

Starting Seeds for the Garden

Germinating seeds need light, correct temperatures, moisture and oxygen availability.

Read the seed packet

- Plant type, (annual, vegetable, etc)
- Name/cultivar/hybrid
- Sun/shade
- Planting depth: not too deep, not too shallow
- Germination temperature range
- Days to germination

Save the packets; store in a Ziploc bag marked with the year

- Put in notes on how plants performed.
- Seed starting date
- Transfer to pots date
- Planting date
- Harvest dates(s)
- Yield
- Notes for next year

Tomatoes

- Determinate (will get to specific size) vs indeterminate (will keep growing). How much space do you have in the garden for them?
- Look for disease resistant varieties.
- Gardening.cornell.edu/homegardening/vegetablegrowingguides
 - Cultivation info
 - Plant info
 - Recommendations for varieties successful in NYS

Last Spring Frost

- Date related to Hardiness Zone
- Varies in Erie County by location
- Last Average Frost Date (LAFD)
 - Zone 5a varies from May 19-22
 - Zone 6 varies from April 24 – May 8
 - *Climate change has had an impact on the expected dates of LAFD. This is an area of special concern for famers and commercial growers and will impact home gardeners as well.*

Awaytogarden.com – excellent resource for deciding when to start seeds

- Crop Name
- When to start indoors
- How many weeks to grow indoors before transplanting
- Transplant or sow date relative to LAFD
- When to transplant or sow in the garden

Use Seed Starting Mix (not potting mix or garden soil)

- Sterile, lightweight, free from weeds
- Discourages soil-borne pathogens
- Has correct texture and porosity (for drainage and air)
- Retains air and moisture

Seed Starting Containers

- Individual containers – cell flats
 - Sterilize before using previously used containers.
- Peat pots, coir
- Egg cartons, newspaper containers
- Must have drainage holes

Planting Seeds

- 1/3 to ½ cup growing medium in each container/cell.
- Drainage holes
- Moisten the mix, damp but not wet.
- Check the seed packet for correct seed depth.
- Cover with seed starting mix or vermiculite to achieve correct depth. Tamp down VERY LIGHTLY and water gently or mist to wet soil medium.
- 1-2 seeds per container
- Test for viability of old seeds to predict germination rate.
- LABEL and/or create a map of seeds planted.

Germination - triggered by moisture, temperature, and light

- Moisture
 - Wrap seed trays in clear plastic wrap or use dome top
 - May need to adjust dome top to prevent excess moisture buildup and create air flow
 - Remove the covering as soon as germination appears.
- Temperature
 - Most seeds germinate at 75-90F
 - Heat mats – create bottom heat to aid in germination
 - Read seed packet for information on germination temperature requirements.
 - Most seeds “appreciate” heat mat, some need it to germinate.
- Light
 - Seeds need higher levels of lights than typically found in a sunny window.
 - Weak, spindly seedlings if not enough light
 - South facing window – can be too harsh at times of the day.
 - East facing with morning sun, will still probably need more light.
 - Plant Growing Lights
 - Many available commercially; can make homemade version also
 - Adjustable lights or erect platform to get seedlings up to lights
 - (Note: If you are constructing a grow light structure, do some research on what kind of fluorescent lights to use. New research on LED lights may be of interest.)
 - 12-16 hours a day of artificial lighting, 2-6 “ from the lights. Adjust to allow for plant growth.

Watch for TRUE LEAVES

- Learn to identify the true leaves of the varieties you planted.
- Transplant to 3 ½ to 4 Inch pots (with drainage holes) when one or two sets of true leaves appear.
- Use potting soil now, not seed starting soil. Avoid garden soil; it is still too heavy for new seedlings. Water the soil before planting so that it is damp, but not saturated.
- 1 seedling/pot; thin out or clip off extra plants at the soil level.
- Lift GENTLY out of cell trays or other containers with small spoon or kitchen knife.
- Transplant at the same soil level as before EXCEPT tomatoes. Tomato seedlings can be set so that all stem below the first true leaves is buried in the soil.
- Water gently.
- Label the pots.

Hardening Off

- Seedlings need to adjust to outdoor conditions.
- Start 2 weeks ahead of planting date.
- Place in dappled sun or light shade for a couple of hours. Direct sun will burn them.
- Gradually increase the amount of time outside. Bring inside at night.
- A little breeze is good; helps strengthen the stems.

Transplant into the garden

- Cloudy day
- Nighttime temperatures consistently about 45-50F
- Not in the heat of the day
- Use row covers/plant protectors if needed against insect pests, critters.
- Remove peat pots or cut down the side and remove the bottoms.
- Give them room – check the spacing requirements on the seed packet.

Note: These notes are intended for planting seeds of warm weather crops, ex. Beans, corn, cucumbers, eggplant, melons, peppers, zucchini, tomatoes, watermelon and certain flowers
Some cool season crops can be sown directly in the garden: ex. Lettuce, spinach, kale, peas, Radishes

Resources

- Planthardiness.ars.usda.gov (*put in Zipcode for hardiness zone*)
- Gardening.cornell.edu/homegardening (*for Vegetable Growing Guides, info + varieties for NYS*)
- Vegvariety.cce.cornell.edu
- Extension.psu.edu/vegetablegardening
- Awaytogarden.com (*when to start seeds and plant out*)
- Laidbackgardener.blog (*how to read a seed packet*)
- Fruitionseeds.com (*Seed Starting Academy*)

P. Koppmann

Erie County Master Gardeners

4.21