

## LOCAL GROWING & SEED SAVING ADVICE

# Tomatoes



This guide provides growing and seed saving instructions specifically for gardeners of the Fox Valley in Wisconsin.

Seed from “open pollinated” or “heirloom” varieties can be saved and replanted to produce offspring like the parents, as long as they have not crossed with plants of a different variety. Seed from hybrid varieties is not usually worth saving, since the offspring will differ noticeably from the parents. Hybrid seed packets are usually labeled “hybrid” or “F1.” Some species require isolation and/or hand pollination to prevent crossing with another variety.

## Overview of saving tomato seeds

Tomato seeds can be saved and replanted to produce true-to-type fruits if seeds are saved from fully developed, ripe fruits from open-pollinated varieties that did not cross with other tomato varieties.

Tomatoes are self-fertile, which means they do not need another plant or pollinator to produce fruits. However, pollinators can spread pollen between varieties grown too close together.

- If tomatoes have cross-pollinated, the resulting plants will produce edible tomatoes, but they may have lost identifying features of the original.

When preparing tomato seeds for saving, the goal is to remove the gel that surrounds fresh seed and preserve the seed in a perfectly dry state.

## Plan ahead for seed saving

You can use distance isolation to minimize cross-pollination among tomato varieties by planting the variety you want to save at least twenty-five feet away from other tomato varieties.

Collecting seed from fruits of ten plants of a single variety will maintain desired genetic diversity. However, the target population size of ten plants can be spread out among different people’s gardens. In that case, several gardeners with the same saved variety would combine the clean dry seeds at the end of the season before resharing.

## Start indoors

Growing tomatoes for harvest by late summer requires indoor seed starting in the second or third week in April. Plant two tomato seeds per container or soil block and cover with eighth of an inch of sand or seed starting mix. Keep seeds moist and warm to facilitate germination. Ideal germination temperature for tomatoes is 80 F; warmth can be added with a heat mat, lights, placement near radiator, or indoor sunshine.

Seeds do not need light to germinate but will need light to grow after they sprout. Use indoor grow lights or placement in sunny window. Check seedlings daily and maintain moist soil. Strive to raise an abundance of seedlings, as this allows you to select for vigor and health. Snip off the weaker ones with a scissors (pulling may disturb the roots of nearby seedlings) leaving only one seedling growing in each container or soil block.

## Pot-up

If you start seeds in small soil blocks or containers, you will probably need to “pot-up” (move into larger containers) twice before it is time to transplant outdoors. When roots have filled the container, it’s time to pot-up. Each time, prioritize the most vigorous and healthy plants, discarding those that are not thriving.

## Harden-off

To minimize transplant shock, sunburn, and wind damage, set your seedlings outdoors in late May (the week or two before you plant them in the ground). Start with about one hour outdoors on day one, two hours on day two, three to four hours on day three, etc. This gets them gradually used to outdoor life. If heavy rain or high winds are in the forecast, keep seedlings indoors to avoid damage.

## Transplant

Seedlings can be planted in the ground after the danger of frost has passed with daytime highs in the 70s F and nighttime lows above 50 F. This is typically the first week in June, give or take a week. Resist the temptation to plant them out early. Even if they live through cool nights, they will not be growing or thriving in cool temperatures, and weak tomato plants are more susceptible to disease.

Overcast days and evenings are better times for transplanting than sunny days. Water seedlings well immediately before and after transplanting once mulch is in place. Plants should be placed about three feet apart within rows with about four feet between rows. Place roots low in deep holes that cover one-third of the stem because tomatoes will root along the buried stem, which helps establish and strengthen the plant.

You'll need mulch (marsh hay, grass clippings, fallen tree leaves, comfrey, half-finished compost, etc.) at the time of transplant. It is often easier to mulch the tomato bed and then plant into the mulch. Mulching suppresses weeds, keeps moisture in, reduces soil-borne disease, and improves the soil because the mulch eventually degrades into compost. Mulch tomato transplants before watering to minimize soil splashing up onto plants.

Indeterminate tomatoes tend to be vining plants that benefit from trellising and weekly pruning to maintain two primary shoots. The trellis could be a tall cage, fencing, woven baling twine, etc. It is usually easiest to install posts before or cages immediately after transplanting.

Determinate varieties are usually shorter, bushy plants. They should not be pruned but do require some support from short, stout cages or similar, especially since they get weighted down with most of their fruits ripening together over a three to five week period.

## Tend the plants

If it does not rain, water new transplants at least once per week, with frequency depending on how warm and sunny it is. Put your finger in the soil to gauge soil moisture below the surface. Once established, mulched tomatoes generally do not need regular watering.

## Watch for disease and pests

Tomatoes usually grow well in our area, but there are diseases that can affect health and production of tomato plants. It is best to remove any plants that show signs of disease such as dark lesions on stems or blackened tips of leaves.

► Please do not save and share seed from unhealthy plants because some diseases can be transmitted through seed.

It is common for lower leaves to turn yellow/brown as the season progresses; that is not something to be concerned about. Those old leaves can simply be removed while the rest of the plant remains.

Tomato hornworm can be a pest in some parts of the country, but we rarely see it here. You first would likely notice foliage missing and large black frass. If you see these signs, look more carefully for the (finger sized!) well-camouflaged green caterpillars and remove them.

## Collect and clean seeds

Select seed fruits from healthy plants that exhibit the unique characteristics of the variety. Cut open and squeeze seeds and pulp into a jar. Add a few tablespoons of water and stir to mix. Loosely cover to prevent fruit fly infestation, and leave on the counter to ferment.

After two to three days it should be fermenting. Stir or shake, then pour off the floating material (non-viable seeds and pulp) and drain the seeds; add more water and repeat this step every few days until the water in the jar remains clear and no more debris and seeds float to the surface. This can take anywhere from several days to a week.

After draining the remaining seeds through a fine sieve for the last time, flush well with running water to remove any remaining residue. Let the tomato seeds dry in an area with good air circulation on an absorbent paper or mesh sieve. Drying will take at least one month.

## Store and share seeds

When completely dry, label seeds and store in a cool dry place out of direct sunlight. At room temperature, they should remain viable for several years. For longer term storage, freeze in air tight containers or bags.

If you are a Seed Saver growing a variety from the OSS Collection to share with the organizers, please label fully dried seeds with your name, the variety name, harvest date, how many plants contributed seed, and location where the fruits were grown.



*Local Growing & Seed Saving Advice: Tomatoes* was written by Jason Mills and Julia Chybowsky, designed by Lynn Stuart, and illustrated by Cassie Edwards.