

# Tree Oyster Mushroom

The Tree Oyster mushroom (*Pleurotus ostreatus*) prefers cool temperatures (10-15°C or 50-65°F), and a high humidity (55-55% RH). It requires light - direct sunlight is too strong, but "skylight," or light from a window or fluorescent lamp up to about 10 ft. away is OK. Most mushrooms require light to facilitate development but not for photosynthesis, so a low level is sufficient. Vitamin D is produced in some mushrooms when they are exposed to UV light such as from "skylight" and mushrooms are a unique vegetable source of vitamin D.

The substrate on which your mushrooms are growing is made of Alder sawdust/chips supplemented with millet grain, wheat bran and crushed limestone, There may be a wad of cotton stuck on the top of your block. This was used to exclude contaminants while the packs were being incubated but serves no purpose anymore and may be carefully removed or else left in place 'if it's too difficult to remove.

Put your grow block in a cold place (10C), which could be your fridge, an unheated room, or outdoors depending on the weather, etc. for several days to activate it. (If small dark mushroom 'pins' have begun to form then you do not need to activate it further.)

Once you can see the small dark mushroom pins forming then make a few 1 1/2" slits near the bottom of the bag. Open the top of the bag and hold the open bag under the tap to flood it with cold water, and leave in the sink for half an hour to drain. Turn 'bottom up' to drain any remaining excess water. Then "scrunch" the top of the bag together, and place it in your growing environment at 10-13°C

As the mushrooms "pins" start to expand to "buttons," (1/4-1 1/2" diameter) slit the bag in about 5 places from the top of the bag crown to just below the top of the substrate block. The 4 or 5 'flaps' formed where the Bag has been slit will move apart to easily provide room for the expanding mushrooms and provide more ventilation while still keeping the immediate environment of the growing mushrooms humid. Contact with the intact bag may inhibit the normal development of the mushrooms. If mushrooms appear down the sides of the block under the plastic, then slit the bag to that point. Do not cut the surface of any developing mushrooms or the surface of the substrate block. It is sometimes best to ignore those mushrooms as slitting the bag down the sides of the block can expose more substrate surface to drying out,

Forced air heating or draughty locations may cause excessive drying. In most home situations leaving the bottom part of the bag permanently in place around the substrate block will help to conserve moisture. Erecting a "tent," in the form of a large, clear plastic bag placed loosely over the top, or poly sheet supported by wire or sticks will be beneficial. When very dry conditions prevail, you may also need to mist the inside of the tent or place a damp towel in it (remember that freezing weather outside results in low humidity indoors). An aquarium or terrarium is not usually satisfactory, as ventilation may be too restricted; Misting directly onto the mushrooms themselves is not very satisfactory and may lead to problems such as mold and bacterial growth. During damp, cool weather the mushrooms will grow well outdoors out protect them from direct sunlight, slugs, snails, bugs, etc.

The substrate block and the developing mushrooms may benefit from periodic drenching but neither the mushrooms nor the substrate should remain continuously wet or they will rot. Drenching the pack by holding it under a cold shower for a couple of minutes once every couple of days is usually better than misting it several times a day,

Harvest when edge of the cap begins to flatten cut or, if you have any really large mushrooms just let them grow.

After a heavy harvest the block will have lost much moisture. Put the block in a loosely filling poly bag with a few small holes in it for ventilation and let it rest for 2-4 weeks at 18-25°C. Then replenish the moisture by immersing the block in cold (0-10°C) water for a few hours. Immersion in *warm* water may damage your mushroom mycelium. Warm water does not carry as much dissolved oxygen as cold water and at the same time the mushroom's need for oxygen is greater in warm water.

Drain the block well and place it back in a loosely fitting poly bag so that it will have a little more fresh air. More mushrooms should appear within a week or so. Fruiting may be encouraged by cycling the block between cool (-10°C) and warm (15- 20°C). The re-activation cycle may be repeated 3 or 4 times or more, with a 2-4 week rest each time Long, tubular mushrooms with tiny caps or antler-like forms are due to inadequate ventilation (CO2 too high). Small caps may also be the result of low light level. Mushrooms dying prematurely and sometimes turning orange-yellow may be due to the mushrooms being wet for extended periods. Mushrooms cracking or scaling on the cap and failing to develop properly may be due to dry conditions. The surface of the substrate block becoming too dry will inhibit "pinning" Problems may often be cured by giving you; block a rest in a high humidity, high carbon dioxide environment such as a loosely closed plastic bag for a week or 2 before trying to fruit it.

Let this be an exploration and learning experience. Mushrooms are generally more sensitive to environmental factors than some familiar green plants are and most of us are less familiar with their requirements. Although relatively fast growing, mushrooms can be challenging and provide the opportunity for a great teaming experience! We would love to see your pictures! If it is necessary to delay fruiting your kit, then put a twist tie on the top of the bag and store flat 1:1-4°C for approximately a month, Mushrooms will grow inside the package if the temperature is higher than this. Oyster mushroom mycelium may be killed at a temperature only slightly above body temperature (-40C).

Oyster mushrooms produce lots of spores which, like pollen and dust, may cause hay-fever or allergic responses.

The Mushroom Man

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