



## Shiitake Mushroom Logs

Shiitake (*Lentinus edodes*) strains are categorized by the temperature at which fruiting occurs as warm weather, cold weather, or wide range. I recommend you begin with wide range strains as they will grow from about 45F to 80F and most colonize the logs rapidly.

For optimal mushroom production, select healthy live dormant trees. Cut branches or trunks ranging in diameter from 3-8 inches to a manageable length. To **inoculate logs**, drill holes in a diamond pattern approximately 6-8 inches along the length of the log and 1-2 inches around the diameter. The fungus grows more rapidly along the grain of the wood than across it. This diamond pattern allows the different inoculation points to grow together more rapidly and coalesce into a single mycelium that reduces the likelihood of contamination and matures more quickly so mushrooms can be fruited. Plug the holes with spawn and cover them with wax to prevent the spawn from drying out and seal out possible contaminants. Any wax will work but food grade cheese wax adheres well to the log and remains pliable in cold weather. Label the log with the strain, the date, and the wood species so you can keep track of what you did in three or four years. The log is then ready to be stacked in the **laying yard** for the **spawn run**. The object of the spawn run is to decay the wood so select a shady humid spot where things rot. A freshly cut log has about 40% moisture content, shiitake mycelium will die if the log moisture content drops below 25%. Maintaining log moisture content is the most important management objective for the next 6-12 months during the spawn run. The majority of the labor is finished, now a little patience and benign neglect while the mycelium matures...

If you have inoculated your logs in winter or early spring, by late summer you should notice white zones of mycelial growth on the ends of the log that coincide with inoculation sites. Check these logs after rains and once you notice a few mushrooms forming naturally they are ready to be put into production. Shiitake logs need soaking for about 24 hours to initiate mushroom formation. A natural water source is best, such as a well, pond or stream. If you use chlorinated water from a municipal source make sure to let it stand for a day or so for the chlorine to evaporate, as this will kill mycelium it comes into contact with. After soaking, lean or stack the logs

so there is good air flow around them and in several days or sooner you should see primordia forming.

**Harvest** the mushrooms at the largest size to which they grow while the cap margin is still in-rolled. If you harvest when the cap margin has flared out, you may harvest more weight but the firmness and shelf life is reduced. The right time to harvest is a balance between many factors including your time, marketing goals, the weather, insect pressure, etc. When harvesting use a knife to cut the stem from the log to prevent damage to the log bark. I use large paper bags for collecting, but baskets and boxes work well, too. Do not store mushrooms in plastic, this promotes anaerobic conditions and things can get slimy quickly

After shiitake mushrooms are harvested from the logs, there needs to be a 6-8 week **rest period** so the mycelium can regain its mojo. If you push the logs sooner, they will wear out and long term yield will suffer. If you manage your logs well, you will be able to harvest mushrooms for several years.

If you have questions about mushroom cultivation please email Mark Jones: [info@sharondalefarm.com](mailto:info@sharondalefarm.com) or call (434)296-3301

[www.sharondalefarm.com](http://www.sharondalefarm.com)