



Seed Starting, Planning, and Sourcing

Seed Starting: the process of growing plants indoors for transplant outdoors later in the calendar year.

Hybrid seeds are the offspring cross between two genetically different parent lines. Hybrid varieties are selected for and bred for specific traits such as improved flavor, disease resistance, fruit quality, yield, and climate adaptability. An (F1) hybrid is the first-generation offspring of the cross. Hybrids are not a viable candidate for seed saving because they will not produce plants with the same characteristics of the hybrid variety.

Open pollinated seeds are non-hybrid seeds that can reproduce from one generation to the next. Seeds saved from openly pollinated seeds will produce similar traits to their parent plant.

Heirloom seeds Open-pollinated varieties whose seed lines have been maintained and passed down by gardeners and farmers over several generations. They are often very flavorful and unique in traits.

Non-GMO seeds: seeds originating from and cultivated by natural pollination.

GMO seeds are not naturally occurring and are bred in a laboratory using techniques like gene splicing.

Sourcing Seeds

Online companies:

- [Johnny's Selected Seeds](#)
- [High Mowing Organic Seeds](#)
- [Seed Savers Exchange](#)
- [Baker Creek Heirloom Seeds](#)
- [Kitazawa](#)

Local sourcing:

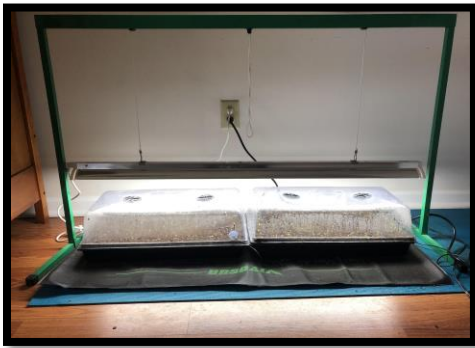
- Open Harvest Cooperative Grocery
- Earl May
- Hardware stores
- Seed Swaps

Avoid non-reputable sources such as Ebay, Amazon, Etsy, and other similar sources.

How to Start Seeds

Materials needed:

- Seedling heat mat, or alternative method of heat control for germination
- Shelves, combined with a fan OR located in a place with good airflow
 - Wire
 - Plastic
- Direct light source (fluorescent works well), preferable adjustable
- Containers, plug form trays, or pots
- Cover for containers
 - Lids/cover with venting
 - Ziploc bags
- Seed starting mix/potting soil - sterility is key!
- Marker & Tags
- Seeds



Steps to starting seeds:

1. Wash your hands!
2. Clean and sanitize your trays/pots, tools, and work surfaces
3. Lightly moisten your soil mix and fill the containers you will seed to the surface
4. Make a slight depression in the middle of each container
5. Place seed in depression and cover with soil mix. Use one seed per container.
6. Lightly tamp the surface of the soil over your seeds and water in.
7. Place your seeds/trays on bottom heat under a direct light source
8. Cover containers until 75% of seeds germinate, then uncover
9. Let seedlings grow indoors until they have 4-6 sets of true leaves and temperatures are safe to set outside - check daily for water and fertilization needs
10. Harden off prior to transplanting

Troubleshooting of Common Issues

Damping off: blanket term used to refer to a variety of soil-borne fungal pathogens. Healthy plants might get a white fuzz and will topple over and die within a few days. Often you will see a weakening at the base of the stem before the plants die.



image source: <https://www.gardenmyths.com/damping-off-disease-prevention-treatment/>

What to do:

- Prevent by providing good airflow
- If plants are infected - dispose of them, the soil, and clean/sanitize containers

Leggy seedlings: seedlings that produce long, weak stems.

What to do:

- Prevent by providing adequate light and checking growth daily
- If seedlings start becoming leggy, add more light, or move them closer to the light source
- Depending on severity and maturity, some may be salvaged by potting up

Gnats & aphids: fungal gnats & aphids are common pests that predate young seedlings



image source: <https://lancaster.unl.edu/pest/resources/fungusgnats.shtml>



image source: <https://extension.usu.edu/vegetableguide/leafy-greens/aphids>

What to do:

- Prevent by scouting daily and/or with yellow sticky traps
- Physically remove pests by hand or washing/dunking off
- Apply insecticidal soap, neem oil spray/soil drench, horticultural oil, or diatomaceous earth

Yellowing plants: yellowing leaves generally indicate that plants do not have enough nitrogen available to them. Nitrogen is important because it is used by plants to produce chlorophyll, essential amino acids, and in DNA replication (mitosis).

What to do:

- Fertilize using an organic fertilizer when needed. Use according to the product directions.

Additional Sources

- Johnny's Growers Library - <https://www.johnnyseeds.com/growers-library/online-tools-calculators.html>
- Johnny's Glossary - <https://www.johnnyseeds.com/growers-library/glossary.html>
- Seeds Savers Resources - <https://www.seedsavers.org/learn#seed-starting>
- Plant Hardiness Zone Map - <http://planthardiness.ars.usda.gov/PHZMWeb/>
- Seed Starting Calendar by Community Crops & Heartland Organics - attached

Contact Information

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