

Coir & Vermiculite Guide

This method is extremely useful when cultivating King Oysters (*Pleurotus eryngii*) and Pioppino mushrooms (*Agrocybe aegerita*). This guide can also be used for a whole range of other top fruiting mushrooms.

Items required

What we give you

- 4L of Vermiculite (Grade 3)
- 1 Bag Aussie Mushroom Commercial King Oyster Spawn
(Or 2 - 3 bags of standard Grain spawn if using your own)
- Alcohol swabs

What you will need to get

- 20L bucket with lid
- 1 Brick of coir (makes 9L) from bunnings
- **Either** 1 50L Storage container (Award 50L Clear Storage Container with lid from Bunnings recommended) **OR** 2 27L Storage Container (All Set 27L Storage Container with lid from Bunnings recommended)
- 5L of Water (Tap is fine)
- Dishwashing gloves or disposable gloves
- Spray bottle

Optional

- 30mm Spade drill bit
- Polyfill

Method

Substrate Preparation

1. Place coir brick and 4L of Aussie Mushrooms Vermiculite into 20L Bucket
2. Boil **exactly** 5L of water (keep at boiling for 2min before proceeding)
3. Carefully pour the water into the 20L Bucket containing the coir and vermiculite
4. Seal the lid onto the bucket and wait for 30min
5. While keeping the lid shut, rigorously shake the bucket to help mix up the contents
6. Leave to cool overnight or after at least 5hr
7. **With gloves on**, open the bucket and mix up the contents thoroughly
8. Alcohol swab your storage container/s and ensure the surfaces have dried before proceeding
9. Break up the spawn bags and empty both into the 50L storage container (if using 2 27L containers, empty 1 spawn bag into each container)
10. Pour the coir and vermiculite mixture into the storage container (Half and half if using 2 27L tubs)
11. **With gloves on**, mix the contents thoroughly by hand. Smooth out the substrate as flat as possible but try not to compact the substrate

Incubation

1. Place the storage container lid **upside down**, over the top of the container, With a finger sized gap in 1 corner for air exchange.
2. Leave to incubate for ~1.5 - 2 weeks (depending on the strain)
3. Incubating in total darkness is not required but is advantageous for this section of the guide
4. If large water droplets form on the lid, feel free to shake them off away from the substrate as you want to avoid water droplets landing directly on your substrate
5. Incubating temperatures vary from strain to strain but 20-24°C is a general incubating temperature

Fruiting

Light and Temperature

- 12 hours on, 12 off is typical of most culinary mushrooms
- Direct sunlight is sub optimal, reflected light is tenfold better
- Strength of light must be enough to be able to read a book in
- If using a light bulb, get one that has the “natural daylight” colour, **not** “warm light”
- Due to the size of the substrate, dial back your fruiting temperatures by 2°C to accommodate for the heat generated by the substrate

Fresh air exchange and humidity

- Keep the lid upside down on the container however, twist is slightly so that there is room for some gas exchange
- 2 Fingers width at the widest point is optimal for the 50L tub and a thumbs width is great for the 27L containers
- When misting the container with water, make sure that you aim for the walls of the plastic tub. Avoid directly spraying the substrate
- Only mist as needed (when the walls of the container don't have water droplets on them). Over spraying can lead to contaminations
- Give the containers a burst of fresh air by removing the lid and using it to fan the substrate 2 times per day. Once in the morning and once at night (doing it after brushing your teeth is a good way to remember)
- Fanning only needs to take ~30sec
- If misting and fanning at the same time, mist first and then fan as the evaporation will aid the mushrooms to grow

Optional Container Adjustments

If you want to optimize the growing conditions for your container, you can opt in to do some modifications to your storage container. Keep in mind that these modifications are by no means necessary and you will still have great success using the standard method

1. Using a 30mm spade, drill 6 holes (2 in the long sides and 1 in the shorter sides) roughly $\frac{3}{4}$ of the way up the container. Only 4 holes are necessary if using the 2 smaller tubs

2. Tape over the holes with duct tape on the outside of the container during the incubation stage
3. When placing the container into fruiting conditions, remove the tape and stuff Polyfill into the holes
4. The Polyfill should not be stuffed too tightly, a looser fill is more optimal than a tighter one.
5. The lid on your container can be placed the right way up, as this additional modification allows for filtered fresh air exchange and the twisted lid position is not required

Tips and helpful practices

The following list is not a requirement when cultivating mushrooms but is helpful practice to get used to if you want to maximise your growing potential. This is not a complete comprehensive list, and will be updated when necessary

- Use distilled or pre-boiled water whenever water is involved in a guide (i.e. misting with a spray bottle)
- Having a high standard of personal hygiene helps prevent you from contaminating your grows and environment you are growing in. This includes regular showering and wearing a fresh change of clothes if you're about to do some high-risk work such as working at a flow hood/still air box or working with sterilized/pasteurised substrate
- Keep the room you are growing in as clean as possible. Vacuum and mop floors where applicable. Aerosol disinfectants can be useful as well
- Immediately and carefully discard any materials that have contaminations as they will only act to dirty the entire growing area by spreading their spores. Some contaminations such as Trichoderma (Forest green mold) have very sticky spores and can be difficult to clean and remove once they have spread.

