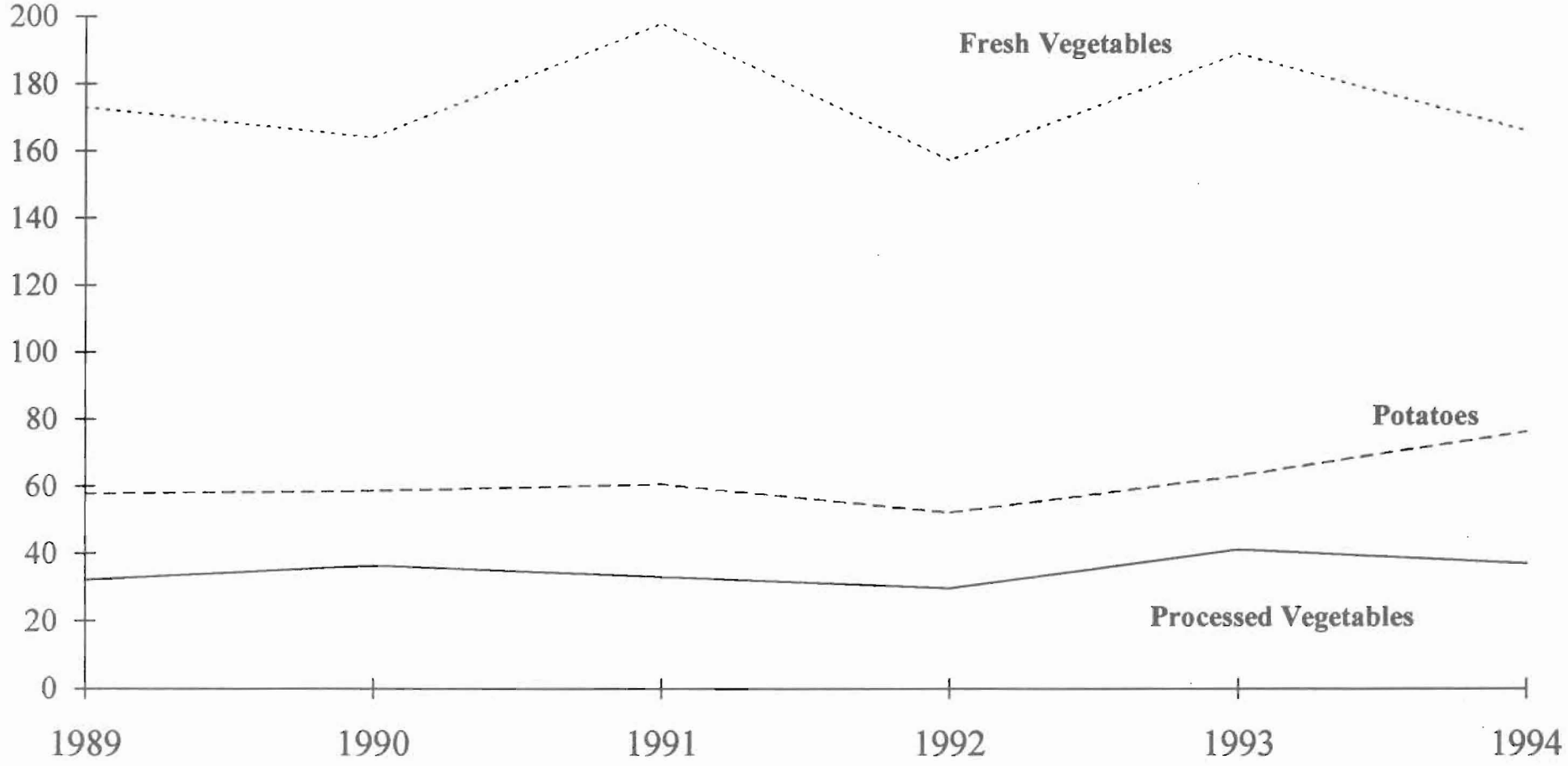
[1] Preliminary.
[2] Fresh Market Vegetable data has changed significanly for the years 1989-1993. This is a result of the 1992 Census of Agriculture
Source: New York Agricultural Statistics 1994-1995, New York State Agriculture and Markets, Division of Statistics, July 1995.

Notwithstanding the above, Table I presents the latest aggregate figures for the state's vegetable industry. First, potato production continued to decline in Long Island while Upstate production increased by 2.2%. The value of production increased in both regions because prices were higher in 1994, particularly for Upstate potatoes where prices increased by 33%. Consequently, the farm value of the state's 1994 potato crop increased by $13.2 million over 1993--a 21% increase. The five-year average is $62 million, of which 77% comes from Upstate production.

Figure I

POTATOES AND VEGETABLES: NEW YORK STATE FARM VALUE OF PRODUCTION, 1989-1994,

(millions of dollars)



Source: New York Agricultural Statistics 1994-1995, New York State Agriculture and Markets, Division of Statistics, July 1995.

All of the figures found on Table I for vegetable values are different--generally **lower--than the** figures reported in last year's Outlook report. Fresh market vegetable value declined by nearly 13% in 1994 and most of the reduction could be attributed to lower yields and/or harvested acreage. Sweet corn and onion production were notable exceptions, since production for these two crops increased. Processed vegetable value also declined by 9.7%, but the 1994 value was still higher than the 5-year average. Figure I illustrates the 6-year trend for the relevant crop values. No clear pattern emerges from the graph, but if the figures were 'deflated', then a slight downward trend would be evident for state potato and vegetable value. The bottom line is that the state's 1994 potato and vegetable production value was $279.2 million, slightly higher than the 5-year average of $272 million.

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

	Production				Crop Value			
	1991	1992	1993	1994	1991	1992	1993	1994
	----------1,000 cwt.----------				----------million dollars----------			
New York:								
L.I.	1,650	1,984	1,643	1,617	14.77	12.69	13.97	14.31
Upstate	5,267	5,824	6,050	6,188	45.56	39.31	49.01	61.88
California	5,390	5,600	4,800	5,600	22.37	43.96	44.88	33.88
Colorado	23,800	22,110	25,270	25,795	47.60	89.55	155.41	91.57
Idaho	122,175	127,050	126,192	138,801	488.70	654.31	586.79	687.06
Maine	18,170	24,300	19,890	18,375	105.39	123.93	142.21	112.09
Michigan	8,840	10,800	17,780	12,180	53.48	69.12	84.82	80.39
Minnesota	17,160	16,080	12,650	17,755	68.64	69.95	71.47	85.22
North Dakota	30,030	27,690	21,090	28,200	118.62	125.99	131.81	128.31
Oregon	22,170	21,075	23,103	27,514	87.81	115.45	132.04	130.74
Pennsylvania	3,500	4,940	4,600	3,780	26.25	33.35	37.49	28.73
Washington	75,435	69,300	88,500	88,920	286.65	346.50	469.05	422.37
Wisconsin	23,275	25,160	22,588	25,740	97.76	123.28	149.08	128.70
Other	14,868	17,612	11,779	20,050	79.60	112.04	117.13	123.55
Total-Fall	371,730	379,525	385,935	420,515	1,543.2	1,959.4	2,185.2	2,128.8

Source: Potatoes, Agricultural Statistics Board, National Agricultural Statistical Service, United States Department of Agriculture. September, 1995.

Table II presents national data for fall potato production. In 1994, the nation produced approximately 162 lbs. per person which represents significantly more than national per capita consumption. New York production is 2% of national production, but nearly 3.6% of national fall potato value. National production increased by nearly 9% in 1994, while state production increased by only 1.5%. Conversely, national production value decreased by 2.6%, while state production value increased by 21%, reflecting the 26.8% increase in state potato prices.

TABLE III: NEW YORK ONION PRODUCTION BY AREA, 1990-1995.

	1990	1991	1992	1993	1994	1995[1]	Five-Yr. Average (1991-95)
	1,000 hundredweight						
Orange*	2,340	1,674	2,090	1,560	1,624	2,016	1,792.8
Orleans-Genesee*	930	608	975	810	806	806	801.0
Oswego*	760	722	660	684	703	558	665.4
Madison*	126	110	184	150	196	189	165.8
Steuben-Yates-Ontario	360	298	396	420	416	372	380.4
Wayne & Other	120	128	87	96	99	85	99.0
TOTAL	4,636	3,540	4,392	3,720	3,844	4,026	3,904.4

* - Includes seed and set onions.
1- October 17, 1995 estimate.
Source: New York Agriculture and Markets, "Vegetables," New York Agricultural Statistics, Division of Statistics, October 17, 1995.

Table III lists the principal onion producing counties in New York. In 1995, state onion production increased by 4.7% to 4.0 million cwt., slightly higher than the 3.9 million 5-year average. Orange county produced 50% of the onion crop and its production increased by 24% (entirely due to a 24% increase in yields) over 1994. Total state production only increased 4.7%.

Table IV presents national figures for storage onion production. In 1994, average prices for state onions were $10.51 per cwt., while the national average price was $9.37. Storage onion prices for this fall in New York have average 75-cents higher than last year. For 1995, New York holds an 8.8% share of national production, while in value terms the state's share was 9.0% (1994). National production translates to nearly 18 lbs. per person and national per capita consumption is just over 17 lbs. However, the national per capita consumption figure includes consumption of spring and summer onions and the storage onion production figure does not reflect a shrink rate between production and consumption. Therefore, some storage onions are exported, but relatively few.

Table V lists the major vegetables, by value of farm production, for New York. Partly a result of the new figures released by New York State Department of Agriculture and Markets, the ranking on the table have been altered. Last year's Outlook report indicated that onions were the number one vegetable crop in the state, but the latest figures indicate that onions have fallen to number three. The value of state potato production represents nearly 28% of total state vegetable production value. Additionally, fresh market cabbage is the number two vegetable crop followed by onions and fresh market sweet corn. The top four represent 66% of the state's total vegetable farm value (this statement is limited to the vegetables for which figures are available--since pumpkin production value

is not available, then it is treated as zero). The fourth column on Table V lists the highest value and year when it occurred. Only fresh market sweet corn had its biggest year in 1994--nearly $31 million dollars. Conversely, 1980 was the highest value year for potatoes and processed green beans. Column five presents the 19-year value of farm production trend --as statistically determined. For example, the value of production of cabbage has increased $1.588 million per year since 1976. Only processed green beans have a negative trend, while six other vegetables have no trend (zero). Overall, state production value of the listed vegetables has increased $5.542 million per year since 1976.

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

	Production				Crop Value			
	1992	1993	1994	1995[1]	1992	1993	1994	1995
	----------1,000 cwt.----------				----------million dollars----------			
New York	4,392	3,720	3,844	4,026	62.0	74.8	40.4	45.0[2]
Colorado	5,460	5,735	6,125	6,290	57.8	102.0	67.1	
Idaho & Malheur Co.	11,712	10,638	12,925	11,968	130.8	120.3	141.8	
Michigan	2,448	2,201	2,308	2,130	23.9	26.9	16.1	
Oregon	1,722	2,436	2,898	2,448	22.8	42.6	29.4	
Washington	3,901	4,655	5,250	5,856	37.8	76.2	53.7	
Other	2,224	1,413	1,959	1,859	19.4	16.4	12.6	
Subtotal	31,859	30,798	35,309	34,577	354.5	459.2	361.1	
California	10,313	13,035	12,400	11,200	82.9	102.3	85.8	
TOTAL	42,172	43,833	47,709	45,777	437.4	561.5	446.9	

[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.

Figures II and III present a graphical illustration of national per capita utilization (consumption) of the major vegetables produced in New York. Fresh market potato consumption has been steady since 1980 as has fresh market cabbage consumption. Total--fresh, frozen, and canned--consumption of sweet corn shows a slight upward trend since 1990. Figure III clearly shows the steady growth of national onion and frozen sweet corn consumption. After experiencing slight declines, both canned and fresh market sweet corn consumption has increased slightly since 1990. Processed snap bean consumption has been fairly steady.

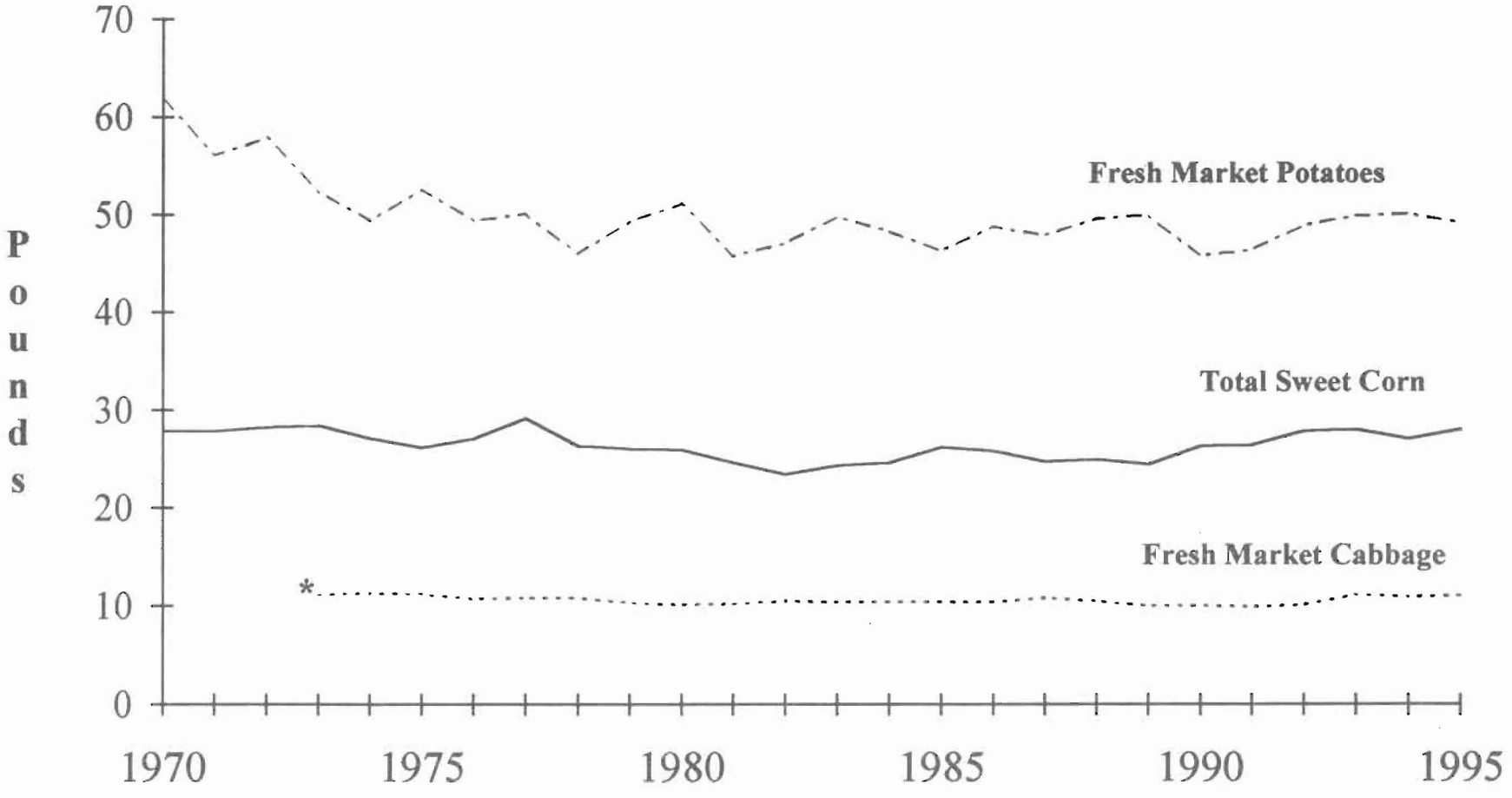
TABLE V: COMMODITY RANKING OF VALUE OF NEW YORK STATE VEGETABLE PRODUCTION IN 1994

Commodity	Value of 1994 Production	1976-1994 Avg. Value	Highest Value In Past 19 Yrs.	19 Yr. Value Trend Per Yr.	Value Share in 1994
	millions of dollars				%
Potatoes	76.190	62.086	(1980) 97.628	zero	27.6
Cabbage	40.188	34.606	(1983) 48.828	1.588	14.5
Onions	40.380	45.635	(1993) 74.834	1.297	13.7
Sweet Corn (fresh)	30.988	20.204	(1994) 30.988	1.011	10.5
Tomatoes	14.760	10.933	(1988) 17.434	.362	5.0
Sweet Corn (processed)	13.475	8.065	(1993) 16.279	0.477	4.6
Green Beans (fresh)	13.572	7.568	(1989) 18.603	0.192	4.6
Strawberries	11.648	8.689	(1993) 30.780	.573	4.0
Green Beans (processed)	10.414	13.620	(1980) 19.134	-(0.335)	3.5
Cauliflower	7.834	7.266	(1993) 14.501	zero	2.7
Green Peas (processed)	7.046	4.304	(1985) 8.564	0.234	2.4
Cucumbers	6.306	5.273	(1992) 9.948	0.258	2.1
Carrots	5.287	4.253	(1992) 7.807	0.203	1.8
Lettuce	3.896	8.365	(1981) 13.412	zero	1.3
Beets	2.630	2.067	(1993) 3.110	zero	0.9
Cabbage (Kraut)	2.436	2.417	(1993) 3.577	zero	0.8
Celery	--	3.215[1]	(1992) 5.441	zero	--
TOTALS	287.082	248.395	(1993) 315.327	5.542	100.00

[1] 1976-1993 Average Value

Source: NY Agricultural Statistics 1994-1995, NY Agriculture and Markets, Division of Statistics, July 1995.

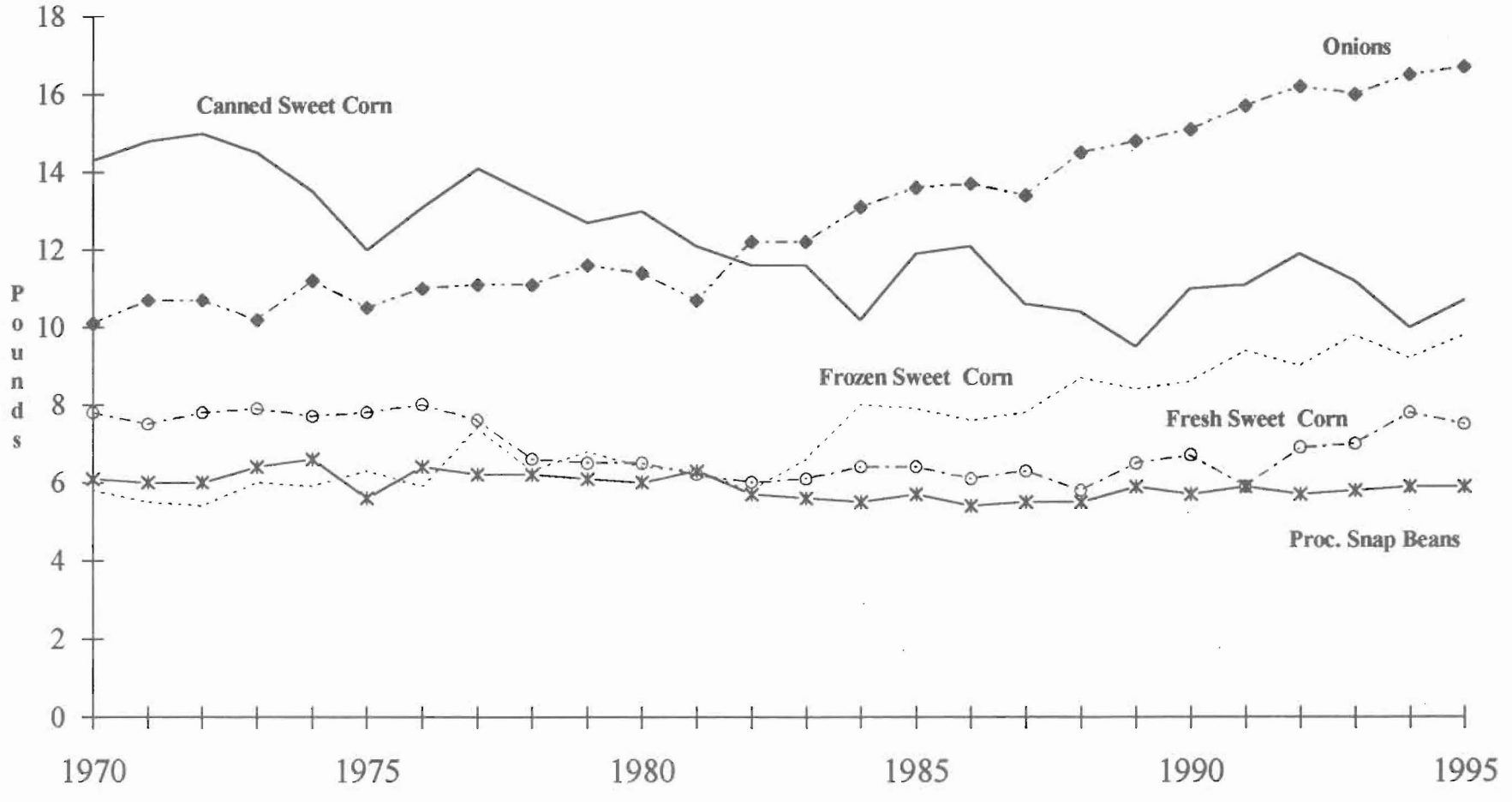
Figure II
U. S. PER CAPITA UTILIZATION OF NEW YORK PRIMARY VEGETABLES, IN POUNDS, 1970-1995



* - Data not available prior to 1993.
Source: Vegetables and Specialties: Situation and Outlook Report, USDA, Economic Research Service, VGS-266, July 1995.

Figure III

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



Source: Vegetables and Specialties: Situation and Outlook Report, USDA, Economic Research Service, VGS-266, July 1995.

--OUTLOOK--

Several important issues loom in the horizon--next year--which could significantly affect the NYS vegetable industry. Also, given the significant changes the NYS Department of Agriculture and Markets revealed in its latest edition of NYS Agriculture Statistics, it is imperative that policy makers feel comfortable with the accuracy and precision of the data which they utilize to arrive at policy prescriptions.

The 1995 Farm Bill--The Freedom to Farm Act--has language that would allow grain farmers to plant any crop they so desire on 'flex' acreage and/or any other acreage they own. Up to now, Farm Bills have included language that restricts grain farmers participating in any federal support and/or subsidy program from planting, say, vegetables. If the Freedom to Farm Act is passed without restrictions on what kinds of crops can be planted on 'program' acreage, then the potential for increased production of vegetables--particularly vegetables for processing--is significant. Not only will there be a price effect, relatively lower prices, but also a potential shift to mid-western sources of supply, leaving some New York producers at a competitive disadvantage.

The second issue applies to federal immigration policy and specifically how such policy affects farm labor markets. There are a number of bills pending before Congress that propose to significantly change federal immigration policy. Among the provisions being discussed are: the appropriation of significant new financial resources to hire more Border Patrol agents and/or Immigration & Naturalization Service (INS) personnel; increasing enforcement of sanctions against employers hiring undocumented workers; instituting a 'guest-worker' program for seasonal agricultural crop producers; establishing a 'tamper-proof' national I.D. card and verification system; and abolishing and/or significantly amending the H-2A program. All of the just mentioned provisions can directly affect New York vegetable producers, either positively or negatively. In addition, indirect affects includes how these provisions can in/decrease the competitive position of New York vegetable producers *vis-a-vis* other producing regions of the country (world). It is imperative that the NYS vegetable industry evaluate and analyze the potential impacts and thereafter articulate their position relative to each of the provisions in the various federal legislation.

Notwithstanding the above, Upstate potato production and value will likely increase even though the threat of disease is still in the horizon. One factor driving the positive outlook for Upstate potato producers is the increased share of western U.S. potato production that will be exported--either to Pacific Basin or Central and South American countries.

Fresh market vegetable production is a function of weather conditions, but given the drought this year, some growers have added irrigation capacity. This outcome has positioned these growers to increase yields and quality--both outcomes will contribute to relatively higher prices. The structural parameters underlying consumer demand for fresh market vegetables are still in place and therefore the relevant question is who will supply increased demand. Since NYS growers have increased the relative quality of fresh market vegetables and developed a 'more consistent delivery' reputation, they are in a relatively better position to capture the increased demand for fresh vegetables. Also, direct market sales have been increasing in volume and therefore growers will continue to receive relatively higher prices because of direct market sales.

The outlook for processing vegetable is strong for this coming year, but the outlook beyond a year is more cloudy because of the potential ramifications of the Freedom to Farm Act.

--SITUATION

The U.S. ornamentals industry continues to grow at a pace surpassing both population and inflation. Though statistics for the various ornamental categories are not as complete as, say, for vegetables, the data available supports the statement with respect to the industry's growth rate. Of all the categories comprising the ornamentals industry, the floriculture crops category is the area where the USDA has the data. Table I lists the wholesale value of sales for the various floriculture crops in 1993 and 1994. The entire category grew by 6.1% and only potted flowering plants declined in value. Bedding plants continued to take a larger share of the entire floriculture crop value--nearly 43% now as compared to less than 30% in 1986. Conversely, foliage plants represented 27% in 1986, but now they only represent 16%. The increased demand for bedding plants has been primarily driven by home owners returning to gardening, particularly as a leisure activity. Also, new attractive hardier varieties have been introduced. The value of foliage plants increased the most between 1993 and 1994--16.8% or $70 million dollars--and most of the increase can be attributed to consumers becoming again interested in indoor foliage, particularly as they may serve to "clean" the air. The industry is just under a $3 billion dollars.

TABLE I: SUMMARY OF U.S. FLORICULTURE CROPS WHOLESALE VALUE OF SALES, 1993 AND 1994 - MILLIONS OF DOLLARS

Category	1993		1994		
	Value $	Percent of Total	Value $	Percent of Total	De/Increase Over 1993 (%)
Cut Flowers	423.9	15.1	440.3	14.8	+3.9
Potted Flowering Plants	683.3	24.3	654.3	22.0	-4.2
Foliage Plants	417.0	14.8	487.1	16.3	+16.8
Bedding Plants	1,170.0	41.6	1,279.4	42.9	+9.4
Cut Greens	116.0	4.1	119.3	4.0	+2.8
Total Value	2,810.3	100.0%	2,980.4	100.0%	+6.1

Source: Floriculture Crops - 1994 Summary, U.S. Department of Agriculture, National Agricultural Statistics Service, Agricultural Statistics Board, April 1995.

Table II lists floriculture crop statistics specific to New York, but in greater detail than what is found in table I. First, it is now clear that last year's statistics on potted flowering plants were accurate and most likely the statistics for prior years may have been skewed. Secondly, the different crops listed in this year's table are different than the listings in prior years: carnations are no longer included, but gladiolus are now included under cut flowers; cyclamen and kalanchoe are not listed under potted flowering plants; and three types of impatiens plus two-types of petunias are now listed under bedding garden plants. Therefore, comparisons to prior year's may require more scrutiny.

TABLE II: COMMERCIAL PRODUCERS, QUANTITIES SOLD, AND WHOLESALE VALUE OF SELECTED FLORICULTURE CROPS, NEW YORK, 1994

	Reporting Producers[1]	Quantity Sold		Wholesale Value
	Number			$1,000
Cut Flowers				
Chrysanthemums				
Standard	11	376,000	blooms	399
Pompon	13	39,000	bunches	41
Gladioli	9	98,000	spikes	39
Roses				
Hybrid Tea	10	11,608,000	blooms	6,756
Sweetheart	8	3,430,000	blooms	1,931
Other Cut Flowers	30	----		1,446
Sub-Total				10,573 (-25.2%)[2]
Potted Flowering Plants				
African Violets	17	1,439,000	pots	1,515
Chrysanthemums	62	1,400,000	pots	2,807
Cyclamen	29	502,000	pots	1,325
Finished Florist Azaleas	40	4,287,000	pots	10,472
Easter Lilies	83	564,000	pots	1,997
Kalanchoe	11	410,000	pots	546
Other Lilies	39	121,000	pots	469
Poinsettias	134	3,147,000	pots	9,422
Other Potted Flowering	76	1,435,000	flats	4,624
Sub-Total				31,180 (+7.00%)[3]
Foliage For Indoor/Patio Use				
Potted Foliage	46		--------	1,326
Foliage Hanging Baskets	62	238,000	baskets	1,104
Sub-Total				2,430 (-25.4%)

Table II (cont.)	Reporting Producers[1]	Quantity Sold		Wholesale Value
	Number			$1000
Bedding Garden Plants				
Geraniums (flats)	52	222,000	flats	1,900
Impatiens (flats)	131	1,184,000	flats	8,288
New Guinea Impatiens (flats)	32	48,000	flats	444
Petunias (flats)	124	469,000	flats	3,269
Other Flowering and Foliar Plants	178	2,309,000	flats	16,556
Vegetable Type Plants	161	532,000	flats	4,017
Hardy Garden Chrysanthemums	132	2,297,000	pots	3,978
Geraniums (cuttings)	167	5,033,000	pots	6,133
Geraniums (seed)	48	3,940,000	pots	3,546
Impatiens	48	364,000	pots	356
New Guinea Impatiens	92	899,000	pots	1,233
Petunias	22	88,000	pots	106
Other Potted and Foliar Plants	123	5,161,000	pots	6,990
Vegetable Plants	60	779,000	pots	726
Flowering Hanging Baskets	182	651,000	baskets	3,984
Sub-Total				61,526 (-5.4%)
Total of Reported Floriculture Crops				**105,709 (-17.2%)**

[1] More than $10,000 in gross sales of all floriculture crops.
[2] Percentage change from 1993 sales.
[3] The value for Other Potted Flowering Plants changed significantly for 1993 from 26,051 to 9,383. This is a result of the 1992 Census of Agriculture.
Source: New York Agricultural Statistics, 1994-1995, NYS Dept. of Agriculture & Markets, Division of Statistics, in cooperation with USDA, National Agriculture Statistics Service, July 1995.

Nonetheless, the state's floriculture industry declined by 17.2% in 1994 and most of the decline was in the potted flowering plants category. However, signs in 1995 indicate that the industry's crop value increased over 1994, particularly in potted flowering plants and bedding plants.

--OUTLOOK

It is difficult to forecast the future of the floriculture crops industry in New York. However, producers are becoming larger in scale and some of the larger producers are in the process of installing the latest in technological advances. Both of these developments will render the industry more competitive and therefore increase the industry's position in the national market.

Since very little information is available with respect to the other categories of ornamentals--nursery crops, turf grass, golf courses, etc--it is difficult to offer any judgements.

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