



### Advanced Mushroom Grow Kit Shiitake strain

Thank you for purchasing one of our Easy Mushroom Grow Kit! This kit contains Shiitake mushroom mycelium. To ease starting your adventure into the world of mushrooms, you are invited to read this instructive booklet. For more details and direct communication, please visit our website [www.homegrownmushroom.ca](http://www.homegrownmushroom.ca) or send us a message at [info@champignons-maison.com](mailto:info@champignons-maison.com)

#### Conservation:

**No time to start your kit now?** No worries, simply put it in the fridge until the time is right!

### Some practical terms

- **Mycelium:** The mycelium is the mushroom's vegetative state. It is composed of many filaments named hyphae. In nature, it is usually below the soil surface or inside dead trunks. In your kit, the mycelium is the entire white block in the bag.
- **Substrate:** The substrate is the nutritive material in which the mycelium grows. At Homegrown Mushrooms, it consists mainly of coffee ground and sawdust recovered locally. An excellent way to add value to our residual materials!
- **Spores:** Spores are the reproductive cells of fungi. They are microscopic and each mushroom can produce hundreds of thousands of them. They are released by the gills or pores located under the mushroom cap.
- **Primordium:** A primordium (primordia in the plural) is a baby mushroom. The primordia look like small buttons or pinheads and are highly sensitive to dehydration.
- **Mushroom:** The mushroom is the reproductive organ. It's also the part we eat! The term mushroom is however often used to talk about the fungus, which is the whole organism.

### Instructions

- 1- Open the box, **unroll the bag containing the mycelium block and cut it open from the very top.** Avoid damaging the mycelium block.
- 2- **Fill it with cold water to submerge the block** and let it soak for 24 hours. This will humidify the mycelium and induce necessary stress to bring it out of its vegetative state.
- 3- After 24 hours, **drain the mycelium block completely** by watering your plant or garden with what is now a rich liquid fertilizer!
- 4- **Gently cut the whole bag** and discard it. Try to avoid damaging the mycelium.
- 5- Place the mycelium block in a bowl or a plate, on a surface that can handle humidity. It should be in a suitable place, away from heat sources, air

conditioning or direct sunlight. Mushrooms need indirect light and should be submitted moderately to sunlight to avoid drying out.

**6- Roll the bottom of the greenhouse** (holed plastic bag provided) to make it stiffer. Then **put it over your mycelium bag.**

**7- Remove the greenhouse and spray the block** generously at least twice a day, then put it back on the mycelium block. This will provide fresh air and moisture needed for the growth of your mushrooms. **If the water droplets inside the tent have evaporated, this is sign that new watering is needed. Make sure to remove exceeding cumulating water** inside the bag if it happens. **The block should not soak in stagnant water.** Use it to water your plants.

**8- Monitor your mushrooms carefully,** when growth starts it goes rapidly! If your mushrooms **grow without opening their cap or if they stay really small,** it means they lack oxygen so you need to **cut out bigger holes in the greenhouse,** or leave it open an hour or two a day, depending on the environment you provide.

**9- Harvest your mushrooms** when the cap is almost flat, but still slightly curved toward the stem. Pick the mushroom individually as they mature. If your mushrooms release their spores, this is another sign that they are ready for harvest. Spores appear as white dust that sticks to surfaces. With clean hands, **take the mushroom at its base** and gently pull it off of the block. If mushroom flesh or dried primordia are left on the mycelium, they will rot and damage the mycelium.

**10- When all mushrooms are harvested and no more primordia are forming, remove the greenhouse and leave your block to dry** for 2 days.

**11- Submerge once again your mycelium block** in cold water for 24 hours to recharge its humidity and stimulate the next flushes of mushrooms. If your mycelium as formed a brown crust, poke 4 small holes through the crust to help water get in.

**12- Put the mycelium back** to its place under the greenhouse. Continue spraying your kit again.

**New primordia will reappear** within 14 days. This process will provide between 2 and 4 harvests!

### Improve your mycelium mileage

After many months of culture, your grow kit will yield smaller harvests as the substrate will have been depleted of its nutrients by the action of producing mushrooms. Do not worry; **your culture is still fully alive**, it only lacks the proper food content to grow forever more.

You can improve your mycelium mileage by feeding it with many carbon sources; spent coffee grounds and filter, spent tealeaves and bags, any wood product including corrugated cardboard and paper, *brown* garden debris as branch, leave and stalk as much as dead wood in the form of logs or stumps.

**Shiitake has the particularity** of needing a really clean substrate to propagate through, either sterilized by human activity (exposure to microwave or autoclave) or kept exempt of bacteria by its nature (freshly cut log or stumps).

As mycelium propagates by contact, your grow kit will become an *inoculum* – a mushroom culture vessel – this will allow you to deploy the culture on those substrates, turning those debris into mushrooms in a matter of months. Visit our website for more detailed information.

### Recycling Dead Wood into mushroom

Cultivating the shiitake into dead woods in the form of logs or stumps is a classic of the *traditional mycology*. Holding many ecological advantages, it can produce fresh mushrooms for up to a decade in the right environment.

- Choose a hardwood that doesn't already host other fungi. We recommend a piece of wood that have been cut for at least 2 weeks (to wash the

antifungal properties of the tree) and less than a year (to avoid working with a contaminated wood stock).

- For quicker results, work with Birch or Poplar. For prolonged harvest, invest in a more noble hardwood such as Maple, Oak or Walnut.

- Nature is a game of numbers. The more mycelium that is introduced into a log or stump, the faster it will propagate through the matter and start producing mushrooms.

- Dig holes with a drill every inch or notch deeply with a saw and introduce as much mycelium as possible.

- Once the wood piece is filled with mycelium, use hot wax (preferably natural wax) to seal back the opening, preventing your inoculum to turn into a food source for the bugs and other living beings of the surrounding.

- Stimulate the propagation of the mycelium by keeping the wood moist. Some will water it every other day while other prefer to wrap it into plastic to keep its substrate humidity level around 40%.

- If a log hasn't produce any mushroom after 18 months of inoculation, submerge it under cold water for 24 hours to shock it into fruiting.

- To stimulate vigorous fruiting, maintain a level of ambient humidity over 50%, ideally 75%.

-After many years of culture, your logs or stumps will yield smaller harvests as they will have been depleted of their nutrients by the action of the mycelium. It can then be use to grow oyster or reishi mushroom or could be break by hands to turn it into wood chips and use to cultivate wine cap mushrooms.

### Additional notes:

Indoors as outdoors, Shitakes prefer colder temperatures, so early Spring and late Fall should be the most productive seasons. It will even be possible to harvest mushrooms up until the first freezings of Fall! But Shitake is pretty fragile and only survive Winter under certain conditions.

### Issues and solutions

**I: The mushrooms form long stems** and small caps, or have the appearance of corals. *This happens when the mushrooms lack soxygen.*

**S:** Be sure to raise the tent to spray it, this will bring fresh air in the bag. Ventilate and vaporize the mycelium 2 to 4 times a day. If the problem persists, cut more opening in the moisture tent.

**I: The mushrooms dried up.** *This happens when the ambient air is too dry.*

**S:** Make sure the mycelium is away from heat sources, ventilation, air conditioning, or direct sunlight. Be sure to spray the moisture tent sufficiently. When there are no more droplets in the tent, it's time to spray again. If the problem persists, you can cover some openings of the moisture tent with sticky paper.

**I: Mold appeared.** *This can be caused by exhausted mycelium (spent substrate) or a sporefull environment.*

**S:** In the case of a green mold, with clean hands, dab the infected area with 70% alcohol. If necessary, remove the mycelium from its bag. With a clean knife, cut out the infected area and discard it. Ideally, spray the inside of the mycelium bag as well as the mycelium block with peroxide at 3% concentration. Put the mycelium back in its bag. It is possible that the mold reappears. In the case of a black, pink or orange mold, throwing the mycelium away will be the best option.

**Visit our website for more detailed information.**  
Happy harvest!