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TRENDS FOR THE APPLE INDUSTRY

IN THE

UNITED STATES

LEADING APPLE-PRODUCING STATES

NEW YORK STATE

By

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TRENDS FOR THE APPLE INDUSTRY IN THE UNITED STATES,
LEADING APPLE-PRODUCING STATES AND NEW YORK STATE

United States

The apple industry in the United States has been static in some respects and dynamic in others. Numbers of trees have decreased, but, in recent years especially, yield per tree and total production have tended to increase. The quantity of apples consumed fresh has changed little, but the proportion of the apples used in that form has decreased.

Number of trees

In the past 30 years in the United States there has been a decline in the number of apple trees both bearing and non-bearing (Table 1). The rate of decline of bearing trees has been faster than that of non-bearing with the result that there has been an increase in the proportion of non-bearing trees.

Table 1. NUMBER OF APPLE TREES
35 Commercial Apples States, United States ^{1/}
Selected Years

Year	Bearing trees	Non-bearing trees	Total trees ^{2/}	Percent non-bearing
<u>Number in millions</u>				
1935	79	16	96	18
1940	56	12	68	18
1945	NA	NA	62	NA
1950	36	10	47	23
1954 ^{3/}	24	7	31	23
1959 ^{3/}	20	8	28	29

^{1/} See figure 1 for the 35 commercial apple states.

^{2/} Total may not add exactly because of rounding.

^{3/} Does not include data from farms with less than 20 trees.

SOURCE: U.S. Census of Agriculture.

Production

Although the number of trees has been decreasing, aside from year to year fluctuations, total apple production has tended to increase over the 30-year period (Tables 2 and 3). This was possible because of the 330 percent increase in yield per apple tree. Most of the increase occurred between 1950 and 1959 when the number of bushels of apples produced per tree nearly doubled. Data for 1964 are not yet available.

Table 2. APPLE PRODUCTION
35 Commercial Apple States, United States ^{1/}, Selected Years

Year	Total utilized production ^{2/}	Bushels produced per bearing tree
Million bushels		
1935	111	1.4
1940	117	2.1
1945	102	NA
1950	115	3.2
1954	104	4.3
1959	119	6.0

^{1/} See Figure 1 for the 35 commercial apple states.

^{2/} Production figures are a three-year moving average centered on the year stated.

SOURCE: U.S. Census of Agriculture, and Fruits; Non-citrus by States,
Crop Reporting Board, Statistical Reporting Service, U.S.D.A.

Prices

The annual yield and price of apples in the United States have been quite variable (Table 3). The weighted and unweighted average price of apples for the period 1950 to 1964 was \$1.95 per bushel. The annual average price ranged from \$1.43 to \$2.57 per bushel. Apple prices were depressed in the late 1950's but have recovered somewhat since then.

Although price variation was fairly large, apple income was less so. With large crops the price was depressed and with small crops the price was high. This inverse relationship had the effect of reducing the year to year variability of income from apple sales. The coefficient of variation of prices for the 1950-1964 period was 18 percent. For the total value of apple sales it was 14 percent.

Table 3. APPLE PRICES, BUSHELs SOLD AND VALUE OF SALES
35 Commercial Apple States, United States ^{1/}, 1950-1964

Year	Average price per bushel sold	Bushels of apples sold	Total value of sales
		million	million
1950	\$ 1.63	116	\$ 189
1951	1.75	97	170
1952	2.43	91	221
1953	2.57	92	238
1954	2.25	108	244
1955	1.95	102	199
1956	2.36	98	231
1957	1.45	114	165
1958	1.43	121	173
1959	1.71	123	210
1960	2.19	106	232
1961	1.86	123	229
1962	1.95	123	241
1963	1.92	123	236
1964	1.82	135	247
1950-1954	2.13	101	212
1955-1959	1.78	112	196
1960-1964	1.95	122	237

^{1/} See Figure 1 for the 35 commercial apple states.

SOURCE: Fruits; Non-citrus by States, Crop Reporting Board, Statistical Reporting Service, U.S.D.A.

Form of Utilization

Today most apples are sold in such forms as fresh fruit, apple sauce, baby food, canned apple slices, frozen apple pies, apple juice and cider. Fresh fruit sales in the United States for the period 1960-1964 averaged 77 million bushels annually which was 63 percent of the total sales for the period (Table 4).

Table 4. UTILIZATION OF APPLES
35 Commercial Apple States, United States ^{1/}, 1950-1964

Year	Fresh sales	Processed				Total sales ^{3/}
		Canned	Dried	Frozen	Other ^{2/}	
Millions of bushels						
1950	77	17	7 ^{4/}	2 ^{4/}	14	116
1951	70	12	3	1 ^{4/}	11	97
1952	66	11	4 ^{4/}	1 ^{4/}	8	91
1953	66	11	3 ^{4/}	1 ^{4/}	9	92
1954	70	19	4	2 ^{4/}	13	108
1955	69	16	4	2 ^{4/}	11	102
1956	65	18	2	3	10	98
1957	79	18	2	2	13	114
1958	82	20	5	3	13	121
1959	80	19	4	4	16	123
1960	70	18	3	4	11	106
1961	78	23	4	3	16	123
1962	77	23	4	4	16	123
1963	77	24	3	3	16	123
1964	81	27	2	4	21	135
Average						
1950-54	70	14	4	1	11	101
1955-59	75	18	3	3	13	112
1960-64	77	23	3	4	16	122

^{1/} See Figure 1 for the 35 commercial apple states.

^{2/} Includes apples crushed for vinegar, cider and juice. For some states small quantities of canned, dried and frozen apples are included.

^{3/} Numbers may not add up to the total because of rounding.

^{4/} Dried and frozen apples in Virginia and West Virginia are included with other.

SOURCE: Fruits; Non-citrus by States, Crop Reporting Board, Statistical Reporting Service, U.S.D.A.

Of the 46 million bushels per year which went for processing during the 1960-1964 period about half were canned. Processed apples in dried and frozen form averaged two percent and three percent of the total apple sales, respectively. The remaining 13 percent of the apples were sold for vinegar, cider and juice.

The volume and relative proportion of apples utilized in the different ways has varied over the years. Although the number of bushels sold fresh has been increasing slightly, the percentage of apples sold as fresh fruit has decreased at an average annual rate of 1.07 percent. Between 1950 and 1964 the percent of fresh sales of total sales decreased by seven percent. Offsetting this for the most part was an increase of five percent in the apples used for canning.

Per Capita Consumption

To indicate the rate of consumption of apples, the quantity sold for use has been divided by the population of the United States including Alaska and Hawaii.¹ Both the quantity of domestically consumed apples and the population increased during the period 1951 to 1963 (Table 5). The former increased at a slightly faster rate; thus per capita consumption has risen slightly. The annual rate of apple consumption averaged 30.5 pounds per person in the six years 1951 through 1956. In the six years 1958 to 1963 the consumption was 31.7 pounds per person.

Table 5. DOMESTIC PRODUCTION, POPULATION
AND PER CAPITA CONSUMPTION OF APPLES
United States, 1951-1963

Year	Domestic production utilized	Population of United States at July 1	Per capita consumption of apples
	million pounds	million	pounds
1951	5,002	154	32
1952	4,589	156	29
1953	4,776	159	30
1954	4,934	162	30
1955	5,028	165	30
1956	5,087	168	30
1957	5,365	171	31
1958	5,726	174	33
1959	5,579	177	32
1960	5,601	180	31
1961	5,607	183	31
1962	5,870	186	32
1963	6,067	187	32

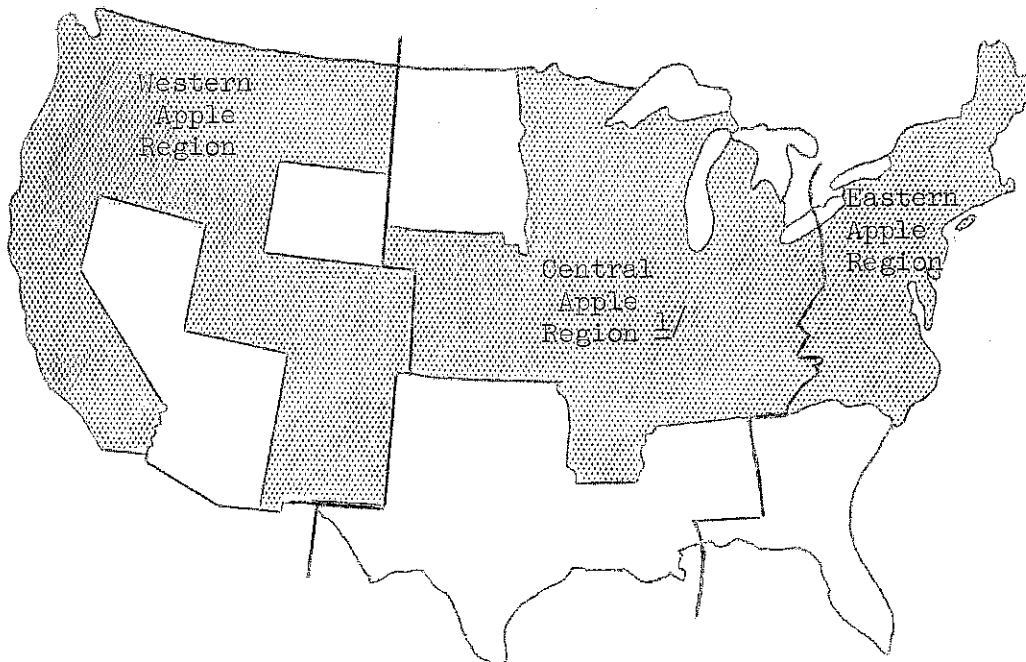
SOURCE: Fruits; Non-citrus by States, Crop Reporting Board, Statistical Reporting Service, U.S.D.A.; Agricultural Statistics; U.S. Bureau of the Census, Current Population Reports.

¹ Domestic production is stated as a three-year moving average to remove part of the yearly variability and partially to take into consideration the yearly carryover of processed apples. Also net exports have been subtracted from total production; thus the data include only that consumed by the population of the United States.

Apple Regions of the United States

As a means of getting a better understanding of apple production in the United States the Crop Reporting Board of the U.S.D.A. has divided states into three commercial apple regions: East, Central and West (Figure 1). Each of these has different production and marketing characteristics for its apple industry.

Figure 1. COMMERCIAL APPLE PRODUCTION REGIONS
1951-1962



■ Commercial apple states as defined by the Crop Reporting Board of the U.S.D.A.

1/ Nebraska was considered as one of the commercial apple states until 1961.

Number of Trees

In all three regions the number of apple trees declined over the period 1935 to 1959. However, in the West the number of non-bearing trees planted since 1945 has exceeded the number of bearing trees removed and the total number of trees is up somewhat (Table 6).

Table 6. NUMBER OF APPLE TREES AND PERCENT NON-BEARING
Apple Regions of the United States ^{1/}, Selected Years

Region	Year	Bearing trees	Non-bearing trees	Total trees ^{2/}	Percent non-bearing
number in millions					
East:	1935	35	6	42	17
	1940	26	5	31	16
	1945	NA	NA	30	NA
	1950	17	4	21	19
	1954	11	3	14	21
	1959	9	3	12	25
Central:	1935	32	8	41	22
	1940	22	6	28	23
	1945	NA	NA	24	NA
	1950	14	4	18	22
	1954	7	2	9	22
	1959	6	2	8	25
West:	1935	11	2	13	15
	1940	8	1	9	11
	1945	NA	NA	8	NA
	1950	6	2	8	25
	1954	5	2	7	29
	1959	5	4	9	45

^{1/} The commercial apple states that are included in each of the regions are shown in Figure 1.

^{2/} Numbers may not add up to total because of rounding.

SOURCE: U.S. Census of Agriculture.

Closer scrutiny of the data shows that, although the number of trees has tended to decrease in all regions in the years 1935-1959 (the West is an exception since 1945), farmers took out the older, mature trees more rapidly than they slowed their planting of new orchards with the result that the proportion of non-bearing trees increased. In the West, because of the increase in planting of new orchards, the proportion of non-bearing trees was 45 percent of the total trees in 1959 as compared with only 15 percent in 1935.

Yield Per Tree

During the period being considered, the rate of production per tree has been increased in all three regions (Table 7 and Figure 2). However, the West has consistently had the highest and the Central region the lowest yield.

Table 7. NUMBER OF BEARING TREES, UTILIZED PRODUCTION
AND PRODUCTION PER TREE
Apple Regions of the United States ^{1/}, Selected Years

Region	Year	Number bearing trees	Utilized production ^{2/}	Production per bearing tree
		million	million bushel	bushel
East:	1935	35	47	1.3
	1940	26	53	2.0
	1945	NA	40	NA
	1950	17	51	3.0
	1954	11	48	4.4
	1959	9	58	6.4
Central:	1935	32	19	0.6
	1940	22	24	1.1
	1945	NA	15	NA
	1950	14	22	1.6
	1954	7	17	2.4
	1959	6	24	4.0
West:	1935	11	45	4.1
	1940	8	40	5.0
	1945	NA	46	NA
	1950	6	42	7.0
	1954	5	39	7.8
	1959	5	38	7.6

^{1/} The commercial apple states that are included in each of the regions are shown in Figure 1.

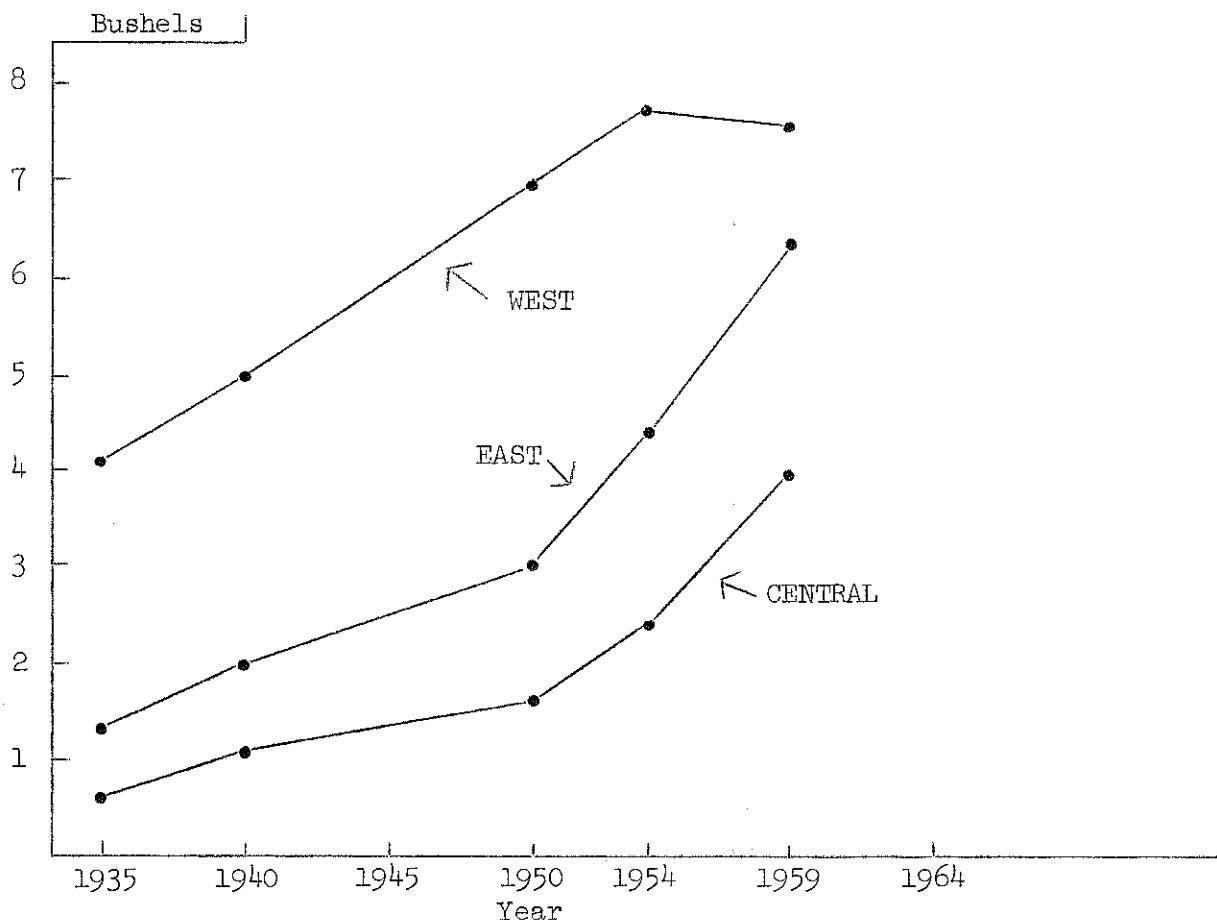
^{2/} A three-year moving average centered on the year stated.

SOURCE: U.S. Census of Agriculture and Fruits; Non-citrus by States,
Crop Reporting Board, Statistical Reporting Service, U.S.D.A.

The East had the greatest absolute increase in yield over this period, 5.1 bushels per bearing tree. The absolute yield in the West and Central regions increased about 3.5 bushels per tree. Relatively, the Central region had the greatest increase in yield, and the West showed the least advance.

Figure 2.

YIELD OF APPLES PER BEARING TREE
FOR APPLE REGIONS OF THE UNITED STATES



Per Capita Production

Average per capita production for the years 1951 to 1963 was 72 pounds in the West, 38 pounds in the East and 13 pounds in the Central region.

The production of apples in both East and Central has increased at a more rapid rate than population and thus, per capita production has increased in those areas (Table 8). Population has grown faster than apple production in the West and per capita production has fallen.

These data might be interpreted to indicate a trend for the Central region to produce more of the apples consumed there, the East to produce somewhat more for export to other parts of the country and the West to produce less for export.

Table 8. APPLE PRODUCTION, POPULATION AND PER CAPITA CONSUMPTION OF APPLES
Apple Regions of the United States ^{1/}, 1951-1962

Region	Year	Utilized production ^{2/} million pounds	Population of region July 1 ^{3/} million	Per capita production of apples pounds
East:	1951	2291	61	37
	1952	2072	62	33
	1953	2217	63	35
	1954	2311	65	36
	1955	2390	65	37
	1956	2259	66	37
	1957	2428	67	36
	1958	2692	69	39
	1959	2762	70	40
	1960	2882	71	41
	1961	2879	72	40
	1962	2939	73	40
	1963	2913	74	39
Average	1951-1963			38
Central:	1951	881	72	12
	1952	866	72	12
	1953	778	73	11
	1954	793	74	11
	1955	859	76	11
	1956	939	77	12
	1957	1049	78	13
	1958	1102	79	14
	1959	1152	81	14
	1960	1234	81	15
	1961	1229	82	15
	1962	1201	83	15
	1963	1232	83	15
Average	1951-1963			13
West:	1951	1895	21	91
	1952	1724	22	79
	1953	1825	22	81
	1954	1874	23	81
	1955	1817	24	76
	1956	1954	25	75
	1957	1991	26	78
	1958	1935	26	74
	1959	1811	27	68
	1960	1625	28	57
	1961	1634	29	56
	1962	1865	30	62
	1963	2054	31	66
Average	1951-1963			72

^{1/} The commercial apple states included in each region are shown in Figure 1.

^{2/} Production stated as a three-year moving average centered on year stated.

^{3/} Alaska and Hawaii are part of the West's population region.

SOURCE: Fruits; Non-citrus by States, Crop Reporting Board, Statistical Reporting Service, U.S.D.A.; and U.S. Bureau of the Census, Current Population Reports.

Utilization

Variation existed in the utilization of apples between the regions (Table 9). A smaller proportion of its apple crop is sold as fresh fruit in the East than the other two regions. A larger proportion is canned. In the Western and Central states about three-fourths of the apples were sold as fresh fruit. The West is the only region in which apples are dried on a commercial basis. Few apples are used for cider, juice or vinegar in that region.

Table 9. UTILIZATION OF APPLES
United States and Region^{1/}, Average 1950-1964

Utilization	United States	East	Central	West
	percent of total sales			
Fresh	66	58	73	74
Canned	17	27	7	8
Dried	3	-- ^{2/}	-- ^{2/}	9
Frozen	2	2	3	2
Other ^{3/}	<u>12</u>	<u>13</u>	<u>17</u>	<u>7</u>
	100	100	100	100

^{1/} The commercial apple states that are included in each of the regions are shown in Figure 1.

^{2/} Less than one-half percent.

^{3/} Apples crushed for vinegar, cider and juice. For some states small quantity canned, dried and frozen are included.

SOURCE: Fruits; Non-citrus by States, Crop Reporting Board, Statistical Reporting Service, U.S.D.A.

Varieties Grown

Because of the differences in utilization of apples, different types and varieties of apples are grown in the different regions. The greatest proportion of the West and Central regions' varieties are adapted to fresh fruit whereas more of the East's varieties are dual-purpose varieties (Table 10). The East is the only region in which certain varieties are considered as being solely for processing.

Table 10. VARIETAL PRODUCTION CLASSIFIED BY USE
Commercial Apple Regions of United States, Selected Years

		Varietal Classification			
Region	Year	Fresh	Dual purpose	Processing	Total
<u>percent of total production for each region</u>					
East:	1950	37	44	19	100
	1964	40	43	17	100
Central:	1950	65	35	0	100
	1964	78	22	0	100
West:	1950	81	19	0	100
	1964	82	18	0	100

SOURCE: Fruits; Non-citrus by States, Crop Reporting Board, Statistical Reporting Service, U.S.D.A.; and classification from Apple Marketing Clinic.

Prices

The variety, quality and the utilization of the fruit affect the average price received. Generally, the varieties and quality of apples sold as fresh fruit command the highest prices, while lower prices are paid for processing fruit. As expected, under these circumstances, the East with a higher percentage of processed apples had the lowest average price for apples during the years 1950 to 1964—\$1.80 per bushel. The West had the highest price—\$2.10 per bushel. The average price for the Central region was \$1.93 per bushel.

Variation in Value of Sales

There was considerable variation from year to year in income from apple sales in all three regions. The West and Central regions had much more variation than did the East. The coefficients of variation for each of the regions for the period 1950 to 1964 were as follows:

East	17%
Central	24%
West	24%

Leading Apple Producing States

There are 35 states which produce enough apples to be considered as commercial apple states by the U. S. Crop Reporting Board.¹ Five of these states—

¹ The 35 commercial apple states are shown in Figure 1.

New York, Virginia, Michigan, Washington and California—produced 62 percent of the total crop in 1964.

Washington State had the greatest production of the five states in 1964.¹ New York was second to Washington and Michigan produced about three-fourths as many apples as New York. California and Virginia each produced about half as many apples as New York.

<u>State</u>	<u>Million Bushels produced in 1964</u>
Washington	25.5
New York	21.1
Michigan	16.2
California	12.4
Virginia	9.7

Number of Trees

Over the years since 1935 these five states have experienced a decrease in total tree count (Table 11). Recently there have been important changes. Washington State has had an increase in total number of apple trees, and the decrease in tree numbers seems to have slowed or stopped in the other four states. All five states have increased their proportion of non-bearing trees.²

Yield per Tree

From 1935 to 1959 the yield per bearing tree increased in all five of the states. However, Washington yields have decreased since 1950 (Figure 3 and Table 12). The greatest increase in yield during the period was 5.8 bushels per tree in New York. This was followed closely by the change in Virginia. These two states also had the greatest relative increases in yield—about 370 percent. Washington's gain was 46 percent, small compared to Virginia and New York.

Although Washington once held a sizeable lead in yield per tree, the other four states are closing the gap. This is particularly true of New York, Virginia and California. Michigan was close to Virginia and New York in 1935 but had not kept pace in 1959.

¹ Fruits; Non-citrus by States, Crop Reporting Board, Statistical Reporting Service, U.S.D.A.

² Problems and Proposals for Action in the New York State Fruit Industry, College Fruit Committee, Cornell University, December 1964.

Table 11. APPLE TREES OF SELECTED STATES
Five Leading Apple Producing States, Selected Years

State	Year	Bearing trees	Non-bearing trees	Total trees ^{1/}	Percent non-bearing
number in millions					
Washington:	1935	4.6	0.9	5.5	16
	1940	3.4	0.3	3.7	8
	1945	NA	NA	3.3	NA
	1950	2.7	0.7	3.4	21
	1954	2.4	1.1	3.6	33
	1959	2.6	2.6	5.2	50
New York:	1935	7.7	1.4	9.0	14
	1940	5.4	1.2	6.6	18
	1945	NA	NA	6.6	NA
	1950	4.3	0.7	5.0	14
	1954	2.9	0.6	3.5	17
	1959	2.6	0.7	3.3	21
Michigan:	1935	5.7	1.0	6.7	15
	1940	4.3	1.0	5.4	20
	1945	NA	NA	5.2	NA
	1950	3.4	0.7	4.0	15
	1954	2.4	0.5	2.9	17
	1959	2.2	0.7	2.9	24
Virginia:	1935	6.7	1.0	7.7	13
	1940	5.1	0.8	5.9	14
	1945	NA	NA	5.8	NA
	1950	3.4	0.7	4.1	16
	1954	2.3	0.5	2.8	18
	1959	1.5	0.5	2.0	25
California:	1935	2.5	0.2	2.8	11
	1940	2.0	0.2	2.1	5
	1945	NA	NA	2.2	NA
	1950	1.6	0.3	1.9	16
	1954	1.5	0.2	1.7	12
	1959	1.4	0.3	1.6	13

^{1/} Numbers may not add to total because of rounding.

SOURCE: U.S. Census of Agriculture.

Table 12. APPLE PRODUCTION PER BEARING TREE
OF SELECTED STATES
Five Leading Apple Producing States, Selected Years

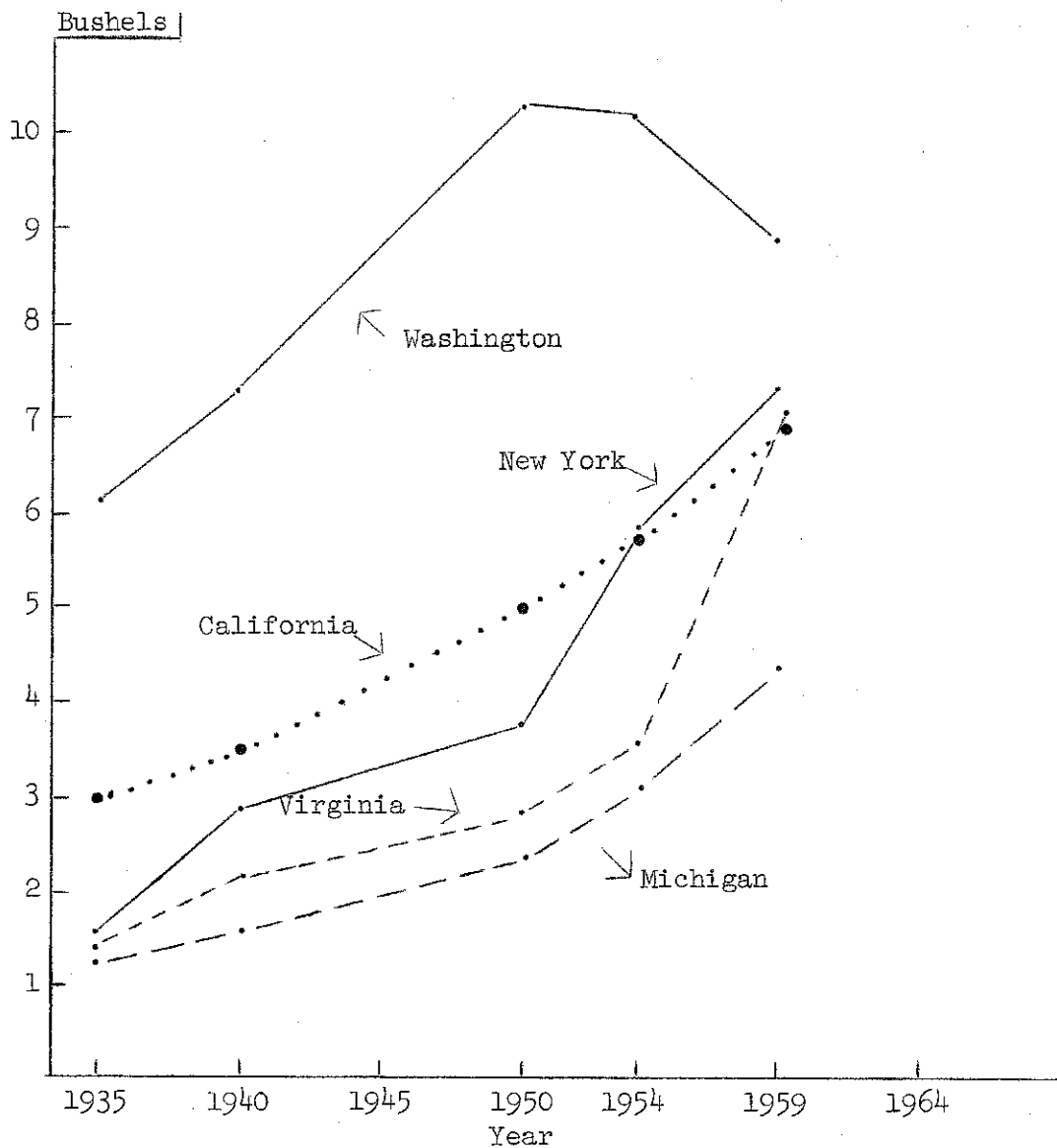
State	Year	Number of bearing trees	Utilized production ^{1/}	Yield per tree
		million	million bushels	bushels
Washington:	1935	4.6	28.2	6.1
	1940	3.4	24.8	7.3
	1945	NA	30.3	NA
	1950	2.7	27.7	10.3
	1954	2.4	24.5	10.2
	1959	2.6	23.1	8.9
New York:	1935	7.7	12.5	1.6
	1940	5.4	15.5	2.9
	1945	NA	10.8	NA
	1950	4.3	16.4	3.8
	1954	2.9	17.2	5.9
	1959	2.6	19.3	7.4
Michigan:	1935	5.7	7.5	1.3
	1940	4.3	6.9	1.6
	1945	NA	8.1	NA
	1950	3.4	8.0	2.4
	1954	2.4	8.7	3.6
	1959	2.2	9.6	4.4
Virginia:	1935	6.7	10.3	1.5
	1940	5.1	11.1	2.2
	1945	NA	9.9	NA
	1950	3.4	9.9	2.9
	1954	2.3	8.2	3.6
	1959	1.5	10.7	7.1
California:	1935	2.5	7.5	3.0
	1940	2.0	6.9	3.5
	1945	NA	8.1	NA
	1950	1.6	8.0	5.0
	1954	1.5	8.7	5.8
	1959	1.4	9.7	6.9

^{1/} A three-year moving average centered on the year stated.

SOURCE: U.S. Census of Agriculture and Fruits; Non-citrus by States, Crop Reporting Board, Statistical Reporting Service, U.S.D.A.

Figure 3.

YIELD OF APPLES PER BEARING TREE
FOR SELECTED STATES



Proportion Produced

The changes in yields and acreage of apples have affected the relative importance of the United States' apple states in the market (Table 13). New York and Michigan have increased their proportion. Virginia's share has remained constant. Washington's proportion of the total produced has had the most variation of the five states and appears to have declined somewhat. In 1945 she produced nearly a third of the apples of the United States, but in 1963 her production was only 20 percent of the total.

The proportion of the total production of these five states has not changed significantly during the period 1935-1959. It was high in 1945 primarily because of the large yield in Washington that year.

Table 13. PROPORTION OF THE TOTAL APPLE PRODUCTION FROM FIVE STATES
Selected Years

Year	New York	Washington	Virginia	Michigan	California	Total of five States
percent						
1935	11	25	9	7	7	59
1940	13	21	9	6	5	54
1945	11	30	10	8	8	67
1950	14	24	9	7	7	61
1954	17	24	8	8	8	65
1959	16	19	9	8	8	60
1963	16	20	7	11	8	62

SOURCE: Compiled by using a three-year moving average of production centered on year stated. Figures from Fruits; Non-citrus by States, Crop Reporting Board, Statistical Reporting Service, U.S.D.A.

New York

As previously noted, in 1959 New York was the second leading apple producing state in the United States. However, although apples are a principal crop in some areas and on some farms, they do not contribute a large proportion of the state's farm receipts. In 1959 apple receipts constituted 3.2 percent of the total New York farm receipts. The proportion has varied from year to year but has remained small over the years (Table 14).

In 1959 apples were more important than all other fruit crops of New York combined. They accounted for 59 percent of the fruit and nut receipts in that year.¹

¹ U.S. Census of Agriculture, 1959.

Table 14. IMPORTANCE OF APPLES TO NEW YORK AGRICULTURE
Selected Years

Year	Total value of farm products sold	Total value of apples sold	Apple receipts as a percent of total farm receipts
	million dollars	million dollars	
1939	242.4	9.5	3.9
1944	503.8	25.4	5.0
1949	630.4	17.9	2.8
1954	668.5	32.2	4.8
1959	755.4	24.2	3.2

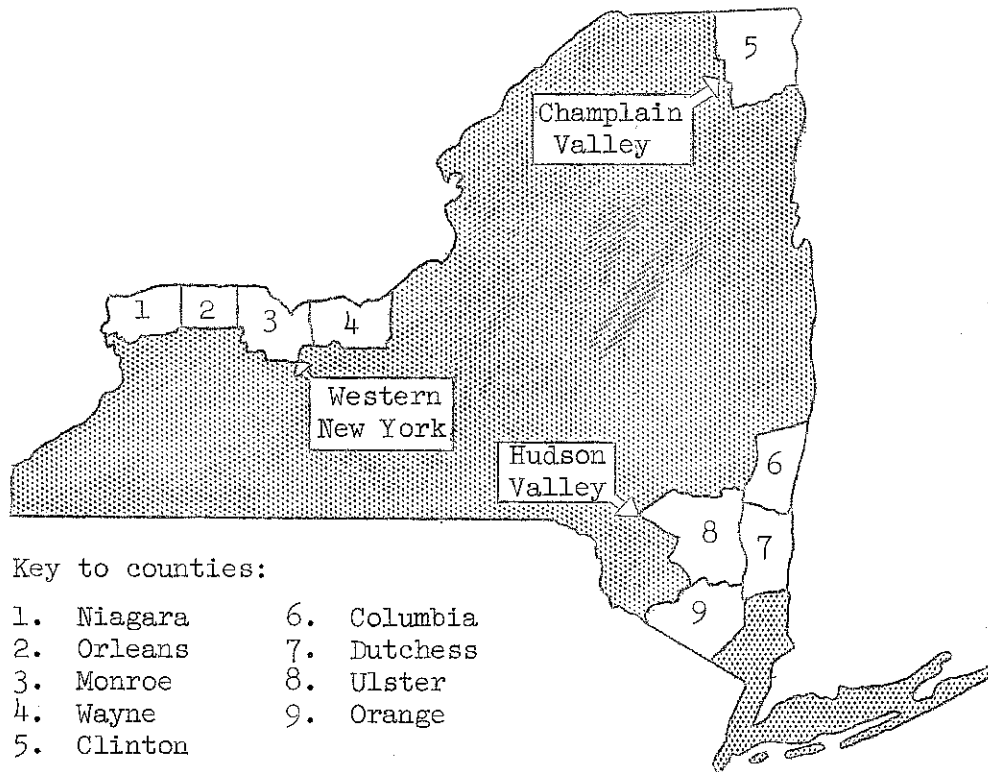
SOURCE: Charles Glenn Snyder, Relative Profitability of Various Apple Varieties in the Hudson Valley, Thesis, Cornell University, 1964, p. 4.

Apple production in New York is mainly confined to nine counties composing three apple regions—Western New York, Hudson Valley and the Champlain Valley (Figure 4). These regions produced 87 percent of the state's apple crop in 1959. Of the nine counties, Wayne was the most important with a total production in 1959 of about 4.8 million bushels. Each of the nine important counties produced over a half million bushels of apples.

<u>County</u>	<u>Thousand bushels produced in 1959</u>
Wayne	4,765
Ulster	2,859
Orleans	1,703
Niagara	1,540
Columbia	1,345
Dutchess	1,278
Monroe	1,277
Orange	746
Clinton	593

Figure 4.

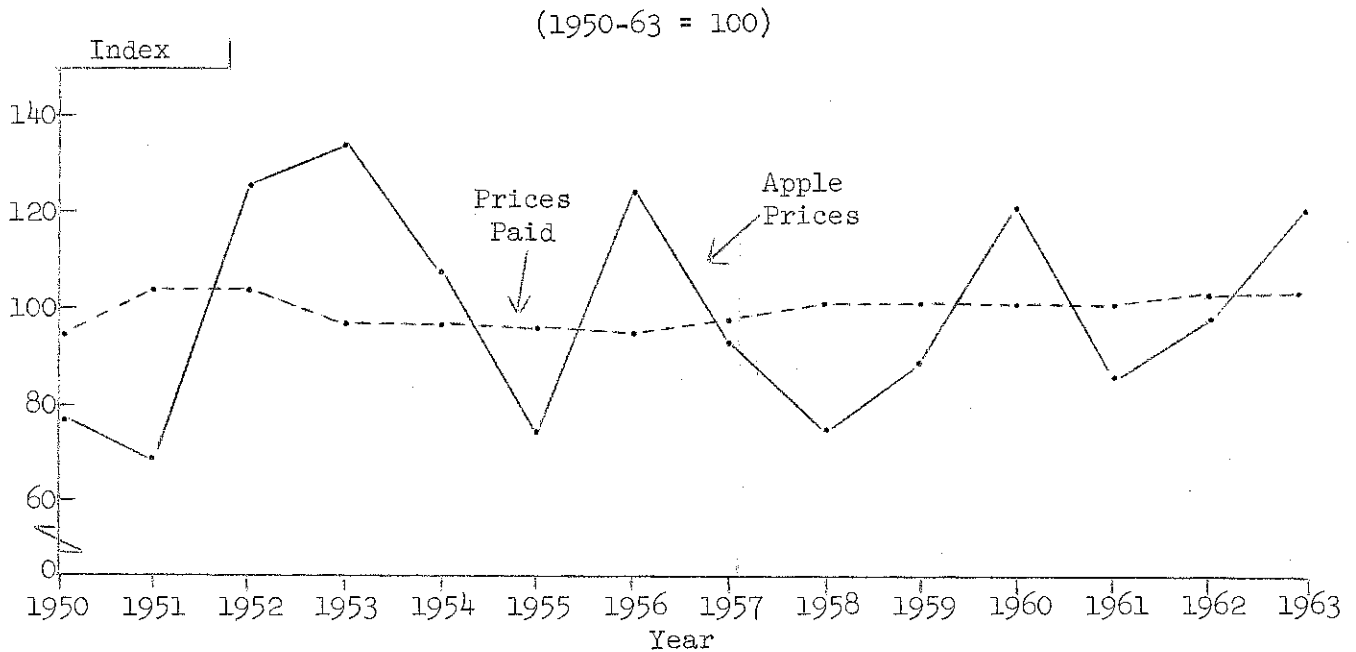
APPLE REGIONS OF NEW YORK



Prices of New York apples have been highly variable over the years. In 1951 the average was only \$1.14 per bushel. In 1953 the average was \$2.57 or 125 percent more. There seems to be some tendency for the fluctuations to be less in recent years (Figure 5).

In contrast to the price fluctuation of apples, prices of items used for production have been fairly stable. This does not mean that production costs have been stable. Year to year variation in weather causes great differences in the need for and amount spent on such things as spray materials. Costs per unit also are influenced greatly by the year to year variation in yield of apples.

Figure 5. INDEXES FOR ITEMS USED FOR PRODUCTION BY U.S. FARMERS
AND NEW YORK APPLE PRICES
1950-1963



SOURCE: Agricultural Prices, Crop Reporting Board, Statistical Reporting Service, U.S.D.A. and Fruits; Non-citrus by States, Crop Reporting Board, Statistical Reporting Service, U.S.D.A.

Trends of the Nine Leading Apple Counties of New York

Over the years from 1935 to 1959 the number of bearing trees has been declining in all counties except Wayne, where the 1959 data indicated an increase in number of bearing trees (Table 15). In recent years all the counties have increased their planting of non-bearing trees, and at present the counties have a high proportion of non-bearing trees.

Table 15. NUMBER OF APPLE TREES, PROPORTION OF NON-BEARING TREES,
PRODUCTION AND YIELD PER TREE
Selected Counties of New York, Selected Years

County	Year	Bearing trees	Non- bearing trees	Total trees ^{1/}	Percent non- bearing	Utilized production	Yield per bearing tree
Number in thousands						Thousand bushels	Bushels
Wayne	1935	967	114	1,082	11	3,010	3.1
	1945	NA	NA	976	NA	3,791	NA
	1950	725	104	830	13	4,239	5.8
	1954	553	109	662	16	4,729	8.1
	1959	615	202	818	25	4,765	7.8
Ulster	1935	414	141	555	25	757	1.8
	1945	NA	NA	688	NA	2,016	NA
	1950	446	87	543	16	1,911	4.3
	1954	444	73	517	14	2,552	5.7
	1959	348	97	445	22	2,859	8.2
Orleans	1935	639	66	705	9	2,058	3.2
	1945	NA	NA	443	NA	1,526	NA
	1950	353	38	391	10	1,760	5.0
	1954	234	46	279	16	1,980	8.5
	1959	196	72	268	27	1,703	8.7
Niagara	1935	841	155	996	16	2,142	2.5
	1945	NA	NA	650	NA	967	NA
	1950	479	52	531	10	1,771	3.7
	1954	379	56	435	13	2,003	5.2
	1959	295	69	365	19	1,540	5.2
Columbia	1935	499	157	656	24	682	1.4
	1945	NA	NA	614	NA	1,365	NA
	1950	370	72	442	16	1,162	3.1
	1954	243	40	283	14	1,348	5.5
	1959	200	47	246	19	1,345	6.7
Dutchess	1935	340	91	431	21	500	1.5
	1945	NA	NA	464	NA	989	NA
	1950	254	38	291	13	849	3.3
	1954	147	24	171	14	1,100	7.5
	1959	129	36	164	22	1,278	9.9

^{1/} Numbers may not add to total because of rounding.

