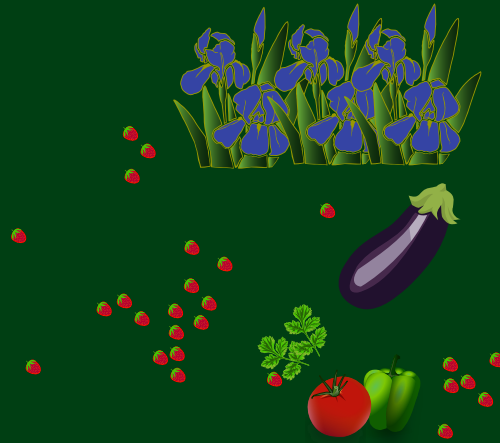


Garden Club of Teaneck

Seed Exchange Bible

March 2018



It is always "The Year of the Seed"

After the GCT Business meeting, we will hear impromptu speakers (members who wish to share their propagation experiences.)

YOUR PART: GIVE & GET SEEDS/CUTTINGS, EXCHANGE GARDEN TIPS.

SEEDS: NO OLDER THAN 3 YEARS OR WITHIN THE VIABILITY (see handout*)

SEED ENVELOPES You can use your own envelopes, seed packets (sealed) or the coin changing envelopes in the Greenhouse.

SEED INFORMATION: 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."

SEEDS FOR DONATION: WHERE? Bring envelopes SEALED, and put them in boxes marked "Seed Exchange" on the kitchen cabinet with sign "Seed Exchange"

SORT YOUR SEED PACKETS into boxes marked "Herbs-Tomatoes-Vegetables--Greens-Flowers-Other." There are signs on the boxes.

CUTTINGS: Members willing to give cuttings need to place cuttings in a plant-labeled jar, one kind of plant per jar!

Baggies and paper towels will be supplied so people can wrap the cutting. Place them in areas next to the seed boxes

HANDOUTS ARE ON WEB SITE: <http://www.gardenclubofteaneck.org>:

**Easy and Not-so-easy Seeds to Germinate
Procedures for Planting Seeds
Propagating Plants from Cuttings
*Viability Test & Seed life**



*Join us after the Business Meeting
Have Fun!*

Procedure for Planting Seeds

Robyn Lowenthal

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.
9. When one or two seeds germinate, remove plastic 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 seeds 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 seeds of woody plants

Testing Seeds for Viability

Robyn Lowenthal

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 make up for the duds.

Garden Club of Teaneck

SEEDS



INFO TO PUT ON YOUR SEED PACKS

- Seed Name
- GMO status
- Instructions
- Seed company or "Wild harvested"
- Your name

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/>

Provided by Joe Papa

Planning Tools & Calculators | Johnny's Selected Seeds.

www.johnnyseeds.com/growers-library/on-line-tools-calculators.html

Viability Chart: Clear Creek Seed Company

www.clearcreekseeds.com/seed-viability-chart/

Herbs & Flowers: FEDCO

www.fedcoseeds.com/seeds/seed_saving.html

Propagating Plants from Cuttings

Robyn Lowenthal

Propagating plants from cuttings, aka asexual or vegetative propagation, is one of the easiest methods of making new plants and is ideal for plants that are hard to start from seed. The new plant will be an exact replica -- a clone - of the parent plant.

Stem cuttings include herbaceous, softwood, semi-hardwood and hardwood. Leaf cuttings may be used when working with fleshy plants such as begonias, African violets and succulents.

Keep in mind that when you are doing this type of plant propagation, you are doing “plant surgery.” Take cuttings from healthy plants. Good sanitation is vital; always use a clean, sharp knife and sterile rooting medium. The cuttings must be given the proper growing environment; the main “enemies” of cuttings are drying out and/or rotting. When propagating with cuttings, always remember that plants have tops and bottoms. Always plant your cuttings with the up end up!

Cuttings can be “held” for a while, by putting them in water, in a sealed plastic bag, or wrapping them in damp paper towels. When taking cuttings from succulent plants, it is best to allow the cutting to callus for a few days, to help prevent rotting when placed in soil.

Some cuttings need rooting hormone. Pour just the needed amount of rooting hormone into a small cup or onto a paper towel. Never stick cuttings into the container of rooting hormone. This will degrade the remaining hormone in the container. Discard any leftover rooting hormone.

How: Take cuttings just below where a leaf attaches to the stem (the node) because roots tend to grow from nodes. If you leave a section of stem below the node, it often rots. Remove all but the top 3 or 4 leaves. Leaves can be trimmed to reduce the chance of drying out. Remove any flowers. Make some holes in your soil, using a dowel or pencil, a little larger than the diameter of the stem. Dip the cuttings into water, then into rooting hormone (if needed), and stick them into the holes. Firm up the

soil around the cutting to provide good contact. If high humidity is needed, place the entire pot into a plastic bag. Fill the bag with air and seal with a rubber band or twist tie. Check the cuttings regularly. A sure sign of root development is the appearance of new growth. Remove the plant from the bag and place under lights.

When:

Herbaceous plants – anytime. Softwood cuttings – spring to early summer.

Semi-hardwood cuttings – late spring to late summer.

Hardwood – during dormancy.

Herbaceous plants, 3” and 5”. Depending on type of plant, rooting hormone and/or high humidity may or may not be necessary.

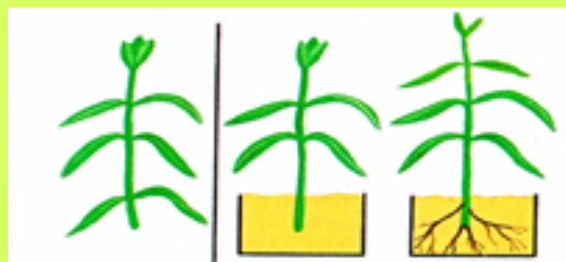
Softwood cuttings, 3”– 5”, are taken from the new, soft growth of woody plants. Rooting hormone is necessary, and bottom heat is helpful. This type of cutting is vulnerable to moisture loss. Trim leaves and keep in a very humid environment, such as in a terrarium or plastic bag.

Semi-hardwood cuttings, 3” – 6”, are partially mature wood from the current season’s growth. Rooting hormone is necessary, and “wounding” may help root development. They don’t require a very humid environment.

Hardwood cuttings, from deciduous or evergreen plants, 4”–30” , should include at least two nodes. Rooting hormone is necessary.

Leaf cuttings. Begonias, African violets - Cut a healthy leaf with the petiole. Reduce leaf size, but retain central veins. Stick petiole into the soil, with the leaf making contact with the soil. Water and put into a plastic bag until a baby plantlet appears.

Succulents – Remove a healthy leaf. Allow it to dry for a few days, then stick it into soil. When a baby plantlet appears, you know roots have developed.



from Garden Club of Teaneck Newsletter, March 2017 p.4

HOW TO PLANT A SEED

A handout for The Seed Exchange

Robyn Lowenthal

Growing plants from seed is one of the most magical part of gardening. It continues to amaze me that inside the tiniest of seeds exists the potential for an entire plant—flowers, fruit and all.

Growing from seed allows us to produce a huge variety of cultivars, often not available at garden centers. It is cost effective, since a large number of plants can be produced efficiently and inexpensively. Seeds are easy to store and can remain viable for a long time. But it is necessary to consider the basic needs of the seeds. Be sure to read, and believe, the information provided on reliable seed company packets.

Growing medium. Firm, fine-textured growing medium will allow for improved germination, due to its ability to maintain uniform moisture. The medium should be sterile, to help avoid fungal diseases. Oxygen is also necessary for the start of cellular respiration. Compacted or waterlogged soils reduce the availability of oxygen and can slow or stop germination.

Light. Seeds require either light or dark conditions to germinate. Very small seeds generally require light to germinate. Other seeds will not germinate if exposed to light. It is important to check your seed packet to see if light is a requirement. I have noticed that seeds from Swallowtail Gardens and Harris Seeds have detailed instructions about both temperature and light requirements.

Soil temperature. Germination can be inhibited by too high or too low temperatures. In general, most flower and vegetable seeds like soil temperatures in the 70-80° F range. Since soil temperature tends to run approximately 5°F lower than air temperature, in many cases one must provide additional controlled bottom heat, using heat mats, cables or keeping your seed trays on top of the refrigerator. Soil temperature is equally important for direct seeding outdoors. Some seeds, such as lettuce and

pansies, will not germinate when temperatures are above 86 °F. Some warm season vegetables, like cucumbers and corn, will not germinate when soil is below 59 °F.

Moisture. Although it may seem elementary, providing adequate and uniform moisture is vital to successful seed germination. Water is necessary to rehydrate the seed, soften the seed coat, and allow the enlarging embryo to burst out. Humidity is also important. Either cover your flats with clear plastic covers, or provide them with a light mist to ensure they do not dry out.

While most seeds and seedlings should be kept consistently moist, overwatering can be a problem. Too much water can cause seeds to rot or promote disease issues like damping off. It is important to remove flat covers periodically to allow enough air flow. If flats are in a greenhouse, covers should also be removed on warm days to make sure your seedlings do not get over heated.

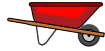
Growing plants from seed is usually simple and straightforward. Most annual and even perennial seeds need no special treatment to germinate. Some seeds, called recalcitrant, have evolved over the centuries to need certain specific conditions to start their growth cycle. These may include scarification, soaking and stratification.

When we purchase seed, these procedures have often already been done. When we collect seed, we must do it ourselves. There is no general rule. In addition to the information on the seed packet, my go-to resource for seed germination information is Park's *Success with Seeds* by Ann Reilly.



Garden Club of Teaneck
SEEDS

Your Name



Approx. N°

Seed Type

Date Collected 2017-8

Collected From

Notes:

Garden Club of Teaneck
SEEDS

Your Name



Approx. N°

Seed Type

Date Collected 2017-8

Collected From

Notes:

