

# Growing Mushrooms With Dowel Plug Spawn

## Tools Needed

Hammer, drill with 5/16" or 8mm bit, beeswax, paintbrush (for applying wax) and a heat source to melt the wax (an old pan placed on low heat works great).

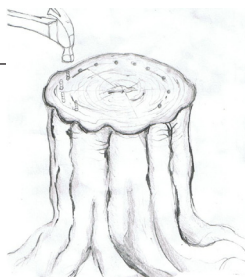
## What to inoculate (choosing a log or stump)

The species of wood you need depends on which mushroom you're trying to grow.

- Never use wood from a fruit tree, because these have strong anti-fungal properties.
- Softwoods such as hemlock, Douglas fir, true fir, and spruce are good choices for Chicken of the Woods and Phoenix Oyster.
- Hardwoods such as oak, poplar, cottonwood, aspen, elm, maple and alder (non-aromatics) are good for Reishi, Maitake, Shiitake, Turkey Tail, Lion's Mane, White Elm, Beech, Black Poplar and Oyster varieties.
- Logs and stumps should not be older than 3 months because other fungi will begin to colonize the wood. However, they should sit for at least 2 weeks between cutting and inoculation, because living wood defends itself against fungi.
- Logs used for cultivation should be between 4 and 12 inches in diameter and from 2 feet long to whatever you can handle.

## Stump inoculations

Drill holes 2 inches deep and 2 inches apart around the whole circumference of the stump. Stumps should be inoculated along the circumference of the face, in the border between the bark and the heartwood. Pound the dowels in and seal with wax.



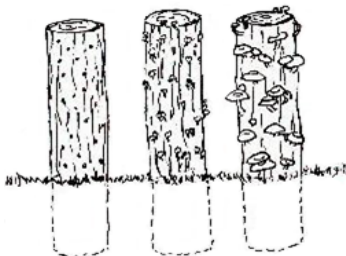
## Where to put your inoculated logs

Choose a shady location that is protected from the wind. You can lean the logs against something or bury 1/4 of each log so that it stands upright. You can also lay the logs horizontally, but in this case keep them elevated at least a few inches off of the ground using some type of spacers like cinder blocks or wooden stringers.

Lean logs against a tree.



Partially bury logs so they stand upright.



Stack logs "crib fashion" in a shady location.



## When to inoculate

The best time of year to inoculate logs and stumps is in the Spring, after the last hard frost. However, you can inoculate your logs almost any time, as long as they'll have at least two weeks before the first freeze. The idea is to allow the mushroom mycelium growing on the Plug Spawn time to establish itself before it goes into dormancy over the Winter. Logs can be left outdoors during the Winter, under a layer of straw, burlap, shade cloth or other vapor-permeable cover (don't use plastic tarps: they can let mold form).

## How to inoculate (general instructions)

Use a 5/16" or 8mm bit to drill 2-inch-deep holes.

Insert 1 plug per hole and whack it in with a hammer. A 3-4 foot log can take 50 or more plugs, while stumps usually hold 30-50 plugs.

Holes should be sealed with beeswax to protect the mycelium from weather and insects. Melt the wax in a pot. An electric frying pan with a thermostat controls works well; so does a camp stove, if inoculating away from electricity. Make sure that the wax is hot when you apply it. Otherwise, the wax won't create a tight seal and can easily fall off. The wax can be applied with a paintbrush.

Logs generally begin producing 6 months to 1 year after inoculation, after which they usually continue to fruit for 4 years.



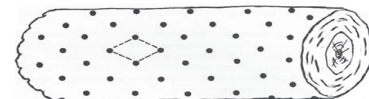
No special training needed!



Applying wax

## Log inoculations

Drill holes 2 inches deep down the length of the log, spacing the holes 6 inches apart. Start the next row 2 to 4 inches away from the first, and offset the holes so that they form a "diamond" pattern. Continue making rows until the entire log is inoculated. Pound the dowels in and seal with wax.



THE  
Mushroomery  
(541) 258-5855  
39997 Mt. HOPE DRIVE  
LEBANON, OR 97355

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