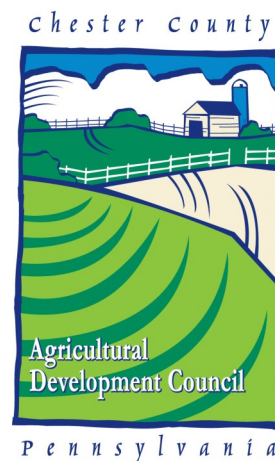


Mushroom Data Sheet 2011

Chester County, Pennsylvania



General Mushroom Facts:

- Every U.S. mushroom farm is family owned and operated, some for as many as four generations.
- Mushrooms are grown indoors on raised/stacked beds made of wood or aluminum shelving. Indoor growing provides a controlled growing environment where temperatures (critical to growing process) can be monitored and maintained. On average, mushroom farmers grow 4-6 crops per year and the average production time to raise a crop is 8-12 weeks.
- The odor often associated with mushrooms comes from mushroom substrate, a necessary ingredient to growing mushrooms rather than from the mushrooms themselves. However, due to the increased residential population, composters and growers have invested significant amounts of money in new technologies, including aerated bunkers to help mitigate odors.
- Many mushroom farmers have invested in technology, including bunkers to help improve water and air quality and reduce odor, as well as mechanized growing rooms and energy efficient air conditioning systems to use less energy and save money.
- Those who make substrate have invested in high tech bulk pasteurization rooms called tunnels that improve air quality and reduce odor while accelerating the growing process by 20 percent and yielding more productive substrate.
- Growing mushrooms is part of a sustainable agricultural system in that the process used to make mushroom substrate requires by-products from other agricultural industries, such as straw, hay, and horse and poultry manure. Without mushroom farms, other agricultural producers would have economical and environmental difficulty in disposing of their by-products.

Chester County Facts

Mushrooms are the top vegetable crop in the County.

Mushroom farmers contribute an estimated **\$2.7 billion** to the local economy including sales, farm employment, taxes paid by farms, and the value of service industries that support mushroom farms. (Source: 2008 Penn State Economic Impact Study)

The County's 61 mushroom farms account for 47 percent of total U.S. mushroom production.

Of the total U.S. production of Agaricus mushrooms (862 million pounds - from July 2010-June 2011) Chester County growers produced 402 million pounds with an estimated value of **\$365 million**. (Source: USDA National Agricultural Statistics Service, Aug. 19, 2011)

According to the Census of Ag 2007, Chester County is ranked 1st in Pennsylvania and 3rd in the U.S. in the value of nursery, greenhouse, floriculture, sod and mushrooms with sales of **\$402,195,000**.



Photos Courtesy of the Mushroom Council

Mushrooms account for **\$345,915,000** of that and 62.5 percent of all agricultural products sold in the County.

In addition to the environmental and safety requirements listed above, many Chester County growers have implemented Mushroom Good Agricultural Practices (MGAP) - a set of standards and procedures that are used to enhance and document safe mushroom growing practices consistent with current Food and Drug Administration food safety guidelines for fresh produce.

Mushroom Cyclical Model

Pennsylvania Facts:

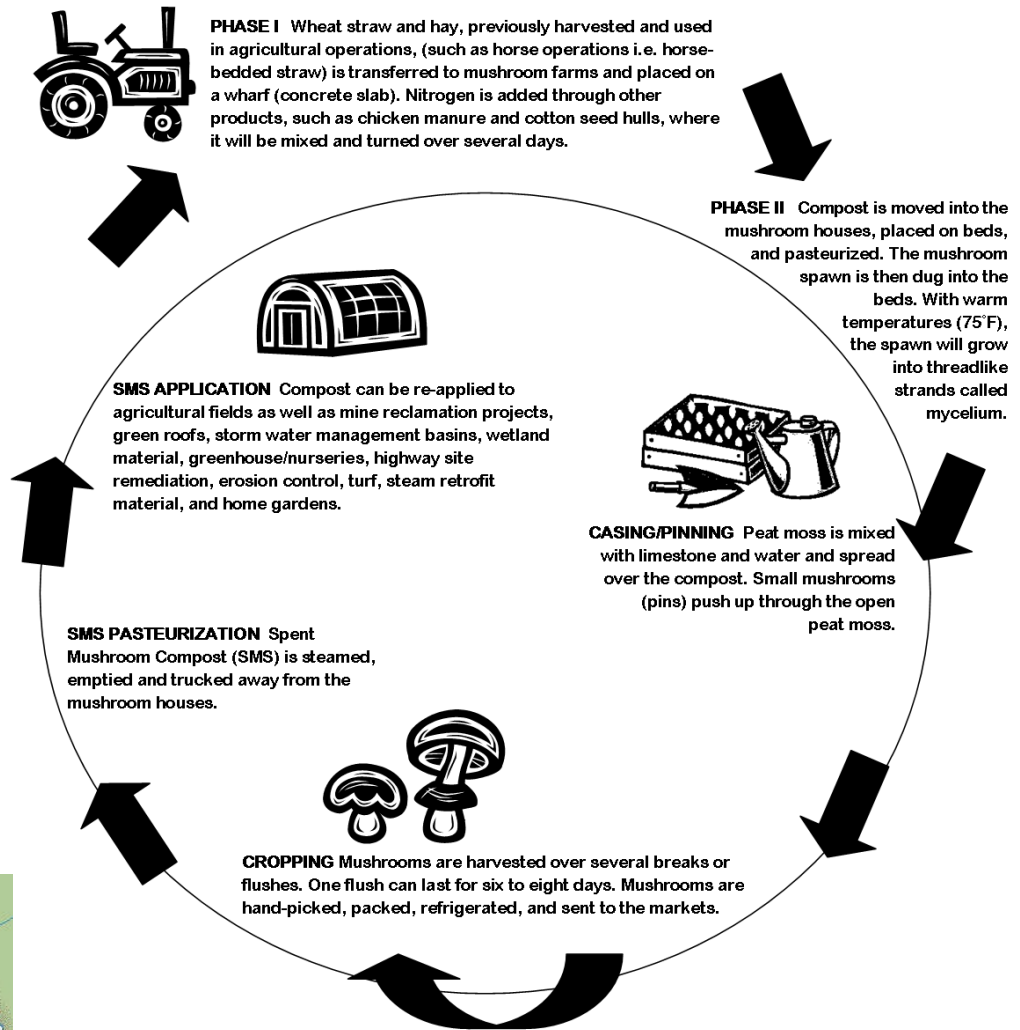
Mushrooms are the top vegetable crop in Pennsylvania.

There are 61 mushroom farms in Pennsylvania.

Pennsylvania mushroom farms account for 65 percent of total U.S. mushroom production.

Of the total U.S. production of *Agaricus* mushrooms Pennsylvania growers produced 549 million pounds with an estimated value of **\$619 million**.

In addition, approximately 92 million pounds of Pennsylvania mushrooms went to processing (e.g. canned, soups, etc.) with an estimated value of **\$50 million** dollars.



Mushroom Farming in Pennsylvania

It is estimated that Pennsylvania's mushroom farm community helps keep more than 230,000 acres of farmland in production in Southeastern PA because of the symbiotic agricultural system described on the next page.

Southeastern Pennsylvania

mushroom farms employ approximately 9,500 individuals.

There are many commercial applications that use mushroom compost, also known as spent mushroom substrate or SMS, including but not limited to, mine reclamation, wetland material, storm water management basins, green roofs, erosion control, highway site restoration and crop fertilization. Mushroom compost supports plant growth in a variety of applications.

All mushroom farms are required to have a Mushroom Farm Environmental Management Plan

(MFEMP), which outlines how farmers will manage soil, water and air conditions as well as prevent pollution incidents. These plans are developed for a specific farm in conjunction with the local Conservation District.

PA Department of Environmental Protection developed a handbook, Best Practices for Environmental Protection in the Mushroom Farm Community, which provides operating procedures and instructions for the use or disposal of mushroom compost. This manual is also used to develop the farms' individual Management Plans.

¹ *Agaricus* refers to both White Button and Brown mushrooms including Crimini and Portabella. *Agaricus*, however, does not include specialty mushrooms such as but not limited to Shiitake, Oyster, Maitake, and Enoki.