

THE OUTLOOK FOR FRUIT IN
THE NORTHEAST

by

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The past year brought many problems for fruit growers in the Northeast. Some of these are in the nature of short-run problems, such as reduced yields from cold or dry weather. Other problems are of a longer term nature, and reflect the difficulties inherent as thousands of individual growers attempt to make supply adjustments for perennial crops. For these crops there is a three to four year lag from the time orchard and vineyards are planted until production begins, and perhaps several more years before peak production is reached.

The short-run problems included unusual weather, especially at Christmas when temperatures in parts of the Northeast plummeted from a mild day on Christmas Eve to sub-zero readings on Christmas Day. Then in April, parts of the Northeast again experienced untimely freezing temperatures that cut yields considerably. Furthermore, some sections were very dry during much of the growing season. For the five tree fruit crops to be discussed here today, as well as for grapes, all showed decreased production forecasts. The same was true nationally, but of course at much lower percentage decreases. The decreases in production from 1980 levels ranged from over 50 percent in both tart and sweet cherries to a five percent decrease in pears.

Some of the longer run problems that I will discuss include potential imbalances in supply and demand for some fruit crops, especially apples, tart cherries, and grapes. These potential problems have strong implications for growers' management decisions as they attempt to plan for the next decade.

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I will review production data from the five major tree fruit crops in the Northeast, as well as grapes, blueberries, strawberries, and cranberries. I will attempt to point out some of the factors which will have a bearing on prices and growers' incomes, and will discuss prices where reported data are available.

Apples

In his review of background information for his outlook presentation in 1975, How noted that the apple industry was going through a period of considerable change. Some of the changes which were mentioned included the replanting of old orchards and setting trees on new land, in many cases with size controlled root stock and higher density production systems. These plantings begin bearing sooner, produce a higher yield per acre, and provide for greater labor efficiency. Continued expansion of controlled atmosphere storage has provided growers with an extended marketing season for fresh fruit, and in some cases has helped processors extend their plant operations.

Estimates of productive capacity are difficult to make, for reasons How gave in his 1975 presentation. Tree surveys are the best sources of this data, but are done at irregular intervals and not coordinated between regions. The two leading states in production, Washington and New York, collectively accounted for about 47 percent of the nation's record 1980 production. (Washington and New York produced 71.9 and 26.2 million bushels respectively, out of a national crop of 210.2 million bushels.) But, for these two states, Washington does not conduct a fruit tree survey at all, and New York's last survey was in 1975, with another one scheduled for release this fall. However, the prevailing industry opinion is that productive capacity has increased substantially, which signals potential marketing challenges for the 80's. The December 1980 issue of The Goodfruit Grower featured articles about the expansion in the Snake River and

Columbia River basin in Washington State. Larson predicted that Washington would probably attain a production of 100 million bushels before the year 2000.

On the demand side, How observed in 1975 that the total market appeared to be expanding slowly. Domestic per capita consumption of fresh apples was relatively stable at that time, and has changed little in the interim years (see Atkin, p. 21). The potential increased productive capacity evident in 1975, and stable domestic consumption led to How's concern that the industry might be under severe competitive pressure during the last half of the 70's.

What was not evident at that time, however, was the dramatic increase in fresh apple exports that would occur during the period 1975-1981 (Table 1). Exports increased from 5.4 million bushels in 1975-76 to 16 million bushels in 1980-81, with a forecast of 17.2 million bushels for 1981-82. Countries which were of particular importance for this increase were Taiwan (.1 million bushels in 1975-76 to 3.9 million bushels in 1980-81) and Saudi Arabia (.1 million bushels in 1975-76 to 1.6 million bushels in 1980-81). The Middle East and the Far East countries, with rising incomes and hard currency from oil revenue, collectively increased purchases from the U.S. from 1.5 million bushels in 1975-76 to 8.9 million bushels in 1980-81. Although there was country to country and year to year changes in exports, there were increases in all major trading areas.

This tremendous increase in exports took the pressure off the market. Even though production in the U.S. did increase substantially during the 1970's (from a 1970-74 average production of about 150 million bushels to the approximately 200 million bushels produced in more recent years) grower returns in the late 70's were relatively favorable. In New York, cost account records show profitable years from 1976 to 1979 (Table 2). In 1975, national production was the highest it had been up to that time, and prices were low. For the 1980 season, despite

the 1980 record level of exports, the record crop resulted in downward pressure on apple prices. Prices for fresh market opened at about the same level as 1979, but weakened as the marketing season progressed. Average processing prices fell from \$103 per ton to \$86 per ton in New York and from \$114 per ton to \$81.50 per ton nationally. Thus the farm value of utilized production fell nationally, and in every state in the Northeast except Rhode Island and Vermont. While we do not have final figures for profit per acre for cost account farms, we anticipate that these will be much lower (perhaps negative) than for previous years.

Now let's take a look at the 1981 crop year. Production in the Northeast (Table 3) is forecast by USDA at 46.7 million bushels, down 22 percent from 1980. Many orchards suffered bud damage on April 21 in New York and New England, as temperatures dropped into the low 20's. This especially affected the Champlain Valley in New York and Vermont, and many orchards experienced winter freeze damage as well. Adverse weather conditions also affected Canadian apples, with a 27 percent decreased production expected. Quebec was especially hard hit, with a 65 percent decrease expected, and with permanent damage to productive capacity by the estimated loss of half a million trees due to winter damage. The crop in the eastern U.S. is down in general, and this leads to an expected decrease of nine percent nationally, from 210 million bushels in 1980 to 192 million bushels. The western crop is generally better than a year ago, with Washington State expecting a slight increase in production.

What prices can growers in the Northeast expect for this marketing season? Price predictions are always hazardous as demand conditions can change as the season progresses. On the plus side, fresh apple prices in Northeastern markets opened about at the same level as in 1980 for the early varieties. The decreased national production, a considerable decrease in the Northeastern crop, the decreased Canadian production, and an expected increase in exports are factors which will enhance growers' prices. The Mediterranean fruit fly may have an

indirect affect as fruit (not necessarily apples) is diverted from certain export and domestic markets by quarantine. This could have a somewhat depressing effect on prices. Juice apples in New York are selling for about 4.5-5.0¢ per pound this year, compared with less than 3¢ per pound last year.

In general, it would appear that the 1981-82 season has the prospect of higher prices than 1980-81, but perhaps not enough to offset lower production. Even with favorable prices, some growers will have disastrous years due to substantially decreased production from weather damage.

Over the longer run, the 1980's would appear to offer significant challenges to growers in the Northeast. Stable per capita domestic consumption, increased productive potential especially in the Northwest, and competition from other producing nations are factors which could cause declining real incomes to fruit growers. These factors led Atkin to suggest that the best opportunity for New York's growers was to develop stronger producer organizations which could enable capitalizing on increased export marketing opportunities.

Peaches

The 1981 peach production was forecast at 60.4 million bushels, six percent less than last year (Table 4). Much of the decrease was in clingstone peaches. Excluding clingstones, the U.S. crop was down by only one percent.

The forecasts for states in the Northeast were not favorable. The region's two largest producing states, New Jersey and Pennsylvania, were expecting decreases in production of 27 and 38 percent respectively.

Because of a large southern crop (13 percent above last year), opening prices in that region were down sharply from a year earlier. Despite the reduced output in the Northeast, the impact of the southern crop helped to hold prices down. Final price figures for the 1981 crop will not be available until later in the year.

Cherries

The past few years have afforded a graphic illustration of the volatility of the tart cherry market. About 97 percent of the national crop is utilized for processing. Historically, over two-thirds of the production is in Michigan. Furthermore, the crop is extremely susceptible to frost damage. New York is the second leading producer, and Pennsylvania also has significant production. The geographic concentration of production and the susceptibility to weather damage lead to large year-to-year fluctuations in production and prices.

The period 1977-1979 had been extremely profitable years for growers. Prices of 43¢ per pound in 1978 and 47¢ per pound in 1979 (due to short crops) raised growers' profits tremendously. In New York, cost account records indicated profits in excess of \$1,900 per acre for these two years (Table 5). There was concern that growers would be encouraged to over plant. Some restraint was caused by the tight supplies of nursery stock. The 1980 crop year, with production increasing by 48 percent over 1979, should have reminded growers of the volatility of the market, as prices plummeted to 20¢ per pound.

With the large 1980 crop, a considerable amount of cherries were diverted by growers in the tart cherry marketing order to be released from the reserve pool during the 1981-82 season. So despite a small crop in 1981 (142 million pounds - see Table 6), the supplies of both canned and frozen tart cherries should be sufficient for the season.

The short crop in Michigan resulted from freezing temperatures in April which damaged buds and trees. New York growers experienced severe winter kill of buds during the week of sub-normal temperatures at the end of December, and by frost in April. Pennsylvania's production is 43 percent above last year's, although there was locally light to heavy freeze damage.

With prices at more than 45¢ per pound, some Pennsylvania growers should be in a favorable position. However, the combination of low production in 1981 and a slow cash flow from diversion of the 1980 crop into the reserve pool, has hurt most New York growers.

For the long-term, there is considerable concern that the favorable prices of the late 1970's will have led to over expansion for the 1980's. The recently completed Michigan Tree Fruit Survey (1978) helped somewhat to allay those fears. The survey showed only a one percent increase in tree numbers since 1973. However, the age distribution of the trees, the increased use of trickle irrigation, and new cultural techniques mean that the production potential per tree is higher. Industry people will be anxiously awaiting the New York survey to see what has happened to tree numbers in New York. Western areas, especially Utah, have also increased their acreage and production potential. Productive capacity may be considerably greater for tart cherries in the 80's, signalling less favorable prices than growers experienced in the late 70's.

The sweet cherry crop is also short. New York's crop is down by 57 percent and Pennsylvania's by 43 percent from the preceding year (Table 7). Nationally, production is down by 19 percent. Sweet cherry production in New York and Pennsylvania was affected by the same adverse weather conditions that affected tart cherries.

Pears

The national pear crop is forecast at 852,250 tons, down five percent from last year (Table 8). The average of the three states which produce commercial quantities in the Northeast shows a similar decline, but New York had a projected nine percent decrease, while Pennsylvania and Connecticut had increases forecast.

Three states in the Northwest (Washington, Oregon, and California) produce about 95 percent of the nation's pear crop. Prices in the Northwest are expected

to be similar to last year, but prices to Northeast growers are not yet available.

Grapes

Grape growers in New York and Pennsylvania face a period of painful adjustment. The grape industry in California, as well as the east, faces an imbalance of white varieties versus red varieties as consumers' preferences shift toward white wine and away from red. Furthermore, in both New York and Pennsylvania, the Concord variety predominates. (Concords comprised 65 percent of total New York grape acreage and 82 percent of Pennsylvania acreage in the most recent vine surveys.) Concords face the added disadvantage that they are not in demand for premium wines, the sector of the grape industry which is gaining in importance. Concord, a native variety, is used mainly for juice, jellies, and jam.

The imbalance of varieties is such that some processors have large volumes of crush from red varieties, and particularly Concords, in inventory. In 1980, one of the major processors dropped some of their traditional growers, who had to scramble for other markets.

Another blow to New York growers was the so called "Christmas massacre", when a thaw on Christmas Eve was followed by sub-zero temperatures on Christmas Day. The effects were greater in the Finger Lakes and the Hudson River production areas than in the Great Lakes area. The freeze was also more devastating for varieties susceptible to winter injury (Vinifera and certain French-American Hybrids) than for the more hardy native varieties. The effect on production for the whole state is expected to result in about a 29 percent decrease in production from 1980 (Table 9), but damage ranges from very little in westernmost counties to very severe for some growers further to the east. The freeze also was devastating to vines, especially Vinifera, which in some cases were

killed. Some growers of Vinifera may be forced to reconsider the potential for these varieties in New York.

Pennsylvania's production is apparently unchanged from last year. Nationally there is a large reduction of 20 percent forecast for total grape production, with California, which typically produces about 90 percent of the total production in the nation, experiencing a 21 percent reduction.

Prices were generally up for white varieties, but down for red varieties, especially Concords. National Grape Cooperative did, however, give a larger cash advance (\$90 per ton versus \$85 last year) for their eastern growers.

Over the next few years, Northeastern growers will be reassessing their alternatives and looking for adjustment opportunities. Some of the alternatives under consideration by New York growers include different training systems (e.g., Geneva Double Curtain) or cultural techniques, other fruit crops, crushing juice, selling fresh grapes, direct marketing (U-pick and/or roadside marketing), and, of course, different varieties. Growers should remember, however, the lag time between market signals (prices) and production, which for grapes is at least four years including land preparation. It is conceivable that growers could over-swing to white varieties the same way that they over-expanded grape acreage in the 70's.

Blueberries

Maine and New Jersey have increases in production forecast amounting to five percent and four percent respectively (Table 10). The national outlook is for a three percent increase. Published price data are not yet available.

Strawberries

The 1981 strawberry crop is currently estimated at 606 million pounds, seven percent larger than last year (Table 11). The only state that has figures

available for 1981 is New Jersey, where an eight percent increase in production is expected due to higher yield per acre.

Cranberries

Cranberry production for the Northeast is projected at 1.4 million barrels, virtually unchanged from last year's production (Table 12). Nationally, a three percent decrease is anticipated.

Concluding Remarks

The low supplies of non-citrus fruit, both nationally, in Canada, and in Europe, should enhance prices in 1981 considerably. Another factor to watch will be the developing citrus crop. However, Northeast growers were hit hard by the weather, which reduced yields considerably and was locally devastating to some growers.

For the long run, at least two factors which may prove to be helpful to Northeast growers are (1) the effects of rising real fuel costs on transportation costs and (2) interest by consumers and producers in direct marketing. Northeast growers, with close proximity to large eastern markets, may be able to capitalize on these factors. However, substantial difficulties may arise from competition from other areas and potentially large supplies for certain crops in the next decade. These will provide both marketing and management challenges as growers face the uncertain economic environment in the 80's. If these potential conditions I have discussed become reality, beginning fruit farmers and those with greater debt loads will have severe difficulties over the next few years, as cash flow would be a real problem.

References

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TABLE 1. FRESH APPLE EXPORTS FROM THE UNITED STATES, 1975-76 - 1980-81 SEASONS, AND 1981-82 FORECAST.

<u>YEAR</u>	<u>MILLION 42-LB. BUSHELS</u>
1975-76	5.4
1976-77	6.3
1977-78	7.9
1978-79	7.5
1979-80	12.4
1980-81	16.0
1981-82 (FORECAST)	17.2

SOURCE: FOREIGN AGRICULTURAL SERVICE, AUGUST 1981.

TABLE 2. PROFIT PER ACRE FOR APPLES, SELECTED NEW YORK FARMS, 1975 - 1979.

<u>YEAR</u>	<u>NO. OF FARMS</u>	<u>PROFIT PER ACRE (\$)</u>
1975	12	(-) 221
1976	10	308
1977	8	328
1978	8	200
1979	9	97

SOURCE: SNYDER; FRUIT AND VEGETABLE CROPS COSTS AND RETURNS FROM FARM COST ACCOUNTS, 1975 - 1979.

TABLE 3. APPLE PRODUCTION, 1979, 1980, AND 1981 (FORECAST), NORTHEASTERN STATES AND THE UNITED STATES.

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>PERCENT CHANGE</u> <u>1980-1981</u>
	(1,000 42-POUND BUSHELS)			
CONNECTICUT	1,071	1,000	990	- 1
DELAWARE	321	333	321	- 4
MAINE	2,048	2,024	1,740	- 14
MARYLAND	2,024	2,143	1,786	- 17
MASSACHUSETTS	2,262	2,381	1,975	- 17
NEW HAMPSHIRE	1,381	1,381	1,120	- 19
NEW JERSEY	2,619	2,619	2,381	- 9
NEW YORK	24,643	26,191	18,571	- 29
PENNSYLVANIA	12,738	13,571	10,714	- 21
RHODE ISLAND	119	131	110	- 16
VERMONT	1,167	1,190	715	- 40
WEST VIRGINIA	6,190	5,833	5,238	- 10
 NORTHEAST	 56,583	 58,797	 45,661	 - 22
 UNITED STATES	 193,881	 210,200	 191,844	 - 9

TABLE 4. PEACH PRODUCTION, 1979, 1980, AND 1981 (ESTIMATED),
NORTHEASTERN STATES AND THE UNITED STATES.

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>% CHANGE</u> <u>1980-81</u>
	(1,000 48-POUND BUSHELS)			
CONNECTICUT	52	58	10	- 83
DELAWARE	42	29	50	+ 72
MARYLAND	458	396	396	0
MASSACHUSETTS	38	42	16	- 62
NEW JERSEY	1,979	2,292	1,667	- 27
NEW YORK	140	271	188	- 31
PENNSYLVANIA	1,667	2,188	1,354	- 38
WEST VIRGINIA	500	458	375	- 18
 NORTHEAST	 4,876	 5,734	 4,056	 - 29
 CALIFORNIA (CLINGSTONE & FREESTONE)	 38,917	 40,938	 37,917	 - 7
 UNITED STATES (CLINGSTONE & FREESTONE)	 61,488	 64,035	 60,429	 - 6

TABLE 5. PROFIT PER ACRE FOR TART CHERRIES, SELECTED NEW YORK FARMS, 1975-79.

<u>YEAR</u>	<u>NO. OF FARMS</u>	<u>PROFIT PER ACRE (\$)</u>
1975	7	33
1976	7	499
1977	6	343
1978	5	1,912
1979	6	1,892

SOURCE: SNYDER, FRUIT AND VEGETABLE CROPS COSTS AND RETURNS FROM FARM COST ACCOUNTS, 1975-79.

TABLE 6. TART CHERRY PRODUCTION, 1979, 1980, AND 1981 (INDICATED),
NORTHEASTERN STATES, MICHIGAN, AND THE UNITED STATES.

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>% CHANGE</u> <u>1980-81</u>
	(MILLION POUNDS)			
NEW YORK	27.3	30.4	9.5	- 69
PENNSYLVANIA	6.3	5.6	8.0	+ 43
NORTHEAST	33.6	36.0	17.5	- 51
MICHIGAN	100.0	150.0	95.0	- 37
UNITED STATES	170.4	218.1	142.0	- 35

TABLE 7. SWEET CHERRY PRODUCTION, 1979, 1980, AND 1981 (ESTIMATED),
NORTHEASTERN STATES AND THE UNITED STATES.

	<u>1979</u>	<u>1980</u> (TONS)	<u>1981</u>	<u>% CHANGE</u> <u>1980-81</u>
NEW YORK	4,200	5,100	2,200	- 57
PENNSYLVANIA	730	700	400	- 43
NORTHEAST	4,930	5,800	2,600	- 55
UNITED STATES	181,980	171,700	138,900	- 19

TABLE 8. PEAR PRODUCTION, 1979, 1980, AND 1981 (INDICATED),
NORTHEASTERN STATES AND THE UNITED STATES.

	<u>1979</u>	<u>1980</u> (TONS)	<u>1981</u>	<u>% CHANGE</u> <u>1980-81</u>
CONNECTICUT	1,500	1,500	1,650	+ 10
NEW YORK	18,000	17,500	16,000	- 9
PENNSYLVANIA	3,100	3,500	3,800	+ 9
NORTHEAST	22,600	22,500	21,450	- 5
UNITED STATES	854,700	893,800	852,250	- 5

TABLE 9. GRAPE PRODUCTION, 1979, 1980, AND 1981 (ESTIMATED),
NORTHEASTERN STATES, CALIFORNIA, AND THE UNITED STATES.

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>% CHANGE</u> <u>1980-81</u>
		(TONS)		
NEW YORK	165,000	175,000	125,000	- 29
PENNSYLVANIA	57,500	56,000	56,000	0
NORTHEAST	222,500	231,000	181,000	- 22
CALIFORNIA	4,558,000	5,124,000	4,060,000	- 21
UNITED STATES	4,989,000	5,595,100	4,490,000	- 20

TABLE 10. BLUEBERRY PRODUCTION, 1979, 1980, 1981 (FORECAST),
NORTHEASTERN STATES AND THE UNITED STATES.

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>% CHANGE</u> <u>1980-81</u>
	(1,000 POUNDS)			
MAINE	17,000	21,200	22,200	+ 5
NEW JERSEY	23,400	26,000	27,000	+ 4
NORTHEAST	40,400	47,200	49,200	+ 4
UNITED STATES	92,285	102,735	105,820	+ 3

TABLE 11. STRAWBERRY PRODUCTION, 1979, 1980, AND 1981,
NORTHEASTERN STATES AND THE UNITED STATES.

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>% CHANGE</u> <u>1980-81</u>
		(1,000 CWT.)		
NEW JERSEY	34	38	41	+ 8
NEW YORK	138	143	N.A.	N.A.
PENNSYLVANIA	57	62	N.A.	N.A.
NORTHEAST	229	243	N.A.	N.A.
UNITED STATES	5,919	6,496	6,060	- 7

TABLE 12. CRANBERRY PRODUCTION, 1979, 1980, AND 1981 (ESTIMATED),
NORTHEASTERN STATES AND THE UNITED STATES.

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>% CHANGE</u> <u>1980-81</u>
		(BARRELS)		
MASSACHUSETTS	1,080,000	1,185,000	1,180,000	0
NEW JERSEY	253,000	245,000	245,000	0
NORTHEAST	1,233,300	1,430,000	1,425,000	0
UNITED STATES	2,475,500	2,697,500	2,623,000	- 3