

PEPPER GERMINATION TIPS



HOT PEPPER GERMINATING TIPS

REQUIREMENTS:

- Potting soil
- Salad take-out plastic container with clear plastic dome.
- Soil thermometer or Taylor brand indoor-outdoor thermometer.
- Pepper seeds.
- Distilled water.
- Miracle-Grow "Bloom Booster" or Peters Professional "Super Blossom"

Make a "Seed starter solution" of either the Miracle-Grow or Peters

Professional, mixing one tablespoon in a gallon of distilled water.

Also, do not use bleach on your pepper seeds and never refrigerate your seeds to start them!

Fill planting container with potting soil and sprinkle with the starter-fertilizer solution to settle soil. Plant seeds, spacing 1/2" apart, and cover with no more than 1/8" of potting soil. Water with the Seed starter solution, and use the solution instead of tap water, whenever the containers need to be re-watered. Do not use tap water or well-water on very young seedlings because the chlorine or minerals may damage the seedlings. If you want to use other containers, buy some 8 inch diameter plastic pots and fill with potting soil. Once seedlings are a few inches tall, transplant seedlings into their own individual 3" or 4" pots, and let plants grow to 6-8" tall. Work about a teaspoon of Bone Meal into the potting soil of the 3-4" pots before you transplant the seedlings into them. Once transplanted into their own individual pot, start watering with an organic fertilizer, like Alaska "All Purpose Spray Plant Food" or Fish fertilizer. Do not continue to use the Miracle-grow or Peters Professional once the seedlings are up.

NEVER, NEVER, NEVER ever use peat pots, peat pellets, or potting soil that is made of mostly peat.

Everyone always asks "Why??" ---We don't know---It may be that the peat is too acidic, or that there is something naturally in peat that inhibits pepper seed germination? All we know, is that whenever anyone has had problems with pepper seed germination, when the seeds have been proven to have good germination when tested on top of moist cotton--part of the problem has always been peat pellets or potting soil that was mostly peat.

TOP TEN THINGS TO DO - WHEN STARTING PEPPER SEEDS:

- 1.) Never ever, ever, ever use peat pellets, peat pots, or potting soil that is made up of mostly peat.
- 2.) Always give 80-85°F (25-30°C) daytime soil temp., and room temp. at night. Do not refrigerate!
- 3.) Always use a soil thermometer or Taylor brand indoor-outdoor thermometer.
- 4.) Always use an organic fertilizer on older seedlings.
- 5.) Never plant seeds more than 1/4 inch deep.

- 6.) Always let the soil surface dry very slightly before re-watering.
- 7.) Always use the Seed starting solution on slower-germinating kinds. i.e. Habanero, Trinidad Scorpion etc.
- 8.) Never use table salt.
- 9.) Never use bleach.
- 10.) Don't give up -- a lot of hot peppers take almost a month to germinate (see below).

Plant pepper seeds, spacing them 1/2" (one cm.) apart in each direction and no more than 1/4" (6 mm) deep. Keep containers 80-85°F (25-30°C) during the day and 60-70°F (15-20°C) at night. Make a hole in the clear plastic top for the thermometer to go through. For a few hours each day, take the cover off the container in the afternoon to let air in. This will help control "damping off" fungus, which is a disease which attacks the seedlings and makes them topple over. To water without disturbing the seedlings, with the holes punched in the bottom of the container, you can water or re-water by letting the container sit in a bowl of water and soak up the water through the bottom holes. Make sure that the soil level is above the level of the water when the container is soaking up water.

KEEPING THEM WARM: There are at least three inexpensive methods to provide the 80-85°F (25-30°C.) soil temperatures that pepper seeds love for germination---

- 1.) The heating pad method from the pharmacy. Purchase one that can get wet and put it under the flats or pots that your pepper seeds have been sown in. We DO NOT recommend the commercial seedling heating mats, because they do not get the soil temp. high enough. Also, we do not recommend soil heating cables, because you have to put them into sand beds, and can't just put them directly underneath pots.
- 2.) The light bulb in the cardboard box method. You need a cardboard box approximately 2 x 3 x 3 feet (0.6 x 1 x 1 meter), a ceramic light socket, lamp cord long enough to go from a wall socket and where you will have your germination box set up, an electrical plug, a 40 watt utility light. Place box on its side and bolt ceramic socket to the inside of the box about half-way up on either the left or right side. Keep light on during the day, but turn off at night to allow seedlings to return to room temperature. A 40 watt light will keep the inside of the box at 80-85°F (25-30°C).
- 3.) A high shelf in a heated room. The 80-85°F (25-30°C) daytime soil temps for peppers only have to be maintained until the leaves break the soil surface, and then seedlings can be moved to a cooler place with abundant light. If you check high shelves near the ceiling, you might find one where the heat in the room keeps the temp. at the right level during the day. You just need to make sure and keep the seed pots adequately moist, and never allowed to dry out, which may be watering once or twice a day.

GERMINATION SPEED -- Regular sweet peppers are very quick to germinate, usually 6-8 days.

HOT PEPPERS always take longer, a minimum of 15 days, but up to 100 days!

--Habaneros always take a minimum of 18-25 days.

--East Indian, Malaysian and Thai hot peppers always take 20-55 days.

--Bird peppers like Pequin and Tepin, and Ghost or Scorpion peppers (the world's hottest) are always the longest: 21-100 days. Daytime heat of 80-85°F (and fertilizers will cut the

time down to 25-30 days. Once seedlings appear, remove cover completely and put in a sunny place. Transplant seedlings into individual 3" (8 cm) diameter pots with potting soil as soon as they can be handled, and let grow in those containers until strong. Plant young plants outside when night time temperatures consistently are above 50°F (10°C).

DROOPY SEEDLINGS? Do the seedlings come up, and then suddenly droop and die? That's called "damping off" fungus, which grows on the soil surface when it is kept too wet, and when there's not adequate air circulation. Keep the potting soil on the dry-side, always give good air circulation, and always let the very top surface of the soil dry out before re-watering the seedlings.

FERTILIZERS: Watering pepper seeds with a fertilizer solution, helps speed seed germination, by breaking a natural dormancy that is naturally in some pepper seeds. When seedlings appear, we only recommend using diluted fish fertilizer (available in a bottle at the garden store). The fish fertilizer can be fed frequently, and never burns. We usually feed our plants every 3 weeks during the growing season. Habaneros, especially, will need calcium many times during the growing season, in the form of Bone Meal, a few Tablespoon per plant. Scatter the Bone meal around each plant, and water in. You can tell when you need calcium if the plants stop growing and if young leaves start to pucker---they are running out of calcium to build new leaves.

BONEMEAL is available at any hardware store, and is usually used for roses, and give each plant a sprinkle of bone meal every two weeks during the growing season. We use 4 pounds for 100 plants each time we fertilize.

SPACING IN THE GARDEN -- Sweet peppers are usually dwarf, so can be packed in at about 1.5 feet apart. Most hot peppers need about 2-3 feet and the sprawling Manzanos or Rocotos (*Capsicum Pubescens*) need 3-4 feet, but in Florida, Hawaii and Coastal Southern California they are perennial vine-like plants that can be trellised like grapes. The Manzanos when 3-4 years old, and when they are trellised, will produce hundreds of pounds of fruit per plant.

CONTAINER PLANTS -- All peppers are perennials and can be grown in 2-3-5 gallon containers of potting soil year-round. Just bring in the plants when the nights drop below 50°F. and put them back outside when the nights are consistently above 50°F.

TIME TO PRODUCE -- Once your pepper plants are out in the garden, how long will it take them to produce? Green, unripe fruit is generally produced in 55-75 days after setting plants out into the garden, and red-ripe fruit is 90-150 days. There are exceptions to that rule, like the Chimayo hot pepper from the high mountains of New Mexico that starts flowering as a seedling, and will produce fruit in 30 days!

YOUR PLANT MAKES FLOWERS BUT NO FRUIT? Most hot peppers and some sweet peppers require insect pollination to form fruit. If the proper insect is absent, or if the local insects are not attracted to your pepper flowers, you may see the plants flower and never set fruit. This is especially true for the blue-flowered *Capsicum Pubescens*, the Manzanos or Rocotos, or hot peppers grown in a greenhouse. Pollen is produced on the stamens, and usually ripens between noon and 3 p.m. every day. Take a moistened water-colour paint brush, and pick up some pollen on your brush and transfer it to the other flower centres. You can get close to 100% fruit set with hand pollination.

TOP 3 FASTEST WAYS TO KILL PEPPER SEED GERMINATION:

- 1.) Store them at room temp. in any of the following places:
 - (a.) Near the floor or less than 3 feet off the floor (where moisture condenses).
 - (b.) In an unheated building or outside (shed, etc.) --- no moisture control.
 - (c.) In a cupboard or drawer, that doesn't get good air circulation.
- 2.) If storing seed refrigerated or frozen in a jar or a plastic zip lock ("Hefty") bag and open the container before the seeds reach room temp. when they are still cold, moisture condenses on seeds.
- 3.) Store them in plastic or a glass jar, and you don't have a way to tell if there is moisture still in the seed, at least a strip of newsprint. Jars and plastic zip lock (I personally like the Hefty Freezer brand) are great but you need to put a slip of newspaper in with the seed. If you pull out the newspaper, and if it is not crispy-dry, you need to dump out both the newspaper and the seeds out onto a paper plate to dry in the sun, to drive off excess moisture. You can purchase some "indicator silica gel", and put that in with your seeds to absorb moisture. Label and date your seed stocks. Properly dried seeds in jars or Freezer zip locks even at room temperature will probably give an extra year to your seeds life, and refrigeration may keep your seeds for 5 years or more.

Seed Counts.

Variety.....	Seeds/oz.....	per lb.....	per Kg.
Chocolate Habanero.....	6,250.....	100,000.....	220,000
Manzano or Rocoto.....	4,400.....	70,000.....	155,000
Serrano.....	9,072.....	148,000.....	320,000
Tepin.....	7,250.....	116,000.....	255,000

REMEMBER-- All peppers are perennials, and make nice house-plants if grown in potting soil in 2-3 gallon plastic pots, and taken indoors when the nights drop into the 40s. Move plants outdoors when nights go back into the 50s. Plants will live for several years that way, most will stop growing in the winter and lose most of their leaves, but will leaf back out in spring.