



# Mushrooms

ISSN: 1949-1530

Released August 26, 2022, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA).

## All Mushroom Value of Sales at \$1.02 Billion

Volume of sales of the 2021-2022 United States mushroom crop totaled 702 million pounds, down 7 percent from last season. Value of sales for the 2021-2022 United States mushroom crop was \$1.02 billion, down 4 percent from the previous season. The average reported price was \$1.45 per pound, up 5 cents from the previous year.

## Agaricus and Specialty Mushroom Sales, Price, and Value – United States: 2019-2020, 2020-2021, and 2021-2022

Year	All sales		
	Volume of sales (1,000 pounds)	Price per pound <sup>1</sup> (dollars)	Value of sales (1,000 dollars)
2019-2020 <sup>2</sup> .....	816,367	1.41	1,153,296
2020-2021 <sup>2</sup> .....	757,987	1.40	1,063,849
2021-2022 <sup>2</sup> .....	702,391	1.45	1,018,281

<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.

**This page intentionally left blank.**

## Contents

Agaricus Mushroom Area in Production and Yield – States and United States: 2019-2020, 2020-2021, and 2021-2022 .....	4
Agaricus Mushroom Sales, Dollar Volume per Square Foot of Growing Area, Price, and Value – States and United States: 2019-2020, 2020-2021, and 2021-2022 .....	4
Agaricus Mushroom Fresh Market Sales, Price, and Value – States and United States: 2019-2020, 2020-2021, and 2021-2022 .....	5
Agaricus Mushroom Processing Sales, Price, and Value – States and United States: 2019-2020, 2020-2021, and 2021-2022 .....	5
Brown Mushrooms (Portabello and Crimini) Sales, Price, and Value – United States: 2019-2020, 2020-2021, and 2021-2022 .....	6
Agaricus Mushroom Growing Area Intended for Production by Utilization – States and United States: July 2022-June 2023 .....	6
Specialty Mushroom Area in Production by Variety – United States: 2019-2020, 2020-2021, and 2021-2022.....	7
Specialty Mushroom Total Production, Volume of Sales, Price, and Value of Sales by Variety – United States: 2019-2020, 2020-2021, and 2021-2022 .....	7
Mushroom Comments.....	8
Statistical Methodology .....	9
Information Contacts .....	9

**Agaricus Mushroom Area in Production and Yield – States and United States: 2019-2020, 2020-2021, and 2021-2022**

State	Area in production						Yield per square foot		
	Growing area			Total filings			2019-2020	2020-2021	2021-2022
	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022			
	(1,000 square feet)	(1,000 square feet)	(1,000 square feet)	(1,000 square feet)	(1,000 square feet)	(1,000 square feet)	(pounds)	(pounds)	(pounds)
California .....	2,616	2,589	1,663	25,617	24,382	15,626	4.39	4.07	4.72
Pennsylvania .....	14,830	16,304	15,254	76,581	73,266	74,770	6.87	6.49	5.97
Other States <sup>1</sup> .....	4,440	4,360	3,845	32,886	33,314	26,749	4.79	4.89	5.96
United States .....	21,886	23,253	20,762	135,084	130,962	117,145	5.90	5.63	5.80

<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: 2019-2020, 2020-2021, and 2021-2022**

State	Volume of sales			Dollar volume per square foot			Price per pound <sup>1</sup>			Value of sales		
	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022
	(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 .....	112,457	99,245	73,780	9.67	8.91	11.08	2.20	2.19	2.35	247,760	217,145	173,143
Pennsylvania .....	526,336	475,200	446,586	7.16	6.57	6.14	1.04	1.01	1.03	548,077	481,484	459,389
Other States <sup>2</sup> .....	157,569	162,968	159,522	8.82	8.98	11.16	1.84	1.84	1.87	290,013	299,107	298,398
United States .....	796,362	737,413	679,888	8.04	7.62	7.95	1.36	1.35	1.37	1,085,850	997,736	930,930

<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: 2019-2020, 2020-2021, and 2021-2022**

State	Volume of sales			Price per pound <sup>1</sup>			Value of sales		
	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022
	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(dollars)	(dollars)	(dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
Pennsylvania .....	477,025	414,436	387,884	1.08	1.07	1.09	514,973	443,119	420,922
Other States <sup>2</sup> .....	263,769	256,304	227,976	2.01	1.99	2.04	530,884	509,402	464,847
United States .....	740,794	670,740	615,860	1.41	1.42	1.44	1,045,857	952,521	885,769

<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: 2019-2020, 2020-2021, and 2021-2022**

State	Volume of sales			Price per pound <sup>1</sup>			Value of sales		
	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022
	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(dollars)	(dollars)	(dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
Pennsylvania .....	49,311	60,764	58,702	0.671	0.631	0.655	33,104	38,365	38,467
Other States <sup>2</sup> .....	6,257	5,909	5,326	1.100	1.160	1.260	6,889	6,850	6,694
United States .....	55,568	66,673	64,028	0.720	0.678	0.705	39,993	45,215	45,161

<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: 2019-2020, 2020-2021, and 2021-2022**

[Brown mushrooms are part of Agaricus mushrooms]

State	Volume of sales			Price per pound <sup>1</sup>			Value		
	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022
	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)	(dollars)	(dollars)	(dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
United States <sup>2</sup> .....	188,703	192,675	202,568	1.57	1.57	1.67	296,139	301,598	337,726

<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 2022-June 2023**

State	Intentions July 2022 - June 2023			
	Fresh market	Processed market	Total fillings	Percent of last year
	(1,000 square feet)	(1,000 square feet)	(1,000 square feet)	(percent)
Pennsylvania .....	66,522	4,433	70,955	95
Other States <sup>1</sup> .....	41,378	22	41,400	98
United States .....	107,900	4,455	112,355	96

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

## Specialty Mushroom Area in Production by Variety – United States: 2019-2020, 2020-2021, and 2021-2022

[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. Totals may not add due to rounding]

Variety	Area in production								
	Natural wood outdoor logs			Natural wood undercover and indoor logs			All other production media		
	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022
	(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 .....	(D)	(D)	(D)	(D)	(D)	(D)	677	723	257
Oyster .....	(D)	(D)	(D)	(D)	(D)	(D)	808	1,058	641
Other .....	(D)	(D)	(D)	(D)	(D)	(D)	390	412	543
Total <sup>1</sup> .....	14	14	22	2,401	1,849	1,674	1,876	2,193	1,441

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

<sup>1</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: 2019-2020, 2020-2021, and 2021-2022

[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. Totals may not add due to rounding]

Variety	Total production <sup>1</sup>			All sales								
				Volume of sales <sup>2</sup>			Price per pound <sup>3</sup>			Value of sales		
	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022	2019-2020	2020-2021	2021-2022
	(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 .....	7,298	7,475	8,073	7,013	7,210	7,749	3.44	3.44	3.51	24,091	24,836	27,162
Oyster .....	8,642	7,220	5,267	8,517	6,708	5,007	2.70	2.24	3.04	23,032	15,003	15,209
Other .....	4,652	6,819	10,265	4,475	6,655	9,748	4.54	3.95	4.61	20,323	26,273	44,980
Total <sup>4</sup> .....	20,592	21,514	23,606	20,005	20,574	22,504	3.37	3.21	3.88	67,446	66,113	87,351

<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 680 million pounds, down 8 percent from the 2020-2021 season. Pennsylvania accounted for 66 percent of the total volume of sales and second-ranked California contributed 11 percent. The value of the Agaricus crop was estimated at \$931 million dollars, down 7 percent from a year ago. Brown mushrooms, including Portabello and Crimini varieties, accounted for 203 million pounds, up 5 percent from last season. Brown mushrooms accounted for 30 percent of the total Agaricus volume sold and 36 percent of the total Agaricus value.

United States fresh market sales of Agaricus mushrooms totaled 616 million pounds, down 8 percent from the previous season, while processed sales, at 64.0 million pounds, decreased 4 percent from the previous season. Growers reported United States fresh market production made up 91 percent of total sales volume, while processed production represented the remaining 9 percent. Grower total filling intentions for the 2022-2023 crop are 112 million square feet, down 4 percent from the total fillings in the 2021-2022 season.

Agaricus mushroom growers in Chester County, Pennsylvania produced 321 million pounds, an increase of 1 percent compared with the 2020-2021 growing season. This production was valued at 329 million dollars, up 3 percent from the previous season. The growing area in Chester County was 11.7 million square feet, up 22 percent from last season. Total fillings were 56.7 million square feet, up 20 percent from the 2020-2021 growing season.

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

Value of sales for commercially grown specialty mushrooms in 2021-2022 totaled \$87.3 million, up 32 percent from the 2020-2021 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 \$3.88 per pound, was up 67 cents from the previous season estimate.

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

Growers produced 156 million pounds of mushrooms that were certified organic during the 2021-2022 growing season, 19 percent above 2020-2021. Forty-nine percent of the total, or 76.1 million pounds, were sold as certified organic mushrooms. Agaricus mushrooms accounted for 82 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
Deonne Holiday – Almonds, Asparagus, Carrots, Coffee, Cranberries, Onions, Plums, Prunes, Sweet Corn, Tobacco.....	(202) 720-4288
Robert Little – Apricots, Dry Beans, Lettuce, Macadamia, Maple Syrup, Nectarines, Pears, Snap Beans, Spinach, Tomatoes .....	(202) 720-3250
Krishna Rizal – Artichokes, Cauliflower, Celery, Garlic, Grapefruit, Kiwifruit, Lemons, Mandarins and tangerines, Mint, Mushrooms, Olives, Oranges, Pistachios.....	(202) 720-5412
Chris Singh – Apples, Blueberries, Cucumbers, Hazelnuts, Potatoes, Pumpkins, Raspberries, Squash, Strawberries, Sugarbeets, Sugarcane, Sweet Potatoes .....	(202) 720-4285
Antonio Torres – Cantaloupes, Dry Edible Peas, Green Peas, Honeydews, Lentils, Papayas, Peaches, Sweet Cherries, Tart Cherries, Walnuts, Watermelons .....	(202) 720-2157
Chris Wallace – Avocados, Bell Peppers, Broccoli, Cabbage, Chickpeas, Chile Peppers, Dates, Floriculture, Grapes, Hops, Pecans .....	(202) 720-4215

## 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](http://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](http://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](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).

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](http://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](mailto:program.intake@usda.gov).