

Testing Seeds to see Viability

Lowenthal Robyn

To test “old” seeds for germination, dampen a paper towel– it does not need to be dripping wet, just nice and soggy. Arrange the seeds on the paper towel. I like to use 10 seeds of each type, as it makes figuring the percentage easy, and ensures you are getting a solid random sampling of the packet.

If you are using seeds that look similar, be sure to label each area of the towel to keep them straight. Or just use separate towels. Roll up the paper towel, or place a second paper towel over the top, to ensure the seeds are surrounded by dampness.

Place the damp towel/seeds in a plastic bag, seal, and set aside in a warm place. Depending on the type of seeds you are testing, they should begin to germinate anywhere from 2-14 days. If your seeds are of the slow-germinating variety, you may need to spritz the paper towel with more water to keep it damp. If it dries out, the seeds will stop the germination process.

Once the seeds begin to sprout, give them a day or two, and then take note as to how many sprouted vs. how many did not sprout. This will give you a germination rate. Obviously, the higher the germination rate, the better. Anything over 50% is decent.

Anything lower than 50% still might be usable, but you may need to plant more seeds to potentially make up for the “duds.”

HOW LONG DO SEEDS LAST?

Approximate Life Expectancy of Vegetable Seeds Stored Under Favorable Conditions.

Joe Papa

Vegetable	Years	Vegetable	Years
Asparagus	3	Leek	2
Bean	3	Lettuce	5*
Beet	4	Muskmelon	5
Broccoli	3	Mustard	4
Brussels sprouts	4	New Zealand	
Cabbage	4	spinach	3
Carrot	3	Okra	2
Celeriac	3	Onion	1
Cauliflower	4	Parsley	1
Celery	3	Parsnip	1
Chard, Swiss	4	Pea	3
Chicory	4	Pepper	2
Chinese cabbage	3	Pumpkin	4
Collards	5	Radish	5
Corn, sweet	2	Rutabaga	4
Cucumber	5	Salsify	2
Eggplant	4	Spinach	3
Endive	5	Squash	4
Fennel	4	Tomato	4
Kale	4	Turnip	4
Kohlrabi	3	Watermelon	4

Source: <https://www.highmowingseeds.com/blog/seed-viability-chart/>

OTHER SEED VIABILITY LINKS

Herbs Clear Creek Seed Company

<http://www.clearcreekseeds.com/seed-viability-chart/>

Herbs & Flowers FEDCO

https://www.fedcoseeds.com/seeds/seed_saving.html

LINK TO INSTRUCTIONS FOR
CONTRIBUTING

<http://www.gardenclubofteaneck.org/seedExchange.html>

Seed Storage Tips from Seed Saver Exchange
<http://blog.seedsavers.org/blog/how-to-store-seeds>

Tip 1: Maintain Cool Conditions

Keep seeds out of direct sunlight in a cool spot that maintains a fairly consistent temperature. Consider a cold closet, a basement, or a room on the north side of your home that remains cool year round. Freezing isn't necessary for short-term storage, but you can refrigerate seeds, provided they are sufficiently dry.

Seed Storage Tip 2: Maintain Dry Conditions

Before you place your seeds in storage, it's important that they are dry. Not sure? A simple bend v. snap test is a good starting point. If the seed can be cleanly snapped in half or shatters under stress, it is likely dry enough for storage, even in a freezer. But if it bends or smashes, the seeds should be dried further before being stored.

All seeds need to germinate is sufficient water and temperatures that are favorable for plant growth. Make sure your seeds don't sprout by storing them in a spot that isn't humid and ensure the seeds are dry before sealing them in a container.

Moisture is an especially important factor if you are freezing or refrigerating your seeds. If seeds are too wet, they can rot in the refrigerator or suffer frost damage in the freezer. If you store seeds in the refrigerator or freezer, place the packets in an air-tight container and ensure the seeds are properly dried to begin with. If you are storing seed you've saved yourself (bravo!), follow the correct seed saving processes to ensure they are dry.

Consistency is key when it comes to temperature and humidity levels. This is why you should avoid storing seeds in a spot that isn't climate-controlled, like a garage or shed, where temperatures and moisture levels can fluctuate wildly.

Seed Storage Tip 3: Protect the Seeds

We've all had a plant or two that's caught the attention of a pest. Critters, rodents, and bugs also enjoy nibbling on seeds that are waiting to be planted.

Choose a storage spot that is pest-free and you can keep a close eye on to ensure it remains that way. Glass jars, metal containers, or wire mesh can further protect seeds from invaders.

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Glass jars, metal containers, or wire mesh can further protect seeds from invaders. However, there is something to be said for a little breathing room. When using a storage area that is cool and dry year round, you may be able to keep seeds in paper bags, mesh bags, or envelopes in what is called "open storage".

Moisture and heat generated by the seed during respiration can escape through these gas permeable containers. This is also a smart tactic when you aren't sure about the moisture content of the seed. But you will still want to take precautions to protect your seeds from pests.

Some seeds do not fare as well in storage. Crops like carrots, parsnip, onions, and leeks are notoriously short lived. For these, freezer storage is best as seeds from these varieties that are stored at or near room temperature will quickly lose their ability to germinate and grow.

With these safeguards in place, you'll be able to plant your seeds later and enjoy watching them grow.



STARTING WITH THE SEED

1. Read the information on the seed packet to see if any special treatments are necessary and to determine proper planting depth and spacing, and soil and air temperature.
2. Choose a container or tray for planting. Fill with appropriate, wetted planting medium. Seed starting mix is widely available; it has a very fine texture that allows the tiny seedlings to penetrate the soil surface, and provides excellent drainage. It is good, but not necessary. Fertilizer is not needed, as it will not aid in germination. It will aid in root development later on.
3. Sow the seeds, according to the seed depth recommended on your seed packet. If seeds need light to germinate, sprinkle them on the soil surface and press them firmly into the soil. If seeds are larger and need darkness, make furrows in the soil surface, put the seeds in the furrows and fill in the furrows with more potting mix. Strive for a level soil surface, since this helps with even watering. A rule of thumb about planting depth is to plant seeds to a depth that approximates three to four times its diameter.
4. Moisten the soil surface with a spray bottle or something else that provides a gentle mist. Believe it or not, a strong flow of water can cause soil compaction.
5. Label the container with seed name, date of planting, and any other important information.
6. Cover with plastic to increase humidity.
7. Follow the seed packet information regarding the light requirements, i.e., light vs. darkness. When germinating seeds, "light" means ambient light. Prior to germination, there is no need to place seeds under grow lights, since no photosynthesis occurs until there are roots and leaves. Placing a flat of seeds under lights increases the risk of the soil drying out too soon.
8. Check every day. If soil appears dry, water with a spray bottle.

tic and place container under lights. When seeds are started indoors, artificial lighting is a must. Lights should be placed very close to each flat, approximately 1-1/2 or 2" from the plants. The close proximity of the light ensures that the plants do not stretch toward the light but rather stay healthy and stocky.

10. When seedlings have two sets of real leaves, (do not count cotyledons – seed leaves), transplant into individual pots or cell packs.

11. Continued growing under lights encourages photosynthesis, allowing the seedling to grow strong and straight. If growing on a windowsill, be sure to rotate seedlings every few days, so they grow straight.

Seed Storage - Most annual and vegetable seeds will store well for two to three years, provided they are kept in a cool, dry place.

Moisture frequently triggers germination, so until you are ready to plant, it is important to keep your seed dry. If seed are kept in an unopened, moisture-resistant package and not subjected to abnormal temperatures, most will keep perfectly well for several years.

Some vegetables, such as beets, cucumbers and radishes, will even keep for as long as ten years. If your seed packet is already opened, store the seed in a dry, airtight container in a cool place. It helps to store the seed as cool as possible (refrigeration helps) for reduced temperatures will lengthen storage life, and this is especially true for seed of woody plants

Garden Club of Teaneck
SEEDS



**INFO TO PUT ON
YOUR
SEED PACKS**

SEED NAME:
SOURCE:
YEAR:
Germination
Status Non-GMO
GMO
Name

This is still "The Year of the Seed."

THE SECOND SEED EXCHANGE is NOV.4th

After the GCT Business meeting on Nov. 4. at the Greenhouse, we will hear speakers (Doug Raska, Anna Kurz) on **seed storage until spring planting.**

YOUR PART: GIVE & GET SEEDS, EXCHANGE GARDEN TIPS. SEEDS: NO OLDER THAN 3 YEARS

FOR YOUR SEEDS: SEED ENVELOPES You can use your own envelopes, seed packets (sealed) or the coin changing envelopes in the Greenhouse to pack your seeds, or any other small envelope. You can make your GCT personalizd seed packet from Anna Kurz's adaptation of TipNut's design. Look at our web site:<http://www.gardenclubofteaneck.org/seedExchange.html>

SEED INFORMATION : Exchangers need to know what is in the envelope. Label them with the information: "seed name", "year of seed packaging", "number of seeds" "germination time," "GMO status (non GMO or GMO) and "your name."

Use Jor Papa's *Viability Chart* and/or Robyn Lowenthal's *Germination Test* provided to check the seeds you intend to swap

SEEDS FOR DONATION":WHERE? Bring envelopes SEALED, and put them in boxes marked "Seed Exchange " on the top of the large table where officers sit at meetings. Please SORT YOUR SEED PACKETS s into the categories: "Herbs-Tomatoes-Vegetables-Flowers-Other." There are signs are on the boxes.

No early birds! The swap starts after the Business Meeting.



Come, have an extra coffee, talk garden talk, and above all, have fun!