December 1993 A.E. Ext. 93-17

New York Economic Handbook 1994

AGRICULTURAL SITUATION AND OUTLOOK

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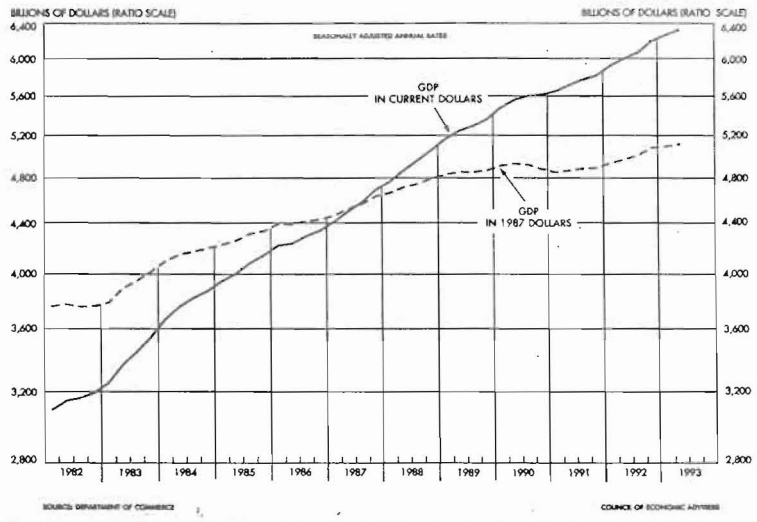
This publication contains information pertaining to the general economic situation and New York agriculture. It is prepared primarily for use of professional agricultural workers in New York State. USDA reports provide current reference material pertaining to the nation's agricultural situation.

"Current Economic Situation" is a monthly release that carries the latest figures for selected economic indicators and highlights current developments. This release is a supplement to the Economic Handbook and is available to anyone. To request being added to the mailing list, write to the Department of Agricultural, Resource, and Managerial Economics, Cornell University, 452 Warren Hall, Ithaca, New York 14853-7801.

NATIONAL OUTPUT, INCOME AND SPENDING
Compontents of Gross Domestic Product



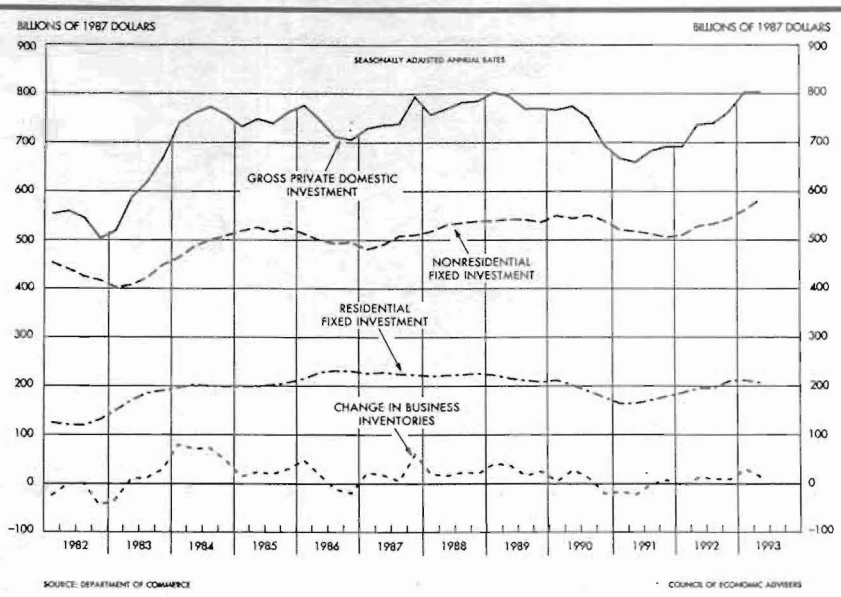
After a strong fourth quarter 1992, growth in Gross Domestic Product dropped to 0.8% and 1.9%, respectively, in the first two quarters of 1993. Growth of 2.8% in the third quarter and the prospect of 4% growth in the fourth quarter should bring growth for the year near 2.5%. Key factors in the moderate growth rate were: 1) reduced withholding of income taxes in 1992 which led to reduced spending in early 1993, 2) reduced defense spending, 3) recessions in overseas industrialized countries which hurt U.S. exports, 4) floods in the upper and middle Mississippi and Missouri River basins, and 5) in the near term, the deficit reduction action of the Federal government.

GDP growth in 1994 is expected to be slightly higher than in 1993, likely near 3%. Lower interest rates are having an effect on home construction and on consumer willingness to increase installment credit. Business inventories in late 1993 are relatively low; hence, new employees may be needed. If, or when, other industrialized countries dig out of recession, that will add to potential for growth.

	Gross Domestic Product	Personal Consumption Expenditures	Gross Private Domestic Investment	Government Purchases of Goods and Services	Net Exports Goods and Services
			billions of current dollars		
1983	3,405	2,258	547	652	-51
1984	3,775	2,460	719	701	-103
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	5,723	3,906	737	1,099	-20
1992	6,039	4,140	797	1,132	-30
1993[a]	6,328	4,360	874	1,159	-55

[a] Annualized rate for 2nd quarter, 1993.

GROSS PRIVATE DOMESTIC INVESTMENT
(Constant dollars)



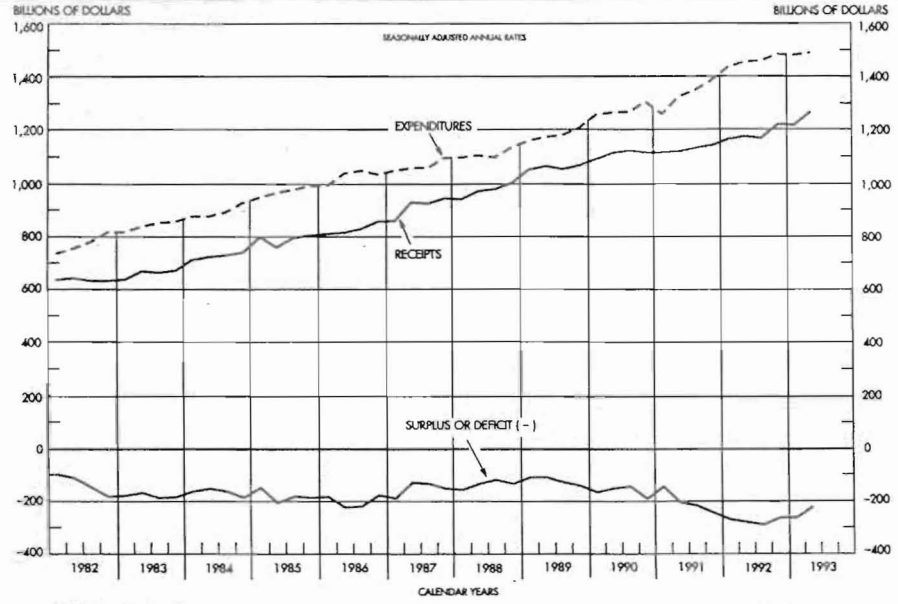
Gross private domestic investment in 1993 exceeded its previous high of 1989. A big part of the increase came from nonresidential fixed investment, primarily producer's durable equipment (also see table on page 6). While business and government new construction showed little increase, private residential construction moved substantially higher in 1992 and 1993. New housing units and housing permits continue to benefit from the lowest interest rates in over 20 years. Consistent with the continuing downsizing of many large business firms, new business construction has been down. At some point, however, business plant and equipment purchases will turn upward, but whether that will occur in 1994 is not clear.

NEW CONSTRUCTION 1983-93

	Total New Construct.	Private Residential	Private Comm./ Industrial	Federal, State & Local	New Private Housing	Private Housing Permits	New Private Homes Sold
	Billions of Dollars				*1,000 Units*		
1983	295	126	58	64	1,703	1,605	623
1984	349	154	74	70	1,750	1,682	639
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	403	158	77	110	1,014	949	509
1992	436	188	66	119	1,200	1,095	610
1993[a]	459	201	65	126	1,266	1,173	633

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

FEDERAL FINANCE
The Federal Deficit and Debt

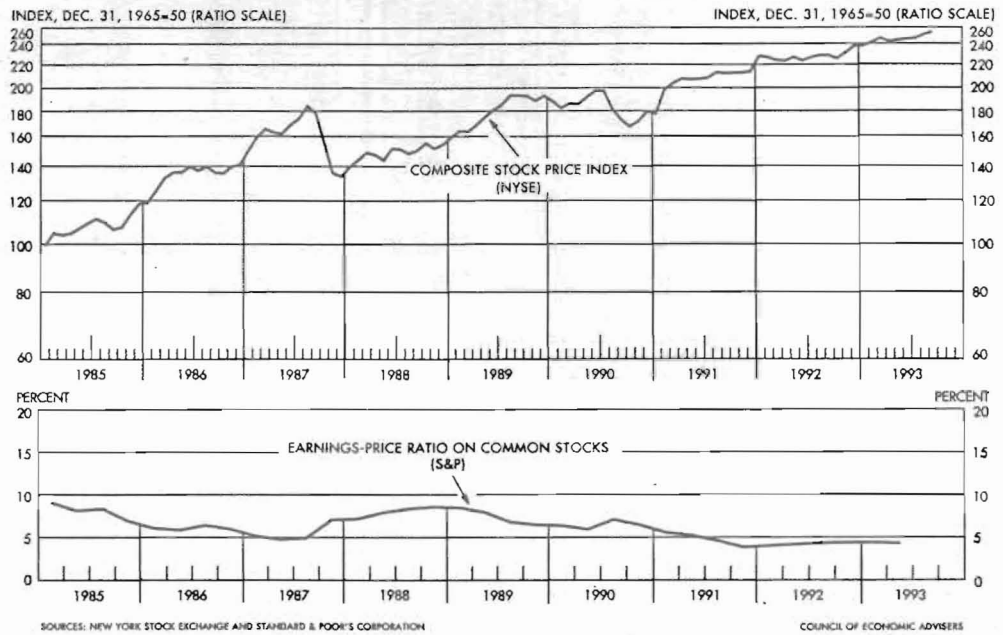


The big news in 1993 was the passage of the Omnibus Budget Reduction Act of 1993. In large part as a result of that Act, the 1993 budget deficit came in at $255 billion, down from the record $290 billion in 1992. While reducing the deficit dampens economic growth in the short run, longer run effects should increase national saving, encourage new investment and add to growth. The 1994 deficit is expected to be about the same as 1993, and the Congressional Budget Office estimates that the budget deficit will be about $200 billion in the years from 1995-1998. Given the massive Federal debt, now about $4.3 trillion, any increase in the general level of interest rates will have important implications to future budget deficits. Note that a 1% increase in interest on the whole debt would be $43 billion.

Fiscal Year	Government Receipts	Government Outlays	Government 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	3,599
1992	1,091	1,381	-290	4,003
1993[a]	1,153	1,408	-255	4,334
1994[b]	1,244	1,497	-253	4,677

[a] Wall Street Journal, October 29, 1993.
[b] Congressional Budget Office estimate.

COMMON STOCK PRICES AND YIELDS
NYSE, 1985-1993

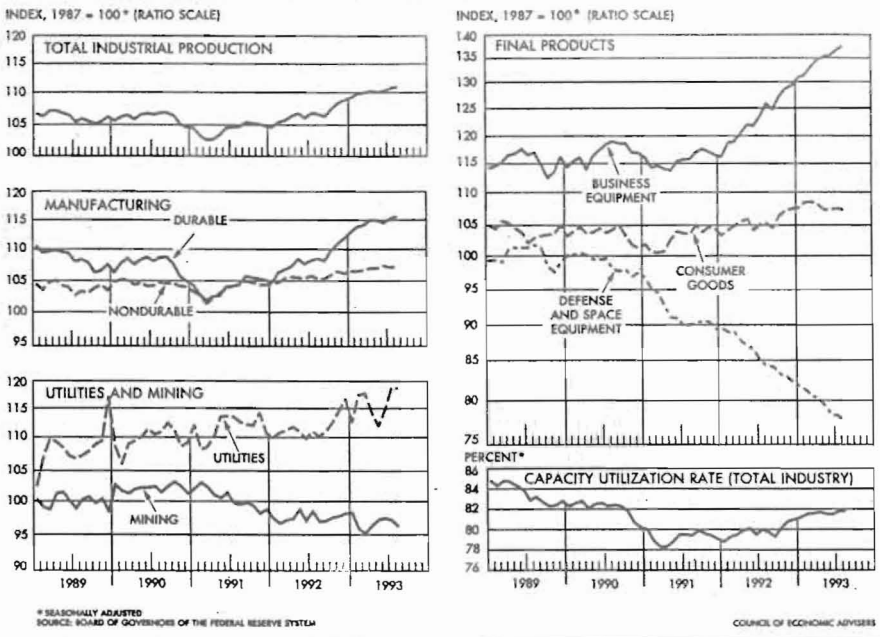


During 1993 stock prices continued to push new highs for much of the year. Lower interest rates were a factor as money moved out of lower return bonds and fixed income securities into the stock market. While corporate profits helped justify the stock market performance, interest rates and the potential for increasing growth in the economy may have been more important in driving the market. The PE ratio in 1993 (reciprocal of the earnings-price ratio) remained between 20 and 25, a relatively high ratio by historical standards. Corporate profits, and particularly, after tax profits, were also at historical highs in 1993.

CORPORATE PROFITS BEFORE AND AFTER TAXES, 1984-1993

	Profits BEFORE Taxes	Profits AFTER Taxes
	- - - - - - *billions* of dollars - - - - - -	
1984	241	146
1985	225	129
1986	218	111
1987	288	161
1988	348	211
1989	343	202
1990	366	227
1991	362	233
1992	395	249
1993, 1st Q	420	259
1993, 2nd Q	446	272

INDUSTRIAL PRODUCTION AND BUSINESS ACTIVITY



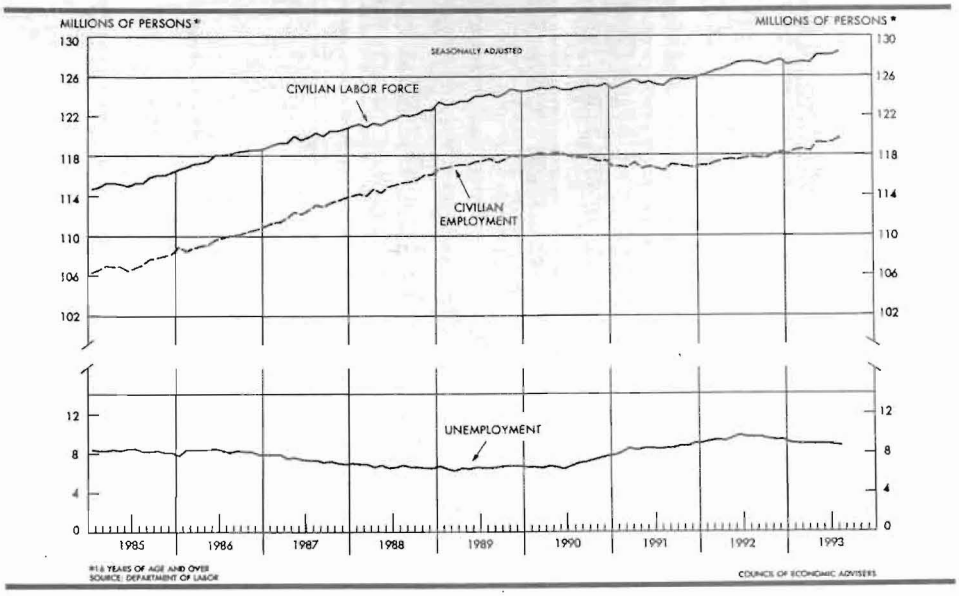
The Index of Industrial Production continued upward in 1993 with strength coming from manufacturing, especially industrial machinery, computer equipment, and electrical equipment. With emphasis on Federal budget reduction, however, defense and space equipment purchases moved sharply lower. Other weak spots were apparel manufacturing and fabricated metals, though fabricated metals now appear on the upswing. Capacity utilization rose slightly during the year but remained under 82%, suggesting adequate production capacity if consumer demand should increase.

INDUSTRIAL PRODUCTION, SELECTED MANUFACTURES, 1983-93

	Fabricated Metals	Industrial Machinery & Computer Equipment	Electrical Machinery	Motor Vehicles and Parts	Apparel Products	Chemicals & Products	Food
				1987 = 100			
1983	85.5	64.3	80.3	74.5	93.8	87.5	90.1
1984	93.3	80.8	94.1	90.6	95.7	91.4	92.1
1985	94.5	86.8	93.1	99	92.6	91.4	94.9
1986	93.8	90.3	94.3	98.5	96.3	94.6	97.4
1987	100	100	100	100	100	100	100
1988	104.2	113	108.5	105.7	98.1	106	101.5
1989	102.8	117.3	111	106.9	95	109	102.5
1990	99.5	117.6	111.4	101	92.2	111.8	103.7
1991	94.9	113.7	112.8	94.3	91.9	111.3	105.3
1992	96.7	124.8	119.8	104.8	92.3	115	106
1993[a]	100.9	147.8	130.6	112.7	91	118.9	107.4

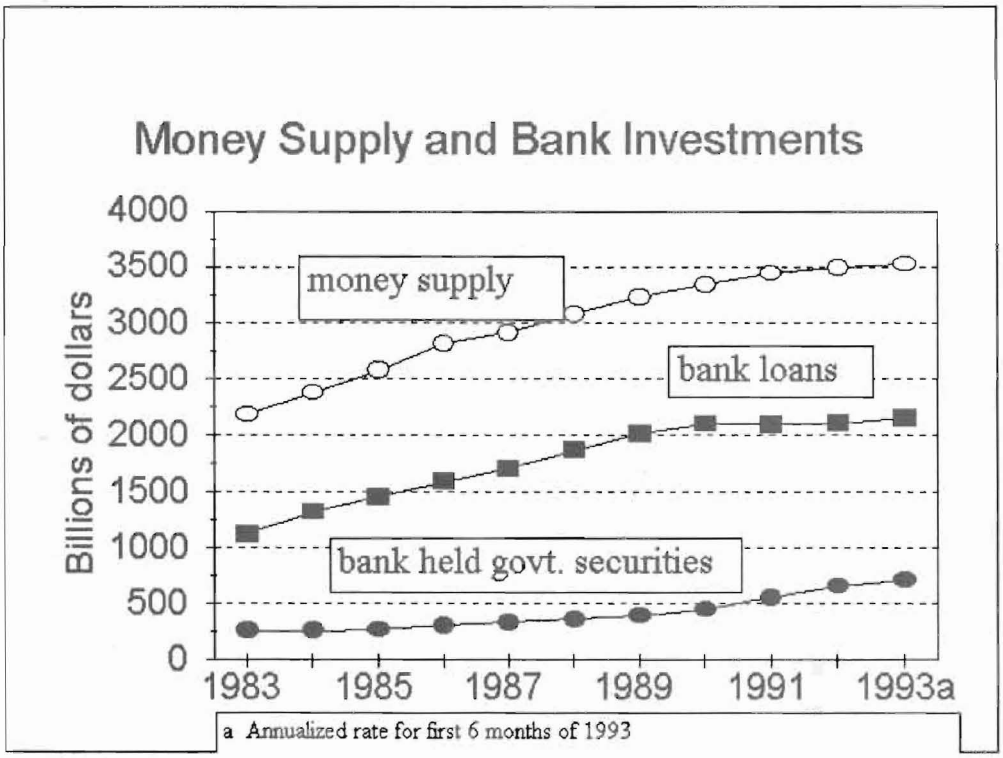
[a] Annualized rate for June, July and August

EMPLOYMENT AND THE LABOR FORCE



Civilian employment grew more rapidly in 1993 and is now approaching 120 million people. Unemployment decreased from 7.1% in January to 6.7% by late summer but then increased to 6.8% in October. A number of large firms continued to downsize by laying off employees. Also, increasing numbers of jobs are being filled by temporary employees, "temps", whose benefits are less costly than full time employees. A large number of the unemployed, some 1.75 million, have been unemployed for six months or more; yet, it's also true that net jobs are being added to the economy.

In the past two years the money supply, M2, has grown more slowly helping to slow the rate of inflation. Also interesting is the change in the growth rate of bank investments, increasingly toward government securities rather than loans. A part of the change is due to competition for loans from non regulated financial and nonfinancial institutions.



CONSUMER AND PRODUCER PRICES

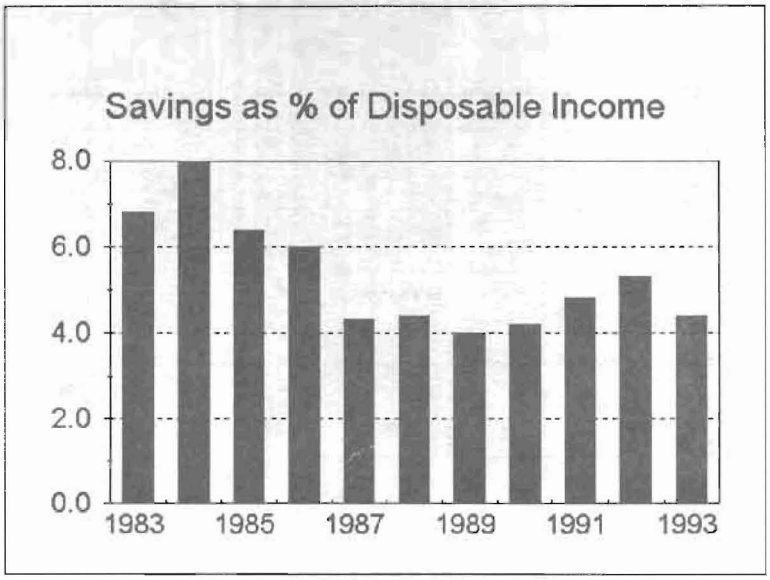
Year	Consumer Price Index		Producer Price Index		
	All Items	Food	All Finished Goods	All Intermed. Goods	All Crude Materials
	(1982-84 = 100)			*(1982 = 100)*	
1983	99.6	99.4	101.6	100.6	101.3
1984	103.9	103.2	103.7	103.1	103.5
1985	107.6	105.6	104.7	102.7	95.8
1986	109.6	109.0	103.2	99.1	87.7
1987	113.6	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	144.3	140.5	124.5	115.4	102.0

Source: Department of Commerce; Council of Economic Advisers.

After increasing 3% in 1992, the CPI appears headed toward a 2.8-2.9% increase in 1993. Since 1990 food prices have continued to rise slower than the overall index. Prices of crude materials and intermediate goods have been relatively stable, and the increase in producer prices for all finished goods has been slower than for all items in the CPI.

Major components of the CPI are shown below with their weights in the index. Medical care costs continue to be one of the categories with the most rapid rate of increase, but even that rate of increase is down from 7% in 1992. The figures are encouraging in terms of possible further reduction in the rate of inflation in 1994.

Component	December 1992 Weights (percent)	August 1993 Price Index (1982-84=100)	% Change from August 1992 Price Index (percent)
Housing	41	141.6	2.7
Transportation	17	130.3	2.7
Food	16	141.0	2.0
Apparel	6	134.1	1.3
Medical Care	7	202.9	5.8
All Other	13		
Total	100	144.8	2.8



The savings rate increased in 1990 and 1991, but it has fallen back to near 4% in 1993. This is low by historical standards, though consistent with the period of 1987-1990. Total installment credit is expected to be up substantially in 1993 as consumers began to increase purchases of durables with installment loans. Auto loans will be up in 1993 for the first time since 1987. Yet, both auto loans and total installment credit remain relatively low as a proportion of personal consumption expenditures.

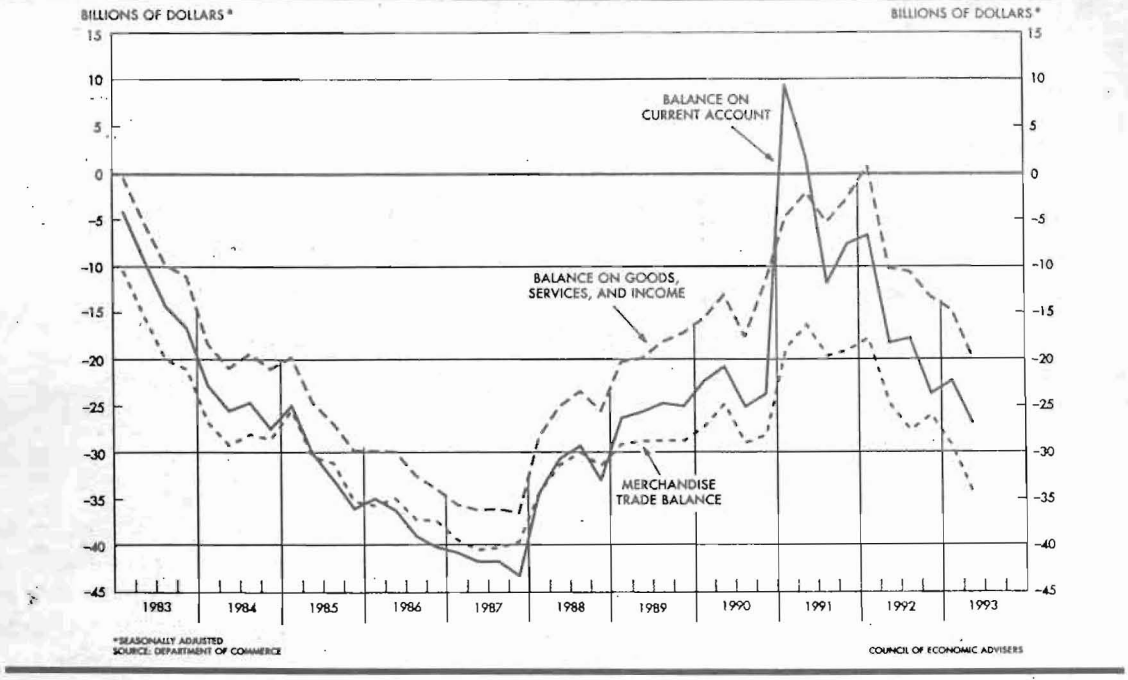
CONSUMER INSTALLMENT CREDIT

	Personal Consumption Expenditures[1]	Total Installment Credit Outstanding[2]	Auto Loans	Auto Loans as Percent of Total Installment Credit	Total Installment Credit as Percent of Personal Consumption Expenditures
	billions			*percent*	
December 1984	$2460	$443	$174	39	18.0
December 1985	2667	518	210	41	19.4
December 1986	2851	572	248	43	20.1
December 1987	3052	609	266	44	20.0
December 1988	3296	663	285	43	20.1
December 1989	3523	724	293	40	20.6
December 1990	3761	739	285	39	19.7
December 1991	3906	734	261	36	18.8
December 1992	4140	741	260	35	17.9
December 1993[a]	4450	770	268	35	17.3

[a] Forecast
[1] Annual totals.
[2] Not including credit secured by real estate.

AN INTERNATIONAL VIEW

U.S. Trade Deficit, Quarterly Data, 1983-1993



The improvements in reducing the trade deficit from 1988-1991 have ended, and since 1991 the trade deficit has again been increasing. The major reason is the recession in other industrialized countries who have reduced imports of U.S. products. As noted below, the Index of Industrial Production in Japan, France, Germany and Italy has decreased from 1991 to 1993. Even in Canada and the United Kingdom where it has increased the last two years, the index is barely ahead of its 1987 level. Until the economies pick up in Europe and Japan there is little hope for substantially reducing the negative trade balances of the U.S. Figures on net exports of the U.S. are shown on page 2.

INDUSTRIAL PRODUCTION, MAJOR INDUSTRIALIZED COUNTRIES, 1983-93

Period	United States	Canada	Japan	France	Germany	Italy	United Kingdom
	Index of Industrial production (1987 = 100; seasonally adjusted)						
1983	84.9	81.2	85.5	96.5	90.9	88.9	89.6
1984	92.8	91.0	93.4	97.1	93.5	91.8	89.7
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	109.3	104.6	103.9	105.9	103.6
1989	106.0	105.2	115.9	108.8	108.8	109.2	104.0
1990	106.0	101.8	121.4	110.9	114.1	109.4	103.4
1991	104.1	98.1	123.7	111.2	117.4	107.1	100.4
1992	106.5	98.5	116.5	110.0	116.0	106.5	100.1
1993[a]	110.1	102.2	113.2	106.2	106.9	103.6	101.7

[a] For January-June period only.

NUMBER OF FARMS, FARM GROSS CASH INCOME AND FARM ASSETS, UNITED STATES, 1987 AND 1991

Item	Units	Gross cash income 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
				1987				
Number of Farms	Thou.	10	19	59	212	316	235	1,361
Gross Cash income	Bil.	$42.0	$15.2	$24.2	$40.2	$25.6	$8.5	$9.5
NCI[1]	Bil.	15.3	5.3	9.3	15.5	8.7	2.4	-0.7
NCI/Farm	Thou.	1,492	282	157	73	27	10	-0.5
Farm Assets	Bil.	45.2	33.9	92.6	168.6	142	82.9	207.5
Farm Debt	Bil.	12.9	10.7	17.8	35.3	26.8	12	29
Assets/Farm	Thou.	4,407	1,800	1,558	794	449	353	152
				1991				
Number of Farms	Thou.	16	26	69	215	309	240	1,229
Gross Cash Income	Bil.	$59.1	$19.4	$25.9	$37.3	$23.9	$8.3	$9.3
NCI[1]	Bil.	19.6	6.5	9.1	13	7.6	2.2	-0.5
NCI/Farm	Thou.	1,200	253	132	61	25	9	-0.4
Farm Assets	Bil.	63	57.9	90.7	173.9	159.2	83.9	213.2
Farm Debt	Bil.	15.7	13.5	18.1	32.3	24.6	10.4	24.2
Assets/Farm	Thou.	3,864	2,244	1,306	810	514	350	173

[1] NCI is net cash income

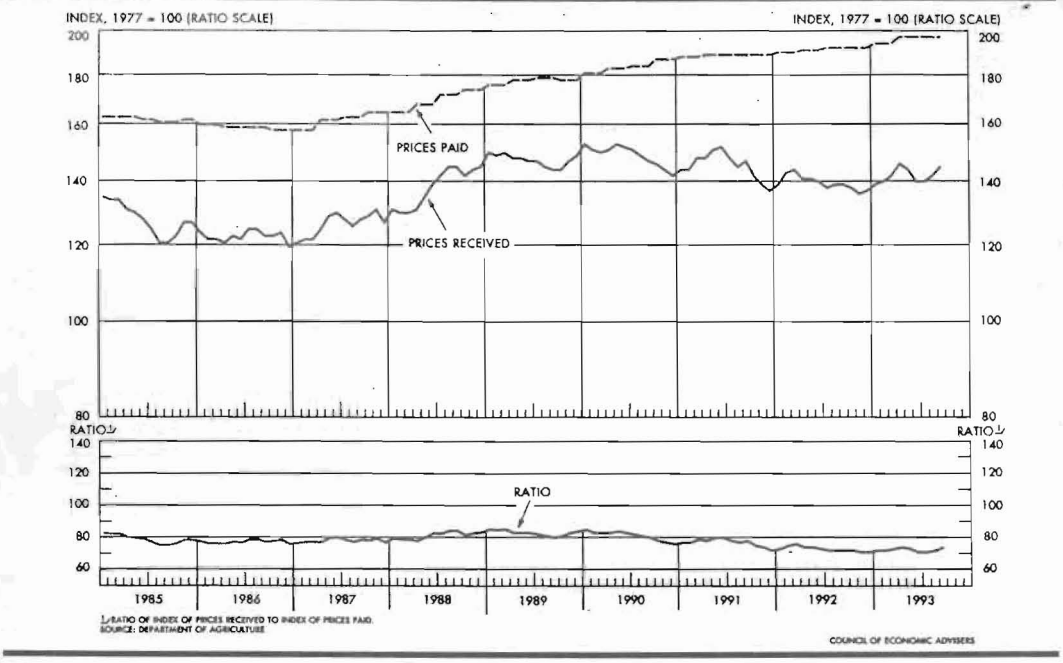
Source: *Economic Indicators of the Farm Sector, National Financial Summary, 1991*, ERS, USDA

One way of looking at changes in farm structure is to compare characteristics for different size classes. As shown above, structural changes in U. S. agriculture continue along trend lines of the past as shown by 1987 and 1991 comparisons. More farms are being added in the farm size categories over $250,000 gross farm income per farm while farm numbers have fallen in the classes with less than $100,000 gross farm income per farm. Note that a higher proportion of aggregate gross cash income, that is, more total sales of product, came from farms with over $500,000 gross cash income per farm in 1991 than in 1987. Similarly, while total farm assets increased in almost every gross cash income size group, larger increases in assets occurred from 1987 to 1991 in the half million dollar, and up, classes.

Aggregate outstanding farm debt also shifted slightly toward the larger farm size classes from 1987 to 1991. That is, a larger proportion of the total farm debt was associated with larger farm size classes. Less of the total farm debt as well as fewer farm numbers were associated with the size classes under $250,000 gross cash farm income per farm.

Net cash income per farm was smaller for all size classes in 1991 than in 1987. The reason is that profit margins of farms were lower in 1991.

PRICES RECEIVED AND PAID BY FARMERS



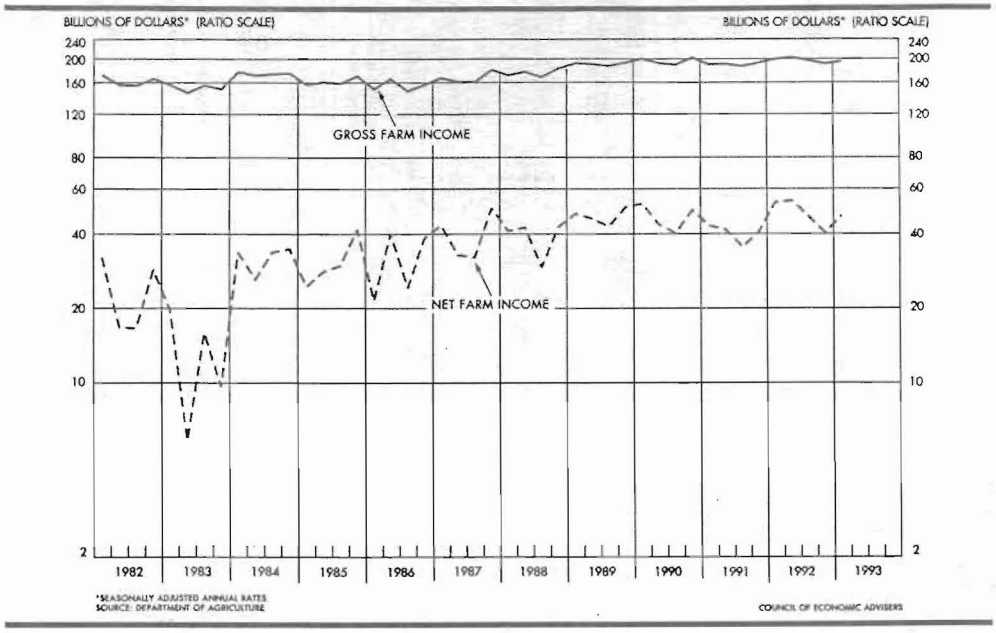
Prices received by farmers fell in 1991 and 1992 but turned up somewhat in 1993. The improvement, however, was little more than increases in prices paid; so the ratio of prices received to prices paid remained at or near the lowest ratio in the past 11 years. Given the substantially reduced 1993 production of corn, soybeans, and to a lesser extent, other feed grains, crop prices may be enough stronger during late fall and winter to raise the ratio above 73. Certainly for the 1993-94 crop year, corn, feed grain and soybean prices should be substantially above 1992-93 levels.

Expectations are that beef production will be up 3-4 percent in 1994 leading to lower prices. While pork production will likely be lower, price increases will be moderated by competition from beef and poultry. Broilers and turkey prices are expected to be lower. Hence, for at least the first half of 1994, if not for the whole year, livestock prices are likely to be a bit weaker than in 1993.

	Prices Received				
Year	Crops	Livestock	All Commodities	Prices Paid	Ratio
1983	128	141	135	161	84
1984	138	146	142	164	87
1985	120	136	128	162	79
1986	107	138	123	159	77
1987	106	146	127	162	78
1988	126	150	138	170	81
1989	134	160	147	178	83
1990	127	170	149	184	81
1991	129	161	145	189	77
1992	121	157	140	191	73
1993[a]	123	162	143	195	73

[a] Forecast.

FARM INCOME AND EXPENSES



Given higher prices in 1993, U.S. gross farm income is expected to be as high or higher than in 1992. Net farm income is also expected to match that of 1992, the highest current dollar income of the past eleven years. Farm prices and incomes are affected strongly by international markets; but given the reduced U.S. stocks of feed grains, grain prices are headed higher in 1994. Also, worldwide and U.S. weather patterns could play a significant role in both prices and incomes in 1994.

Due to lower milk prices and drought in several areas of the state, New York farm income is expected to be lower in 1993 by perhaps 3%. With increased milk production at slightly lower prices in 1994 and a more normal weather pattern, New York net farm income in 1994 should be up slightly over 1993.

	United States			
Year	Gross Farm Income	Production Expenses	Net Farm Income	New York Net Farm Income
	- - - *billions of dollars* - - -			*millions* of dollars
1983	154	140	14	274
1984	168	142	26	408
1985	161	132	29	522
1986	156	125	31	532
1987	168	129	40	641
1988	176	137	39	533
1989	191	144	47	682
1990	196	150	46	643
1991	190	150	40	543
1992[a]	197	149	48	622
1993[b]	198	150	48	605

[a] Preliminary. [b] Forecast.

Source: Agricultural Outlook, ERS, USDA, October 1993, and NY Agricultural Statistics Service.

PRODUCTION, CARRYOVER STOCKS AND PRICES, WHEAT AND CORN, U.S., 1985-93

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*	*$*	*million bushels*		*percent*	*$*
1985-86	2425	1905	97	3.08	8877	4040	62	2.23
1986-87	2091	1821	83	2.42	8226	4882	66	1.50
1987-88	2108	1261	47	2.57	7131	4259	56	1.94
1988-89	1812	702	29	3.72	4929	1930	27	2.54
1989-90	2037	536	24	3.72	7526	1344	17	2.36
1990-91	2736	866	35	2.61	7934	1521	20	2.28
1991-92	1981	472	20	3.00	7475	1100	14	2.37
1992-93[a]	2459	529	21	3.24	9479	2113	25	2.07
1993-94[b]	2422	682	29	3.00	6503	881	11	2.55

[a] Preliminary [b] Forecast

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

Carryover stocks of wheat in the U.S. rose to 29% in 1993; and, while stocks are still well below levels of the mid 80's, prices are likely to be below last year, about $3.00 for the 1993-94 crop year. Corn stocks, on the other hand, were greatly reduced from the Midwest floods in the summer of 1993. Ending stocks next summer are estimated below 1 billion bushels, at 11% of annual use, a lower level than in 1983-84 when prices averaged $3.21. USDA estimates corn prices in 1993-94 at $2.35-$2.75, but don't be surprised if prices average higher than that, given the low level of world stocks. Similarly, soybean ending stocks for next summer are estimated lower than in 1983-84 when prices averaged $7.83. USDA's estimate for 1993-94 is $6.00-$7.00. Southern Hemisphere grain crops, harvested during our winter months, will likely affect U.S. grain prices in winter and spring months. U.S. farmer planting intentions will be closely watched next spring. And, any weather problems next summer will increase the volatility of corn and soybean prices.

WORLD PRODUCTION, USE AND STOCKS OF WHEAT AND CORN, 1983-93

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*
1983-84	484	469	104	147	31	348	411	61	66	16
1984-85	509	489	106	166	34	458	434	67	90	21
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[a]	561	548	122	141	26	529	507	68	101	20
1993-94[b]	559	562	113	139	25	455	493	62	64	13

[a] Preliminary [b] Forecast

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

FARM PROGRAMS AND PRICE SUPPORTS

United States, 1987-88 to 1993-94

Year	Target Price	Effective Loan Rate	Market Price	Deficiency Payment	Setaside Requirement
		- - - Dollars Per Bushel - - -			*Percent*
Wheat:					
1987-88	4.38	2.28	2.57	1.81	27.5
1988-89	4.23	2.21	3.72	.69	27.5
1989-90	4.10	2.06	3.72	.32	10
1990-91	4.00	1.95	2.61	1.28	5
1991-92	4.00	2.04	3.00	1.35	15
1992-93	4.00	2.21	3.24	.81	5
1993-94	4.00	2.45	2.90[a]	1.05	0
Corn:					
1987-88	3.03	1.82	1.94	1.09	20
1988-89	2.93	1.77	2.54	.36	20
1989-90	2.84	1.65	2.36	.58	10
1990-91	2.75	1.57	2.28	.53	10
1991-92	2.75	1.62	2.37	.41	7.5
1992-93	2.75	1.72	2.07	.73	5
1993-94	2.75	1.72	2.40[a]	.72	10

[a] Forecast.

Source: Agricultural Outlook, ERS, USDA, October 1993.

Farm programs and price supports have been little changed since passage of the Food, Agriculture, Conservation and Trade Act of 1990. There is little likelihood of change through 1995 when the legislation expires. Without major problems of large carryover stocks, there is no incentive to tamper with the program. Setasides in 1994 will be minimal, and efforts will continue to keep government payments at relatively low levels. Some major disaster funding in 1993 went to Midwest farmers who suffered losses in the floods, but final estimates are not available. Some analysts now believe the 1995 "Farm Bill" will largely follow the direction of the 1990 legislation with but minor modifications.

As noted below, agriculture continues to contribute toward reducing the U.S. Balance of Trade deficit. While the 1993 agricultural trade balance is expected to be slightly less than in 1992, it will still represent the fourth largest positive balance of trade in the past eight years.

U.S. AGRICULTURAL TRADE BALANCE, 1986-93

	Fiscal year							
	1986	1987	1988	1989	1990	1991	1992	1993[f]
				- - - - billion dollars - - - -				
Exports	26.31	27.88	35.32	39.59	40.22	37.61	42.42	42.5
Imports	20.88	20.65	21.01	21.48	22.56	22.59	24.32	25.0
U.S. Agricultural Trade Balance	5.43	7.23	14.3	18.11	17.66	15.02	18.09	17.5

[f] 1993 is forecast

Source: *Agricultural Outlook*, ERS, USDA, October 1993.

OUTLOOK: SUMMARY AND PERSPECTIVE

The U.S. economy as measured by gross domestic product has grown slowly and in spurts and starts the past two years. Several factors had a negative impact on growth in 1993. The summer floods in the Midwest were one. Another was the reduced withholding of Federal income taxes in 1992. That drained funds from the economy in the spring of 1993 when taxpayers had to cough up the money at tax time. Reduced government defense spending in 1993 also hurt economic growth. Over the past two years inflation has remained around the 3% mark. Decreases in both real and nominal interest rates have both lowered rates to borrowers and returns to investors and retirees. Large businesses have been downsizing and laying off workers who have typically had difficulty in finding new jobs; and, when they have found jobs, the jobs were often at lower wages than before. Still, the unemployment rate has trended slowly downward from over 7% to slightly under.

The U.S. has continued to run a large merchandise trade deficit as imports continue to exceed exports. That deficit has tended to restrain price increases for domestic goods, but it has also added jobs overseas. Economies of other major industrialized countries continue either in recession or are only producing at levels of 5 or 6 years ago. This, too, exacerbates the U.S. trade deficit because those countries tend to cut back on purchases of U.S. goods. Recent trends in the Dollar/Yen exchange rate have raised prices on Japanese produced goods and have created an opportunity for expanding U.S. production of competing goods.

By the last half of 1993, however, the economy was flashing some positive signals. New housing sales and construction were up. Automobile and light truck sales were running 8% above year earlier. Machine tools and business durables were strong; and, while business investment in new plant and equipment was still in a three year downtrend, turnaround may come in 1994. The bad news for the Northeast is that the region has been lagging the rest of the country. *U.S. News and World Report* on November 8, 1993, ranked the 50 state economies on such factors as income growth rate, employment/unemployment, new business growth, and other criteria. In the bottom eleven were nine Middle Atlantic and Northeast states: Connecticut, New York, Maine, Maryland, New Jersey, Pennsylvania, Massachusetts, Virginia and Vermont.

Given my interpretation of preceding pages, my forecast for 1994 is as follows:

- **Gross domestic product will grow by 3%**. After a 2.4-2.5% estimated growth rate in 1993, economic growth will pick up on the strength of consumer spending, an expanding work force, continued strong sales of machine tools and durables and relatively low interest rates. Also, business inventories are low relative to sales suggesting possible growth in employment to rebuild inventories. Lower Federal deficits/defense spending and a negative trade balance will continue to restrain growth.

- **Inflation will remain in the 2.9-3.0% range**. While increased growth is in prospect, the economy has considerable excess capacity. Rising medical costs, a major contributor to inflation the past few years, seem to be slowing. The Fed will be watching for any signs of inflation and will act to keep control.

- **Interest rates will rise slightly**--short term by 1/2 percentage point, perhaps more, and longer term by about 1/4 percentage point. Monetary policy and a relatively stable inflation rate will push toward a flattening of the yield curve, i.e., short term rates will rise more than long term rates.

- **The unemployment rate will decrease to 6.5-6.7%** by the end of 1994. The economy will add jobs, but improvement in the unemployment rate will be slow, consistent with a moderate 3% growth rate.

- **U.S. net farm income will increase perhaps 5% or more** in 1994 from 1993 levels. Gross farm income will increase due, in part, to higher prices for corn, soybeans, feed grains and inventory effects. Higher feed prices will speed adjustment in the livestock sector which by late 1994 or 1995 should also experience price and income improvement.

United States consumers spent over $504 billion for foods originating on domestic farms in 1992 (Table 1). About 63 percent of those expenditures were made in retail grocery stores for food consumed at home. The remaining 37 percent represents the retail value of food served by public eating places, hospitals, schools and other institutions.

Americans spent 11.4 percent of their disposable income on food in 1992. This percentage has declined continually since these statistics were first tracked in the early 1900s and is the lowest ratio in the world. This percentage is considered an indication of the efficiency of the U.S. food marketing system. Although food prices generally increase each year due to inflation, the relative cost of food has continually declined.

TABLE 1
Food Expenditures by Families and Individuals As a Share of Disposable Personal Income

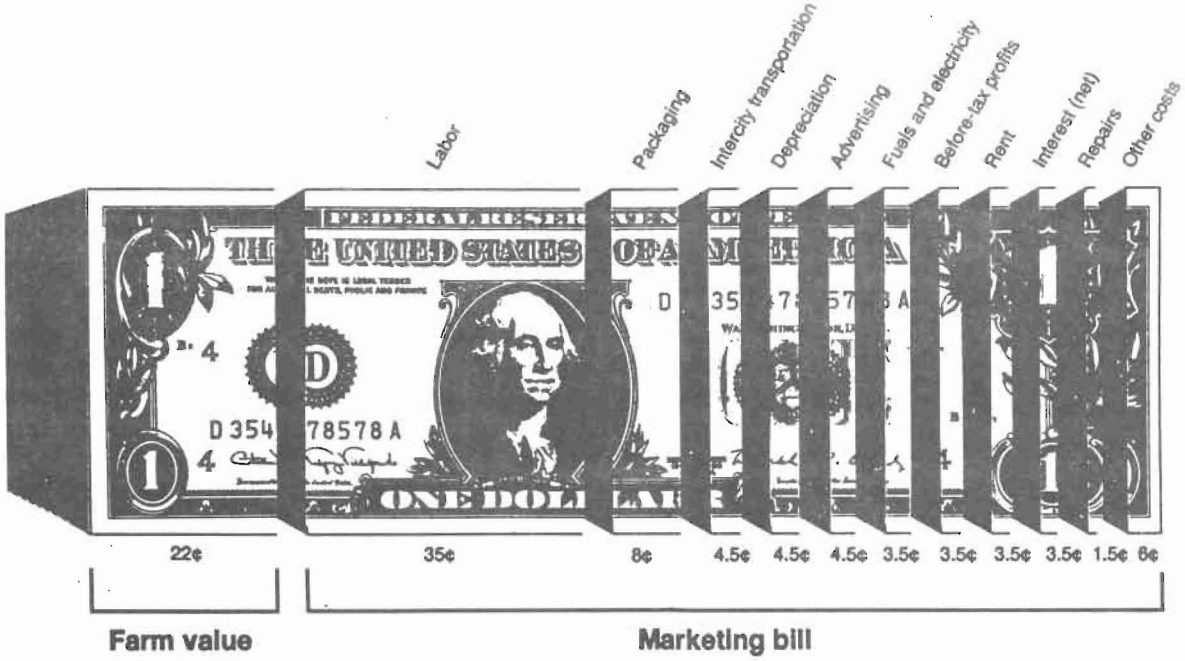
Year	Disposable personal income ($ Bil.)	Amount Spent on Food at Home ($ Bil.)	Amount Spent on Food Away from Home ($ Bil.)	Total Amount Spent on Food ($ Bil.)	Percent of Income Spent on Food at Home	Percent of Income Spent on Food Away from Home	Total Percent of Income Spent on Food
1959	346.5	49.3	12.1	61.4	14.2	3.5	17.7
1969	663.8	68.0	23.4	91.3	10.2	3.5	13.8
1979	1,753.0	161.8	76.9	238.7	9.2	4.4	13.6
1989	3,787.0	274.2	165.8	440.0	7.2	4.4	11.6
1992	4,430.8	319.5	184.6	504.1	7.2	4.2	11.4

Source: USDA-ERS "Food Cost Review, 1992" A.E. Report #672.

Although the food at home percentage of disposable income declined almost every year since tracking began, the 1992 rate of 7.2 percent is the same percentage reported for years earlier (Table 1). On the other hand, the food away from home portion of disposable income, which had been gradually increasing throughout the past two decades, began to decline in the 1990s to its current level of 4.2 percent.

About $111 billion or 22 percent of the $504 billion, was the farmers' share of consumer expenditures (Figure 1). The marketing bill accounts for the other 78 percent of consumer expenditures for U.S. farm products. The farmers' share of the consumer food dollar has been declining as more and more value-added processing and preparation are performed on foods to meet consumer demand for convenience and quality.

FIGURE 1
What a Dollar Spent for Food Paid for in 1992
About one-third went for food marketing labor costs



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: USDA-ERS "Food Cost Review, 1992" A.E. Report #672

Labor cost is the largest component of the marketing bill, accounting for over 45 percent of total marketing cost (Table 2). Labor is also the second fastest growing component of the marketing bill, rising 9 percent since 1990. Fuels and electricity increased the most (11 percent) since 1990 but these costs are only one tenth the magnitude of labor costs. Labor costs will continue to rise as consumers demand more prepared and convenience foods from supermarkets.

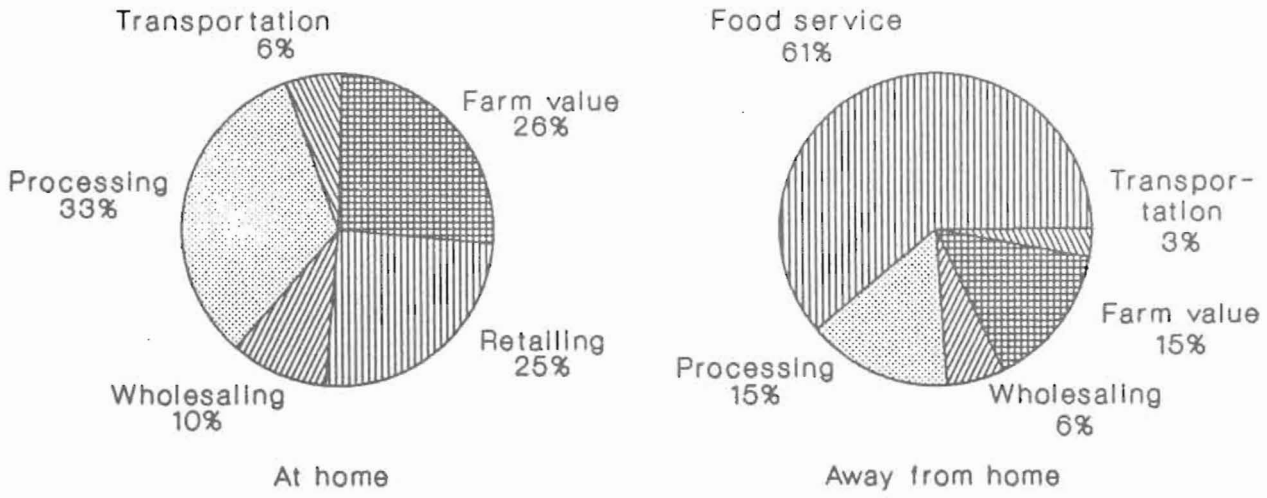
TABLE 2
Components of the Marketing Bill for Domestically Produced Farm Food
($ billions)

Year	Labor	Packaging materials	Intercity rail and truck transportation	Fuels and electricity	Corporate profits before taxes	Other costs	Total Marketing Bill
1970	32.2	8.2	5.2	2.2	3.6	23.7	75.1
1975	48.3	13.3	8.4	4.6	7.1	29.7	111.4
1980	81.5	21.0	13.0	9.0	9.9	48.3	182.7
1985	115.6	26.9	16.5	13.1	10.4	76.5	259.0
1990	154.0	36.5	19.8	15.2	15.0	103.1	343.6
1992	167.8	39.2	20.6	16.8	15.9	111.2	371.5

Source: USDA-ERS "Food Cost Review, 1992" A.E. Report #672.

Breaking total food expenditures down into expenditures for food consumed at home and food consumed away from home reveals stark differences in farmers' share and marketing bill components (Figure 2).

FIGURE 2
Marketing Functions of the Food Dollar in 1992



Source: USDA-ERS "Food Cost Review, 1992" A.E. Report #672.

While the farmers' share of total food expenditures was 22 percent, farmers receive 26 percent of consumers' dollars spend for food consumed at home but just 15 percent of expenditures for food eaten away from home. Food consumed away from home includes much higher value added by food service labor and related costs (61 percent).

The actual prices farmers receive for their products are the same regardless of whether the products eventually are sold to consumers in grocery stores or in food service establishments. However, food service establishments add more value to farm products on average than grocery stores through processing, food preparation and service, therefore, the farmers' share of the food away from home dollar is lower.

Food manufacturing industries have generally become more productive as technology decreased the labor intensity of food processing (Table 3). Grocery stores and restaurants, on the other hand, have been forced to add labor-intensive services to respond to changing consumer lifestyles which demand high quality, convenient, fresh prepared foods. Supermarkets have added such offerings as delis, pizza, salad bars, fresh seafood, hot prepared meals, catering, scratch bakeries, restaurants and custom meat cutting. Food service operators, particularly fast food restaurants, have been forced to offer more services, such as table service and home delivery, and more menu variety as sales growth of many of the chains has slowed.

TABLE 3
Indexes of Output per Employee Hour in Selected Food Manufacturing Industries, Retail Food Stores, and Eating and Drinking Places

(1982=100)

Year	Food Manufacturing								
	Red Meat Products	Poultry dressing and processing	Fluid Milk	Preserved fruit and vegetables	Grain mill products	Bakery products	Sugar	Retail food stores	Eating and Drinking places
1970	68.8	62.3	54.4	73.9	65.9	84.8	95.0	112.1	103.9
1975	75.2	69.9	70.4	86.8	72.1	90.4	104.0	103.5	103.8
1980	95.3	84.2	91.4	93.5	87.0	90.7	110.7	105.2	102.7
1985	108.4	106.2	112.8	105.5	115.8	106.4	112.2	100.0	92.6
1990	99.8	114.8	131.9	108.8	128.6	104.6	122.6	93.7	97.6

Source: USDA-ERS "Food Cost Review 1992" A.E. Report #672.

On the other hand, most food processing and manufacturing firms have been downsizing their work forces as technology reduces the labor intensity of most food production. Mergers, acquisitions and leveraged buyouts have been another reason for downsizing as duplicate functions are eliminated and cost savings become critical in light of higher debt loads.

While expenditures at retail food stores grew by 48 percent in the last decade, spending for food away from home increased by 81 percent (Table 4). The farm value of spending for food away from home also grew much faster than the farm value of grocery store sales (61% vs. 21%) over the ten year period. The processing portion of the marketing bill was the fastest growing marketing component.

TABLE 4
Marketing Function Components of Consumer Expenditures

($ billions)

Expenditures and Components	1982	1987	1992
Expenditures at food stores	196.7	230.2	291.5
Farm value	64.1	67.5	77.4
Marketing bill	132.6	162.7	214.1
Processing	60.9	72.1	95.4
Intercity transportation	11.9	14.0	15.9
Wholesaling	20.0	23.2	29.6
Retailing	39.8	53.4	73.2
Expenditures for eating away from home	102.2	145.3	185.3
Farm value	17.3	22.9	27.9
Marketing bill	84.9	122.4	157.4
Processing	14.7	21.8	27.9
Intercity transportation	3.0	3.6	4.7
Wholesaling	5.9	8.6	11.1
Food Service	61.3	88.4	113.7

Source: USDA-ERS "Food Cost Review, 1992" A.E. Report #672.

Total processing costs of food consumed away from home has almost doubled in the last ten years. As more food is consumed outside the home, more variety and higher quality are demanded at affordable prices. With low cost, largely unskilled labor at the restaurant level, processing costs have risen as manufacturers have developed easy to prepare food products which also maintain the quality standards consumers expect.

Despite the continuing growth in the marketing bill portion of consumers' food dollars, the profits of food manufacturers and retail food chains have remained relatively constant since 1980 (Table 5). In 1992, food manufacturing profits as a percentage of sales was the only profit measure which was above its average level of the past 13 years. Retail food chain profit as a percent of sales in 1992 was equal to the average value since 1980.

TABLE 5
Profit Margins of Food Manufacturers and Retail Food Chains, Industry Averages

Year	Food Manufacturers			Retail Food Chains		
	After-tax profits as a percentage of --					
	Sales	Stockholder equity	Assets	Sales	Stockholder equity	Assets
1980	3.4	14.7	7.1	0.9	13.7	4.5
1981	3.1	13.6	6.5	1.0	13.9	4.7
1982	3.1	13.0	6.3	0.9	12.7	4.4
1983	3.3	13.3	6.0	1.1	13.6	4.9
1984	3.3	13.3	6.0	1.4	17.3	6.0
1985	4.1	15.3	6.6	1.3	14.5	5.3
1986	4.2	16.2	6.3	1.1	11.9	4.4
1987	4.6	17.5	6.8	0.9	12.8	3.6
1988	5.5	20.9	8.1	0.9	13.6	3.2
1989	4.2	17.1	5.5	0.8	20.7	2.9
1990	4.0	16.1	5.2	1.1	22.8	3.8
1991	4.8	17.5	6.0	1.1	18.8	3.8
1992	4.5	15.7	5.5	1.0	14.6	3.2
Avg. 1980-92	4.0	15.7	6.3	1.0	15.5	4.2

Source: USDA-ERS "Food Cost Review, 1992" A.E. Report #672.

U.S. Situation

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

Table 1. United States Agricultural Cooperative Numbers, Business Volume, and Net Income 1991-92.

Major Business Activity	Number		Net Volume		Net Income	
	1991	1992	1991	1992	1991	1992
			($ billion)		($ million)	
Marketing	2,378	2,218	56.2	58.2	810.3	780.7
Supply	1,689	1,618	17.9	18.5	639.0	586.7
Service	422	479	2.5	2.6	120.5	72.8
TOTAL	4,489	4,315	76.6	79.3	1,569.9	1,444.0

Source: Farmer Cooperative Statistics, 1992, Service Report No. 39, USDA, ACS, Washington, DC. (November, 1993)

The number of cooperatives in the United States has continued to decline to a total of 4,315 in 1992, a net decrease of 174 associations. This is primarily due to the consolidation and merger of local marketing and supply cooperatives in the mid-west. Total net business volume which excludes intercooperative business amounted to $79.3 billion, up from from 1991 surpassing the record $77.3 billion in 1990. Total net income for 1991 was $1.44 billion, down from $1.57 billion in 1991.

Combined assets in 1992 for all cooperatives totaled $32.5 billion, a 3.5 percent increase from 1991. Net worth totaled $14.4 billion, up 2.3 percent. Total liabilities were $18.1 billion in 1992 up 4.4 percent from the previous year.

New York State Situation

Data for agricultural cooperatives headquartered in New York State were obtained from the ACS survey cited previously. State level data is collected every other year. The most current statistics available are for 1989 and 1991. Table 2 summarizes cooperative numbers and business volume for New York State.

Table 2. New York State Agricultural Cooperative Numbers and Business Volume by Major Business Activity, 1989 and 1991.

Major Business Activity	Number Headquartered in State		Gross Volume	
	1989	1991	1989	1991
			($ million)	
Marketing:				
Dairy	57	65	962.1	1,059.4
Fruit & Veg.	7	8	223.8	163.7
Grains	NA[1]	NA	27.1	NA
Livestock	4	5	58.9	61.3
Other[2]	NA[1]	4	16.0	42.8
TOTAL MARKETING[3]	72	82	1,287.9	1,327.3
Supply:				
Building Materials				
Containers & Packaging			21.3	NA
Farm Chemicals			3.2	NA
Farm Machinery & Equip.			50.9	37.3
Feed			34.1	NA
Fertilizer			263.7	238.4
Meats & Groceries			68.2	110.5
Petroleum			2.7	NA
Seed			519.6	305.4
Misc. Supplies			27.3	26.5
			189.5	243.8
TOTAL SUPPLYING	91	82	1,180.5	962.1
Related Services	4	6	26.1	113.2
TOTAL[3]	168	170	2,494.5	2,402.5

Source: Farmer Cooperative Statistics, 1991, Service Report No. 33, USDA, ACS, Washington, DC. (November, 1992)

1 Not available to avoid disclosure of individual cooperative data.

2 Other includes wool, poultry, dry bean, grains and miscellaneous.

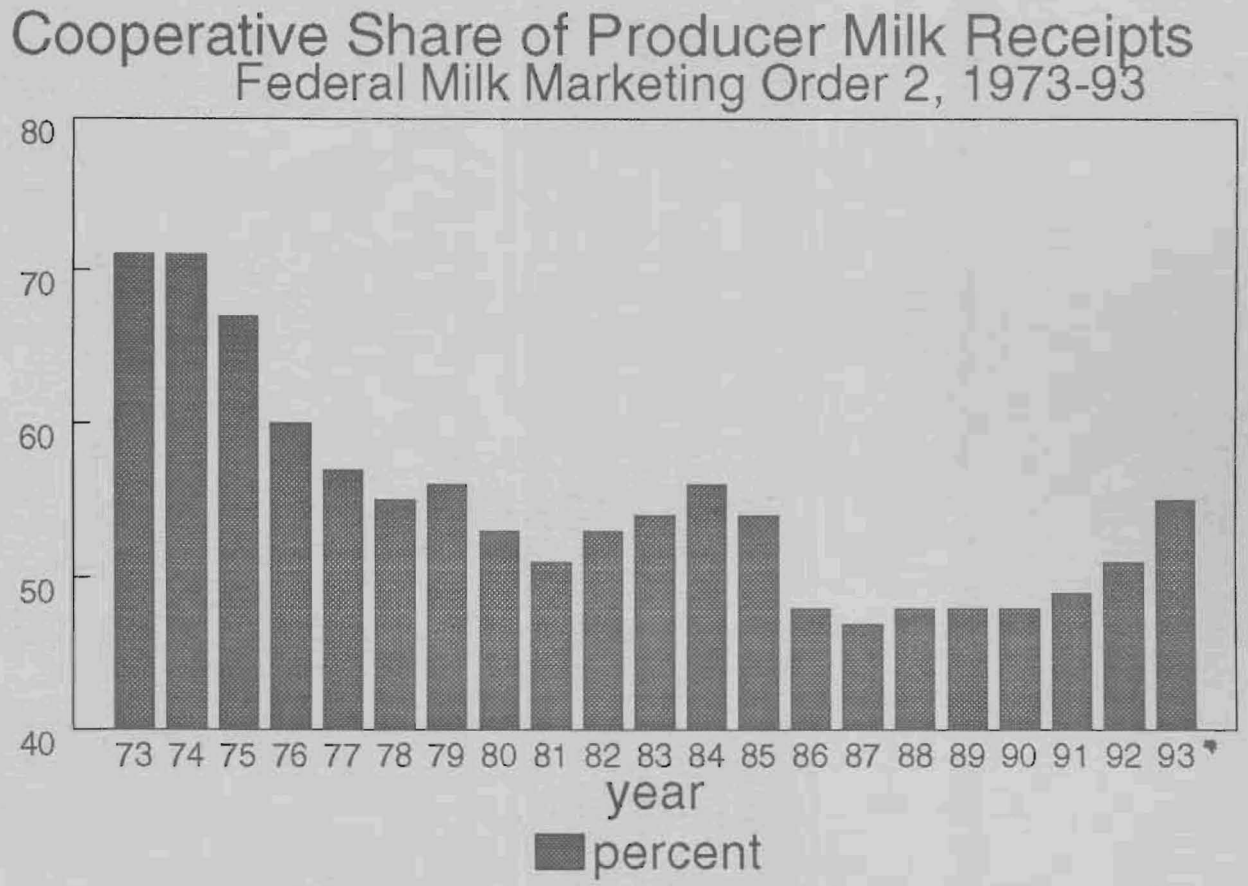
3 Totals may not add due to inclusion of cooperatives listed under not available and some cooperatives conducting two or more activities.

The number of agricultural cooperatives in New York State in 1991 showed a net increase of 2 cooperatives with an increase in dairy cooperatives and a decrease in the number of supply cooperatives. Total gross business volume declined by $92 million, a decrease of 3 percent from 1989. Supply cooperative volume decreased while cooperative service and marketing volume increased. Dairy cooperatives showed an increase in volume over the two year period. A reporting change for business categorized as related services contributed to the sharp increase in volume reported under related services.

New York Cooperative Performance

A year ago in this section we indicated the 1993 economic performance of New York cooperatives would be influenced by four factors: 1) milk prices, 2) the state of the general economy, 3) effects of the wet and cool 1992 growing season, and 4) cooperatives' ability to adopt strategies for the new economic realities of the food sector. None of these factors showed significant improvement, and cooperative performance was mixed, as expected. While sales in many cases increased, cooperative earnings decreased or were stable.

Let us start our review of different industries with dairy marketing cooperatives. Figure 1 illustrates the proportion of Order 2 milk marketed by Northeast cooperatives. Cooperatives' market share has continued to increase from a low of 47 percent in 1987 to approximately 56 percent for the first four months of 1993.



* 1993 based on first four months
Source: Market Administrator Office, NY-NJ Federal Milk Marketing Order.

In the 1970's and early 1980's cooperative market share decreased primarily due the financial difficulties of three major dairy marketing cooperatives. With improved economic performance, cooperative market share continues to rebound. Some of the increase is due to increased recruiting and new milk pricing strategies, but a share of that increase is due to fewer non-cooperative market alternatives.

Sales of the major dairy bargaining cooperatives increased moderately in 1993. While milk prices were up slightly, the increase was primarily due to increased market share as represented by increased volume. However, net income was down somewhat. This is attributed to downward pressure on milk prices and difficulty in finding sufficient balancing capacity during times of surplus milk supplies.

Cooperatives processing milk or milk products experienced similar trends. While their sales were up somewhat, earnings were off. One bright spot was the successful merger of a small New England cooperative with a respected brand franchise into a larger regional dairy cooperative.

Dairy service cooperatives, such as dairy herd improvement, artificial insemination, livestock auctions and meat processing, continued to experience the effects of declining cow numbers. Earnings of this group were mixed, related to individual business conditions. For example, the export market for one dairy service cooperative continued to exhibit significant weakness, while another cooperative continued to experience a double digit increase in its forage testing business.

The major supply cooperative in the region showed a significant turn around in 1993. Its sales were lower due to closing unprofitable operations, but net income was solidly in the black compared to a significant loss in 1992. The organization is still in the middle of a major restructuring program which should continue to improve economic performance and customer service. During the year the organization decided to sell its two food subsidiaries, and began carrying them as discontinued operations. Consequently, consolidated sales decreased by about a half, but future earnings should improve.

New York fruit and vegetable cooperatives were particularly impacted by the effects of poor weather in 1992 and the weak general economy.

The major New York vegetable and fruit cooperative is involved in an arrangement with a company that processes and markets consumer products which use member commodities. That cooperative's revenues experienced a slight decrease, but the food marketing company and cooperative took a major write-off for the restructuring or disposal of unprofitable operations. The cooperative will amortize the cost over ten years. As a result the net income available to members was sharply reduced. The cooperative's food processing partner has been put up for sale by its major shareholder. This continues to cause uncertainty about the future of the processed vegetable and fruit industry in New York. However, flooding in midwestern production areas has reduced surplus inventories and strengthened prices in the industry.

The major grape processing company in the state was confronted with marketing a very large but low quality crop. Combined with soft consumer markets this resulted in lower sales, net income and returns per ton. The 1993 crop is of higher quality but significantly lower volume on the east coast, with a larger volume crop on the west coast. This disparity may cause increased costs of handling the crop over the coming year. Consumer demand appears to continue weak.

Cooperative Restructuring

Business news during 1992-93 has been full of "corporate restructurings" - from General Motors, to Kodak, to IBM. Cooperative restructuring is also a reality, but it is a quiet restructuring that does not receive the high profile attention. One should expect this restructuring to continue.

Several factors are driving this restructuring. One is the declining number of farmers and the increased diversity of markets and farms. Food processors and farm input suppliers are trying to address the specific needs of their markets, and the old system and structures may not be well positioned to do this. Sometimes it requires completely re-thinking the way a cooperatives does business. Most cooperatives are rather thin organizations, with little excess staff and resources. Many cooperatives continue to look for ways to do more with less. One form that restructuring takes is a merger with other similar organizations. At least one New York cooperative is actively studying this alternative. Also, some cooperatives are closing operations and writing off unproductive assets. This typically results in an up front loss, but the intent is to have a more profitable organization in the long run. Finally, most restructuring has a direct impact on members. Some members do not appreciate the need for organizations to change as well as adjust the way they interact with their members.

Every indication is that cooperatives will continue to examine their operations and restructure. Members, suppliers and customers must realize this is inevitable for the organizations to survive and remain profitable.

Outlook

The 1994 outlook for major New York agricultural cooperatives will depend on three factors. The first factor is the economic health of the dairy economy, which is directly associated with the price of milk. Current indications are that milk prices will probably vary in the same range as the last few years. Consequently, the price-cost squeeze will continue at the cooperative as well as farm level.

One new variable in the picture is the approval of bovine somatotropin (BST). After a short moratorium, dairy producers will be allowed to use BST and likely increasing yield per cow. Cooperatives face several short and long term questions in terms of BST: a) Will cooperatives allow their members to use it, b) What role will cooperatives play in the distribution of BST, c) How will it effect production, consumption and price, and d) What impact will BST have on the structure of farms and the dairy industry? While there has been studies and speculation on these issues, the true test is yet to come in 1994.

The second factor continues to be the strength of the general economy. While there are some signs of recovery, consumer confidence remains low and consumers tend to be conservative in their purchasing behavior. Consumers are trading down to lower value products resulting in little opportunity to increase prices. With no drastic turn around in sight, these trends are likely to continue.

Pressure on prices and costs will force cooperatives to continue to restructure their operations. While this is necessary in order for cooperatives to remain competitive and earn money for their members, it will imply more changes: new structures, new pricing strategies, mergers, and new methods of dealing with members.

While New York agricultural cooperatives face several challenges, there is every indication they are realistically facing these challenges, conscientiously studying the alternatives and adopting appropriate strategies. As long as this continues, the economic performance of New York cooperatives will remain stable.

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

Item	1970	1975	1980	1985	1990	1991	1992
	billion dollars						
Assets							
Real Estate	202	384	783	586	628	623	633
Livestock	24	29	61	47	71	68	71
Machinery	30	57	80	83	85	86	86
Crops & Supplies[a]	9	21	33	23	23	22	24
Purchased Inputs	c	c	c	1	3	2	4
Financial Assets	7	7	7	9	11	12	14
Coop. Investments	7	13	19	24	27	29	30
Total	279	511	983	773	848	842	862
Liabilities & Equity							
Real Estate Debt	28	45	90	100	74	75	75
Nonreal Estate Debt[b]	21	40	77	78	63	64	64
Total	49	85	167	178	137	139	139
Owner Equity	230	426	816	595	711	703	723
Total	279	511	983	773	848	842	862
Percent Equity	82	83	83	77	84	84	84

[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	1991	1992
	percent of total						
Assets							
Real Estate	72	75	80	76	74	74	74
Livestock	9	6	6	6	8	8	8
Machinery	11	11	8	11	10	10	10
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	54	54
Nonreal Estate Debt[b]	43	47	46	44	46	46	46
Total	100	100	100	100	100	100	100

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

Source: Economic Research Service, USDA.

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

Item	1970	1975	1980	1985	1990	1991	1992
	billion dollars						
Real Estate							
Farm Credit System	6.5	14.5	33.2	42.2	25.7	25.2	25.3
Individuals & Others	10.3	15.8	27.8	25.8	15.0	15.5	16.0
Commercial Banks	3.3	5.6	7.8	10.7	16.2	17.3	18.6
Farmers Home Admin.	2.1	3.0	7.4	9.8	7.6	7.0	6.4
Insurance Companies	5.1	6.2	12.0	11.3	9.6	9.5	8.7
CCC - Storage	.2	.2	1.5	.3	a	a	a
Total	27.5	45.3	89.7	100.1	74.1	74.5	75.0
Nonreal Estate[b]							
Commercial Banks	10.5	19.0	30.0	33.7	31.3	32.9	32.9
Farmers Home Admin.	.7	1.6	10.0	14.7	9.4	8.2	7.1
Merchants & Dealers	4.7	8.4	17.4	15.1	12.7	13.0	13.2
Farm Credit System	5.3	10.7	19.7	14.0	9.8	10.2	10.4
Total	21.2	39.7	77.1	77.5	63.2	64.3	63.6

[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	1991	1992
	percent of total						
Farm Credit System	24	30	32	32	26	25	26
Commercial Banks	28	29	23	25	35	36	37
Farmers Home Admin.	6	5	11	14	12	11	10
Insurance Companies	11	7	7	6	7	7	6
Individuals & Others	31	29	27	23	20	21	21
Total[a]	100	100	100	100	100	100	100

[a] Excludes crops under CCC loan.

Source: Economic Research Service, USDA.

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

Item	1970	1975	1980	1985	1990	1991	1992
	million dollars						
Assets							
Real Estate	2614	4881	6178	6520	7595	7591	8047
Livestock	536	653	1527	983	1258	1263	1303
Machinery	822	1303	1718	1875	1842	1857	1865
Crops & Supplies[a]	204	396	561	491	535	417	439
Household	c	c	c	27	69	59	90
Financial Assets	135	140	145	175	197	216	250
Coop. Investments	180	341	462	493	470	441	461
Total	4491	7714	10591	10564	11966	11844	12455
Liabilities & Equity							
Real Estate Debt	353	634	1038	1125	892	843	869
Nonreal Estate Debt[b]	411	748	1582	1472	1268	1160	1216
Total Debt	764	1382	2620	2597	2160	2003	2085
Equity	3727	6332	7971	7967	9806	9841	10370
Total	4491	7714	10591	10564	11966	11844	12455
Percent Equity	83	82	75	75	82	83	83

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

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

Item	1970	1975	1980	1985	1990	1991	1992
	percent of total						
Assets							
Real Estate	58	63	58	62	63	64	65
Livestock	12	9	15	9	11	11	10
Machinery	18	17	16	18	15	16	15
All Other	12	11	11	11	11	9	10
Total[a]	100	100	100	100	100	100	100
Liabilities							
Real Estate Debt	46	46	40	43	41	42	42
Nonreal Estate Debt[b]	54	54	60	57	59	58	58
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.

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

Item	1970	1975	1980	1985	1990	1991	1992
	million dollars						
Real Estate							
Farm Credit System	98	262	367	449	400	338	359
Individuals & Others	142	214	373	363	214	220	227
Commercial Banks	69	101	108	89	115	134	143
Farmers Home Admin.	34	45	145	192	154	145	134
Insurance Companies	7	8	26	26	9	6	6
CCC - Storage	3	4	19	6	a	a	a
Total	353	634	1038	1125	892	843	869
Nonreal Estate							
Commercial Banks	155	266	632	597	417	334	375
Farmers Home Admin.	26	37	284	287	219	207	196
Farm Credit System	139	281	328	331	416	399	421
Merchants & Dealers	91	164	339	257	216	220	224
Total[b]	411	748	1583	1472	1268	1160	1216

[a] Less than .05 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 State Farm Debt by Lender
Current Dollars, December 31
Excluding Operator Households

Item	1970	1975	1980	1985	1990	1991	1992
	percent of total						
Commercial Banks	29	27	28	26	25	23	25
Farm Credit System	31	39	27	30	38	37	37
Farmers Home Admin.	8	6	17	19	17	18	16
Insurance Companies	1	1	1	1	a	a	a
Individuals & Others	31	27	27	24	20	22	22
Total	100	100	100	100	100	100	100

[a] Less than .05 million.

Source: Economic Research Service, USDA.

Nonaccrual and Nonperforming Loans
Farm Credit System, December 31

Year	Total System (FCB's and BC's)		Farm Credit Banks (FCB)		
			United States		Springfield District
	Nonaccrual	Nonperforming	Nonaccrual	Nonperforming[c]	Nonaccrual
	percent of loan volume				
1987[a]	d	d	11.1	d	1.1
1988	6.5	12.3	8.0	15.0	0.6
1989	5.0	11.0	6.3	13.6	0.4
1990	5.1	9.7	6.3	11.9	1.5[b]
1991	4.5	8.0	5.5	10.0	2.5
1992	3.7	6.0	4.7	7.6	2.9
1993 (6/30)	3.3	5.1	d	d	3.3

[a] Weighted average for PCA and FLB's for 1984-87.
[b] More conservative standards implemented.
[c] Nonperforming assets as a percentage of total loans and other property owned.
[d] Not available
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		
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 (6/30)	1.5	1.9	2.7

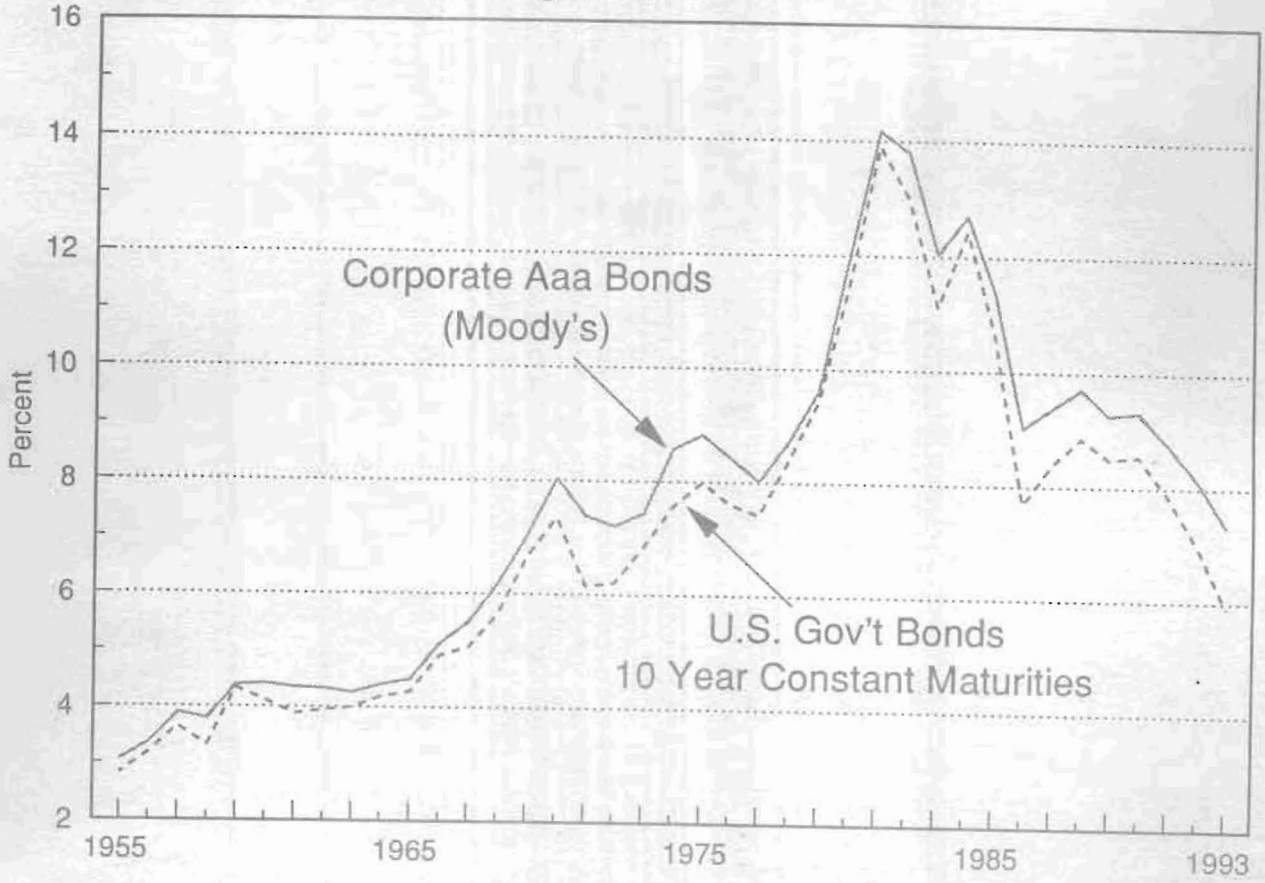
[a] Includes nonaccrual and past due 90 days but accruing.
[b] Includes nonperforming and past due 30 to 89 days but accruing.
Source: Agricultural Finance Databook. Reports of Condition and Income.

Delinquent Major Farm Program Direct Loans[a]
Farmers Home Administration

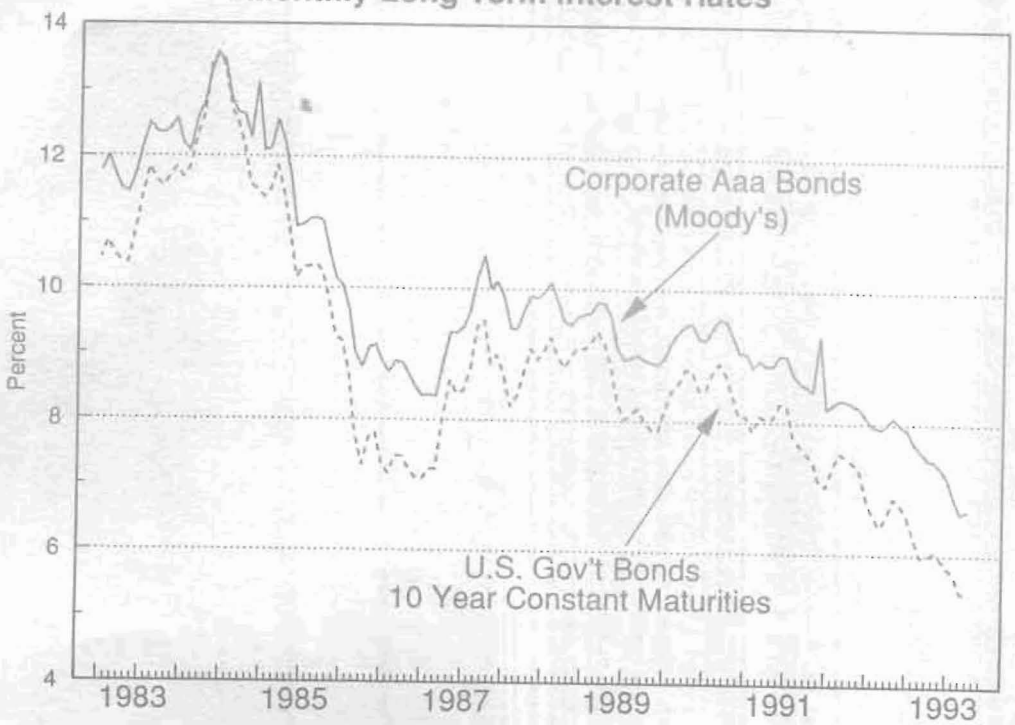
Date	Farm Ownership		Operating Loans		Emergency Loans		Economic Emergency		Soil and Water	
	U.S.	N.Y.	U.S.	N.Y.	U.S.	N.Y.	U.S.	N.Y.	U.S.	N.Y.
	percent of loan volume									
9/30/87	6	7	19	14	45	34	31	34	14	10
9/30/88	8	9	25	19	57	38	42	45	20	12
9/30/89	9	10	26	20	60	41	44	51	23	13
9/30/90	7	9	23	17	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

[a] Delinquent rates for all guaranteed farm loans on 9/30/93 were 0.6 percent for New York State and 2.1 percent for the United States.
Source: FmHA Report Code 616.

Annual Long Term Interest Rates

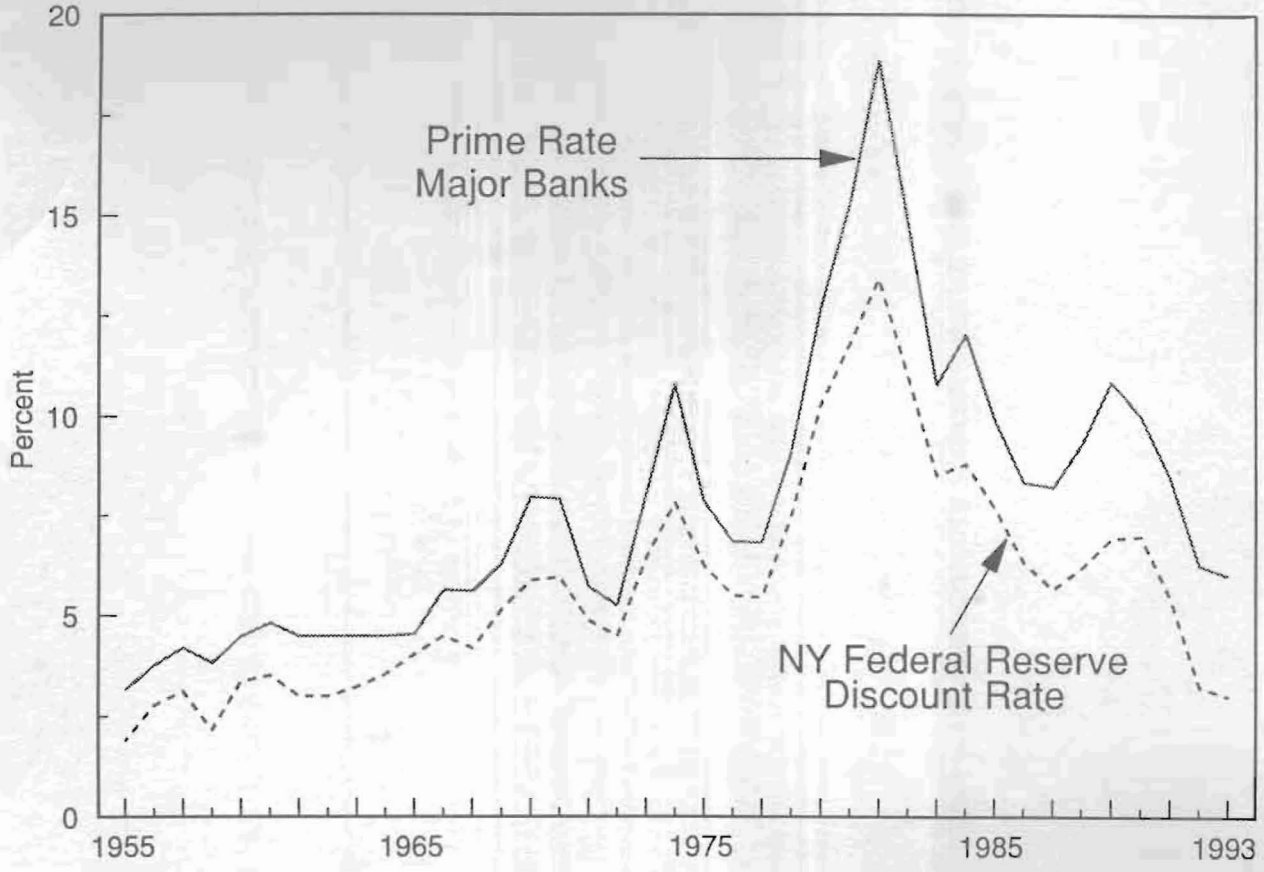


Monthly Long Term Interest Rates

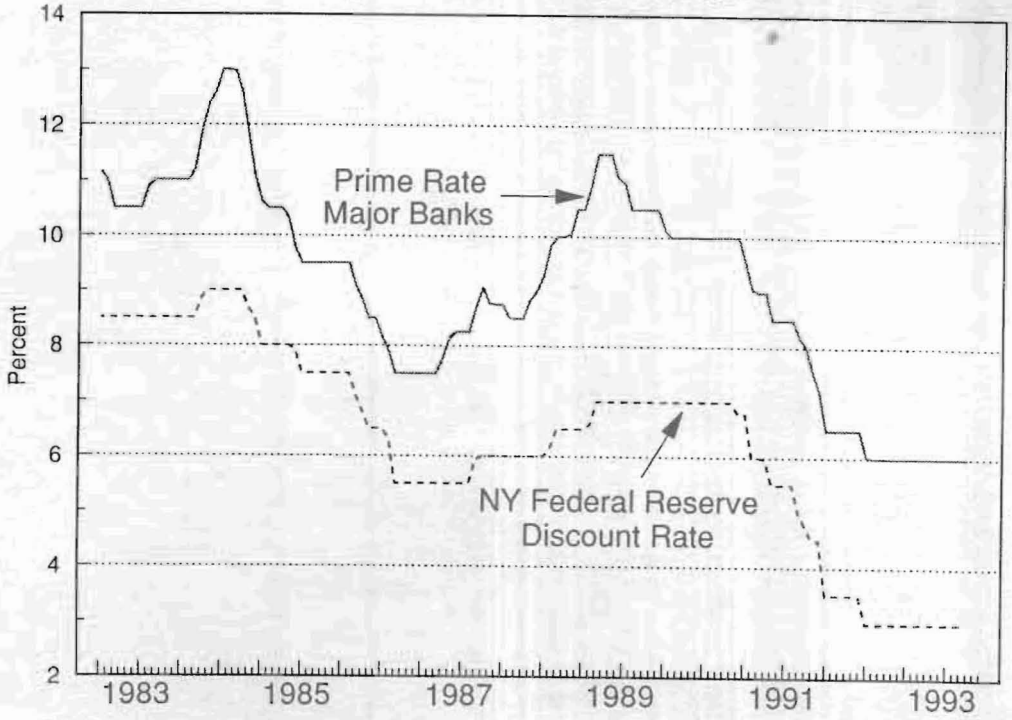


U.S. Gov't Bonds 10 Year Constant Maturity		
	1992	1993
Jan	7.03	6.60
Feb	7.34	6.62
Mar	7.54	5.98
Apr	7.48	5.97
May	7.39	6.04
Jun	7.26	5.96
Jul	6.84	5.81
Aug	6.59	5.73
Sep	6.42	5.45
Oct	6.59	5.41
Nov	6.87	
Dec	6.77	

Annual Average Short Term Interest Rates

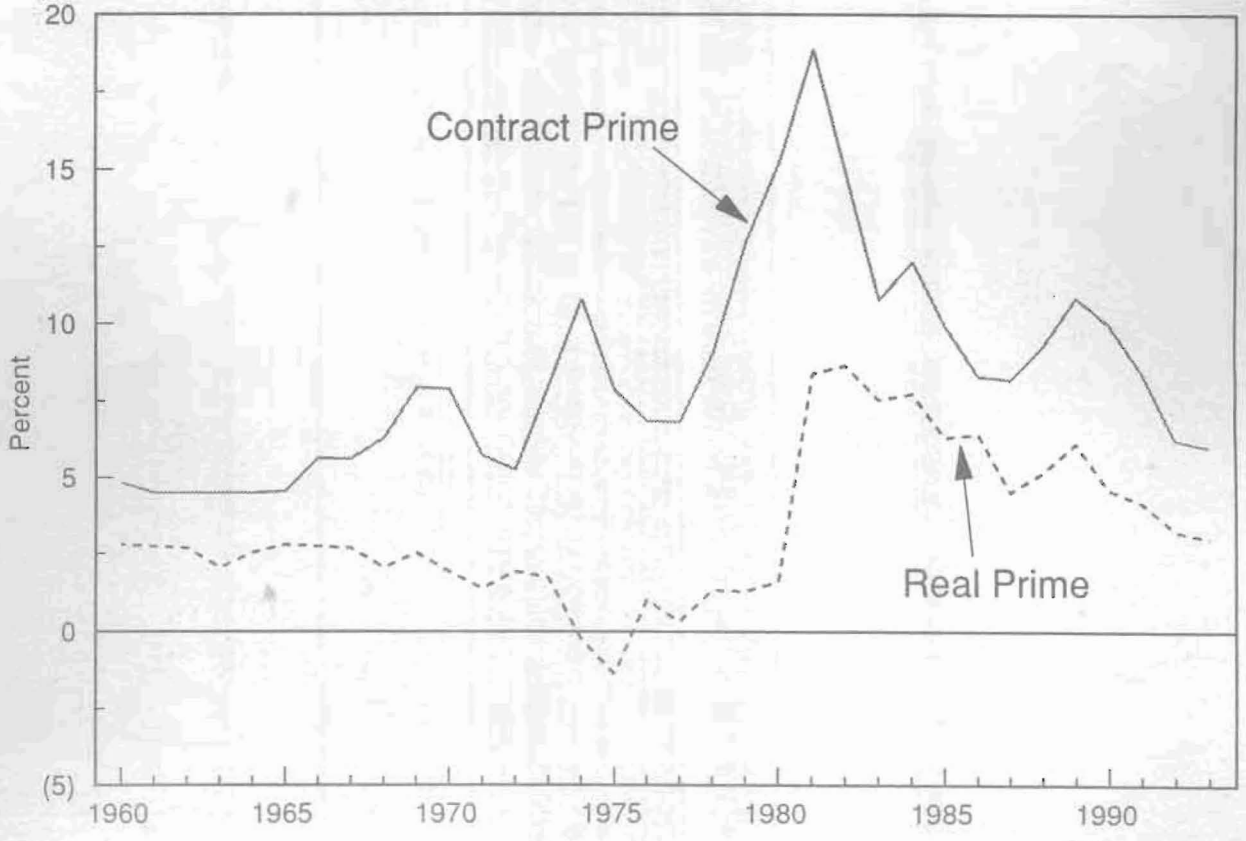


Monthly Short Term Interest Rates



Prime Rate Major Banks		
	1992	1993
Jan	6.50	6.00
Feb	6.50	6.00
Mar	6.50	6.00
Apr	6.50	6.00
May	6.50	6.00
Jun	6.50	6.00
Jul	6.02	6.00
Aug	6.00	6.00
Sep	6.00	6.00
Oct	6.00	6.00
Nov	6.00	
Dec	6.00	

Contract and Real Interest Rates



After bottoming out in the last part of 1992, short term interest rates were relatively constant throughout 1993. Three month treasury bills hovered around the three percent Federal Reserve Discount Rate throughout the year. 1993 rates averaged about one-quarter percent below 1992 rates. Short term rates are at their lowest level in 25 years.

Long term interest rates continued to decline throughout most of 1993. Ten year government bonds declined by more than one percent. Corporate bonds declined by about one percent before recovering slightly. Average rates for 1993 were also about one percent below 1992 rates. The decline in long term rates in the face of constant short term rates (flattening of the yield curve) represents a further reduction of the inflation premium in long term rates. The longer we have low and stable inflation rates, the more people become convinced that inflation will remain under control in the future.

Short term interest rates are likely to increase about one-half percent during 1994. Current short term rates are very close to the rate of inflation, leaving very little return to the investor after subtracting inflation. Thus, investors are likely to resist any downward movement of rates by moving funds into other investments, like the stock market. The expected 2.5 to 3.0 percent growth of the economy will provide upward pressure on rates. However, unless the growth is much more robust than expected, that upward pressure will be modest.

A high proportion of the excess inflation premium that had been built into long term rates was squeezed out during 1993. Real long term rates are now about 3 percent. A modest amount of continued reduction in the inflation premium will tend to offset the upward pressure on rates brought about by an improved economy. Long term rates in 1994 should be about constant to up one-quarter percent.

CROP PRODUCTION
United States and New York
1991-93 a/

Crop	Acres Harvested			Yield Per Acre			Production		
	1991	1992	1993	1991	1992	1993	1991	1992	1993
United States	(million)			(bu.)			(million bu.)		
Corn grain	68.8	72.1	63.1	108.6	131.4	103.1	7,474	9,479	6,503
Sorghum	9.8	12.2	9.8	59.0	72.8	63.6	579	884	620
Oats	4.8	4.5	3.8	50.7	65.6	54.6	243	295	208
Barley	8.4	7.3	7.1	55.2	62.4	58.9	464	458	416
Wheat	57.7	62.4	63.0	34.3	39.4	38.4	1,981	2,459	2,422
Soybeans	58.0	58.4	56.0	34.2	37.6	32.7	1,987	2,197	1,834
New York	(thousand)			(bu.)			(thousand bu.)		
Corn grain	660	670	590	98	92	102	64,680	61,640	60,180
Oats	100	110	105	50	70	62	5,000	7,700	6,510
Wheat	110	110	85	49	56	46	5,390	6,160	3,910
				(tons)			(thousand tons)		
Corn silage	550	530	NA	14.0	14.5	NA	7,700	7,685	NA
All hay	1,950	1,700	1,900	2.10	2.11	2.23	4,102	3,590	4,245
Alfalfa b/	760	800	750	2.50	2.35	2.90	1,900	1,880	2,175

Source: USDA Crop Production and New York Crop Reporting Service.

a/ All 1993 data are preliminary and subject to revision. Estimates for the United States are as of November 1, 1993. New York estimates are as of October 1993, except for corn which is November 1993.
b/ Includes alfalfa mixtures.

Grain production in the United States in 1993 is estimated to be well below year-earlier levels. Corn for grain production of 6.5 billion bushels is 31 percent below the 1992 crop and is the smallest crop since 1988. Sorghum production is down 30 percent from the 1992 level.

The production of oats is down 29 percent from the 1992 level. Barley production is down 9 percent from last year. Total feed grain production is down 30 percent from the 1992 level.

The soybean crop of 1.8 billion bushels is about 16 percent below the 1992 crop and is the smallest crop since 1988. Wheat production of 2.4 billion bushels is about equal to the 1992 crop.

The New York corn for grain crop is estimated to be 60 million bushels, down slightly from the 1992 crop. New York corn yield is estimated to be 102 bushels per acre, up from 92 in 1992. Wheat production is down 37 percent from 1992. The production of oats is estimated to be down 15 percent from 1992. Hay production is up 18 percent from the 1992 level.

GRAIN AND FEED

CORN AND FEED GRAIN BALANCE SHEETS, 1991-93

Item	1990/91	1991/92	1992/93 (Prelim.)	1993/94 (Proj.)
Supply	----- CORN (million bushels) -----			
Beginning Stocks (Sept. 1)	1,344	1,521	1,100	2,113
Production	7,933	7,475	9,479	6,503
Imports	3	20	6	15
Total	9,281	9,016	10,585	8,631
Disappearance				
Feed and Residual	4,710	4,878	5,288	4,850
Food, Ind. and Seed	1,325	1,454	1,510	1,550
Total Domestic	6,035	6,332	6,798	6,400
Exports	1,725	1,584	1,675	1,350
Total	7,760	7,916	8,473	7,750
Ending Stocks (Aug. 30)	1,521	1,100	2,113	881
Season average farm price	$2.28	$2.37	$2.07	$2.35-2.75
Supply	-- FEED GRAINS a/ (million metric tons) --			
Beginning Stocks	45.5	47.7	34.0	63.0
Production	230.4	218.2	277.5	193.0
Imports	1.4	2.1	1.2	2.1
Total	277.4	268.0	312.6	258.2
Disappearance				
Feed and Residual	138.5	142.2	154.2	142.4
Food, Ind. and Seed	39.8	42.2	44.0	45.0
Total Domestic	178.3	184.4	198.2	187.4
Exports	51.4	49.7	51.4	42.6
Total	229.7	234.1	249.6	229.9
Ending Stocks	47.7	34.0	63.0	28.2

Source: Agricultural Supply and Demand Estimates, USDA, November 9, 1993.

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

The fall 1993 corn supply of 8.6 billion bushels is down 18 percent from the 1992 level and is the smallest since 1988. Feed use is projected to decrease 8 percent. Exports are projected to decrease 19 percent from the 1992/93 level. Total utilization is expected to be over 8 percent smaller than in 1992/93. Projected carryover in the fall of 1994 of 880 million bushels is less than half the fall 1993 carryover and is the smallest since 1989.

Feedgrain supplies are dominated by corn, so changes in supply and demand are similar. The total supply of feedgrains is 17 percent below last year. Domestic feed use in the 1993/94 marketing year is projected to decrease about 8 percent. Exports are projected to decrease 17 percent. Carryover stocks at the end of the 1993/94 marketing year are projected to be 28 million metric tons, down 55 percent from the 1993 level and the smallest since 1989.

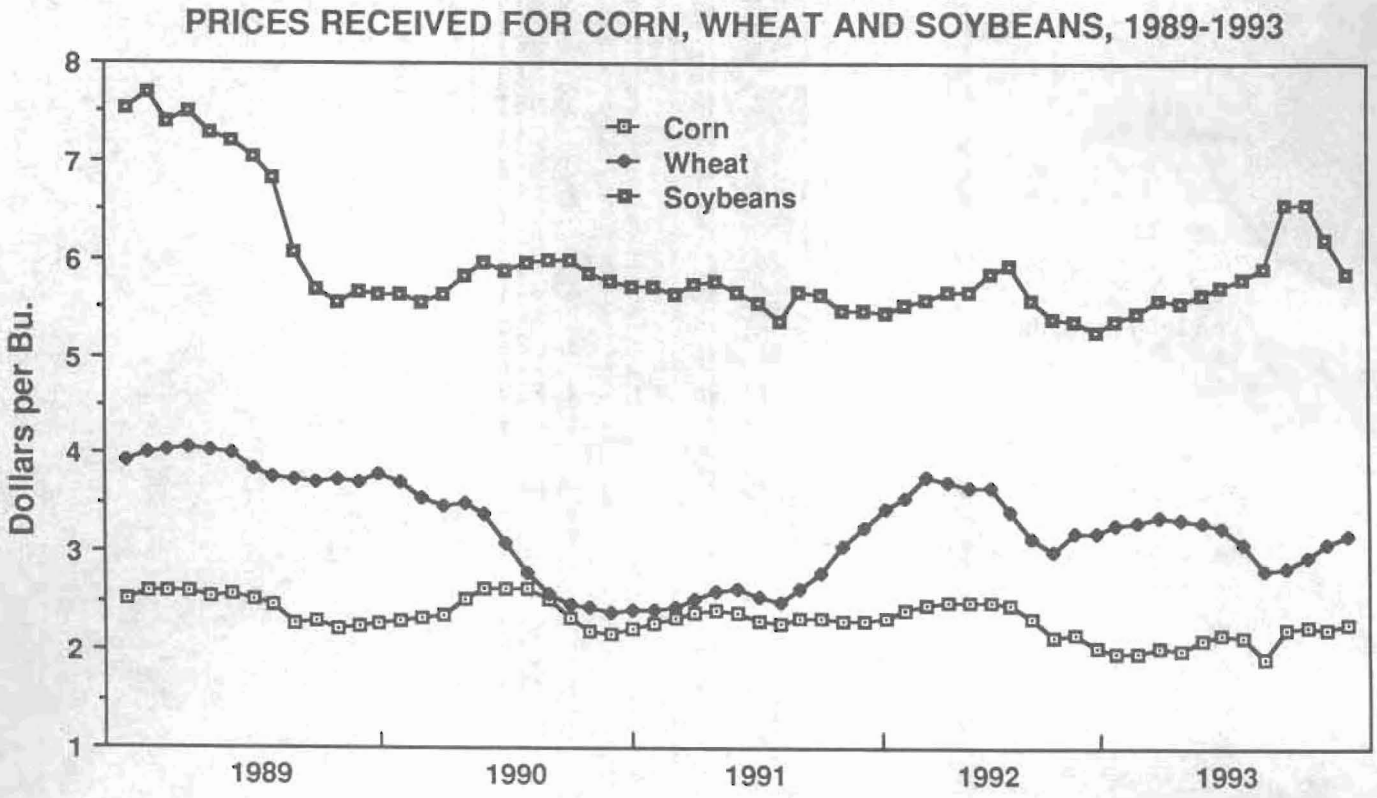
WHEAT AND SOYBEAN BALANCE SHEETS, 1991-93

Item	1990/91	1991/92	1992/93 (Prelim.)	1993/94 (Proj.)
Supply	----- WHEAT (million bushels) -----			
Beginning Stocks (June 1)	536	866	472	529
Production	2,736	1,981	2,459	2,422
Imports	37	41	70	85
Total	3,309	2,888	3,001	3,036
Disappearance				
Food	796	789	829	835
Seed	90	94	93	94
Feed and Residual	489	254	196	300
Total domestic	1,376	1,137	1,118	1,229
Exports	1,068	1,280	1,354	1,125
Total	2,444	2,416	2,472	2,354
Ending Stocks (May 31)	866	472	529	682
Season average farm price	$2.61	$3.00	$3.24	$2.85-3.10
Supply	----- SOYBEANS (million bushels) -----			
Beginning Stocks (Sept. 1)	239	329	278	292
Production	1,926	1,987	2,188	1,834
Imports	2	3	2	5
Total	2,167	2,319	2,468	2,131
Disappearance				
Crushings	1,180	1,254	1,279	1,225
Exports	560	684	775	625
Seed, Feed	55	55	64	65
Residual	43	48	58	46
Total	1,838	2,041	2,176	1,961
Ending Stocks (Aug. 30)	329	278	292	170
Season average farm price	$5.75	$5.58	$5.60	$6.00-7.00

Source: Agricultural Supply and Demand Estimates, USDA, November 9, 1993.

The 1993 United States wheat supply of 3 billion bushels is slightly above the 1992 level. Domestic food use is projected to increase 1 percent. Feed use is projected to increase 53 percent. Exports are projected to decline 17 percent from the previous year. Carryover on May 31, 1994 is projected to be 682 million bushels, up 29 percent from the 1993 level.

The total soybean supply is 2.1 billion bushels, down 14 percent from 1992. Crushings are projected to decline 4 percent and exports to decrease 19 percent from year-earlier levels. Carryover in the fall of 1994 is projected to be about 170 million bushels, 58 percent below the 1993 carryover and the smallest since 1989.



Source: USDA Agricultural Prices.

Soybean prices reached a peak of around $6.60 in mid-1993 and then declined to just under $6.00 in October. The October 1993 average price received by U.S. farmers was $5.87, $0.75 per bushel above the level of October 1992. USDA's projection for the season average price for 1993 crop soybeans is $6.00 to $7.00, with a mid point $0.90 above the average price for the 1992 crop.

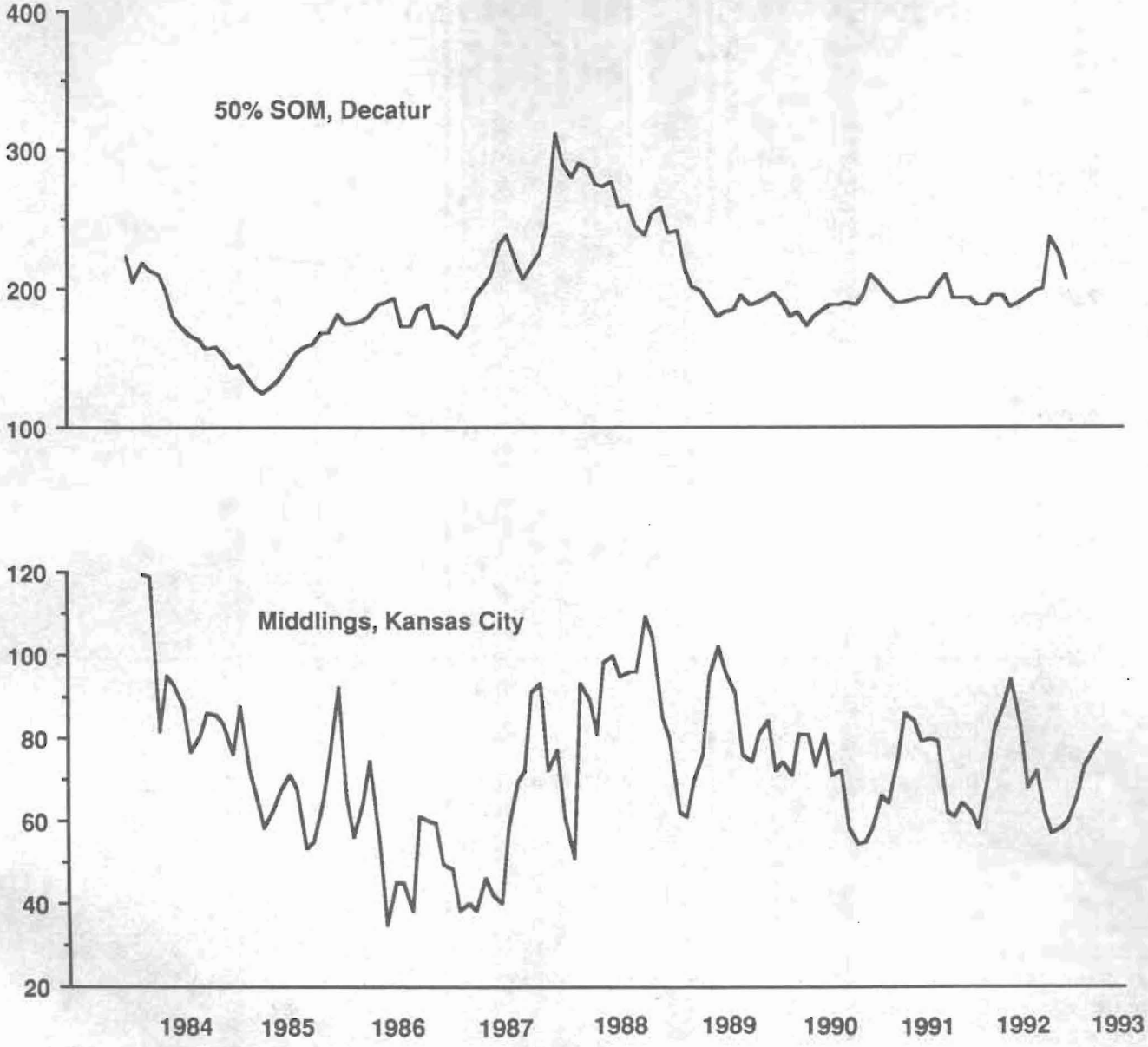
Wheat prices in mid-1993 were below mid-1992 levels. Prices in the mid fall of 1993 were below year-earlier levels. The October 1993 price received by U.S. farmers was $3.18, $0.13 below the year-earlier price. The New York price of $3.09 was $0.55 above the October 1992 level.

The projected season average price for the 1993 U.S. wheat crop is $2.85 to $3.10. The mid point is $0.26 below the average price received by farmers for the 1992 crop.

Corn prices reached a high of about $2.25 in the summer of 1993 and remained at that level until October, before increasing substantially after the November crop report. The U.S. average price received by farmers in October 1993 was $2.28, $0.29 above the year-earlier level. The New York price in mid October was $2.30 per bushel, $0.33 below the average level for the entire month of October 1992.

The mid November USDA projection of the season average price received by U.S. farmers for the 1993 corn crop was $2.35 to $2.75 per bushel. The mid point is $0.48 above the season average price for the 1992 crop.

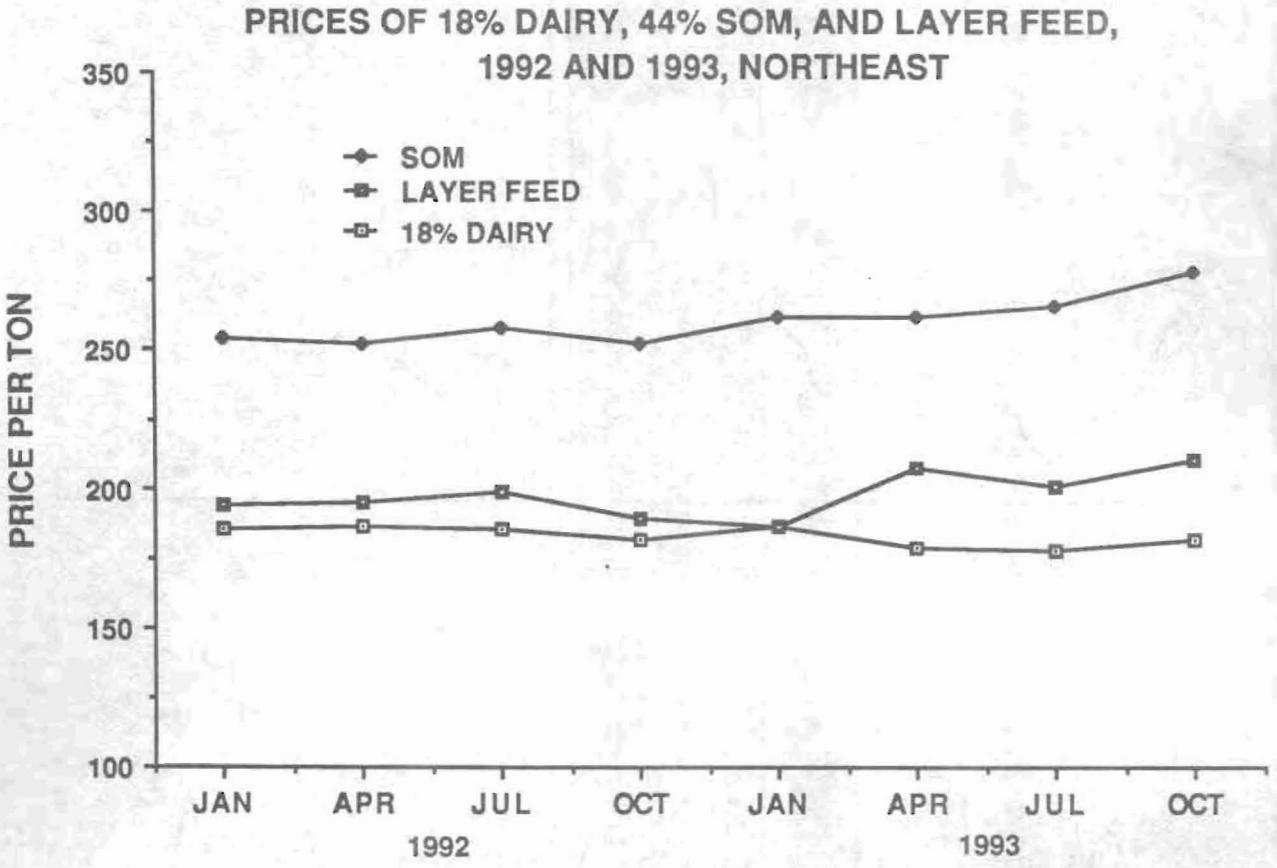
MONTHLY PRICES OF SOYBEAN MEAL AND MIDDLINGS, 1984 TO DATE



Source: USDA Feed Situation and Feedstuffs.

Prices for soybean oil meal (50%, Decatur) peaked at $230 per ton in July 1993 and declined to under $200 per ton in October. October 1993 prices were about $15 above year-earlier levels. Prices rose to around the $215 level after the November 1 crop report was released on November 9. Prices will be appreciably above year-earlier levels during the winter and spring of 1994.

Prices for byproducts such as middlings continue to fluctuate widely and are not closely related to the prices of the grains from which they are derived. Prices of these byproducts in the fall of 1993 were about the same as a year earlier.



Source: USDA Agricultural Prices and New York Crop Reporting Service.

In October 1993, prices for 18% dairy feed in the Northeast, as reported by the USDA, were about the same as prices of a year earlier. Layer feed prices were $21 above the levels of a year earlier. In October 1993, prices of 44% soybean meal were about $26 per ton above levels of a year earlier.

	1993			1994		
Month	18% Dairy	44% SOM	Layer feed	18% Dairy	44% SOM	Layer feed
Jan.	186	262	186	_____	___	_____
Apr.	179	262	207	_____	___	_____
July	178	266	201	_____	___	_____
Oct.	181	278	210	_____	___	_____

Prices for soybean meal, dairy feed, and layer feed in the first half of 1994 are likely to be appreciably higher than the levels of the first half of 1993. Prices later in the eyar will depend on 1994 crop prospects.

Livestock Outlook for 1994

Stephen A. Ford and H. Louis Moore
Penn State University

The livestock outlook for 1994 shows continued trends in meat production, despite increases in feed grain prices. Corn prices should be significantly higher than in 1993 because of the poor crop year in much of the Midwest. USDA estimates of the corn crop are currently at 6.503 billion bushels, which will result in the smallest carryout since 1974. Soybean meal prices should trend downward from current levels, however, because of increased export activity around the world. There will also be a shortage of quality hay for cattle feed this year. Consequently, feed prices will increase for most livestock producers.

Meat supplies have increased each year in the 1990s. These supply increases have added competitive pressure to the various sectors of the industry. Most of the recent increases in production have come from poultry and pork (Figure 1). Despite increased feed prices, it is expected that total meat production will increase 4 percent again in 1994, primarily on the strength of poultry producers (Table 1). Beef production is also expected to increase 3 percent, while pork will show no change in production. Broiler production will continue to gain ground on beef production, increasing to over 22.8 billion pounds produced in 1994. Demand for meat should continue to keep pace with increased meat production as population increases, exports increase, and the economy recovers.

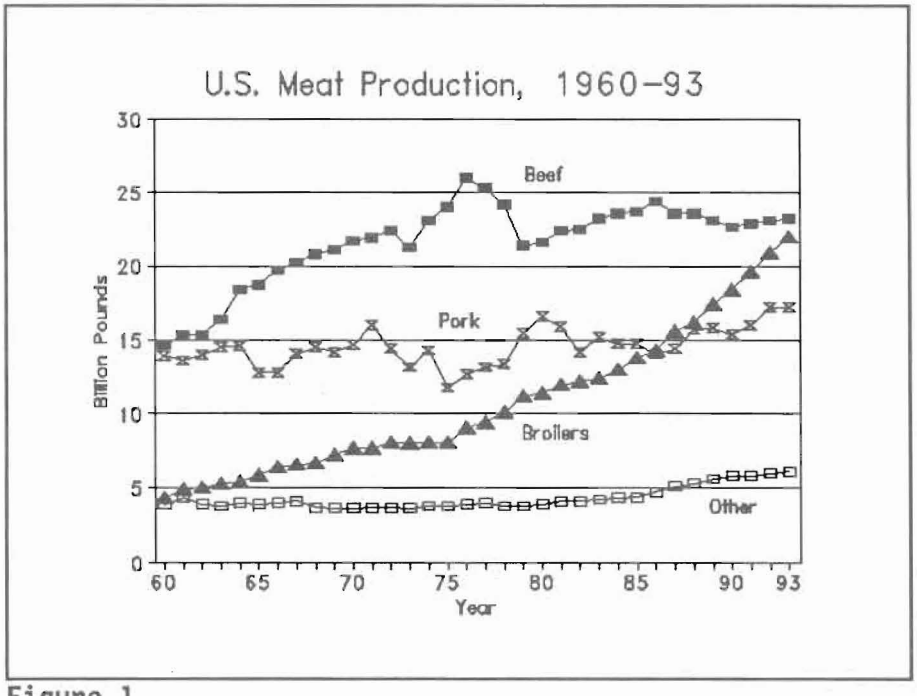


Figure 1

Table 1. Percentage Changes in Red Meat and Poultry Production from Previous Years

Meat	1990	1991	1992	1993	1994*
Beef	-1	1	1	0	3
Pork	-3	4	8	0	0
Lamb	5	0	-4	-1	-2
Veal	-8	-6	1	-8	-2
Poultry	7	5	6	5	4
Total	1	3	5	2	4

*Projected

Cattle

The midyear cattle inventory indicates that producers are expanding numbers in a very slow, conservative way. Total cattle numbers on July 1 were up just 1 percent from 1992 and 1991. Numbers have grown only 3 percent since the cyclical low was reached on July 1, 1990. The pace of expansion may be increasing in 1993 as the calf crop is up about 3 percent.

Favorable returns to cow-calf producers in recent years and through the next few years will probably encourage further expansion in beef herds. Beef cow numbers at 34 million head on July 1 were the largest for any midyear inventory since 1974.

After falling in the first half of 1993, beef supplies have been increasing and putting downward pressure on prices. Carcass weights have been increasing, resulting in more beef per animal. Beef supplies in 1994 will be about 3 percent above year earlier levels. The short term tightness in the supply of stocker cattle has supported feeder cattle prices and increases in feed grain prices.

The 13-state cattle on feed estimates from October 1 indicate a 9 percent increase in cattle on feed numbers over the same period in 1992 (Figure 2). These numbers support the slow expansion in the beef industry when the composition of the cattle on feed is examined (Table 2). The number of heifers on feed averages over 15 percent more than in 1992; a greater increase than that shown for steers. Potential replacements are being put on feed, rather than being used for herd expansion. In addition, fourth quarter beef slaughter cow numbers are expected to increase, further reducing cow numbers. An additional effect will be an increase in the price of processing beef, since beef cows slaughter at lighter weights than do dairy cows.

Cattle feedlot returns have also fallen during third quarter of 1993 (Figure 3) with losses in October of up to $9/cwt. Feedlot returns should continue to fall as feed prices increase through the next three quarters. However, increased holiday demand for beef should increase prices to improve profit margins.

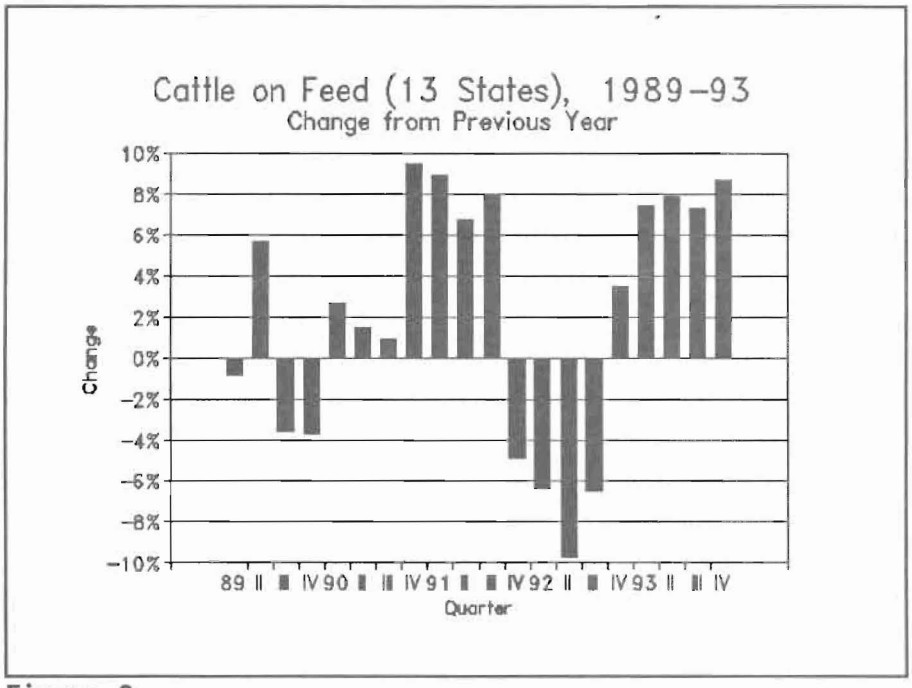


Figure 2

Table 2. 13-states Cattle on Feed, October 1 (percent of previous years)

1993 as a % of:	1991	1992
Steers	110	106
< 500 lbs	101	86
500-699	126	126
700-899	120	109
900-1099	108	100
1100 +	93	106
Heifers	118	115
< 500 lbs	192	142
500-699	140	110
700-899	121	116
900-1099	100	111
1100 +	120	133
Total	112	109

Beef exports have increased 10 percent in 1993 and are expected to increase even more in 1994 as the world economy improves. These would be record levels of beef exports.

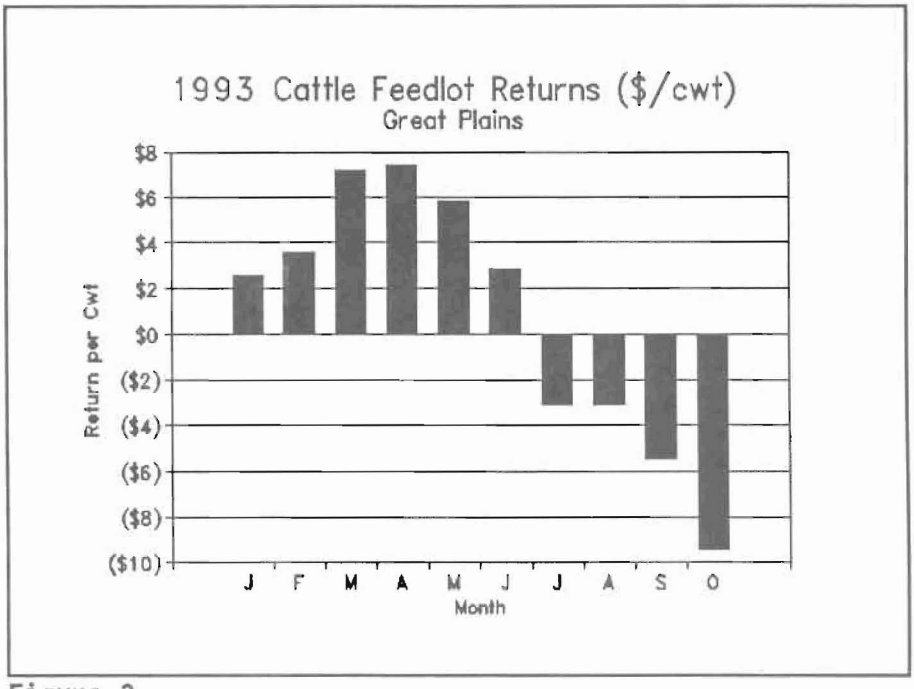


Figure 3

Pork

A fast pace of technological development in the hog industry has resulted in fewer farms producing record levels of pork. In the 1981-91 period the nation lost nearly 60 percent of its hog producers. Despite the sharp drop in operations with hogs, new records have been set in pork production in the 1991-93 period.

The September-November pig crop estimate showed no growth, based on the September 1993 intentions report. Producers will produce only enough hogs to support first-half 1994 hog slaughter at about the same level as 1993. The hog breeding inventory is down approximately 3 percent from the level in 1992 (Figure 4) which supports reported intentions.

Pork exports should increase from 1993 while imports will be unchanged. Hog prices in 1994 will average $46 to $48 per hundredweight, up slightly from the 1993 level. Yet, returns to North Central farrow-to-finish operations have been positive for most of 1993, while they were negative in 1992 (Figure 5). The level of returns should decrease, however, with increases in feed grain prices.

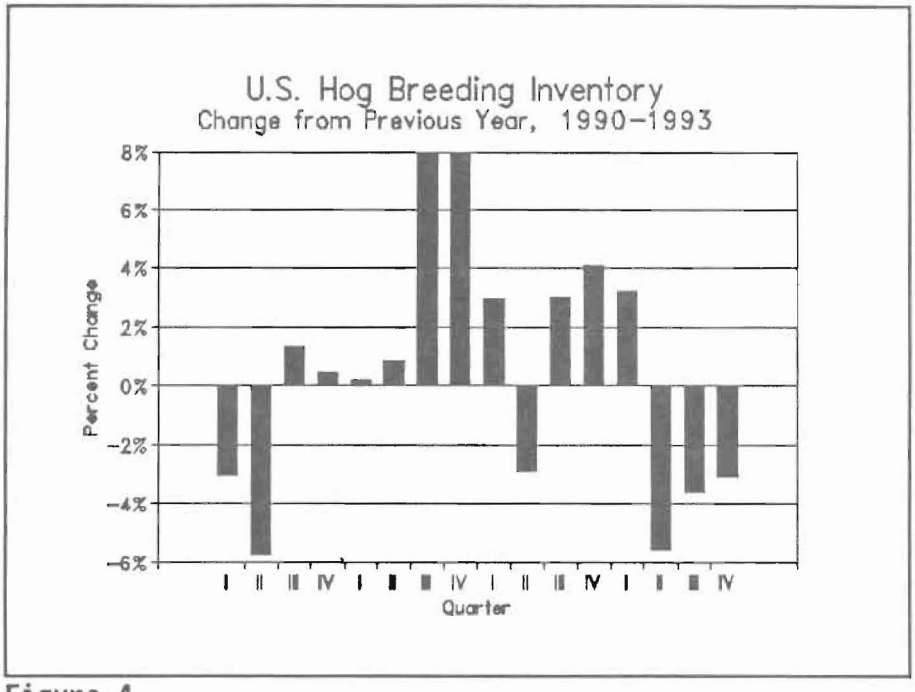


Figure 4

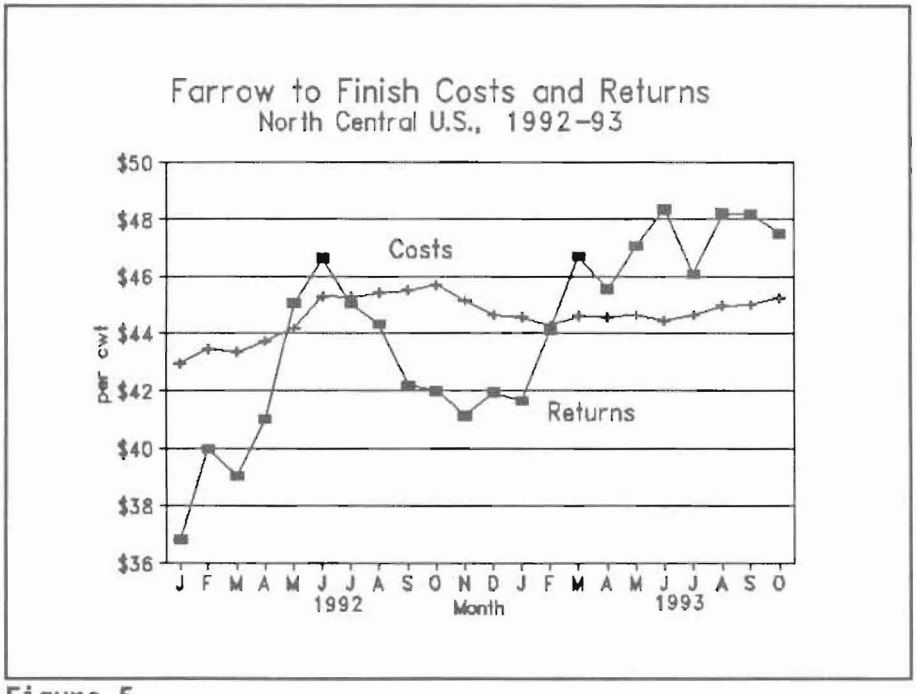


Figure 5

Poultry

All of the 1993 increase in meat production resulted from a 5 percent increase in broiler production and a 1 percent increase in turkey output. Strong export and domestic demand supported wholesale prices of broilers above those of a year ago, even with the sharp increase in production from 1992. Export sales will represent about 8 percent of production in 1993 compared to less than 5 percent as recently as 1989. Exports should continue to grow in 1994 with Hong Kong being the largest overseas market.

Broiler output, after years of sharp increases, is nearly equal to beef production (Figure 1). Broiler output in 1993 will reach 22.2 billion pounds compared to 23.0 billion pounds of beef. Increased feed costs will hurt the poultry industry some in the months ahead but returns should still be favorable, continuing the current expansion. Returns have averaged about 9 cents per pound through 1993 (Figure 6). Broiler production in 1994 is expected to increase 4 percent.

Turkey producers' returns have been less favorable than those for broiler producers in the last few years, and they have slowed their rate of expansion. Turkey output in both 1993 and 1994 is expected to be up just 1 percent annually. Although stocks of turkeys and turkey products are declining and exports are increasing, returns during the remainder of 1993 and in 1994 are expected to be slightly below break-even levels. Annual turkey consumption has been unchanged since 1991 at about 18 pounds per capita.

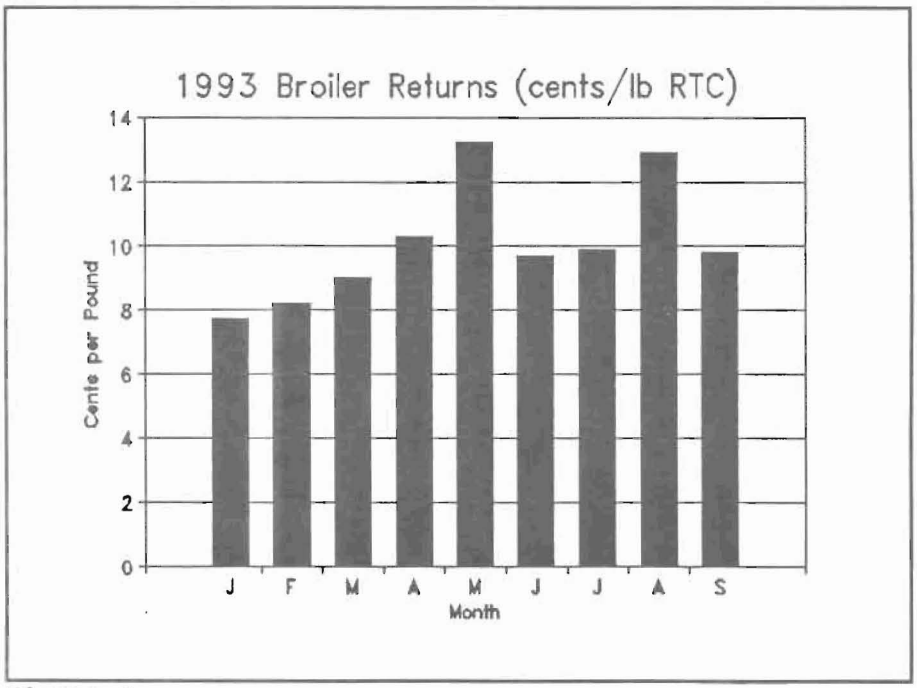


Figure 6

1994 DAIRY OUTLOOK

Overview

POSITIVE FACTORS

- Better balance in butter markets, reduced supplies
- Improved forage quality
- Increase in processor funded promotion

NEGATIVE FACTORS

- Lower Federal Order milk prices
- Higher feed costs

UNCERTAINTIES

- Response to bST by farmers and consumers

NEW YORK DAIRY SITUATION AND OUTLOOK
1991, 1992, Preliminary 1993, and Projected 1994

Item	Year				Percent Change	
	1991	1992	1993	1994	92-93	93-94
Number of milk cows (thousand head)	756	749	748	740	-0.1	-1.1
Milk per cow (lbs.)	14,787	15,463	15,310	15,620	-1.0[b]	+2.0
Total milk production (million lbs.)	11,179	11,582	11,452	11,559	-1.1[b]	+0.9
Blended milk price ($/cwt.)[a]	11.76	12.80	12.58	11.92	-1.7	-5.2
Index of prices paid by dairy farmers	172	173	176	182	+1.7	+3.4

[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 $11.71 for 1991; $12.67 for 1992; and $12.44 for 1993, assuming no refund.
[b] Adjusted for leap year in 1992.

Table 1. U.S. Milk Supply and Utilization, 1986-1994.

	1986[a]	1987[a]	1988[e]	1989	1990	1991	1992[b e]	1993[c]	1994[d]
Supply									
Cow Numbers (thous.)	10,773	10,327	10,262	10,126	10,127	9,990	9,839	9,726	9,608
Production/Cow (lbs.)	13,285	13,819	14,145	14,244	14,642	14,860	15,423	15,600	15,950
					(billion pounds)				
Production	143.1	142.7	145.2	144.2	148.3	148.5	151.7	151.7	153.2
Farm Use	2.4	2.3	2.2	2.1	2.0	2.0	1.9	1.9	1.9
Marketings	140.7	140.5	143.0	142.1	146.3	146.5	149.8	149.8	151.3
Beginning Commercial Stocks	4.5	4.1	4.6	4.3	4.1	5.1	4.5	4.7	4.6
Imports	2.7	2.5	2.4	2.5	2.7	2.6	2.5	2.6	2.6
TOTAL SUPPLY	148.0	147.0	149.9	148.9	153.1	154.2	156.8	157.1	158.5
Utilization									
Commercial Disappearance[a]	133.0	135.6	136.5	135.4	138.9	139.3	142.1	144.3	145.8
Ending Commercial Stocks	4.1	4.6	4.3	4.1	5.1	4.5	4.7	4.6	4.7
DEIP	--	--	--	--	--	0.7	1.5	1.3	2.0
Net Government Removals[a]	10.8	6.8	9.1	9.4	9.0	9.7	8.5	6.9	6.1
TOTAL USE	148.0	147.0	149.9	148.9	153.1	154.2	156.8	157.1	158.5

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

[a] Revised.
[b] Preliminary.
[c] Based on preliminary USDA data and Cornell estimates.
[d] Projected by Andrew Novakovic.
[e] Leap year.

The U.S. Dairy Situation and Outlook

Milk Supplies

National milk production broached 150 billion pounds for the first time in 1992 and is estimated to about equal last year's level of 151.7 pounds. Discounting for the extra day in 1992, this actually represents an increase in daily average production of 0.3%.[1] Although milk production grew at a faster rate during the first half of the year, during the second half it was below year earlier levels. This decline toward year-end is largely related to the extremely wet summer and poor harvest in most of the large dairy region in the Upper Midwest, very dry weather in the Southeast, and pockets of poor weather in the Northeast. Although the impact of the 1993 flood appears to have been less than feared when it began, it nonetheless did have impacts on homegrown feed supplies and purchased feed costs.

The estimated increase in production per cow of 1.4% (adjusted for the 1992 leap year) was almost completely offset by a decline of nearly 1.2% in the national dairy herd. Milk yields typically increase about 275 to 300 pounds per year on average; thus the 1993 increase is well below the norm.

Milk production in the important Upper Midwest region was once again hard hit in 1993, next year will be the first year since about the beginning of World War I that Wisconsin will not be the leading milk-producing state. While in many ways, the ranking of states in milk production is not terribly important, the dethroning of Wisconsin has generally hit that state's dairy industry morale very hard and is widely regarded as an important symbol of the changes that have been transforming the shape and character of the nation's dairy industry.

Although milk production has been strong along the West Coast for many years, persistent drought slowed production growth in California last year and before. The drought is over and as the land heals and reservoirs recover, California production grew at a rate of about 3.5%. Although this is about half its historical average, the size of next year's number one state assures that this is a considerable quantity of milk. California analysts believe that the growth in 1993 was higher in part because of the very favorable weather they experienced while the Midwest was being flooded. Milk production growth has typically been rather strong in the other large western dairy state--Washington, and its growth rate of a little over 6% this year was higher than expected. Although below last year's 8% level, milk producers in the number eight state also benefitted from favorable weather during summer and fall.

Texas milk production gained national attention int he late 1980s when milk production boomed and rapidly moved Texas to the number six position in milk production. Since 1991, production growth has generally leveled, but in 1993 Texas once again gained attention as the most rapidly growing of the top ten dairy states. Its growth of about 6.6% puts it slightly ahead of the rate of gain in Washington, the only two of the top ten states to experience a rate of gain greater than California's.

The northeastern dairy states fared little better than the Upper Midwest in 1993. New York, the number three state, declined less than 1%. Pennsylvania, although remaining solidly in fourth place, saw total milk production decline by about 1.5%. Vermont, which ranks about fifteenth and represents half of the important New England region, dropped at about the same rate as New York.

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[1]Percentage changes in all 1993 quantities are adjusted for leap year. In effect, the percentages are expressed on a daily average basis. The extra day in 1992 means that the unadjusted percentage annual changes for 1993 are about 0.3% lower.

Milk Utilization

Available estimates of the commercial disappearance of all dairy products indicate that "sales" are up a little less than 2% in 1992.[1] Higher sales are reported in all major product categories except fluid milk, nonfat dry milk, frozen desserts, and cottage cheese.[2]

With butter prices falling markedly due to repeated cuts in the federal purchase price for butter, butter sales are projected to be up some 8%. Although natural cheese sales are up 1 to 2%, it is noteworthy that their rate of gain is a third or less of the growth witnessed in most of the 1980s. Nonfat dry milk sales are heavily influenced by export opportunities and can show fairly large swings from one year to the next. although the nearly 30% decline in powder usage is a concern, prices for powder remain above the federal support level and there have been no sales of surplus to USDA.

The decline in frozen desserts is consistent with recent historical patterns--lowfat ice creams (ice milk) and frozen yogurt are showing substantial growth and ice creams (except the super premiums) are down. The net result is a relatively flat to slightly declining frozen dessert category.

Of particular concern this year is the decline in fluid milk sales of 1% or more. For a long time the steady, predictable decline in whole milk sales has been more or less offset by increases in sales of 2% milk, such that the total category has shown modest growth since 1982. In 1993, we saw for the first time a decrease in 2% milk sales. Although coupled with a substantial percentage increase in skim milk sales, it appears that more consumers are choosing other beverages rather than simply shifting to a yet lower fat milk.

The Dairy Price Support Program

Of all the data in Table 1, the most accurate is net removals, i.e., how much dairy products are sold to the USDA under the price support program. Even this number bears some interpretation though. First, like the other numbers, it is a milkfat based milk equivalent. As has been true for the last four years, sales to USDA of surplus product have been almost exclusively of butter. In 1993, sales of surplus product will pounds aggregate to about 6 billion pounds of milk on a milkfat basis; but this aggregate measure fails to reflect the fact that skim solids are not part of this surplus.

In the fiscal year which ended on 30 September 1993, USDA reported net removals of 346 million pounds of butter, 16 million pounds of cheese, and 355 million pounds of nonfat dry milk--*8.1 billion pounds of milk on a milkfat basis and 4.7 billion pounds on a skim solids basis.* Of these quantities, 53 million pounds of butter (15.3%), 11 million pounds of cheese (72%), and 338 million pounds of nonfat dry milk (95%) were exported under DEIP. In addition to these reported net removals, 62 million pounds of cheddar and mozzarella were purchased for domestic food programs, all at market prices through a competitive bid process. Compared to 1992, there were some (albeit small) sales of cheese as a surplus product, and DEIP sales of powder were high enough to push reported net removals on a skim solids basis much closer to the fats basis milk equivalent.

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[2]When reviewing USDA's commercial disappearance data, it is always good to keep two characteristics of this estimate in mind. first of all, USDA has to express dairy product sales on some kind of milk equivalent basis and the standard measure continues to be a milkfat equivalent. thus, the commercial disappearance estimates essentially measure aggregate milkfat sales. Not surprisingly, sales on a skim solids basis have shown greater growth rates in recent years. Sales on a dollar basis, which are a combination of growth in volume and inflation, would also show a somewhat different growth pattern.

Second, commercial disappearance is not directly estimated from product sales data. Rather, USDA estimates production, imports, changes in commercial inventories, and sales to the government under the price support program to determine how much of the nation's milk supply ended up in commercial channels after changes in inventories are taken into account. An error in any one of the component parts will also cause an error in the estimate of commercial disappearance.

Milk Prices

As shown in Table 2, milk and dairy product prices were a mixture of up and downs in 1993. The **national average milk price** is estimated to be down 2.7%, or 35¢/cwt. Monthly prices never seriously exceeded year earlier levels, and 1993 prices were lower early in the year and during the summer and early fall. Once again, "normal" seasonal patterns were defied in 1993, as we saw a rare double peak (or double bottom), with prices peaking in June and then again at the end of the year. This price pattern shows the roller coaster reaction to fairly small changes in the market's perception of supply and demand balance, particularly prior to the Midwestern flooding and afterwards.

The cheese market continues to be one of, if not the most critical subsector in determining the overall tone of dairy product markets. **Wholesale prices of cheese** declined through most of the 1980s, then increased dramatically (12%) in 1989. By 1991, cheese had returned to its 1988 level but recovered most of that decline in 1992. For 1993, an average price for 40# blocks of cheddar cheese on the National Cheese Exchange is estimated at $1.29 per pound, comparable to the 1992 average. Like milk prices, cheese had an unusual, double-peak pattern in 1993. January and February prices were in the vicinity of $1.16-$1.17. The monthly average NCE price peaked in May at $1.39 and proceeded to fall to the low $1.20s through the summer. At year end, prices recovered to a weekly high of about $1.35. Monthly wholesale price fluctuations notwithstanding, **retail prices** are estimated to be unchanged on average compared to 1992.

Cuts in the USDA's purchase price for **butter** continue to be reflected in **significantly declining wholesale and retail prices**. The price of block, grade A butter on the Chicago Mercantile Exchange is estimated at about 74¢/lb for 1993, 8¢ below the 1992 market average. Since USDA began dropping its purchase price for butter in 1983, market prices have been chasing the purchase price downward. In 1992, wholesale markets began to show a little resilience above the federal level, and in 1993 this phenomenon was even more prevalent. The important implication of this is that we may have finally reached a low enough butter price for markets to clear without massive government purchases of surplus. Contrary to conventional skepticism about retail pricing practices, retail prices for butter have followed wholesale prices down. In 1993, the average butter price is about 17¢ lower than the year before. Since 1987, retail butter prices have declined 30%.

As USDA has pushed its purchase price for butter down, the price for nonfat dry milk has increased. Following a 14% increase in 1992, wholesale market prices for **nonfat dry milk** averaged over 4% higher in 1993, maintaining a level 12¢ above the USDA purchase price. Most analysts credit the sales of nonfat dry milk through the Dairy Export Incentive Program as a critical factor in putting the market price so far above the support level; however, it also bears noting that DEIP sales were less important in 1993.

Department of Labor data indicate that, overall, **retail dairy product prices** increased a modest 0.6% in 1993, substantially below the 2% inflation rate for all food prices and the 3% inflation rate estimated for all consumer products. Fluid milk prices increased at a greater rate, just under 2%, while cheese held steady and butter prices declined.

Dairy Policy in 1993 and Beyond

Federal dairy policy has three major components--the Dairy Price Support Program (DPSP), Dairy Import Quotas (DIQ), and Federal Milk Marketing Orders (FMMOs). A number of other programs, such as the Dairy Export Incentive Program (DEIP) play an important but smaller role.

Legislation passed in 1990 establishes the parameters of the DPSP and related programs. **Existing policy requires that USDA charge farmers 11¼¢/cwt of milk marketed beginning on January 1, 1994.** Just as was the case in 1993,

in early 1994 farmers will be able to claim a refund of their 1993 assessment if their 1993 marketings do not exceed their 1992 marketings. Probably on April 1, the 1994 assessment will be increased to recoup the refunds of 1993 money. In essence, the producers who increase marketings in 1994 will pay for the refunds of those who cut back in 1993. The average assessment for 1994 is estimated at about 17¢/cwt. This compares to an average assessment in 1993 of 15¢/cwt.

Beyond this, no other changes in the DPSP are mandated. USDA may make further cuts in its purchase price for butter, with a compensating increase in the nonfat dry milk price. Given that market prices for butter have held above the last cut in the purchase price and that sales of surplus butter to USDA stopped in the last quarter of 1993, it may be that USDA will hold off on any more cuts.

Although no unilateral changes in U.S. import quota policy are expected, the approval of the North American Free Trade Agreement (NAFTA) will lead to gradual changes in the trade relationship between the U.S. and Mexico. Many industry members believe there are substantial export opportunities for the U.S.; however, there are some who are concerned that NAFTA loopholes will allow Mexico to become a back door to the U.S. for dairy products made elsewhere in the world. Neither extreme seems very probable, but legitimate export opportunities certainly exist, and the industry would be wise to keep a sharp lookout for any abuse of loopholes.

Several significant changes to federal milk marketing orders have occurred, are in the process, or are being proposed.

In 1992, a hearing process was initiated to consider changing the way milk is priced when it is used to make nonfat dry milk and butter. After several fits and starts, including some court battles, by the end of 1993 USDA recommended that most federal orders adopt a new "class IIIa" pricing system in which milk used to make nonfat dry milk (but not butter) was priced on a formula based on wholesale prices for nonfat dry milk and approximations of yield and manufacturing costs. The intent is to derive a cost of milk that approximates what powder manufacturers can afford to pay. Theoretically, this could be greater than the regular class III price, which is the M-W price, and in fact there have been a few months where the class IIIa price was above the M-W. More likely it will typically run below the M-W and there will be months when it is significantly below. Of course, a lower class IIIa price also means a lower blend price for producers. In orders where nonfat dry milk is a small part of the overall usage of milk, or when the IIIa price is close to the class III price, the effect will be minimal. But, in some orders, most notably the Pacific Northwest, the effect is not trivial. In addition, cheese makers will be concerned to see how the near guarantee of a margin in powder-making will affect their ability to attract milk to cheese plants.

Indeed, all class prices will be calculated from a new basic formula price once USDA completes its decision on a replacement for the M-W price. The hearing to replace the M-W was completed in 1992 M-W was completed in 1992 and all that remains is for USDA to issue a recommended decision and, ultimately, a final decision, which producers will have to approve. As with all federal order decisions, failure to approve a final decision results in the termination of the order. It is an all or nothing vote in which maintaining the *status quo ante* is not an option.

In recent years, a number of order areas have adopted multiple component pricing. In 1993, the Eastern Ohio-Western Pennsylvania, Ohio Valley, and Indiana Orders joined the Great Basin (Utah area) and Middle Atlantic Orders and added, for the first time, a federal order pricing program that includes payments based on somatic cell counts. Other midwestern orders are working on their own proposals, and there have been tentative discussions in the New England and New York-New Jersey markets.

As part of the 1990 farm bill, Congress instructed USDA to promulgate regulations which would prevent states from using pricing programs that allowed their processors to buy milk at prices substantially below the minimums required under federal milk marketing orders. Although not limited to California, this action was largely inspired by the fact that California's classified pricing system uses a product price and manufacturing cost approach to calculate prices for milk used in the manufacture of cheese, butter, and nonfat dry milk. The resulting California class 4a and 4b prices are typically well below federal order class III prices, which are derived from the M-W price. The so-called section 102 mandate was expected to result in changes in 1991, but, at the end of 1993, USDA finally issued a draft regulation. The adoption of class IIIa pricing, which makes federal orders more like the California system, at least with respect to the pricing of milk used to make powder, is largely responsible for a regulation that will simply result in prices under state-regulated systems that have to match federal order class III and IIIa prices. When it is finally adopted, this will have important ramifications for California and may even have a small effect in Western New York.

Outlook

As shown in Table 1, for 1994 we estimate milk production and commercial disappearance to increase a modest 1%, resulting in a slight increase in net removals and/or DEIP sales. Despite this seemingly modest difference in the supply/demand balance, we expect milk prices to decline about 50¢/cwt on average. (We forecasted a similar change for 1993 prices in our 1992 outlook, and prices actually declined about 35¢/cwt.) Many other forecasters are less bullish and project prices to be essentially unchanged, on average.

The wild card all forecasters are playing with this year is BST. Bovine somatotropin, or specifically Posilac™--the product developed and marketed by Monsanto--was approved in early November, 1993 and will be available for purchase beginning February 2, 1994. With some analysts doubtful of any large effect, or at least doubtful of much happening in 1994, and other people envisioning rampant production growth and/or huge drops in demand because of consumer food safety concerns, it is hardly easy to forecast how this might affect milk prices in 1994. The best case scenario is that total production effects are modest, consumer reaction is limited to a very small group of people, and prices are largely unaffected. As shown in Table 1, we do not anticipate a large impact on either total production or commercial sales; however, our forecast assumes that there will be some affect that will erode prices to near support levels early in the year. Production may be slightly higher and fluid milk demand, in particular, might be slightly, maybe even only temporarily, affected. It also assumes that rumor and speculation may well play a role in moving prices beyond what straightforward market signals would dictate.

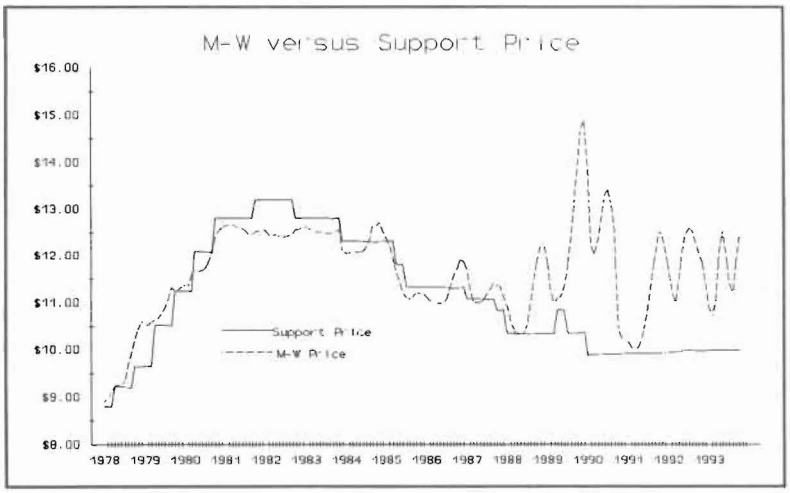


Table 2. National Farm Prices for Milk; CCC Purchase, Wholesale, and Retail Prices for Cheddar Cheese, Butter, and Nonfat Dry Milk; and Selected Retail Price Indices, 1986-1993.

	1986	1987	1988	1989	1990	1991	1992[a]	1993[b]
Farm Milk ($/cwt.):								
All Milk (ave. fat)	12.51	12.54	12.26	13.56	13.74	12.27[a]	13.15	12.80
M-W (3.5%)	11.30	11.23	11.03	12.37	12.21	11.05	11.88	11.73
Support (3.5%)	11.31	11.00	10.33	10.47	9.89	9.90[a]	9.96	9.98
Milk Price:Concentrate Value	1.79	1.84	1.58	1.65	1.72	1.58	1.69	1.64
Assessment	.36	.19	.03	.00	.01	.05	.13	.15
Cheddar Cheese, Blocks ($/lb.):								
CCC Purchase	1.250	1.219	1.1525	1.166	1.111	1.110	1.116	1.119
Wholesale, National Cheese Exchange	1.260	1.213	1.210	1.350	1.315	1.204	1.282	1.287
Butter ($/lb.):								
CCC Purchase, Grade A or higher, Chicago	1.398	1.373	1.320	1.263	1.017	.983	.807	.708
Wholesale, Gr. A, Chicago Merc. Ex.	1.437	1.393	1.316	1.269	1.006	.983	.815	.738
Retail, Grade AA, sticks (1 lb.)	2.151	2.170	2.158	2.133	1.992	1.935	1.830	1.662
Nonfat Dry Milk,								
Extra Grade, Unfortified ($/lb.):	.808	.783	.728	.774	.831	.850	.948	1.002
Wholesale, Central States	.806	.793	.802	1.055	1.006	.942[a]	1.072	1.120
Retail Price Indices (1982-84=100.0):								
Whole Milk	101.7	103.6	106.0	114.3	126.7	122.4	126.4	128.6
Cheese	103.5	105.9	109.2	117.6	131.2	132.8	135.5	135.4
All Dairy Products	103.3	105.9	108.3	115.6	126.5	125.1	128.5	129.3
All Food	109.0	113.5	118.2	125.1	132.4	136.3	137.9	140.7
All Consumer Prices	109.6	113.6	118.3	124.0	130.7	136.2	140.3	144.5

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

[a] Revised.
[b] Estimated by Andrew Novakovic from federal data for part of the year.

Number of Producers Delivering Milk
Northeast Federal and State Marketing Orders*
1987-1993

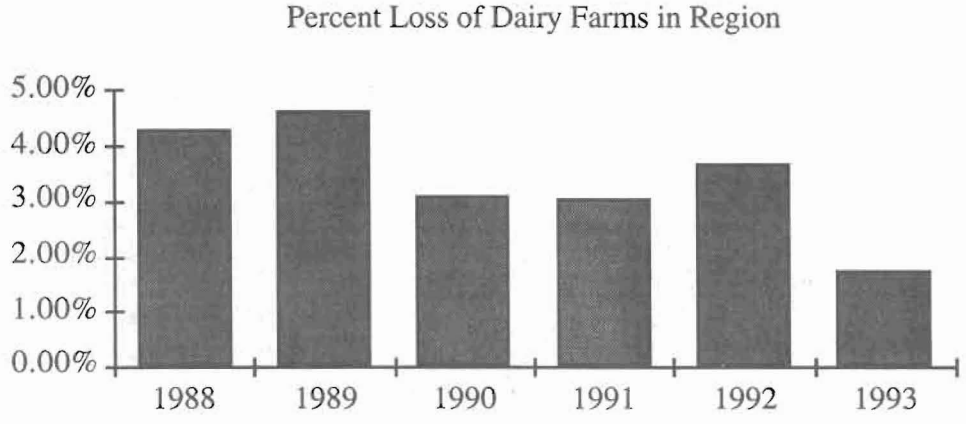
Markets	1987	1988	1989	1990	1991	1992[a]	1993[b]
New York-New Jersey	14731	13954	13570	13261	12730	12290	11988
New England	5412	5182	4934	4893	4795	4511	4443
Middle Atlantic	6406	6196	5741	5509	5458	5406	5449
E. Ohio-W. Pennsylvania	5605	5478	5175	4889	4685	4432	4303
Western New York	1088	997	919	853	838	822	807
Regional Total	33242	31807	30339	29405	28506	27461	26990

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 3.75% over the period from 1987-1992. In 1993, farm loss is projected to be a low 1.7% from 1992 numbers. Much of the difference in farm loss is explained by the rebound of milk prices in 1992 over the low prices experienced in 1991. Farm loss is influenced by milk price with about a one-year lag. For this reason, the loss of producers in 1994 is expected to be near the long-term trend as milk prices have changed little from year earlier levels.



Receipts of Milk from Producers by Regulated Handlers, Million Pounds
Northeast Federal and State Marketing Orders
1987-1993

Markets	1987	1988	1989	1990	1991	1992[a]	1993[b]
				(million pounds)			
New York-New Jersey	11339	11222	11096	11125	11075	11254	11430
New England	5173	5118	4975	5114	5309	5478	5357
Middle Atlantic	6281	6199	5908	5899	6222	6543	6358
E. Ohio-W. Pennsylvania	3842	3920	3687	3547	3517	3622	3447
Western New York	1304	1283	1207	1199	1228	1273	1117
Regional Total	27939	27742	26873	26884	27351	28170	27709

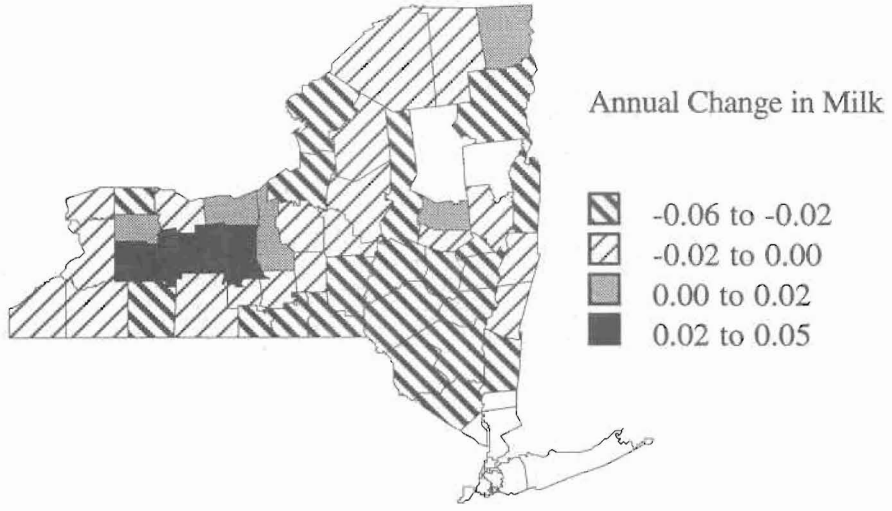
Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

[a]Revised.
[b]Projected (adjusted for leap year).

Milk production in the federal and state orders was little different in 1992 than it was in 1987. During 1993, poor quality feed caused a reduction milk per cow and resulted in a 1.6 percent decline in milk marketings from 1992. The Western New York order led the decline in receipts with a loss of 12%. This does not reflect an actual loss of milk production but largely is the result of plants being pooled under a different order.

Although trends in New York indicate little change in total milk production in recent years, there have been shifts in production within the state. The map below shows substantial losses in the Eastern Plateau region with the largest growth area being portions of the Western andCentral Plains.

For 1994, the regional shifts in production are expected to continue with a recovery in total pounds of milk produced. Next year should see more than a 1 percent increase over 1992 marketings.



Producer Milk Used in ClassI by Regulated Handlers, Million Pounds
Northeast Federal and State Marketing Orders
1987-1993

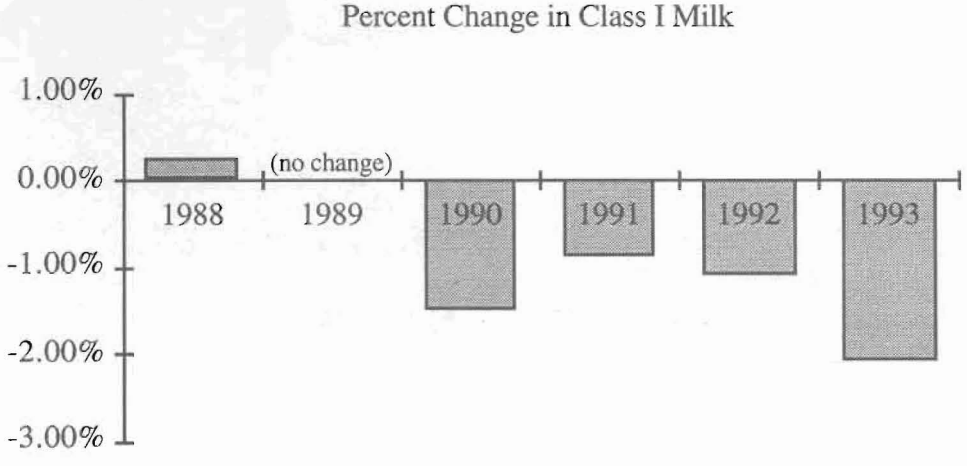
Markets	1987	1988	1989	1990	1991	1992[a]	1993[b]
				(million pounds)			
New York-New Jersey	4606	4607	4587	4487	4477	4434	4580
New England	2813	2815	2811	2810	2746	2686	2630
Middle Atlantic	3152	3084	3109	3131	3155	3143	2865
E. Ohio-W. Pennsylvania	2023	2052	2033	1927	1872	1866	1807
Western New York	427	495	513	501	492	472	455
Regional Total	13021	13053	13053	12856	12742	12601	12337

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

[a]Revised.
[b]Projected (adjusted for leap year).

A disturbing trend in fluid milk consumption is per capita sales. While population in the federal and state order areas shown above has increased at a pace of about 0.5% annually, fluid milk sales in the orders has declined about 1.0% annually (see chart below). 1993 was an exception with an unusually large decline of more than 2.0%. Federal Order #2 (New York-New Jersey) was an exception to this trend with an increase in Class I sales of more than 3 percent but this is more due to plants pooling in different orders than intra-regional trends in consumption.

Federal and state order projections point to a decline of 0.75% in fluid sales for the region in 1994. The projected increase in total receipts in the region coupled with the decline in fluid sales suggests a decrease in Class I utilization from 44% in 1993 to 43% in 1994.



Minimum Class I Prices for 3.5% Milk
Northeast Federal and State Marketing Orders
1987-1993

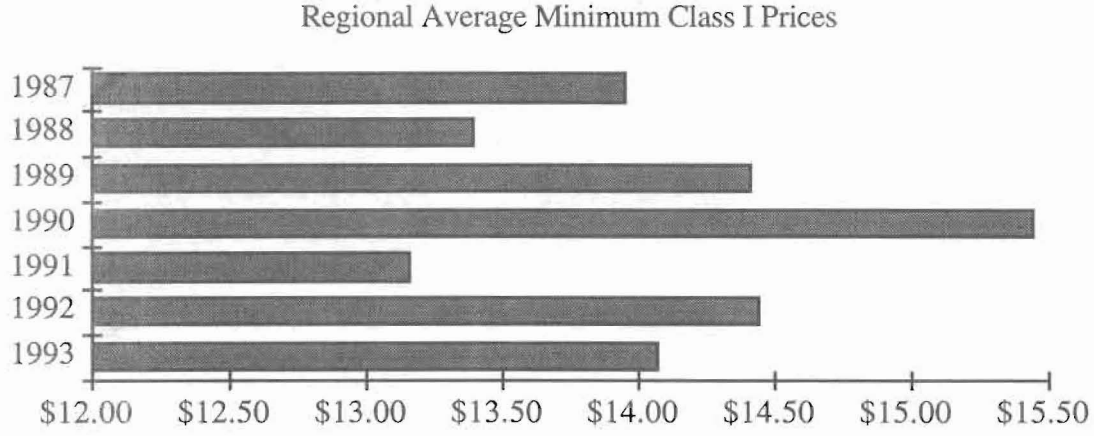
Markets	1987	1988	1989	1990	1991	1992	1993[a]
				($/cwt)			
New York-New Jersey[1]	13.89	13.41	14.49	15.52	13.16	14.41	14.04
New England[2]	13.86	13.38	14.46	15.49	13.23	14.51	14.14
Middle Atlantic[3]	14.37	13.89	14.97	16.00	13.74	15.02	14.65
E. Ohio-W. Pennsylvania[3]	13.34	12.86	13.94	14.97	12.71	14.00	13.64
Western New York[3]	14.35	13.45	14.24	15.27	13.00	14.29	13.92

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

[a]Projected.
[1]201-210 mile zone.
[2]21st zone.
[3]Priced at major city in the marketing area.

In 1993, minimum Class I prices did not reach the heady days of 1990 but neither did they plunge to the lows of 1991. The average regional decline of 37¢ per cwt in 1993 reflects changes in the Minnesota-Wisconsin basic formula price throughout the year. The annual average Class I price would have been much lower if the M-W had not experienced an unusual surge in May. This phenomenon has provided a "double peak" in 1993 with the biggest Class I price of the year occuring in July. The second and lower peak in Class I prices will be observed in December of 1993.

Because Class I prices are directly tied to the M-W price, the 1994 forecast depends on the ability to predict the basic formula price. Many seers have differing ideas about the size of 1994 change in prices but nearly all agree on the direction...Class I prices will be down next year.



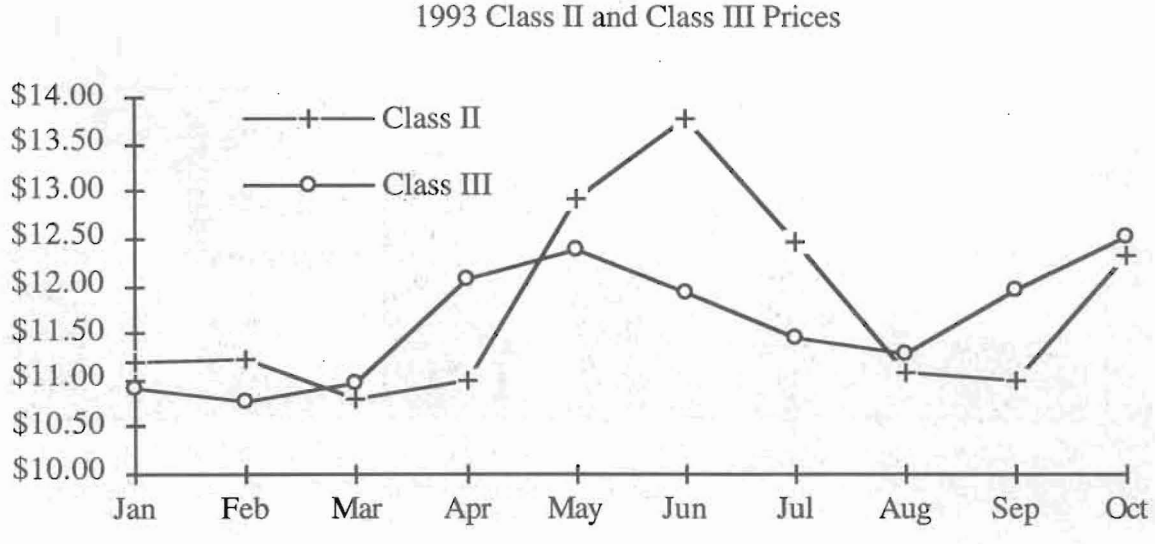
Minimum ClassII/III Prices for 3.5% Milk
Northeast Federal and State Marketing Orders
1987-1993

Markets	1987	1988	1989	1990	1991	1992	1993[a]
				($/cwt)			
New York-New Jersey[1]	11.23	11.03	12.37	12.21	11.06*	11.88	11.73
New England[2]	11.23	11.03	12.37	12.21	11.06*	11.88	11.73
Middle Atlantic[3]	11.25	11.05	12.39	12.23	11.08*	11.90	11.78
E. Ohio-W. Pennsylvania[4]	11.23	11.03	12.37	12.21	11.06	11.88	11.78
Western New York[3]	11.18	10.98	12.32	12.16	11.01	11.83	11.73

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

*Class II price prior to April 1, 1991, Class III price effective April 1, 1991.
[a]Projected.
[1]201-210 mile zone.
[2]21st zone.
[3]Class II in a two-price system, priced at major city in the marketing area.
[4]ClassIII.

On April 1, 1991, the New York-New Jersey, New England, and Middle Atlantic federal marketing orders changed to a three-class price system. The Class II price formula was calculated to provide advanced pricing for processors (they would know what they would pay for milk before it was purchased). A problem with the soft product formula is that while it provides advanced pricing for processors it also can provide prices that are more volatile than even the M-W (Class III) price. The chart below shows the exagerated price movements during 1993. Class II/III prices are important to New York as more than half of the milk sold in the state is use for soft and hard product processing. Expectations for 1994 are that these prices will be lower (see M-W projections)



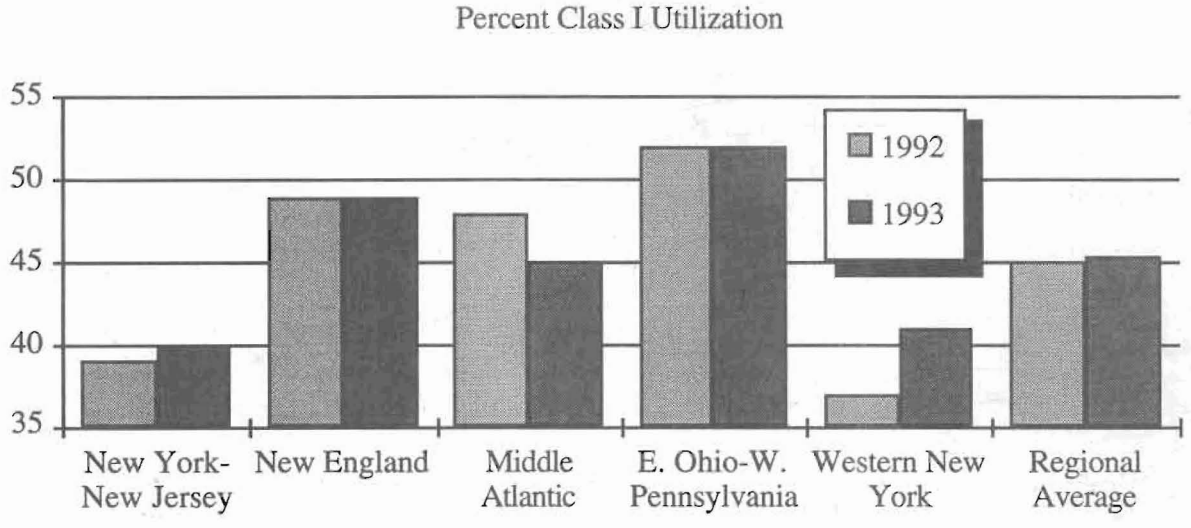
Minimum Blend Prices for 3.5% Milk
Northeast Federal and State Marketing Orders
1987-1993

Markets	1987	1988	1989	1990	1991	1992	1993[a]
				($/cwt)			
New York-New Jersey[1]	12.18	11.83	13.10	13.44	11.79	12.81	12.58
New England[2]	12.56	12.20	13.45	13.95	12.07	13.08	12.74
Middle Atlantic[3]	12.84	12.44	13.75	14.27	12.45	13.49	13.06
E. Ohio-W. Pennsylvania[3]	12.37	11.97	13.24	13.84	11.95	13.01	12.80
Western New York[3]	12.22	11.94	13.04	13.46	11.77	12.69	12.62
Regional Average	12.43	12.08	13.32	13.79	12.01	13.02	12.76

Source: Annual Federal Milk Order Market Statistics and Annual Statistical Reports for State Orders.

[a]Projected.
[1]201-210 mile zone.
[2]21st zone.
[3]Priced at major city in the marketing area.

The minimum blend price is the best reflection of the price paid to farmers. It comprises the changes in class usage and the basic formula price, both of which have been moving over time. In 1993, the regional average blend price declined by 26¢ or about 2 percent from 1992. This average decline masks the actual changes in the individual orders. The New York-New Jersey order experienced a price decline closely resembling the regional average. In contrast, the Middle Atlantic order's decline of 43¢ was off more than 3 percent from 1992 levels. Almost all of Middle Atlantic's decline is explained by a loss of Class I utilization from 48 to 45 percent. For the New York-New Jersey order, the blend price is projected to be down a further 63¢ in 1994, under the assumption that the basic formula price (M-W) will face substantial downward pressures.



*1993 projected

N.Y.-N.J. Blend Price, 3.5% M.F., 201-210 Mile Zone, 1987-1993

Month	1987	1988	1989	1990	1991	1992*	1993*
January	$12.76	$12.03	$12.95	$15.17	$11.11	12.97	12.19
February	12.42	11.80	12.55	14.22	10.99	12.52	11.93
March	11.92	11.29	11.95	13.45	10.90	11.88	11.77
April	11.55	10.92	11.59	12.75	10.81	12.27	12.19
May	11.30	10.71	11.42	12.83	10.84	12.36	12.72
June	11.35	10.66	11.62	13.25	11.04	12.93	13.11
July	11.96	11.31	12.38	14.02	11.59	13.16	12.85
August	12.44	12.03	13.29	14.43	12.04	13.36	12.33
September	12.75	12.50	14.00	14.27	12.45	13.46	12.47
October	12.80	12.94	14.67	13.10	13.01	13.24	12.83
November	12.69	13.18	15.28	12.52	13.32	12.94	13.17**
December	12.21	13.07	15.47	11.23	13.34	12.57	13.19**
Average	12.18	11.87	13.10	13.44	11.79	12.81	12.56**

*The seasonal incentive plan was suspended for 1992; the amount withheld in March was repaid in April and the plan was suspended for the remainder of the year.

**Projected

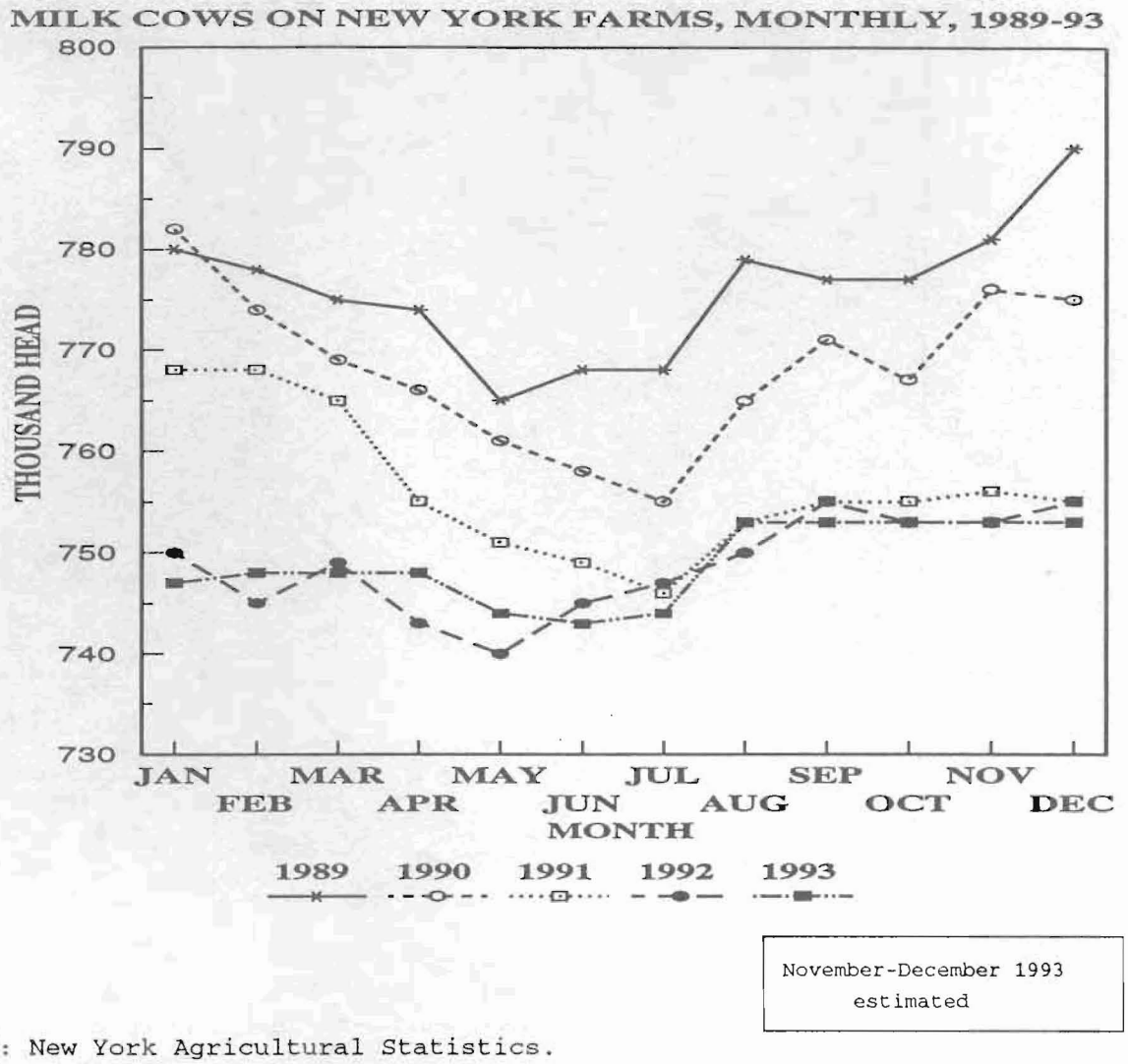
Source: Price Announcements, Office of the Administrator, New York-New Jersey Milk Marketing Area.

MILK PRICE PROJECTIONS
New York-New Jersey Blend Price, 3.5 Percent, 201-210 Mile Zone
Last Quarter 1993 - 1994

Month	1992	1993	Difference
		(dollars per hundredweight)	
October	13.24	12.83a	-0.41
November	12.94	13.17p	-0.23
December	12.57	13.19p	-0.62
Fourth Quarter Average	*12.92*	*13.06*	*+0.14*
Annual Average	***12.81***	***12.56p***	***-0.25***
	1993a	1994f	
		(dollars per hundredweight)	
January	12.19	12.84	+0.65
February	11.93	12.20	+0.27
March	11.77	11.74	-0.03
First Quarter Average	*11.96*	*12.26*	*+0.30*
April	12.19	11.29	-0.90
May	12.72	11.14	-1.58
June	13.11	11.24	-1.87
Second Quarter Average	*12.67*	*11.22*	*-1.45*
July	12.85	11.49	-1.36
August	12.33	11.71	-0.62
September	12.47	12.08	-0.39
Third Quarter Average	*12.55*	*11.76*	*-0.79*
October	12.83	12.26	-0.57
November	13.17	12.52	-0.65
December	13.19	12.48	-0.71
Fourth Quarter Average	*13.06*	*12.42*	*-0.64*
Annual Average Blend Price	**12.56**	**11.92**	**-0.64**

*=blend price less government assessment
a=actual; p=projected; f=forecasted.

Forecast by Mark W. Stephenson, 12/93



SOURCE: New York Agricultural Statistics.

During 1993, monthly cow numbers have been below the entire period from 1985 through 1991 and closely followed the 1992 monthly cow numbers. 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 May 1992, the number of cows totaled 740,000, 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 first three quarters of 1993 compared to 1992. In the third quarter of 1993, the number of cows in the U.S. averaged 9,710,000. That is 116,000 head less than a year earlier. The Northeast[1] comprised 18.8 percent of total U.S. milk cows or 1,824,200 head in the third quarter of 1993. This is 400 head more than a year earlier. The Northeast did not contribute to the 1992 to 1993 third quarter U.S. decrease in cow numbers of 1.2 percent.

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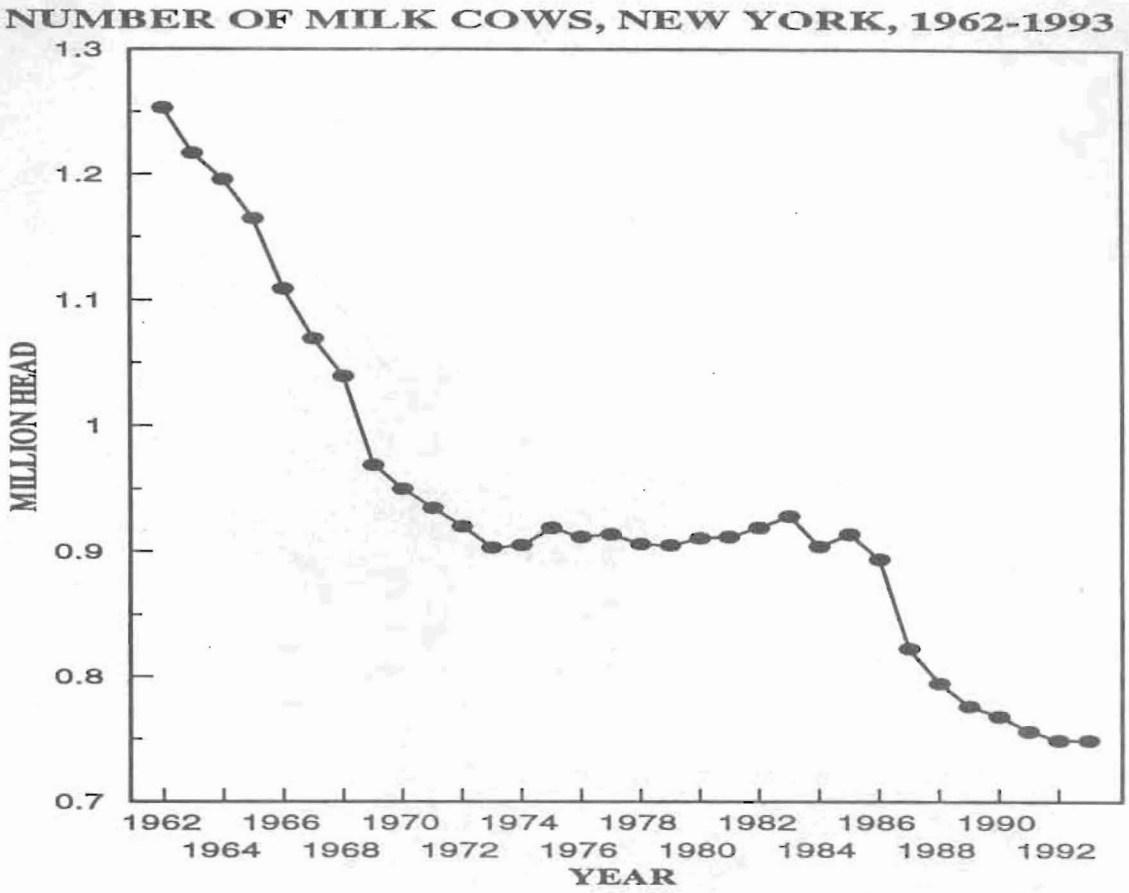
[1]Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.



SOURCE: New York Agricultural Statistics.

The average number of milk cows on New York farms for 1993 is estimated at 748,000 head, which is down only 1,000 head from 1992. The projected average number of cows for 1994 is 740,000, or down 1.1 percent from 1993.

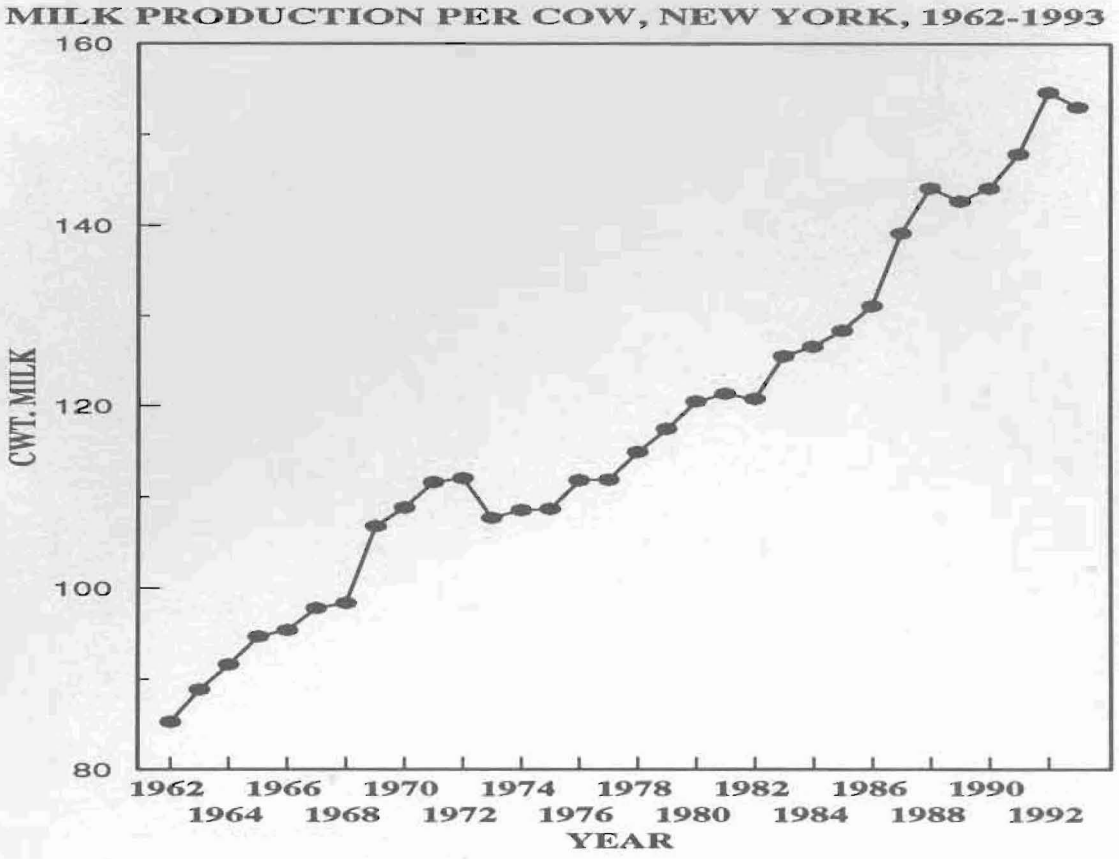
Heifers on New York farms as a percent of cow numbers on January 1, 1993 increased 1.6 percentage points from 1992, to 42.9 percent. At 324,000 head, milk cow replacement heifers were at the highest level in six years.

Heifers on U.S. farms as a percent of cow numbers was 42.9 percent in January 1993, a 0.5 percentage point increase from 1992. July 1993 U.S. heifers as a percent of cow numbers was 41.8 percent, 0.8 percentage points below July 1992.

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
1983	928	932	435	46.7
1984	904	925	420	45.4
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	776	780	302	38.7
1990	768	790	319	40.4
1991	756	775	322	41.5
1992	749	755	312	41.3
1993[1]	748	755	324	42.9
1994[2]	740	752		

[1]Preliminary [2]Projected

SOURCE: New York Agricultural Statistics



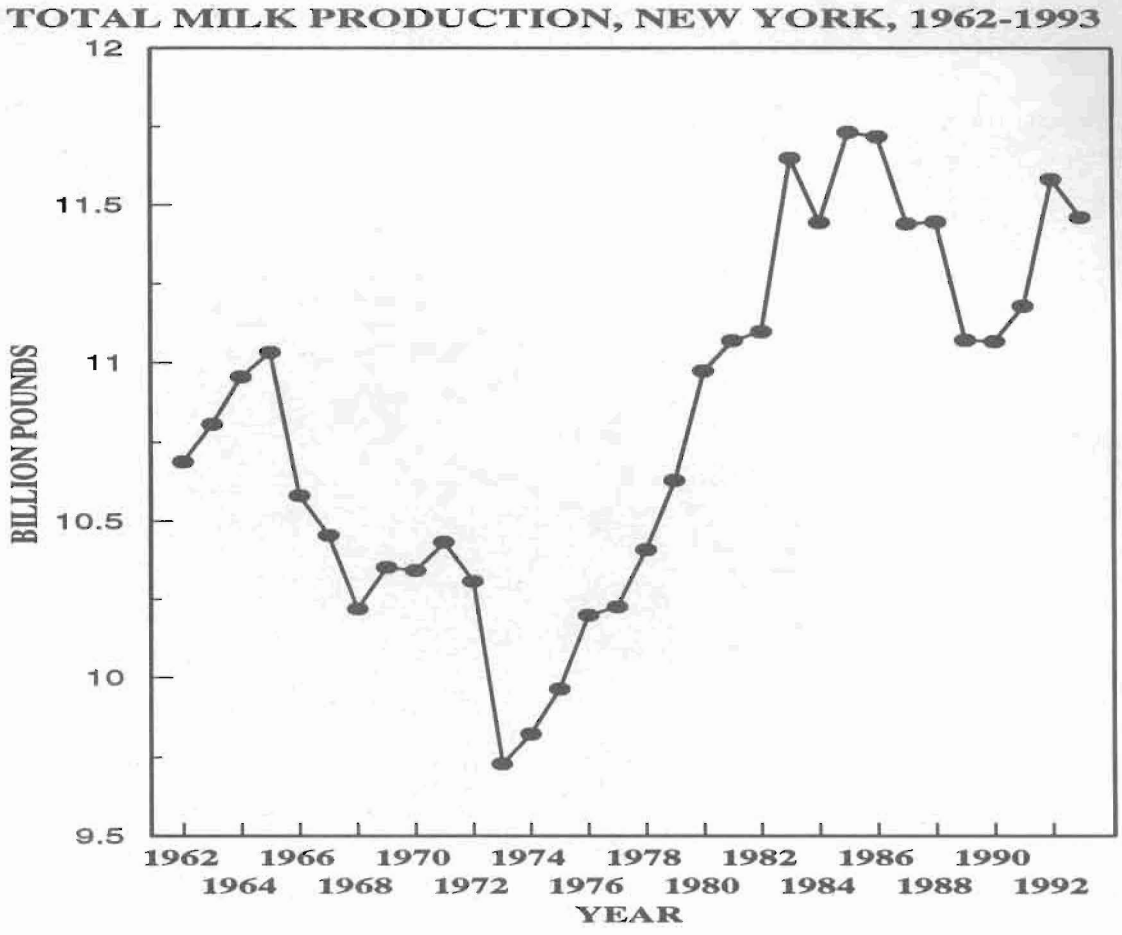
SOURCE: New York Agricultural Statistics.

Pounds of milk produced per cow in 1992 was up 4.6 percent from 1991. Milk per cow is expected to average 15,310 pounds in 1993, a decrease of 1.0 percent, from 1992. This can be attributed to such factors as lower quality forage and very warm weather in early July. 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 2.0 percent in 1994 to 15,620 pounds. However, forage quality later in the year and the ability to purchase feeds with lower milk prices will be critical to milk production through the first half of the year.

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
1983	12,552	193	1.47	82.00	12,585
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	14,267	189	1.50	75.50	14,244
1990	14,410	177	1.68	77.00	14,642
1991[3]	14,787	172	1.47	77.50	14,867
1992[3]	15,463	174	1.56	87.50	15,423
1993[4]	15,310	171	1.53	--	15,600
1994[5]	15,620	--	--	--	15,950

[1]1983-1985 is New York, 1986-1993 is Northeast. [2]Season average, June through May. [3]Revised [4]Preliminary [5]Projected



SOURCE: New York Agricultural Statistics.

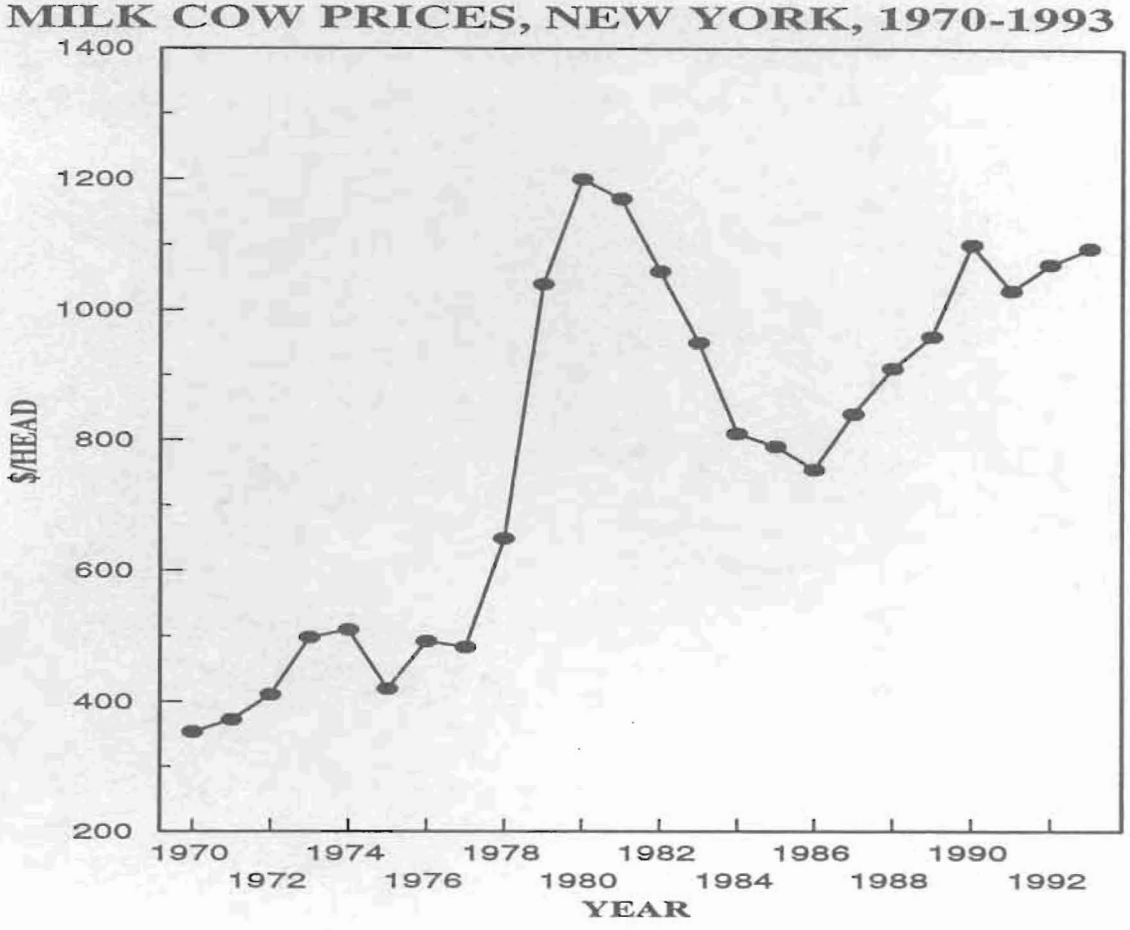
Total New York milk production in 1993 is estimated at 11,452 million pounds, down 1.1 percent from 1992. This decrease is due to the 1.0 percent decrease in production per cow, and 0.1 percent decrease in cow numbers.

Total milk production is projected to increase 0.9 percent in 1994 to 11,559 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 151,747 million pounds in 1992. It is estimated that 1993 production will be about the same, and 1994 production will be 153,200 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		
1983	11,648	139,588	8.3	1989	11,071	144,239	7.7
1984	11,443	135,351	8.5	1990	11,067	148,313	7.5
1985	11,732	143,012	8.2	1991[1]	11,179	148,477	7.5
1986	11,718	143,124	8.2	1992[1]	11,582	151,747	7.6
1987	11,439	142,709	8.0	1993[2]	11,452	151,700	7.6
1988	11,444	145,152	7.9	1994[3]	11,559	153,200	7.5

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

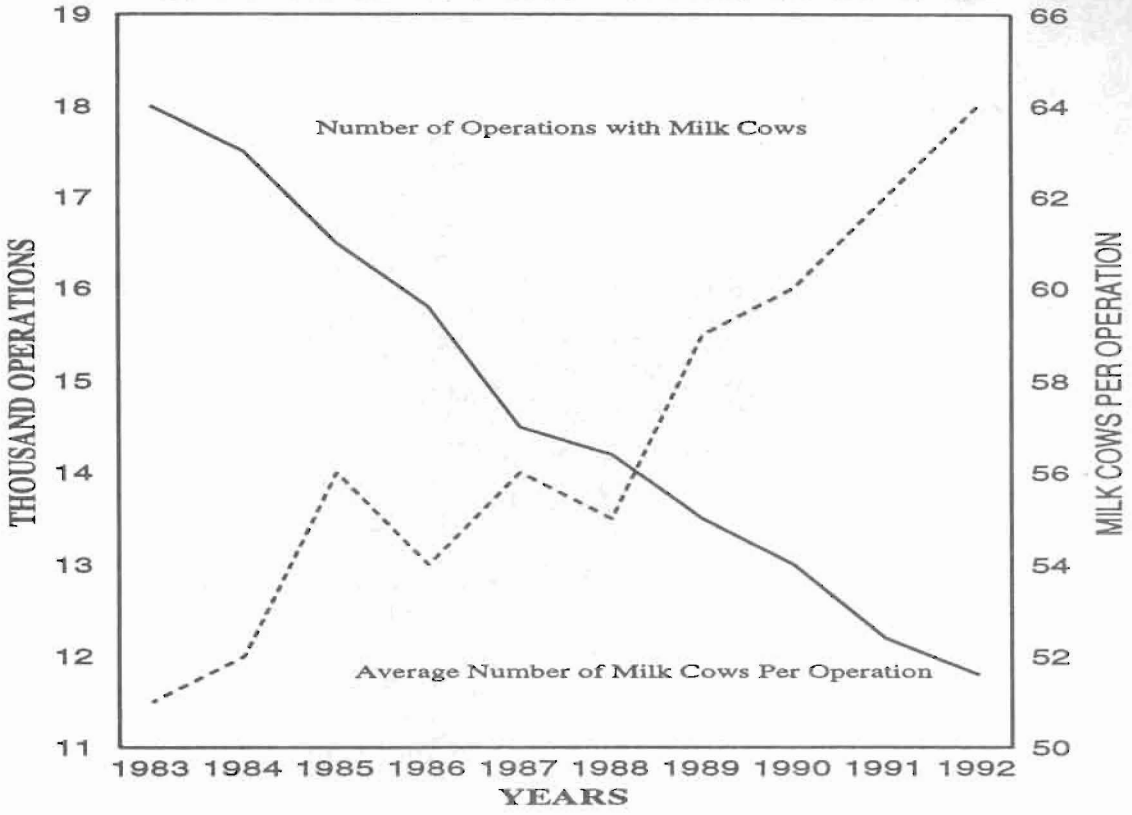


SOURCE: New York Agricultural Statistics.

Milk cow prices fluctuated the first two quarters of 1992 and increased to $1,090 in August. In 1993, milk cow prices increased to $1,110 per head in August. Monthly prices for milk cows averaged $22 a head higher than a year earlier. Slaughter cow prices averaged $0.38 per hundredweight higher than a year earlier. Calf prices averaged about $8 per hundredweight higher in 1993 compared to 1992.

	Milk Cows, $/Head		Slaughter Cows, $/Cwt		Calves, $/Cwt	
Month	1992	1993	1992	1993	1992	1993
January	1,050	$1,080	$43.20	$45.20	$102.00	$106.00
February	1,060	1,080	45.30	47.40	110.00	112.00
March	1,050	1,090	44.70	44.90	107.00	97.30
April	1,060	1,090	44.30	43.70	115.00	100.00
May	1,070	1,090	47.00	48.10	107.00	121.00
June	1,070	1,090	46.20	47.50	106.00	133.00
July	1,080	1,090	45.60	46.70	104.00	114.00
August	1,090	1,100	45.50	45.00	90.20	113.00
September	1,090	1,110	44.40	43.70	100.00	114.00
October	1,090	1,110	43.50	43.30	101.00	114.00
November	1,090		42.60		89.60	
December	1,090		44.10		95.80	

NUMBER OF OPERATIONS WITH MILK COWS AND AVERAGE NUMBER OF MILK COWS PER OPERATION, NEW YORK, 1983-1992



SOURCE: NYASS, New York Agricultural Statistics, 1992-1993

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 6,200 less milk cow operations in 1992 than there were in 1983. The average number of milk cows per operation has increased by 13 cows, or 25 percent over the same period. On January 1, 1993, 41 percent of the total milk cows were in herds with 50-99 head, 42 percent were in herds with over 100 milk cows, and 17 percent were in herds with less than 50 head.

MILK COW OPERATIONS: BY HERD SIZE, 1983-1992

Year	Number of Milk Cows in Herd					
	1-9	10-29	30-49	50-99	100 plus	Total
	number of operations					
1983	3,100	2,400	5,000	5,750	1,750	18,000
1984	3,050	2,350	4,900	5,350	1,850	17,500
1985	2,700	2,300	4,550	5,100	1,850	16,500
1986	2,300	2,000	4,300	5,300	1,900	15,800
1987	1,700	1,600	4,300	5,000	1,900	14,500
1988	1,650	1,550	3,850	5,300	1,850	14,200
1989	1,300	1,400	3,400	5,400	2,000	13,500
1990	1,350	1,300	3,150	5,300	1,900	13,000
1991	1,300	1,200	2,900	5,000	1,800	12,200
1992	1,300	1,300	2,600	4,700	1,900	11,800

MILK COWS JANUARY 1: INVENTORY BY HERD SIZE, 1984-1993

Year	Number of Milk Cows in Herd					
	1-9	10-29	30-49	50-99	100 plus	Total
	thousand head					
1984	7	48	208	398	264	925
1985	8	48	203	369	282	910
1986	8	49	196	371	301	925
1987	5	37	168	355	290	855
1988	3	29	171	332	281	816
1989	3	27	144	335	271	780
1990	3	27	126	334	300	790
1991	3	25	120	330	297	775
1992	3	22	113	320	297	755
1993	3	25	100	310	317	755

INDEX OF PRICES PAID BY NEW YORK DAIRY FARMERS
(1977=100)

Item	Weight	1988	1989	1990	1991	1992	1993[1]	1994[2]
Feed	.31	133	139	128	126	127	127	134
Purchased animals	.03	188	198	227	214	222	227	224
Fuel & energy	.05	184	193	220	222	221	227	230
Fertilizer	.05	139	144	140	145	139	135	138
Seed	.02	171	181	184	187	186	191	196
Machinery	.18	198	208	217	227	237	247	257
Building & fencing supplies	.08	138	141	144	146	150	157	165
Farm services & rent	.08	147	158	166	172	172	172	175
Agricultural chemicals	.01	127	132	139	150	159	165	168
Interest rates	.07	126	141	135	125	101	93	93
Farm wage rates	.09	209	221	235	250	247	259	265
Property taxes	.03	181	186	190	190	194	199	205
Prices Paid, Not Including Assessment		159	168	170	172	173	176	182

[1]Preliminary [2]Projected
SOURCE: New York Agricultural Statistics Service

The preliminary 1993 index of prices paid by New York dairy farmers is 176, a 1.7 percent increase from the 1992 index of 173. All component items in the index increased in 1993, except feed, fertilizer, farm services and rent, and interest rates. Farm wage rates showed the largest increase at 4.9 percent, followed by building and fencing supplies with a 4.7 percent increase, and machinery with a 4.2 percent increase. The feed component stayed the same. The index had been very stable from 1985 through 1987; but every component item increased in both 1988 and 1989.

The 1994 index of prices paid is projected at 182, up 3.4 percent from 1993. Feed prices are projected to be up five to six percent. Crop prospects in 1994 will have a large influence on feed prices in the summer and fall. Fertilizer supplies are expected to be ample, at stable to slightly higher prices. Energy prices for 1994 are expected to be at, or modestly above 1993. This is due to no or, at most, a small price increase for imported crude oil. Interest rates are expected to increase into 1994, but on average to be the same as 1993.

MANAGEMENT OPPORTUNITIES

The ever changing cost and price environment in which dairy farmers are operating will continue to be a challenge to management in 1994. Every farmer will be faced with an increasing number of production and marketing decisions that will impact the future financial performance of their business. Yet this year, farmers will need to evaluate their position relative to modifying milk marketings in order to receive the refundable assessment. If 1993 marketings are at or below 1992, the total assessment will be refunded. Dairy farmers paid an assessment of $0.1125 per hundredweight of milk marketed from January through April, $0.1635 in May through October, and $0.1471 for November and December. If total milk marketings in 1993 are slightly above 1992 marketings, then modifying marketings for the remainder of the 1993 to qualify for the return of the refundable assessment should be evaluated.

Early next year, the decision as to whether or not to supplement the herd with BST must be addressed. BST, unlike some new technologies in the past, has emotional as well as production and financial implications. Farmers must evaluate if they can successfully adopt BST technology and if it will reward them financially, or if they would be better served by not adopting.

As a result of the $0.60 per hundredweight projected decrease in average milk price and four percent projected increase in prices paid in 1994, farmers will need to formulate a management plan to combat these changes. The management plan should be formulated based on a detailed business analysis which identifies not only strengths, but areas for improvement. All businesses can be improved and the Cornell Dairy Farm Business Summary program can help. By comparing your farm's performance with the average of similar farms as reported on the following pages, areas for improvement can be identified.

Options to be considered for inclusion in the plan to combat the price cost situation next year include:

1. Reduce costs through improved operating efficiency and improved purchasing skills. Improving labor and production efficiency are key to lowering production costs. Developing specifications for inputs needed, knowing the negotiating game, evaluating bargains and searching for low interest rates are all important components of lowering costs through improved purchasing skills.
2. Make capital purchases only after analyzing the impact on future profits. Capital purchases can improve efficiency, but especially in periods of lower margins evaluate the added costs of new capital items with the added output and reduced costs that may occur.
3. Perform field operations and dairy practices on time, especially treating mastitis, disease and injury before they become worse. Timeliness in production practices is very important.
4. Feed a balanced, least cost ration to all cows and heifers, especially providing the right feeds during early lactation.
5. Operate your dairy facilities at capacity. If feasible, consider adding cows to attain additional revenue if that revenue outweighs the added costs.

Also, when margins decrease, don't neglect the details such as cleaning and maintaining equipment and communicating with and managing labor. And perhaps most importantly, don't get behind in financial record keeping. Knowing where you stand financially each month will provide you with good information on how your plan is working and where improvements can be made.

COMPARISON OF FARM BUSINESS SUMMARY DATA
Same 198 New York Dairy Farms, 1989-1992

Selected Factors	1989	1990	1991	1992
Milk receipts per cwt. milk	$14.58	$14.93	$13.00	$13.60
Size of Business				
Average number of cows	116	121	125	134
Average number of heifers	92	100	105	105
Milk sold, cwt.	20,506	21,682	23,048	25,450
Worker equivalent	3.50	3.61	3.68	3.81
Total tillable acres	323	347	351	356
Rates of Production				
Milk sold per cow, lbs.	17,663	17,983	18,389	18,934
Hay DM per acre, tons	2.7	2.8	2.6	2.8
Corn silage per acre, tons	13.4	14.5	14.0	15.1
Labor Efficiency				
Cows per worker	33	34	34	35
Milk sold per worker, lbs.	586,517	600,602	627,066	667,894
Cost Control				
Grain & concentrate purchased as % of milk sales	27%	28%	29%	28%
Dairy feed & crop expense per cwt. milk	$4.92	$5.17	$4.71	$4.68
Oper. cost of producing cwt. milk	$10.30	$11.10	$10.21	$10.45
Total cost of producing cwt. milk	$14.32	$15.25	$14.25	$14.22
Hired labor cost per cwt.	$1.76	$1.96	$1.93	$1.95
Interest paid per cwt.	$1.03	$1.02	$1.05	$0.86
Labor & machinery costs per cow	$898	$1,033	$996	$1,001
Capital Efficiency				
Farm capital per cow	$6,196	$6,449	$6,656	$6,555
Machinery & equipment per cow	$1,134	$1,209	$1,268	$1,222
Real estate per cow	$2,782	$2,911	$2,997	$2,980
Livestock investment per cow	$1,337	$1,405	$1,439	$1,434
Asset turnover ratio	0.51	0.49	0.45	0.48
Profitability				
Net farm income w/o apprec.	$60,427	$53,910	$33,589	$49,002
Net farm income w/apprec.	$86,853	$65,059	$50,971	$65,874
Labor & management income per operator/manager	$24,927	$17,499	$2,463	$12,396
Rate return on:				
Equity capital w/apprec.	11.7%	5.8%	2.8%	5.2%
All capital w/apprec.	10.6%	6.7%	4.7%	5.8%
All capital w/o apprec.	7.0%	5.3%	2.6%	3.9%
Financial Summary, End Year				
Farm net worth	$502,335	$526,531	$540,337	$575,832
Change in net worth w/apprec.	$54,237	$21,098	$12,831	$30,586
Debt to asset ratio	0.33	0.35	0.36	0.36
Farm debt per cow	$2,022	$2,335	$2,349	$2,353

TEN YEAR COMPARISON: SELECTED BUSINESS FACTORS
New York Dairy Farms, 1983 to 1992

Item	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Number of farms	510	458	404	414	426	406	409	395	407	357
Cropping Program										
Total tillable acres	272	280	280	288	305	302	316	325	330	346
Tillable acres rented	91	94	93	100	105	104	117	121	124	135
Hay crop acres	139	143	142	147	153	156	164	166	169	171
Corn silage acres	72	76	69	67	67	74	81	82	88	98
Hay crop, tons DM/acre	2.5	2.7	2.7	2.7	2.7	2.6	2.6	2.7	2.4	2.8
Corn silage, tons/acre	13.5	14.0	14.3	14.3	16.2	14.1	13.4	14.4	13.7	14.5
Fert. & lime exp. /tillable acre	$31	$32	$32	$26	$27	$29	$29	$29	$25	$25
Machinery cost/cow	$413	$433	$426	$400	$413	$398	$425	$483	$438	$444
Dairy Analysis										
Number of cows	88	89	89	95	101	102	104	107	111	123
Number of heifers	72	76	73	77	79	82	83	87	92	96
Milk sold, cwt.	13,432	13,735	14,001	15,374	16,498	17,200	17,975	19,005	20,060	23,130
Milk sold/cow, lbs.	15,264	15,433	15,679	16,237	16,351	16,882	17,259	17,720	18,027	18,789
Purchased dairy feed/cwt. milk	$3.44	$3.28	$3.04	$3.10	$3.21	$3.71	$3.99	$4.27	$3.87	$3.91
Purc. grain & conc. as % milk receipts	25%	24%	23%	24%	24%	28%	27%	28%	29%	28%
Purc. feed & crop exp./cwt. milk	$4.62	$4.53	$4.13	$4.00	$4.11	$4.62	$4.92	$5.21	$4.67	$4.70
Capital Efficiency										
Farm capital/cow	$5,421	$5,520	$5,801	$5,792	$5,894	$6,133	$6,407	$6,556	$6,688	$6,587
Real estate/cow	$2,668	$2,731	$2,726	$2,758	$2,805	$2,902	$2,977	$2,977	$3,063	$3,015
Mach. invest./cow	$1,038	$1,057	$1,083	$1,062	$1,057	$1,083	$1,154	$1,233	$1,267	$1,203
Asset turnover ratio	.42	.43	.40	.43	.45	.45	.48	.48	.43	.47
Labor Efficiency										
Worker equivalent	3.00	3.08	3.17	3.17	3.19	3.17	3.30	3.37	3.38	3.60
Operator/manager eq.	1.32	1.31	1.34	1.33	1.32	1.35	1.39	1.39	1.37	1.41
Milk sold/worker, lbs.	447,733	445,942	442,125	497,555	516,728	542,708	544,598	563,349	593,297	641,893
Cows/worker	29	29	28	31	32	32	32	32	33	34
Labor cost/cow	$344	$366	$387	$385	$400	$426	$469	$541	$538	$552
Profitability & Financial Analysis										
Labor & mgmt. income/oper.	$5,514	$2,262	$2,850	$3,837	$11,042	$11,911	$18,004	$14,328	$-955	$11,254
Farm net worth	$322,001	$336,210	$325,664	$348,909	$398,209	$426,123	$468,848	$471,322	$480,131	$515,215
Percent equity	63%	64%	63%	63%	65%	66%	68%	66%	64%	64%

TEN YEAR COMPARISON: AVERAGE COST OF PRODUCING MILK PER HUNDREDWEIGHT
New York Dairy Farms, 1983 to 1992

Item	1983	1984	1985*	1986*	1987*	1988*	1989*	1990*	1991*	1992*
Cash Operating Expenses										
Hired labor	$ 1.25	$ 1.39	$ 1.38	$ 1.38	$ 1.49	$ 1.46	$1.62	$ 1.77	$ 1.74	$1.80
Purchased feed	3.59	3.46	3.09	3.15	3.26	3.73	4.02	4.28	3.88	3.92
Machinery repairs & rent	.77	.80	.78	.75	.88	.83	.92	1.06	.89	.93
Auto expenses (farm share)	.04	.03	.03	.04	.04	.04	.04	.05	.04	.04
Fuel, oil & grease	.49	.50	.48	.34	.35	.34	.33	.41	.37	.35
Replacement livestock	.16	.10	.10	.13	.13	.11	.17	.20	.15	.21
Breeding fees	.19	.20	.20	.19	.19	.18	.18	.19	.18	.18
Veterinary & medicine	.28	.29	.27	.28	.28	.28	.30	.32	.33	.35
Milk marketing	.93	1.03	.80	.84	.74	.52	.49	.53	.58	.63
Other dairy expenses	.54	.55	.53	.52	.53	.56	.60	.68	.65	.70
Lime & fertilizer	.63	.66	.63	.49	.50	.51	.50	.50	.40	.37
Seeds & plants	.21	.22	.23	.21	.21	.21	.22	.22	.20	.21
Spray & other crop expense	.19	.20	.22	.20	.19	.19	.21	.22	.20	.21
Land, building, fence repair	.18	.18	.17	.16	.20	.22	.27	.32	.19	.24
Taxes	.34	.33	.34	.33	.35	.35	.36	.37	.38	.35
Insurance	.21	.20	.22	.22	.22	.23	.23	.24	.23	.22
Telephone & elec. (farm share)	.36	.36	.37	.39	.38	.38	.39	.39	.39	.38
Interest paid	1.40	1.40	1.25	1.18	1.04	1.02	1.06	1.05	1.07	.88
Misc. (including rent)	.44	.44	.40	.41	.45	.41	.43	.47	.43	.44
Total Operating Expenses	$12.20	$12.34	$11.50	$11.22	$11.43	$11.57	$12.34	$13.27	$12.30	$12.41
Less: Nonmilk cash receipts	1.49	1.74	1.58	1.52	1.84	1.86	1.75	1.75	1.73	1.67
Increase in feed & supplies**	.26	.18	.05	.01	.16	.16	.02	.26	.04	.23
Increase in livestock	.24	.16	.18	.12	.10	.08	.12	.15	.18	.08
OPERATING COST OF MILK PRODUCTION	$10.21	$10.26	$ 9.69	$ 9.57	$ 9.33	$ 9.47	$10.45	$11.11	$10.35	10.43
Overhead Expenses										
Depreciation: mach. & bldgs.	$ 1.56	$ 1.65	$ 1.64	$ 1.54	$ 1.43	$ 1.31	$ 1.31	$ 1.35	$ 1.28	$1.19
Unpaid labor	.12	.12	.12	.13	.10	.11	.12	.19	.18	.16
Operator(s) labor***	.89	.87	.97	.86	.87	.95	.98	1.10	1.06	.99
Operator(s) mgmt. (5% of cash rec.)	.76	.76	.72	.71	.74	.74	.81	.85	.73	.76
Interest on farm eq. cap. (5%)	1.20	1.22	1.16	1.10	1.15	1.19	1.24	1.24	1.20	1.11
Total Overhead Expenses	$ 4.53	$ 4.62	$ 4.61	$ 4.34	$ 4.28	$ 4.30	$ 4.46	$ 4.73	$4.45	$4.21
TOTAL COST OF MILK PRODUCTION	$14.74	$14.88	$14.30	$13.91	$13.61	$13.77	$14.91	$15.84	$14.80	$14.64
AVERAGE FARM PRICE OF MILK	$13.64	$13.49	$12.90	$12.65	$12.89	$13.03	$14.53	$14.93	$12.95	$13.58
Return per cwt. to operator labor, capital, & management	$1.75	$1.46	$1.45	$1.41	$2.04	$2.14	$2.65	$2.28	$1.14	$1.80
Rate of return on farm eq. cap.	0.4%	-0.7%	-1.0%	-0.7%	1.9%	1.8%	3.3%	1.3%	-2.7%	0.2%

*Accrual receipts and expenses. **Increase in grown feeds, 1985-1991. ***1980-1984 = $750/month, 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 of operator labor.

The 357 New York dairy farms participating in the 1992 Dairy Farm Business Summary Project have been sorted into nine herd size categories and averages for the farms in each category are presented in the following tables. 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 as shown in the table below. Net farm income without appreciation averaged $4,790 per farm for the less than 40 cow farms and $252,256 per farm for those with 300 cows and over. This relationship generally holds for all measures of profitability including rate of return on capital. However the 200 to 299 herd size group showed a lower level of profitability in 1992 than the farms with 150 to 199 cows.

It is more than size alone that determines profitability on dairy farms. Although average net farm income per cow was the lowest at $150 for the smallest farms and highest at $443 for the largest farms, there was much variety in between. The 85 to 99 cow group averaged $422 net farm income per cow while the 200 to 299 cow group averaged only $255 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
357 New York Dairy Farms, 1992

Number of Cows	Number of Farms	Average Number of Cows	Net Farm Income Without Apprec.	Net Farm Income Per Cow	Labor & Management Inc./Oper.	Return on all capital without Apprec.
Under 40	19	32	$ 4,790	$150	$-8,413	-4.5%
40 to 54	60	47	14,096	300	-2,089	-1.4%
55 to 69	63	62	23,919	386	1,967	0.5%
70 to 84	39	77	25,594	332	2,435	1.2%
85 to 99	37	91	38,421	422	8,737	3.0%
100 to 149	57	118	41,686	353	9,501	2.7%
150 to 199	38	171	64,831	379	26,578	4.2%
200 to 299	24	235	59,461	255	13,844	3.4%
300 & over	20	570	252,256	443	167,301	9.0%

Further study and analysis of the 200 to 299 cow size group reveals some of the reasons for the relatively low average net farm income of $255 per cow in 1992. Milk sold per cow averaged 18,687 pounds, 100 pounds below the 357 DFBS farm average and well below the averages of other large farm categories.

Operating costs of producing milk averaged $11.25 per hundredweight of milk sold on the 200 to 299 cow farms, 70 to 90 cents more per hundredweight compared to all other size groups with 100 cows and more. Their greatest operating expense was purchased feed which averaged $799 per cow and $4.28 per hundredweight of milk sold per cow, nine percent more than the 357 DFBS average for 1992.

COWS PER FARM AND RELATED FARM FACTORS
357 New York Dairy Farms, 1992

Number of Cows	Average Number of Cows	Milk Sold Per Cow (lbs.)	Milk Sold Per Worker (cwt.)	Tillable Acres Per Cow	Forage DM Per Cow (tons)	Farm Capital Per Cow	Cost of Producing Milk/Cwt. Oper.	Total
Under 40	32	17,208	3,698	4.6	8.4	$8,730	$10.61	$18.03
40 to 54	47	17,098	4,419	3.3	7.3	7,741	10.15	16.68
55 to 69	62	17,815	4,588	3.3	8.0	7,465	9.96	15.57
70 to 84	77	18,208	5,203	3.7	8.4	7,491	10.31	15.31
85 to 99	91	18,717	5,527	3.4	8.5	7,531	9.98	14.65
100 to 149	118	18,505	6,115	3.0	7.7	6,961	10.37	14.60
150 to 199	171	19,178	6,838	2.8	7.7	5,589	10.56	14.14
200 to 299	235	18,687	7,084	2.8	7.9	6,161	11.25	14.57
300 & over	570	19,795	9,235	2.0	6.8	5,362	10.36	12.78

The farms with 300 and more cows per farm averaged 15 percent more milk sold per cow than the smallest farms. All of the groups with 85 or more cows average well above 18,000 pounds of milk sold per cow while the farms smaller than 85 cows averaged 17,590 pounds of milk sold per cow.

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 eight percent of the 218 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 freqency increased. Farms with 100 to 149 cows reported 19 percent of the herds milking more often than 2x, the 150-199 cow herds reported 45 percent, 200-299 cow herds reported 67 percent and the 300 cow and larger herds reported 80 percent exceeding the 2x milking frequency.

Milk output per worker has always shown a strong correlation with farm profitability. The farms with 100 cows or more averaged nearly 700,000 lbs. of milk sold per worker while the farms with less than 85 cows averaged only 457,000 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 2.0 tillable acres per cow, and farm capital with an average investment of $5,362 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. These 20 largest farms held their average total costs of producing milk to $12.78 per hundredweight, $1.63 below the $14.41 average for the remaining 337 dairy farms. The lower average costs of production plus a somewhat higher average milk price gave the managers of the 300 plus cow dairy farms profit margins that averaged $1.75 per hundredweight above the average of the other 337 DFBS farms.

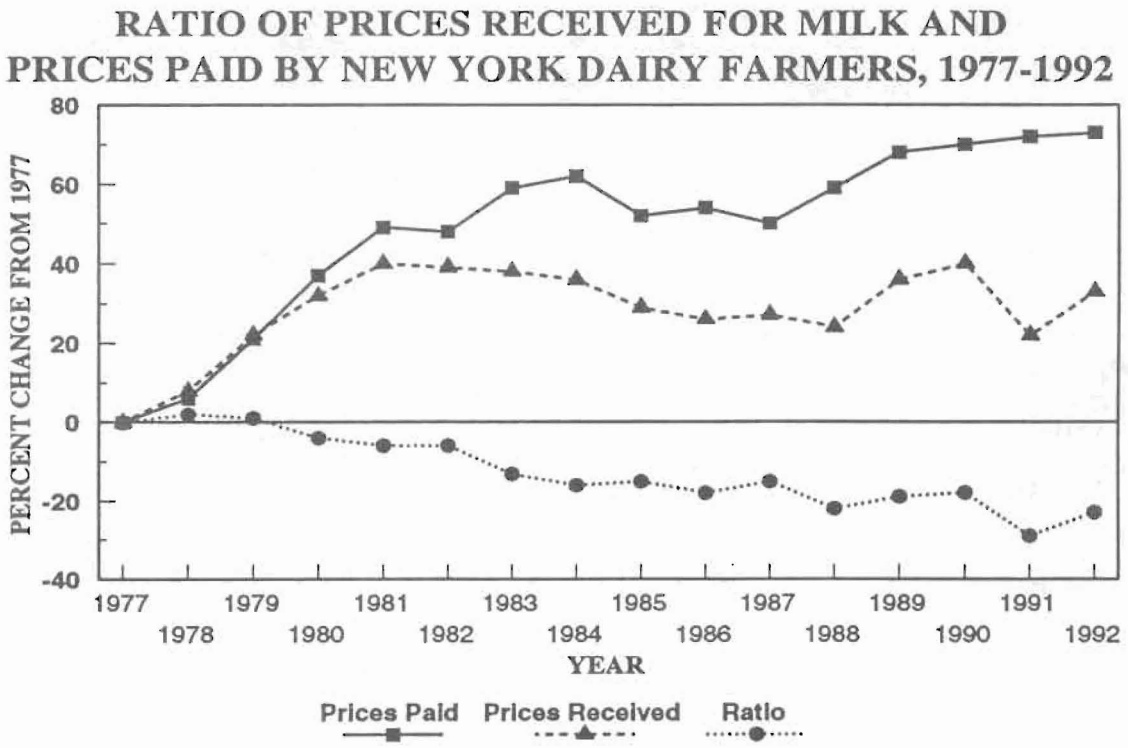
The prices dairy farmers pay for a given quantity of goods and services has a major influence on farm production costs. The astute manager will keep close watch on unit costs and utilize the most economical goods and services.

PRICES PAID BY NEW YORK FARMERS FOR SELECTED ITEMS, 1982-1992

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)
1982	176.6	278	63.70	1.240	16,000	3.26
1983	192.6	249	64.60	1.140	17,200	3.52
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

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.



SOURCE: NYASS, New York Agricultural Statistics.

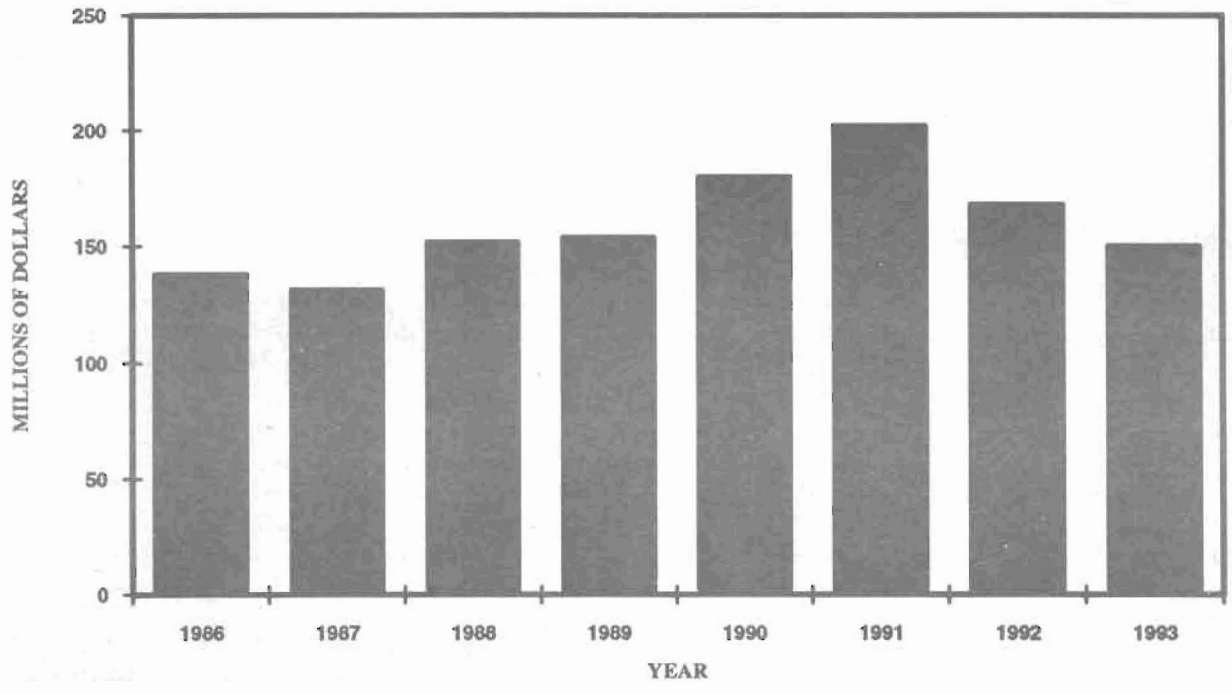
HIGHLIGHTS OF THE 1993 FRUIT OUTLOOK

The total production of the six tree and vine crops which are important to New York's agricultural economy was projected to decrease by three percent nationally. The national production of pears, tart cherries, and peaches were forecast to increase compared with last year's production, while decreased production was forecast for apples, grapes, and sweet cherries. The national production of apples was forecast at 250 million bushels, down two percent from 1992. Grape production was expected to total 5,608 thousand tons, a decrease of seven percent from last year.

In New York, apple production is indicated to be 22.6 million bushels, 19 percent below the 1992 output, and seven percent below the average production of the last five years. Grape production of 120 thousand tons was estimated, 33 percent below last year's crop. Total production of the six major fruit and vine crops of 625 thousand tons is projected for the State, 23 percent below the previous year. Total production is the lowest since 1981.

The utilized value of the major fruit crops in New York for the past seven years is shown below. The value of production was $168 million last year, well below the value of the last two years. In 1994, with much lower production of apples and grapes, the value of production is likely to be about $150 million.

VALUE OF PRODUCTION OF MAJOR FRUIT CROPS, NEW YORK, 1986-1992 AND 1993 (projected)



COMMERCIAL NONCITRUS FRUIT PRODUCTION, NEW YORK AND UNITED STATES

Fruit	New York				United States			
	1990	1991	1992	1993*	1990	1991	1992	1993*
	thousand tons							
Apples	495	525	585	475	4,829	4,829	5,307	5,256
Grapes	144	192	180	120	5,660	5,556	6,052	5,608
Tart Cherries	8	13	16	7	104	95	131	165
Pears	15	15	19	17	964	904	926	935
Peaches	7	8	7	5	1,117	1,343	1,329	1,385
Sweet Cherries	1	1	1	1	157	151	208	178
Total New York's Major Fruit Crops	670	754	808	625	12,831	12,878	13,953	13,527

*indicated

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

Fruit	New York				United States			
	1989	1990	1991	1992	1989	1990	1991	1992
	dollars per ton							
Apples								
Fresh	296	356	402	284	278	418	502	384
Processed	133	150	153	129	107	144	171	129
All sales	208	258	254	198	208	302	358	268
Grapes	277	286	254	225	314	295	312	303
Tart Cherries	302	416	900	364	290	362	928	352
Pears	223	253	275	308	277	280	303	296
Peaches	588	552	548	524	328	348	314	300
Sweet Cherries	783	743	901	976	713	894	964	912

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

Fruit	New York				United States			
	1989	1990	1991	1992	1989	1990	1991	1992
	million dollars							
Apples								
Fresh	65.1	92.6	84.4	78.8	817	1,162	1,375	1,110
Processed	34.8	35.3	48.5	41.9	217	295	358	312
All Sales*	100.0	127.8	132.9	116.1	1,034	1,457	1,733	1,422
Grapes	42.1	41.2	48.8	38.3	1,863	1,670	1,736	1,825
Tart Cherries	3.4	2.8	11.5	4.0	35	37	88	55
Pears	3.6	3.7	4.0	5.4	254	269	274	273
Peaches	3.6	3.8	3.7	3.6	365	372	393	373
Sweet Cherries	0.9	0.5	1.1	0.5	136	118	137	178
Total New York's Major Fruit Crops	153.6	179.8	202.0	167.8	3,687	3,922	4,362	4,126

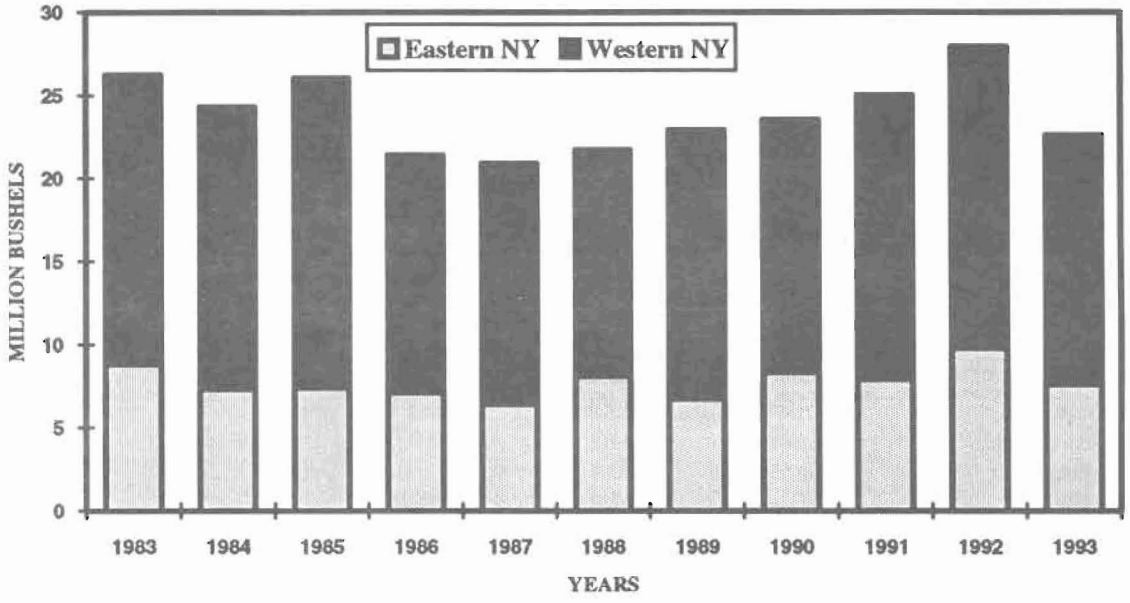
*May not add from total of fresh and processed due to rounding errors.

APPLE PRODUCTION, UNITED STATES, 1988-1992, FIVE-YEAR AVERAGE PRODUCTION, AND 1993 FORECAST, 1,000 42-POUND BUSHELS

States/Regions	5-Year Average	1992*	1993 USDA Estimate**	1993 Compared to USDA 5-Year Average (% Change)	1993 Compared to 1992 (% Change)
Maine	1,914	1,976	1,595	-16.7	-19.3
New Hampshire	1,143	1,286	976	-14.6	-24.1
Vermont	1,124	1,190	1,024	-8.9	-14.0
Massachusetts	1,895	2,024	1,548	-18.3	-23.5
Rhode Island	141	155	119	-15.6	-23.1
Connecticut	781	1,000	643	-17.7	-35.7
New York	24,190	27,857	22,619	-6.5	-18.8
New Jersey	1,524	1,310	1,786	17.2	36.4
Pennsylvania	10,762	11,905	13,095	21.7	10.0
Delaware	457	476	476	4.2	0.0
Maryland	1,029	1,190	1,000	-2.8	-16.0
Virginia	8,333	8,810	8,333	0.0	-5.4
West Virginia	4,309	5,357	4,881	13.3	-8.9
North Carolina	6,190	5,714	6,905	11.5	20.8
South Carolina	986	1,429	1,429	44.9	0.0
Georgia	652	595	833	27.8	40.0
Total East	65,430	72,274	67,262	2.8	-6.9
Ohio	2,738	2,738	3,214	17.4	17.4
Indiana	1,462	1,667	1,905	30.3	14.3
Illinois	1,872	2,095	2,143	14.5	2.3
Michigan	21,381	25,714	23,810	11.4	-7.4
Wisconsin	1,338	1,500	1,405	5.0	-6.3
Minnesota	568	690	667	17.4	-3.4
Iowa	250	333	262	4.8	-21.4
Missouri	1,090	881	1,238	13.6	40.5
Kansas	222	143	238	7.3	66.7
Kentucky	343	381	524	52.7	37.5
Tennessee	279	310	369	32.3	19.2
Arkansas	233	190	262	12.4	37.5
Total Central	31,776	36,643	36,036	13.4	-1.7
Total East & Central	97,206	108,917	103,298	6.3	-5.2
Colorado	1,595	2,143	2190	37.3	2.2
New Mexico	188	357	167	-11.3	-53.3
Utah	1,119	1,429	1,238	10.6	-13.3
Idaho	3,110	1,786	4,048	30.1	126.7
Washington	108,571	114,286	114,286	5.3	0.0
Oregon	3,762	4,167	3,333	-11.4	-20.0
California	17,738	20,000	20,238	14.1	1.2
Arizona	1,167	2,143	1,500	N.A.	-30.0
Total West	137,250	146,310	147,000	7.1	0.5
TOTAL U.S.	234,456	255,226	250,298	6.8	-1.9

*1992 and 5-year averages from NASS, USDA, Non-Citrus Fruits and Nuts Summary revised as of July 1, 1993.
**NASS, USDA, Crop Production, October 1, 1993.

APPLE PRODUCTION IN NEW YORK STATE, BY REGION
1983-1992 AND 1993 (indicated)

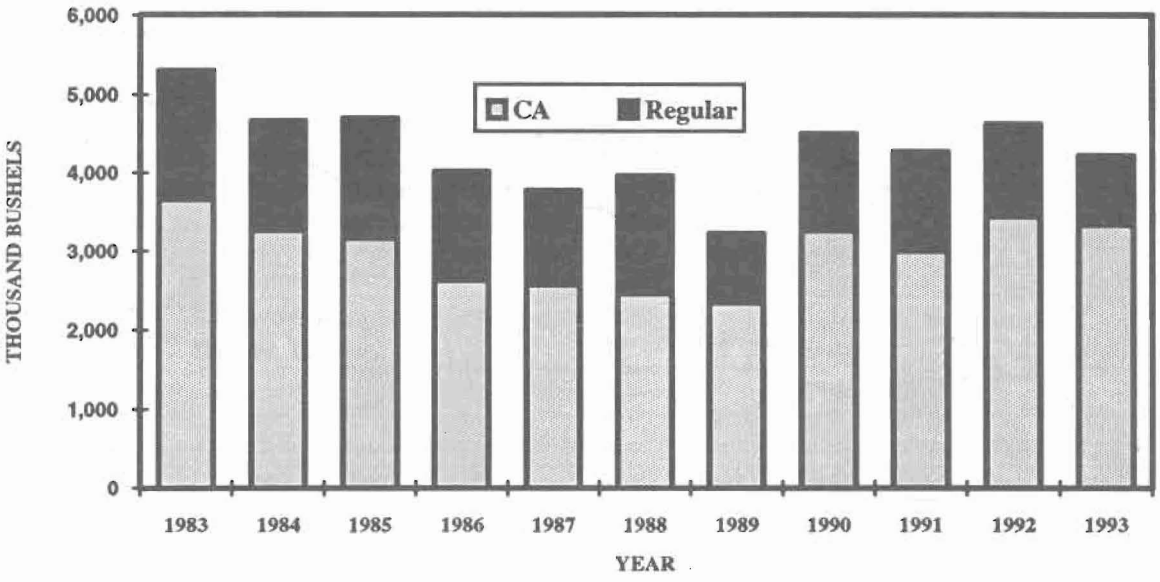


Of the projected 22.6 million bushel crop for 1993, a 7.6 million bushel crop is indicated for eastern New York and a 15.0 million bushel crop is indicated for western New York. The indicated production in eastern New York is 22 percent below 1992 while the crop in western New York is expected to be 17 percent below last year. The total crop is 19 percent below 1992, and seven percent below the average of the past five years.

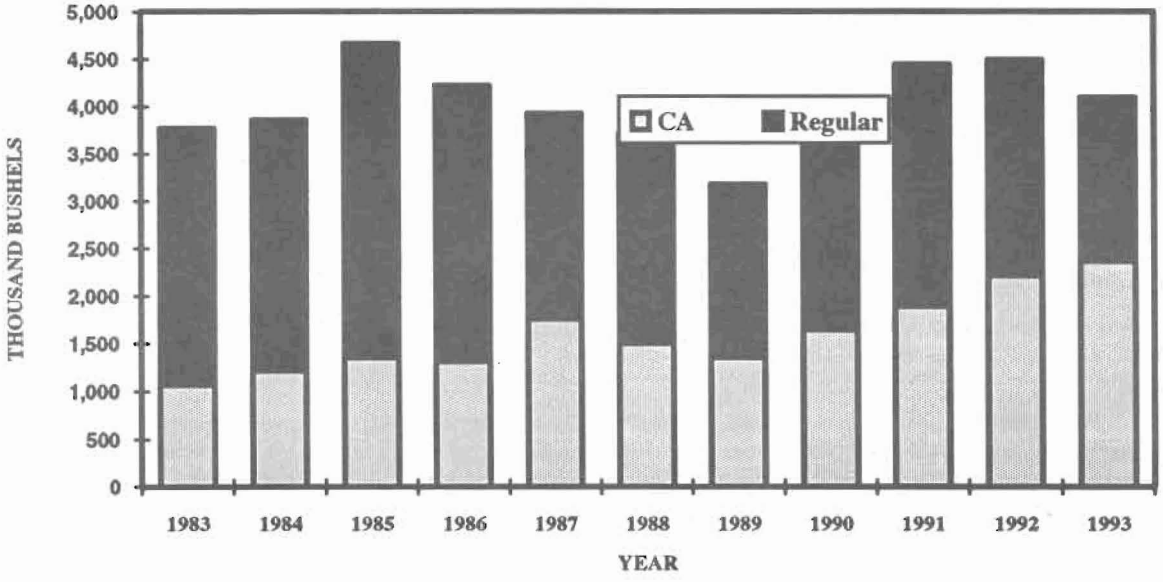
Lower production in 1986-1988 occurred due to (1) three consecutive years of poor weather conditions, especially in western New York, and (2) orchard removal. The potential productive capacity has increased due to plantings of higher density, more productive systems which are currently nonbearing or in early bearing years, and production has steadily increased since 1987. Production was down in 1993, however, due to the hot, dry summer. Hail storms in August also did crop damage in western New York.

Cold storage holding patterns, shown on the following page, indicate that eastern New York is the primary fresh fruit production area in New York. However, western New York is becoming more important as a fresh fruit producer, as indicated in the increased emphasis on controlled atmosphere storage. Cold storage holdings, including CA holdings, are three percent above the average of the past five years, but nine percent below last year's holdings which were unusually high due to the large 1992 crop. Varieties with relatively large supplies in storage include Rome, Red and Golden Delicious, and Empire, while McIntosh and Cortland are in short supply.

APPLES IN COLD STORAGE, EASTERN NEW YORK AS OF OCTOBER 31, REGULAR STORAGE AND CA, 1983-1993

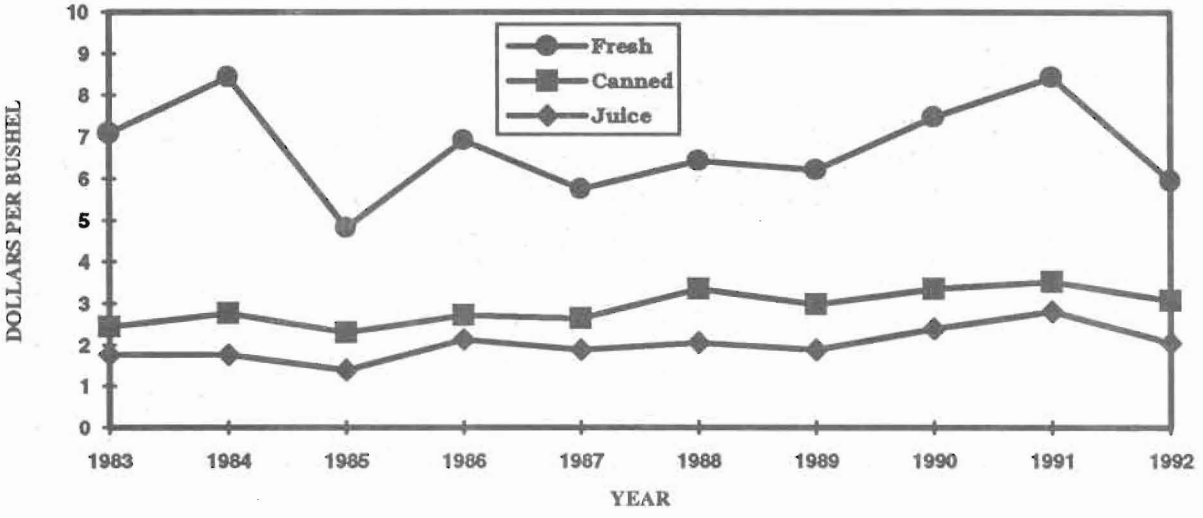


APPLES IN COLD STORAGE, WESTERN NEW YORK AS OF OCTOBER 31, REGULAR STORAGE AND CA, 1983-1993



SOURCES: New York Agricultural Statistics, 1991-1993 and Apples in Cold Storage No. 983-07-93.

AVERAGE ANNUAL PRICES RECEIVED BY NEW YORK GROWERS FOR APPLES, 1993-1992



SOURCE: New York Agricultural Statistics, 1992-1993.

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 1992, all prices were down sharply due to a large national crop, a large eastern U.S. crop, as well as a large crop in New York. (Note: Beginning in 1985, the price of fresh apples was reported based on a packinghouse door equivalent rather than "as sold". Therefore, the 1985-91 prices are not directly comparable to the fresh prices prior to 1985.)

In October 1993, the average price of fresh apples sold in New York averaged only seven percent above last year's depressed prices. Prices of McIntosh apples in November, however, were $8-10 per box for bagged apples and $14-16 for boxes of cell packed apples. Red Delicious prices came under pressure from the large Washington crop. Prices of most varieties are generally two to four dollars per box higher than a year ago. As the extent of the short crop in New York became obvious, prices firmed up in early November, but weakened again somewhat in mid-November.

The export situation appears not too favorable, as pressure from France and from other U.S. exporters who have larger crops will cause New York shippers to emphasize domestic markets. A relatively strong dollar also makes exporting less attractive than in recent years.

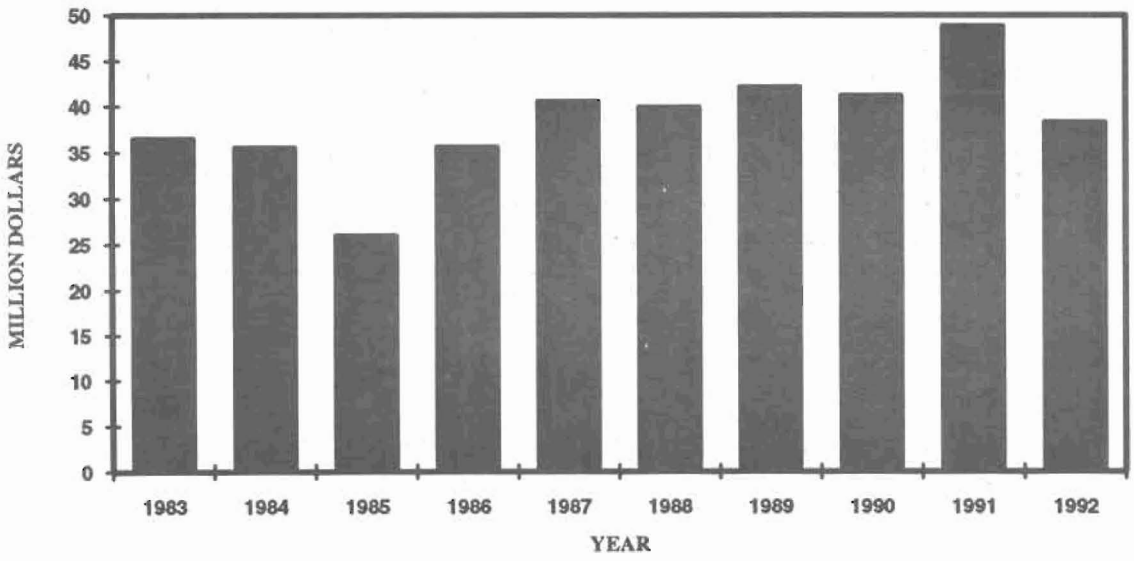
Processed apple prices were also substantially lower than a year ago despite the short crop. Major processors generally were paying 4 to 11 percent less than a year ago. Juice apples were bringing about 28 percent less than last year. As the extent of the short crop was known, processors increased prices, but many growers had sold fruit at the earlier, lower prices. Juice apples, at 4-4½ cents per pound may increase some, but probably will be held to 5 cents or less by ample supplies of concentrate from Europe.

Grapes

The value of utilized production for grapes in New York increased rapidly during the 1960's and early 1970's, reaching a peak of $45.9 million in 1978. For several years after 1978, the value was generally declining and reached a low of $25.9 million in 1985. Between 1986 and 1991, the State's industry recovered, fueled by a lower-valued dollar which increased the prices of competing imports of wine and juice; and new product development, promotion, and development of export markets in the grape juice sector. These positive factors have been somewhat offset by the continued erosion of the nonpremium wine sector. Wine cooler volume sold dropped 30 percent in 1991. 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 1991 reached a record level of $48.8 million, fueled by a large, high quality grape crop. In 1992, utilized value decreased to $38.3 million as both production and prices declined from the banner year of 1991.

Prospects for the utilized value of the State's 1993 crop will result in an even lower utilized value than in 1992. A primary factor is the extremely short crop projected at 120 thousand tons, the lightest crop since 1977, and 33 percent below last year's average sized crop. Prices for grapes used for wine strengthened somewhat, but the value of the 1993 crop will probably fall below $30 million in 1993.

VALUE OF UTILIZED PRODUCTION OF GRAPES, 1983-1992

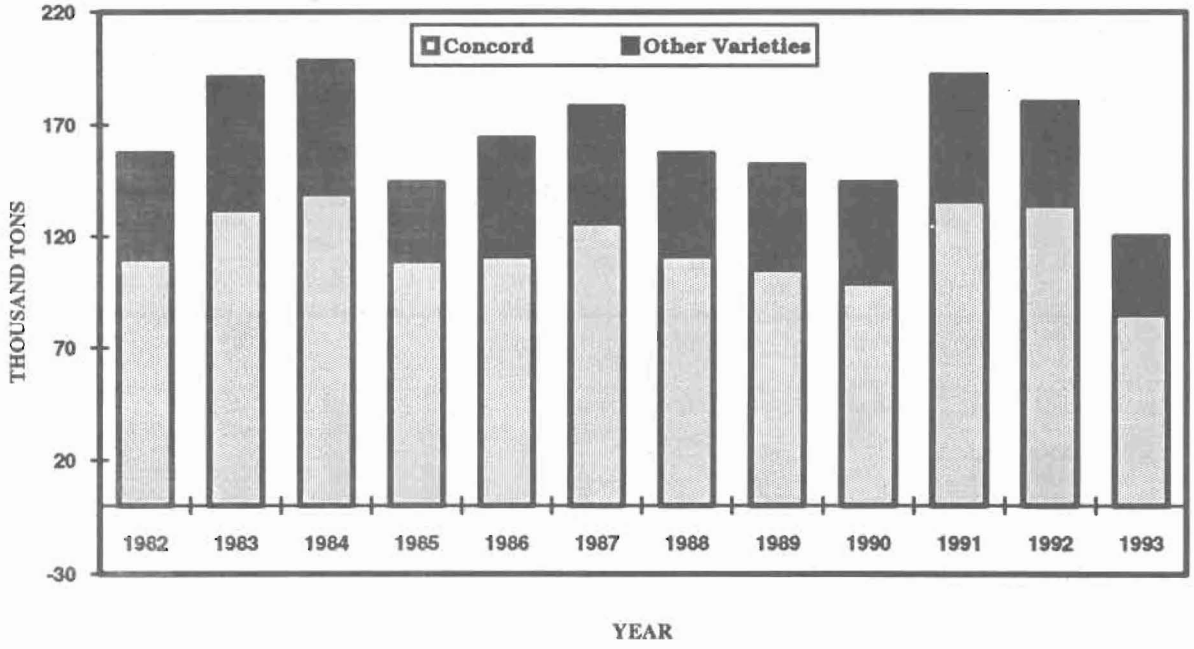


SOURCE: New York Agricultural Statistics, 1992-1993.

With strong demand for juice and nonfermented products and the use of Concords in wine coolers and other fermented products, Concords have continued to account for about 70 percent of New York's grape production.

Total production of grapes in 1993 is expected to total 120 thousand tons. The Concord crop is projected at 85 thousand tons. This translates into a decrease of 33 percent for the total crop and 37 percent for Concords.

TOTAL PRODUCTION OF GRAPES IN NEW YORK
CONCORD AND OTHER VARIETIES
1982-1992 and 1993 (estimated)



Sources: New York Agricultural Statistics, 1992-1993 and New York Agricultural Statistics Service, Fruit, No. 975-9-93.

Wine

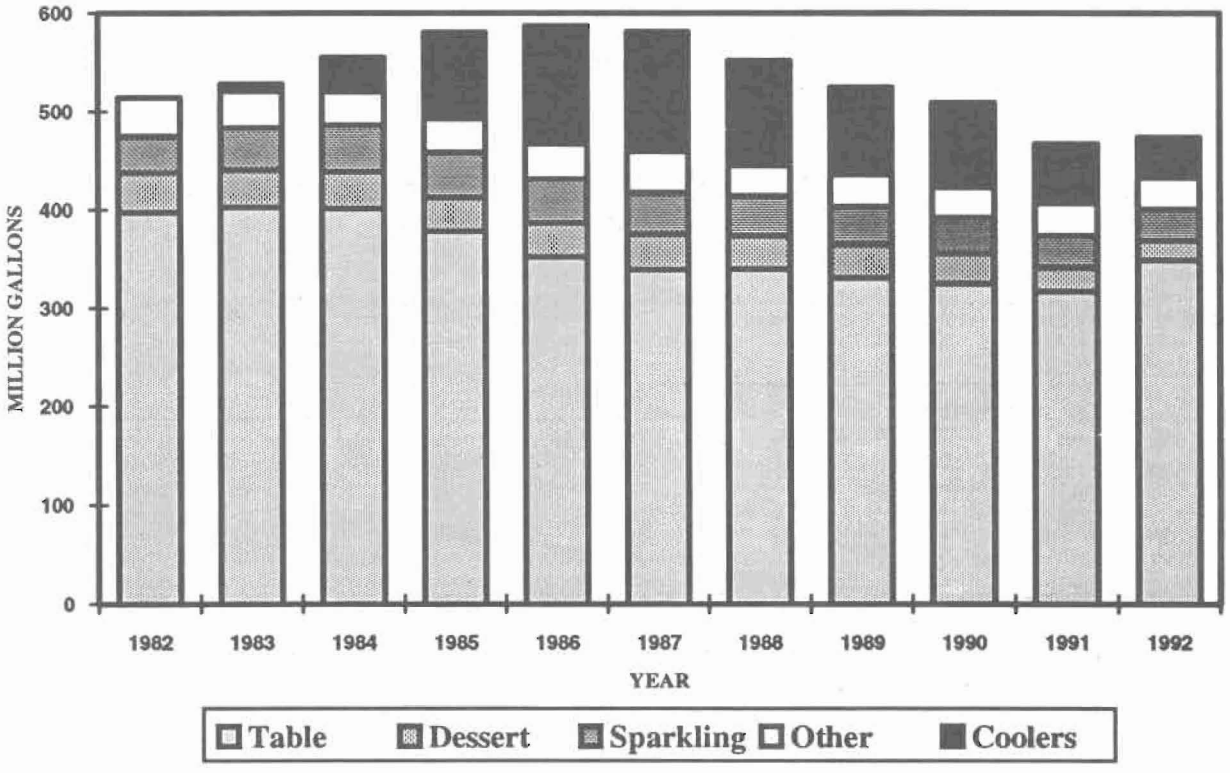
Despite the lingering slow-growth economy, in 1992 the U.S. wine market increased 1.5 percent after five consecutive years of decline. The positive turnaround in 1992 resulted primarily from three factors:

1) The 60 Minutes telecast on the "French Paradox" in November 1991 proclaiming healthful benefits of moderate wine consumption, was followed by an immediate surge in consumer purchases, especially of red table wines. California red table wine shipments increased a healthy 33 percent.

2) A technical correction from the abnormally low sales in the first half of 1991 when the effects of an increased excise tax on wine severely depressed shipments.

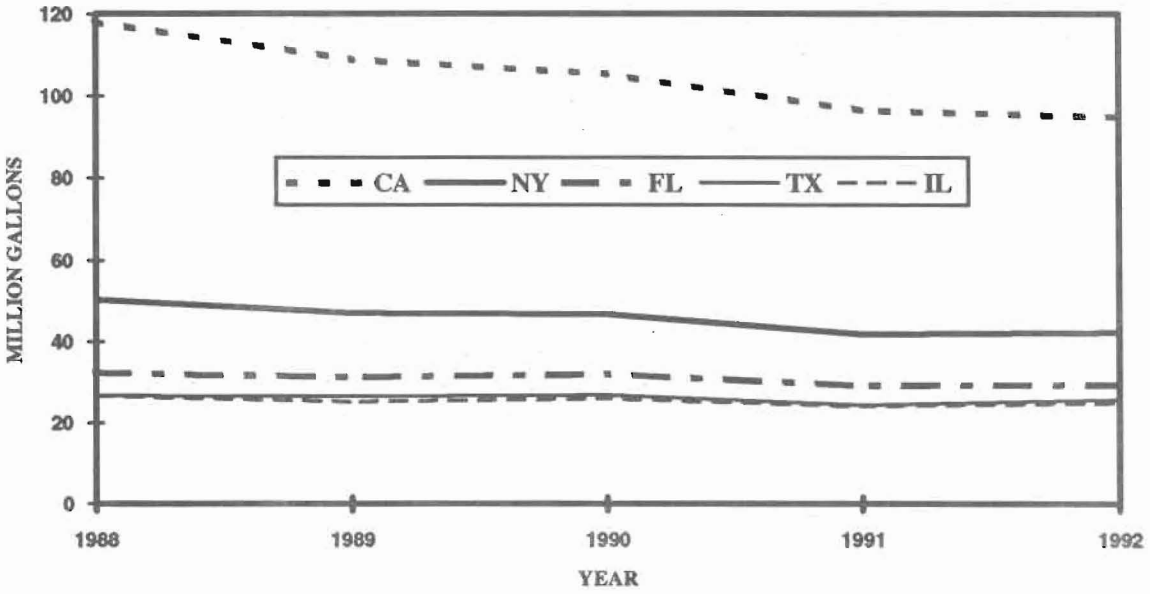
3) Imported wine shipments received a boost as the wine trade built inventories in the summer of 1992 in anticipation of the imposition of the 200 percent tariff on EC wines. The dispute was temporarily settled without the United States imposing the tariffs, but the threat caused shipments to increase in calendar year 1992.

WINE ENTERING DISTRIBUTION CHANNELS IN THE U.S., BY TYPE, 1982-1992



Source: Wines and Vines, July 1993.

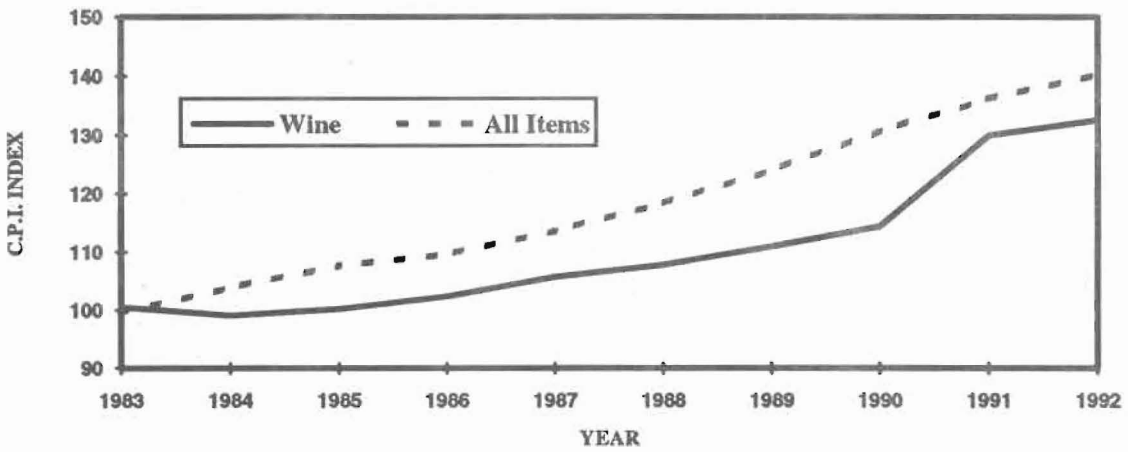
WINE CONSUMPTION IN HIGH CONSUMING STATES, 1988-1992 (million gallons)



Source: Economics Services Department, California Wine Institute

Wine consumption for the five leading states is shown in the figure above. Total consumption declined nearly 20 percent from 1988 to 1992 in California, and 16 percent in New York. During this time period, consumption in the entire U.S. declined by 14 percent. Note that consumption increased slightly in 1992 in New York.

CONSUMER PRICE INDEX FOR WINE AND FOR ALL ITEMS, FOR URBAN CONSUMERS, 1983-1992



Source: Economic Research Department, Wine Institute.

During the last 10 years, the C.P.I. increased by 32 percent for wine, considerably less than the 41 percent increase for all items. The increase for the wine index in 1991, however, was a hefty 14 percent due to the additional federal excise tax levied in January 1991. In 1992, the wine index again lagged behind the C.P.I. for all items, by 2.1 percent vs. 3.0 percent for all items.

GRAPES: NEW YORK GROWN, RECEIVED BY WINERIES AND PROCESSING PLANTS, 1988-92

Variety	1988	1989	1990	1991	1992	5-Year Avg.
			tons			
Concord	108,278	100,150	97,551	134,357	123,919	112,851
Catawba	11,740	7,887	9,855	13,252	10,124	10,572
Niagara	8,262	11,962	9,188	9,934	9,676	9,804
Elvira	2,518	4,227	3,662	4,501	3,606	3,703
Delaware	3,879	3,237	2,741	4,051	1937	3,169
Dutchess	658	571	461	550	364	521
Aurore	6,359	8,538	6,754	7,963	7,204	7,364
de Chaunac	1,949	2,484	2,010	2,611	1,385	2,088
Baco Noir	801	1,202	1,141	1,695	1,449	1,258
Seyval Blanc	1,259	1,185	1,311	1,361	1,215	1,266
Cayuga White	1,124	1,311	895	1,107	1,143	1,116
Rougeon	800	586	783	1,046	587	760
Vitis Vin.(all)	1,863	1,946	2,064	2,919	2,422	2,243
Other varieties	2,610	2,714	2,584	3,653	2,969	2,906
Total, all varieties	152,100	148,000	141,000	189,000	168 000	159,620

SOURCE: New York Agricultural Statistics, 1992-1993.

GRAPES: PRICES PAID FOR NEW YORK GROWN GRAPES PROCESSED, 1988-92

Variety	1988	1989	1990	1991	1992	5-Year Avg.
American Varieties						
Catawba	211	234	225	203	200	215
Concord	245	268	287	246	210	251
Delaware	234	255	222	199	189	220
Dutchess	259	265	214	180	181	220
Elvira	204	210	208	199	196	203
Niagara	225	258	262	223	215*	237
French American Hybrid						
Aurore	232	237	220	192	183	213
Baco Noir	273	256	251	293	246	264
Cayuga White	281	347	272	262	242	281
de Chaunac	183	203	203	229	227	209
Rougeon	187	215	201	223	238	213
Seyval Blanc	270	325	259	273	287	283
Vitis Vinifera						
All varieties	990	1,131	1,050	1,108	1,055	1,067
Average of all varieties	248	272	282	251	222*	255

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

SOURCE: Fruit, New York Crop Reporting Service, 975-2-90, 975-2-91, 975-2-92, and 975-2-93.

Concords are the predominant variety grown and processed in New York. There were 124,000 tons of Concords from New York processed in 1992. Over the past five years, Concords have comprised 71 percent of total tonnage utilized. The second leading variety is Catawba with 6.6 percent of tonnage followed by Niagara with 6.1 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 Aurore, have held their own. Red varieties, such as Baco Noir and deChaunac, benefitted in 1991 from depleted inventories and a general increase in interest in red wine among consumers due to the "French Paradox" telecast. Baco Noir's price decreased in 1992, while deChaunac and Rougeon held relatively steady.

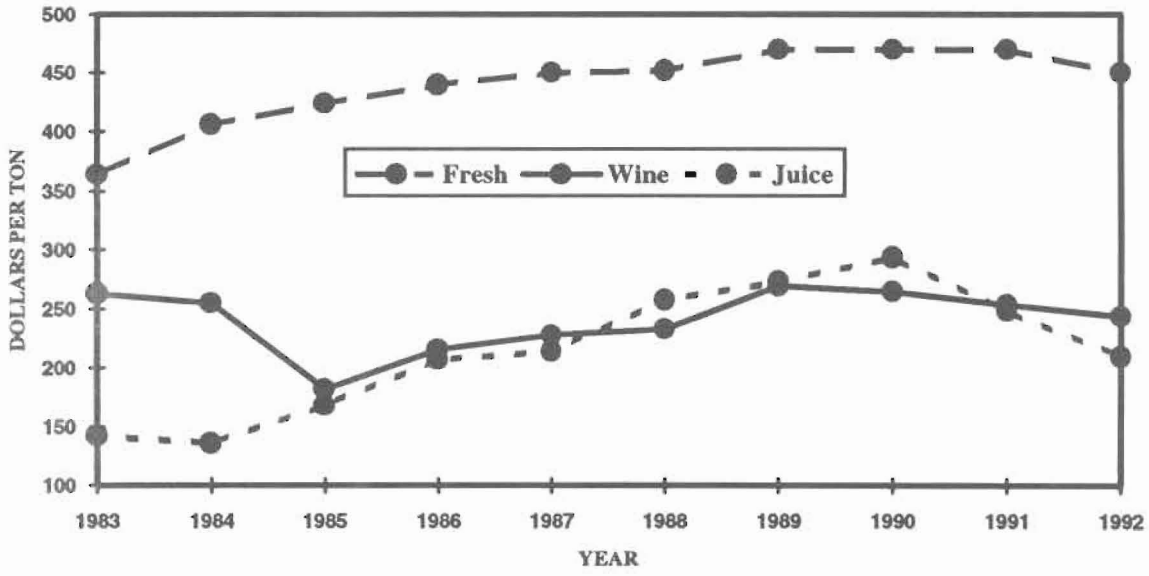
The prices of grapes utilized for fresh use, wine, and juice are shown below. In the early 1980's, the price of grapes utilized for wine generally exceeded the price of grapes utilized for juice by $100 or more per ton. Since 1985, the price for grapes utilized in juice has been about equal to the price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

In 1993, the small crop strengthened prices for some wine grape varieties such as Riesling. Chardonnay also rebounded after being in excess supply for the past two years. Canandaigua Wine Company paid about the same for most varieties, except for increases for Aurore and Delaware. Canandaigua in 1993 acquired Vintners International Company (including Taylor Wine Company in Hammondsport), thus becoming the second largest winery in the United States (behind Gallo) and the only large winery buying grapes in New York.

National Grape Cooperative, Inc., which processes one-third of New York's total grape crop, paid a harvest cash advance of $90 this year vs. $95 in 1992. The cooperative reported net proceeds per ton in fiscal year 1993 of $248, about the same as in 1992. Cash flow will be decreased for most New York members in 1994 because of flat earnings and greatly reduced tonnage from the 1993 crop.

With much lower yields, relatively unchanged prices, and higher operating costs in 1993, cash flow for most growers was considerably lower in 1993 than for the previous year. Growers face another lean cash flow year for the 1994 season.

AVERAGE PRICE FOR GRAPES IN NEW YORK UTILIZED FOR FRESH GRAPES, WINE, AND JUICE, 1983-1992



Source: New York Agricultural Statistics, 1992-1993.

--SITUATION

Many New York potato & vegetable producers were lucky to get a crop in 1992. The drought conditions of 1991 changed to cold--an unusually cold July--and wet conditions in 1992. Growers of processing vegetables fared slightly better than fresh market producers--2.95% below the five-year average crop value--while fresh market crop value was 4.1% below the five-year average. Table I presents farm value of production figures for the past six years for New York State (NYS) potatoes and vegetables (1991 figures were adjusted and are therefore different than figures presented in the New York Economic Handbook, 1993). Lower crop values for fresh market vegetables were generally a function of lower production--down 7% from 1991--and not necessarily from lower prices. Processing vegetable production was up 3.5%, but the price decline was larger--resulting in the drop in value. Potato production was up 12.9%, but 1992 prices were the lowest since 1987. Upstate potato prices were slightly higher than Long Island prices. Total potato and vegetable farm value dropped 15.4% from 1991 and was 5.4% below the five-year average.

TABLE I: POTATOES AND VEGETABLES: NEW YORK STATE FARM VALUE OF PRODUCTION, 1987-1992.

	1987	1988	1989	1990	1991	1992[1]	Five-Year Average (1988-1992)
	millions of dollars						
Potatoes:							
Long Island	12.5	16.1	16.8	13.3	14.8	12.7	14.74
Upstate	38.4	44.9	40.9	43.1	45.5	39.3	42.74
Subtotal	50.9	61.0	57.7	56.4	60.3	52.0	57.48
Vegetables:							
Fresh Market	166.8	165.7	176.3	165.6	203.3	168.7	175.92
Processing	30.9	24.1	32.3	36.4	33.0	30.3	31.22
Subtotal	197.7	189.8	208.6	202.0	236.3	199.0	207.14
TOTAL	248.6	250.8	266.3	258.4	296.6	251.0	264.62

[1] Preliminary.

Source: New York Agricultural Statistics 1992-1993, New York State Agriculture and Markets, Division of Statistics, July 1993.

It is important to point out that the New York Agriculture and Markets statistics do not include all vegetables grown in the state. In fact, commodities like pumpkins, squash, and melons, etc. are not part of the official statistics. The author and others in the extension agent field recognize that the above three commodities alone represent significant farm value and therefore the figures reported in table I under-represent the true NYS farm value of vegetables.

Growing conditions in 1993 were much better than in 1992. The season was generally two-weeks early for many crops and prices were better than in 1992. Fresh market cabbage, sweet corn, and processing vegetables had particularly good yields. Onion prices have been very good during this fall, though yields were not as high as in 1992. Yields were up for many crops because of early warm weather and growers with irrigation did particularly well.

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

	Production				Crop Value			
	1989	1990	1991	1992	1989	1990	1991	1992
	----------1,000 cwt.----------				----------million dollars----------			
New York:								
L.I.	1,898	1,950	1,650	1,984	16.37	13.65	14.77	12.69
Upstate	4,730	5,950	5,267	5,824	38.02	44.85	45.56	39.31
California	6,640	6,630	5,390	5,600	49.89	37.79	22.37	43.96
Colorado	20,603	22,750	23,800	22,110	150.18	101.24	47.60	89.55
Idaho	102,475	119,070	122,175	127,050	655.85	595.35	488.70	654.31
Maine	22,000	20,520	18,170	24,300	149.11	124.15	105.39	123.93
Michigan	7,350	9,240	8,840	10,800	54.53	61.45	53.48	69.12
Minnesota	13,860	14,280	17,160	16,080	72.36	79.97	68.64	69.95
North Dakota	15,070	16,675	30,030	27,690	84.86	95.05	118.62	125.99
Oregon	23,308	23,450	22,170	21,075	122.18	129.56	87.81	115.45
Pennsylvania	4,715	5,400	3,500	4,940	38.30	40.77	26.25	33.35
Washington	64,310	67,980	75,435	69,300	308.54	353.50	286.65	346.50
Wisconsin	23,120	23,075	23,275	25,160	159.80	126.91	97.76	123.28
Other	14,794	15,547	14,868	17,612	78.48	104.80	79.60	112.04
Total-Fall	324,673	352,507	371,730	379,525	1,999.1	1,909.4	1,543.2	1,959.4

Source: Potatoes, Agricultural Statistics Board, National Agricultural Statistical Service, United States Department of Agriculture. September 24, 1993.

Table II presents production and crop value figures for national fall potato production. New York produced 2.06% of the 1992 national crop and captured 2.65% of the crop value. National fall potato production increased for the fifth consecutive year, while the 1992 crop value was 27.0% higher than in 1991. Idaho continues to dominate--33.5% of national production--the national market. Most of the increase in production has been in Idaho.

TABLE III: NEW YORK ONION PRODUCTION BY AREA, 1988-1993.

	1988	1989	1990	1991	1992	1993[1]	Five-Yr. Average (1989-93)
	----------1,000 hundredweight----------						
Orange*	1,050	1,500	2,340	1,674	2,090	1,219	1,764.6
Orleans-Genesee*	648	315	930	608	975	750	715.6
Oswego*	448	504	760	722	660	648	658.8
Madison*	140	182	126	110	184	168	154.0
Steuben-Yates-Ontario	156	288	360	298	396	420	352.4
Wayne & Other	88	123	120	128	87	71	105.8
TOTAL	2,808	2,912	4,636	3,540	4,392	3,276	3,751.2

* - Includes seed and set onions.
1- October 20, 1993 estimate.
Source: New York Agriculture and Markets, "Vegetables," New York Agricultural Statistics, Division of Statistics, October 20, 1993.

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

	Production				Crop Value			
	1990	1991	1992	1993[1]	1990	1991	1992[1]	1993
	----------1,000 cwt.----------				----------million dollars----------			
New York	4,636	3,540	4,392	3,276	49.4	57.3	65.6	48.8[2]
Colorado	5,130	4,953	5,460	5,365	42.7	52.2	57.7	
Idaho & Malheur Co.	10,296	10,590	11,712	11,400	79.4	113.0	130.8	
Michigan	2,442	2,044	2,220	2,448	15.4	19.5	19.2	
Oregon	1,365	1,216	1,722	2,478	11.8	12.6	19.4	
Washington	2,992	3,619	3,901	4,465	21.1	34.0	33.6	
Other	1,948	1,897	2,224	1,499	12.6	14.6	19.4	
Subtotal	28,809	28,859	31,631	30,931	232.7	303.2	345.7	
California	11,590	10,582	10,313	12,870	85.1	73.5	80.5	
TOTAL	40,399	39,441	41,944	43,801	318.4	376.7	426.2	

[1] Preliminary.
[2] Based on fall prices.
Source: Vegetables, 1992 Summary. Agricultural Statistics Board. National Agricultural Statistics Service. United States Department of Agriculture. January 1992.

Table III provides figures for New York storage onion production from 1988 to 1993. This year's crop is 25.4% below last year's and is 12.8% below the five-year average. Orange county production was off by 41.7% from the previous year and the county's share of state production dropped to 37.2%. National storage onion figures are presented on Table IV. For 1993, New York's share of national production is 7.5%, down from the 10.5% share held in 1992. In value terms, New York's share in 1992 was 15.4%.

Table V presents the value of the major vegetables produced in New York. Commodities are ranked by their share of state vegetable production value. Onions surpassed potatoes as the state's most valuable commodity. Also, 1992 was the best (within the past 17-years) year for processed sweet corn, cucumbers, carrots, and celery. processed green beans and beets were the only two commodities with a negative value trend over the past 17-years. Total state vegetable value increased, on average, $5.459 million dollars per year over the past 17-years.

Table VI presents national per capita utilization figures for the major New York vegetables. The USDA changed their system of computing the figures for onions and therefore all the figures are different than those presented in previous New York Economic Handbook.

--OUTLOOK

The outlook for the NYS potato and vegetable industry is mixed. Potato production in Long Island will likely continue to decline as will the production of beets, kraut cabbage, and processed green beans. Conversely, the production of most fresh market vegetables--particularly onions, cucumbers, fresh market green beans, pumpkins, sweet corn--will expand. It would be appropriate for the NYS Agriculture Statistics Service to reconsider the mix of vegetables it reports figures for. Vegetables currently not reported now represent significant farm gate value and therefore need to be included in the statistical series.

TABLE V: COMMODITY RANKING OF VALUE OF NEW YORK STATE VEGETABLE PRODUCTION IN 1992

Commodity	Value of 1992 Production	1976-1992 Avg. Value	Highest Value In Past 17 Yrs.	17 Yr. Value Trend Per Yr.	Value Share in 1992
	millions of dollars				%
Onions	61.990	44.227	(1980) 62.612	1.297	25.0
Potatoes	51.520	58.115	(1980) 97.628	zero	20.8
Cabbage	20.029	27.140	(1983) 48.828	zero	8.08
Sweet Corn (fresh)	19.647	19.389	(1989) 29.958	1.080	7.92
Strawberries	11.556	8.174	(1991) 14.421	0.570	4.66
Sweet Corn (processed)	11.045	7.264	(1992) 11.045	0.353	4.45
Cauliflower	10.256	8.336	(1984) 11.677	0.283	4.13
Cucumbers	9.948	5.262	(1992) 9.948	0.344	4.01
Carrots	7.807	4.183	(1992) 7.807	0.256	3.15
Lettuce	7.782	8.886	(1981) 13.412	zero	3.14
Green Beans (processed)	7.675	13.977	(1980) 19.134	-(0.327)	3.10
Green Beans (fresh)	7.385	8.677	(1989) 18.603	0.475	2.98
Tomatoes	6.846	10.766	(1988) 17.434	0.434	2.76
Green Peas (processed)	5.887	4.069	(1985) 8.564	0.233	2.37
Celery	5.441	3.261	(1992) 5.441	zero	2.19
Beets	1.785	1.972	(1979) 2.950	-(0.050)	0.72
Cabbage (Kraut)	1.365	2.347	(1981) 3.199	zero	0.55
TOTALS	247.964	236.044	(1991) 294.663	5.459	100.00

Source: NY Agricultural Statistics 1992-1993 NY Agricultural Markets, Division of Statistics, July 1993.

TABLE VII: PER CAPITA UTILIZATION,* IN POUNDS - 1970 - 1992

Year	Onions (Fresh)	Potatoes[1] (Fresh)	Snap Beans		Sweet Corn[2]			Total
			Canned	Frozen	Canned	Frozen	Fresh	
1970	12.4	62.3	4.7	1.2	14.3	5.8	7.8	27.9
1971	13.1	56.1	4.6	1.3	14.8	5.5	7.5	27.8
1972	12.6	57.9	4.6	1.4	15.0	5.4	7.8	28.2
1973	10.2	52.4	4.9	1.7	14.5	6.0	7.9	28.4
1974	11.2	49.4	4.9	1.5	13.5	5.9	7.7	27.1
1975	10.5	52.6	4.4	1.2	12.0	6.3	7.8	26.1
1976	11.0	49.4	4.9	1.5	13.1	5.9	8.0	27.0
1977	11.1	50.1	4.8	1.4	14.1	7.4	7.6	29.1
1978	10.9	46.0	4.8	1.4	13.4	6.3	6.6	26.3
1979	11.4	49.3	4.7	1.4	12.7	6.8	6.5	26.0
1980	11.4	51.1	4.6	1.4	13.0	6.4	6.5	25.9
1981	10.7	45.8	4.6	1.7	12.1	6.0	6.2	24.6
1982	12.2	47.1	4.2	1.5	11.6	5.8	6.0	23.4
1983	12.2	49.8	4.1	1.5	11.6	6.6	6.1	24.3
1984	13.1	48.3	3.7	1.8	10.2	8.0	6.4	24.6
1985	13.6	46.3	3.8	1.9	11.9	7.9	6.4	26.2
1986	13.7	48.8	3.9	1.5	12.1	7.6	6.1	25.8
1987	13.4	47.9	3.8	1.7	10.6	7.8	6.3	24.7
1988	14.5	49.6	3.8	1.7	10.4	8.7	5.7	24.8
1989	14.8	50.0	3.9	2.0	9.5	8.4	6.4	24.3
1990	15.1	45.9	3.7	2.0	11.0	8.6	6.5	26.1
1991	15.8	46.9	4.1	1.8	11.1	9.4	5.7	26.2
1992[3]	16.2	48.7	4.0	1.8	11.9	9.0	6.4	27.3

*The USDA changed the method of calculation - particularly with respect to onions - therefore the figures have changed appreciably.

[1] Crop year not calendar year.

[2] On cob basis.

[3] Preliminary.

Source: Vegetables and Specialties: Situation and Outlook Report, USDA, Economic Research Service, TVS-257, July 1993.

--SITUATION

Table I presents the five categories of floriculture crops and their value for the past two years. Bedding plants continued their steady growth--reaching 11% over 1991--and now represent 38.2% of the value of the entire floriculture category. Alternatively, foliage plants continued their decline--7.0% over 1991--and now represent 15.2% of floriculture value. The entire floriculture category increased 7% over 1991 and this years growth will be similar , if not larger. Floriculture value could reach $3 billion dollars in 1993. As usual, the 1991 figures in table I have been adjusted and therefore are different than those reported in last year's New York Economic Handbook.

TABLE I: SUMMARY OF U.S. FLORICULTURE CROPS WHOLESALE VALUE OF SALES, 1991 AND 1992 - MILLIONS OF DOLLARS

Category	1991		1992		
	Value	Percent of Total	Value	Percent of Total	De/Increase Over 1991 (%)
Cut Flowers	$435.6	16.6%	$453.0	16.5%	+ 4.0%
Potted Flowering Plants	687.5	26.2	715.0	26.0	+4.0
Foliage Plants	448.4	17.1	417.0	15.2	-7.0
Bedding Plants	945.9	36.0	1,050.0	38.2	+11.0
Cut Greens	109.9	4.2	111.0	4.0	+1.0
Total Value	2,627.3	100.0%	2,746.0	100.0%	+7.0

Source: Floriculture Crops - 1992 Summary, U.S. Department of Agriculture, National Agricultural Statistics Service, Agricultural Statistics Board, April 1993.

TABLE II: COMMERCIAL PRODUCERS, QUANTITIES SOLD, AND WHOLESALE VALUE OF SELECTED FLORICULTURE CROPS, NEW YORK, 1992

	Reporting Producers[1]	Quantity Sold		Wholesale Value
	Number			$1,000
Cut Flowers				
Carnations - Standard	5	94,000	blooms	35
Chrysanthemums				
Standard	18	705,000	blooms	308
Pompon	21	125,000	bunches	211
Roses				
Hybrid Tea	13	15,091,000	blooms	9,070
Sweetheart	12	4,040,000	blooms	1,814
Other Cut Flowers	49	- - - -		2,963
Sub-Total				13,847 (-11.0%)[2]
Potted Flowering Plants				
African Violets	31	1,454,000	pots	1,705
Chrysanthemums	83	1,575,000	pots	3,918
Finished Florist Azaleas	53	3,234,000	pots	8,394
Easter Lilies	84	610,000	pots	2,140
Other Lilies	35	84,000	pots	361
Other Potted Flowering	101	21,781,000	flats	122,581
Poinsettias	152	2,950,000	pots	8,949
Sub-Total				141,909 (-1.98%)
Foliage For Indoor/Patio Use				
Potted Foliage	53		--------	1,775
Foliage Hanging Baskets	103	391,000	baskets	1,998
Sub-Total				3,773 (-15.5%)
Bedding Garden Plants				
Geraniums (flats)	55	202,000	flats	1,893
Other Flowering and Foliar Plants	194	3,390,000	flats	22,747
Vegetable Type Plants	177	641,000	flats	4,865
Hardy Garden Chrysanthemums	139	2,056,000	pots	4,602
Geraniums (cuttings)	180	6,723,000	pots	8,168
Geraniums (seed)	68	3,040,000	pots	2,981
Other Potted and Foliar Plants	129	6,045,000	pots	103,607
Vegetable Plants	63	628,000	pots	705
Foliage Hanging Baskets	222	1,328,000	baskets	7,450
Sub-Total				64,018 (+26.0%)
Total of Reported Floriculture Crops				**220,737 (+7.00%)**

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

[2] Percentage change from 1991 sales.

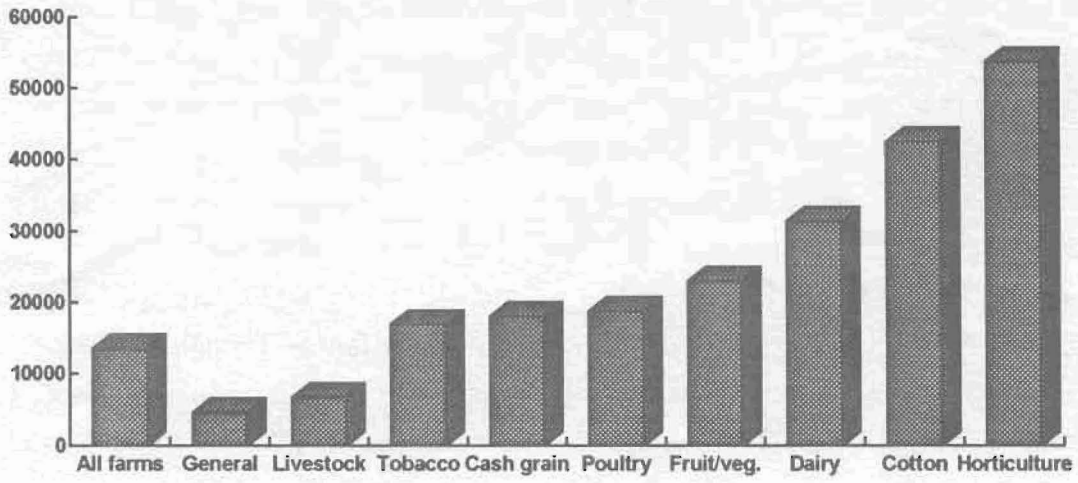
Source: New York Agricultural Statistics, 1992-1993, NYS Dept. of Agriculture & Markets, Division of Statistics, in cooperation with USDA, National Agriculture Statistics Service, July 1993.

Table II lists floriculture figures specific for New York. Total category sales reached $220.7 million dollars, representing a 7% increase over 1991. Of the four categories listed, only bedding garden plants increased--26%--over the past year. The largest category--64.3% of total state floriculture value--is potted flowering plants and the category declined nearly 2% over 1991 figures. The cut flower category continued to decline--particularly in the hybrid-tea rose production value. Figures 1 and 2 provide national and New York specific statistics for the 'Floriculture and Environmental (Ornamental) Horticulture' farms. Figure 1 illustrates that the average 'horticulture' farm in the U.S. had a net farm income of nearly $55,000 while the average for all farms in the U.S. was nearly $15,000. Figure 2 shows the 1987-1991 pattern of grower cash receipts for NYS floriculture and environmental horticulture farms. Though the 1992 figures are not listed, the preliminary estimate is that the five-year growth pattern continued in 1992. In 1991, floriculture receipts were $230.5 million while environmental horticulture crops were $116 million.

--OUTLOOK

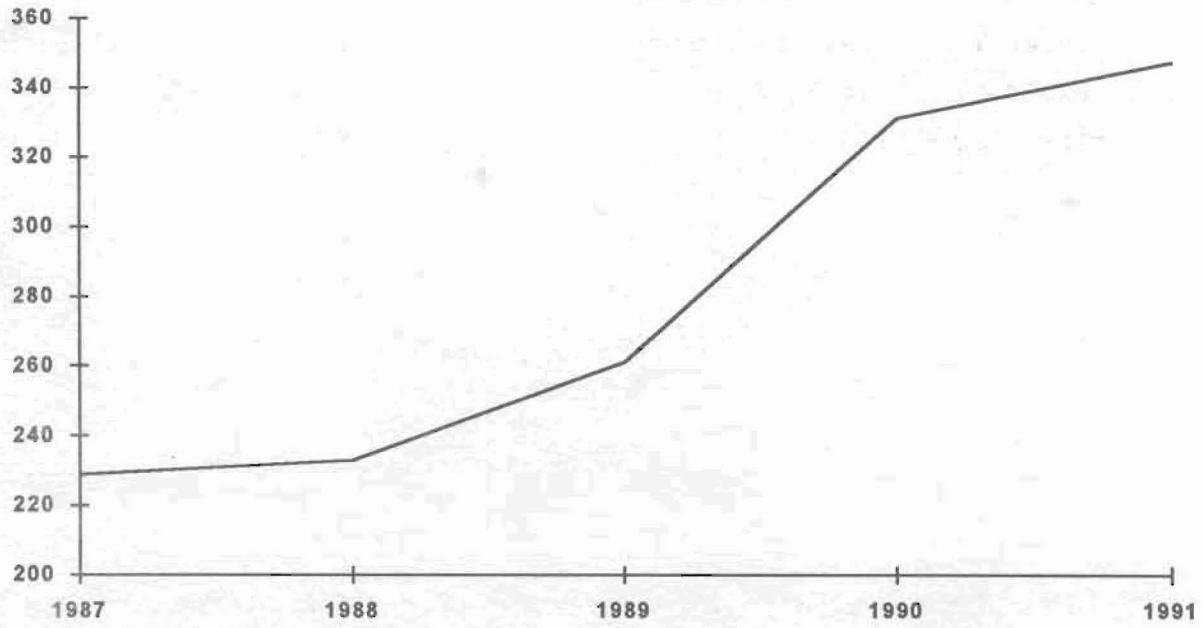
The outlook for cut flowers is not as bright as for other floriculture products. Potted flowering plants will likely continue to increase in both volume and value as will the bedding plant category. Total floriculture and environmental horticulture crops will likely continue in the trajectory illustrated in figure 2.

Figure 1: Net Farm Income by Production Specialty, 1990
Dollars per farm



Source: Financial Performance of U.S. Floriculture and Environmental Horticulture Farm Businesses, 1987-91, USDA, Economic Research Service, Statistical Bulletin Number 862, September 1993.

Figure 2: Value of Grower Cash Receipts for Floriculture and Environmental Horticulture Farms -- New York State, 1987-91
1,000,000 dollars



Source: Financial Performance of U.S. Floriculture and Environmental Horticulture Farm Businesses, 1987-91, USDA, Economic Research Service, Statistical Bulletin Number 862, September 1993.

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