How To... Grow Oyster Mushrooms

Some mushrooms are much easier to grow than others. Today we are using oysters because they are the easiest. Shiitake are also not difficult but take longer (six months or so).

Portobello mushrooms can be grown at home, but are trickier because they require a growing media, like horse manure, in the *right stage* of decomposition.

There are many types of oyster mushrooms. Two good ones to start with are:

- Blue-grey oysters - highly productive and the easiest. Ideal temperature for growth is 10 - 20^{0}C.
- Pink oyster mushrooms - beautiful and one of the fastest to grow, but must have warmer temperatures 18 - 27^{0}C.

The pink oyster is one of the fastest. It is tropical variety and needs warm temperatures.

Tips for mushroom growing success

- Grow indoors - where there are less pests than outdoors.
- Use *fresh* spawn. The fresher it is, the stronger they will grow.
- You can start with small amounts of spawn, but the more you use the stronger and faster your mushrooms will colonise.

How to grow oyster mushrooms on straw

Step 1: pasteurisation

Oyster mushrooms are 'primary decomposers' - they eat fresh plant material. Because of this, they have not evolved to be good at competing with other moulds and bacteria. Therefore it is important to kill most of these to give your oysters a good start.

Do this by pasteurising your straw (or other growing media). Cover it with boiling water (in a bucket or a *strong, heat resistant* plastic bag) and then leaving it *cool completely* - for eight hours or overnight.

Once cool, drain as much of the water off as you can. Your media is now ready for inoculation with the spawn.

The blue grey is the easiest to grow - and is happy in cooler temperatures.

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Step 2: Inoculation

Cleanliness is important in this stage to avoid contaminating the straw again - wash your hands with an anti-bacterial wash or soap before handling the growing media or spawn.

Mix the spawn through the straw. The better you mix them, the better and faster your spawn will colonise the straw.

Then cut eight cross hatch slits in the sides of the bag (each slit about 1 inch long). This is where the mushrooms will grow later on. Your mushrooms are ready for step 3, colonisation.

Step 3: Colonisation

Put the bag of straw and mushroom spawn inside a second, larger plastic bag, without holes in the bottom. Close this to exclude the fresh air. Carbon dioxide will build up inside the bag and this will stimulate the mushroom to grow through the straw.

Put the bag in a warm place - it needs to be at least 10 ^{0}C for blue grey and 18^{0}C for pink oysters, but they will colonise faster in a warmer place like an airing cupboard.

After two days, remove the bag of straw, snip off the bottom corners of the bag with scissors, and drain out any water that has collected at the bottom. Oyster mushrooms like damp conditions but do not like puddles of water.

Close the bag up again and put it back in a warm place for 3 - 4 weeks (pink mushrooms) and 4 - 5 weeks (blue-grey). You can just leave them during this time. You might want to put a reminder in your diary or phone so you don't forget about them completely!

Step 4: Fruiting - the first flush

After a few weeks, the straw should be fully colonised by the mushrooms. When you open the bag you will see white mycelia all over the straw. If it does not look fully colonised, put it back in the bag for another week or two.

The first flush of pink mushrooms. These are just slightly over-ripe - as the edges have gone wavy.

Once fully colonised

- Open the outer plastic bag so that air can reach the bag containing the straw. The oxygen will stimulate the mushroom to fruit.
- Move it to a light place - it needs light to fruit (the rule of thumb is enough light to read by).
- Spray with water regularly, ideally twice a day. Avoid spraying the mushrooms directly. Instead spray the inner walls of the outer bag. This will help create a moist atmosphere that the mushroom needs to fruit. If moisture levels are not high enough, the mushroom will not fruit or baby fruits may die.

- After a few days, you will begin to see baby 'pin mushrooms' of the 'first flush' form. These will grow fast into full sized mushrooms in just a few days.
- Aim to harvest the mushrooms before the edge of the mushrooms go wavy - but don't worry if they do as they are still fine to eat.
- Harvest the mushrooms by twisting the fruits off the bag - avoid tearing them as you may damage the mycelia.
- Enjoy eating them. Note that the stems of oyster mushrooms can be tough and almost inedible, so make sure to remove these before cooking.

Step 5: Fruiting - later flushes

After the first flush, keep spraying the mushrooms with moisture once or twice a day, and keep them in a light place. After ten to fifteen days (sometimes a bit longer) you should get a second flush of mushrooms. This is usually as large and sometimes larger than the first flush.
Continue spraying the mushrooms and you can also get a third and fourth flush at two or three week intervals. These are usually slightly smaller.
When the mushrooms have finished fruiting, add the spent straw to your compost heap if you have one. You might even get another flush of mushrooms on your compost!

What else can you grow oyster mushrooms on?

Although chopped straw is one of the easiest and fastest medias to grow on, it is not always easy to find in small quantities in the city. Luckily, oyster mushrooms will also grow happily on a range of other materials. The length of the colonisation period varies depending on the growing media, as show in italics below.

- Cardboard - e.g. boxes or egg trays. *2 months.*
- Old books or telephone directories or waste paper - but avoid bleached or recycled paper due to a possible risk of dioxins. *3 - 4 months*
- Old cotton clothes.
- Coffee grounds are high in nitrogen which can give good mushroom growth - but also makes it easier for other competing bacteria and moulds to grow. A more challenging media to grow mushrooms on successfully.
- Wood chip / sawdust: use hard woods (eg oak, chestnut, apple) as pine contains an anti fungal resin which stops mushroom growth. *5 - 6 months*

*Y*ou can also grow on a mix of any of the above ingredients.