

# Mushroom Box™ Growing Instructions: Shiitake Logs – using MushroomBox dowels

[www.mushroombox.co.uk](http://www.mushroombox.co.uk)

## Introduction

These shiitake dowels are intended for use in cultivation shiitake mushrooms on hardwood logs. Cultivating mushrooms from logs can be slow – up to 2years, but gourmets comment that the taste of log-grown shiitake is much-preferred over faster-growing substrates. Shiitake dowels can be used for innoculating tree stumps, or for innoculating sawdust, straw, paper products or a variety of alternative substrates, however these instructions cover the use of shiitake dowels in logs only.

## What you will need:

- 1) Mushroom Dowels: These are wooden plugs around 40mm long and usually 6mm in diameter. Mushroom Box sells mushroom dowels in packs of 50. They should be damp, and will be covered in what looks like white or grey mould, often fluffy in appearance. This 'mould' is in fact, the shiitake mycelium
- 2) Mushroom Sealing Wax: Once the dowels have been inserted into the log, you'll need to seal the wound with non-toxic, natural sealing wax to prevent other fungi or moulds entering the log. Mushroom Wax is fairly inexpensive and available from MushroomBox, supplied in 200g or 1kg bags. The 200g bag is suitable for around 100 dowels.

**You Will Also Need:** A method of heating the wax in order to melt it and a small brush or a foam pad for applying the wax

- 3) Collared Dowel Drills for drilling the holes – a suitable low-cost drill set is available from Mushroom Box.
- 4) Hardwood Logs from 50mm to 200mm in diameter. Alder or Oak is the best choice, but most hardwoods will work ok. Don't use cedar or softwoods, because the resins contained within these woods acts as a natural fungicide, which will prevent the Shiitake mushrooms from growing.

## Logs as Substrates:

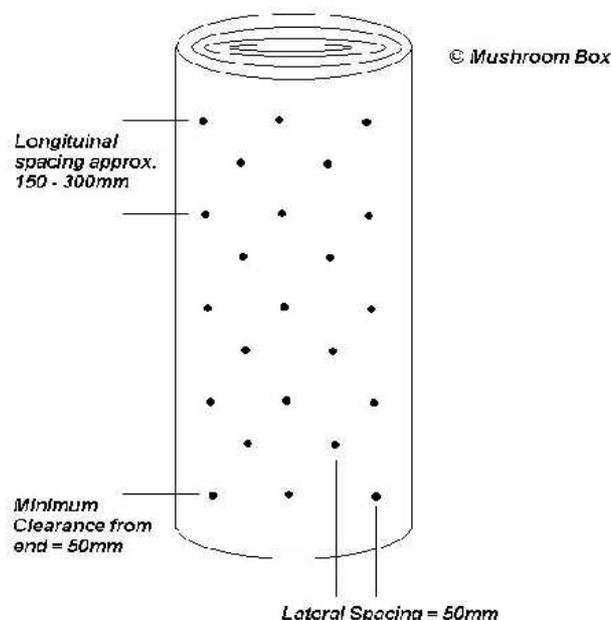
The shiitake dowels can be used to produce delicious shiitake mushrooms from hardwood logs. The dowels can also be used to produce mushrooms from the stumps of recently felled trees, and will cause the stump to decay much faster than it would have done otherwise – making its removal easier as well as providing you with a tasty dinner!

Logs should not be used freshly felled. Wait at least 3weeks, and up to 6weeks before innoculating the logs with shiitake dowels. Older logs can be used, but you run the risk that they will have already been contaminated with competitor moulds or fungi.

If you wish to use old logs, you can do so provided that they have no rot, although you would be well-advised to heat the logs to 70°C for 2 hours to kill off any potential competitors.

## INSTRUCTIONS FOR USE:

1. Use your mushroom dowels as soon as possible – the sooner they are used, the more virulent the shiitake mycelium will be. If you cannot use the dowels straight away, you can store them in a refrigerator (between 1 and 5°C) for up to two weeks.
2. A 50 pack of Mushroom Box dowels is suitable for inoculating approximately 1.5 - 2.5m length of log (100mm diameter)
3. Select your log(s). Any hardwood log between 0.5 and 1m length will do. If the log is split, or has damage to the bark, we advise that you select an alternative, as the damage site is a potential entry point for competing species.
4. Place the log which you intend to inoculate onto a saw-horse or bench. Insert the 6mm dowel bit into a cordless drill or similar (assuming you are using 6mm dowels). Set the collar depth, such that the hole will be 5-10mm longer than the dowel.
5. Drill the holes in a diamond pattern as shown in the diagram below, covering the entire bark surface:



6. With clean hands, insert a mushroom dowel into each hole and hammer it until it is flush with, or preferably slightly below the surface of the log.
7. Once all the dowels have been hammered home, melt the wax and apply a few drops of hot wax to the exposed dowel end, in order to sterilise and seal the

surface, thus preventing potential competitors entering. If there are any side-branch wounds on the log, seal these also, with the mushroom wax.

8. Place the log in a cool, damp place for approximately 24weeks. Do not cover with polythene, as this can encourage moulds to grow on the surface of the log.
9. When the ends of the logs show signs of mycelial growth (you should see white patterns on the cut top/bottom surfaces of the log), you know that the mycelium growth is complete.
10. You can leave the log to fruit naturally – during spring and autumn, but this can be slower, and sometimes unpredictable. Alternatively, you can force the log into fruiting, as long as sufficient mycelial growth has taken place.
11. To force the log to fruit, first immerse it in cold water for 48hours, using a weight to ensure it remains fully immersed.
12. On removal from the water-soak, strike the log several times. The shocks act as a trigger mechanism, simulating a fall to the forest floor.
13. Move the log in a sheltered spot away from direct sunshine and strong winds, and sprinkle with water daily. With luck, within a few days, your mushrooms will erupt from the bark surface.

Depending on conditions and the size of the log, shiitake mushrooms will continue to flourish from the log for a period of 2-7years. Store the log in a location that you can keep watch for potential mushroom flushes – you don't want to miss them! If you are not rewarded with a flush of delicious shiitake mushrooms, don't give up. Mushrooms by their nature are unpredictable, and the log may simply need more time.

### **Trouble-shooting and Growing Notes**

Be careful not to allow your shiitake logs to get too wet or too dry. Ideally, store your logs in a shaded area (eg under trees), which will naturally provide the right conditions.

Shiitake mushrooms are very tasty. Insects know this too! Growing mushrooms outdoors can attract slugs, mites, flies, fly lava and mice – all looking for a free lunch at your expense. Pesticides should not be used, as the chemicals can easily be taken up by the mushrooms.

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If you enjoyed growing these shiitake mushrooms, please visit our website to find out more about our range of mail-order Mushroom Boxes™ and other mushroom kits.

You will also find growing tips, step-by-step pictorial guides, and recipes.

<http://mushroombox.co.uk>