



National Agricultural Statistics Service

Hawaii Agricultural Statistics Service
Hawaii Department of Agriculture

Annual Hawaii Vegetables

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Farm value tops \$50 million

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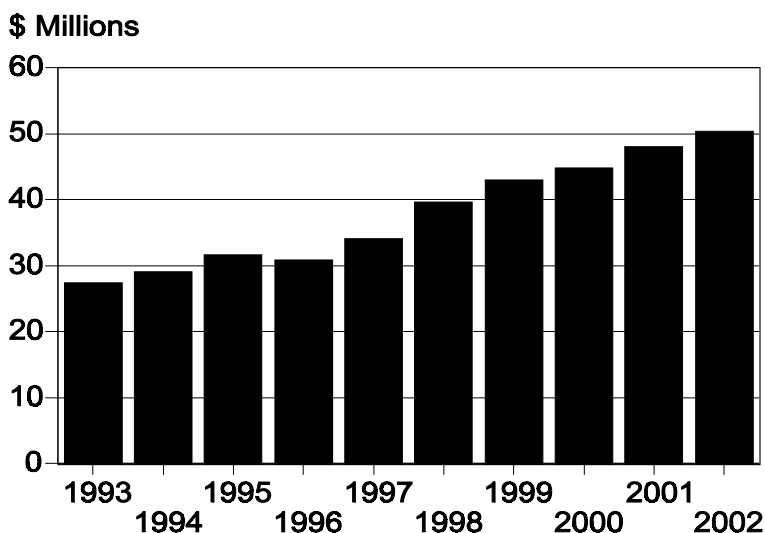
The Hawaii Agricultural Statistics Service estimates the farm value of vegetables and melons at a record high \$50.4 million in 2002, up 5 percent from 2001. Farm production increased 2 percent to 96.5 million pounds.

Increased showers benefitted and hindered vegetable crops

Farmers in most areas of the State experienced an increase in rainfall during 2002 with major vegetable-growing regions such as Kula, Maui (24.26 inches), Waimea, Hawaii (57.92 inches), and Kunia, Oahu (15.05 inches) all recording increases of over 40 percent from 2001. But while the added rainfall was welcomed, an uneven distribution and the untimely nature of these showers hampered the production of certain vegetables. Particularly hard hit were dry onion growers whose mature plants are especially susceptible to rain damage. Ill-timed showers were also responsible for the partial loss of Halloween pumpkins. While overall rainfall was up in 2002, parts of the State remained relatively dry, and crops dependent on natural rainfall continued to be stressed. Other aggravating factors that farmers had to deal with in 2002 were hornworm caterpillars on Molokai sweet potatoes, mice infestations on Molokai and Upcountry Maui, and the aster yellows disease on watercress. ■

Farm value

Hawaii Vegetables and Melons, 1993-2002



Tomato revenues set another record high

Vegetable and melon growers registered record-high farm revenues of \$50.4 million in 2002, up 5 percent from 2001. A combination of increased production, up 2 percent, and higher farm prices for most crops led to the overall gain in farm revenues.

Tomatoes growers lead all individual vegetables and melons in farm value with a record high \$9.6 million in 2002, up 4 percent from 2001. Increases in production and farm prices enabled watermelon farmers to move from last year's fourth spot to second in 2002 on farm revenues of \$2.9 million, a 17-percent increase. Head cabbage growers were third with farm revenues estimated at \$2.7 million in 2002, down 1 percent from 2001 as farm prices declined 5 percent. In fourth were cucumbers at \$2.5 million, up 7 percent from 2001 mainly due to a 5 percent increase in farm prices. Dropping from second to fifth in 2002 were dry onions with \$2.0 million in farm revenues, a 50-percent decline as weather conditions hampered output.

Other \$1-million crops and their percentage change from 2001 were green peppers (+2%), Chinese cabbage (+1%), green onions (+7%), and sweet corn (+7%). The farm value of snap beans dropped below the \$1-million mark for the first time in four years at \$900,000 in 2002.

The combined category of Other Vegetables and Melons continued to make double-digit percentage gains in farm revenues with a 2002 estimate of \$16.2 million, up 36 percent from 2001. This category contains over 60 individual vegetables and includes such high-valued crops as sprouts, taro leaves, ethnic vegetables, baby vegetables, and salad mix greens. ■

Vegetable and melon production up 2 percent

Production of vegetables and melons totaled 96.5 million pounds in 2002, up 2 percent from 2001. Leading all vegetables and melons for the fourth consecutive year were tomatoes (field-grown and greenhouse tomatoes combined) with a record-tying harvest of 17.5 million pounds in 2002.

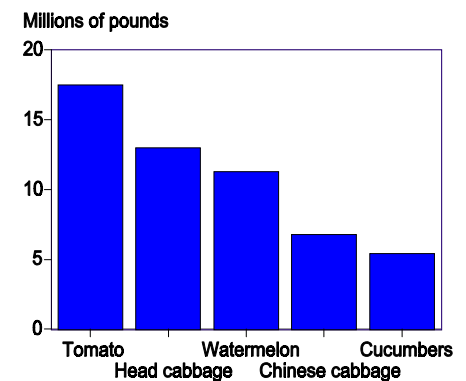
Head cabbage growers were second with production estimated at 13.0 million pounds in 2002, up 4 percent from 2001. Watermelons remained third with a harvest of 11.3 million pounds, up 8 percent from 2001. Fourth were Chinese cabbage growers with 6.8 million pounds, down 3 percent from 2001. Rounding out the top 5 were cucumbers at 5.4 million pounds for 2002, up 2 percent from 2001.

The category of Other Vegetables and Melons had a record-high combined production of 17.6 million pounds in 2002, up 43 percent from 2001. Increased production of specialty melons and cantaloupes were mainly responsible for the overall boost.

Other notable increases in production

were registered by sweet corn (+26%) and sweet potatoes (+28%). On the other hand, production declines were registered by such million-pound crops as daikon (-22%), dry onions (-61%), Italian squash (-22%), mustard cabbage (-13%), and celery (-4%). Watercress production decreased 7 percent to 800,000 pounds as production continued to be plagued by the aster yellows disease. ■

Top 5 vegetables and melons based on volume State of Hawaii, 2002



Vegetables with the largest percentage change in farm value *

State of Hawaii, 2002

Commodity	2001	2002	Change
	----- \$1,000 -----		Percent
Largest increases			
Watermelons	2,520	2,938	+17
Green onions	1,246	1,335	+7
Sweet corn	1,216	1,296	+7
Largest decreases			
Dry onions	4,052	2,016	-50
Snap beans	1,067	873	-18
Head cabbage	2,750	2,730	-1

* Minimum farm value of \$1 million in 2001.

2002 Vegetable and Melon Statistics

Vegetable and melons: Acreage, production, and value State of Hawaii, 2001 and 2002 ¹

Commodity	Harvested acreage ^{2/}		Production		Farm value	
	2001	2002	2001	2002	2001	2002
	-----Acres-----		-----1,000 pounds-----		-----1,000 dollars-----	
Beans, snap	210	180	1,100	900	1,067	873
Bittermelon	15	20	250	200	200	180
Broccoli	155	150	550	550	358	374
Burdock	15	^{3/}	150	^{3/}	218	^{3/}
Cabbage, Chinese	320	340	7,000	6,800	1,610	1,632
Cabbage, head	500	540	12,500	13,000	2,750	2,730
Cabbage, mustard	130	130	1,600	1,400	800	714
Celery	50	50	1,150	1,100	368	363
Corn, sweet	440	610	1,900	2,400	1,216	1,296
Cucumbers	370	390	5,300	5,400	2,332	2,484
Daikon	330	250	3,200	2,500	896	751
Eggplant	50	60	1,000	750	660	548
Lettuce ^{4/}	140	120	1,200	1,200	600	684
Onions, dry	300	200	5,400	2,100	4,052	2,016
Onions, green	120	125	1,400	1,500	1,246	1,335
Peppers, green	210	215	3,100	3,200	1,860	1,888
Pumpkins	35	80	400	400	164	160
Radish	15	10	150	100	90	55
Romaine	190	150	2,000	1,800	900	846
Squash, Italian	160	175	1,800	1,400	900	644
Squash, Oriental	20	10	500	250	175	103
Sweet potatoes	220	300	1,800	2,300	900	989
Tomatoes	580	580	17,500	17,500	9,275	9,625
Watercress	35	35	860	800	946	944
Watermelon	520	550	10,500	11,300	2,520	2,938
Other vegetables and melons	1,000	1,160	12,300	17,600	11,931	16,192
Total vegetables and melons	6,130	6,430	94,610	96,450	48,034	50,364

^{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.

^{3/} Burdock included in "Other vegetables and melons" category.

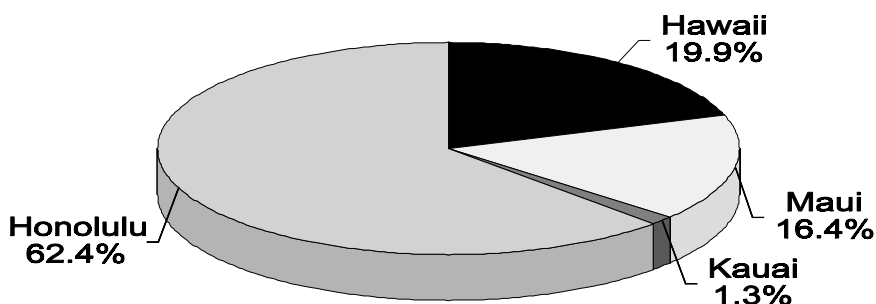
^{4/} Includes head and semi-head (Manoa) lettuce. Leaf lettuce and salad greens included in "Other vegetables and melons". See lettuce feature on page 6.

County Summaries

Honolulu increases share of State's total

Honolulu county accounted for 62 percent of the State's total production of vegetables and melons in 2002, an increase from its 59 percent share in 2001. Hawaii county was the second leading area of vegetable and melon production with 20 percent of the State's 2002 total. Maui was third with 16 percent, while Kauai was a distant fourth with 1 percent.

Distribution of vegetable and melon production by county State of Hawaii - 2002



Hawaii county

Big Island growers produced 19.2 million pounds of vegetables and melons during 2002, down 2 percent from 2001. The county's top 3 vegetables all registered declines in production: Chinese cabbage (-4%), head cabbage (-15%), and daikon (-20%). Partially offsetting these declines were increases in large volume crops such as sweet potatoes (+11%), tomatoes (+15%), and romaine (+24%).

Total harvested acreage of vegetables and melons is estimated at 1,460 acres in 2002, down 8

percent from 2001.

Total farm value of all vegetables and melons for Hawaii county is estimated at \$9.7 million, down 1 percent from 2001. Chinese cabbage and tomatoes (mainly greenhouse types) were the only vegetable crops posting farm revenues in excess of \$1 million in 2002.

Maui county

Maui county produced 15.8 million pounds of vegetables and melons during 2002, down 14 percent from 2001. Declines in head cabbage (-8%), tomatoes (-30%), Chinese cabbage (-30%), and dry onions (-38%) were major reasons for the overall drop in output. Sweet potato production increased 71 percent to 650,000 pounds as an increase in harvested acreage more than offset a drop in yields due to insects, mice, and dry weather.

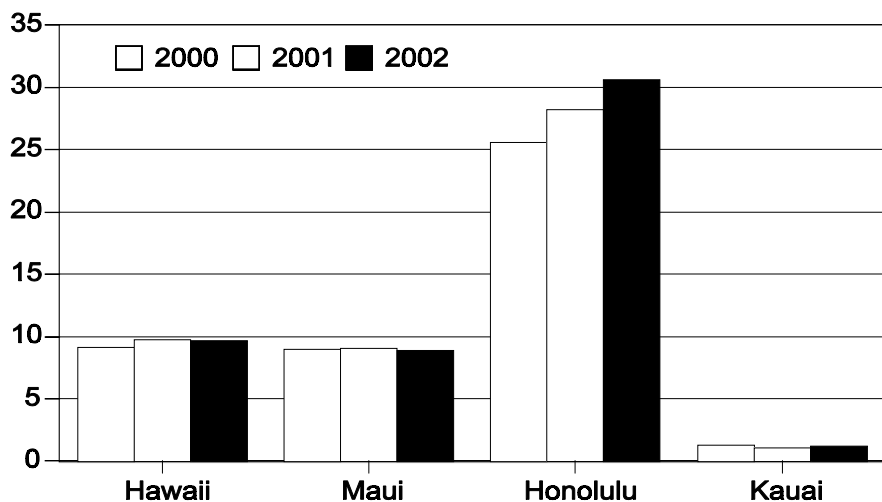
Maui county farmers harvested 1,115 acres of vegetables and melons in 2002, down 8 percent from 2001. Reductions in dry onions, romaine, and tomatoes were major contributors to the overall decline.

Total farm revenues are estimated at \$8.9 million in 2002, down 2 percent from 2001. Lower farm revenues for tomatoes and dry onions were the main reason for the decline. The combined category of Other Vegetables and Melons posted a 109 percent increase to \$2.4 million in 2002.

Farm value of vegetables and melons by county

State of Hawaii, 2000 - 2002

\$ Millions



County Summaries

Honolulu county

Output of vegetables and melons by Oahu farmers totaled 60.2 million pounds in 2002, up 8 percent from 2001. In addition, Oahu accounts for more than half of the State's production for 12 of the 24 vegetables and melons that are listed individually.

The top 5 crops on Oahu for 2002 based on volume, with percentage change from 2001 in parenthesis, were: tomatoes (+4%), watermelon (+6%), head cabbage (+25%), green peppers (+3%), and cucumbers (-2%). The combined category of Other Vegetables and Melons recorded a 51-percent increase in production to 13.6 million pounds. The largest decline in production was in dry onions (-76%) as farmers harvested less acreage and untimely rains reduced yields.

Farm revenues totaled \$30.6 million in 2002, up 9 percent from 2001. The top 5 revenue generating vegetables, with percentage change from 2001, in parenthesis were tomatoes (+6%), watermelons (+14%), green peppers (+1%), head cabbage (+18%), and green onions (+5%) These 5 vegetables accounted for 48 percent of the county's total farm value. Another 31 percent of total farm value is accounted for by the combined category of Other Vegetables and Melons.

Kauai county

Production increases by sweet corn, tomatoes, and watermelon enabled Kauai county to boost total production of all vegetables and melons to a record high 1.3 pounds for 2002, up 30 percent from 2001.

Farm value is estimated at \$1.2 million for 2002, up 14 percent from 2001 but 4 percent lower than the record high \$1.2 million achieved in 2000. ■

Vegetables and Melons By Counties, State of Hawaii 1998-2002

County	Harvested Acreage	Production (000 lbs.)	Farm Value (\$1,000)
State			
1998	6,255	93,355	39,660
1999	7,840	99,950	42,990
2000	6,090	97,020	44,869
2001	6,130	94,610	48,034
2002	6,430	96,450	50,364
Hawaii			
1998	1,760	22,555	9,057
1999	2,000	23,950	10,421
2000	1,560	20,575	9,097
2001	1,580	19,600	9,759
2002	1,460	19,160	9,699
Maui			
1998	1,540	27,205	11,083
1999	1,395	21,940	8,650
2000	1,315	20,525	8,983
2001	1,210	18,425	9,042
2002	1,115	15,795	8,853
Honolulu			
1998	2,820	42,830	18,765
1999	4,300	53,100	23,121
2000	3,070	54,740	25,534
2001	3,220	55,610	28,175
2002	3,615	60,225	30,609
Kauai			
1998	135	765	755
1999	140	960	798
2000	145	1,170	1,249
2001	120	975	1,058
2002	240	1,270	1,203

Hawaii Lettuces

Farm value at all-time high \$4.7 million

Hawaii farmers generated a record-high \$4.7 million in revenues from the sale of all types of lettuce in 2002. Higher farm prices more than offset a 7 percent decline in total production to achieve the record.

Growers of **head and semi-head (Manoa) lettuce** produced 1.2 million pounds in 2002, unchanged from 2001 and stopping a three-year decline in production. Farm revenues increased 14 percent due to a record-high farm price of 57.0 cents per pound.

Romaine lettuce production totaled 1.8 million pounds in 2002, down 10 percent from 2001 and the lowest output in 6 years. Farm prices, however, were at a record-high in 2002 at an average of 47.0 cents per pound. Still, the increase in farm price was not enough to offset the decline in production as total farm revenues declined 6 percent to \$846,000 in 2002.

Production of **all other lettuce** totaled 1.6 million pounds in 2002,

Production

Type of lettuce	1998	1999	2000	2001	2002
	<i>1,000 pounds</i>				
Head and semi-head	1,700	1,500	1,300	1,200	1,200
Romaine	3,300	2,700	2,000	2,000	1,800
Other ¹	850	1,200	1,600	1,800	1,600
Total	5,850	5,400	4,900	5,000	4,600

¹ Includes all other lettuce and "salad mix" greens.

Farm Value

Type of lettuce	1998	1999	2000	2001	2002
	<i>\$1,000</i>				
Head and semi-head	816	735	650	600	684
Romaine	1,254	999	860	900	846
Other ¹	800	2,200	2,900	3,000	3,200
Total	2,870	3,934	4,410	4,500	4,730

¹ Includes all other lettuce and "salad mix" greens.

down 11 percent from 2001. Higher farm prices, however, more than offset the decline in production to boost total farm revenues to a record high \$3.2 million in 2002, up 7 percent from 2001. This combined

category of lettuces includes some of the higher valued specialty types of lettuce and accounts for 68 percent of the total value of all lettuces. ■

Hawaii Processed Chinese Cabbage and Daikon

Year	Chinese cabbage			Daikon		
	Quantity processed	Farm price	Value of sales	Quantity processed	Farm price	Value of sales
	<i>1,000 pounds</i>	<i>Cents per pound</i>	<i>1,000 dollars</i>	<i>1,000 pounds</i>	<i>Cents per pound</i>	<i>1,000 dollars</i>
1993	1,270	29.0	368	610	25.0	153
1994	1,240	29.5	366	560	26.0	146
1995	1,230	29.0	357	520	26.5	138
1996	1,250	29.0	363	500	27.0	135
1997	1,200	23.0	276	700	28.5	200
1998	1,200	19.0	228	550	30.5	168
1999	1,100	19.0	209	400	27.7	111
2000	1,000	21.0	210	350	28.0	98
2001	1,000	23.0	230	400	28.0	112
2002	1,100	24.0	264	400	30.0	120

Hawaii Sweet Corn

Harvested acreage at record high in 2002

Hawaii's sweet corn farmers harvested a record high 610 acres in 2002, up 39 percent from 2001. Honolulu county growers harvested 340 of year's record acreage or 56 percent of the total. Hawaii, Maui, and Kauai counties (combined to avoid disclosure of individual operations) accounted for the remaining 270 acres, a 59 percent increase from 2001.

Production totaled 2.4 million pounds in 2002, up 26 from 2001 but less than the all-time record of 2.6 million pounds in 1946 or the 2.5 million pounds in 1991. Production did not match the record acreage in 2002 because yields were down for a variety of reasons including rust disease, poor germination, slow market conditions, and less-than-favorable weather.

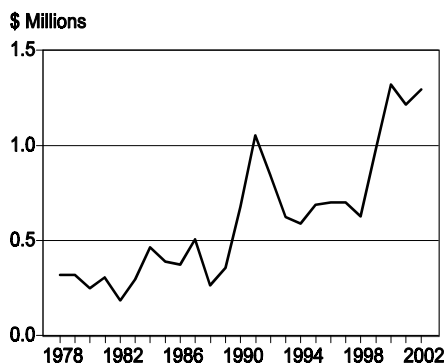
The average farm price dropped to its lowest level in 5 years at 54.0 cents per pound in 2002. An increase in production, however, more than offset the drop in farm prices and resulted in total farm revenues increasing 7 percent to the second highest level on record at \$1.3 million in 2002. ■

Hawaii Sweet Corn Statistics State of Hawaii, 1978-2002

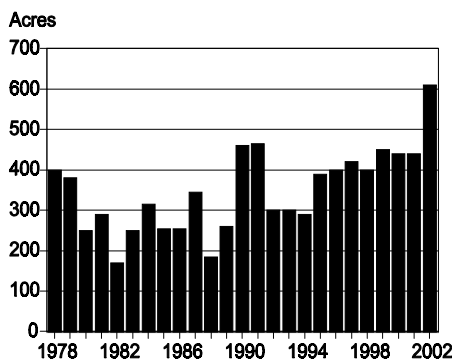
Year	Acreage in crop	Production	Average farm price	Value of sales
		1,000 pounds	Cents per lb.	\$1,000
1978	400	1,590	20.0	318
1979	380	1,510	21.2	320
1980	250	950	26.2	249
1981	290	1,050	29.3	308
1982	170	560	33.4	187
1983	250	880	33.8	297
1984	315	1,300	35.8	465
1985	255	1,060	36.6	388
1986	255	1,040	36.0	374
1987	345	1,480	34.2	506
1988	185	660	40.1	265
1989	260	1,020	35.0	357
1990	460	2,400	28.3	679
1991	465	2,500	42.2	1,055
1992	300	1,500	56.0	840
1993	300	1,200	52.0	624
1994	290	1,000	59.0	590
1995	390	1,300	53.0	689
1996	400	1,400	50.0	700
1997	420	1,300	54.0	702
1998	400	1,100	57.0	627
1999	450	1,700	58.0	986
2000	440	2,400	55.0	1,320
2001	440	1,900	64.0	1,216
2002	610	2,400	54.0	1,296

Sweet Corn, State of Hawaii 1978-2002

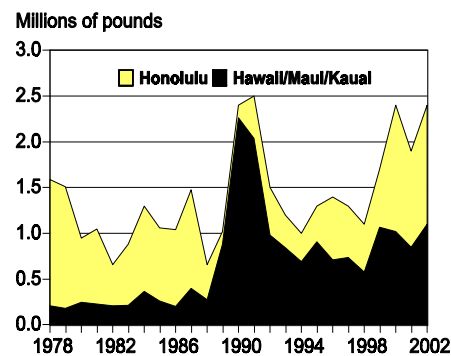
Value of Sales



Harvested Acres



Production



California Vegetable Summary

California Fresh Market Vegetable Crops, 2001 and 2002

Crop	Area Harvested		Production		Price Per Cwt. ¹		Total Value	
	2001	2002	2001	2002	2001	2002	2001	2002
	<i>Acres</i>		<i>1,000 cwt.</i>		<i>Dollars</i>		<i>\$1,000</i>	
Asparagus	35,000	34,000	1,050	1,020	156.00	114.00	163,800	116,280
Snap Beans	5,400	6,500	432	520	64.40	62.30	27,821	32,396
Bell Peppers	22,000	21,000	7,150	6,930	25.50	28.60	182,343	197,987
Cabbage	12,000	12,500	4,560	4,750	13.80	14.00	62,928	66,500
Carrots	81,000	77,000	23,490	22,330	18.10	20.30	425,169	453,299
Celery	25,500	25,000	17,723	17,750	14.40	12.80	255,841	227,130
Sweet Corn	22,000	24,000	3,740	4,080	22.30	24.00	83,402	97,920
Cucumbers	4,700	4,300	1,128	1,032	30.00	28.60	33,840	29,515
Head Lettuce	128,000	129,000	48,640	48,375	18.50	15.20	899,840	735,300
Leaf Lettuce	46,000	49,000	9,890	10,535	24.90	28.10	246,261	296,034
Romaine	40,500	42,000	11,340	12,390	17.50	19.90	198,450	246,561
Tomatoes	38,000	38,500	10,260	11,550	24.90	25.40	255,474	293,370
Watermelons	11,800	11,800	6,254	6,018	10.90	12.70	68,169	76,429

¹ Price is on a packed and loaded basis, f.o.b. shipping point.

Source: California Agricultural Statistics Service