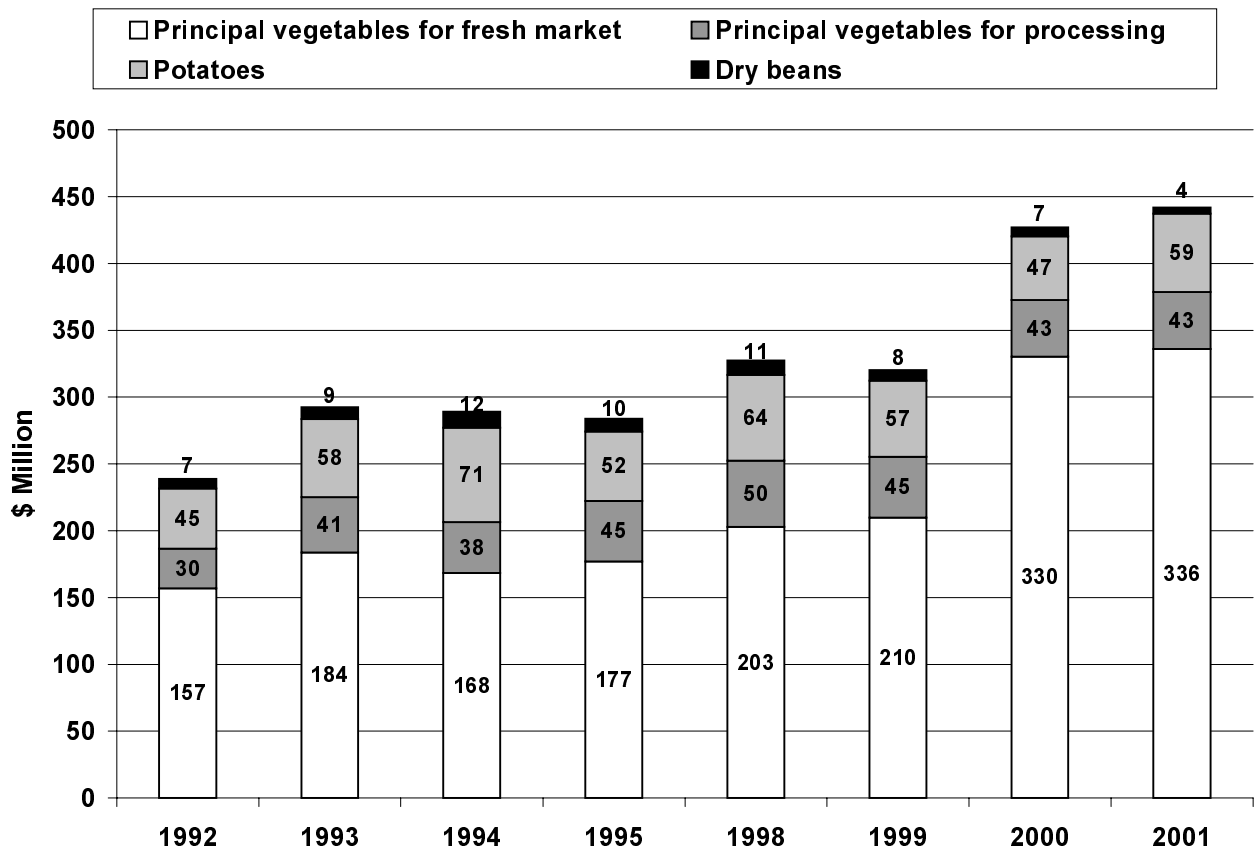


Chapter 10. Vegetables

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The value of all New York vegetable production in 2001 totaled \$442 million, an increase of about 3.5 percent from 2000 (Figure 10-1). New York ranked sixth in the nation for the value of principal fresh market vegetable production and seventh for the value of principal processed vegetable production in 2001. The value of New York's principal fresh market vegetables totaled \$336 million this year, a 2 percent increase from 2000. Fresh market production in 2001 was estimated at 17.7 million hundredweight (cwt.). Processing vegetables were valued at \$42.5 million in 2001, which is similar to the value of \$42.6 million in 2000, and production totaled 377 thousand tons in 2001. The acreage used for vegetable production in 2001 increased about 3 percent from a year before to 197,000 acres. This increase mainly is due to growth in fresh market vegetable production. As processing acreage declines, many growers are taking advantage of fresh market opportunities.

FIGURE 10-1. VALUE OF PRODUCTION OF PRINCIPAL VEGETABLES FOR FRESH MARKET AND PROCESSING, POTATOES, AND DRY BEANS, NEW YORK, 1991-2000



Source: New York Agricultural Statistics, 2001-2002.

Cabbage, sweet corn, potatoes, onions and snap beans are again the top five vegetable crops produced in New York in 2001 (Table 10-1). With 13 percent of the nation's production acreage in 2001, New York is the second leading summer-season producer for fresh market vegetables, trailing only California. New York ranked first in the nation for fresh market cabbage production in 2001. Although the 2001 fresh market cabbage production in New York, estimated at 5.52 million cwt., is down 3 percent from last year, the value of \$83.3 million is 4.6 percent higher than it was in 2000. Both acreage and total value of fresh market sweet corn harvested in 2001 were up 21 percent from a year ago. The 2001 New York fresh market snap bean crop was ranked second highest in the nation and was valued at \$40.2 million. Pumpkins produced in New York had a value of \$3.9 million, the highest value in the nation in 2001. Table 10-2 shows that all major fresh market vegetables in New York had lower values per acre in 2001 compared with 2000. Mainly this is due to lower yield, except for sweet corn and pumpkins which received lower average prices in 2001 compared with 2000.

TABLE 10-1. NEW YORK VEGETABLE CROPS WITH THE HIGHEST PRODUCTION VALUE IN 2001

| 2000 Ranking | Crop | 2001 Ranking | 2001 Value of Production (\$ million) |
|--------------|-------------------------|--------------|---------------------------------------|
| 1 | Cabbage ¹ | 1 | 87.1 |
| 2 | Sweet Corn ¹ | 2 | 80.2 |
| 4 | Potatoes | 3 | 58.8 |
| 3 | Snap Beans ¹ | 4 | 51.7 |
| 5 | Onions | 5 | 38.3 |
| 6 | Tomatoes | 6 | 28.5 |
| 7 | Pumpkins | 7 | 23.9 |
| 8 | Cucumbers | 8 | 20.1 |
| 9 | Squash | 9 | 14.9 |
| 10 | Bell Peppers | 10 | 6.0 |

¹ Processed and fresh market combined. Source: New York Agricultural Statistics, 2001-2002.

TABLE 10-2. VALUE PER ACRE OF PRODUCTION FOR SELECTED VEGETABLE CROPS IN NEW YORK, 1999-2001

| | 1999 | 2000 | 2001 | Change 2000-2001 |
|------------------------------------|-----------------|----------|---------|------------------|
| | --- \$/acre --- | | | % |
| Vegetables for Fresh Market | | | | |
| Sweet Corn | 1,548.8 | 2,052.4 | 2,047.0 | -10.2% |
| Cabbage | 4,602.6 | 6,721.9 | 6,034.6 | -0.3% |
| Snap Beans | 3,250.5 | 4,149.6 | 3,525.9 | -21.8% |
| Onions | 3,013.2 | 3,852.4 | 3,012.8 | -15.0% |
| Cucumbers | 4,680.0 | 5,333.9 | 4,675.1 | -12.4% |
| Tomatoes | 3,973.2 | 10,224.0 | 9,504.0 | -7.0% |
| Pumpkins | N/A | 4,620.0 | 3,738.0 | -19.1% |
| Squash | N/A | 5,213.9 | 3,807.9 | -27.0% |
| Bell Peppers | N/A | 9,193.5 | 9,393.8 | 2.2% |
| Vegetables for Processing | | | | |
| Sweet Corn | 389.7 | 400.0 | 405.1 | 1.3% |
| Snap Beans | 654.4 | 650.4 | 515.8 | -20.7% |
| Green Peas | 668.7 | 410.6 | 708.3 | 72.5% |
| Cabbage for Kraut | 1,392.1 | 1,451.4 | 1,452.3 | 0.1% |
| Fall Potatoes | 2,237.6 | 2,226.1 | 2,523.6 | 4.3% |
| Dry Beans | 266.0 | 277.6 | 200.9 | 13.4% |

Source: New York Agricultural Statistics, 2001-2002.

Tables 10-3 to 10-5 show production values, production levels, and average farm prices for major vegetable crops produced in New York from 1999 to 2001 and compare them with U.S. production.

Fresh Vegetables

The 2001 value of fresh market vegetable production in New York was about 6 percent of U.S. total, the same as in 2000. The only two crops that had increases in production value in New York between 2000 and 2001 were snap beans (up 27 percent) and sweet corn (up 21 percent). Among fresh market vegetables produced in the U.S., sweet corn, cabbage and snap beans had an increase in production value between 2000 and 2001. During the summer quarter of 2001 (July to September), prices received by growers and shippers of fresh market vegetables and melons averaged about 5 percent above a year earlier.

During the first 6 months of 2002 shipping-point prices averaged 22 percent above a year earlier as unusually cool winter weather in California and Arizona interfered with the production and marketing of cool-season vegetables. After reaching a record high in March, shipping-point prices declined in April, May and June as ideal growing weather brought larger supplies into the market. With production area up in California and average yields higher in other States, market volume for fresh market vegetables this summer was slightly above that of a year ago. As a result, summer-season fresh market vegetable prices are about 10 percent below those of the previous year.

U.S. fresh market onion production was down in 2001 as both area harvested and yield declined. Production of storage onions is again expected to decline 2 percent in 2002 to about 46 million cwt. The shipping-point price for fresh market onions during July to September averaged \$14.33/cwt. – up 14 percent from a year earlier. The outlook for the October to December quarter suggests onion prices could average well above the low price (\$8.87/cwt.) of more than a year ago. New York's onion crop for 2002 is estimated at 3.03 million cwt., down 18 percent from last year's crop of 4.22 million cwt. Hot, dry conditions caused low yields and pushed the maturity of the crop ahead of schedule, resulting in a higher percentage of small onions.

Processed Vegetables

The production of New York processing vegetables was valued at about 3 percent of U.S. total in 2001, the same as in 2000. Among the top four processing vegetables in New York, green peas had a large increase in production value in 2001, up 84 percent from 2000, and snap beans had the greatest reduction in production value during the same period (down 33 percent).

Processors of five major vegetables (tomatoes, sweet corn, snap beans, green peas, and cucumbers for pickles) contracted for 1.26 million acres in the U.S. in 2002, up 3 percent from a year ago. Most of the increase comes from tomatoes (up 10 percent from 2001). Contract areas were also greater for green peas (up 3 percent), cucumbers for pickles (up 22 percent), and snap beans (up 2 percent). Continued weak wholesale prices prompted processors of both freezing and canning sweet corn to cut contact area. New York sweet corn for processing is expected to decrease again this year, with production estimated to be down 42 percent from last year. Processors contracted less acres of sweet corn, and yields are lower because of drought. As in 2001, wholesale prices for both canned and frozen vegetables are higher this year.

Potatoes

The 2001 value of potato production in New York was \$58.8 million, 24 percent higher than in 2000. The increase in production value is mainly from higher prices due to lower fall potato production nationwide. With higher prices in the U.S. market, import volume of fresh market potatoes (excluding seeds) from Canada in 2001 increased 42 percent from a year earlier. U.S. fall-season potato growers expect to harvest 5 percent more acres in 2002 reflecting higher potato prices at planting time. With higher acreage and yields that should match or exceed those of a year earlier, potato production this fall will be up from fall of 2001. In combination with production from other seasons, total 2002 U.S. production is expected to range 4 to 7 percent above last year. Prices will most likely be at least slightly below the previous year level.

TABLE 10-3. VALUE OF PRODUCTION, SELECTED VEGETABLE CROPS
NEW YORK AND UNITED STATES, 1998-2000

| | New York | | | | United States | | | | NY as % of U.S. |
|--|--------------------|--------------|--------------|-----------------------|--------------------|----------------|----------------|-----------------------|-----------------------|
| | 1999 | 2000 | 2001 | % Change 2000-2001 | 1999 | 2000 | 2001 | % Change 2000-2001 | 2001 |
| | ---(\$ million)--- | | | % | ---(\$ million)--- | | | % | % |
| Vegetables for Fresh Market | | | | | | | | | |
| Sweet Corn | 52.2 | 56.4 | 68.4 | 21% | 443.3 | 474.0 | 542.6 | 13% | 13% |
| Cabbage | 55.7 | 86.7 | 83.3 | -4% | 240.9 | 332.4 | 364.9 | 12% | 23% |
| Onions | 38.0 | 47.4 | 38.3 | -19% | 635.1 | 732.3 | 702.9 | -5% | 5% |
| Snap Beans | 19.8 | 31.5 | 40.2 | 27% | 260.9 | 251.4 | 273.2 | 9% | 15% |
| Tomatoes | 12.3 | 30.7 | 28.5 | -7% | 951.0 | 1,160.1 | 1,117.0 | -4% | 3% |
| Pumpkins | N/A | 26.3 | 23.9 | -9% | N/A | 101.6 | N/A | N/A | N/A |
| Cucumbers | 16.8 | 20.3 | 20.1 | -1% | 216.7 | 234.5 | 212.5 | -3% | 9% |
| Squash | N/A | 17.2 | 14.9 | -14% | N/A | 207.7 | N/A | N/A | N/A |
| Bell Peppers | N/A | 7.1 | 6.0 | -15% | 483.8 | 614.4 | 420.7 | -20% | 1% |
| <i>Total Principal Fresh Market Vegetables¹</i> | <i>209.9</i> | <i>335.4</i> | <i>336.1</i> | <i>2%</i> | <i>4,742.6</i> | <i>5,487.0</i> | <i>5,422.9</i> | <i>0%</i> | <i>6%</i> |
| Vegetables for Processing | | | | | | | | | |
| Sweet Corn | 12.7 | 11.6 | 11.8 | 2% | 234.4 | 231.6 | 229.2 | -1% | 5% |
| Snap Beans | 13.8 | 17.2 | 11.5 | -33% | 134.5 | 142.5 | 112.7 | -21% | 10% |
| Green Peas | 10.0 | 6.7 | 12.3 | 84% | 126.9 | 131.7 | 102.4 | -22% | 12% |
| Cabbage for Kraut | 3.3 | 4.1 | 3.8 | -7% | 7.8 | 9.9 | 8.5 | -14% | 44% |
| <i>Total Principal Processing Vegetables¹</i> | <i>45.3</i> | <i>42.6</i> | <i>42.5</i> | <i>0%</i> | <i>1,680.1</i> | <i>1,453.0</i> | <i>1,276.3</i> | <i>-12%</i> | <i>3%</i> |
| Fall Potatoes | 57.1 | 47.4 | 58.8 | 24% | 1,994.0 | 2,064.6 | 1,910.8 | -7% | 3% |
| Dry Beans | 8.0 | 6.8 | 4.5 | -34% | 215.0 | 209.0 | 392.9 | -5% | 1% |

¹ Totals include additional principal crops not listed.

Sources: ERS, USDA, Vegetable Specialties – Situation and Outlook Yearbook, July 2002.
New York Agricultural Statistics, 2001-2002.

**TABLE 10-4. PRODUCTION OF SELECTED VEGETABLE CROPS
NEW YORK AND UNITED STATES, 1999-2001**

| | New York | | | | United States | | | | NY as % of U.S. |
|--|---------------------|-------|-------|-----------------------|---------------------|----------|-------|-----------------------|--------------------|
| | 1999 | 2000 | 2001 | % Change 2000-2001 | 1999 | 2000 | 2001 | % Change 2000-2001 | 2001 |
| | ---(Million cwt)--- | | | | ---(Million cwt)--- | | | | % |
| Vegetables for Fresh Market | | | | % | | | | | % |
| Sweet Corn | 3.2 | 2.6 | 3.8 | 47% | 25.8 | 26.4 | 27.7 | 5% | 14% |
| Cabbage | 5.0 | 5.7 | 5.5 | -3% | 21.8 | 26.0 | 26.2 | 1% | 21% |
| Onions | 3.5 | 4.7 | 4.0 | -13% | 73.6 | 71.7 | 67.1 | -6% | 6% |
| Snap Beans | 0.4 | 0.5 | 0.6 | 23% | 5.6 | 5.9 | 6.0 | 2% | 11% |
| Cucumbers | 0.6 | 0.8 | 0.7 | -8% | 11.9 | 11.0 | 10.9 | -1% | 7% |
| Tomatoes | 0.4 | 0.5 | 0.5 | -11% | 36.7 | 37.7 | 37.0 | -2% | 1% |
| Pumpkins | N/A | 1.1 | 1.3 | 18% | N/A | 9.0 | N/A | N/A | N/A |
| Squash | N/A | 0.7 | 0.6 | -14% | N/A | 8.7 | N/A | N/A | N/A |
| Bell Peppers | N/A | 0.2 | 0.1 | -9% | 15.6 | 17.0 | 14.8 | -13% | 1% |
| <i>Total Principal Fresh Market Vegetables¹</i> | 13.6 | 17.2 | 17.7 | 3% | 291.7 | 287.6 | 286.8 | 0% | 6% |
| | ---(1,000 tons)--- | | | | ---(1,000 tons)--- | | | | |
| Vegetables for Processing | | | | | | | | | |
| Sweet Corn | 179.4 | 154.7 | 160.6 | 4% | 3,297.4 | 3,155.5 | 3.1 | 0% | 5% |
| Snap Beans | 72.5 | 89.3 | 66.1 | -26% | 778.4 | 833.5 | 0.7 | -16% | 9% |
| Green Peas | 31.7 | 32.8 | 39.5 | 20% | 461.6 | 530.1 | 0.4 | -27% | 10% |
| Cabbage for Kraut | 68.2 | 76.1 | 73.3 | -4% | 177.9 | 208.3 | 0.2 | -16% | 42% |
| <i>Total Principal Processing Vegetables¹</i> | 420.8 | 389.3 | 377.3 | -3% | 18,711.3 | 16,651.4 | 14.7 | -12% | 3% |
| | ---(1,000 cwt)--- | | | | ---(1,000 cwt)--- | | | | |
| Fall Potatoes | 6,758 | 5,964 | 5,942 | 0% | 429.8 | 470.5 | 400.7 | -14% | 1% |
| Dry Beans | 414 | 358 | 194 | -46% | 33.1 | 26.4 | 19.5 | -26% | 1% |

¹ Totals include additional principal crops not listed.

Sources: ERS, USDA, Vegetable Specialties – Situation and Outlook Yearbook, July 2002.
New York Agricultural Statistics, 2001-2002.

Dry Beans

In 2001, lower dry bean plantings and drought losses reduced area harvested by 23 percent to 1.24 million acres in the U.S., the lowest since 1983. With yields down 4 percent, dry bean production fell 26 percent to 19.5 million cwt. Dry bean production continued to decrease in New York as well, down 46 percent in 2001 from a year before. With output down, stocks for most classes dwindled, and grower and dealer prices rose. The large rise in prices (25 percent and more) during the 2001 marketing year encouraged dry bean growers to increase planted area 36 percent to 1.69 million acres in 2002. Given increased area plus higher yield trends, production for the 2002 dry edible bean crop is estimated at 27.6 million cwt. – a 41 percent increase from a year ago. In anticipation of sharp increases in production this season and expected weak export demand from Mexico, prices for many bean classes have begun to weaken. The 2002/03 season opened with the preliminary industry aggregate grower price of \$17.80/cwt., 2 percent below a year earlier.

Although prices have dropped for most classes, the greatest downward price pressure has been on black, navy, and pinto beans because output for these classes is expected to rise substantially.

TABLE 10-5. AVERAGE FARM PRICES OF MAJOR VEGETABLE CROPS
NEW YORK AND UNITED STATES, 1999-2001

| | New York | | | | United States | | | |
|------------------------------------|----------------|-------|-------|-----------------------|----------------|-------|-------|-----------------------|
| | 1999 | 2000 | 2001 | % Change 2000-2001 | 1999 | 2000 | 2001 | % Change 2000-2001 |
| Vegetables for Fresh Market | ---(\$/cwt)--- | | | | ---(\$/cwt)--- | | | |
| Sweet Corn | 16.3 | 21.6 | 17.8 | -18% | 17.2 | 17.2 | 19.6 | 0% |
| Cabbage | 12.6 | 17.5 | 16.8 | 8% | 11.0 | 12.6 | 14.2 | 14% |
| Onion | 12.2 | 13.5 | 10.7 | -21% | 13.8 | 9.8 | 11.4 | -29% |
| Snap Beans | 53.3 | 61.0 | 63.0 | 3% | 46.5 | 42.7 | 45.4 | -8% |
| Cucumbers | 26.0 | 25.4 | 27.5 | 8% | 18.2 | 20.4 | 19.5 | 12% |
| Tomatoes | 34.5 | 56.8 | 59.4 | 5% | 25.9 | 31.4 | 30.2 | 21% |
| Pumpkins | N/A | 23.1 | 17.8 | -23% | N/A | 11.4 | N/A | N/A |
| Squash | N/A | 23.7 | 23.8 | 0% | N/A | 23.9 | N/A | N/A |
| Bell Peppers | N/A | 43.7 | 40.9 | -6% | 31.1 | 31.5 | 28.4 | 1% |
| Vegetables for Processing | ---(\$/ton)--- | | | | ---(\$/ton)--- | | | |
| Sweet Corn | 70.6 | 75.0 | 73.7 | -2% | 71.1 | 73.4 | 72.9 | -1% |
| Snap Beans | 190.0 | 193.0 | 174.0 | -10% | 172.8 | 171.0 | 161.0 | -6% |
| Green Peas | 314.0 | 204.0 | 312.0 | 53% | 275.0 | 248.5 | 265.0 | 7% |
| Cabbage for Kraut | 49.0 | 53.4 | 51.5 | -4% | 43.7 | 47.4 | 48.7 | 3% |
| Fall Potatoes | ---(\$/cwt)--- | | | | ---(\$/cwt)--- | | | |
| | 9.0 | 8.9 | 9.9 | -4% | 5.1 | 5.3 | 4.6 | -14% |
| Dry Beans | 19.4 | 19.0 | N/A | N/A | 16.4 | 15.3 | 19.4 | 25% |

Sources: ERS, USDA, Vegetable Specialties – Situation and Outlook Yearbook, July 2002.
New York Agricultural Statistics, 2001-2002.

Consumption Trends

In 2001, per capita use of vegetables and melons totaled 449 pounds, a 1 percent decline from a year earlier. Fresh market use was stable, while freezing and canning uses were lower. Per capita use of potatoes increased 1 percent to 140 pounds, reflecting lower prices stemming from the record high 2000 fall potato crop. Record-high per capita use was reported for fresh market sweet corn and tomatoes. On the other hand, the canning sweet corn market continued its long-term decline, and processing tomato use reached its lowest point since 1988. In 2002, per capita vegetable and melon consumption is forecast to rise 1 percent. Increased use of fresh, canning, and freezing vegetables is expected to outweigh reduced use of potatoes and sweet potatoes. Potato use in 2002 is expected to decline due to higher retail prices caused by smaller storage supplies from the short 2001 crop.

Sales in the food industry are up 2.9 percent from last year, despite the fragile economy and continued aftershocks from the terrorist attack of September 11. Expenditures on away-from-home food continued to grow (47 percent of total domestic food expenditures), and the National Restaurant Association projects away-from-home food expenditures will exceed at-home food expenditures by 2010. Economic prosperity and smaller households are driving America's demand for away-from-home foods. Although the growth in expenditures on away-from-home food has outpaced at-home food expenditures in the past, people are eating at home more. At-home food consumption was 0.6 percent higher in 2002 than a year ago.

Consumers are making more of their food purchases from nontraditional outlets, accounting for 24.5 percent of at-home food expenditures in 2000. These nontraditional outlets include warehouse club stores, supercenters, mass-merchandisers, drug stores, and mail order outlets which offer consumers low prices and convenience. According to the Institute of Food Technologists, convenience, freshness, and sophistication are the principal trends in consumer food demand shaping the look of new food products. Consumers also favor new foods that are "clean, pure, natural, and safe." Three main areas of emphasis in today's produce market are: the growing minority market, the increasing significance of the older generation in the market, and understanding new consumer demands such as changing tastes, organics, soy and tropical products.

Market Situation and Outlook

- ***Market Structure Changes***

Companies that have built their businesses around large discount stores and supercenters continued to build those gargantuan stores at a rapid pace. The nationwide market share of the four largest grocery retail chains reached 30.9% in 2001, compared with 17.0% in 1987 (Table 10-6). As Wal-Mart continues to spread its price dominance across the land, conventional supermarket chains are picking their spots, and wholesalers are trimming their retail operations in an effort to compete with greater focus and efficiency. Several large retail operations, such as Winn-Dixie, Supervalu and A&P, are undergoing internal consolidation and shakeouts as they determine the size and scope of the supermarket industry and their strategic position in the food chain in the early 21st century.

| Company | % Market Share |
|------------------------|----------------|
| Wal-Mart Supercenters | 9.6 |
| Kroger Co. | 7.3 |
| Albertson's, Inc. | 5.6 |
| Safeway, Inc. | 5.0 |
| Ahold USA Retail | 3.4 |
| Supervalu, Inc. | 3.1 |
| Costco Wholesale Corp. | 3.0 |
| Sam's Club | 2.7 |
| Fleming Cos. | 2.3 |
| Publix Super Markets | 2.2 |

Source: Supermarket News.

The food retail landscape continues to change. Despite strong competition, chains that cater to special niches – such as health food (Whole Foods) or limited assortment value (Aldi) – have increased their presence in the market. Moreover, in the past few years, the grocery giants are venturing into a new retail

arena. They have started building smaller, niche stores more closely related to the traditional grocery format. Wal-Mart opened its first Neighborhood Market Store in 1998, and now there are more than 30 of them. In 2000, H.E. Butt Grocery Co., San Antonio, followed suit and opened its first Central Market store patterned after a European market, and the Costco Wholesale Group also announced plans to build a Costco Fresh store.

Many retail chains now operate their own distribution centers. In 1999, 47 of the largest 50 food retailers, including Kroger, Wal-Mart, and Safeway, operated distribution centers. To meet the new buying practices and demands, traditional wholesalers are consolidating, adopting new technology, or providing services and specialty foods to cater to niche markets' needs.

Distributors are also consolidating and changing. They are getting bigger as well as adding specialty and systems operations. The market share of the 10 largest foodservice distributors increased from 17 percent in 1990 to 28 percent in 2000. However, this figure understates the extent of consolidation among broadline distributors. Broadline distributors accounted for almost 50 percent of all foodservice distributor sales in 2000, and the top four firms (Sysco, U.S. Foodservice, Alliant, and Performance Food Group) accounted for almost 50 percent of these sales. The owner of U.S. Foodservice (Ahold) acquired Alliant Foodservice in November 2001.

More coordination effort such as contracting is occurring at the production level. Since the 1960s, more than half of all citrus fruits and processed vegetables in the U.S. have been produced under contract. More recently, contracting arrangements have increased in the fresh produce industries. Growth of fast food restaurants increased potato contracting to assure supplies of frozen potato products, and volume requirements of supermarket chains and other large fresh produce buyers, such as suppliers of branded fresh packaged salads, have increased already-growing interest in contracting as a means of procuring the desired volume, size, variety, quality, and consistency of product. Another means of coordinating farm production involves third-party verification or certification of a product's quality attributes. For example, third parties certify or verify products that will carry eco-labels such as "dolphin-safe", "environmentally friendly" or "fair trade." Moreover, in response to changing consumer demands for food and to capture the food dollar from value-added products, some farmers are turning to "new generation cooperatives". These cooperatives allow farmers to control food production through more than one stage of production and marketing, usually through some level of processing.

- ***Organic and Natural Marketing***

Perhaps the best news for produce comes in the organic and natural food sector. Organic food sales climbed from \$1 billion to \$9.3 billion in 2001 and are expected to enjoy continued growth (Table 10-6). The biggest gainer in organic is fresh produce, sales of which climbed 14.4 percent from \$833 million to \$953 million between 1999 and 2000. With more households (43 percent of U.S. households) now buying organic, and the 20 to 50 percent price premium received by organic products, retailers will continue to promote, stock and merchandise organic in the future. As the USDA Organic National Standards became reality on October 21, 2002, consumer confidence in organic claims is expected to increase, and consumer demand for these products is expected to continue. Moreover, the shopper who buys organic is a "very desirable consumer" for supermarkets. These shoppers typically have higher household incomes, buy more per shopping trip and buy more expensive, premium items like wine and imported cheeses.

TABLE 10-6. ORGANIC FOOD SALES IN THE UNITED STATES

| Year | 1990 | 1995 | 2000 | 2001 | 2005 (est.) |
|--------------------|------|-------|-------|-------|-------------|
| Sales (\$ billion) | \$1 | \$2.8 | \$7.8 | \$9.1 | \$20 |

Source: The Packer, August 19, 2002

Demand for organic food is changing. In the beginning, organic meant fresh vegetables, grains and beans – and the time it took to cook them. The new shopper wants convenience with an organic label. Growth is expected in products such as organic TV dinners, frozen organic pizzas, and instant organic meals in a bag. The organic industry is also affected by the consolidation trend. Organic stalwarts such as Cascadian Farm (cereals, frozen fruits, vegetables and entrees), Muir Glen (canned tomatoes, pasta sauces and salsa) and Small Planet Foods are now owned by General Mills; Knudsen (fruit juices) is owned by Smuckers; and Kashi (cereals) belongs to Kellogg's.

As the market share of natural and organic products increases, reduced-fat and low-fat products are seeing a rebound. The number of new food products labeled “reduced-fat” and “low-fat” in 2000 was 49% lower than in 1996. However, the number of these new products more than doubled between 1999 and 2000. This increase may reflect the food industry's use of fat replacement ingredients that consumers find more acceptable. Developers of new products have not overlooked the area of new “functional foods.” These products are enriched with calcium and other nutrients specifically targeted toward health-conscious consumers. Calcium-fortified and soy products are new functional foods that are popular with consumers. Consumers are also demanding more foods enriched with vitamin A, vitamin C, and fiber.

- ***Value-Added Marketing***

The fresh-cut market is maturing. Companies are refining products, creating niches and battling tight supplies. Packaged salad marketers are creating new blends to energize product lines, regional processors are producing custom blends, and food security is taking a high profile throughout the supply chain. Shelf-life battles continue. Technology helps extend shelf life, but some suppliers opt to use just-in-time delivery of high quality products that have remained at the proper temperature through the supply chain to deliver a quality eating experience to consumers. Retailers vary in choosing in-house processing vs. outsourced fresh-cut. Food safety, labor and cost were three factors considered when chains decide whether to prepare fresh-cut produce in-store or outsource it. Small chains often prepare fresh-cut produce themselves; large chains typically find it more cost effective to go through a fresh-cut supplier. Food service operators continue to be big fresh-cut buyers, particularly in the face of competitive chains and tight labor markets. The International Fresh-cut Produce Association, Alexandria, Va., estimated that 60 percent to 65 percent of fresh-cut sales are to the food service industry.

New convenience foods reflect the response of manufacturers and retailers to the loss of sales due to the rising popularity of dining out. These products contribute significantly to the number of new product introductions, particularly handheld or prepackaged entrees and other products that offer convenience and require little preparation. Products that require some amount of preparation by the consumer, such as complete meal kits or packaged sauces, are also important new convenience products that help retailers diversify and compete by making the produce department a one-stop shop for hungry consumers. In 1999, the top new products introduced in this category were sauces (610), pizza and entrees (432), soups (254), seasonings (238), pasta (231), and vegetables (158).

The 2002 Farm Act amends the Agricultural Marketing Act of 1946 to require retailers to inform consumers of the country of origin for certain commodities. On October 8, 2002, the USDA issued guidelines

for voluntary country-of-origin labeling. The USDA's list of voluntary labeling for retail commodities includes: fresh and frozen fruits and vegetables; peanuts; and fresh and frozen muscle cuts of meat (beef, veal, lamb, pork and fish). However, excessive record-keeping requirements and the threat of PACA labeling violations and fines likely will keep most retailers from complying with newly released voluntary country-of-origin labeling guidelines. Foodservice establishments are not covered by the regulations, but they are scheduled to come into compliance when the USDA promulgates requirements for mandatory labeling by September 2004.

Industry Outlook

Consumer pressures placed on agriculture for variety, quality, and safety are affecting how the industry is organized, including the types of buying and selling arrangements within the food supply chain and the application of information technologies. Some controversial issues exist among developments in the food industry. Firms' efforts to respond to demands for increasingly differentiated food products and productivity through biotechnology raise ethical, food safety, and environmental debates among different sectors. Contracting is also an issue of contention, especially among small farmers that may not have the output volume necessary to warrant contracts with large processors. Also, spot-market prices become more vulnerable to manipulation and volatility as fewer buyers and sellers account for a larger percentage of the trade.

Domestic demand for food products is expected to grow slowly over the next 20 years. In this situation, a food company's growth depends on lowering production and operating costs, differentiating its products, producing higher quality products at economical prices, or expanding international trade and investments. Consumers will dictate the future course of the food system. In the year ahead, successful firms in the food system will adapt to the changing tastes of consumers and capitalize on changes in their demographic makeup. Farm production will become more capital intensive, with emphasis placed on adding value to commodities. Product differentiation and quality control are becoming more essential at the farm level. These market developments will likely require farmers to become more interdependent participants in the food supply chain, perhaps giving rise to contracting and other forms of organization in agriculture.