

Detailed Grow Log-Tek - Penis Envy in a Monotub

by

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original source: <http://www.shroomery.org/forums/showflat.php/Number/6194327/fpart/1/vc/1>

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This grow log isn't so much about one grow. It's about the process used for this kind of grow.

You'll notice many missing or incorrect pictures, yeah I'm not so much a camera guy, but in the future I'll clean it all up.

The point is to follow and understand the process and materials used to get from a spore syringe to healthy fruits using a simple method. Comments are very welcome. Any improvement suggestions are also welcome.

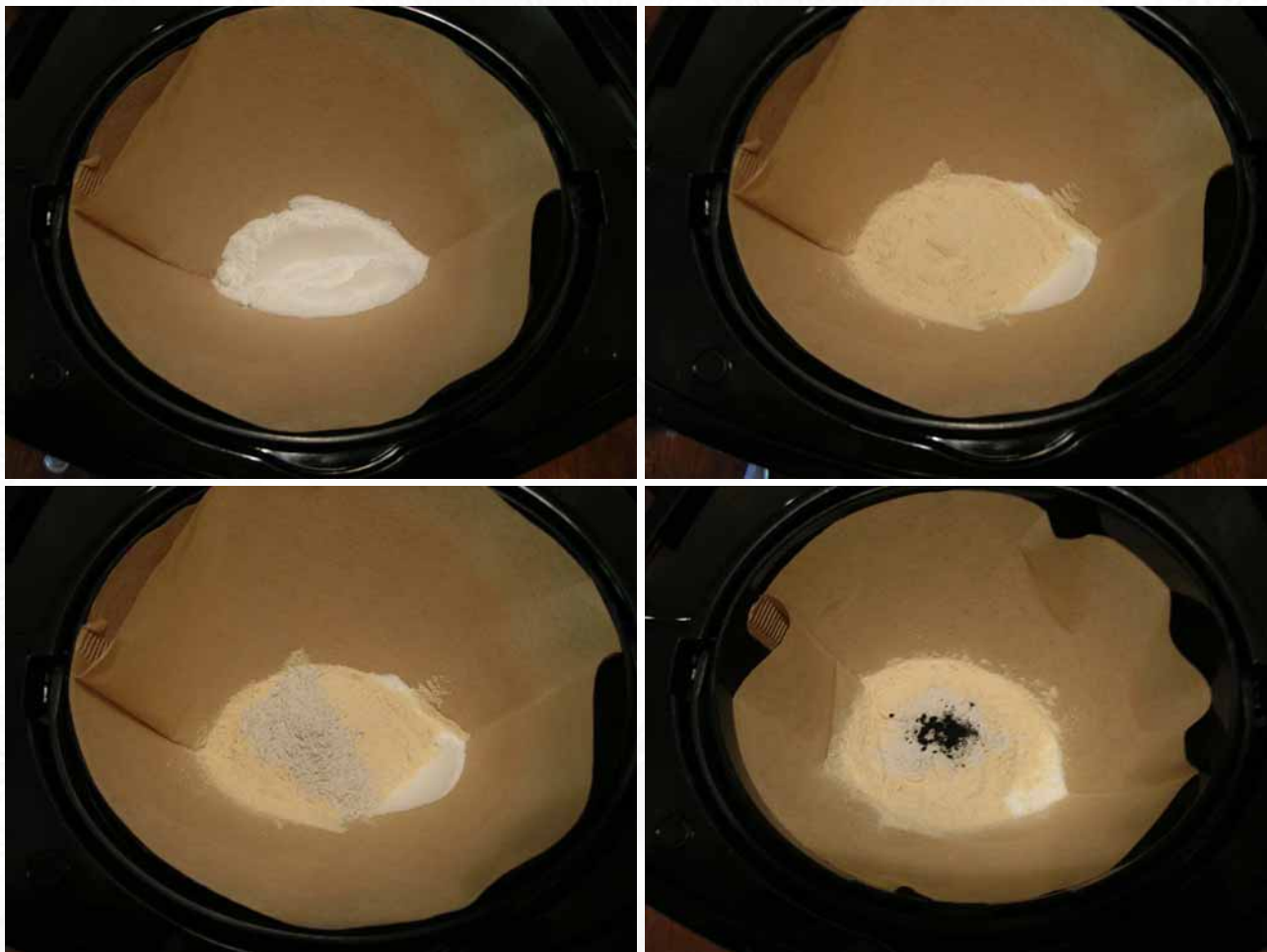
STAGE ONE: Liquid Culture Creation

First step was to order spores from a sponsor here at the shroomery.

While awaiting their arrival, I made a batch of liquid culture.



I started by making sure I had a new or very clean coffee pot. One of the ones that brews 12 coffee cups at a time. That equals roughly 1.8 liters.



I added to the basket: light dry malt, dextrose, gypsum, and activated charcoal.
I used one coffee filter fit for this type of machine.



15 grams each of dextrose and light dry malt



1.5 grams of gypsum flour, and a tiny amount of powdered activated charcoal.
No measurement, just look at the above picture for amount.



I filled the reservoir full with distilled water and brewed it as I would brew a normal pot of coffee.



I added a magnetic stir bar to each of three quart jars and I poured this solution into them up to the 600ml mark each.



I added these lids to the jars, RTV port on one side, 1/4" hole on the other.



I covered the jars/lids with a piece of tyvek and tightened the band over the tyvek.



I covered the jars with aluminum foil and pressure cooked them at 15psi for twenty minutes.



I removed the jars and let them cool.
I removed the foil and cleaned the tyvek off.



For safety, I wrapped the lid/jar area with micropore tape.



And I added some coffee filters on top as dust covers. I can never be too safe with LC.



Truth be told, I pressure cooked the jars empty first to ensure they were clean when I began the process.

The spores arrived in the mail, and it was then time to move on to inoculation...

I inoculated a quart of liquid culture with some Penis Envy spores from a sponsor here.
This was the process:

I showered first and put on clean clothes.
I used listerine before and after brushing my teeth.



I wore an N95 mask and a shower cap.



I wore latex gloves and cleaned them well with 70% isopropyl. I wiped down the needle and jars with an isopropyl paper towel.



I sprayed the hell out of the air with oust brand air sanitizer. I gave the oust a minute to work and then I folded up a paper towel.



I soaked that paper towel with 70% isopropyl and folded it over the needle cover.



I removed the cover, keeping needle covered with the paper towel.

I shook the ever living hell out of the syringe, holding the needle tight.



I inoculated each liquid culture jar with one half cc of spore solution.



I removed the needle, still keeping it in the paper towel and I applied a piece of micropore tape to the tyvek's hole.



This piece of tape was soaked in isopropyl prior to it's application.

I re-covered the jars with the coffee filters and labeled them PE Spore LC.

These jars were left in a room that sits at 75 degrees steady for a couple of days.



Soon puff balls began to form and grow.



I used my magnetic stirrer to help colonization along.



Soon I had a liquid culture that was ready to use.



So I filled a big syringe with the finished LC, and got some grain together.

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STAGE TWO: Prepare and Inoculate Grain Spawn

I chose this birdseed to use as my grain, I like it.





I filled a five gallon bucket with twenty pounds of birdseed.
That brought it to about 2/3 full.



I added a piece of house screen and a lid with a big hole to the bucket.



I filled the bucket with hot water, dumped it out, filled it, dumped it out... Until the water ran perfectly clear. This was like ten reps.



I opened the lid and took off the screen.
I added six cups of hot coffee and three tablespoons of gypsum to the birdseed.
I replaced the screen and lid, and filled the bucket up to within two inches of the top.
I set the bucket out of the way and left it alone for 24 hours.
After the 24 hour wait, I again dumped, filled, dumped, filled, dumped...
Until the water ran completely clear.
I used very hot water for the last couple of fill and dumps.



I inverted the bucket and let it drain through the screen for six hours.



After the drain, the birdseed was ready to be sterilized in filter patch bags.

Some of the following pictures show not just birdseed in the bags. They show a different substrate, this is because I suck at taking pictures.

So just visualize these bags always having birdseed in them.

There are other discrepancies too, like some bags not having RTV ports on them, again, just bare with me, at least there are pictures...



I put three full quarts of birdseed into each bag and folded the





I loaded the bags into my AA-921 and pressure cooked them at 15psi for three hours. Four bags per batch.





After the pressure cooker cooled and de-pressurized, I opened it and impulse sealed the bags.



I then removed the bags and made some RTV ports on them. The ports went on the opposite side as the filter patch, below it.





I then hung the bags like so to cool and self-inflate.



I inoculated the grain bags with the PE LC and put them on wire shelves.





These were the bags, hanging out, colonizing.



Colonized to 25% or so, so time for massaging.



After massaging.



Growth began again quickly and took off.



Here they were, finished and ready to go.



This grow log will follow the life of two of these bags and their try at it.

So I needed something to mix with this spawn...
What do I choose this time, so many options...

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STAGE THREE: Construct a Monotub and Prepare a Bulk Substrate



Following my monotub tek, I took two of these tubs and made them into monotubs.
These things are great, no plexi glass needed, the lid is clear(ish)!



I marked and drilled four 2" holes in each side.



The bottom holes are 5.5 inches from the bottom of the tub.
The top holes are 8 inches above the bottom ones.





I cleaned the tub well with vinegar and isopropyl and stuffed the holes with poly-fil.



I lined the bottom with a black trash bag, like with this tub.



Once complete, I just set these tubs aside to wait for use.

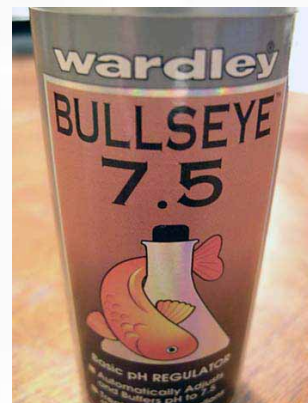
So I needed a bulk substrate to mix with the colonizing grain.
I was all out of horse manure, the other bags ate all of that.
Next best thing to horse manure in my house is...



Coco Coir.



So three bricks went into a five gallon bucket.



Three gallons of distilled water and three teaspoons of 7.5 pH regulator...



were heated on the stove to 150 degrees.



I added some hydrated lime, gypsum, kelp meal and blood meal to the bucket.



I added the three hot gallons of water and stirred well. The stirring incorporated all of those powder additives into the water. The coir then, in turn, absorbed that water and those additives.



A cover was placed on the bucket with a hole in it, and the coir bricks were allowed to expand for a half-hour.



After the half-hour, I opened the bucket to find three very expanded bricks.



I broke up the bricks very well using a knife at first. No big chunks at all left, all broken up.
These pictures suck, sorry, I suck with a camera. You can imagine though...



I dumped the coir into a mixing tub and added in the last little bit of tenn stud I had to the mix. But I wanted more...



Worm castings, diatomaceous earth, and maybe a touch of stevia leaf were added.

This was mixed very well until incorporated.
Some vegetable oil was added and mixed in.
And 7.5 pH regulated distilled water was added until the mix was field capacity.



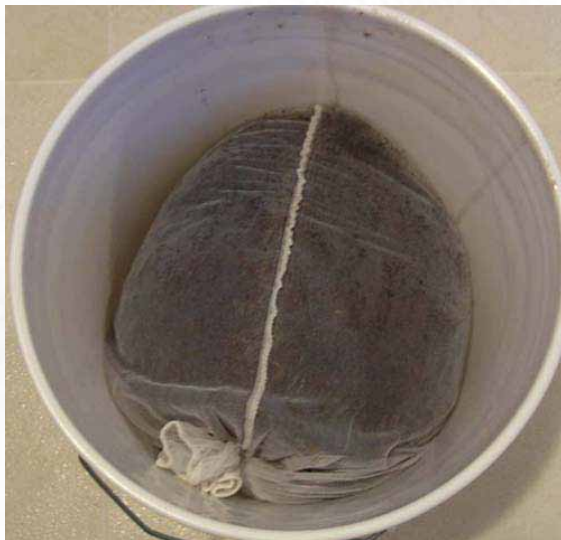
A five gallon bucket was lined with a paint straining nylon bag.



The bag was filled 1/2 to 2/3 full with this finished substrate mix.



The bag was closed and cinched together with a rubber band. This mix was enough to make two nylon bags full.



So the first one done was loaded into a five gallon bucket. (I always place them on their side, they fit much better.)

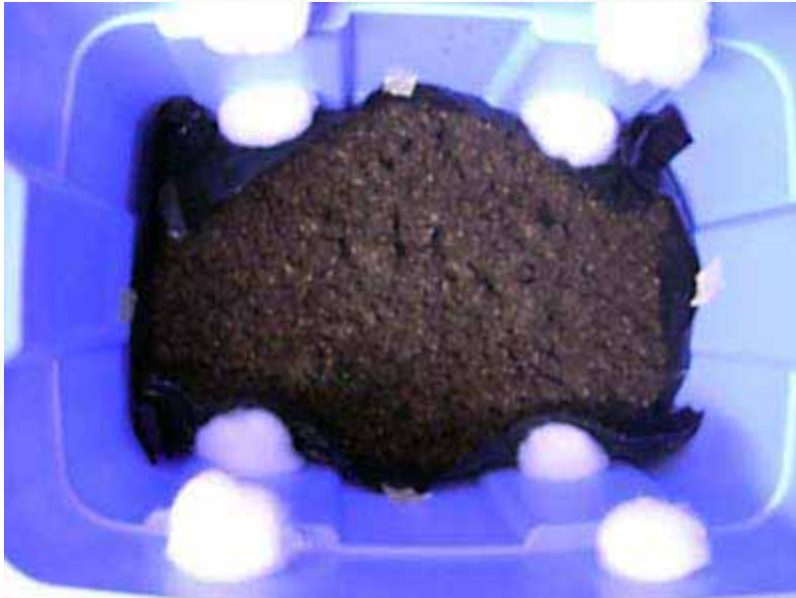


And the second one was placed on top of the first, filling the bucket.

Sticking to my bulk substrate tek, I heated about 3 gallons of water to 175 degrees.



I filled the bucket with 175 degree water, covered it with a lid, and let it sit and pasteurize for two hours.



Once the two hours were over, I put the two bags into a clean tub to drain and cool.
I squeezed them fairly hard at first and then just let them sit.

Okay, now I had some colonized spawn and some pasteurized bulk substrate material.
It was time to put the two together into my newly constructed monotubs.

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STAGE FOUR: Spawn and Substrate added to Monotub and Preparation of Casing Material

I showered and put on clean clothes.
I used listerine before and after brushing my teeth.



I put on an N95 mask and a shower cap.



I wore latex gloves and cleaned them well with 70% isopropyl.



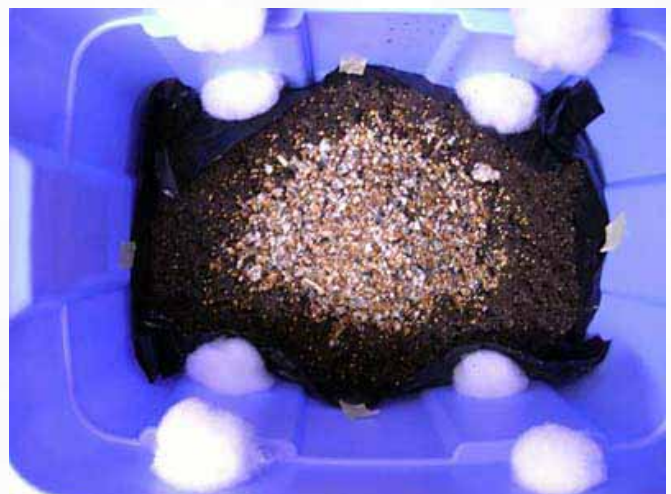
I put on latex gloves and cleaned them well with 70% isopropyl. I wiped down the spawn bags and tubs with an isopropyl paper towel.



I sprayed the hell out of the air with oust brand air sanitizer. I gave the oust a minute to work, then opened the first tub.



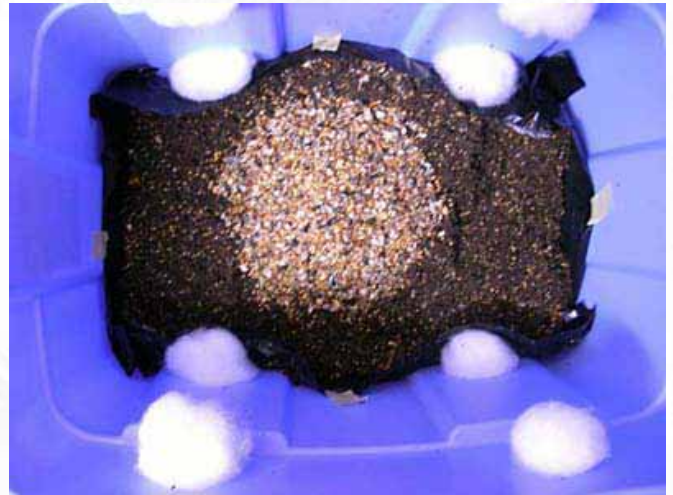
I emptied the bulk mix into the monotubs, leveling them out at around four and a half inches deep.
Sorry these pictures really suck in quality, I was trying to be clean.



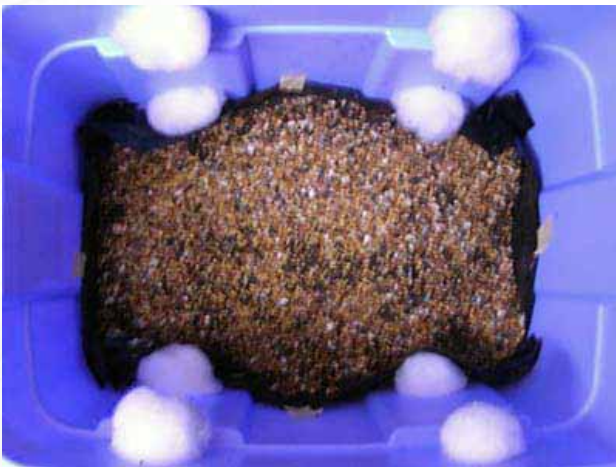
I dumped the spawn on top of the substrate.
Each tub required one bag which was 3 quarts of birdseed spawn.



I mixed it in really well, especially the bottom.

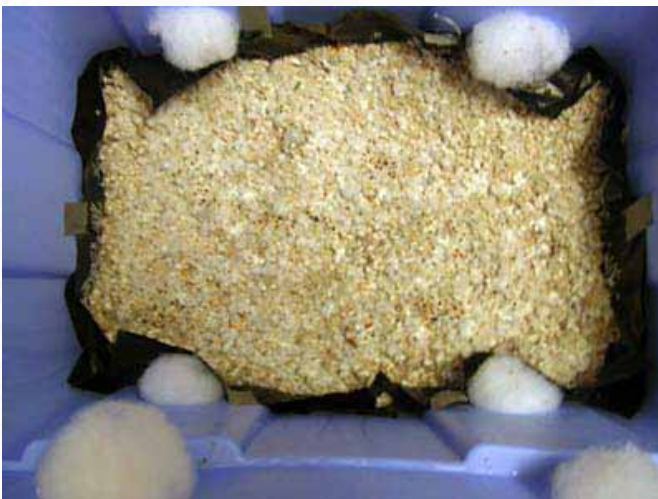


I added more spawn to serve as a spawn frosting layer.



I evened out the spawn frosting and closed up the tubs.

I placed the tubs under a blanket for about a week and a half.
74 degree room, blanket not too tight at all, allowing gas exchange still.





They colonized quite well and started to shoot up some rhizomorphs.

Now casing mix had to be made.

In recent past, I would make a traditional 50/50+ casing mix.

But this was more recent past, and I used a store-bought bagged product...



Miracle-Gro Moisture Control Potting Mix.

I said this would be easy, and it is.

So I made up only six quarts of this stuff, because that's all I need for two of those monotubs.

I forgot to take pictures of this part, maybe I'll make more soon and remember to take some pictures...

Recipe I used for my casing mix:

38 cups of Miracle-Gro Moisture Control right out of the bag

(I removed sticks and large pieces)

1/4 cup of hydrated garden lime

1 cup of oyster shell flour

1 cup of food grade diatomaceous earth

I mixed this all very well before adding any water.



I added 7.5 regulator distilled water until field capacity.



I tested the pH with my pH/Moisture probe and it was 7.5.
Perfect, now time to pasteurize the casing material on the stove.

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STAGE FIVE: Pasteurization and Application of Casing Material and Fruiting Parameters



I filled six quart jars full of casing material, NOT packed down tight.



I used new lids, not altered in any way and placed them on the jars.



I screwed the band down tight and loaded the jars into the Pressure Cooker.
(the middle jar is full of just water, to help keep the jars in place)
I filled the pressure cooker with cold water so the water was 2/3 up the side of the jars.



I put the lid on the pressure cooker, but not the weight, and started the stove on high.

I let the heat build and the water boil.

I let steam escape the valve for five minutes and shut off the heat.

I let the pressure cooker just sit there and begin to cool for a half of an hour.

I turned the heat back on high and repeated the boil and five minutes of allow steam venting before shutting the heat off again.

This time the pressure cooker was allowed to cool for two hours.

I removed the jars and brought them to a room to cool to room temperature.
Casing mix was then complete and awaiting it's use.

I moved the tubs out of darkness and into the clean room with still air.
I showered and put on clean clothes.
I used listerine before and after brushing my teeth.



I wore an N95 mask and a shower cap.



I wore latex gloves and cleaned them well with 70% isopropyl.



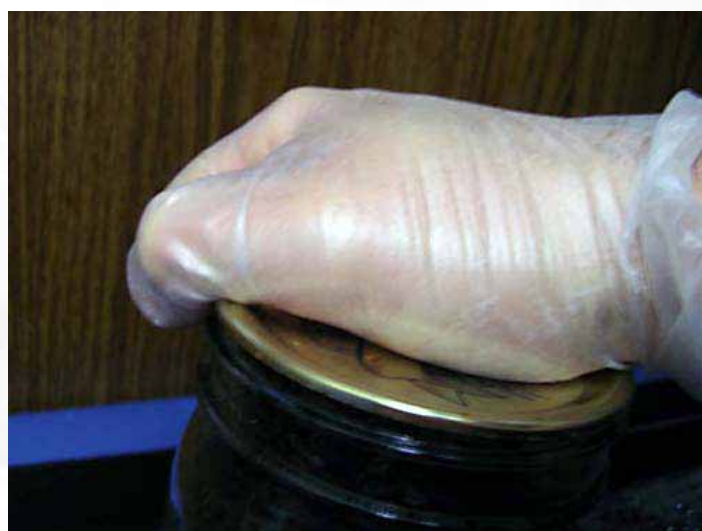
I removed the bands and wiped down the casing jars with an isopropyl paper towel.



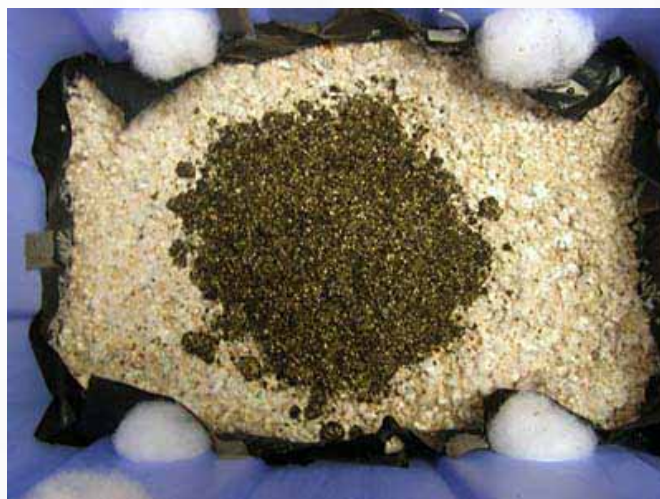
I sprayed the hell out of the air with oust brand air sanitizer.



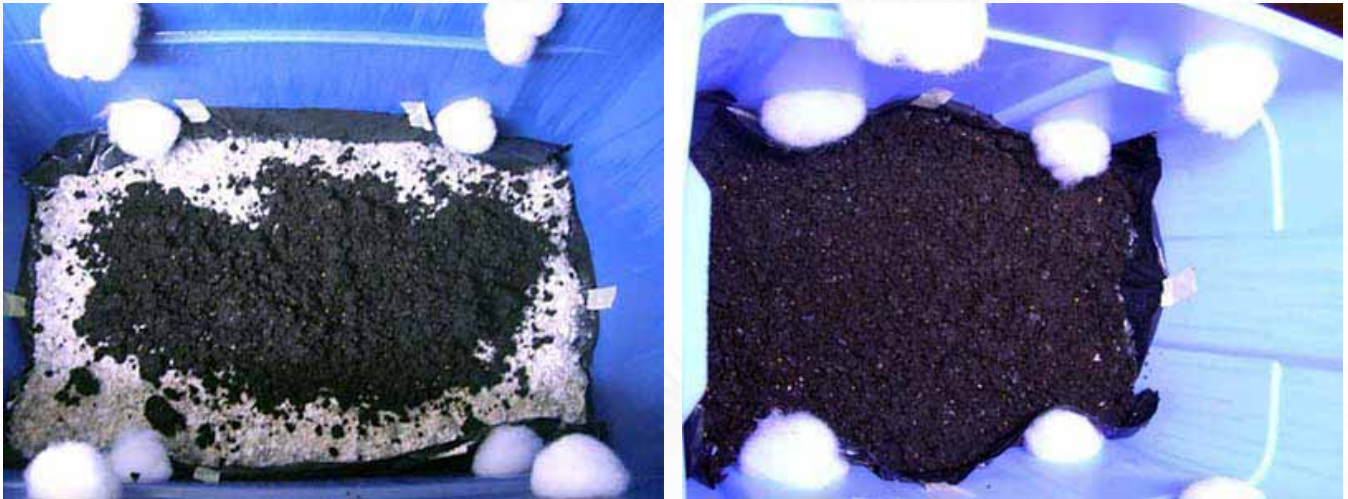
I gave the oust a minute to work.



I shook each jar well then popped the vacuum seal and set it aside.



3 quarts of casing per tub were added and leveled out very evenly.



The tubs were closed immediately and put back into darkness.

After three days, the mycelium began to poke through and the tubs were taken from darkness and placed into their fruiting room.

Fruiting is super simple with monotubs.

Parameters the tubs were placed in:

74-76 degree room, whole room heated with a radiator-type space heater.

Box fan on a shelf high in one corner, running on medium.

Another small fan in the opposite corner, oscillating on medium.

Empty, inverted tubs or milk crates used to sit the tubs on.

A fluorescent light in the center of the room on the ceiling with cool white bulbs, set on a timer for 13 hours on and 11 hours off.

That's it.

No misting, ever.

No fanning, ever.

No patching or any opening of the tub at all, until harvest that is...

The holes are placed so as to promote swirling of air inside of the tub.

The poly-fil is used to trap humidity inside that the casing naturally produces.

It's a wonderful fruiting environment.

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STAGE SIX: Harvest, Dunking a Bulk Substrate and Later Flushes

Pinning is a problem to show you.

See these monotubs never opened, and I couldn't photograph the pinset.

The lids are translucent to start, and with a touch of condensation they turn pretty much opaque.

So sorry folks, right now I have no pinset shots of these tubs.

Let's just say the pinsets were acceptable, but not overwhelming.

Here are some pictures of the fruits:



Each tub on their first flush, nothing too special really.



Nice color on the gills on this one.



Typical flush for one tub, six ounces cracker dry.

Some pictures of Second Flush Fruits for you:



A nice handful of solid fruits and a nice family of brothers and sisters.





My dehydrator was laughing at me.



But I got them dry.

Other Penis Envy pictures of mine for you:



Gill mutation.



The minuscule veil.



The single and double penises.



Super dense stipes on these pe pe's.





Nice shots from a bag.



After the harvest, it was time to dunk the substrates and get them ready for a second flush, this is how I did that:



I placed the tub into the bathtub.



I removed the poly-fil from the holes and set it aside.



I tilted the tub and carefully filled it with water up to the holes.



I gently submerged the substrate and loosened the bag around the sides.



I removed the bag gently.



I filled another tub with about two inches of water.



I carefully put the water filled tub on/in the tub with the substrate.
This top tub was an effective and even weight to hold the substrate under water.
Notice that some water ran out of the bottom holes, that was fine.



I positioned the tubs under the faucet and turned the water on slow.



I let the water run into and out of the bottom tub for 4 hours.
After the four hour dunking, I shut the water off.
This used about as much water as a typical shower would have.



I very carefully removed the top tub as to not spill any water onto the substrate.



I emptied the top tub and set it aside.
Now it was time to remove and drain the substrate.



I taped two of the bottom holes with duct tape.
This would be temporary.



I tilted the tub again and filled it as much as I could.
I cut a piece of house screen six inches longer and wider than the substrate.
I used the screen to easily lift the substrate out of the bottom tub.



I placed the substrate and screen on to a wire shelf on top of some trays to drain.

I let the substrate drain for four hours.

While the substrate was draining, I cleaned the monotub very, very well and replaced the poly-fil in the holes. I sealed the lid and set it by the bathtub for easy access when ready.



I slowly and easily shimmied a new plastic bag under and around the substrate.

I placed the substrates back into their clean monotubs and applied a fresh layer of brand new casing material to the substrates.

I then placed the monotubs back into the fruiting room and waited for a second flush.

And the grow is successfully completed.

What to do with the fruits? Make chocolates!

Works with any strain!!

