Cost of Pollination

ISSN: 2475-4315

Released December 13, 2024, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA).

Cost per Colony to Pollinate Almonds down 4 Percent from 2023

In Regions 6 & 7, the average cost per colony for almonds decreased 4 percent from 188 dollars per colony in 2023 to 181 dollars per colony in 2024. The average price per acre decreased from 310 dollars per acre to 305 dollars per acre during that period. The total value of pollination for almonds decreased 3 percent. Almonds were the highest valued crop in that region. The total value of all pollination in Regions 6 & 7 for 2024 was 353 million dollars, down 1 percent from 2023.

Cranberries had the highest total value of pollination of crops reported in Region 1 in 2024. The price per colony for cranberries increased 7 percent to 88.8 dollars per colony in 2024. The price per acre decreased 6 percent to 188 dollars per acre. The total value of pollination for cranberries in Region 1 for 2024 was 5.59 million dollars. The total value for pollination of all crops in Region 1 for 2024 was 18.5 million dollars, down 7 percent from 2023.

Blueberries had the highest total value of pollination of crops reported in Region 2 in 2024. The price per colony for blueberries increased 2 percent to 68.0 dollars per colony in 2024. The price per acre increased 4 percent to 144 dollars per acre. The total value of pollination for blueberries in Region 2 for 2024 was 3.60 million dollars. The total value of pollination of all crops in Region 2 for 2024 was 6.34 million dollars, down 6 percent from 2023.

Watermelons had the highest total value of pollination of crops reported in Region 3 in 2024. The price per colony for watermelons increased 22 percent to 69.6 dollars per colony in 2024. The price per acre increased 5 percent to 85.5 dollars per acre. The total value of pollination for watermelons in Region 3 for 2024 was 1.95 million dollars. The total value of pollination of all crops in Region 3 for 2024 was 4.10 million dollars, down 27 percent from 2023.

Apples had the highest total value of pollination of crops reported in Region 4 in 2024. The price per colony for apples decreased 20 percent to 59.6 dollars per colony in 2024. The price per acre decreased 15 percent to 54.7 dollars per acre. The total value of pollination for apples in Region 4 for 2024 was 167 thousand dollars. The total value of pollination of all crops in Region 4 for 2024 was 711 thousand dollars, down 44 percent from 2023.

Apples had the highest total value of pollination of crops reported in Region 5 in 2024. The price per colony for apples decreased 2 percent to 58.1 dollars per colony in 2024. The price per acre decreased 17 percent to 56.7 dollars per acre. The total value of pollination for apples in Region 5 for 2024 was 6.28 million dollars. The total value of pollination of all crops in Region 5 for 2024 was 18.3 million dollars, down 26 percent from 2023.

Contents

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 1: 2023

[See regional listing on page 10]

Crop	Region 1				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Tree fruit					
Apple	76,400	38.5	44,000	81.0	3,564
Cherry	29,400	27.0	12,500	66.7	834
Melons					
Watermelon	1,950	74.6	2,400	69.9	168
Berries					
Blueberry	40,800	142.0	81,000	76.8	6,221
Cranberry	32,100	200.0	78,000	82.8	6,458
Vegetables					
Cucumber	8,100	41.3	4,600	79.6	366
Pumpkin	8,700	36.5	6,000	77.2	463
Squash	4,800	52.3	4,400	83.9	369
All other [1]	5,600	46.8	17,500	77.8	1,362
Total	207,850	83.0	250,400	79.1	19,805

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 1: 2024

[See regional listing on page 10]

Crop	Region 1				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Tree fruit					
Apple	70,600	37.7	40,000	83.9	3,356
Cherry	25,000	36.5	15,000	66.8	1,002
Melons					
Watermelon	2,950	73.7	2,600	100.0	260
Berries					
Blueberry	29,500	174.0	67,000	81.5	5,461
Cranberry	26,300	188.0	63,000	88.8	5,594
Vegetables					
Cucumber	11,800	32.6	6,000	68.3	410
Pumpkin	7,800	50.4	11,000	93.0	1,023
Squash	4,750	46.0	3,800	79.1	301
All other [1]	5,100	47.6	16,000	68.6	1,098
Total	183,800	82.3	224,400	82.5	18,505

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 2: 2023

[See regional listing on page 10]

Crop	Region 2				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Tree fruit					
Apple	11,800	26.3	5,000	69.3	347
Melons					
Cantaloupe	2,600	74.4	3,800	57.5	219
Watermelon	18,000	88.8	25,000	66.1	1,653
Berries					
Blueberry	21,100	139.0	49,000	66.4	3,254
Vegetables					
Pumpkin	1,160	36.9	1,000	74.6	75
Squash	2,750	73.1	4,100	60.3	247
All other [1]	13,400	54.4	14,500	65.9	956
Total	70,810	84.8	102,400	65.9	6,751

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 2: 2024

[See regional listing on page 10]

Crop	Region 2				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Tree fruit					
Apple	11,000	18.7	4,200	60.3	253
Melons					
Cantaloupe	510	59.7	3,000	79.1	237
Watermelon	18,200	81.0	20,000	74.6	1,492
Berries					
Blueberry	21,000	144.0	53,000	68.0	3,604
Vegetables					
Pumpkin	2,500	58.4	2,900	58.9	171
Squash	2,600	69.1	2,200	98.3	216
All other [1]	5,500	44.2	6,500	57.1	371
Total	61,310	86.6	91,800	69.1	6,344

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 3: 2023

[See regional listing on page 10]

Crop	Region 3				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Melons					
Watermelon	22,100	81.5	35,000	57.0	1,995
Berries					
Blueberry	2,350	230.0	18,000	59.3	1,067
All other [1]	26,700	58.7	37,000	68.3	2,527
Total	51,150	76.5	90,000	62.1	5,589

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 3: 2024

[See regional listing on page 10]

Crop	Region 3				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Melons					
Watermelon	22,100	85.5	28,000	69.6	1,949
Berries					
Blueberry	2,000	194.0	7,000	77.5	543
All other [1]	22,600	37.3	33,000	48.7	1,607
Total	46,700	66.8	68,000	60.3	4,099

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 4: 2023

[See regional listing on page 10]

Crop	Region 4				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Tree fruit					
Apple	1,150	64.4	1,900	74.2	141
Cherry	1,040	41.6	2,600	43.3	113
All other [1]	1,160	62.4	19,000	53.9	1,024
Total	3,350	56.7	23,500	54.4	1,278

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 4: 2024

[See regional listing on page 10]

Crop	Region 4				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Tree fruit					
Apple	1,300	54.7	2,800	59.6	167
Cherry	1,650	39.8	2,400	39.0	94
All other [1]	1,900	52.3	5,500	81.8	450
Total	4,850	48.5	10,700	66.5	711

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 5: 2023

[See regional listing on page 10]

Crop	Region 5				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Tree fruit					
Apple	139,500	68.0	164,000	59.5	9,758
Cherry	36,100	104.0	62,000	61.2	3,794
Pear	23,800	56.7	23,000	59.1	1,359
Berries					
Blueberry	23,500	150.0	64,000	56.5	3,616
Cranberry	6,000	121.0	9,000	81.9	737
Raspberry	2,600	72.6	4,700	40.7	191
All other [1]	53,900	84.5	73,000	71.3	5,205
Total	285,400	82.6	399,700	61.7	24,660

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 5: 2024

[See regional listing on page 10]

Crop	Region 5				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Tree fruit					
Apple	109,400	56.7	108,000	58.1	6,275
Cherry	35,000	90.7	54,000	59.1	3,191
Pear	26,200	61.0	27,000	61.1	1,650
Berries					
Blueberry	13,100	161.0	49,000	44.9	2,200
Cranberry	4,250	117.0	6,500	74.3	483
Raspberry	5,500	78.4	12,000	36.5	438
All other [1]	47,100	64.4	114,000	35.9	4,093
Total	240,550	70.9	370,500	49.5	18,330

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 6 & 7: 2023

[See regional listing on page 10]

Crop	Region 6 & 7				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Tree nuts					
Almond	1,075,400	310.0	1,780,000	188.0	334,640
Tree fruit					
Apples	3,350	84.9	6,500	56.2	365
Cherry	26,500	124.0	44,000	77.9	3,428
Melons					
Cantaloupe	36,100	62.4	28,000	81.6	2,285
Watermelon	8,900	150.0	9,500	142.0	1,349
Other Crops					
Alfalfa	11,200	139.0	19,500	92.0	1,794
Sunflower	18,300	88.1	27,000	60.5	1,634
All other [1]	64,100	101.0	165,000	66.3	10,940
Total	1,243,850	281.3	2,079,500	171.4	356,435

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Paid Pollinated Acres, Price per Acre, Colonies Used, Price per Colony, and Total Value of Pollination – Region 6 & 7: 2024

[See regional listing on page 10]

Crop	Region 6 & 7				
	Paid pollinated acres	Price per acre	Colonies used	Price per colony [2]	Total value of pollination
	(acres)	(dollars)	(colonies)	(dollars)	(1,000 dollars)
Tree nuts					
Almond	1,055,700	305.0	1,800,000	181.0	325,800
Tree fruit					
Apples	1,700	86.5	3,500	54.0	189
Cherry	29,400	168.0	48,000	103.0	4,944
Melons					
Cantaloupe	17,600	63.2	14,500	76.5	1,109
Watermelon	9,600	110.0	18,000	60.0	1,080
Other Crops					
Sunflower	11,100	56.5	15,500	40.3	625
All other [1]	65,800	215.0	133,000	143.0	19,019
Total	1,190,900	289.3	2,032,500	173.6	352,766

[1] Includes crops not categorized above.
[2] Regional total price per colony is total value of pollination divided by colonies used.

Statistical Methodology

Survey Procedures: The *Cost of Pollination* survey, conducted annually in all 50 states, collects information on acreage pollinated, colonies used, and dollars spent for a variety of different crops. The target population for *Cost of Pollination* estimate program is all farms and ranches with at least one acre of a crop determined to be potentially pollinated by honey bees. There were 33 specific crops targeted in the *Cost of Pollination* sampling scheme, 19 of these crops were listed individually on the questionnaire. Additional crops were allowed to be reported under the "All Other Crops" category (see "Sampled Crops"). Any other reported commodity not included in these lists were grouped as miscellaneous and summarized together. The *Cost of Pollination* samples were selected using a Multivariate Probability Proportional to Size (MPPS) sampling scheme. Each record was assigned a measure of size based on the record's data for multiple specified commodities. The 2024 sample size was 15,046 and the 2023 sample size was 15,548. All sampled operations were mailed a questionnaire and given adequate time to respond by mail or electronic data reporting (EDR). Those that did not respond by mail or EDR were telephoned or enumerated in person.

Sampled Crops: The 19 sampled crops listed on the questionnaire were: alfalfa, almonds, apples, blueberries, cantaloupes, cherries, clover, cranberries, cucumber, nectarines, oranges, peaches, pears, pumpkins, raspberries, squash, strawberries, sunflowers, and watermelons. The 14 remaining crops that were sampled, but not listed individually on the questionnaire were: apricots, avocados, boysenberries, buckwheat, canola, grapes, honeydew melons, kiwifruit, plums, prunes, macadamia nuts, mangos, tomatoes, and turnips.

Estimation Procedures: Estimates were prepared by the Agricultural Statistics Board after reviewing recommendations and analysis submitted by each Regional Field Office. All data were analyzed for unusual values. Data from each operation were compared to their own past operating profile and to trends from similar operations. Data for missing operations were covered by weighting positive data of similar operations based on location and strata. National and State survey data were reviewed for reasonableness with each other, estimates from the previous year, and other USDA, NASS reports.

In order to be published individually, a crop must have an appropriate threshold of paid pollinated acres in a region and meet USDA, NASS's confidentiality policy. If a crop did not meet either of these requirements, it was combined with all other unpublished crops under the "All Other" heading. Due to the differences in regions and years, the aggregate and other published estimates may include different crops.

Revision Policy: The previous year's estimates are subject to revision when current year's estimates are made. Revisions are the result of late reports or corrected data.

Reliability: Estimates were created by reviewing rounded indications from the survey and the associated measures of error. Due to the sampled population differing from other USDA, NASS surveys, estimates on this report may differ from other published numbers. Since all operations with crops were not included in the sample, survey estimates are subject to sampling variability. The measurement of error due to sampling in the current period is evaluated by the coefficient of variation for each estimated item. For individually published crops, coefficients of variation can be found using USDA, NASS's Quick Stats searchable database.

Survey results were also subject to non-sampling errors such as omissions, duplication, and mistakes in reporting, recording, and processing the data. While these errors cannot be measured directly, they were minimized through strict quality controls in the data collection process and a careful review of all reported data for consistency and reasonableness.

Estimation Regions

To improve the reliability and increase the number of estimates which can be published, estimates are published at regional level, based on the regions used for the 2012 Census of Agriculture. Regions 6 and 7 were combined. The states in each region are as follows:

Region 1: Connecticut, Illinois, Indiana, Iowa, Kansas, Massachusetts, Maine, Michigan, Nebraska, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Wisconsin.

Region 2: Alabama, Delaware, Georgia, Kentucky, Maryland, North Carolina, South Carolina, Tennessee, Virginia, West Virginia.

Region 3: Arkansas, Florida, Louisiana, Missouri, Mississippi, New Mexico, Oklahoma, Texas.

Region 4: Colorado, Minnesota, Montana, Nevada, North Dakota, South Dakota, Utah, Wyoming.

Region 5: Alaska, Idaho, Oregon, Washington.

Region 6 & 7: Arizona, California, Hawaii.

Terms and Definitions of Cost of Pollination Estimates

Paid Pollinated Acres: Acreage that an operation paid money to be pollinated by honey bees.

Dollars per Acre: The average price paid by operations to pollinate an acre of crop. Acres pollinated for free or on a nonmonetary basis were not included in this calculation.

Colonies Used: The total colonies used to pollinate a crop; regardless of ownership or if on a paid basis.

Dollars per Colony: The average price paid by operations to use a colony for pollination. Colonies owned by the operation or used on a nonmonetary basis were not included.

Total Value of Pollination: The total valuation of all pollination, calculated by multiplying the price per colony by colonies used.

Information Contacts

Listed below are the commodity specialists in the Livestock Branch of the National Agricultural Statistics Service to contact for additional information. E-mail inquiries may be sent to nass@usda.gov

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- Cornell's Mann Library has launched a new website housing NASS's and other agency's archived reports. The new website, https://usda.library.cornell.edu. All email subscriptions containing reports will be sent from the new website, https://usda.library.cornell.edu. To continue receiving the reports via e-mail, you will have to go to the new website, create a new account and re-subscribe to the reports. If you need instructions to set up an account or subscribe, they are located at: https://usda.library.cornell.edu/help. You should whitelist notifications@usda-esmis.library.cornell.edu in your email client to avoid the emails going into spam/junk folders.

For more information on NASS surveys and reports, call the NASS Agricultural Statistics Hotline at (800) 727-9540, 7:30 a.m. to 4:00 p.m. ET, or e-mail: nass@usda.gov.