

## **Starting Seeds Indoors**

### **Starting Seeds Indoors vs. Outdoors**

https://www.apartmenttherapy.com/inside-or-outside-which-to-choose-when-starting-plants-from-seed-228844

#### **Indoor Seed Starting**

**The Good:** Indoor seed starting gives you the most control over your seedlings. You can easily track the germination rate of your seeds, and give them more moisture or more warmth as needed. In a contained environment, seedlings are less prone to pests and diseases.

**The Bad:** Indoor seed starting requires a decent amount of space in a fairly warm room and, at the very least, a sunny window that's preferably south-facing.

#### **Outdoor Seed Starting**

**The Good:** Outdoor seed starting is quick and simple, provided your soil has been prepped. Whether you're sowing all your crops in neat and evenly spaced rows, or broadcasting handfuls of flower seeds over a wide area, it's a natural way to garden and lets the seeds decide when to sprout.

**The Bad:** Outdoor seed starting can be finicky and unpredictable if you're not diligent about watering, the weather doesn't cooperate, or a critter decides to dig up your freshly seeded beds. You'll also need to keep a close eye on weeds that may compete with seedlings in the first few weeks.



#### **Indoor Seed Starting**

The Good: Control, track the germination rate of your seeds, contained environment, you can control your heat.



#### **Indoor Seed Starting**

The Bad: Requires a decent amount of space in a fairly warm room.



Outdoor Seed Starting The Good: Quick and simple



#### **Outdoor Seed Starting**

The Bad: Critter and Birds, weeds and you have to rely on the weather.

### Best reason to Start Seeds Indoors

You get a really good head start on your plants





### The reason to grow your own plants from seeds Cheaper and much wider variety

# Supplies

- Soil
- Containers
- Markers
- Seeds
- Light source
- Heat
- Patience



### You need a potting mixture Soil-less potting mixture

#### Why Use Soilless Potting Mix?

Primarily, the very best reason for utilizing soilless planting medium is that one may control any types of insects, diseases, bacteria, weed seeds and or other pesky additions which are commonly found in garden soils.

**Soilless seed-starting mixes** have a finer texture and are made from ingredients such as milled peat moss, perlite, coconut coir fiber and vermiculite.

Not everyone needs **seed starting mixes**, some gardeners do very well **starting** their seeds in potting soil or a rich garden soil. This often saves the work and stress of transplanting, but if you **need** a sterile soil because of mold or fungi pressures, then **seed starting mixes** will really help. **I use a soilless seed starter.** 

It is not recommended to **use topsoil** for **starting seeds** in containers. **Seeds** need the right amount of oxygen and moisture for the best chance of germination, and **topsoil does** not provide the best **growing** medium that suits these needs.

What is the difference between topsoil and potting soil and which one should you use? ... Potting soil is for planting in containers. Topsoil is sand or clay (ground-up rocks) mixed with organic materials such as compost. Potting soil is a mixture of peat moss and other organic materials such as composted sawdust. <u>https://www.coloradoan.com/</u> story/news/2014/03/09/topsoil-vs-potting-soil-/6237649/



Soilless Seed Start Mix

coconut coir

perlite

vermiculite

### Potting Soil



### DO NOT USE Topsoil



### We use Soilless Potting Mix



vermiculite

coconut coir

### You need a container

You can use anything to plant your seeds in.











#### Just make sure you have drainage and a saucer on the bottom.







### You need Seeds





You can get seeds anywhere.

Local stores

#### Online



**Ocean State** 



Johnny's Selected Seeds





Southern Exposure Seed Exchange

### BAKER CREEK HEIRLOOM SEEDS TATESEES

Friends and neighbors The Library

# Just be careful not to buy expired seeds.

### **Do seeds** have an **expiration** date?

It depends on the type of **seeds** and how they were stored. If your **seeds** were kept in a cool, dry place, there's a good chance they're still viable, but expect a lower germination rate — exactly how low depends on the species.

#### ANNUAL Snapdragon Fordhook<sup>®</sup> Tall Mix

41402

Narminster, PA 18974 ts Reserved Vibrant mixture in a wide range of colors. Great in beds, borders and for cutting.

START INDOORS in a warm, well-lighted area about 12 weeks before last frost. Sow seed thinly and barely press into seed starting formula. Seedlings emerge in 8-14 days. Before transfer to garden, accustom to outdoor conditions by moving to a sheltered area outside for a week. **Blooms in early summer.** 



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#### If you are using older seeds just check the germination rate.

#### Germination test.

Place some sample seeds inside moist paper towels and slide the towels into a plastic bag. Mark the type of seeds on the front. Let them sit out in the warmest room of your house and check them at day five and every day thereafter. Viable seeds should sprout by day ten. If they don't, or if less than a third wake up, get fresh seed.











9 out of 10 seeds sprouted that's a 90% germination rate. If you have less than an 70% germination rate you should get new seeds

### **Read your seed packets!**

#### It will tell you:

- Expiration date
- When to plant
- How to plant
- Plant height
- If you need full sun
- Depth of seeds
- Size of plant

ANNUAL

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Origin: Mu.T.

2013

cked for:

FULL SUN (6+ HOURS) 90-100 DAYS TO BLOOM 20" HEIGHT DEPTH **Barely Press In** SPACE 6"





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Fast growing plants bear fragrant, trumpet-shaped flowers that open each afternoon.

SOW in average soil in full sun after danger of frost. Sow about 6" apart and cover with 1/2" of fine soil. Firm lightly and keep evenly moist. Seedlings emerge in 7-10 days. Thin to stand 12-18" apart when seedlings are 1-2" high. **Blooms in summer.**  FULL SUN (6+ HOURS) 60-65 DAYS TO BLOOM 30" HEIGHT DEPTH 1/2" THIN 12-18"



#### Coleus

#### Solenostemon scutellarioides

Old-fashioned annual, enjoying a comeback among collectors, Coleus is grown for its bright, showy foliage. Makes a colorful houseplant.

FLOWER/COLOR: Multicolored foliage in shades of red, pink, crimson, rose, bronze or deep purple with red centers depending on variety. Insignificant flower.

USE: Bedding, mixed containers, window boxes, filler in bouquets, houseplant. Stunning in masses, containers and borders when mixed with plants of light foliage.

CULTURE: Indoors (recommended planting method) - Sow 8 weeks before last frost. Do not cover seed as light aids germination (a light covering of vermiculite may be used to help maintain moisture). Bottorn water or mist. Transplant to cell packs or larger containers when first true leaves appear. Direct seeding is not recommended.

GERMINATION: 8-10 days at 70-75°F.

GROWING ON: 65-70°F. Harden off and transplant outdoors

## Some info about seeds before we start.

#### Some seeds need

- Scarification
- Stratification

#### **Stratification and Scarification in Nature**

Stratification and scarification occur naturally when seeds stay outdoors through the cold winter.

Some seeds, like morning glories and lotus, have outer shells that are extremely hard and don't allow water through. This is one way a seed stays dormant in the fall and winter until growing conditions improve.

Animals can also scarify seed by eating the hard seeds and digesting them. This is how strawberries can make their way around your yard.

Another way hard seeds can be cracked open is by leaving them outdoors throughout a cold winter. The constant freezing and thawing will be enough to get them to eventually crack. This process is generally referred to as stratification or cold stratification. Some seeds are not hardy enough for cold winter temperatures, but many perennial plants are started this way.

### Scarification

Scarification in botany involves weakening, opening, or otherwise altering the coat of a seed to encourage germination.

In other words you need to nick the coating on the seed.



#### You do not want to damage the seed so don't go to deep



### STRATIFICATION

Cold stratification is the process of subjecting seeds to both cold and moist conditions. Seeds of many trees, shrubs and perennials require these conditions before germination will ensue.

Many seed species have an embryonic dormancy phase, and generally will not sprout until this dormancy is broken.





Place seeds in a bag with a slightly moist paper towel put in refrigerator draw for 4-6 weeks.



# Seeds that need stratification can be started outside using the Winter Seed Sowing "Milk jug" method.

https://youtu.be/WgNTAJgW\_w4

https://youtu.be/hWENZMdym9s

https://youtu.be/8B6VVvLytdl

### Lets get started.

- Pour your seed starting mix into the large container and wet it thoroughly. You want all the water to be absorbed and the mix to be moist before you start.
- Scoop the seed starting mix into each of your small containers, leaving about 1/2 inch at the top, and place the small containers in your plant tray.
- Sprinkle a few seeds over the seed starting mix (about three to four if they're large, or a hefty pinch if they're small). Repeat with the remaining containers and seeds. Don't forget to label each container!
- Following the seed packet instructions, cover the seeds with seed starting mix. As a general rule of thumb, seeds should be covered with a thin layer equal to their height, anywhere from 1/8 inch to 1/2 inch or more. Some seeds don't need to be covered at all, as they need light in order to germinate, so simply press them into the seed starting mix.
- Tamp down gently on the seed starting mix with your fingers (or the back of a spoon) and thoroughly mist the surface with your spray bottle.
- Place the plant tray, with all of your newly seeded containers, in a sunny window in a warm location. Keep the seed starting mix evenly moist until you're ready to transplant the seedlings into your garden. Use the spray bottle to avoid dislodging the seeds or damaging your seedlings as they grow.





#### Moisten your seed starter





perlite

coconut coir

vermiculite

19035

00000

### Fill our container



### Plant your seeds



### Label your container



# Check them to make sure they are damp



### **Light Sauce**

You can use natural light or artificial light

Fortunately, most seeds require heat, not sunlight to germinate.

Start your seeds in a spot that stays consistently warm on top of the fridge or a radiator are good options.

Shift them to the sunniest **windowsill** you have as soon as a bit of green is showing above the soil line.





#### Heated sauce

Heat mats make a huge difference. Because really, how much space do you have on top of your refrigerator?



# This is one of my friends set up.

Nice window for light and a radiator under for heat.



#### We can now celebrate they are sticking their heads up





**Cotyledons** are the first leaves that come out of a seed .. but they are actually part of the inside of the seed from the beginning... just waiting to grow!

**Cotyledons** store the fuel for the plant to grow. They are often just green and round regardless of the true plant shape and color.



The first "true leaves" that emerge after the cotyledons start to show the true color and shape of the plant

Wait for their second "true" leaves





### Now do terrible things to the weak ones. 🙀 Thin out your seeds











#### Transplant to bigger pots and better soil

Your plants are thinned and their second leaves are up. Now you can transplant them from their little cells to **bigger pots and better soil**.



### Wait till our last frost date to plant outside.

https://planthardiness.ars.usda.gov/PHZMWeb/





But we all have micro climates

Read your seed packets.

#### DO NOT START YOUR SEEDS TO EARLY.

These tomatoes are ready to be transplanted outside.

(This photo is probably end of March)

But it is still to cold to put them out in the yard. That means you have to take care of them for 2 more months.

Except we have a greenhouse. So we really only have to keep them inside a couple more weeks and then put them in the greenhouse.



These were started way to early and are getting very leggy



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## **Ready to transplant outside**

#### Transplant outside

https://www.fix.com/blog/steps-to-hardenseedlings/

Your plants are big and healthy. You are ready to transplant them outside.

## You can not just put them outside in the sun.

You need to harden them off.



### Hardening Off Your Seedlings

Before you transplant your seedlings outside, they'll need to go through a simple process of "hardening off." Hardening off is garden lingo for acclimating your plants to the outdoors so they can survive sun, wind, cold, and other elements they weren't exposed to while growing indoors.

You can start to harden off your seedlings once they've grown at least two to three sets of leaves. At that point, they're mature enough to move outside.

- About 7 to 10 days before your seedlings are ready to be transplanted, take them outside and leave them in the shade for a few hours in the morning or afternoon. Bring them inside before nightfall. Repeat for the next day or two. If the weather is exceptionally windy or cold, wait until it clears up before attempting to harden off your seedlings.
- After their two- to three-day introduction to the outside world, place the seedlings in dappled sunlight for a few hours in the morning or afternoon. Bring them inside before nightfall. Repeat for the next day or two.
- Next, leave them outside all day in direct sun and bring them inside before nightfall. Repeat the next day. If the weather is exceptionally hot, shelter your seedlings during the harshest part of the day or move them into partial shade.
- Finally, let your seedlings live outside all day and all night until they move into the garden.









When all the hardening off is done you can transplant them into the ground.



### **Tip** When Transplanting tomatoes

![](_page_68_Picture_1.jpeg)

![](_page_68_Picture_2.jpeg)

#### Why start your plants from seeds?

Mainly, people start seeds to get a jump on the gardening season.

Lots more variety.

You can grow a lot more plants for less money.

What else is there to do during "self isolation".

![](_page_70_Picture_0.jpeg)

### **Good Luck**

Some helpful links for you

https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/11705/Vegetable\_Planting\_Times\_Guidelines\_for\_Ll.pdf? 1446826465

https://deckers-nursery.com/blogs/garden-learning-center/tomato-seed-starting-with-pam-ireland

https://awaytogarden.com/when-to-start-seeds-calculator/?fbclid=IwAR3V1qPxE3dYDWOiaAqBUwtgsCe\_DXxI29urFVKJtDZkbqYmoBtF7YzFI8