

## Shiitake mushroom cultivation outdoors on wood logs

### **1. Tree**

- Healthy live tree or branches
- Recommend cutting around March during the dormant season but summer to fall works as well. Branches are fine.
- Try to inoculate soon after felling the tree
- For shiitake, either red oak or maple, sugar or red are good.

### **2. Mushroom spawn**

- Mushroom mycelium cultivated into specific substrate for transfer into wood logs. Many companies sell mushroom spawns either in sawdust or dowel plugs.



**Sawdust**



**Plug**

Pictures from Field and Forest web site.

### **3. Inoculation tools**

- Drill
- Tip bit and inoculation tool appropriate for the chosen method of inoculation

For Plug spawn inoculations.

- 8.5mm screw bit with stop
- Hammer

For Sawdust spawn

- 12.5mm screw tip bit with stop
- Brass inoculator

### **4. Log inoculation methods**

- Drill holes 6-8 inches apart in a row
  - Rows about 2 inches apart with interspaced holes
- Inoculate each hole with spawn
- Cover holes and side of the log with wax
  - Soft cheese wax can be used without melting. Household paraffin wax is cheaper and available in hardware stores.

## 5. Stack inoculated logs outside in a shady area

- The mycelium will grow and fruit spontaneously when conditions are right
- Allocate 6 months to 1 year before fruiting. Depending on the strain and conditions.
- Logs will produce for 2-3 years



## 6. Induce fruiting

- To control fruiting logs are soaked for 24-48 hours



## 7. Shiitake strains

Choices are abundant and vary based on fruiting temperature, time of the year for fruiting, fruiting interval, mycelium growth rate.

- The “Native” strain from Field and Forest grows particularly well in Lincoln.
- The “Cold weather strain” can fruit during January thaw, when insects or slugs are absent. It also produces well early spring.
- WR46 is a commercial strain that produces after heavy rains in the summer and fall. The mycelium grows fast and fruiting intervals are short.
- Beltane produces early spring.

## 8. Purchase of mushroom spawn and equipment

- <https://www.fieldforest.net>
- <https://fungially.com/grow-mushrooms>
- <https://fungi.com/collections/plugin-spawn-for-logs-stumps>