GROW PITTSBURGH

Why grow mushrooms indoors?
- Can control the environment to create perfect conditions for mushrooms
- Safe from most pests and stay cleaner than outdoor mushrooms
- You can go from spawn to mushrooms in as little as a month
- You can grow them in Winter!

Supplies:
- Substrate- the growing medium for your mushrooms. This can be a lot of things but **straw** is easy to get and the best material to start with. Supplemental nutrition can improve yield.
- Mushroom grain spawn- like the "seeds" of the mushroom, which you can buy online (we like Field & Forest). Oyster mushrooms are the easiest to grow and there are many types and colors to choose from. We find **Grey Dove** and **PoHu** very reliable.
- Large pot and pillowcase for pasteurization- liming is another method, but heating is the most effective at destroying mold spores that may already be in the substrate
- Food grade plastic bags or buckets to hold your mushroom medium
- Large bin with a lid (like a rubbermaid)
- Optional: humidifier, grow lights, shelving unit and plastic sheeting

Substrate Ideas for Oyster Mushrooms:
- ★ Oat/wheat straw
- ★ Dried ornamental grass/lawn clippings
- ★ Dried cornstalks
- ★ Cardboard/shredded paper
- ★ Coffee grounds
- ★ Wood shavings, sawdust (not pressure treated)
- ★ Raw fabrics like cotten, linen

Inoculation:
1. Shred your straw into small (3-5") pieces using a lawnmower (or you can buy pre-shredded at many hardware stores)
2. Heat up a large pot of water to 160 F and submerge your straw by stuffing into a cloth sack and weighing down in the water. Leave for 60 minutes.
3. Remove your sack of straw from the water and let drain. You don't want to inoculate until it is cool enough to handle and dry enough that when you squeeze a handful only 1-2 drops of water comes out
4. Mix your spawn into your straw with clean hands on a clean table at a rate of 5% of the wet weight of the straw (a 20 lb bag of straw would need 1 lb of grain spawn)
5. Fill your bag or bucket tightly with inoculated straw and seal with tape, string or a lid
6. Cut holes every 4-6" along your container.

Incubation

- Put your straw block somewhere relatively warm and humid. We use a big plastic bin in front of our radiator
- Leave it for 3-5 weeks, opening every few days to let oxygen in and check moisture levels. You will see the white mycelium slowly taking over the straw.
- Once it is full of mycelium, check daily for *pinning*- tiny white clusters of mushrooms beginning to form where you cut holes. It's time to fruit!
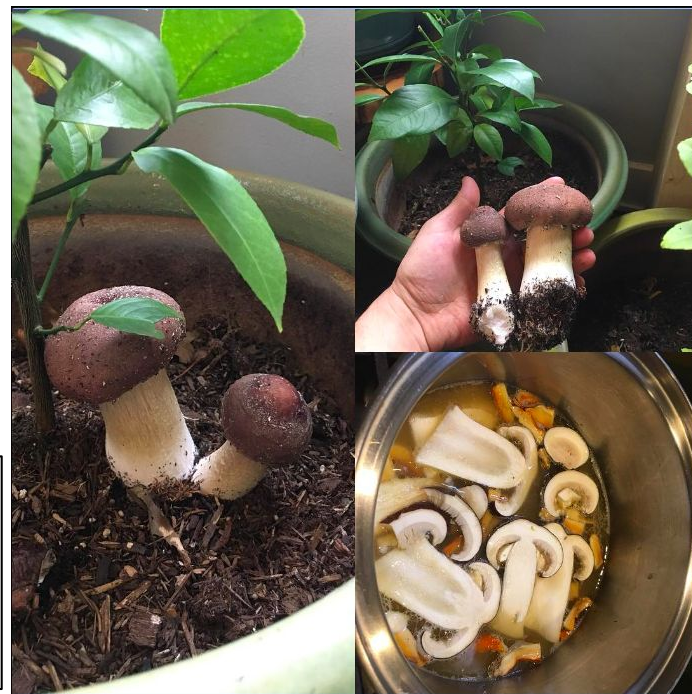
Fruiting and Harvesting

- After pinning, move your mushroom bag somewhere cooler but still humid, 60-65 F is ideal. Pittsburgh basements are often perfect.
- To create a simple "fruiting chamber:"
  - Set up a plastic or galvanized shelving unit with hanging LED or grow lights if it doesn't receive ~10 hours of natural light (we use the same shelf for seed starting!)
  - Cover with plastic sheeting with a slit in front for access
  - Put your mushroom bag on a shelf under the grow lights so that most of the pinning clusters are receiving light (or hang from shelf above)
  - Run a small humidifier placed in the bottom of the chamber, cutting a small hole at the top of the chamber for air to circulate.
- Keep an eye on your mushrooms- they can double in size every 24 hrs!
- Harvest at desired size but before the caps turn from inward to outward
- After harvesting, turn off humidifier and let bag rest. It will continue to grow mushrooms every few weeks for 2-3 months but the harvest size will decrease each time.

Photo from Organic Mushroom Farming & Mycoremediation by Tradd Cotter

Left: plastic nursery pots can be sanitized and reused to grow mushrooms indoors or out. Above: Oysters on straw in our basement "fruiting chamber"

Honorable Mention: You can grow winecap mushrooms (stropharia rugosoannulata) in your houseplants! Inoculate moist woodchips with spawn and sprinkle 1-2 inches deep in pots. Keep well watered and look for winecaps after 1-2 months.