



How to Save Seeds

Mountain View Public Library

What are Seeds?

A plant produces seeds 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.

- **Self-pollinating**—Male and female parts are contained within a single flower that fertilizes itself.
- **Cross-pollinators**—Male and female flowers are separate. 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

These 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

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 a plant that is 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.”

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 flesh. 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.
- Biennial—they won't flower until the second year, after winter.
- With bulbing varieties, replant bulb when it sprouts.
- Let the seeds dry on the plant, then collect.

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 a 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, then collect.

Umbelliferae or *Apiaceae*—**Parsley** family

- Carrot, celery, caraway, chervil, cilantro (coriander), dill, fennel, parsley, parsnip.
- Many are biennial.
- Carrot will cross with Queen Anne's Lace. Don't save seeds if grown nearby.
- Let seeds dry on plant, then 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, winter squash.

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

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.

*The information in this brochure was generously provided by Richmond Grows Seed Lending Library.
www.RichmondGrowsSeeds.org*