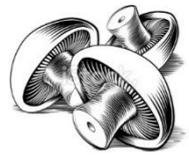
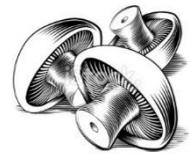


The Nuts and Bolts



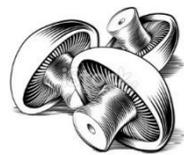
What are the different entry points for a beginning mushroom producer?



What are some of the necessary inputs?

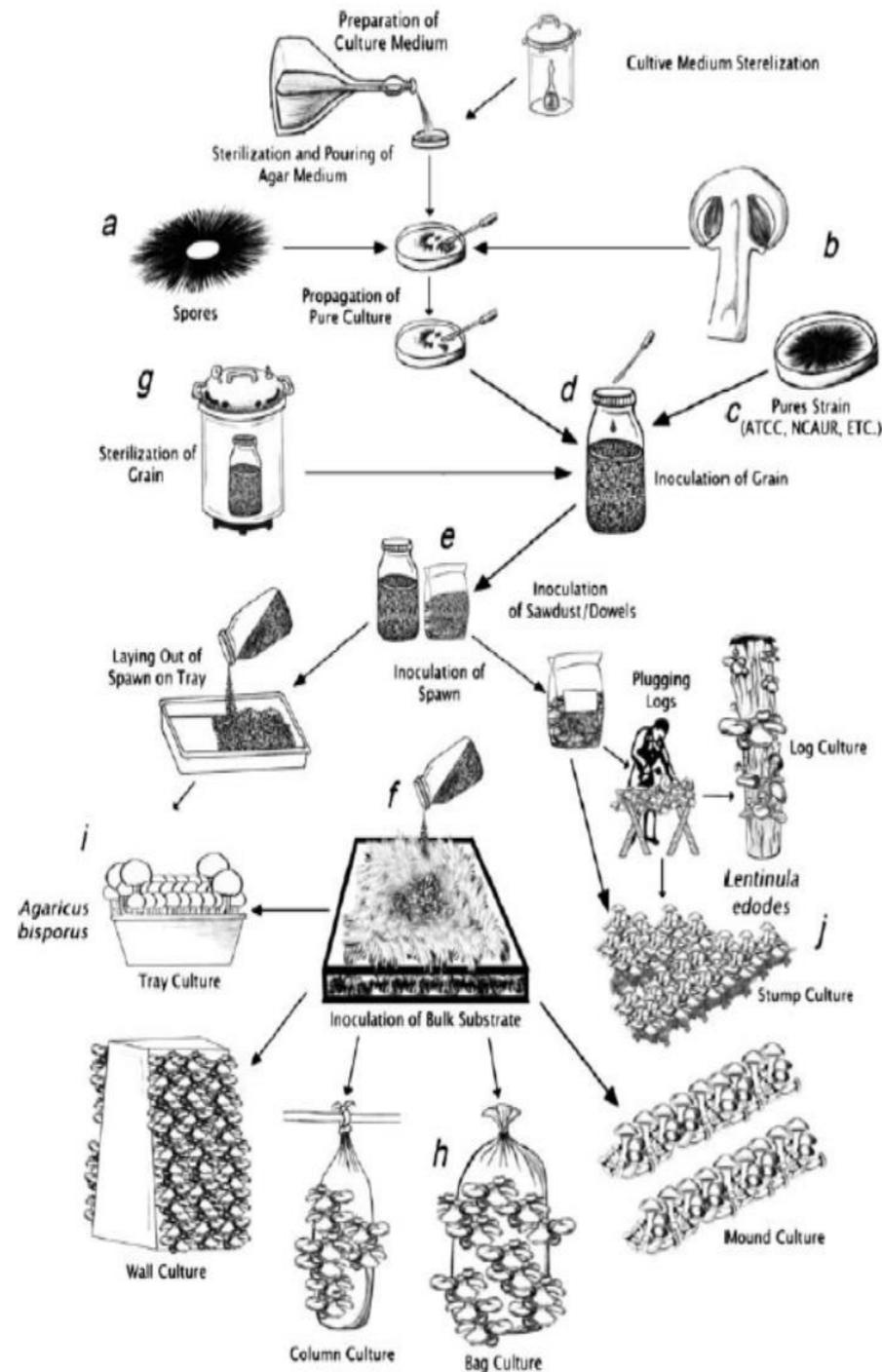


What are some alternatives to the MycoCats process outlined earlier?



Practical info for getting started fruiting mushrooms.

The Full Process



- Prepare cultures (7-10 d)
- Spawn production (10-14 d)
- Substrate preparation (2-4 d)
- Spawn run (14-21 d)
- Production flush (7-42 d)
- Total time = 40-90 days to finish

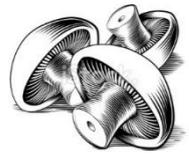
The Easiest Entry Point

Growing mushrooms from pre-spawned bags requires the least amount of inputs.

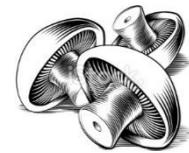


A controlled-environment grow space is the only requirement.

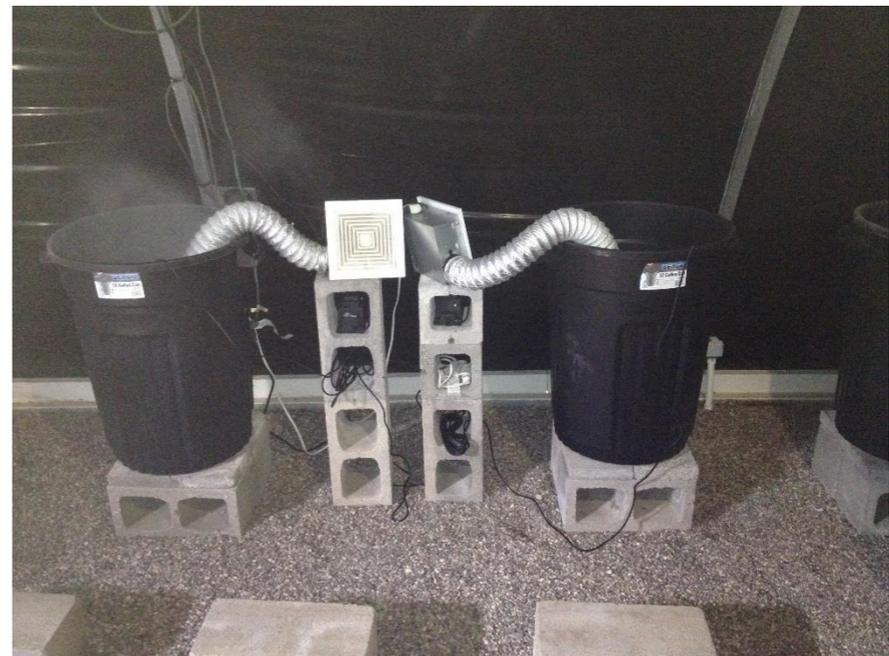
Inputs



Temperature Regulation (less than 75° F)



Humidity Regulation (RH greater than 85%)



Inputs



Regulation of CO₂ Levels (less than 600 ppm)

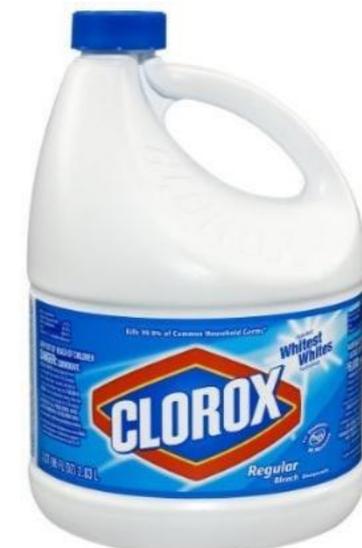
Amprobe CO₂ Meter



Air Circulation



Maintaining a clean environment to prevent contamination.



Inputs

Purchase fully colonized grow bags prepared by someone else!



The Second Easiest Entry Point

Point

Prepare your own substrate and perform your own Spawn Run!



Fungi Perfecti



Aloha Medicinals



Field and Forest

The Second Easiest Entry Point

Growing out mycelium on substrate from spawn requires a degree of cleanliness.



Alternatives to autoclaving



Steam Pasteurization

Heated to 160° F for 1 hour then cooled.

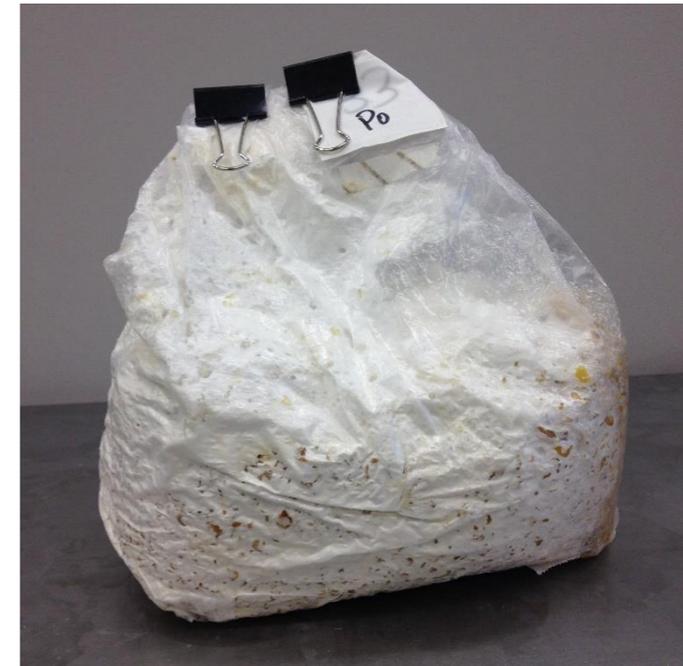


Hot Water Pasteurization

Heated to 160° F for 1 hour then cooled.

Chemical pasteurization is also used: lime, bleach, peroxide, and others

The substrate is then spread out on a clean table and inoculated with spawn.



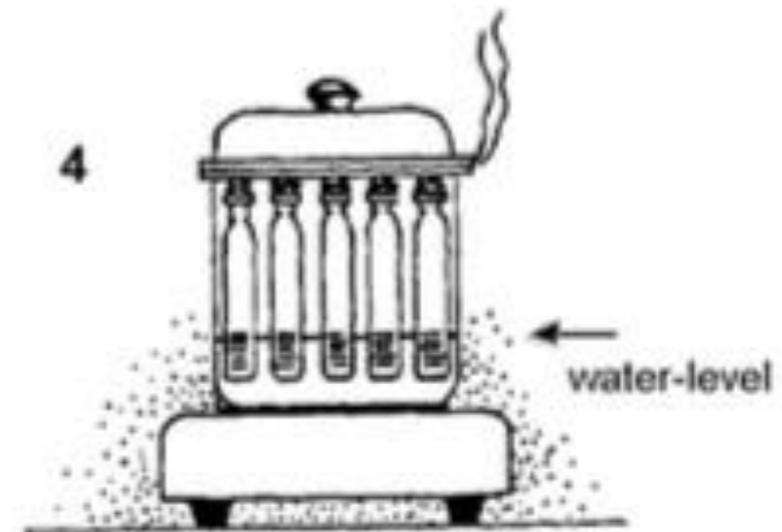
The inoculated substrate is then transferred to grow bags.



Cost: \$0.26 each in bulk

Further Down The Rabbit Hole: Preparing your own Spawn!

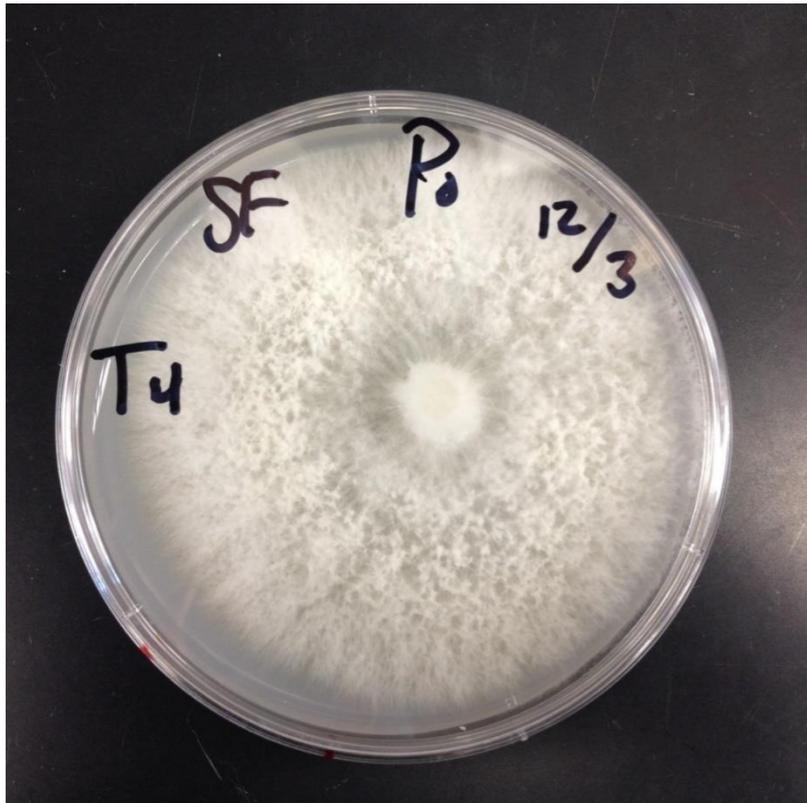
Tracing the line of culture further back requires an even greater deal of environmental control and sterility.



Sterilize for 15 minutes in pressure cooker.

Media and containers can be sterilized at home in a pressure cooker.

Transfers from slants and cultures can then be performed using some of the methods we practiced earlier in the workshop.



Scaling Up: From Low to High Tech

Regardless of the scale at which you are cultivating mushrooms, the same core principles hold true.

Smallest Possible:



A little more complicated:
modified food/beverage coolers.



A Wider View



Regulating temperature and humidity.



Monitoring temperature and humidity.

Another step up in complexity: The Tucson Village Farm fruiting shed:



~\$1200

A Tour:



Solar-Powered temperature control and water pressure-powered humidity control.



With the addition of power storage and a water harvesting tank, this set-up could be taken completely off-grid!



Simple but successful!



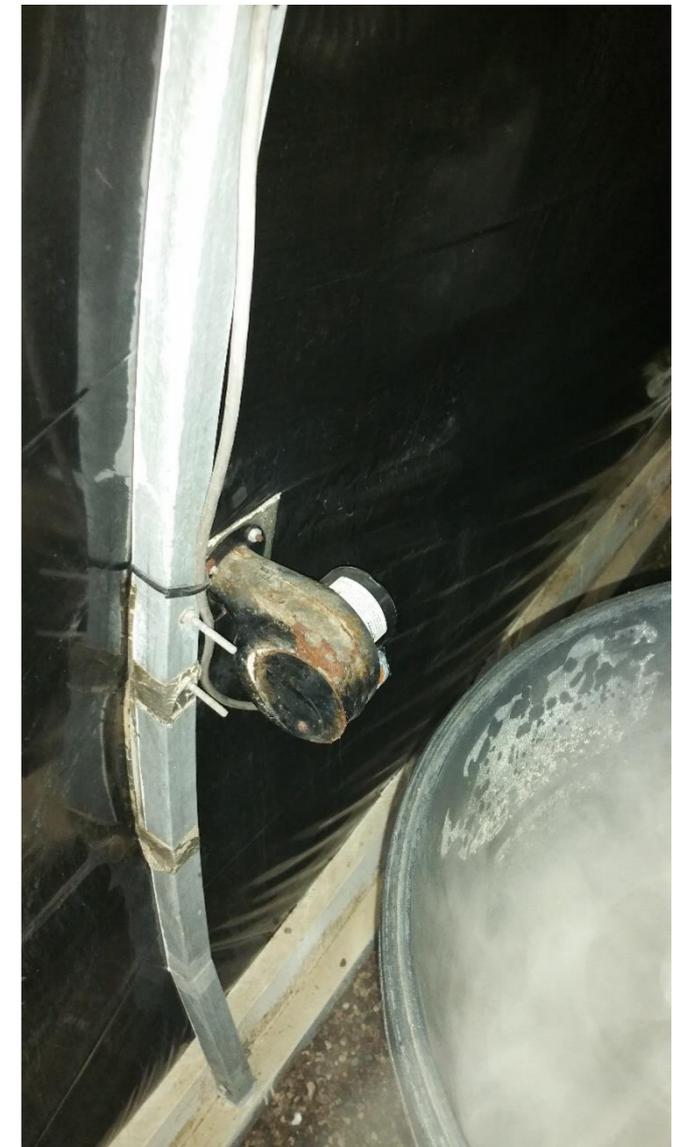


Further Along: The MycoCats Hoop House.





An evaporative cooling wet wall and double-walled inflated side construction



Humidity Control



Using ultrasonic atomizers
and bathroom fans

The inside view:



More happy Oysters...



Instructions for fruiting your pearl oyster grow bags.

1. Constructing your fruiting chamber
2. Adding additional humidity/air flow control
3. Slicing your bag
4. Harvesting your mushrooms!

Review the How-To instructional hand-out