

What are Seeds?

A plant produces seeds in order to reproduce itself. Just like an egg has to be fertilized to become a new animal, a seed must be pollinated to produce a new plant. Understanding pollination is key to getting seeds to produce the plants you want. Some plants are **self-pollinating**—the male and female parts are contained within a single flower that fertilizes itself. Other plants, called **cross-pollinators**, have separate male and female flowers and their pollen has to get from one flower to another in order for the flowers to be fertilized.

The seeds from families of plants that are self-pollinating are labeled “**easy**” to save. The most widely crossing of the cross-pollinators are labeled “**advanced**” because it takes effort to keep them from crossing with each other.

Types of Seeds

Open-pollinated or **heirloom** varieties have been grown for so many generations that their physical and genetic qualities are relatively stable. This seed will be “true to type” if saved. In simple terms, you will reap what you sow.

Hybrid seeds. If a packet has *hybrid*, *F1*, or *VF* written on it, seeds from those plants will not produce plants like the parent plant. They may produce something somewhat or very different, or they may produce nothing at all.

Plant Families

If you learn the family, genus and species of vegetables, you will also learn their basic seed saving needs and risks.

Families define the basic form of the flower parts of plants. All plants with the same flower (and reproductive) structure are in the same family.

Genera (singular: Genus) define more closely related plants. Crosses between genera are rare but can occur.

Species define specific botanically recognized plants with similar fruit, flowers, and leaves. Plants within one species will readily cross with each other.

Cultivars are cultivated varieties that can cross with each other but will not cross with varieties of other species. When we save seeds we usually want to maintain a cultivar or breed a new one.

Example:

Family: Cucurbitaceae **Genus:** *Cucurbita*

Species: *Cucurbita pepo* **Cultivars:** Acorn squash, Warty gourd

Squash and gourd are the same species and can easily cross-pollinate, which might result in an inedible variety. That is why they are labeled “advanced.”



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How to Save Seeds



OUR MISSION:

The High Plains seed library provides the community with seed resources, promotes sustainability, and cultivates a culture of sharing.



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Easiest-to-Save Seeds

The plants in these families are mostly self-pollinating. The flowers have male and female parts, so pollination occurs within the individual plant, not as a cross between plants. Seeds are reliably the same as the parent plant.

Asteraceae or Compositae *Aster, Daisy, or Sunflower Family*: artichoke, cardoon, endive, Jerusalem artichoke, lettuce, salsify, shungiku, sunflower.

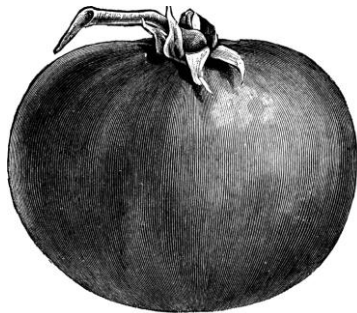
For Jerusalem artichokes, the tuber is planted. For others in this family, allow the plants to flower, collect dry seeds.

Fabaceae or Leguminosae *Pea, Bean, Legume or Pulse Family*: bean, lentil, pea, peanut, soybean.

Allow beans and peas to dry in their pods on plants before collecting and storing. Peanuts are generally not grown in coastal California.

Solanaceae *Nightshade Family*: cape gooseberry, eggplant, ground cherry, pepper, potato, tomatillo, tomato.

Allow fruits to fully ripen. Seed must be separated from fresh. Letting tomato pulp ferment in water for a few days is helpful. Seed should be rinsed and dried thoroughly before being stored. Potatoes are grown from tubers not seeds.



Easy-to-Save Seeds

These plants are self-sterile, cross-pollinating, or **outbreeding**. They will cross with other plants of their species. To save seeds from these plants you must

- allow only one variety in each species to flower at a time
- let multiple plants of one variety flower to ensure pollination

In our dense urban environments, some crossing can occur with our neighbors' plants, but these plants will not cross over great distances. Many are rarely allowed to flower anyway.

Amaryllidaceae or Alliaceae *Lily or Onion Family*: chives, garlic, leeks, onions.

They are biennial, which means they won't flower until the second year, after winter. Let the seeds dry on the plant. Collect. With bulbing varieties, replant bulb when it sprouts.

Chenopodiaceae or Amaranthaceae

Goosefoot or Amaranth Family: amaranth, beet, chard, lamb's quarters, orach, quinoa, spinach.

Beet and Chard are the same species, so only let one variety flower at the same time.

Spinach is **dioecious** meaning each plant is either male or female, so let many plants flower at once for pollination. Let the seeds dry on the plant. Collect.

Umbelliferae or Apiaceae *Parsley Family*: carrot, celery, caraway, chervil, cilantro (coriander), dill, fennel, parsley, parsnip.

Carrot unfortunately will cross with Queen Anne's Lace, so don't save carrot seeds if Queen Anne's Lace grows nearby. Many of this family are biennials, so flowering may not occur until the second year. Let the seeds dry on the plant. Collect.

Advanced Seeds

Most of these vegetables are outbreeding and pollinated by wind or insects. They are commonly found flowering in local neighborhoods, making isolation very difficult. Seeds that require hand pollination, tenting, and other methods to ensure varietal purity are labeled "advanced." **These families will readily cross with unseen nearby plants and may create odd and possibly inedible varieties in one generation.**

Brassicaceae *Mustard Family*: Asian greens, broccoli, Brussels sprouts, cabbage, cauliflower, collards, kale, kohlrabi, mustard, turnip.

Exceptions that are easy: Arugula, rutabaga



Cucurbitaceae *Gourd Family*: cucumbers, gourds, luffa, melons, pumpkin, summer squash (ex. zucchini), winter squash (ex. acorn)

Exceptions that are easy: Plant uncommon cucurbits like gourds, mixta squash, luffa. Hand pollinate to ensure purity with this family.

Poaceae *Grass Family*: barley, corn, kamut, millet, oats, sorghum, wheat.

Corn readily crosses with different, unseen varieties. It is unlikely that saved seeds will be like their parents.

Exceptions that are easy: Sorghum is easy to save because it does not cross. All other crops in this family are so uncommon in backyards that they are easy to save.