

## GROWING MUSHROOMS

Mushrooms (*Agraricus campestris*). The common mushroom is the only cultivated fungi in common usage. Although it grows wild in many places, it is safer to purchase or cultivate the mushroom rather than try to differentiate *A. campestris* from its many poisonous relatives.

For your winter-time gardening pleasure, you'll find mushroom growing just the thing. All you need is a place - a very small one - that is dark, moist and cool. For most home-owners, that place will be in the basement; even the area under the kitchen sink might do.

It is not necessary to make an absolute "dark room" out of your entire basement; a certain amount of light will not hurt mushrooms. But they do need controlled humidity and temperature. Strong drafts and dry air are fatal, as is a temperature that ranges much above 60° or below 55°.

In order to find a place that maintains the proper temperature range both day and night, make some tests by placing a few thermometers in various spots of your basement. Since temperatures can vary as much as ten degrees at different levels in the same location, make certain you put the thermometer at about the level where the mushrooms will be growing.

Once you've selected the spot for your mushroom garden, the next step is to decide how you're going to grow them. If you use the tray method, a bench or hanging shelves on tiers will do the job. Generally, you can estimate that the trays will weigh about 25 pounds when ready for growth.

Prepared trays, already filled with the growing medium and inoculated with the mushroom spawn, can be purchased. Constructed like seed flats, they measure about six inches deep and 14 by 16 inches in size. They contain compost covered with heavy paper and loose topsoil. Spawn is already plated in the trays, so all you have to do is remove the paper, add an inch of topsoil and water thoroughly. If the conditions are right, you'll be harvesting your crop in about four weeks.

### Growing Medium:

Mushrooms grow in organic material containing carbohydrates such as sugar, starch, cellulose or lignin, as well as the nitrogen required by all green plants. However, mushrooms cannot manufacture these products the way other plants do because they have no green color in their tissues. They develop their full root system, a network of fine white threads called mycelium, before any part of the plant appears above the soil. Fresh strawy horse manure is excellent for mushroom growing. It should be composted by turning it every four or five days,

shaking thoroughly and watering well each time. Keep it moist, but not saturated. After three or four turnings, it should be a rich dark brown, with no odor. It can then be put in trays of any convenient size and allowed to "sweat out" heat to 140. After about a week, this should be ready for planting.

Many growers do not use horse manure as their special mushroom compost, but instead find it more practical to make compost using materials more readily available. Here is how to do it:

Mix together in a heap about 100 pounds of corn fodder or finely ground corn cobs and an equal amount of straw. Water and firm this well and let it stand a few days. Then mix in thoroughly 20 pounds each of leaf mold or peat moss, tankage, and either greensand or granite dust. Some well-rotted compost can be added to aid decomposition. About 30 pounds of sand completes the mixture. After a good watering, let it stand five or six days before turning. A second turning a week or so later should be enough before setting in the trays and planting. Plant the spawn as soon as the temperature of the beds reaches about 75°.

## **Spawn:**

You can purchase spawn, which is much like a cheese or bread mold, from several catalog garden seed companies. Bottle spawn is the purest form of culture. Break it into pieces a little smaller than a golf ball and plant them eight to ten inches apart, about two inches deep.

To get a good run of spawn, keep the room as dark as possible and the temperature about 70 for the next 21 days. At the end of that time, the threadlike filaments (mycelium) from adjacent plantings should meet. The temperature should then be dropped to about 60° and the beds "eased" - covered with a one-inch layer of good garden soil. (Many home growers keep their beds near the heating plant for the sweating out and spawning periods, then move them to the 60° spot at casing time.)

Water well with a gentle spray; the medium should be moist and crumbly, but not so moist that water can be readily squeezed out of it. Most mushroom diseases and pests - fogging off, sow bugs, and black spot - will never make their appearance if moisture and temperature conditions are carefully tended. Any snails and slugs can be trapped with lettuce or cabbage leaves. If the air in your cellar is on the dry side, a layer or two of moist burlap over the trays will maintain the proper humidity. Water whenever the topsoil feels powdery.

In approximately three weeks, tiny white dots will appear. You'll find these clustered together in groups, called a "flush" or "break." In another ten days, the largest will be ready for picking, but don't rush the harvest. Pick only those whose cap has split away from the stem. These ripe ones will taste much better than the "green," immature ones commercial growers must ship to avoid bruising.

## Harvesting:

Careful picking of the tiny buttons or the giant-size ones is the order of the day. Don't pull them up - you may injure others just breaking through. Press the soil down around the bottom of the stem with one hand and twist it off at soil level with the other. Or use a sharp knife to cut the stem at its base.

Practice selective harvesting, picking every day if possible, and your beds will crop up to six months. After each "flush" is completely picked, clean out the remaining ends and diseased or underdeveloped mushrooms.

When the entire bed is cropped out, the compost will make a fine soil conditioner. Most gardeners don't try to grow mushrooms during the summer - it's too hard to maintain a 60° temperature - so you can set up a profitable schedule fall preparation of compost, winter cropping, and spring fertilization of your garden with the used compost.

The wonderful flavor of cultivated mushrooms and their ability to elevate any dish from the mediocre category is enough to make them a valuable part of the diet. But cultivated mushrooms also contain valuable nutritive elements. Nutritionists have found them to be a good source of extra protein, iron, vitamin C, riboflavin and niacin.

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