



grow your own
Gourmet Mushrooms

Homegrown mushrooms bring a richer flavor to the kitchen than their store-bought kin.

BY CAROLE OTTESEN

Oyster mushrooms like this one are prized for their tasty, meaty, shell-like caps.



NOT VERY long ago, the white button mushroom reigned supreme as the most trusted and recognizable edible mushroom in American kitchens. Today, gourmet species formerly considered rare and exotic—shiitake, enoki, oysters—are offered side by side with the white buttons in supermarkets across the country.

Cooking shows and foodie magazines have fueled the demand for these gourmet mushrooms with their recipes. Those who cook with them soon learn that they are deliciously habit-forming—and also expensive.

One way to enjoy and afford gourmet mushrooms is to grow your own. Besides being economical, cultivating a known species of mushroom reduces the danger inherent in collecting: possibly misidentifying and ingesting poisonous mushrooms.

Neither plant nor animal, mushrooms belong to their own kingdom (*Fungi*). They are actually more closely related to animals than to plants, so, not surprisingly, cultivating them is a bit different from growing, say, tomatoes or radishes. It entails starting

Some edible mushrooms such as golden chanterelle, top, and enoki, bottom, need exacting conditions so can be challenging to cultivate.

with safe and certified spawn (a term for spores carried in a temporary substrate such as a wooden dowel or sawdust) and feeding the mycelium—the main body of the fungus made up of interconnected tubelike threads—appropriate organic matter. Once the mycelium starts producing the visible fruiting bodies that we call mushrooms, the harvest may continue sporadically for years.

KIT AND CABOODLE

To get a feel for mushroom cultivation, it's best to start with a commercial mushroom kit. These usually consist of a bag or box filled with sterile medium that is laced with spawn from the desired species. You simply place the container in appropriate indirect light, usually indoors, then mist daily with water and wait for pinhead-sized mushrooms to emerge. Once they appear, their rate of growth is precipitous. You could be enjoying a mushroom-filled omelet from your kit in just a couple of weeks.

It is also possible to make your own kit. Mike Smith, a retired ichthyologist in Sil-



Shiitake mushrooms take several months to appear from spawn implanted in a log.

ver Spring, Maryland, is a mushroom aficionado who cultivates them indoors and out. At one of his mushroom-cultivating parties, he showed me and his other guests how to use three-foot-long, clear polypropylene plastic bags to make our own kits. We filled the bags with layers of packed-down straw, still damp from having been steam sterilized. We alternated the straw with mushroom spawn that Smith doled out at an approximate ratio of one pound of spawn per quarter bale of straw.

We poked a few holes in our bags, and *voila!* Ten days later, a beautiful, bountiful crop of pinkish-white oyster mushrooms popped out of the holes.

Unfortunately, the number of mushrooms a kit will produce is limited. The mycelia stop producing mushrooms when the food in the kit is exhausted. This may occur after only one or two flushes. At that point, you can add the straw to your compost pile or use it to start an outdoor mushroom patch.



To use a freshly cut log for mushroom growing, it must first be drilled with holes to introduce spawn.

TAKE IT OUTSIDE

The ready-made kits are a great way to get started with growing your own mushrooms. A longer-term option is to purchase just the spawn of the type of mushroom you like, then create your own mushroom-growing setup outdoors.

Each fungal species has its preferred food, so the key to growing gourmet mushrooms is figuring out which food or substrate works best and providing enough of it to keep the harvest going.

"Most mushrooms can break down only very particular types of wood," explains Tradd Cotter in *Organic Mushroom Farming and Mycoremediation* (see "Resources," page 38). For example, shiitakes require hardwoods such as oak, hornbeam, and maple. And the logs must be fresh. Older logs may be too dry and may have already been colonized by a crop of "weed" fungi.

FUNGAL FACTS

- Mushrooms come in every color but green, though some species glow green in the dark.
- Like humans, mushrooms make their own Vitamin D when exposed to sunlight.
- Unlike plants, which are composed of cells formed of cellulose, the cells of mushroom mycelia are formed from chitin, which is also found in the exoskeletons of many insects.
- The largest organism in the world is a 2,400-year-old honey mushroom with a mycelium that covers more than 2,000 acres in Oregon's Blue Mountains.

—C.O.

(To learn more about growing your own shiitakes, see the "Homegrown Harvest" article that appeared in the January/February 2010 issue of this magazine.)

Rather than choosing a type of mushroom and then providing it with the food it needs, Cotter advises matching a mushroom species to the organic material you have available. Some kinds, like winecaps, can be grown on freshly chipped hardwood mulch and cardboard.

In addition to the growing material, consider the climate in your region when selecting mushroom species. Most species require a specific temperature range to



Left: Mushroom enthusiast Mike Smith, right, shows guests at a mushroom-growing party that cultivation can be as easy as stuffing clear plastic bags with clean, damp straw and mushroom spawn. **Right:** Several weeks later, these oyster mushrooms are ready for harvest.

grow and fruit. For example, pearl oysters, which are one of the quickest and easiest mushrooms to cultivate, are tropical and will die if exposed to freezing temperatures.

Mushrooms from temperate climates typically flush in spring and/or fall and stop producing in hot or very cold weather. This means that although you cannot

provide as steady a supply of gourmet mushrooms as the supermarkets, the seasonal flushes of a mushroom such as shiitake offer superior flavor. A shiitake that has spent a week under cellophane can't compete with the earthy taste of one that has been harvested minutes earlier from your very own log.

Above all, mushrooms require moisture. A location shaded from the desiccating sun is ideal for most species, though a few—like oyster mushrooms—can tolerate the occasional sunbeam as long as their growing material is kept moist. Winecaps have even been known to thrive in vegetable gardens between rows of chard or strawberries.

What will keep all mushrooms producing is an ample supply of their preferred food. However, don't be surprised if the mycelia spread out underground and find their own nutrients, sending up mushrooms where you least expect to find them.

Whether you try growing your own edible mushrooms inside or out, you will be well rewarded as long as you provide what they need. Start with one of the easy kinds to grow such as oysters. As you get the hang of it, you may find yourself experimenting with more challenging species. Fortunately, a wealth of workshops and books about cultivating all kinds of mushrooms are popping up like...well, you know.

Carole Ottesen is a contributing writer for The American Gardener.

Sources

- Everything Mushrooms.** (865) 234-0977. www.everythingmushrooms.com.
- Field and Forest Products, Inc.** (800) 792-6220. www.fieldforest.net.
- Fungi Perfecti.** (800) 780-9126. www.fungi.com.
- Mushroom Mountain.** (864) 855-2469. www.mushroommountain.com.
- The Mushroom Patch.** (567) 287-0037. www.themushroompatch.com.
- Territorial Seed Company.** (800) 626-0826. www.territorialseed.com.

Resources

- Growing Gourmet and Medicinal Mushrooms** by Paul Stamets. http://library.uniteddiversity.coop/Permaculture/Growing_Gourmet_and_Medicinal_Mushrooms.pdf.
- Mycelial Mayhem** by David and Kristin Sewak. New Society Publishers, BC, Canada, 2016.
- Organic Mushroom Farming and Mycoremediation** by Tradd Cotter. Chelsea Green Publishing, White River Junction, VT, 2014.