Midwest Grow Kits Revision 5.1; 2018

How To Use Spawn Bags

This guide will show you how to properly Inoculate and Grow your Rye or 5-Grain Spawn Bags

⇒ Each bag has a self-healing injector site, which closes after you pull the needle out.

⇒ The white square filter patch located towards the top of the bag allows proper gas exchange but will keep contaminates out

Before you start

It is important to make sure that all spore injecting activities are done in the cleanest environment possible. Please use one of our sterile spore injection techniques located in our grow guide. Treat injecting the spawn bag just like a substrate jar.

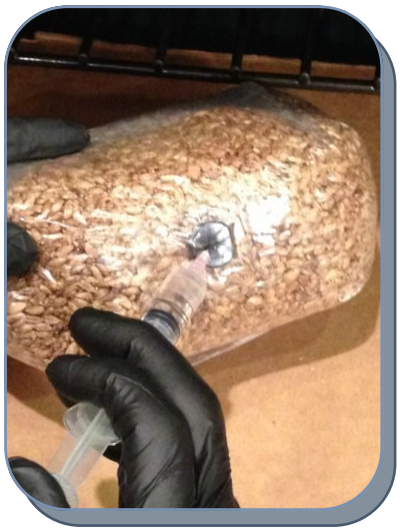
Inoculating

1. Wipe the syringe needle and the injection site (black spot) with an alcohol swab. Do not remove the clear poly heat tape that covers the port.

2. Pull the syringe needle cover away from the syringe

3. Flame the needle until it becomes red hot, wait 3 seconds for it to cool. Push the needle about 1/2 inch into the bag and inject about 2-3 cc's of spores. Pull the needle half way out and angle it in a different direction and inject another 1-2 cc's of spores We recommend a total of 4-5 cc's of spores per spawn bag.

⇒ Make sure you inject in multiple locations to help spread your spore solution around.



⇒ Unroll the spawn bag and make sure the filter patch is upright. Slowly pull the two sides apart and be careful not touch the white filter. The goal is to Provide a channel or path from the grain to the filter.

⇒ Place your spawn bags in a warm, dark location (74-77 degrees optimally) and leave to incubate. Unlike jars, Spawn bags colonize from the inside out so you will most likely won't see any mycelium growth for 7-14 days. Spawn bags generate their own internal heat while colonizing so the internal temperature of the bag is usually 3-4 degrees warmer. *Incubating at temperatures warmer than 80 degrees can cause excess condensation build up and cause wet spots to form slowing down the mycelium growth in that spot.*

⇒ Spawn bags are made of entirely organic whole grains, there is nothing besides the grain itself to hold the moisture. Gravity will slowly draw moisture down over time, especially in areas that are not yet colonized by mycelium. When working with slower colonizing strains, It's a good idea to rotate or angle the bag a different direction so a different side is facing down every week or so. This will help keep moisture from pooling and causing "yellow/brown" liquid to appear. Wet spots are considered normal, but when mycelium reaches these spots it takes much longer for it to colonize the area.

⇒ This picture to the right is a typical 5-Grain spawn bag at day 14-17. You will see white mycelium slowly spreading.

Fully colonized 5-Grain spawn bag rotated on its side.

⇒ *Unlike substrate jars, spores can react very different with whole grain. We see a wide variance in germination rates and colonization times but this will not affect the end result. Some strains can take 60 days+ to fully colonize while others can take as little as 30!*

The Great Grain Mix up! (Optional Step)

When your spawn bags are about 20-30% colonized or around 12-18 days, you can use this technique to speed the overall growth of the bag. We list this step as optional because it works great 90% of the time but if you are not careful to reform the bag and remove air pockets and loose grain it will not be able to re-colonize properly.

⇒ Start by using your fingers to break up all the white mycelium you can see into tiny pieces. Be careful not to puncture the bag with your nails

⇒ Mix the mycelium up in the bag by shaking it and kneading it with your fingers. After spreading the white mycelium around, carefully repack the grain to its original shape. Grab the top of the bag and let it fall 12" or so on a counter. Do this a few times. This will pack the grain back down. Next, any loose grain you can press and form with your hands to ensure there are no large air gaps or spaces.

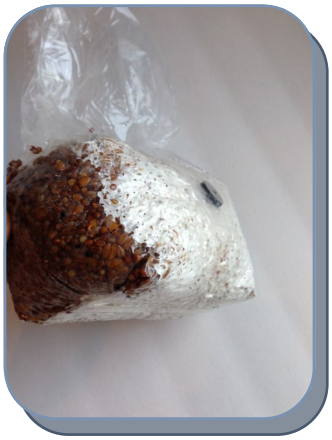
⇒ Place your spawn bag back into the incubation chamber and do not move it or disturb it for the next few weeks. You may not see any progress right away but within 7-10 days you should see new growth all over the bag. This will continue until the bag is 100% colonized!

⇒ Complete colonization may take 30-45 days depending on the species and what temperature you incubate at. Unlike jars, the speed that spawn bags germinate and colonize may have a much greater variance. The photo to the right is a 5grain spawn bag full colonized and ready to move to the next step!

Typical Growth chart of a Spawn Bag

Day 14 Day 25 Day 28 Day 35






Fruiting Your Spawn bags

There are 3 different ways to fruit spawn bags. The most popular and recommended way, is the bulk casing method. The yield is four to five times more than the other methods of fruiting. Your second best option for fruiting would be to use a fruiting chamber with perlite like you would the substrate jars. The last option is to fruit directly in the bag.

Bulk Casing Method

This method is typically an advanced way of growing, but using our premade casing mix has made this process easier and more convenient! This method involves simply breaking up the fully colonized spawn bag into small pieces and mixing it with the casing in the appropriate container (see ratios on bulk casing guide). The spawn and casing re-colonize and form a solid large cake. This provides five times the surface area and results in a much larger yield. This has now become the most popular method for first time spawn bag growers. If you choose this method, please refer to the bulk casing guide on our guides page.

Fruiting in a Humidified Chamber

The second most popular way to fruit your spawn bags would be to use a container with dampened perlite (white volcanic rock). This is the method our substrate jar kits use. You will need vermiculite in this method to provide moisture to the cake and keep it hydrated.

⇒ Start by removing the colonized grain from the bag. Dunking is not recommended with the spawn bags because they will not absorb water directly into the grain. This is why you need vermiculite.

⇒ Place a piece of foil on top of the perlite. The foil should be about one inch larger than the cake on all sides.

⇒ Place a 1cm layer of vermiculite on the foil. Use a spray bottle and moisten the vermiculite enough so it's saturated, but you don't want any standing water. Use spring or bottled water for misting.

⇒ Place the spawn cake on the vermiculite and add another 1cm layer of vermiculite on top. Spray top layer with water to dampen. You will need to keep the vermiculite damp by misting daily.

⇒ It can take a few weeks for mushrooms to form. There are typically no set flushes for this style of growing, the mushrooms will just grow sporadically for the following weeks.

Fruiting in the Bag

The last method is fruiting directly in the bag. This method is easiest, but typically yields the least. You will need vermiculite for this method to keep the grains hydrated.

⇒ Cut the top of the bag off. Cut above the white filter patch.

⇒ Remove the spawn cake. Add a 1cm layer of vermiculite in the bottom of the bag, then use a spray bottle to moisten the vermiculite enough so it's saturated, but you don't want any standing water. Use spring or bottled water.

⇒ Put the spawn cake back in the bag and add another 1cm layer of vermiculite on top of the spawn cake. Spray with water like you did the first layer.

⇒ Fold the top of the bag over and use a binder or paper clip to keep it closed.

⇒ Open the bag twice a day for a few minutes to allow fresh air exchange. Mist the vermiculite as needed to ensure it stays hydrated.

⇒ It can take a few weeks for mushrooms to form. There are typically no set flushes for this style of growing, the mushrooms will just grow sporadically for the following weeks.

Spawn Bag Tips & Frequently asked Questions

⇒ Typically most people have always colonized spawn bags in the dark like the jars. Recent testing and research has shown that light doesn't have any effect on colonizing. Since premature pinning before 100% colonization doesn't happen with spawn bags, do whatever is convenient for your setup.

⇒ When incubating spawn bags with a heating mat, make sure you raise the bags at least an inch above the mat. Use some thick books or anything to make platform for them to sit on. Heating mats can have hot spots which can dry out the grain on the bottom.

⇒ When incubating in one of our kits or your own container, keep the lid closed but open and fan out the container at least once a week to allow fresh air to enter.

⇒ If you plan on doing a bulk casing grow and you have a bag that is over 75% colonized but appears to have stopped colonizing, use a marker to trace where the mycelium is, If it hasn't moved past your line in a week and you are ready to move on to next step of breaking up the cake, you can remove the cake from the bag and simply brush off any un-colonized grain. Make sure you only use colonized grain in your bulk casing tub or tray.

For additional help or questions please email us at *support@midwestgrowkits.com* or call us at (800) 921-4717