



## Shiitake Mushroom Kit Instructions

You will need a plate to put your block on, a plant sprayer, a cover, and water. A clear bag with several holes works as a cover. A terrarium or plastic bin will work, just be sure there is ample air flow.

1. Inspect your shiitake block, if you see mushrooms have begun to emerge, skip step 5. Emerging mushrooms have tan to dark brown caps and lighter colored stems.
2. Place the block in the refrigerator for 1-2 days. This helps shock the mycelium in fruiting by simulating the natural trigger of a fall frost.
3. After refrigerating, open the bag containing the block at the top by cutting horizontally under the seal.
4. Add water to the bag so the block is covered and let it sit overnight. If the bag leaks you can remove the block from the bag and soak it in a pot or bucket for up to 24 hours. If you soak it longer, you could drown the block, as the mycelium requires oxygen to grow.
5. Gently take the block out of the bag and place on your plate or in your container. Using a plastic bag for a cover, make sure it is tented over the block, so there is space between the bag and the block to allow air flow while creating a humid micro-environment. Once mushrooms emerge, the bag can be removed to allow them space to develop.
6. Place in an environment with indirect light and temperatures ranging from 65-75 (60-80°F). The block should get enough light so you can read without straining your eyes, avoiding direct sunlight that may dry out the block.
7. Begin misting at least 2-4 times daily, it is important to keep the block moist, although it is okay if it dries out between watering. You can pool a little water in the bottom of the container to provide a moisture reservoir to sustain humidity between watering. Avoid chlorinated water; rainwater works great if your tap water is chlorinated. Tap water can be boiled and cooled if there is not an accessible non-chlorinated water source.
8. Mushrooms should emerge within one to two weeks. Harvest when the caps have expanded and you can see the gills, but while the caps are still rounded, before they flatten out. Cut the mushrooms off the block at the base of the stem, leaving as little of the stem behind as possible. It is normal for the block to brown more as it matures.
9. After you harvest, stop watering for two weeks and then start the process again to produce another crop. Drying out allows the mycelium to rest and accumulate more nutrients to support the next crop of mushrooms. You can repeat the process up to 3-4 times for a total yield of 2-3 pounds of delicious shiitake mushrooms.

## After Fruiting Indoors

After you are finished with your block indoors, you can work with it outside to maximize its potential. Once you have harvested indoors, the mycelium has significantly decomposed the sawdust substrate. There is no rule on where to go from here, we've listed some suggestions, but feel free to get creative. Keep in mind that outdoors there are numerous competitors and consumers and so not all outdoor ventures will yield mushrooms. However, they will enrich the environment with rich organic matter and food for a variety of organisms.

- Add the block to the compost pile. Place it on top or to the side so it can be observed, it may produce a couple more mushrooms. After awhile it can be turned in to enrich the compost.
- Place the block under garden plantings or at the edge of the lawn in a shady location. Nature may coax out a couple more mushrooms. Over time the block will break down providing rich organic matter to its new growing environment, benefiting plants and microbial populations.
- Bury the block in clean hardwood sawdust. This will put it in contact with a fresh food source. Sometimes the mycelium will gain nutrients from the sawdust and produce subsequent crops of mushrooms.
- The block may be broken up and sandwiched between hardwood log rounds. Oak is ideal. The rounds can be secured together with nails, screws or straps. Place in a moist shady area outside. It can take over a year for the mycelium to establish into the log and longer still before mushrooms may be observed. Wedges can also be cut from the sides of a log. Pack the crevices with myceliated sawdust and replace the wedges using nails or screws.

## Alternative applications and after fruiting indoors

**Sawdust Spawn:** Instead of fruiting indoors, your shiitake mushroom kit can be used as spawn to inoculate hardwood logs. While indoor growing is an "instant gratification" experience, log growing is a "long term investment", it will take a year or two to get mushrooms but your logs will produce mushrooms for many years.

**Materials:** High speed drill, 3/8" drill bit, wax, small brush for applying wax, hot plate or other means to melt the wax, 10+ hardwood logs 4-8" diameter (up to 12" ok), up to 4 feet long. Logs should be relatively fresh with intact bark and no signs of decay.

Drill holes 2 inches deep in rows along the length of the log. Space holes 3-4 inches apart within rows. Space rows 4-6 inches apart. Drill the first hole no closer than 1 inch from the end of the log. Aim for a triangular or diamond spacing between rows to maximize distribution of the spawn throughout the log. Drill your holes at the time of inoculation; if you drill them in advance you are inviting other fungi and contaminants into the log.

With clean hands pack the spawn into each hole. Carefully heat wax in a double boiler on a hot plate (ideal) or burner (please be careful!) or in a crock pot. Coat each inoculation site with hot wax, sealing the spawn in the hole.

The ideal growing environment for your shiitake logs is a shaded moist area. However, it is helpful to place them in a convenient location for watering and regular observation. To prevent the encroachment of competitor fungi on your logs, avoid contact with the soil; they can be stacked Lincoln log style on pallets, lumber, or rocks. It is important not to let your logs dry out, especially in the first year of incubation. In the case of a dry spell, water with a hose or sprinkler at least once a week.

It can take one to two years before you harvest your first crop of mushrooms. First, the mycelium must grow through the log and accumulate sufficient nutrients to support a crop of mushrooms. Under ideal conditions, sometimes you may harvest some mushrooms in less than a year, just don't be disappointed if it takes awhile.