Growing a Modern VICTORY GARDEN

Everyone is looking for ways they can help during the current COVID-19 outbreak. Planting a garden can be one way for your family to get healthy, fresh vegetables, save money, potentially help others through food donations, get exercise, and relieve stress. Consider these historic facts on Victory Gardens:

- **World War I**: In 1917 home gardeners mobilized and the first Victory Gardens were planted. In 1918, more than 5.2 million gardens were cultivated.

- **World War II**: In 1944, an estimated 20 million Victory Gardens produced 8 million tons of food. This was 40% of all the fruits and vegetables consumed in the U.S.

The current COVID-19 situation has sparked renewed interest in food gardening. Many people are considering vegetable gardens as a way to increase personal food security. This spring will see first time gardens, expansion of current gardens, and the re-start of long dormant food gardens.

For those current and past gardeners I don’t expect this information will tell you more than you already know, although you may pick up some new tips. For beginning gardeners, this is the packet for you — a quick reference guide to answer immediate questions! It will guide you in learning a life-long skill. Think of your new endeavor as a Victory Garden for the 21st Century!
NO ROOM FOR A GARDEN?
TRY CONTAINERS!

If you don’t have a yard or space for a traditional garden, container gardens can be very productive. All you need is a porch, balcony, stoop, sidewalk or outside area that gets at least 8 hours of sun per day. South or west facing locations will offer the most sun. Container gardens are low maintenance since weeding is minimal. You can also move them throughout the day to get the maximum amount of sun.

CONTAINERS

Anything can be used as a container. Just make sure there are holes in the bottom so water drains freely. If water sits in the bottom it will cause root rots that will kill the plants. Five-gallon buckets work great—just drill 5 to 6 holes in the bottom. Optimum size for any container is 10 inches in diameter or greater and at least 8 inches deep. The container should be light in color. Dark colors will absorb the sun and may ‘cook’ the roots.

SOIL

Fill your containers with bagged potting or garden soil. If you have access to topsoil, that will work too, although it may make the container very heavy. You can also lay bags of garden soil flat and cut slits for the seeds or plants. Make sure to punch some holes in the bottom first.

WHAT TO PLANT

Just about any vegetable (within reason) can be planted in a container. Obviously larger plants will need to be planted in larger containers. Smaller containers are great for planting greens and herbs. Larger containers can accommodate tomatoes and summer squash. And speaking of tomatoes, the best option for container production of tomatoes is to buy patio tomatoes. These stocky plants are bred to stay small and are highly productive. Patio tomatoes are very popular—most garden centers sell them as transplants. Refer to the chart at the end of this article to determine how many plants can be grown in a five-gallon bucket, when to plant, and growing tips.

WATER

Since they are above the ground, containers are subject to drying out from wind and sun. You may need to water them every day. When watering try not to get the leaves wet—water at the soil level for best results. Apply water until you see the water begin to drain from the bottom of the container, and then stop. That way you can be sure the plants are getting adequate irrigation.

RECYCLE! IDEAS FOR CONTAINERS

- Plastic dish tubs
- Kiddie pools
- Buckets and pails
- Baskets
- Pallets
- Burlap bags
- Cracked wheelbarrows
- Rusted kitchen pots
<table>
<thead>
<tr>
<th>VEGETABLE</th>
<th>QUANTITY IN A 5 GALLON BUCKET</th>
<th>DIRECT SEED OR TRANSPLANT</th>
<th>PLANTING TIME</th>
<th>TIPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomato</td>
<td>1 transplant</td>
<td>Late May</td>
<td>Surround the tomato plant with a ring of lettuce for an instant salad</td>
<td></td>
</tr>
<tr>
<td>Pepper</td>
<td>3 transplant</td>
<td>Late May</td>
<td>Frying peppers and hot peppers are the most productive</td>
<td></td>
</tr>
<tr>
<td>Beans (green, yellow)</td>
<td>6 Direct seed</td>
<td>Mid-May</td>
<td>Harvest the beans frequently to maintain maximum production</td>
<td></td>
</tr>
<tr>
<td>Beets</td>
<td>many Direct seed</td>
<td>Mid-April to early May</td>
<td>Space seeds 4 inches apart</td>
<td></td>
</tr>
<tr>
<td>Carrots</td>
<td>many Direct seed</td>
<td>Mid-April to early May</td>
<td>Scatter the seeds and cover with ¼” of soil. Thin to 2” apart</td>
<td></td>
</tr>
<tr>
<td>Cucumber</td>
<td>3 Direct seed</td>
<td>Late May</td>
<td>A trellis can be used to train the plants to grow upwards</td>
<td></td>
</tr>
<tr>
<td>Eggplant</td>
<td>3 transplant</td>
<td>Late May to early June</td>
<td>Eggplants are very cold sensitive. If the weather is cool wait until early June</td>
<td></td>
</tr>
<tr>
<td>Peas</td>
<td>12 Direct seed</td>
<td>Mid-April to early May</td>
<td>Can be trained to a trellis for easier harvest</td>
<td></td>
</tr>
<tr>
<td>Spinach/Lettuce</td>
<td>many Direct seed</td>
<td>Mid-April to early May</td>
<td>Scatter lettuce seeds on top of the soil then pat them down- do not bury, they will not germinate</td>
<td></td>
</tr>
<tr>
<td>Swiss Chard</td>
<td>6 Direct seed</td>
<td>Early to mid-May</td>
<td>Can be harvested early for ‘baby’ greens</td>
<td></td>
</tr>
<tr>
<td>Kale</td>
<td>6 Direct seed</td>
<td>Mid-April to early May</td>
<td>Can be harvested early for ‘baby’ greens</td>
<td></td>
</tr>
<tr>
<td>Zucchini/Yellow summer squash</td>
<td>1 Direct seed or transplant</td>
<td>Mid-May for seeds; Late May to early June for transplants</td>
<td>Squash are very cold sensitive. If the weather is cool wait until early June before setting out transplants</td>
<td></td>
</tr>
<tr>
<td>Herbs</td>
<td>several Direct seed or transplant</td>
<td>Mid to late May</td>
<td>Plant a container with 3 or 4 of your favorite herbs. Basil is very cold sensitive, don't plant until after June 1</td>
<td></td>
</tr>
</tbody>
</table>
WHERE DO I GET ORGANIC MATTER?

If you haven’t already started a compost pile in your backyard, now is the time to start. You can compost kitchen scraps, lawn trimmings, leaves, and other organic matter. It’s not hard — and it keeps these things out of the landfill.

Information on starting a compost pile can be found on our website. Go to http://ccjefferson.org/gardening/compost-resources

WHAT VARIETIES SHOULD I GROW?

Every year, Cornell publishes a list of selected varieties that are recommended for New York State home gardeners. This list of varieties is printed at the end of this guide.

QUICK TIPS FOR A TRADITIONAL VEGETABLE GARDEN (I.E. GARDENING IN THE EARTH)

- **Start Small!** A garden size of 10’ by 10’ or 20’ by 20’ (for a family of four) is a good area to start with. Having too much garden can be overwhelming. A 20’ by 20’ garden will produce enough vegetables for fresh eating with some extra for processing.

- Locate the garden in a well-drained, flat area that gets at least 8 hours of sun per day. Southern and western exposures offer the most sunlight. You will also need access to water via a hose or spigot. Vegetable gardens are most productive when they receive adequate irrigation.

- **Allow the soil to dry out** before you begin prepping the garden. Working wet soil leads to compaction and destroys the soil structure (not to mention that it makes a mess!). To test if the soil is dry enough to work, squeeze a handful of soil. If water runs out, the soil is too wet. If the soil holds together in a clump, it is too wet. If the handful of soil breaks apart easily or crumbles, it is dry enough. If the soil is too wet, just wait a couple of days. Light breezes and sun will help in the drying process.

- Ideally you should **remove any sod** from the garden area. This can be done using a flat shovel and cutting the sod off the top of the soil. You can also spray the area with a glyphosate herbicide (according to directions on the label) to kill all the vegetation. You can also cover the area with a tarp to kill the grass, although this usually requires several months. The sod can be worked into the soil, but this may lead to a temporary nitrogen deficiency as the material decays.

- **Add 4 inches of organic matter** on top of the soil. Organic matter is well-composted cow or horse manure, compost, peat moss, or any combination thereof. You can also add a slow release, granular fertilizer at this time according to label directions. Products like Osmocote are readily available at garden centers and big box stores.

- **Turn the soil.** Double dig with a shovel or till to incorporate the organic matter and any fertilizer.

- Let the area settle for a few days and then you can begin planting!
Cool season vegetables can be planted much earlier than warm-season crops — some before the last frost!

Warm season crops that are planted directly in the garden via seeds need warm soil temperatures in order to germinate. If the soil is not warm enough, the seeds will simply rot. Other warm season crops are started inside and then transplanted into the garden after all danger of frost has passed. If the weather does call for a frost and your transplants are in the garden, just cover them with an old sheet or plastic containers - this is usually enough to prevent frost damage on tomatoes and peppers. Vine crops, (cucumbers, squash, melons) on the other hand, are very cold sensitive. Even if temperatures are not below freezing, a cool wind can kill the plants. If the weather forecast is for cool temperatures, wait until June to set out the plants.

Regardless of whether you buy transplants at a garden center or start your own, remember to harden them off before planting them in the garden. If you move them directly from the store or home and into the garden they will suffer. Gradually introduce the plants to the outside environment over the course of about 5 days. Set the plants outside for a day, and then bring them in at night. The next day, leave them out until after dark and then bring them in. The next night leave them out all night in an enclosed porch or garage. Do this until the plants are outside overnight and then plant them in the garden. This allows the plants to get used to bright sun, breezes and cool temperatures; it reduces transplant shock which can set back, or even kill the plants.

Keep in mind that you can buy most food plant transplants with SNAP benefits. It makes gardening more affordable for those trying to garden to save money.
## Cool Season Vegetables

Many are planted via direct seeding in early spring

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>Planting Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asparagus</td>
<td>Mid to late April</td>
<td>Perennial crop, crowns are planted; wait 3 years before first harvest.</td>
</tr>
<tr>
<td>Beets</td>
<td>Mid to late April</td>
<td>Plants come up in clusters, thinning is necessary.</td>
</tr>
<tr>
<td>Broccoli</td>
<td>Seeds can be planted as soon as the soil can be worked- early to mid-April</td>
<td>Transplants are also available, they can be set out in late April, or mid to late July for a fall crop.</td>
</tr>
<tr>
<td>Cabbage</td>
<td>Late April</td>
<td>Transplants are also available, they can be set out in early May.</td>
</tr>
<tr>
<td>Carrots</td>
<td>Late April to early May</td>
<td>Seeds are slow to germinate, interplant with radish to mark the rows.</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>In late May use transplants. Direct seed in summer for a fall crop</td>
<td>Transplants grow best, direct seeding gives poor results</td>
</tr>
<tr>
<td>Lettuce/Endive</td>
<td>Late April to early May</td>
<td>Lettuce seed needs light to germinate, do not cover the seeds. Can be planted in August for a fall crop.</td>
</tr>
<tr>
<td>Onions</td>
<td>Mid to late April</td>
<td>Use onion sets or plants. Onion seeds need to be started indoors in March.</td>
</tr>
<tr>
<td>Peas</td>
<td>Seeds can be planted as soon as the soil can be worked- early to mid-April</td>
<td>Bush and climbing varieties. Plant in August for a fall crop.</td>
</tr>
<tr>
<td>Potatoes</td>
<td>“Seed” potatoes are planted in late April</td>
<td>Seed tubers are cut to contain at least 2-3 “eyes”.</td>
</tr>
<tr>
<td>Radish</td>
<td>Late April to early May</td>
<td>Can be used to “mark” the rows of slower germinating seeds.</td>
</tr>
<tr>
<td>Rhubarb</td>
<td>Mid to late April</td>
<td>Perennial crop. Crowns are planted; harvest can begin after the first year.</td>
</tr>
<tr>
<td>Spinach</td>
<td>Mid to late April</td>
<td>Can be planted in August for a fall crop.</td>
</tr>
<tr>
<td>Turnip</td>
<td>Plant seeds mid June to late July</td>
<td>Crops that mature in the cool temps of fall are best.</td>
</tr>
</tbody>
</table>
# Warm Season Vegetables

Planted via seeds or transplants

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>Seed or Transplant</th>
<th>Planting Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beans (dry and snap)</td>
<td>Seed only</td>
<td>Late May to early June</td>
<td>Bush or Pole varieties. Pole varieties tend to save space since the plants are grown vertically on a trellis.</td>
</tr>
<tr>
<td>Cucumber</td>
<td>Seeds or transplants</td>
<td>Seeds: mid- May, Transplants: early June</td>
<td>Plants are damaged by wind and cold temps. Wait until early June if necessary to place transplants in the garden.</td>
</tr>
<tr>
<td>Eggplant</td>
<td>Transplants</td>
<td>Early June</td>
<td>Very frost sensitive, set out after all danger of frost has passed.</td>
</tr>
<tr>
<td>Melons</td>
<td>Seeds or transplants</td>
<td>Seeds: mid- May, Transplants: early June</td>
<td>Plants are damaged by wind and cold temps. Wait until early June if necessary to place transplants in the garden.</td>
</tr>
<tr>
<td>Peppers- Green and Hot</td>
<td>Transplants</td>
<td>Late May</td>
<td>Set out after all danger of frost has passed.</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>Seeds or transplants</td>
<td>Seeds: mid- May, Transplants: early June</td>
<td>Plants are damaged by wind and cold temps. Wait until early June if necessary to place transplants in the garden.</td>
</tr>
<tr>
<td>Sweet Corn</td>
<td>Seed only</td>
<td>May to early June</td>
<td>Plant a large area, at least 20’x 20’, for an adequate crop.</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>Transplants</td>
<td>Late May</td>
<td>Bury stems up to first set of leaves, plant outside after all danger of frost has passed.</td>
</tr>
<tr>
<td>Watermelon</td>
<td>Seeds or transplants</td>
<td>Seeds: mid- May, Transplants: early June</td>
<td>Plants are damaged by wind and cold temps. Wait until early June if necessary to place transplants in the garden.</td>
</tr>
<tr>
<td>Winter Squash</td>
<td>Seeds or transplants</td>
<td>Seeds: mid- May, Transplants: early June</td>
<td>Plants are damaged by wind and cold temps. Wait until early June if necessary to place transplants in the garden.</td>
</tr>
<tr>
<td>Zucchini/Yellow Summer Squash</td>
<td>Seeds or transplants</td>
<td>Seeds: mid- May, Transplants: early June</td>
<td>Plants are damaged by wind and cold temps. Wait until early June if necessary to place transplants in the garden.</td>
</tr>
</tbody>
</table>
VEGETABLES AS TRANSPLANTS

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>Approximate indoor seed starting date</th>
<th>Transplant into garden*</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cucumber</td>
<td>Mid-April</td>
<td>June 1st or later if the weather is cold</td>
<td>Sometimes do better when direct seeded; they do not like being transplanted. They also are very cold sensitive.</td>
</tr>
<tr>
<td>Eggplant</td>
<td>Mid-April</td>
<td>June 1st or later if the weather is cold</td>
<td>Tropical plant, loves heat.</td>
</tr>
<tr>
<td>Melon</td>
<td>Mid-April</td>
<td>June 1st or later if weather is cold</td>
<td>Very cold sensitive; loves heat</td>
</tr>
<tr>
<td>Pepper</td>
<td>Mid-March</td>
<td>Memorial Day, or 1 week earlier if weather is expected to be above freezing (be prepared to cover in case of frost!)</td>
<td>Seeds are slow to germinate and the plants grow very slowly.</td>
</tr>
<tr>
<td>Summer Squash</td>
<td>Mid-April</td>
<td>June 1st or later if weather is cold</td>
<td>Can be direct seeded; cold sensitive.</td>
</tr>
<tr>
<td>Tomato</td>
<td>Early April</td>
<td>Memorial Day, or 1 week earlier if weather is expected to be above freezing (be prepared to cover in case of frost!)</td>
<td>Bury the plant stem up to the first set of leaves.</td>
</tr>
<tr>
<td>Winter Squash</td>
<td>Mid-April</td>
<td>June 1st or later if weather is cold</td>
<td>Cold sensitive</td>
</tr>
</tbody>
</table>

*Dates are approximate- become familiar with weather patterns in your area!

- Choose short season, or northern seed varieties.
- Be sure all planting containers have good drainage.
- Water from the bottom up.
- Once the seeds germinate remove any covers and get the plants under a fluorescent shop light or grow light.
- Any heat mats can be removed at this point.
- Lights should be 4 to 6 inches from the tops of the plants.
- Lights should be on for 12 to 16 hours per day.
- Rotate the plants under the lights.
- Transplant seedlings at least once before they are planted in the garden. They can be transplanted into larger containers when the first set of true leaves are fully developed.
- Fertilize after the first transplant at ½ the recommended rate.
- Use a fan to strengthen plant stems.
- Properly harden off plants before planting them in the garden.
- Plant the transplants outside on a cloudy day.
EVERYBODY LOVES TOMATOES!

Tomatoes are the most popular vegetable garden crop. They are a staple in the kitchen and the garden harvest can be used right away or processed for storage. Tomatoes are also easy to grow and relatively low in maintenance.

WHAT TYPES TO GROW?

Tomatoes come in two different types determinate and indeterminate. This will be noted on the seed packet, tag, or in the seed catalogue description. See the chart below for a comparison. Most gardeners grow both types.

<table>
<thead>
<tr>
<th><strong>Determinate</strong></th>
<th><strong>Indeterminate</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Smaller sized plants at maturity</td>
<td>Plants are large and vining</td>
</tr>
<tr>
<td>Staking, caging and trellising not necessary</td>
<td>Staking, caging and trellising are required for best results</td>
</tr>
<tr>
<td>Produce a large amount of fruit during a compact period of time, then production slows or stops</td>
<td>Produce a steady amount of fruit until frost</td>
</tr>
<tr>
<td>If you plan on processing your tomatoes, these tomatoes will be ready all at once</td>
<td>These tomatoes are good for fresh eating throughout the season and can also be processed</td>
</tr>
</tbody>
</table>

Heirloom tomatoes are very popular and offer the best flavor. Most heirloom tomatoes are indeterminate types. Despite their great taste, heirlooms can be problematic- they are highly susceptible to disease and low-yielding. Don’t depend on them for processing. Most gardeners grow a couple of their favorite varieties for fresh eating.

Whenever possible try to grow tomatoes with good disease resistance. This will save you time and frustration. Look for a series of capital letters in parenthesis after the variety name- this indicates what kind of disease(s) the variety is resistant to. The more letters the greater the disease resistance:

- **Big Beef (AS, F2, GLS, N, TMV, V)** = resistance to Alternaria canker, Fusarium wilt, Gray leaf spot, Nematodes, Tobacco mosaic virus, Verticillium wilt
- **Sun Gold (F, TMV)** = resistance to Fusarium wilt, Tobacco mosaic virus

Tomatoes varieties have different sizes and shapes: beefsteak, slicing, paste, plum, cherry, pear, and grape. Red is the default color, but depending on the variety tomatoes can be pink, yellow, green, orange, black, or striped.

PLANTING

Like any other transplant, tomatoes need to be ‘hardened off’ before they can be planted in the garden. This process prevents transplant shock by slowly introducing the plants to the outdoor environment. Upon bringing the plants home from the garden center, place them outside in a shady, wind free location. Bring them inside before sundown. Gradually give them more sun and leave them outside longer each day until you are leaving them outside well past dark. After about 4 to 5 days the plants are ready to go in the garden. If a day is rainy and cold just keep the plants inside and continue the process once the weather improves.

Tomatoes should be planted in the garden at the end of May. By then the chance of frost has passed. Memorial Day weekend is the target date for most gardeners. Set the plants out on a cloudy day or in the late afternoon or early evening.

Planting a tomato is a bit different from planting other transplants. Remove the plant from the container and pull apart the roots on the bottom so they are somewhat spread out. You are actually tearing the roots and this won’t hurt a thing! It actually encourages root growth. If your plants are in peat pots, just tear off the bottom and spread the roots. The remaining portion of the pot is planted right in the ground.
Space determinate tomatoes 12 to 24 inches apart, indeterminate varieties should be spaced 24 to 36 inches apart. Any stakes, cages, or trellising should be set in place before or at planting.

***When you plant tomatoes- bury the entire stem, all the way up to the first set of leaves. Dig a deep enough hole or lay the plant on its side and dig a small trench.

(Will Suckhow, Sustainable Food Center)

**FERTILIZATION**

After planting, water the transplants with a water soluble fertilizer like Miracle-Gro or fish emulsion. This gives them a good start and also helps prevent transplant shock.

If you have added a granular, slow-release fertilizer to the soil or if you have used a bagged soil that contains fertilizer, you do not need to do any further fertilization. If not, water the plants with a water soluble fertilizer, usually every two weeks as per the label directions.
THINKING ABOUT GROWING SOME BACKYARD FRUIT?

General recommendations for growing fruit in Jefferson County:

- Choose varieties that are hardy to Zone 4 (locations east of Rt. 81) or Zone 5 (locations west of Rt. 81 and the City of Watertown).
- Well-drained sandy loam soil is best, but most plants are adaptable to other soil types.
- The soil pH level should be 6 to 7, (except for blueberries, see below!)
- Fruit trees should not be pruned until the third year after planting. Any broken branches should be removed immediately.

Grapes:

- Deep sandy loam
- South facing slope is best
- New Cold Climate grape varieties do best in Jefferson County
- Limited crop in 3 years
- High maintenance crop- spraying, fertilization, pruning = time and money
- Trellising system needed
- Many insect and disease issues
- Issues with late spring frosts

Blueberries:

- Well-drained, **acidic soil** (pH below 5), no high calcium soils
- Can be grown in raised beds to maintain soil pH
- Good crop in 3 years
- Shallow rooted- do not compete well with weeds
- Medium maintenance- some pruning
- Minor disease issues

Brambles:

- Well-drained sites- no wet areas!
- Crop in 2 years
- Summer vs fall bearers
- Summer- considerable trellis
- Fall- basic trellis, lose a lot of crop to frost
- Medium maintenance crop
- Several disease and insect issues

Prunus (stone fruit) - including plums and cherries:

- Sweet cherries have hardiness issues; best if grown in Zone 5. Sour cherries do well in Zones 4 and 5.
- Disease is rampant and harbored in wild *Prunus* species.
- Black knot, bacterial canker
- Relatively low maintenance if pest issues can be avoided

Apples/Pears:

- High maintenance crop- pruning and spraying are required
- Many disease and insect issues- organic production will be difficult
Apricot/Nectarine/Peach:
  - Difficult - few hardy varieties

Strawberries:
  - Relatively high maintenance
  - Short term - crop first year
  - June vs day neutral (everbearing)
  - June bearers produce a crop in June
  - Everbearers produce a small crop in spring and a larger crop in late summer
  - Fertilization required
  - Mulching will hold down weed competition
  - Must replant every 2 years
  - Some disease and insect issues

Specialty/Niche Crops:
  - Serviceberry - small tree with edible berries (AKA Saskatoon’s)
  - Elderberry - large shrub with clusters of berries
  - Aronia - medium shrub with berries
  - Currants/Gooseberry - Small shrub
  - Honeyberry (haskap) - Easy to grow and can replace blueberries in locations without acidic soils
  - Hazelnuts
  - Other nuts - walnut, hickory
  - Paw-paw - only hardy to Zone 5
  - Mulberry - fast growing tree with berries that look similar to blackberries

Right: Honeyberry (Haskap)
FRUIT AND NUTS YOU CAN GROW IN NNY

Know your zone!

3a: -40 to -35°F
3b: -35 to -30°F
4a: -30 to -25°F
4b: -25 to -20°F
5a: -20 to -15°F

COMMON FRUIT AND BERRIES GROWN HERE:
Apple, Pear, Grape (only cold-climate varieties such as ‘King of the North’ or ‘Frontenac’), Sour Cherries (hardier varieties such as ‘North Star’), Peach*, Plum*, Apricot*, Strawberry, Blueberry (acid soil required), Blackberry*, Raspberry (‘Nova’)

SPECIALTY FRUIT GROWN HERE:
Pawpaw*, Hardy Kiwi, Lingonberry, Elderberry, Mulberry, Currant, Gooseberry, Honeyberry, Aronia, Cranberry

NUTS:
Chestnut, Hazelnut, Hickory (shagbark), English Walnut*

*Not hardy throughout the North Country. Restricted to Zone 5 (along the lake and southern locations). Choose hardiest varieties for best success.
WATER, WEEDS AND WOES

Once your food plants are in the ground, they will need some attention. Problems can crop up, but as long as you pay attention to watering and weeding, you should have productive plants.

WATER

Vegetable gardens and newly planted fruits need an inch of water per week. The best way to determine if Mother Nature is providing enough water is to use a rain gauge. They are available at hardware stores for under $10. Place the gauge in the garden or yard and check it every day. If it does not register one inch of rainfall by the end of a week, then water your plants.

The most effective way to water is with drip irrigation. If you have this type of set-up, that’s perfect, but these systems can be expensive and problematic to set up. A sprinkler, hose or bucket will do if you follow these recommendations:

- **Water early** in the day. This is especially important if you are using overhead water (sprinkler, sprayer) because the leaves get wet and this encourages fungal disease. If you water before 10 am, the plants have all day to dry out before cool, damp evening air moves in.

- **Water deeply.** The water needs to penetrate into the soil to encourage the roots to grow down. Light sprinklings cause the roots to stay near the soil surface where they are more subject to drying and damage.

- **Do not let the soil dry out.** Extreme fluctuations in soil moisture will stress the plants. Keep the soil evenly moist, but not wet. It is possible to over-water and this leads to a whole set of other problems.

WEEDS

The most common reason plants die and/or gardens are abandoned is too much weed pressure. If weeds are allowed to gain a foothold, it can be impossible to catch up. Follow the recommendations below for successful weed management:

- **Weed every day.** Frequent weeding ensures weeds will never get out of control.

- **Early season weeding is most effective.** If you keep up on weeds early in the season, you will have fewer weed issues later on.

- **Use mulch.** This can go a long way in reducing the amount of weeds. Mulch can be placed alongside plants and in walking paths. Options for mulch include: cardboard, newspaper, black plastic, leaves, grass clippings, straw (not hay!), and shredded bark or wood products. To prevent problems, the mulch layer should never be more than 3 inches thick and it should never be piled up against plant stems.

- **Avoid ‘volcano mulching’** If you are using bark mulch around trees never pile it against the trunk and it should not be more than 3 inches deep.
WOES

As the season progresses you may see some pest issues develop. Although, in my experience, first-time gardens tend to be relatively pest-free. If you do see things that just don’t ‘look right,’ contact your local cooperative extension. In Jefferson County the phone number is 315-788-8450. You can also email photos of the issue to sig42@cornell.edu or contact us via Facebook. The key to both disease and insect control is the correct identification of the pest.

Above: Common Japanese Beetle
Cooperative Extension has been there for Jefferson County through many crises. We provided classes on food preservation and gardening during the Great Depression and World War II. We were there helping residents and farmers during the snow storm of 1976 and ice storm of 1998. Today is no different. Though the team at Cornell Cooperative Extension has been largely working from home for the past month, we have been diligent in our efforts to provide the latest information on COVID-19 to our customers – whether they be families, businesses, farmers, or other government agencies. As always, we have worked hard to ensure information is presented clearly, is based upon sound science, and is relevant and timely. While today we are more likely to use PDF documents, Zoom teleconferences, and Youtube videos rather than printed pamphlets and in-home demonstrations, we remain steadfast in this mission.

To help sort through the mountain of COVID resources available, we have put together the following summary:

- COVID-19 resources specific to agriculture: [http://ccejefferson.org/agriculture/covid-19-agriculture-resources](http://ccejefferson.org/agriculture/covid-19-agriculture-resources)
- Food and nutrition related videos: [http://ccejefferson.org/nutrition/nutrition-video-resources](http://ccejefferson.org/nutrition/nutrition-video-resources)
- Financial and budgeting related tips and resources: [http://ccejefferson.org/money](http://ccejefferson.org/money)
- 4-H Virtual Academy: [http://ccejefferson.org/4-h-youth/4-h-virtual-academy](http://ccejefferson.org/4-h-youth/4-h-virtual-academy)
- Video resources for military families: [http://ccejefferson.org/military-families](http://ccejefferson.org/military-families)

Videos are continually being updated on our Facebook page ([https://www.facebook.com/ccejefferson](https://www.facebook.com/ccejefferson)), on our YouTube channel, ([https://www.youtube.com/channel/UCSt2HmdzWnSyAqmWRF7TOVA?view_as=subscriber](https://www.youtube.com/channel/UCSt2HmdzWnSyAqmWRF7TOVA?view_as=subscriber)); and on our Vimeo channel ([https://vimeo.com/ccejefferson](https://vimeo.com/ccejefferson)).

Most importantly, we will continue to provide immediate and direct support to you through telephone calls, email, video-teleconferencing, and other means. Email addresses for our staff can be found on the Extension staff directory. If you need assistance or have questions, please contact us. If we cannot help you, we will do our best to find someone who can.
Selected List
of
Vegetable Varieties for Gardeners
in
New York State
2020

(Revised 12/19)

Vegetable varieties listed in this report should be well adapted for New York State community, school and home gardens. It is recognized that varieties not listed here may be satisfactory or even perform better under certain conditions. We encourage gardens to rate the varieties at:

vegvariety.cce.cornell.edu

Visit our Vegetable Varieties for Gardeners in New York State website for detailed descriptions and some seed sources of more than 7,000 vegetable varieties including those listed in this report. Compare varieties, read ratings and reviews by fellow gardeners, and offer your own observations of which varieties perform best in your garden.

Note: Future reports will be largely based on variety ratings from this site.

vegvariety.cce.cornell.edu

Cornell Garden-Based Learning
Horticulture
School of Integrative Plant Sciences
Cornell University
Ithaca, NY 14853-0327
www.gardening.cornell.edu
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Key to Notation

| *  | At least 4 NY gardeners’ ratings averaging >3.5 stars at: vegvariety.cce.cornell.edu | # | New varieties to this year’s list |
| A  | Alternaria stem resistant | DM | Downy mildew resistant or tolerant |
| BCMV | Tolerance to Bean Common Mosaic Virus BV1 & NY15 | PM | Powdery mildew resistant or tolerant |
| BLS | Bacterial leaf spot resistant strains 1, 2, and 3 are noted | R | Rust resistant |
| CTV | Tolerance to citrus tristeza virus | SE | Sugar enhanced |
| F  | Fusarium resistant | SH2 | Supersweet |
| LBR | Late Blight Resistant | SMR | Scab, mosaic resistant |
| M  | Zucchini yellows mosaic and watermelon virus resistant | SR | Scab resistant, potatoes |
| MR | Mosaic virus resistant | SW | Stewart's wilt |
| N  | Root knot nematode resistant or tolerant | T | Tolerance to tobacco mosaic virus |
| NCLB | Northern Corn Leaf Blight | Th | Thrips resistant |
| P  | Phytophthora resistant or tolerant | V | Verticillium resistant or tolerant |
| YR | yellows resistant |

ASPARAGUS

Jersey Giant (F, R), Jersey King, Jersey Knight (F, R), Viking KB3, Purple Passion *#

BASIL

Everleaf (DM, F), Genovese*, Siam Queen, Thai Sweet, Lettuce Leaf*#, Italian Large Leaf*#, Everleaf *#, Sweet Basil *#, Cinnamon Basil*#, Purple Ruffles *#

BEANS

Green, Bush
 Bronco (BCMV), Charon, Derby, Espada (BCMV), Jade (R, BCMV, CTV *), Provider *,, Roma II (Italian flat pod), Tendergreen Improved, Masai *#, Jumbo *#, Burpee's Stringless Green Pod *#, Bush Blue Lake 274 *# (BCMV), Contender *# (BCMV)

Wax, Bush
 Golden Butterwax, Golden Rod, Dragon Tongue *,, Rocdor

Green, Pole

Lima, Bush
 LARGE SEEDED: Burpee Improved Bush, Fordhook 242 SMALL SEEDED: Henderson

Lima, Pole
 King of the Garden, Trionfo Violettos*, King of the Garden *#

Soy, Edible
 Butterbean, Envy

Dry Beans
 Cabernet, California Red Kidney, Chinook 2000, Etna, Fleetwood, Jacob's Cattle, Midnight, Black Valentine *#, White Half Runner *#, True Red Cranberry *#

Misc.
 French Horticultural, Romano

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BEETS

BROCCOLI
Baccus, Belstar F1, Green Goliath *, Liberty, Packman*, Premium Crop * (DM), Arcadia * (DM), Small Miracle *#, Piracicaba *#, Early Dividend *#, Castle Dome #, Lieutenat #, BC1764#, Green Magic#, Gypsy#, Diplomat#, Bay Meadows #, Ironman #, Burney #, Emerald Pride #, BC1691#, Imperial#, Tradition#, Emerald Crown #, Fiesta#

BRUSSELS SPROUTS
Long Island Improved, Oliver, Rubine Red, Jade Crossed *#, Diablo *#

CABBAGE
Early Farao (Tr), Jersey Wakefield, Heads Up, Pacifica, Tastie, Gonzales *#
Midseason Chieftain Savoy, Lennox, Market Prize (YR), Ruby Perfection, Savoy Ace, Savoy King
Late Huron
Winter Deadon
Chinese Blues (heading type), Jade Pagoda, Optiko (YR)

CARROTS
Amarillo Yellow *, Bolero *, Cosmic Purple *, Healthmaster, Kinko, Purple Haze *, Royal Chantenay, Rumba, White Satin*, Yaya, Yellowstone, Red Cored Chantenay *#, Royal Chantenay *#, Napoli *#, Nelson *#, Nantes Half Long *#, Dragon *#, Danvers 126 *#

CAULIFLOWER
Alert, Amazing, Candid Charm, Cheddar, Early White, Self Blanche (fall), Snow Crown*, Graffiti *

CEleriac Brilliant, Large Smooth Prague aka Giant Prague

CEleri
Tango

CILANTRO
Cruisier *, Calypso *, Delfino *

COLLARDS
Blue Max, Champion *, Georgia Green *.*, Georgia Southern *, Green Glaze *#, Champion #, Georgia Collard #, Tiger F1#

CORN (all yellow kernels except when indicated white [WH] or bicolor [BC]):
Sweet
Early Fleet (BC, SE), Geronimo (BC, SE), Jester II, Seneca Spring (BC, SE), Sundance, Sugar Buns, Temptation (BC, SE), Trinity (BC, SE)
Midseason Incredible (SE, SW), Jubilee, Precious Gem (BC, SE), Argent (SE, WH, R, SW), Silverado (WH), Silver King (WH, SE, NCLB, R, SW), Tuxedo, Bodacious *# (SW), Incredible *# (SW, R), Ambrosia *#
Late Season Bodacious, Delectable (BC, SE), Sensor (BC, SE), Sugar Ace, Sugar Dots *# (SE), Silver Queen *# (SW, NCLB)
Super-sweet Northern Extra Sweet
Popcorn Mini Bluepopper

CUCUMBER
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Slicing
Burpless Hybrid II (MR), Corinto (MR, PM) *, Diva *, Greensleeves, Marketmore 76 (SMR, PM) *, Marketmore 86 (SMR, PM) *, Martini (PM), Socrates (PM), Spacemaster (SMR), Sweet Slice (SMR), Silver Slicer*#, Green Finger*#, Sweet Success *# (SR, MR), Poona Kheera *#, Lemon *#, Suyo Long *#, Little Leaf *# (DM, SR, MR), Straight Eight *# (MR)

Pickling
Alibi (DM, PM), Muncher (MR), National, Regal (SMR), Salt and Pepper (PM), Orient Express *# (PM, DM, MR, SR), Sumpter *# (MR, SR), Cool Breeze *# (MR, SR, PM), Homemade Pickles *#

EDIBLE HERBS/FLOWERS
Remembrance Calendula*#
Garlic Chives *#

EGGPLANT
Early Calliope, Dusky, Ichiban, Little Fingers, Swallow, Daimond *#, Kamo *#, Casper *#, Millionaire *#, Swallow *#, Neon *#, Nadia *#
Midseason Black Beauty, Classic, Neon, Pingtung Long, Listada de Gandia *#

ENDIVE Florida Deepheart, Full Heart Bavarian, Green Curled, Rhodus

FENNEL Grosfruchtiger *, Orion

GARLIC Music *#, Bogatyr*#


KOHLRABI Early Purple Vienna*, Early White Vienna*, Eder, Grand Duke, Kolibri, Kossak (Kossack) Lanro*#

LEEK American Flag, Blue Solaise*, Broad London, Electra, King Richard, Lancelot *, Pancho, Tadorna

LETTUCE
Crisphead (Iceberg)
Great Lakes (Fall), Ithaca, Summertime, Tom Thumb
Butterhead (Bibb/Boston types)
Andriana (MV, DM)*, Buttercrunch *, Esmerelda, Four Seasons, Sangria
Cos (Romaine)
Cosmo Savoy, Green Towers, Little Gem*, Parris Island, Valmaine (a.k.a Paris White or Valmaine Savoy) (MR)
French (Batavia)

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Sierra, Magenta *, Cherokee (DM)*

**MELON**

Orange flesh  
Ambrosia, Gold Star (F), Athena (F 0, 1, and 2, PM 1&2), Burpee Hybrid,  
Fastbreak, Halona, Hannah's choice, Harper Hybrid (F), Iroquois (F), Pulsar,  
Superstar (F), Sugar Queen *#

Green flesh  
Early Dew, Passport

Specialty  
Charantais, Edonis, Galia

Heirloom  
Eel River, Jenny Lind, Rocky Ford, Schoon’s Hard shell

**MUSTARD**  
Green Wave, Red Giant, Southern Giant Curled *#, Red Giant *#

**OKRA**  
Cajun Delight, Cow Horn *#, Clemson Spineless *#

**ONIONS**

Transplants (Not for long term storage)  
Alisa Craig Exhibition*, Bennie’s Red, Candy, Red Sweet Spanish, Scout *,  
Walla Walla, White Sweet Spanish, Yellow Sweet Spanish *#, Texas Supersweet  
1015Y *#

Seed (Early maturing)  
Arsenal, Early Yellow Globe, NY Early *, Precedent

Seed or Transplant (Long term storage)  
Cabernet, Copra (F) *, Duration, Fortress, Mars, Redwing

Sets  
Stuttgarter *, Egyptian Walking *#

Green or Bunching  
Evergreen Hardy White, He-Shi-Ko, Long White Bunching, Southport White

**PARSNIPS**  
All American, Harris' Model, Hollow Crown

**PEAS**

Early  
Knight, Little Marvel *, Maestro, Novella II, Olympia, Progress No. 9, Sparkle  
Late  
Bolero, Green Arrow (DM, F) *, Frosty, Lincoln, Mr. Big, Wando  
Snow pea  
Dwarf Grey Sugar *, Little Sweetie, Mammoth Melting Sugar, Oregon Sugar,  
Oregon Giant*#

Snap pea  
Cascadia (PM), Early Snap, Sugar Ann *, Sugar Snap *, Sugar Sprint *, Amish  
Snap *#

Cowpea  
Red Ripper *#

Shelling  
Little Marvel*#, Green Arrow*# (DM)

**PEPPERS**

Early  
Ace *, Apple, Aura, Carmen *, Cornito Rosso *, Golden Bell, Gypsy, Lipstick,  
New Ace, Redstart  
Main Season  
Boynton Bell (BLS 1,2,3), Golden Bell (Yellow), King Arthur (BLS 2),  
Lady Bell *, Sweet Banana, Sweet Chocolate *, Yellow Belle II, Habanada Sweet  
Pepper*#, Melrose *#, Marconi Red *#, Aconagua *#, Giant Marconi *#

Hot  
Biscayne, Cayenne Long, Hungarian Yellow Wax, Mucho Nacho, Numex Joe E  
Parker *, Serrano, Super Chili, Thai Dragon *#, Biker Billy *#, Kung Pao *#,
Selected List of Vegetable Varieties for Gardeners in NYS – A. Helmholdt – page 6 of 7

Jalapeno M **#, Fish *#, Ixtapa *#, Numex Joe E Parker *#, Cubanelle *#, Ancho *#  

**Thin Walled Frying Types**  
Cubanelle, Italian Sweet, Jimmy Nardello *

**POTATOES**  
**Early** Superior (SR), Red Pontiac *# (SR), Irish Cobbler *#  
**Mid Season** Chieftain, Kennebec, (Reba, Salem (SR), Yukon Gold *, All Red *# (SR)  
**Late Season** Elba, Katahdin, Russian Banana *#, German Butterball *#  
**Specialty** All Blue *, All Red *, Adirondack Blue, Adirondack Red*, Carola, Dark Red Norland *, French Fingerling, German Butterball, Purple Viking *#, Caribe *#, Purple Peruvian *# (SR)

**PUMPKINS**  
**Bigger** Autumn Gold, Gladiator (PM), Gold Rush, Howden, Rocket, Tom Fox  
**Medium** Howdy Doody, Jackpot, Magic Lantern (PM), Racer, Rouge vif D’Etampes (French heirloom), Spoktacular  
**Smaller** Baby Bear, Baby Pam, Lil’ Ironsides, Lumina, Small Sugar, Snackjack  
**Mini** Baby Boo, Jack-be-Little, Munchkin  
**Giant** Atlantic Giant, Big Max, Prizewinner  

**RADICCHIO** Chioggia Red Preco No. 1

**RADISH**  
Champion, Cherry Belle, Easter Egg *, French Breakfast, Hailstone *, Icicle, Scarlet Knight, Sparkler, Pink Beauty *#, French Breakfast *#, Early Scarlet Globe *#

**RHUBARB** Canada Red, MacDonald, Crimson Red, Victoria

**RUTABAGA** American Purple Top, Thomson Laurentian

**SPINACH**  
**Spring** America, Bloomsdale Dark Green, Bloomsdale Long-Standing *, Giant Noble *, Indian Summer (MR), Melody, Space, Tyee  
**Summer** Malabar, New Zealand  
**Fall** Melody, Tyee*, Winter Bloomsdale

**SQUASH, SUMMER**  
**Yellow** Early Prolific Straightneck, Fortune, Seneca, Sunburst, Sundance, Yellow Crookneck, Zephyr*, Rampicante-Tromboncino *#, Early Crookneck *#  
**Zucchini** Dunja (PM, M) *, Eight Ball *, Elite F1, Gold Rush, Golden Burpee, Midnight Zucchini, Multipik, Revenue (M), Raven *#, Ronde de Nice *#, Black Beauty *#, Elite *#, Partenon *#, Cucozelle *#, Costata Romanesco *#, Magda *#  
**Bush Scallop** Butter Scallop, Peter Pan, Sunburst*, White Patty Pan *#

**SQUASH, WINTER**  
**Butternut** Bugle (PM), Early Butternut, Burpee Butterbush *, Harris Betternutt (semi-bush), Metro PMR (PM), Ponca Baby, Waltham Butternut *, Zenith

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Acorn
- Autumn Delight (PM), Carnival *, Sweet Dumpling, Table Ace*, Table King Bush, Table Queen (a.k.a. Ebony Acorn) *, Tuffy

Buttercup/Kabocha
- Ambercup, Autumn Cup, Burgess Buttercup, Sweet Mama, Sweet Meat, Gold Nugget *

Hubbard
- Blue Ballet, Hubbard, Red Kuri

Misc.
- Carnival*, Cornell Bush Delicata (PM), Gold Nugget, Harlequin, Sweet Dumpling, Tetsukabuto, Vegetable Spaghetti, Tetsukabuto #*, Marina Di Chioggia #*, Thelma Sanders #*, Pink Banana #*, Table Ace #*

SUNFLOWER
- Evening colors# *

SWEET POTATO
- Beauregard (F), Georgia Jet

SWISS CHARD

TATSOI
- Tah Tsoi or Tah Tsai *

TOMATO
- * all of these tomato varieties
  - Cherry
    - Black Cherry, Jasper (LBR, EBR, F), Riesentraube, Sungold, Super Sweet 100, SunSugar (F, T), Sweet 100, Coyote, Summer Sweetheart#, Sweet Baby Girl #*, Chocolate Cherry #*, Lemon Drop (LBR)#, Matt’s Wild Cherry (LBR)#,
  - Currant
    - Red Currant
  - Grape
    - Juliet
  - Early
    - Stupice, Enchantment #*
  - Main Season
    - Aunt Ruby’s German Green, Black Krim, Big Beef (V, N, T), Brandywine, Celebrity (V, F, N), Cherokee Purple, Eva Purple Ball, Jet Star (V, F), Mortgage Lifter, Pineapple, Rose, Supersonic (V, F), Thessaloniki #*, German Queen #*, Carmello #(F, V, T), Goliath #*, Striped Roman #*, Park’s Whopper #*, Opalka #*, Defiant (LBR) #, Iron Lady (LBR)#, Mountain Magic (LBR)#, Mountain Merit (LBR)#, Mr. Stripey (LBR)#, Brandywise #
  - Paste/Plum
    - Amish Paste, Roma (V, F), Opalka, Federle #*, Viva Italia #*, Plum Perfect #
  - Pear
    - Yellow Pear
  - Heirlooms
    - Aunt Ruby’s German Green, Black Krim, Brandywine, Cherokee Purple, Kellogg’s Breakfast, Opalka, Pineapple, Rose, Stupice, Caspian Pink #*, Striped German #*, Big Rainbow #*, Rose #*, Arkansas Traveler #*, Delicious #*, Amana Orange #*, Jaune Flamme #*, Italian Heirloom #*,

TURNIPS
- Gilfeather, Hakurei, Purple Top White Globe, Tokyo Cross

WATERMELON
- Crimson Sweet, Moon & Stars, Sorbet Swirl, Sunshine, Yellow Baby, Yellow Doll, Charleston Gray #*, Dixie Queen #*

Seedless*
- Tri-X-Sunrise, Solitaire, Farmers Wonderful
  * Seedless watermelon requires a seeded pollinator so cannot be planted alone.

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