

Grow It!

Seed Starting & Garden Planning

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Why Start Seeds Indoors?

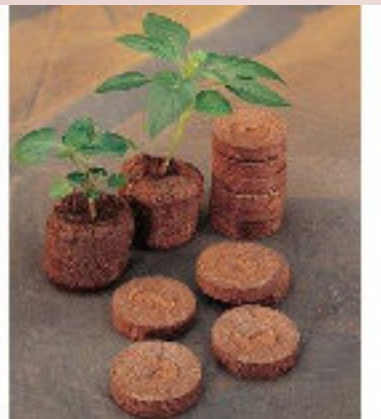
- Earlier harvest
- Control germination
- Selection of strongest plants
- Prevent pest and weather damage to young seedlings
- Compensation for length of season
- Increase variety of vegetables available to you

Medium



Seed starting mediums should retain water, be disease free, and have a fine texture

- Seed starting mix
- High quality potting soil
- Peat or Coco pellets
- Rock wool (Grodan)



Don't use compost or garden soil to prevent introducing pathogens

Containers

- Open tray seeding good for plants whose roots are not sensitive.
- Use small, plantable cells/ pots for plants that have sensitive roots (cucurbit family).
- Select cell/ pot size appropriate to seed size.



Soil Blockers

- Uses galvanized metal forms to create soil “clods”.
- Great way to minimize use of disposables.
- Naturally air prunes roots for health
- We recommend using a mixture of 3 parts Eden Valley premium potting soil to 1 part worm castings.
- Water with mister until good roots have formed to avoid soil block erosion.





Heat Mats

- Many seeds need temperatures of 70-90 F to germinate, or at least germinate much better at these temperatures such as:
 - Tomatoes, peppers, eggplant
 - Basil, cilantro
 - Cucurbits
 - Not mandatory for lettuces, cruciferous veggies, spinach, but can be useful to speed up germination.



Light

- As soon as cotyledon leaves appear, light is critical (12-15 hrs ideally).
- Lack of light makes unhealthy spindly plants.
- If using light from window, be sure to turn plants daily to prevent leaning.
- Use supplemental lighting if adequate natural light isn't available.
- We recommend leaving light on 24 hours a day until 1st set of true leaves appear, then scale back to turning off lights when you sleep.

Sunblaster nanodome greenhouse



5 basic steps for starting your seeds

1. The growing medium should be thoroughly moistened before it is placed in your seed starting containers (warm water works best).
2. Fill the trays or containers with mix and gently tamp down soil to reduce air space. You want to leave $\frac{1}{4}$ to $\frac{1}{2}$ inch at the top.
3. Seeds can either be scattered on the soil surface or placed individually into each growing cell. Most seeds should be covered with a fine layer of soil. You should cover most seeds two to three times their thickness, but read seed packet for specific directions.
4. Gently moisten the growing medium (using a mister or gentle watering can) to ensure good contact between the seeds and the soil. Label each flat, row, or container with a wood or plastic marker so you can identify them later. Save the seed packet for reference.
5. Make sure soil is kept consistently moist, but not soaking wet, during germination.

When do you fertilize?

- Since the “soil less” medium is generally lacking nutrients the plant will need to be fed once it produces first set of true leaves.
- Feed with soluble organic fertilizer, like fish and kelp and/or “bump up” to larger pot with nutrient rich potting soil.



Common Problems

Seeds didn't germinate, or didn't germinate well.

- Seeds were over watered and rotted.
- Seeds dried out from lack of .
- Seeds were planted too deep or not deep enough.
- Seeds are too old.
- Low germination rate on seed species.



Common Problems, cont.

- **Seedlings look spindly**
- - Not enough light (ideal is 12-15 hrs).
- * Leave artificial light on for 24 hours per day on new seedlings until they push first set of true leaves.



Common Problems, cont.

Veins and underside of leaves turning purple

- Phosphorus deficiency



Common Problems, cont.

- **Young Seedling seems healthy, then topples over at base**
 - - Damping off fungal disease. Preventable by using soil less medium, preventing over-watering.
 - - Water with weak chamomile tea.



Common Problems, cont.

Mold developing on soil surface

- Result of over-watering.
- Not harmful if corrected by holding back water. If left unchecked, can block oxygen from root zone. Can be manually broken up, as below.



Transplanting

- Transplant when plant has second set of true leaves, or when it outgrows its space.
- Tease roots free of tray with spoon, butter knife, or mini-transplanter.
- Try not to handle stem too much as it is fairly fragile. Hold plant by leaves when moving.
- Plants in the cucurbit family don't like their roots disturbed, so plant in plantable pot and transport directly to garden after danger of frost has past.



When do you transplant outside?

Our statistical last frost free date is approx May 10 . . . Which only means on that date we still have a 50% change of frost. Be prepared with season extenders if you decide to move your tender plants outside before that date.



What shouldn't you start indoors?

The following should be direct-seeded in your garden.

- Carrots
- Beets
- Turnips
- Radishes
- Garlic
- Potatoes

Recommended supplies to get started

- Sunblaster Nanodome or other light system
- Small pump sprayer
- High growth organic fertilizer
- Organic seed starting soil
- Seed trays (inserts and bottoms)
- Heat mat
- Seeds
- Confidence that you can do this!!!

Thank you and Happy Growing!



September