



Mushrooms

ISSN: 1949-1530

Released August 21, 2019, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA).

All Mushroom Value of Sales at \$1.13 Billion

Volume of sales of the 2018-2019 United States mushroom crop totaled 846 million pounds, down 8 percent from last season's number. Value of sales for the 2018-2019 United States mushroom crop was \$1.13 billion, down 8 percent from the previous season. The average reported price was \$1.34 per pound, unchanged from the previous year's price.

Agaricus and Specialty Mushroom Number of Growers, Sales, Price, and Value – United States: 2016-2017, 2017-2018, and 2018-2019

Year	Growers ¹	All sales		
		Volume of sales	Price per pound ²	Value of sales
	(number)	(1,000 pounds)	(dollars)	(1,000 dollars)
2016-2017	317	933,355	1.310	1,226,127
2017-2018	307	917,235	1.340	1,233,582
2018-2019 ³	(NA)	846,491	1.340	1,131,564

(NA) Not available.

¹ Number of growers counted once if growing both Agaricus and specialty mushrooms. Estimates discontinued in 2018-2019.

² Prices for mushrooms are the average prices producers receive at the point of first sale, commonly referred to as the average price as sold. For example, if in a given State, part of the fresh mushrooms are sold F.O.B. packed by growers, part are sold bulk to brokers or repackers, and some are sold retail at roadside stands, the mushroom average price as sold is a weighted average of the average price for each method of sale.

³ Beginning in 2018-2019, Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

This page intentionally left blank.

Contents

Agaricus Mushroom Number of Growers, Area in Production, and Yield – States and United States: 2016-2017, 2017-2018, and 2018-2019	4
Agaricus Mushroom Sales, Dollar Volume per Square Foot of Growing Area, Price, and Value – States and United States: 2016-2017, 2017-2018, and 2018-2019	4
Agaricus Mushroom Fresh market Sales, Price, and Value – States and United States: 2016-2017, 2017-2018, and 2018-2019	5
Agaricus Mushroom Processing Sales, Price, and Value – States and United States: 2016-2017, 2017-2018, and 2018-2019	5
Brown Mushrooms (Portabello and Crimini) Number of Growers, Sales, and Value – Regions and United States: 2016-2017, 2017-2018, and 2018-2019	6
Agaricus Mushroom Growing Area Intended for Production by Utilization – States and United States: July 2019-June 2020	6
Agaricus Mushroom Number of Growers by Sales Category – United States: 2016-2017, 2017-2018, and 2018-2019	6
Specialty Mushroom Number of Growers and Area in Production by Variety – United States: 2016-2017, 2017-2018, and 2018-2019	7
Specialty Mushroom Total Production, Volume of Sales, Price, and Value of Sales by Variety – United States: 2016-2017, 2017-2018, and 2018-2019	7
Mushroom Comments.....	8
Regional Mushroom Producing States Listing	8
Statistical Methodology	9
Information Contacts	9

Agaricus Mushroom Number of Growers, Area in Production, and Yield – States and United States: 2016-2017, 2017-2018, and 2018-2019

State	Growers ¹			Area in production						Yield per square foot		
				Growing area			Total filings					
	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019
	(Number)	(Number)	(Number)	(1,000 square feet)	(pounds)	(pounds)	(pounds)					
California	11	13	(NA)	3,053	2,862	2,306	17,724	17,399	14,858	5.74	5.48	6.27
Pennsylvania	56	53	(NA)	17,367	17,324	17,727	83,409	84,374	76,829	6.87	6.78	7.25
Other States ²	31	29	(NA)	6,693	6,283	4,492	42,364	38,790	28,014	5.47	5.77	6.33
United States ³	98	95	(NA)	27,113	26,469	24,525	143,497	140,563	119,701	6.32	6.34	6.91

(NA) Not available.

¹ Estimates discontinued in 2018-2019.

² Other States include data for States not listed in the table above. Beginning in 2018-2019 Other States include Florida, Illinois, Maryland, Oklahoma, Tennessee, and Texas.

³ Beginning in 2018-2019, Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

Agaricus Mushroom Sales, Dollar Volume per Square Foot of Growing Area, Price, and Value – States and United States: 2016-2017, 2017-2018, and 2018-2019

State	Volume of sales			Dollar volume per square foot			Price per pound ¹			Value of sales		
	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019
	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(dollar)	(dollar)	(dollar)	(dollar)	(dollar)	(dollar)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
California	101,681	95,324	93,153	11.38	11.25	13.16	1.980	2.050	2.100	201,702	195,731	195,462
Pennsylvania	573,268	572,223	556,637	6.60	6.78	7.25	0.960	1.000	1.000	550,600	572,179	557,064
Other States ²	231,644	223,684	177,223	8.75	9.28	11.15	1.600	1.610	1.760	370,519	359,976	312,239
United States ³	906,593	891,231	827,013	7.82	8.02	8.90	1.240	1.270	1.290	1,122,821	1,127,886	1,064,765

¹ Prices for mushrooms are the average prices producers receive at the point of first sale, commonly referred to as the average price as sold. For example, if in a given State, part of the fresh mushrooms are sold F.O.B. packed by growers, part are sold bulk to brokers or repackers, and some are sold retail at roadside stands, the mushroom average price as sold is a weighted average of the average price for each method of sale.

² Other States include data for States not listed in the table above. Beginning in 2018-2019 Other States include Florida, Illinois, Maryland, Oklahoma, Tennessee, and Texas.

³ Beginning in 2018-2019, Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

Agaricus Mushroom Fresh market Sales, Price, and Value – States and United States: 2016-2017, 2017-2018, and 2018-2019

State	Volume of sales			Price per pound ¹			Value of sales		
	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019
	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(dollars)	(dollars)	(dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
California	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Pennsylvania	503,997	510,240	500,136	1.010	1.040	1.040	509,037	530,650	519,950
Other States ²	307,624	302,812	262,378	1.790	1.780	1.910	551,244	539,666	500,490
United States ³	811,621	813,052	762,514	1.310	1.320	1.340	1,060,281	1,070,316	1,020,440

(D) Withheld to avoid disclosing data for individual operations.

¹ Prices for mushrooms are the average prices producers receive at the point of first sale, commonly referred to as the average price as sold. For example, if in a given State, part of the fresh mushrooms are sold F.O.B. packed by growers, part are sold bulk to brokers or repackers, and some are sold retail at roadside stands, the mushroom average price as sold is a weighted average of the average price for each method of sale.

² Other States include data for States not listed in the table above. Beginning in 2018-2019 Other States include data withheld above and Florida, Illinois, Maryland, Oklahoma, Tennessee, and Texas.

³ Beginning in 2018-2019, Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

Agaricus Mushroom Processing Sales, Price, and Value – States and United States: 2016-2017, 2017-2018, and 2018-2019

State	Volume of sales			Price per pound ¹			Value of sales		
	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019
	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(dollar)	(dollar)	(dollar)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
California	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Pennsylvania	69,271	61,983	56,501	0.600	0.670	0.657	41,563	41,529	37,114
Other States ²	25,701	16,196	7,998	0.816	0.990	0.902	20,977	16,041	7,211
United States ³	94,972	78,179	64,499	0.659	0.736	0.687	62,540	57,570	44,325

(D) Withheld to avoid disclosing data for individual operations.

¹ Prices for mushrooms are the average prices producers receive at the point of first sale, commonly referred to as the average price as sold. For example, if in a given State, part of the fresh mushrooms are sold F.O.B. packed by growers, part are sold bulk to brokers or repackers, and some are sold retail at roadside stands, the mushroom average price as sold is a weighted average of the average price for each method of sale.

² Other States include data for States not listed in the table above. Beginning in 2018-2019 Other States include data withheld above and Florida, Illinois, Maryland, Oklahoma, Tennessee, and Texas.

³ Beginning in 2018-2019, Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

Brown Mushrooms (Portabello and Crimini) Number of Growers, Sales, and Value – Regions and United States: 2016-2017, 2017-2018, and 2018-2019

[Brown mushrooms are part of Agaricus mushrooms]

Region	Number of growers ¹			Volume of sales			Value		
	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019
	(number)	(number)	(number)	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
East ¹	30	29	(NA)	128,433	140,209	(NA)	154,753	169,153	(NA)
Central ¹	8	8	(NA)	16,304	17,887	(NA)	37,987	42,037	(NA)
West ¹	15	14	(NA)	34,257	29,028	(NA)	83,071	72,905	(NA)
United States ²	53	51	(NA)	178,994	187,124	185,016	275,811	284,095	287,038

(NA) Not available.

¹ Estimates discontinued in 2018-2019.

² Beginning in 2018-2019, Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

Agaricus Mushroom Growing Area Intended for Production by Utilization – States and United States: July 2019-June 2020

State	Intentions July 2019 - June 2020			
	Fresh market	Processed market	Total fillings	Percent of last year
	(1,000 square feet)	(1,000 square feet)	(1,000 square feet)	(percent)
California	(D)	(D)	14,857	100
Pennsylvania	(D)	(D)	76,587	100
Other States ¹	117,505	3,038	29,099	104
United States ²	117,505	3,038	120,543	101

(D) Withheld to avoid disclosing data for individual operations.

¹ Other States include data withheld above and Florida, Illinois, Maryland, Oklahoma, Tennessee, and Texas.

² Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

Agaricus Mushroom Number of Growers by Sales Category – United States: 2016-2017, 2017-2018, and 2018-2019

Sales categories (million pounds)	Number of growers		
	2016-2017	2017-2018	2018-2019 ¹
	(number)	(number)	(number)
Over 20.0	10	11	(NA)
10.0 - 19.9	17	18	(NA)
5.0 - 9.9	23	21	(NA)
2.5 - 4.9	12	13	(NA)
1.0 - 2.4	13	14	(NA)
0.5 - 1.0	6	3	(NA)
Less than 0.5	17	15	(NA)
Total	98	95	(NA)

(NA) Not available.

¹ Estimates discontinued in 2018-2019.

Specialty Mushroom Number of Growers and Area in Production by Variety – United States: 2016-2017, 2017-2018, and 2018-2019

[Specialty mushroom estimates represent growers who have at least 200 natural wood logs in production or some commercial indoor growing area, and \$200 in sales]

Variety	Growers ¹			Area in production								
				Natural wood outdoor logs			Natural wood undercover and indoor logs			All other production media		
	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019
	(Number)	(Number)	(Number)	(1,000 logs)	(1,000 logs)	(1,000 logs)	(1,000 logs)	(1,000 logs)	(1,000 logs)	(1,000 square feet)	(1,000 square feet)	(1,000 square feet)
Shiitake ²	185	185	(NA)	142	152	42	441	432	2,383	1,671	1,915	407
Oyster	128	116	(NA)	(X)	(X)	(X)	(X)	(X)	(X)	1,191	1,182	515
Other	59	64	(NA)	(X)	(X)	(X)	(X)	(X)	(X)	450	496	295
Total ³	232	229	(NA)	142	152	42	441	432	2,383	3,312	3,593	1,217

(NA) Not available.

(X) Not applicable.

¹ Growers counted only once for United States total if growing more than one specialty type mushroom. Growers growing Agaricus and specialty mushrooms are included. Estimates discontinued in 2018-2019.

² Includes small quantity of logs producing Oyster and Other mushrooms. These logs are not published separately to avoid disclosure of individual operations.

³ Beginning in 2018-2019, Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

Specialty Mushroom Total Production, Volume of Sales, Price, and Value of Sales by Variety – United States: 2016-2017, 2017-2018, and 2018-2019

[Specialty mushroom estimates represent growers who have at least 200 natural wood logs in production or some commercial indoor growing area, and \$200 in sales]

Variety	Total production ¹			All sales								
				Volume of sales ²			Price per pound ³			Value of sales		
	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019	2016-2017	2017-2018	2018-2019
	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(dollar)	(dollar)	(dollar)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
Shiitake	11,025	10,429	6,987	10,806	10,112	6,727	3.91	4.44	3.21	42,301	44,883	21,563
Oyster	11,394	11,268	9,164	11,087	10,842	8,847	3.12	3.13	3.09	34,542	33,890	27,314
Other	5,233	5,690	3,968	4,869	5,050	3,904	5.43	5.33	4.59	26,463	26,923	17,922
Total ⁴	27,652	27,387	20,119	26,762	26,004	19,478	3.86	4.06	3.43	103,306	105,696	66,799

¹ Total production includes all fresh market and processing sales plus amount harvested but not sold (shrinkage, cullage, dumped, etc.).

² Virtually all specialty mushroom sales are for fresh market.

³ Prices for mushrooms are the average prices producers receive at the point of first sale, commonly referred to as the average price as sold. For example, if in a given State, part of the fresh mushrooms are sold F.O.B. packed by growers, part are sold bulk to brokers or repackers, and some are sold retail at roadside stands, the mushroom average price as sold is a weighted average of the average price for each method of sale.

⁴ Beginning in 2018-2019, Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

Agaricus Mushrooms

Agaricus mushroom volume of sales totaled 827 million pounds, down 7 percent from the 2017-2018 season. Pennsylvania accounted for 67 percent of the total volume of sales and second-ranked California contributed 11 percent. The value of the Agaricus crop was estimated at \$1.06 billion dollars, down 6 percent from a year ago. Brown mushrooms, including Portabello and Crimini varieties, accounted for 185 million pounds, down 1 percent from last season. Brown mushrooms accounted for 22 percent of the total Agaricus volume sold and 27 percent of the total Agaricus value.

United States fresh market sales of Agaricus mushrooms totaled 763 million pounds, down 6 percent from the previous season, while processed sales, at 64.5 million pounds, decreased 17 percent from the previous season. Growers reported United States fresh market production made up 92 percent of total sales volume, while processed production represented the remaining 8 percent. Grower total filling intentions for the 2019-2020 crop are 121 million square feet, up 1 percent from the total fillings in the 2018-2019 season.

Agaricus mushroom growers in Chester County, Pennsylvania produced 397 million pounds, a decrease of 3 percent compared with the 2017-2018 growing season. This production was valued at 397 million dollars, down 2 percent from the previous season. The growing area in Chester County was 14.0 million square feet, up 4 percent from last season. Total fillings were 56.1 million square feet, down 11 percent from the 2017-2018 growing season.

Specialty Mushrooms - Shiitake, Oyster, and all Other Exotics

Value of sales for commercially grown specialty mushrooms in 2018-2019 totaled \$66.8 million, down 37 percent from the 2017-2018 season. A specialty grower is defined as having at least 200 natural wood logs in production or some commercial indoor growing area, and \$200 or more in sales. The average price received by growers, at \$3.43 per pound, was down 63 cents from the revised previous season estimate.

Certified Organic Agaricus and Specialty Mushrooms

Growers produced 104 million pounds of mushrooms that were certified organic during the 2018-2019 growing season, 19 percent below 2017-2018. Seventy-two percent of the total, or 75.5 million pounds, were sold as certified organic mushrooms. Agaricus mushrooms accounted for 88 percent of the mushrooms sold as certified organic, while all specialty mushrooms made up the remainder. The total certified organic volume of sales of all mushrooms represented 9 percent of the 2018-2019 total mushroom volume of sales.

Regional Mushroom Producing States Listing

Regional Agaricus Mushroom Producing States

East: Delaware, Florida, Maryland, New Jersey New York, Pennsylvania, and Tennessee.

Central: Illinois, Missouri, Oklahoma, Texas, and Wisconsin.

West: California, Colorado, Hawaii, Oregon, Utah, Washington, and Wyoming.

Statistical Methodology

Survey procedures: Grower surveys are conducted in preparation for this report. All known commercial mushroom producers are contacted utilizing mail, telephone, and personal enumeration. Unless other specific arrangements are made, data collection for multi-State operations is conducted by the State in which the firm's headquarters is located. Information is collected for Agaricus (including White Button, Crimini, and Portabello) and specialty mushrooms.

Estimating procedures: Information obtained from the mushroom grower surveys is used to establish estimates of area in production, yield per square foot, utilization, volume of sales, average price per pound, and value of sales. Estimates are also prepared for the total amount of mushrooms grown as certified organic and quantity sold from mushrooms certified as organically produced.

Revision policy: All mushroom estimates, except intentions, are subject to revision the following year based on a thorough review of all available data.

Reliability: The mushrooms grower surveys are subject to non-sampling errors, such as omissions, duplication, and mistakes in reporting, recording, and processing the data. These errors cannot be measured directly, but are minimized through rigid quality controls in the data collection process and a careful review of all reported data for consistency and reasonableness.

Information Contacts

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

Lance Honig, Chief, Crops Branch.....	(202) 720-2127
Fleming Gibson, Head, Fruits, Vegetables and Special Crops Section	(202) 720-2127
Joshua Bates– Almonds, Apples, Apricots, Asparagus, Carrots, Coffee, Onions, Plums, Prunes, Sweet Corn, Tobacco.....	(202) 720-4288
Vincent Davis – Dry Beans, Garlic, Hazelnuts, Honeydews, Kiwifruit, Lettuce, Maple Syrup, Mint, Pears, Sweet Cherries, Tart Cherries, Tomatoes	(202) 720-2157
Fleming Gibson – Cauliflower, Celery, Grapefruit, Lemons, Macadamia, Mandarins and tangerines, Mushrooms, Olives, Oranges	(202) 720-5412
Greg Lemmons –Cranberries, Cucumbers, Pistachios, Potatoes, Pumpkins, Raspberries, Squash, Strawberries, Sugarbeets, Sugarcane, Sweet Potatoes, Tame Blueberries, Wild Blueberries	(202) 720-4285
Dan Norris – Artichokes, Cantaloupes, Dry Edible Peas, Green Peas, Lentils, Nectarines, Papayas, Peaches, Snap Beans, Spinach, Walnuts, Watermelons	(202) 720-3250
Fleming Gibson – Avocados, Bell Peppers, Broccoli, Cabbage, Chickpeas, Chile Peppers, Dates, Floriculture, Grapes, Hops, Pecans	(202) 720-2127

Access to NASS Reports

For your convenience, you may access NASS reports and products the following ways:

- All reports are available electronically, at no cost, on the NASS web site: www.nass.usda.gov
- Both national and state specific reports are available via a free e-mail subscription. To set-up this free subscription, visit www.nass.usda.gov and click on “National” or “State” in upper right corner above “search” box to create an account and select the reports you would like to receive.
- 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@nass.usda.gov.

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers, employees, and applicants for employment on the basis of race, color, national origin, age, disability, sex, gender identity, religion, reprisal, and where applicable, political beliefs, marital status, familial or parental status, sexual orientation, or all or part of an individual's income is derived from any public assistance program, or protected genetic information in employment or in any program or activity conducted or funded by the Department. (Not all prohibited bases will apply to all programs and/or employment activities.)

If you wish to file a Civil Rights program complaint of discrimination, complete the [USDA Program Discrimination Complaint Form](#) (PDF), found online at www.ascr.usda.gov/filing-program-discrimination-complaint-usda-customer, or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202) 690-7442 or email at program.intake@usda.gov.