

Growing Shiitake Mushrooms in Topsfield by Hadas Yanay

On Saturday, April 11th, BMC members were invited to Topsfield, where club member Chris Neefus hosted a workshop on growing Shiitakes on logs. Chris has been growing Shiitakes for over five years, and has well over 250 inoculated logs.

For those of you who did not have the opportunity to attend this workshop or if you simply want to review the steps, below is an overview of the process we followed on Saturday.

- 1. Gathering logs:** Collect either oak or sugar maple logs of about 40" length and 5"- 6" diameter. Oak logs last about 5 years, and sugar maples last 3-4 years. The best time to cut your logs is after mid to late October, after the leaves have stopped photosynthesizing. If you do not have access to cut your own logs, tree services or your local arborist may be able to provide you with logs for a small fee. But it is important to ensure that your logs are not rotten or diseased.
- 2. Choosing your spawn:** Select your strain for when you want your mushrooms to fruit. Warm weather strains or wide range strains are reliable and relatively fast fruiting. Cold weather strains take longer to produce, require more shade, and cannot be forced fruited. On Saturday, the group inoculated a wide range strain known as *Double Jewel*, which produces large and dense mushrooms. This particular strain was purchased from *Field and Forest, Spawn and Supply*.
- 3. Log Inoculation:** The best time to inoculate is late April to early May. First, thoroughly mix the bag of spawn to distribute the mycelium. It is recommended to keep the bag of spawn in a shady place during the whole process. Next, to drill the holes into the logs, we used an angle grinder adapter with a 12mm drill bit and a stop collar, creating a high speed drill. This system makes drilling logs quite fast and easy, compared to using a standard drill and dowel method. We alternated a row of 7 holes, 6" between each hole, with a row of 6 holes, 2" between each row. Each hole should be 1 ¼" depth. It is important to drill the holes and inoculate immediately to prevent any other contaminants from entering the logs. Using an inoculator, a brass injector, we filled each hole with spawn to just below the surface. Once all the holes were filled, we added a coating of melted wax to seal the holes and to prevent any pest or diseases from invading. Heat the wax in a tin can or similar container till almost smoking, and use a cotton dapper to coat each hole with a layer of wax. Finally, label the end of each log with the name of the strain and the date of inoculation. Chris uses paint markers and metal tags to ensure long term labeling. Once inoculation is complete, store logs in a shady, evergreen area preferably off the ground, on palettes or other racks.

4. **Fruiting:** Typically, Shiitake logs will begin to fruit 12 months after inoculation. Warm weather and wide range strains can be forced to fruit after 12 months. To force fruit, Chris soaks his logs in a large tub of cold water for 24 hours. Next, he stands the logs (leaving space in between logs for fruiting) on a drying structure to prevent slugs from reaching them, and then he labels each log with the date of soaking. After a few days, plugs should start coming out. Make sure to cover the logs if rain is expected. Chris noted that mushrooms should be harvested as soon as they look ripe enough—Shiitakes can go from perfect to overripe in a day. After the first harvest, let those logs rest for 8 weeks before force fruiting again. The logs should keep producing between 3-5 years, depending on the type of log inoculated.

For more information, here are a few links that Chris mentioned during the workshop:

<http://www.uvm.edu/~susagctr/resources/ShiitakeGuide.pdf>

<http://www.fieldforest.net>

Photos by David Babik.





