

Scripps Miramar Seed Library

Newsletter

November 2022

Mushrooms

Our topic this month is growing mushrooms at home. It requires some work, but it can be accomplished without too much fuss. Our instructions will include several steps that will assist you in successfully growing mushrooms. While many vegetables must be grown in the summer, growing mushrooms is a great winter project because they thrive in cooler temperatures.

Mushrooms are a healthy whole food. They're fat free, low in calories, and filled with vitamins, antioxidants, and other nutrients including fiber. The main key to growing mushrooms at home is the correct growing conditions as well as mushroom spawn, which will be explained later. A basement or even an area under the sink can be utilized as a grow area for the mushrooms. The areas need to be dark, cool, and humid to be a proper growing environment. Also, the ideal temperature for mushrooms to thrive is 50-60° F. Be sure to check the temperature to ensure proper growth.

While vegetables and fruits grow from seeds, mushrooms grow from microscopic spores, which

grows in different types of substrates such as wood, sawdust, compost, or straw depending on the variety of the mushrooms. Oyster, Portobello, shiitake, and white button are types of mushrooms that are easy to grow indoors. However, each variety depends upon a different growing medium.



Portobello Mush-



Oyster Mushroom



Shiitake Mushroom



Button Mushroom

For example, oyster mushrooms require straw, shiitake mushrooms flourish on hardwood sawdust or wood and white button needs composted manure.

Before we begin

To introduce the process of mushroom growing

terms. Since mushrooms grow from **spores**, the mixing of the spores with the growth medium allows a white, root-like structure called **mycelium** to form. A mushroom substrate is a substance that mycelium can cultivate such as oyster mushrooms that utilize straw. Mushroom **spawn** is a **substrate** that already has mycelium growing on it. Growers can buy spores from retail stores or they can order a mushroom growing kit on-line.

Gather your supplies

The following list of supplies is to allow you to make your own mushroom cultivating kit.

Any of the items can be purchased from any gardening store or nursery.

- Planting tray or boxes
- Mushroom spawns



- Plastic bags or sheet (to make a mini greenhouse)
- A substrate (either compost manure, straw, hardwood sawdust, potting

soil depending on the variety of the mushroom you're growing

First step:

Take a long tray which is 6 inches deep. Fill it with substrate and then spread spawn on it, cover the spawn with another inch or so of the substrate.



Second step:

Put your tray in a warmer area to allow the spawn to grow on the substrate.

If possible, keep the temperature range in between 60 to 90° F. A warm place will expand the process of the development of the mycelium and the spawn.

Third step:

The substrate must be kept moist but not wet. Misting at least 3 times a day with water should be sufficient. Cover the trays with plastic sheets or bags to maintain humid environment



Fourth step:

After a few days, you will see the white thread of the mycelium start to grow all over the substrate. When this is observed, move the trays to a cooler place, about 40° to 50°F, and keep the area damp and dark.



Maintain this environment until it time to harvest the mushrooms.

Fifth step:

To maintain humidity in your crop, keep misting around it not over it twice a day. You will be able to harvest in several weeks.



Normally, button mushrooms are fully grown in three to four weeks and can be harvested when the caps are fully opened and separated from the stems. If it stays longer, it will start to turn brown, similar to cremini mushrooms. Cut the mushrooms from the stem, do not pull them from the soil. Otherwise, nearby growth will be disturbed.

If mushrooms are harvested daily, they can be grown continuously for six months at a time. Since each mushroom releases their spores through the stems, leaving the stems intact allows for further development. After growth ceases, more mushroom spawn can be added to the same growing medium.

You may also try the recipe below as well.

Seed Library Pick-Recipe-Open cap mushrooms stuffed with hummus and herbs

- 4 open cup mushrooms
- 1 tbsp olive oil
- 1 tbsp lemon juice

Hummus can be purchased from a grocery store, or you can make your own from the recipe provided.



- 14 oz can of chickpeas, drained
- 2 tbsp of tahini
- 2 garlic cloves
- 5 tbsp olive oil
- Celery, salt, cayenne pepper
- 6 tbsp fresh parsley

Recipe

Preheat oven to 375° F. Meanwhile, snap off the mushroom stems at the base.

Combine olive oil and lemon juice in a cup and liberally brush over the insides of the mushroom caps. Arrange on a baking sheet and cook over 25 mins. Allow to cool. To make hummus, add chickpeas in a blender and blend until smooth. Then add tahini, garlic, olive oil, salt, parsley, cayenne pepper and process well.

Spoon the hummus into the mushroom cups, then mold into a cone shape. Mask one side with chopped parsley and dust the other side with mild paprika. Garnish with olives. Serve with bread, pickled green peppers.

Seed Library pick- plant- Dill



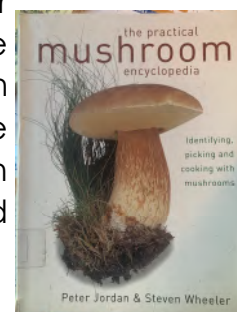
Dill is an annual herb in the celery family. It is widely grown in Eurasia where its leaves and seeds are used as an herb or spice for flavoring food. It has been found in the tomb of Egyptian Pharaoh Amenhotep II, dating to around 1400 BC.

Dill is a very good source of calcium and a good source of dietary fiber, vitamin A, manganese, vitamin C, iron, B complex

magnesium, phosphorus, potassium, sodium, and zinc. Other health benefits include freshening breath, maintaining oral health, stops hiccups, remedies depression, relief from insomnia, Dill weed was also used as currency in Scotland before modern times.

Book suggestion-

for those who prefer mushroom hunting in the woods, the library has an interesting book (shown to the right). It contains information about edible mushrooms and how to avoid poisonous ones.



References:

Jordan, Peter, The Practical Mushroom Encyclopedia. Hermes House Publishing Company.

Bone, Eugenia, Mycophilia. Rodale, Inc

<https://www.gardeningknowhow.com/edible/vegetables/mushrooms/grow-mushrooms.htm>

<https://www.mindbodygreen.com/articles/how-to-grow-mushrooms>

There are multiple sources available at the Scripps Ranch Library that are not cited here.

We request that you share pictures of your garden and tell us about your experience, which can be helpful for other gardeners. Also, we invite you send in your garden related questions and we will answer them in next newsletter .

This newsletter composed by Ashu Agarwal & edited by Jeff Lash

For any questions, please contact Matt Beatty (MBeatty@sandiego.gov)

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