

Making and Inoculating Sawdust Blocks

Hello there. Today I'm going to demonstrate making and inoculating sawdust blocks. Sawdust blocks are very useful to the home cultivator. They don't take up much space and they will produce anywhere from three to six flushes depending on the mushroom that you're cultivating. And they're really very easy to make.

For making our sawdust blocks we need oak pellets, which are available just about anywhere. Amazon, any number of reputable sellers on the internet or even in your local hardware store. You know, take a look in the woodstove section you might be able to find them. And if you know someone who works in the woods, you could probably get sawdust blocks that are sawdust. The other ingredient is wheat bran. This is a nitrogen source that the fungus needs in order to colonize and fruit. And we need about a liter of water which is about 36 ounces in American terms. I like to measure this with my ball jar because I can very easily see by the measurement markings that I've got about what I need.

We will sterilize our sawdust blocks in a standard pressure canner. Okay standard Presto canner, two and a half hours at 15 pounds pressure. And one thing that you will want to do is put some kind of a buffer between the bottom of the canner and the autoclavable plastic bag that we'll be using. Because the bag is plastic, it can burn in the bottom of the canner. And while we're on the subject of the bag, this is a standard mushroom growing autoclavable bag. They are available again from any number of very reputable sellers, they can be obtained in different sizes. You will want to note the air filter on the bag. Fungi are obligate aerobes: they need the air as much as we do. So you'll want a bag with a filter, and you'll want it to be able to withstand the heat and pressure of the canner. That's why we look for the autoclavable quality.

I like to mix mine in a large container (that is my eight quart stock pot) ONE bag at a time so I can be sure that the ratios are correct in the recipe and that I'm putting a consistent amount in each one of my bags. Now my pressure canner will hold three of these bags. My usual recipe is one cup of oak pellet to one quarter cup of the wheat bran. Okay, so for the size of bag I'm using its four cups of the pellet to one cup of the wheat brand. And of course one liter of water. They do mix up pretty easily. You might want some gloves, standard vinyl exam gloves for these kinds of things because the mixture is kind of acidic, and it is just plain messy. You know the mess is why I prefer to use a much larger stockpot than I actually need, so I can keep things a little neater around the house.

And do not forget when you're inoculating your blocks, you're going to need some kind of a label. I'm ad-libbing with notepads because I ran out of computer labels, but hey whatever

works right.? So I will trust that you can measure and mix without any further ado on my part. So you know, you measure it, you mix it, you pack it in the bag. And when you fold down the bag, I will fold the filter inside of the bag to prevent any communication between the water in the canner and the contents of the bag. Now when I inoculate the sterilized block and seal it I will have the filter on the outside and I will tie it up here. I have tried to seal these using a standard hair straightener as we do with Mylar bags and that did not work for me. If you have something else by all means give it a try.

One thing about sterilizing your bags, you'll do it at 15 pounds pressure for two and a half hours. So you'll definitely want to fill the canner up about halfway up the bag. You'll need the extra water, because of the amount of time you'll be sterilizing it. And you need to sterilize it for that amount of time to be sure you're reaching the inside of the block. This is a pretty dense material, you know, we're not canning pears here. So you need the extra time. And for that you need the extra water. The other thing is to put something heavy on top of your bags, like a heavy saucer is what I use or a plate of some kind, because the plastic will expand and there's a danger that it will block the pressure outflow valve. This of course is bad.

So these are the ingredients, the items that you need in order to make your sawdust block. So mix it, measure it, pressure it, can it as I said for two and a half hours at 15 pounds. Then I leave mine in my canner overnight, for two reasons. One to let the block cool down so that it doesn't kill the mycelia that I am inoculating into the block. And two, since it's nice and sterile, I would just assume it stay that way. And in the canner overnight, it's not going anywhere. I do not open up my canner until I'm ready to inoculate my blocks. So we'll just pause one moment, and I will show you how to inoculate blocks from grain spawn.

Now that I'm ready to inoculate my block, I've gathered all the supplies that I require: my still airbox, my grain spawn, and today I'm going to do my black pearl oyster. As you can see, the jar is pretty well colonized, there's probably a space in the middle of grain that has not been used. That's okay. Since I'm doing three blocks, I'm actually going to use the entire jar. This is my sterilized sawdust block, which I just took out of the canner, and I actually loosened up the sawdust inside just by pressing on it. You don't want to open up the bag until you're inside the sterile environment of the still air box. But you do want to loosen it up a little bit. I've found that the block does get very tight, it can be very difficult to colonize and trying to do this after I've colonized it can rip the bag. So be very very careful. A butter knife, which will be sterilized. Again, I like a butter knife because it doesn't have many surfaces on it. This will be used for loosening the spawn inside of the jar and persuading it into the bag. The first thing we do is sterilize our still air box. Bleach solution all the way around, all the way through the box. This step may look kind of boring but it is very necessary and it will cut your contamination rate down a great deal. I will in fact do this between each of the three blocks that I plan to sterilize

today. Although for this video, I'm only going to show you sterilizing the one. Bleach solution inside of the box. Bleach the gloves. Give it a wipe because you don't want bleach dripping all over the place either you just want it as clean as possible without the rainstorm.

Bleach everything that is going into this box, wipe off the jar including the lid. Wipe off the butter knife and wipe off the spawn bag...the sawdust block, excuse me. Put everything inside of the still airbox and close up your box. Then we spritz a little of the solution I know I said we don't want a rainstorm, but we do want fairly clean air and we go about our thing. Hopefully you can see well enough inside of the box. I know it's a little opaque and again these are not the easiest things to work inside of. However, life could be worse. And one thing that will be wanted is something to close up the bag with. A rubber band will do very well and there's a reason I'm going to have this outside of the box you will see that in a minute.

So back into gloves. Find the top and open up the bag. Again, not the easiest thing to do but throwing out your supplies and several weeks' worth of labor due to contamination is also not the easiest or happiest thing to do. And I think you can see why it is I do one block at a time. There's just not that much room inside of the still air box and there's no reason to make matters worse. Take the lid off the box. Give the spawn a stir to break it up a little bit. Yeah, you're likely to lose a little bit on the bottom of the box during the transfer, don't worry about it. It's just not that big of an issue. Trust me once you get the fungi into this nice environment, they will very voraciously eat what is there and grow to make up any possible losses from the transfer.

Be careful that you actually have your green spawn jar inside of the block and give her a shake. Okay, said I'm doing three, three blocks today. So I'm going to do about a third of the jar per block. ***Close up your spawn jar before you do anything else, because contamination can be easily introduced between inoculations and spillage is not a good thing either. Now notice, if you can, that one of my glove holes has come a bit loose. This happens...it does break the seal. But we can use that fact since I've never seen anything I can do about it to poke the top of the bag out of that hole. Twist the bag very very tightly up top and use our rubber band to seal the bag. Now I believe I understand why the maker of my still airbox did not glue these things in place. Because if anything should happen to the glove and the glove would need replacing that would cause a difficult situation. So he didn't do it and that's what happens. The glove does come undone but adapt and adjust and make use of that fact.

I can pull the inoculated block out of the still air box very easily and since I broke it up a little bit before inoculation, it's easy to kind of give it a shake and mix the spawn throughout the day. Mix the spawn as much into the medium as possible again without ripping the bag. I will give it a label because labeling is mandatory and put it in my Martha tent along with everything else.

So that is the basic method for how we create and inoculate sawdust blocks. As you see, it's a very easy thing to do once you understand how to do it. It's certainly no harder than canning spaghetti sauce. So happy mushrooming! I hope my video was helpful.