

How to Start Seeds & How to Thin Seeds

Botanus Garden Club Episode 156 – Certified Organic Vegetable Seeds

The Hindi word for seed is 'Bija' which means 'Containment of Life' and that is exactly what seeds are, little containers of life. We have been thinking of adding certified organic seeds to our selection for a while and once we found a great certified organic seed company (Aimer's Seeds) to partner up with, we were ready.

Before you even start please keep the following thoughts in mind:

- Prepare for some losses, it happens, plant a few extra just in case.
- Most vegetables should be sown indoors 6 weeks before the last frost in your area.
- Don't start too early, especially with tomatoes. Follow the directions on the seed packets, you may have to soak, scratch or chill the seeds before planting.
- Use clean containers = seedling flats, peat pots or paper egg cartons.
- Make sure there are drainage holes (egg cartons, poke holes in the sides near the bottom).
- Label all containers right away!! All seedlings tend to look the same when they first emerge.

HOW TO START SEEDS INDOORS

Use seed starter mix, potting soil is not good enough. Seed starting mix is equal parts of peat moss, perlite and vermiculite. This mix will hold enough water but allow oxygen to flow and that is critical for germination. Add some warm water to your seed starting mix to moisten and then fill each container to just below the rim, at least 2 inches deep. Plant the seeds according to the directions on the package to get the best germination rate.

Set in a south facing window and turn the containers everyday. To speed up germination you can cover the containers with plastic wrap and poke holes, with a toothpick, for ventilation.

Water as directed but remember to **water gently** and **indirectly** because forceful watering can dislodge the seeds or drown them. Too much water also starves the plant of oxygen. Misting would be good but make sure they get enough water. Some people use turkey basters as the water can be given slowly, or a small watering can with a nozzle that has many holes. Bottom heat works well and the optimal room temperatures are between 65 and 75 degrees.

When the seedlings appear, remove the plastic wrap and move into bright light. When the seedlings get their second pair of leaves, also called true leaves, that's when you can move them to individual pots, filled with potting mix and compost. If you are still using a seed starting mix then you will have to fertilize them once a week.

When repotting them never squeeze the stem, hold onto the end of a leaf and use a spoon to gently lift around the roots to repot. After repotting keep them out of direct sunlight for a couple of days. Stroke the seedlings or set a gentle fan towards them to toughen them up. When they go outside they will be hardier.

Now it comes to the time when the last frost is passed and you can start to harden off the plants. This means getting them sensitized to the outdoors.

During their last week indoors, withhold fertilizer and add water less often. During this time, between 7 to 10 days, before planting outside, set the seedlings outside in dappled shade (out of the wind) for a few hours each day. Keep the soil moist **at all times** during these outdoor periods because dry air and spring breezes can result in a rapid loss of moisture. Bring them indoors after each period outside.

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After 7 to 10 days of this hardening off process you are ready to transplant. Transplant on days that are overcast and possible early in the morning when the sun is not too hot. Set your seedlings in loose, well-aerated soil. Soak the area around the new seedlings immediately after planting. Spread a mulch to reduce moisture loss and control weeds.

To ensure there are plenty of nutrients for root growth, use a watered-down fertilizer with a high middle number, phosphorous fertilizer. 2 tbsp of 15-30-15 to 1 gallon of water. Give each seedling a cup of this mix. Sometimes you are using a potting mix with fertilizer in it and you would not need to follow this step. Now all you need is to let them grow, plenty of sun and warm temperatures and water.

THINNING VEGETABLE SEEDS

If you plant your seeds one at a time then you will not need to thin but if you have planted many seeds in a small area then you will have to thin them out. Thinning would either be when you have planted them indoors and are ready to plant them in individual containers or if you have planted them directly outdoors and they are all tight together in the garden bed.

You might look at all the seedlings and think, *I want a lot of these so I'm going to leave them all*, but the whole idea behind the thinning practice is to allow seedlings plenty of growing room to reach their full size. This is something they cannot do if there are lots of other seedlings all around them taking up space and nutrients. You want them to meet all their growth requirements without having to compete with those other seedlings. It also improves air circulation around them.

You should remove excess seedlings once they have grown 1 or 2 sets of 'true leaves', these are the **second set of leaves** to appear and most seedlings will be 2-3" or 5-8 cm tall at this time. The first 2 leaves to appear are called seed leaves or cotyledon.

Read the seed packet so you know how far apart your seedlings should be and then you will know how much you have to thin. The average rule of thumb is to have a 1 or 2 finger width between each seedling.

You can thin the plants by dampening the soil, so the roots won't be disturbed too much, and then gently remove the excess ones by pulling them out. Try not to disturb the nearby roots. This is best done in the evening hours when temperatures are cooler and it's not bright out. It's less stressful as this time and allows the remaining seedlings to bounce back more quickly.

Another method which works well is to use scissors to snip the greenery off the excess seedlings. Cut them right at the soil level and the roots will die with that top removed. Many of the vegetable seedlings can be collected and given a rinse and then toss them in a salad.

Root vegetables, like onions, carrots, beets and turnips are very sensitive to the thinning process and if the roots are disturbed while young it can cause deformation and transplanting long rooted vegetables can cause them to fork. You will want to pull 1 seedling at a time or trim unwanted seedlings right at the soil line. Spacing varies but if you think about how big around you would like your carrots to be, leave them that much space and a little more.