

# Growing Gourmet Mushrooms at Home

A take-home summary of the workshop  
Autumn Joy Workshops · Master Gardeners of Cape Cod · Saturday, October 3, 2026 · 204 Cultural Arts Building, Harwich  
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## The six steps, start to finish

| STEP         | WHAT HAPPENS                                                            | HOW LONG                 |
|--------------|-------------------------------------------------------------------------|--------------------------|
| 1. Substrate | Mix the material the fungus will eat and bring it to the right moisture | An hour                  |
| 2. Sterilize | Heat it long enough to kill everything living in it                     | 2–28 hours, plus cooling |
| 3. Inoculate | Add grain spawn in clean, still air and seal the bag                    | 10 minutes               |
| 4. Colonize  | Keep it dark, warm and closed while the mycelium takes over             | 2–4 weeks                |
| 5. Fruit     | Open it and give it humidity, fresh air and indirect light              | 1–2 weeks                |
| 6. Harvest   | Pick the whole cluster, rest the block, repeat                          | 2–3 flushes              |

Steps 2 and 3 are where most grows fail. If the substrate came out sterile and the spawn went in clean, the rest is fairly forgiving.

## Four species worth starting with

| SPECIES              | FRUITS AT | FIRST FLUSH          | NOTES                                                                                                   |
|----------------------|-----------|----------------------|---------------------------------------------------------------------------------------------------------|
| Blue oyster          | 55–65°F   | 10–18 days           | The easiest place to start. Forgiving, fast, and happy in a cool Cape house. Needs plenty of fresh air. |
| Pink & golden oyster | 70–85°F   | 7–14 days            | Good for summer, no cooling needed. Shelf life is only 3–4 days, so plan to eat them quickly.           |
| Lion's mane          | 65–75°F   | 10–14 days           | Tastes like crab or lobster. Wet pockets form if the air is too still.                                  |
| Shiitake             | 55–75°F   | 8–12 weeks on blocks | Slower, and the block needs a browning phase. Oak logs are the easier route outdoors.                   |

Start with one species and three blocks of it, rather than several species at once.

## Substrate and moisture

**Master's mix** — 50% hardwood sawdust or fuel pellets, 50% soybean hulls by dry weight, watered to about 60–65% moisture. Roughly 5 lb wet per bag.  
**Cheaper options** — wheat straw for oysters (pasteurise, don't sterilise); hardwood chips for outdoor beds. Never use cedar, pine or treated wood.

**The squeeze test.** Squeeze a fistful hard. A few drops should run out — not a stream, and not nothing. That is field capacity, and it is the only moisture measurement you need.

## Sterilize or pasteurize

| MATERIAL             | METHOD                                                                                      | WHY                                                                                                |
|----------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Supplemented sawdust | Pressure, 15 psi for 2–2.5 hours per 5 lb bag. Cool completely, 8–12 hours, before opening. | A nutritious substrate feeds mould as readily as mycelium, so everything has to be killed.         |
| Straw, for oysters   | Hot water at 160–170°F for 1–1.5 hours, or a cold hydrated-lime bath for 12–18 hours.       | This leaves helpful organisms behind to crowd out invaders. It works because oysters compete well. |

The temperature that matters is at the coldest point inside the load, not on the gauge. A probe there is the single most useful upgrade a home grower can make.

## The four fruiting conditions

|             |                                                                                                                                                 |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Humidity    | 85–95%. Mist the air and the walls of the chamber, never the mushrooms themselves.                                                              |
| Fresh air   | Keep CO <sub>2</sub> below roughly 1,000 ppm. Mushrooms give it off as they grow and it settles in still air. This is the one most people miss. |
| Temperature | By species, as listed above. A cool basement suits oysters well.                                                                                |
| Light       | About 12 hours of indirect light. It signals which way is up rather than feeding them.                                                          |

### If something looks wrong

| WHAT YOU SEE             | WHAT IT USUALLY MEANS                         | WHAT TO DO                                                             |
|--------------------------|-----------------------------------------------|------------------------------------------------------------------------|
| Long stems, small caps   | Not enough fresh air                          | Increase air exchange: open the vents, or add a small fan on a timer   |
| Cracked or cratered caps | Air too dry, or blowing directly on them      | Raise humidity, and aim airflow past the mushrooms rather than at them |
| Pins form, then shrivel  | Humidity dropped, or a draft dried them out   | Steadier humidity; a humidifier on a controller helps                  |
| Wet, brown, sour patches | Too much water and too little air movement    | Stop misting, increase airflow, cut the affected area out              |
| Nothing after two weeks  | Too warm, too dark, or the surface is too dry | Cool it down, give it 12 hours of light, mist the air around it        |

### Contamination: the four to recognise

| TYPE                   | HOW IT LOOKS OR SMELLS                                                           | WHAT TO DO                                                               |
|------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Trichoderma            | White at first, then vivid green. Spreads faster than the mycelium.              | Not recoverable. Seal the bag and remove it.                             |
| Cobweb mould           | Grey and wispy, climbs in a day. Dull rather than bright, with no distinct edge. | Often survivable. Salt the patch and cut it out.                         |
| Bacterial blotch       | Wet, slimy patches with a sour or rotten smell. Almost always too much water.    | Reduce moisture and increase airflow.                                    |
| Black and green moulds | Aspergillus and Penicillium.                                                     | Do not open these indoors. Seal the bag and put it in the trash outside. |

Seal a contaminated bag before you move it, and open it outdoors. An opened block releases millions of spores into the room where you do your clean work, which is how one bad bag turns into six.

### Eight habits that prevent most of it

- 70% isopropyl on hands, tools, bag necks and the work surface, every time
  - Work inside a still-air box; a \$20 tote is better than an open kitchen
  - Shower and change clothes first — you carry more spores than anything else in the room
  - Never open a bag near a running fan, an open window or a houseplant
- Check your sterilizer with a probe in the coldest part of the load, not the gauge
  - Buy fresh spawn, and refuse anything that shipped frozen or looks off
  - Inoculate the whole batch in one sitting, quickly, without talking over the work
  - Keep new blocks away from established ones for the first week

### Harvesting, storing and cooking

**Harvest** slightly early — oysters while the cap edges are still turned down, lion's mane while the teeth are short and white. Twist and pull the whole cluster rather than cutting and leaving stumps. Expect 1–1.5 lb from a 5 lb block on the first flush, and 2–3 flushes in total. Rest the block a week between flushes, then soak it in cool water for a few hours.

**Store** in a paper bag in the fridge, unwashed and whole, for 7–10 days. Plastic sweats and they go slimy. Dry them at 125°F until they snap rather than bend, and they keep for a year. Freeze only after sautéing.

**Cook** in a dry, hot pan with no oil until the water cooks off and they squeak, then add butter or oil and salt at the end. Don't crowd the pan. Always cook them; none of these should be eaten raw.

### Outdoors, with no sterile work at all

|              |                                                                                                                                                                                                                                                                                                                                      |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Logs         | Fresh-cut oak, maple or beech, 3–8" thick, cut during dormancy. Plug spawn in 5/16" holes, or sawdust spawn in roughly 7/16" holes, in a diamond pattern about 6" apart with the rows offset. Seal each hole with food-grade wax. Keep them shaded and off the ground, and soak them in a dry summer. First fruiting in 6–18 months. |
| Garden beds  | Wine cap (king stropharia) in hardwood chips. Layer chips and spawn 4–6" deep in partial shade. First fruits usually come in the same season, and the bed is improved as it goes. This is the simplest outdoor project to try first.                                                                                                 |
| Spent blocks | Still alive. Bury one in a shaded bed for an extra flush, or break it into the compost pile as a soil amendment.                                                                                                                                                                                                                     |

### Where to buy, and what to read

|                          |                                                                                                                                                 |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Spawn and substrate      | North Spore — northspore.com. Good for a first try or a one-off trial. For small batch orders, Cape Cod Mushroom Company can supply locally.    |
| Grow bags                | Unicorn Bags — unicornbags.com                                                                                                                  |
| Plug spawn, outdoor kits | North Spore — northspore.com                                                                                                                    |
| Books                    | Tradd Cotter, <i>Organic Mushroom Farming and Mycoremediation</i><br>Paul Stamets, <i>Growing Gourmet and Medicinal Mushrooms</i>               |
| Local                    | Cape Cod Mushroom Company — capecodmushroomco.com. Grow-your-own kits, small batch spawn and substrate, and happy to answer questions by email. |