

HAWAII VEGETABLES



Annual report of harvested acreage,
production, and farm value

Released: October 22, 1998

Farm output and revenue post gains

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The Hawaii Agricultural Statistics Service estimates total production of vegetables and melons for 1997 at 87.5 million pounds, up 7 percent from 1996. Total farm value rose 11 percent to \$34.2 million on the combined strength of higher farm prices and the increase in production.

El Niño causes a wet summer

Atypical weather had a variable effect on crops during 1997. In particular, summer was wetter than normal as a new El Niño weather pattern apparently increased storm activity in the central Pacific. During our hurricane season that runs from June 1 to November 30, 8 tropical cyclones (3 tropical storms, 5 tropical depressions, but no hurricanes) were recorded in the central Pacific. This was nearly double the 36-year average of 4.5 tropical cyclones. Although none of these tropical cyclones hit Hawaii, showers associated with their remnants hampered crop growth and slowed farming activities in many windward and low-lying areas of the southern islands. For example, Hilo and Pahoa received over 23 inches of rain in June, and Hana got over 9 inches in June and September. Conditions were not as wet in the windward areas of the northern islands, but they also received higher than normal amounts of rain throughout summer.

Major vegetable regions at the higher elevations, on the other hand, were generally drier than normal in 1997. In fact, voluntary water restrictions were imposed for farmers in Kula, Maui and Waimea, Hawaii during February and March. Regular irrigation helped to ensure normal crop progress in these major vegetable growing areas during the year.

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**HAWAII AGRICULTURAL
STATISTICS SERVICE**

Fact finding for agriculture

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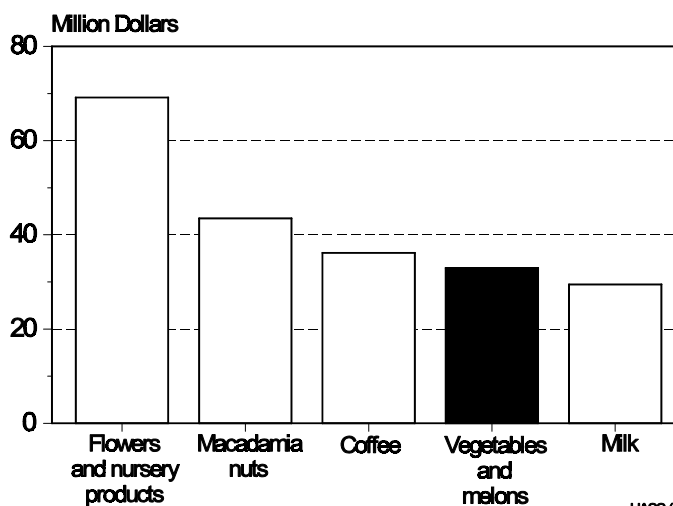
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Top 5 diversified agricultural commodities State of Hawaii, 1997



HASS (10/98)

Watermelons tops in volume

The top two vegetable crops in the State registered declines in 1997, but each was able to retain its previous rank. Watermelons led all others with total production of 16.8 million pounds in 1997, down 2 percent from 1996. Head cabbage was second at 13.0 million pounds, down 8 percent from 1996. Tomatoes went from fourth to third with a record harvest of 10.2 million pounds, up 46 percent from 1996. Improved growing conditions and a 21-percent increase in harvested acreage were responsible for the boost in tomato output. Dropping to fourth was Chinese cabbage which showed no change in output at 7.7 million pounds. Rounding out the top ten, in order, were: cucumbers (5.5 million pounds), daikon (3.3 million pounds), sweet potatoes (2.4 million pounds), green peppers (2.0 million pounds), romaine (1.9 million pounds), and dry onions (1.7 million pounds).

The combined category of other vegetables and melons had production of 9.2 million pounds in 1997, up 46 percent from 1996. Major volume crops in this category were specialty lettuces, chipping potatoes, taro leaves, and miscellaneous ethnic vegetables.

Tomato growers

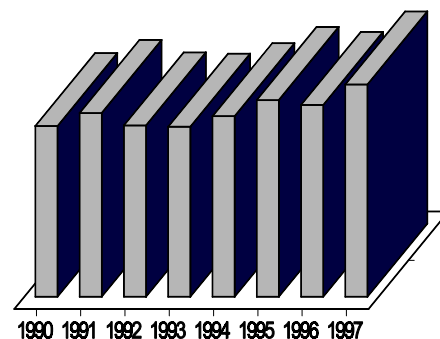


generate highest farm revenues

A boost in output and higher prices enabled tomato growers to post revenues of \$5.5 million in 1997, up 48 percent from 1996 and the highest among all vegetable and melon crops. Second was watermelons with \$3.0 million, up 7 percent from 1996 as higher farm prices more than offset a decline in output. Third and fourth were head cabbage and cucumbers with \$2.7 and \$2.2 million, respectively. Also posting farm revenues above the \$1-million mark (percentage change from 1996 in parenthesis) were: Chinese cabbage (-2%), eggplant (+25%), sweet potatoes (-4%), dry onions (-29%), green onions (+2%), watercress (+3%).

Farm value for the combined category of other vegetables and melons reached \$4.5 million in 1997, up 40 percent from 1996.

Farm Value Vegetables and Melons State of Hawaii, 1990-1997



Year	Farm value (\$ millions)
1990	27.5
1991	29.6
1992	27.6
1993	27.4
1994	29.1
1995	31.7
1996	30.9
1997	34.2

Top 10 Vegetables and melons ranked by farm value State of Hawaii

Commodity by rank	1996	1997	Change
	1,000 dollars		Percent
1. Tomatoes	3,710	5,508	48
2. Other vegetables and melons	3,213	4,508	40
3. Watermelons	2,822	3,024	7
4. Head cabbage	2,609	2,665	2
5. Cucumbers	2,064	2,200	7
6. Chinese cabbage	1,810	1,771	-2
7. Dry onions	2,360	1,666	-29
8. Green onions	1,316	1,344	2
9. Sweet potatoes	1,300	1,248	-4
10 Eggplant	949	1,185	25

1997 Vegetable and Melon Summary

Vegetable and melons: Acreage, production, and value State of Hawaii ¹, 1996 and 1997

Commodity	Harvested acreage ²		Production		Farm value	
	1996	1997	1996	1997	1996	1997
	-----Acres-----		-----1,000 pounds-----		-----1,000 dollars-----	
Beans, snap	160	130	520	700	504	693
Bittermelon	15	20	150	180	158	171
Broccoli	150	140	500	450	255	243
Burdock	20	15	300	220	540	319
Cabbage, Chinese	410	390	7,700	7,700	1,810	1,771
Cabbage, head	640	650	14,100	13,000	2,609	2,665
Cabbage, mustard	200	150	1,700	1,500	731	690
Cauliflower	10	15	120	200	51	90
Celery	55	50	1,150	1,250	334	375
Corn, sweet	400	420	1,400	1,300	700	702
Cucumbers	400	440	4,800	5,500	2,064	2,200
Daikon	280	290	3,300	3,300	941	941
Dasheen	7	5	100	95	94	94
Eggplant	70	80	1,300	1,500	949	1,185
Lettuce	180	145	1,500	1,600	705	736
Onions, dry	210	185	2,000	1,700	2,360	1,666
Onions, green	190	155	1,400	1,400	1,316	1,344
Peas, Chinese	5	5	25	25	45	43
Peppers, green	230	200	2,600	2,000	1,248	980
Pumpkins	30	65	250	450	75	131
Radish	20	15	200	160	116	91
Romaine	175	165	1,700	1,900	663	741
Squash, Italian	80	200	700	1,400	336	701
Squash, oriental	10	25	200	300	84	126
Sweet potatoes	280	240	2,500	2,400	1,300	1,248
Tomatoes	280	340	7,000	10,200	3,710	5,508
Watercress	35	35	1,000	1,020	1,140	1,173
Watermelon	760	840	17,100	16,800	2,822	3,024
Other vegetables and melons	718	860	6,300	9,200	3,213	4,508
Total vegetables and melons	6,020	6,270	81,615	87,450	30,873	34,159

¹ Sum of island estimates may not add to State total due to rounding. Only selected crops are shown separately. All other vegetables and melons are included in the "Other vegetables and melons" category. Does not include ginger root and herbs.

² Vegetables and melons: Acreage harvested (e.g., 1 acre planted and harvested 3 times during the year = 3 harvested acres). Watercress: Average acreage during the year.

Island Summaries

Hawaii

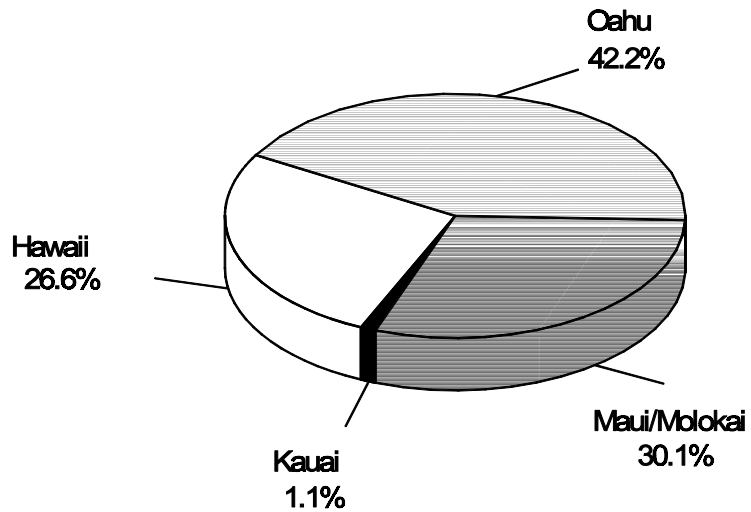
Big Island farmers produced 23.3 million pounds of vegetables and melons in 1997, up 4 percent from 1996. Chinese cabbage remained the island's top vegetable crop with a 1997 volume of 5.4 million pounds; making it the only crop to post farm sales above \$1 million.

The combined category of all other vegetables and melons accounted for more than half of the Big Island's \$9.2 million farm value. Some of the major crops that make up this \$4.9 million category were: red and green leaf lettuce, sweet potatoes, and cucumbers.

Maui and Molokai

Combined production of vegetables and melons from these two islands is estimated at 26.3 million pounds in 1997, up slightly from 1996. Total farm value is pegged at \$11.1 million in 1997, up 2 percent from the previous year. The farm value for tomatoes was far ahead of other crops with \$4.1 million in 1997. The only other crops

Hawaii vegetable and melon production by islands, 1997



to post farm sales in excess of \$1 million were dry onions and head cabbage.

Oahu

Production of vegetables and melons continued to increase on Oahu with 1997 output pegged at 37.0 million pounds, up 13 percent

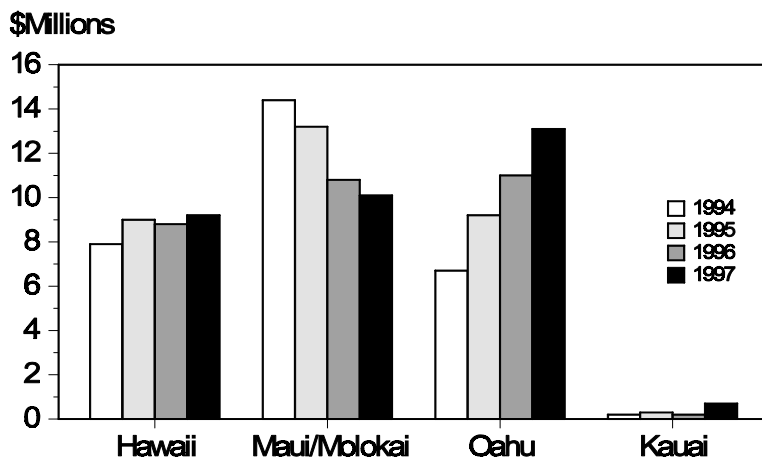
from 1996 and nearly four times the amount produced in 1993. Watermelon was the top crop on Oahu in terms of both volume (16.6 million pounds) and farm value (\$3.0 million).

Farm revenues totaled \$13.1 million in 1997, up 19 percent from 1996. The combined category of all other vegetables and melons, with 1997 revenues of \$6.9 million, accounted for more than half of the total farm value. Major crops in this category were green peppers, head cabbage, chipping potatoes, taro leaves, and watercress.

Kauai

Production of vegetables and melons on Kauai nearly tripled to 920,000 pounds in 1997. Although individual crops are not shown separately to avoid disclosure, major vegetables on the island include sweet corn, tomatoes, watermelons, eggplant, and lettuce.

Hawaii farm value of vegetables and melons by islands, 1994-97



Island Summaries

Acreage, production, and farm value of selected vegetables and melons By Islands, State of Hawaii, 1996 and 1997. ¹

Commodity	Harvested acreage ²		Production		Farm value	
	1996	1997	1996	1997	1996	1997
	-----Acres-----		-----1,000 pounds-----		-----1,000 dollars-----	
Hawaii						
Cabbage, Chinese	290	270	5,600	5,400	1,333	1,242
Cabbage, Head	220	220	4,300	4,000	815	820
Celery	35	30	850	880	255	273
Daikon	185	190	2,000	2,000	544	550
Lettuce	120	90	950	1,130	428	503
Tomatoes	55	50	1,345	1,400	896	959
All other vegetables and melons .	1,005	980	7,435	8,460	4,484	4,864
Island total	1,910	1,830	22,480	23,270	8,755	9,211
Maui/Molokai						
Beans, snap	37	45	245	350	256	359
Cabbage, Head	315	300	7,300	6,700	1,351	1,380
Celery	20	20	300	370	79	102
Corn, sweet	50	25	185	130	114	98
Cucumbers	140	155	2,500	2,600	988	832
Lettuce	25	15	200	100	80	41
Onions, dry	200	180	1,980	1,690	2,344	1,658
Onions, green	15	10	120	105	132	111
Peppers, green	15	5	160	60	79	30
Romaine	85	90	960	1,150	341	414
Squash, Italian	35	40	380	350	181	179
Sweet potatoes	95	70	1,100	800	558	432
Tomatoes	215	245	5,580	8,070	2,751	4,064
Watermelons	60	5	1,750	95	277	18
All other vegetables and melons .	258	250	3,460	3,730	1,308	1,351
Island total	1,565	1,455	26,220	26,300	10,839	11,069
Oahu						
Beans, snap	16	15	55	130	52	132
Corn, sweet	195	240	690	560	333	314
Cucumbers	215	230	1,500	2,100	761	1,061
Eggplant	45	50	700	750	546	645
Onions, green	140	120	1,165	1,180	1,072	1,126
Watermelons	690	825	15,280	16,600	2,521	2,971
All other vegetables and melons .	1,189	1,385	13,195	15,640	5,764	6,892
Island total	2,490	2,865	32,585	36,960	11,049	13,141
Kauai						
Island total	55	120	330	920	230	738

¹ Sum of island estimates may not add to State total due to rounding. Only selected crops are shown separately to avoid disclosure. All vegetables and melons that are not shown separately are included in each island's "All other vegetables and melons" total. Does not include ginger root and herbs.

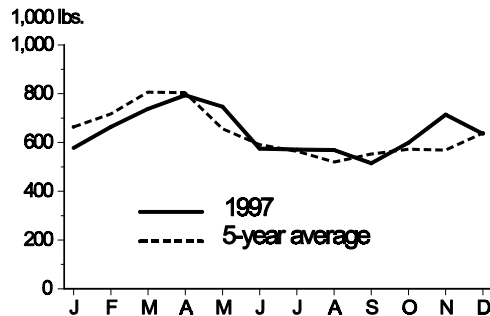
² Reflects the number of times an area was planted and harvested; e.g., 1 acre planted and harvested 3 times during the year = 3 harvested acres.

Monthly Production and Farm Prices

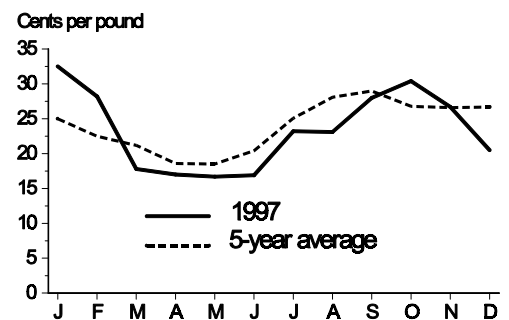
Chinese Cabbage

Approximately 23 percent of the Chinese cabbage harvested annually is processed; most commonly into kimchee.

Monthly Production
State of Hawaii, 1997



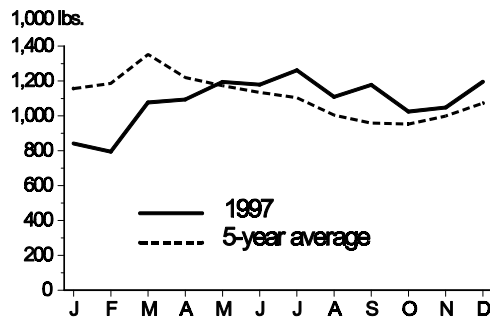
Monthly Average Farm Prices
State of Hawaii, 1997



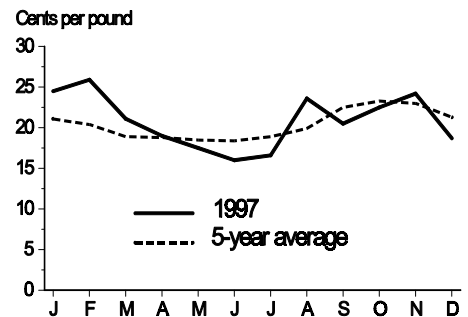
Head Cabbage

Hawaii farmers harvested 650 acres of head cabbage in 1997; the most of any vegetable crop.

Monthly Production
State of Hawaii, 1997



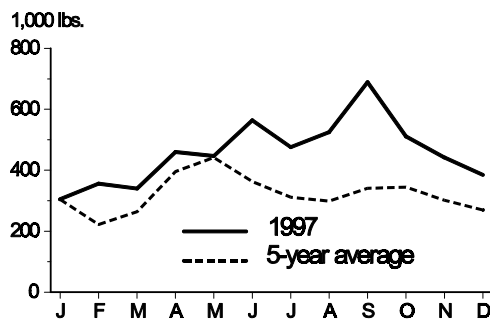
Monthly Average Farm Price
State of Hawaii, 1997



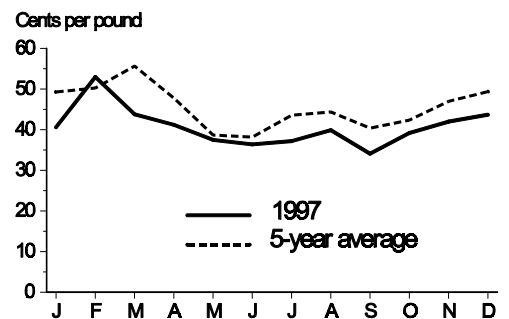
Cucumbers

In 1997, Hawaii farmers harvested 440 acres of cucumbers; the most since 1946.

Monthly Production
State of Hawaii, 1997



Monthly Average Farm Price
State of Hawaii, 1997

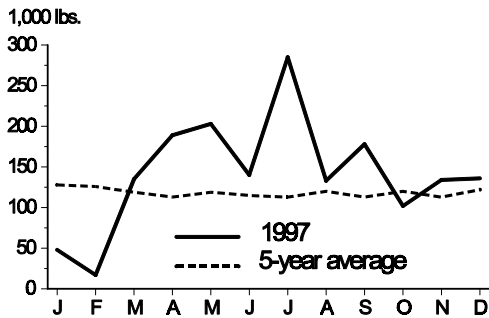


Monthly Production and Farm Prices

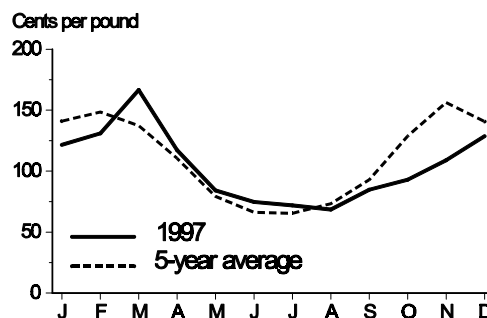
Dry Onions

Production declined for the second straight year in 1997.

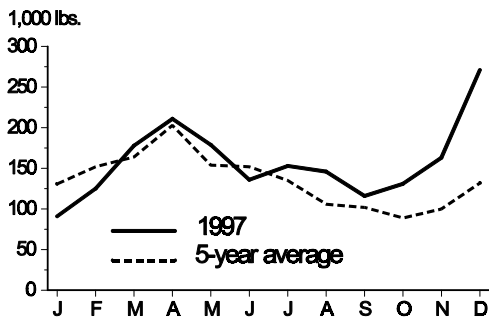
Monthly Production
State of Hawaii, 1997



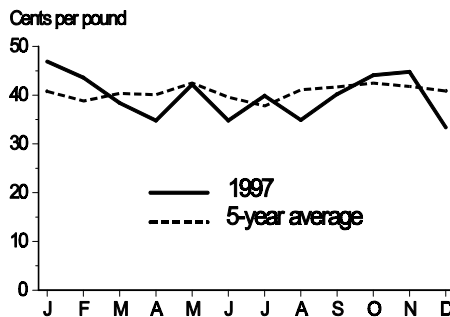
Monthly Average Farm Prices
State of Hawaii, 1997



Monthly Production
State of Hawaii, 1997



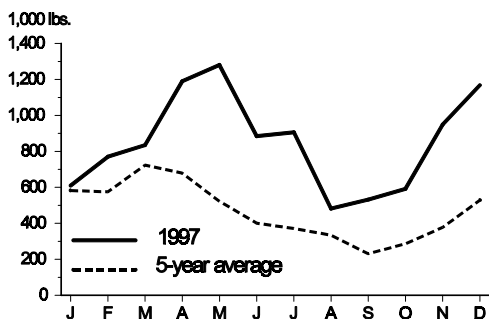
Monthly Average Farm Price
State of Hawaii, 1997



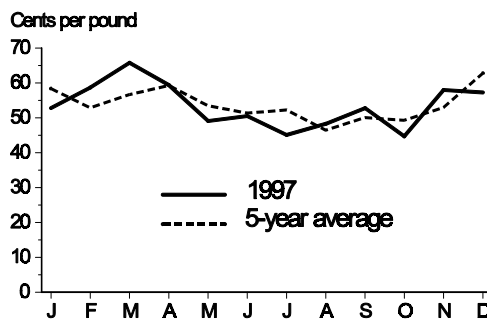
Romaine

1997 production of 1.9 million pounds was highest in 11 years.

Monthly Production
State of Hawaii, 1997



Monthly Average Farm Price
State of Hawaii, 1997



Tomatoes

Led all vegetables and melons in 1997 with a farm value of \$5.5 million.

U.S. Per Capita Utilization of Selected Vegetables and Melons

Year	Cabbage	Broccoli	Sweet corn	Bell peppers 1/	Onions	Tomatoes	Cucumbers	Watermelon
<i>Pounds, farm weight</i>								
1980	8.1	1.4	6.5	2.9	11.4	12.8	3.9	10.7
1981	8.2	1.7	6.2	2.8	10.7	12.3	4.0	11.7
1982	8.8	2.0	6.0	3.0	12.2	12.9	4.2	12.5
1983	8.3	2.0	6.1	3.3	12.2	13.5	4.5	11.3
1984	8.7	2.5	6.4	3.6	13.1	14.2	4.7	14.4
1985	8.8	2.6	6.4	3.8	13.6	14.9	4.4	13.5
1986	8.8	3.0	6.1	4.0	13.7	15.8	4.6	12.8
1987	9.2	3.1	6.3	4.2	13.4	15.8	5.1	13.0
1988	9.1	3.8	5.8	4.5	14.5	16.8	4.8	13.5
1989	8.7	3.8	6.5	4.7	14.8	16.8	4.8	13.6
1990	8.8	3.4	6.7	4.5	15.1	15.5	4.7	13.3
1991	8.5	3.1	5.9	5.1	15.7	15.4	4.6	12.8
1992	8.9	3.4	6.9	5.7	16.2	15.5	5.0	14.8
1993	9.7	2.9	7.0	6.2	16.5	16.0	5.3	14.6
1994	9.7	3.9	8.2	6.5	16.5	16.5	5.5	15.5
1995	8.7	4.4	7.8	6.3	17.6	17.2	5.7	15.7
1996	9.2	4.5	8.3	7.3	17.9	18.0	6.0	17.4
1997	10.2	5.2	8.1	7.2	17.9	18.9	6.3	16.1
1998	10.3	5.1	8.1	7.1	18.0	18.9	6.1	17.0

1/ Includes fresh and processing

Source: *Vegetables and Specialties*, July 1998, Economic Research Service, USDA.