



# Mushrooms

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## All Mushroom Value of Sales at \$1.15 Billion

Volume of sales of the 2019-2020 United States mushroom crop totaled 816 million pounds, down 2 percent from last season. Value of sales for the 2019-2020 United States mushroom crop was \$1.15 billion, up 3 percent from the previous season. The average reported price was \$1.41 per pound, up 7 cent from the previous year.

## Agaricus and Specialty Mushroom Sales, Price, and Value – United States: 2018-2019 and 2019-2020

Year	All sales		
	Volume of sales (1,000 pounds)	Price per pound <sup>1</sup> (dollars)	Value of sales (1,000 dollars)
2018-2019 <sup>2</sup> .....	831,724	1.34	1,114,710
2019-2020 <sup>2</sup> .....	816,367	1.41	1,153,296

<sup>1</sup> 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.

<sup>2</sup> Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

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## Contents

Agaricus Mushroom Area in Production and Yield – States and United States: 2018-2019 and 2019-2020.....	4
Agaricus Mushroom Sales, Dollar Volume per Square Foot of Growing Area, Price, and Value – States and United States: 2018-2019 and 2019-2020.....	4
Agaricus Mushroom Fresh Market Sales, Price, and Value – States and United States: 2018-2019 and 2019-2020 .....	5
Agaricus Mushroom Processing Sales, Price, and Value – States and United States: 2018-2019 and 2019-2020 .....	5
Brown Mushrooms (Portabello and Crimini) Sales, Price, and Value – United States: 2018-2019 and 2019-2020 .....	6
Agaricus Mushroom Growing Area Intended for Production by Utilization – States and United States: July 2020-June 2021 .....	6
Specialty Mushroom Area in Production by Variety – United States: 2018-2019 and 2019-2020 .....	7
Specialty Mushroom Total Production, Volume of Sales, Price, and Value of Sales by Variety – United States: 2018-2019 and 2019-2020 .....	7
Mushroom Comments.....	8
Statistical Methodology .....	9
Information Contacts .....	9

**Agaricus Mushroom Area in Production and Yield – States and United States: 2018-2019 and 2019-2020**

State	Area in production				Yield per square foot	
	Growing area		Total filings			
	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020
	(1,000 square feet)	(1,000 square feet)	(1,000 square feet)	(1,000 square feet)	(pounds)	(pounds)
California .....	2,306	2,616	14,858	25,617	6.27	4.39
Pennsylvania .....	15,293	14,830	76,673	76,581	7.23	6.87
Other States <sup>1</sup> .....	4,432	4,440	27,654	32,886	5.97	4.79
United States .....	22,031	21,886	119,185	135,084	6.82	5.90

<sup>1</sup> Other States include Florida, Illinois, Maryland, Oklahoma, Tennessee, and Texas.

**Agaricus Mushroom Sales, Dollar Volume per Square Foot of Growing Area, Price, and Value – States and United States: 2018-2019 and 2019-2020**

State	Volume of sales		Dollar volume per square foot		Price per pound <sup>1</sup>		Value of sales	
	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020
			(dollar)	(dollar)	(dollar)	(dollar)	(1,000 dollars)	(1,000 dollars)
	(1,000 pounds)	(1,000 pounds)						
California .....	93,153	112,457	13.16	9.67	2.10	2.20	195,462	247,760
Pennsylvania .....	554,093	526,336	7.23	7.16	1.00	1.04	554,258	548,077
Other States <sup>2</sup> .....	165,223	157,569	10.80	8.82	1.81	1.84	298,739	290,013
United States .....	812,469	796,362	8.80	8.04	1.29	1.36	1,048,459	1,085,850

<sup>1</sup> 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.

<sup>2</sup> Other States include Florida, Illinois, Maryland, Oklahoma, Tennessee, and Texas.

**Agaricus Mushroom Fresh Market Sales, Price, and Value – States and United States: 2018-2019 and 2019-2020**

State	Volume of sales		Price per pound <sup>1</sup>		Value of sales	
	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020
	(1,000 pounds)	(1,000 pounds)	(dollars)	(dollars)	(1,000 dollars)	(1,000 dollars)
Pennsylvania .....	497,743	477,025	1.04	1.08	517,072	514,973
Other States <sup>2</sup> .....	250,378	263,769	1.95	2.01	486,990	530,884
United States .....	748,121	740,794	1.34	1.41	1,004,062	1,045,857

<sup>1</sup> 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.

<sup>2</sup> Other States includes California, Florida, Illinois, Maryland, Oklahoma, Tennessee, and Texas.

**Agaricus Mushroom Processing Sales, Price, and Value – States and United States: 2018-2019 and 2019-2020**

State	Volume of sales		Price per pound <sup>1</sup>		Value of sales	
	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020
	(1,000 pounds)	(1,000 pounds)	(dollars)	(dollars)	(1,000 dollars)	(1,000 dollars)
Pennsylvania .....	56,350	49,311	0.660	0.671	37,186	33,104
Other States <sup>2</sup> .....	7,998	6,257	0.902	1.100	7,211	6,889
United States .....	64,348	55,568	0.690	0.720	44,397	39,993

<sup>1</sup> 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.

<sup>2</sup> Other States includes California, Florida, Illinois, Maryland, Oklahoma, Tennessee, and Texas.

## Brown Mushrooms (Portabello and Crimini) Sales, Price, and Value – United States: 2018-2019 and 2019-2020

[Brown mushrooms are part of Agaricus mushrooms]

State	Volume of sales		Price per pound <sup>1</sup>		Value	
	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020
	(1,000 pounds)	(1,000 pounds)	(dollars)	(dollars)	(1,000 dollars)	(1,000 dollars)
United States <sup>2</sup> .....	183,774	188,703	1.55	1.57	285,533	296,139

<sup>1</sup> 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.

<sup>2</sup> Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

## Agaricus Mushroom Growing Area Intended for Production by Utilization – States and United States: July 2020-June 2021

State	Intentions July 2020 - June 2021			
	Fresh market	Processed market	Total fillings	Percent of last year
	(1,000 square feet)	(1,000 square feet)	(1,000 square feet)	(percent)
Pennsylvania .....	(D)	(D)	76,130	99
Other States <sup>1</sup> .....	130,998	3,222	50,090	99
United States .....	130,998	3,222	134,220	99

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

<sup>1</sup> Other States include data withheld above and California, Florida, Illinois, Maryland, Oklahoma, Tennessee, and Texas.

## Specialty Mushroom Area in Production by Variety – United States: 2018-2019 and 2019-2020

[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	Area in production					
	Natural wood outdoor logs		Natural wood undercover and indoor logs		All other production media	
	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020
	(1,000 logs)	(1,000 logs)	(1,000 logs)	(1,000 logs)	(1,000 square feet)	(1,000 square feet)
Shiitake <sup>1</sup> .....	42	14	2,382	2,401	389	677
Oyster .....	(X)	(X)	(X)	(X)	515	808
Other .....	(X)	(X)	(X)	(X)	296	390
Total <sup>2</sup> .....	42	14	2,382	2,401	1,200	1,876

(X) Not applicable.

<sup>1</sup> Includes small quantity of logs producing Oyster and Other mushrooms. These logs are not published separately to avoid disclosure of individual operations.

<sup>2</sup> 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: 2018-2019 and 2019-2020

[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 <sup>1</sup>		All sales					
			Volume of sales <sup>2</sup>		Price per pound <sup>3</sup>		Value of sales	
	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020
	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(dollar)	(dollar)	(1,000 dollars)	(1,000 dollars)
Shiitake .....	6,987	7,298	6,726	7,013	3.20	3.44	21,515	24,091
Oyster .....	8,941	8,642	8,623	8,517	3.10	2.70	26,695	23,032
Other .....	3,970	4,652	3,906	4,475	4.62	4.54	18,041	20,323
Total <sup>4</sup> .....	19,898	20,592	19,255	20,005	3.44	3.37	66,251	67,446

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

<sup>2</sup> Virtually all specialty mushroom sales are for fresh market.

<sup>3</sup> 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.

<sup>4</sup> Includes California, Florida, Illinois, Maryland, Oklahoma, Pennsylvania, Tennessee, and Texas.

## **Agaricus Mushrooms**

Agaricus mushroom volume of sales totaled 796 million pounds, down 2 percent from the 2018-2019 season. Pennsylvania accounted for 66 percent of the total volume of sales and second-ranked California contributed 14 percent. The value of the Agaricus crop was estimated at \$1.09 billion dollars, up 4 percent from a year ago. Brown mushrooms, including Portabello and Crimini varieties, accounted for 189 million pounds, up 3 percent from last season. Brown mushrooms accounted for 24 percent of the total Agaricus volume sold and 27 percent of the total Agaricus value.

United States fresh market sales of Agaricus mushrooms totaled 741 million pounds, down 1 percent from the previous season, while processed sales, at 55.6 million pounds, decreased 14 percent from the previous season. Growers reported United States fresh market production made up 93 percent of total sales volume, while processed production represented the remaining 7 percent. Grower total filling intentions for the 2020-2021 crop are 134 million square feet, down 1 percent from the total fillings in the 2019-2020 season.

Agaricus mushroom growers in Chester County, Pennsylvania produced 380 million pounds, a decrease of 4 percent compared with the 2018-2019 growing season. This production was valued at 398 million dollars, unchanged from the previous season. The growing area in Chester County was 11.2 million square feet, down 21 percent from last season. Total fillings were 56.3 million square feet, down slightly from the 2018-2019 growing season.

## **Specialty Mushrooms - Shiitake, Oyster, and all Other Exotics**

Value of sales for commercially grown specialty mushrooms in 2019-2020 totaled \$67.4 million, up 2 percent from the 2018-2019 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 \$3.37 per pound, was down 7 cents from the revised previous season estimate.

## **Certified Organic Agaricus and Specialty Mushrooms**

Growers produced 127 million pounds of mushrooms that were certified organic during the 2019-2020 growing season, 22 percent above 2018-2019. Sixty-two percent of the total, or 79.4 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.



## 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](mailto:nass@usda.gov)

Lance Honig, Chief, Crops Branch.....	(202) 720-2127
Fleming Gibson, Head, Fruits, Vegetables and Special Crops Section .....	(202) 720-2127
Anastasiya Osborne – Almonds, Apples, Apricots, Asparagus, Carrots, Coffee, Onions, Plums, Prunes, Sweet Corn, Tobacco.....	(202) 720-4288
Fleming Gibson – Cauliflower, Celery, Grapefruit, Lemons, Macadamia, Mandarins and tangerines, Mushrooms, Olives, Oranges .....	(202) 720-5412
Heidi Lanouette – Cranberries, Cucumbers, Pistachios, Potatoes, Pumpkins, Raspberries, Squash, Strawberries, Sugarbeets, Sugarcane, Sweet Potatoes, Tame Blueberries, Wild Blueberries .....	(202) 720-4285
Fleming Gibson – Artichokes, Cantaloupes, Dry Edible Peas, Green Peas, Lentils, Nectarines, Papayas, Peaches, Snap Beans, Spinach, Walnuts, Watermelons .....	(202) 720-5412
Krishna Rizal – Dry Beans, Garlic, Hazelnuts, Honeydews, Kiwifruit, Lettuce, Maple Syrup, Mint, Pears, Sweet Cherries, Tart Cherries, Tomatoes .....	(202) 720-2157
Dawn Smoker – Avocados, Bell Peppers, Broccoli, Cabbage, Chickpeas, Chile Peppers, Dates, Floriculture, Grapes, Hops, Pecans .....	(202) 720-4215

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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](mailto: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](mailto:nass@usda.gov).

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