



How-to: Saving Seeds

What did gardeners do before the advent of seed catalogs? Rather than order up a stack of seed packets, they saved seeds from their own plants for sowing the following growing season. These days it's fun to browse the many varieties on offer from commercial seed sellers and to take advantage of breeding expertise that's gone into the creation of new varieties. But it can also be an interesting and rewarding experience to harvest and save your own seeds. It does require some basic knowledge of plant pollination and some advance planning, but for many of the vegetable plants in your garden, saving seeds is not a difficult or complicate process.

While you can save seeds from just about any plant in your garden, if you want to produce new plants that are the same as the parent plant from which the seeds were harvested you need to pay attention to a couple of factors.

Hybrid or Open-Pollinated, Self or Cross Pollinated

First, you need to determine if your plants are **open-pollinated** or **hybrid** plants. Hybrids are the result of the intentional, controlled crossing by plant breeders of two lines of plants that are themselves the result of selective inbreeding. This creates plants with specific desirable traits, such as disease resistance or early ripening. However, the seeds of hybrids will not “come true”—that is, they will not produce plants that have the same traits as the parent plant and are therefore not good candidates for seed saving. The designation F1 after the variety name indicates that it is a hybrid.

Open-pollinated plants are the ones to grow if you plan to save seeds. They are the result of natural pollination mechanisms, so the seeds and the plants they produce are more diverse genetically than hybrids. Heirloom varieties are open-pollinated. Seeds produced by open-pollinated plants will “come true” and produce plants like the parents as long as pollen of different varieties of the same species isn't shared between parent plants.

Which brings us to the next factor to consider— whether plants are **self-pollinated** or **cross-pollinated**.



In **self-pollinated** plants the pollen produced by the male parts of a flower will fertilize the female parts of the same flower. The seeds that form will carry the same genetic material as the parent plant and will “come true” when grown. Peas, beans, tomatoes, peppers, and lettuce are examples of self-pollinating plants.

Other plants require **cross-pollination** to produce seeds. This means that the pollen from the male flowers of one plant needs to be carried (by pollinators such as bees or on the wind, depending on the kind of plant) to the female flowers of a different plant for fertilization to occur and seeds to form. To save seeds that will produce plants like the parent plant, you need to either grow only one variety of the plant or separate different varieties adequately in the garden so that pollen isn’t shared among them. Broccoli, corn, cucumbers, and squash are examples of cross-pollinated plants.

If you are a beginning seed saver, open-pollinated varieties of peas, beans, tomatoes, peppers and lettuce are easy plants to start with because you don’t need to worry about separating varieties of these self-pollinating plants. Of course, if you are interested in experimenting, it can be fun to save seeds from cross-pollinated plants to see what traits show up in the plants they produce.

Be choosy when you decide which individual plants to save seeds from. Select the healthiest, most robust specimens. Don’t save seeds from diseased plants, as some diseases can be carried over in the seeds. Do you have a plant that shows especially desirable characteristics? Perhaps it is ready for harvest early, has no insect or disease problems, is especially flavorful or exceptionally productive. Saving seeds year to year from the individual plants that grew the best will let you breed your own variety that is increasingly well-adapted to the conditions in your garden.

Be sure to label the seed storage containers so you’ll know what kind and variety you have come planting time next spring!

Beans and Peas

Beans and peas are self-pollinating, but occasional cross-pollination can occur due to bee visits. This isn’t a big issue for most seed savers, but if you want to make sure your seed will come true, grow only one variety or separate different varieties by 10-20 feet.

Let the pods remain on the plants until the pods are brown and dry, most of leaves have fallen from the plant, and you can hear the seeds rattling around in the pods. Pull up the entire plant and hang it upside down in a cool, dry, dark spot for a week or two to dry completely. Remove the seeds from the pods and store the seeds in a paper or cloth bag or loosely sealed container in a cool, dry spot. Seeds will remain viable for about three years.

Tomatoes

Many tomato varieties are hybrids, so be sure to grow open-pollinated varieties if you plan to save seeds. They are self-pollinating, but occasional cross-pollination can occur due to bee visits. This isn’t a

big issue for most seed savers, but if you want to make sure your seed will come true, grow only one variety or separate different varieties by 10 feet.

Tomato seeds need to be fermented before they are dried for storage. Collect the seeds from inside the ripe fruits by cutting open and scooping out the seeds and pulp and placing them in a plastic or glass container. Add enough water to cover. Cover the top of the container with plastic wrap and let sit at room temperature for four days, stirring once daily. The viable seeds will sink to the bottom of the container, while the pulp and non-viable seeds will float to the top. Don't worry if you see mold forming on the floating material. After four days, pour off the water while retaining the viable seeds. Rinse the seeds in fresh water, drain, and then spread the seeds out on a sheet of newspaper or a paper plate to dry for 7-10 days. Store the seeds in a cool, dry spot inside a sealed container. Add a few spoonful of uncooked rice in a paper envelope to the jar to help absorb moisture. Seeds will remain viable for about four years.

Peppers

Many pepper varieties are hybrids, so be sure to grow open-pollinated varieties if you plan to save seeds. Peppers are self-pollinating, but occasional cross-pollination can occur due to bee visits. This isn't a big issue for most seed savers, but if you want to make sure your seed will come true, grow only one variety or separate different varieties by at least 50 feet.

Let the pepper fruits from which you plan to harvest seeds remain on the plant until they turn the mature color for the particular variety and begun to shrivel. Cut the pepper open, remove the seeds, and spread them out to dry on a paper plate or sheet of newspaper for two weeks. Store the seeds in a cool, dry spot inside a sealed container. Add a few spoonful of uncooked rice in a paper envelope to the container to help absorb moisture. Seeds remain viable for about two years.

Lettuce

Lettuce is self-pollinating, but occasional cross-pollination can occur due to bee visits. This isn't a big issue for most seed savers, but if you want to make sure your seed will come true, grow only one variety or separate different varieties by 5-10 feet.

Let the lettuce plants you've selected for seed saving "bolt" or go to seed. As the plants mature beyond the stage of tender, harvestable leaves, they send up tall stalks topped with heads of small, yellow flowers that will eventually set dark seeds inside feathery white tufts. The seeds don't all mature at the same time, so check bolted plants frequently and shake the flower heads over a small bag to catch the mature seeds as they fall. Spread out the seeds to dry for about a week before storing in a sealed container in a cool, dry spot. Add a few spoonful of uncooked rice in a paper envelope to the container to help absorb moisture. Seeds remain viable for about five years.