

## Germinating Cannabis Seeds (for Bio Growers)

Your seedlings will be a lot better off if you germinate directly in soil - less handling and mechanical disturbance means less chance of physical damage to the plant's taproot (and root hairs) and less food reserves used to position itself due to the natural hormonal influence called Gravitropism.

This is my foolproof method for Cannabis Seed Germination in soil:

First, if harvesting seeds from my own crosses, I air-dry newly harvested seeds for a couple of weeks, and then store them in the refrigerator with a little rice. Cold-treatment seems to increase viability and germination rates, especially with indica-dom strains. I almost always get a 100% germination rate with quality seed stock.

Soak the seeds in plain water for 12 hours prior to planting to hydrate them, which will speed up germination. In general, good seeds will sink, bad seeds will remain floating (they contain air, not an embryo). I first sterilize seeds in a bleach solution (1 Tbsp. Bleach/1 gallon of water) for 1/2 hour to kill any fungus residing on the seed coat.

Sterilize enough \*damp\* fine soil with heat to germinate all of your seeds. You can do this by treating the damp soil to temps of (no more than) 200F for 20 mins in a conventional oven, or in a microwave oven on high for 2 minutes, while stirring a couple of times. Your goal is to get and hold the entire soil mix's temperature at 170F to 180F for about 20 minutes which can be monitored with a probe type thermometer. Let the mix cool thoroughly. This will insure that damp-off fungus spores have been killed in the soil mix. Make sure the soil mix is light and humusy (not real coarse). You can add a little sand or vermiculite to aid in drainage and weight.

Buy some white 20oz Styrofoam "drinking glasses", commonly called "Styro-Cups", and punch holes in the bottom (and side bottom) for drainage. I use a red-hot ice pick for this. These containers are 6 1/2" tall and will allow ample room for the taproot to grow before cotyledon emergence which will increase your seedling's vigor. The taproot (radicle) is already at least 4" long at the point of emergence - don't restrict it (in order to maximize seedling growth rate). Styro-Cups can be found on the shelf displaying picnic items at your local grocery store.

Fill the pots almost to the top with your soil mix, water well to settle the mix, take a pencil and make a small hole about 1/4" to 1/2" deep, NO deeper, and drop \*one\* seed in. Cover the seed with \*fine\* soil, only enough to top up the hole, firm lightly with your finger, and lightly water until water runs freely thru the drain holes. Place in a warm spot around 80F/26C. Do NOT cover the cup with saran wrap or anything else. The seed has been hydrated from the soaking and will germinate soon. This container should not require further watering until the seedling is up and running.

During the first couple of days, mist the top soil surface lightly (if need be), never allowing the top to crust over, but not to the point that the medium stays waterlogged which will invite

pythium rot (damp-off). "Less is more" at this point. Do NOT water this pot any more until the seedling is up, and only if it needs it at the point of emergence. Again, no need to cover with plastic wrap as the radicle (taproot) will grow at least 4" before the cotyledons emerge from the soil. IOW, even though you can't see it, the plant's root is seeking and finding moisture at the container's lower soil levels. I cannot emphasize this enough. The seedling will emerge anywhere from 2 to 10 days from the time you sowed it.

That's all to it! With good care, your faves will be ready to transplant within 1 to 2 weeks, and will easily slip out of the "cup" with a solid rootball that will never know it's been disturbed if potted up gently and quickly. Move up to a final pot of 3 to 5 gallons to sex and finish.

An effective transplant solution can be made using (no more than) 1 teaspoon of a 15-30-15 fert and 10 drops of Superthrive per gallon of water. Take note regarding the immediate growth spurt after this transition!

Good luck,  
Uncle Ben

.....and here are a few caveats archived from another thread.....

Quote:

Originally Posted by **UB**

*The dormancy of a seed is determined by a fight between auxins and anti-auxins. It is with the proper conditions (warmth, moisture, etc.) that the auxins finally "win" and break the plant out of its embryonic dormant state. Now, there are other hormonal responses involved such as gravitropism which play a part in all of this. IOW, the effect of gravity on certain plant parts - foliage responds in opposition to the pull, root tissue responds in favor of it. So, if you hydrate a seed which does nothing more than speed up the germ process, and just before the seedcoat cracks sow it, it then stands the best chance of orienting itself due to the pull of gravity and using stored reserves in the germplasm (cotyledons) for maximum vigor and health. A "healthy" plant is strong enough to overcome some issues that could ruin its survival such as damp-off, caused by pythium and such.*

*It's a no-brainer, you don't check or fool with anything, you just soak the seed for about 12 hours until it sinks, sow it, and you're done. If it doesn't sink within 12 hours, you have an air pocket in place of a viable embryo. You probably don't want to take this chance with your treasured seed stock but you can apply pressure between your index finger and thumb on a seed and if it doesn't easily crush/collapse, then chances are almost 100% that it has an embryo, just waiting to pop out in all of its glory.*