Step 3 - Injecting the spores

It is now of utmost importance to work clean and sterile. Clean your work area with a disinfectant and wear the provided gloves and mouth mask. If possible, close doors and windows to minimize air current. When touching a non-sterile part, wipe your hands clean with disinfectant before you proceed.

3.1 - Heat the needle - Shake the spore syringe really well for 5-10 seconds for even distribution of the spores. Take off the protective cap and heat the needle of the syringe until it is red hot. **Then let it cool for 15-20 seconds.**

3.2 - Inject - Remove the aluminium foil and inject about 0.5 ml of the spore suspension into each of the holes you made earlier. Be aware that this is a crucial step in the process. After injecting, immediately seal the holes with some tape.

3.3 - Incubate - Put the cultivation boxes in a warm, dark place (TIP 3). A temperature of 20°C is acceptable, but if possible aim for a temperature around 28°C. Lower temperatures can slow the growth process. Temperatures of 15°C and below will halt the growth of mycelium. Your job is done for now. The spores need time to grow into mycelium. **This takes about 2-4 weeks** (TIP 4).

Ready for step 4 - When the substrate is completely covered with white mycelium (except for the top layer of vermiculite).

(TIP 4) If you see any other colour than white (like green or black) you probably have a bacterial contamination.

If a box contaminates, it unfortunately cannot be saved and will have to be discarded.

Step 4 - Mushroom growth

You now have a ready-to-grow cultivation box that will provide several harvests. It doesn't take too long now before the first mushrooms will pop up. But first we need to water the cultivation box, to make sure there is enough water available for the growing mushrooms.

4.1 - Water - Carefully open one corner of the lid of the box.

Gently turn on the tap and let the box entirely fill up with water.

Close the lid again and let the box stand for 12 hours.

4.2 - Let the excess water run off - After 12 hours the mycelium has soaked up all the water it needs.

Open slightly one corner of the lid, turn the box upside down and let all the excess water run off.

Make sure to remove as much water from the bottom as possible by letting it drip for 10-20 seconds.

4.3 - Growth - Wash your hands with soap, remove the lid and place the box inside the grow bag. Fold the top of the bag twice and attach the paper clips to keep it closed (make sure not to block the filter). Wipe the lid clean with some kitchen paper and store it in a clean place - you will need it again later on.

Place the grow kit in a warm spot (20-25°C) with daylight, but not in direct sunlight or on top of a heat source. Temperatures of around 25°C will allow for faster growth of the mushrooms.

Leave the bag closed and the first tiny mushrooms will appear in about 14 days. These will mature in about 7 days and can then be harvested (TIP 5).

4.4 - Harvesting - Wash your hands thoroughly with soap and dry them with a clean towel or kitchen paper (or wear gloves). Pick all mature mushrooms at once (TIP 6), except when some are growing much faster. Avoid touching the mycelium.

(TIP 5) Preferably harvest the mushrooms when the veil on the underside of the cap starts to tear. If you wait longer the caps will open and the mature mushrooms will drop their (black) spores onto the mycelium. Usually this is not a problem. However, since the spore release normally completes the mushroom life cycle, this could affect your next harvest (see step 4.5).

(TIP 6) Harvest the mushrooms by grabbing the stem at the base and perform a twisting motion while lifting it upwards. Do not poke or dig into the mycelium. Difficult to reach and minuscule mushrooms (< 1 cm) are best left undisturbed. The minuscule mushrooms might grow into mature mushrooms during the next grow cycle.

4.5 - Next cycle - Each box produces several harvests. Immediately after harvesting, the box needs to be filled with water again, just like you did at step 4.1. This will stimulate the mycelium to produce more mushrooms. Repeat all steps onwards until your next harvest.

The cycle of watering, growing and harvesting can be repeated until the mycelium is depleted. Often this is only after three or more growing cycles, with the second cycle generally giving the best results.

Tips for reuse - The cultivation box*, the syringe* and grow bag can be reused in a new grow project. The box can also be used to store food. *sterilization with pressure cooker necessary

REUSE
REDUCE
RECYCLE

Recycling - Because of the necessary sterile conditions, growing mushrooms from spores unfortunately requires the use of plastic materials. **Please make sure to reuse the materials whenever possible and to discard waste items in the appropriate (recycle) bin.** We will keep looking for ways to reduce the environmental impact of our products.

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Mushroom Grow Kit Basic - Manual

Mushroom Grow Kit Basic - Manual

This grow kit will introduce you to the basics of home mushroom cultivation. In four steps you will learn more about the rice flour cake method (or PF Tek) with some minor adjustments. Once you have mastered these techniques, you can experiment further. Before you know it, you are a pro!

If you are new to home cultivation, make sure to start with the Mushroom life cycle and The grow kit explained chapters below.

BOX CONTENTS :

4 x Cultivation box (280 ml) with air filter
1 x 200 g organic rice flour
1 x Vermiculite (natural mineral)
1 x Grow bag with air filter
1 x Pair of sterile gloves
1 x Mouth mask
1 x Syringe (10 ml spore suspension)*
2 x Paper clips

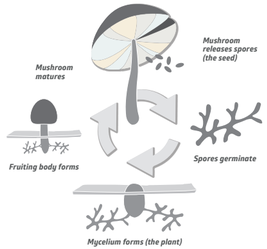
**optional*

Other requirements:
Tape, alcohol (or any disinfectant), lighter, aluminium foil, safety pin or nail, pressure cooker or normal cooking pan with a lid that closes well (see step 2).

Mushroom Life Cycle

The life cycle of the mushroom is best understood when compared to that of a plant. The spores are the seed, the underground mycelium is the plant, and the mushrooms are the fruits. The (white) mycelium reproduces by forming mushrooms.

When the mushrooms are mature they open their caps and release their spores. These will later germinate and grow into mycelium again, thus completing the circle of life.



The grow kit explained

STEP 1 & 2 – Preparing the cultivation boxes - You will start by preparing a growth medium of rice flour and vermiculite (this is called the substrate) and sterilizing it in a cooker.

STEP 3 - Injecting the spores - By injecting spores into the substrate, the spores will develop into mycelium, using the nutrients present in the rice.

STEP 4 - Mushroom growth

Exposing the mycelium to filtered fresh air, light and high humidity levels inside the grow bag will then trigger mushroom formation.

IMPORTANT

With indoor cultivation, mycelium is very sensitive to bacterial contamination, in particular during growth. For this reason, it is important to work clean at all times.

Wash your hands with soap before every step and carefully follow the instructions and recommendations.

Now that we've covered the basics, the fun can start!

Step 1 - Preparing the cultivation boxes

Before you start, clean part of a table to use as a work area. Wash your hands thoroughly with soap and dry them with a clean towel or kitchen paper (or wear gloves). If possible, close doors and windows to minimize air current.

1.1 - Make holes in the lids

Use a safety pin or nail to make 4 small holes in the lid of each cultivation box. These holes are later used to inject the spores into the substrate.

1.2 - Fill up the cultivation boxes

Mix 600 ml of the vermiculite with 300 ml water (TIP 1) . Add the rice flour and mix thoroughly. Loosely fill up the cultivation boxes until 1 cm from the top of the box.

Wipe the upper edge clean and fill the boxes with a layer of the remaining vermiculite (0.5-1 cm). The top layer of vermiculite will later serve as a water reservoir for the growing mushrooms.

Close the lids and fully wrap the boxes in a double layer of aluminium foil.

(TIP 1) You can also start with 1 or 2 boxes at first. This way, it is easier to get an insight in the process, and you can learn from any mistakes. Evenly distribute the (dry) vermiculite and rice flour and store the leftovers in a dry place. The spore syringe can be kept (put the cap back on after use) in the ziplock bag.

Step 2 - Sterilizing the substrate

Next step is heating the cultivation boxes in a pressure cooker to kill bacteria. You can also use a normal cooking pan, provided it has a lid that closes well. However, a pressure cooker is preferred as it operates at 121°C and guarantees to sufficiently sterilize the substrate. This is not always the case when using a normal cooking pan.

2.1 - Sterilize - Fill the pressure cooker with a few centimetres of water and place the boxes on the bottom. The boxes should not be in direct contact with the bottom or they might crack (TIP 2). They should also not float.

Sterilize the boxes for 60 minutes. During sterilization, the cooker needs constant pressure. Sterilization times are measured from the moment there is a constant flow of steam escaping from the safety pin. Lower the heat of the stove once the pressure in the cooker has built up. This prevents the cooker from running dry. When using a normal cooking pan, increase the cooking time to 90 minutes or longer. Due to vaporization you may have to add water during the process.

2.2 - Cooling down - Once sterilized, the boxes need a few hours to cool down. Try not to be impatient - a warm substrate can kill the mushroom spores. When the boxes have cooled down to room temperature they can be removed from the pan.

Do not remove the aluminium foil. Do not wait too long before proceeding to the next step.

(TIP 2) If the cooker you are using does not come with a metal rack, you can use a (heat proof) coaster or a towel. Also do this when using a regular cooking pan.

(TIP 3) A good place to store the boxes would be the cupboard above the refrigerator. The heat produced by the refrigerator rises and increases the temperature by a few degrees. Heat pads can also be used, but be careful. Too much heat will cause the mycelium to dry out, and it will fail to produce mushrooms. Therefore, make sure to leave some space (5 cm or more) between the boxes and the heat source. **Never place them directly onto a heat source**.

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