PULL OUT & SAVE

HOW TO: Seed Saving

Why Seed Save?

Whatever varieties of flowers, herbs, and vegetables we now grow exist because someone years ago selected and saved seeds from a plant that was the best tasting, best looking, or best performing and replanted those seeds year after year. As gardeners we are stewards of the land and many of us also are stewards of seed, or seed savers. When we save sees we continue an ancient tradition while ensuring that varieties do not become extinct. The intrinsic genetic character of the plant is preserved as well as its ability to resist disease and to tolerate climate and soil conditions. Seeds that are saved over many years slowly develop these biological adaptations for survival.

Can You Talk the Talk?

The first step to take if you're interested in joining the growing number of seed savers is learning the seed saver vocabulary, which follows. The next steps are harvesting seed, cleaning seed (wet and dry), storage, and of course sharing and trading seeds.

Some Definitions

Hybrid--Seed that is a result of crossing or breeding two varieties of a plant in order to gain offspring that display the desired qualities of the parent plants. Seeds taken from hybrid plants should not be replanted because they will be sterile, fruitless, or will not germinate true to type. The resulting plants could be like any of the parents; therefore, new seed must be purchased every year.

Standard Varieties—Seeds that will produce plants that are the same as their parents as long as they are not cross-pollinated by similar plants growing nearby.

Roguing—The removal of any plants that are not true to type to avoid producing plants that do not have the desired characteristics. This prevents contaminating the seed supply.

Perfect Flowers—These plants have both male and female parts on the same flower, resulting in self-pollination. Perfect flowers usually will not cross-pollinate with other varieties of the same plant. Beans, tomatoes, lettuce, amaranth, and peppers all have perfect flowers so gardeners can

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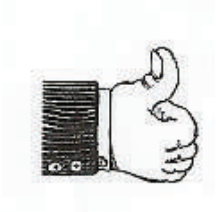
The Three Rules of Thumb for Seed Savers



Rule #1: Do not save the seeds of hybridized plants;

Rule #2: Save the seeds from open-pollinating varieties only;

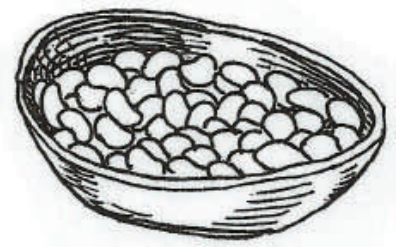
Rule #2: Seeds like it dry. Moisture will damage them (unless, of course, they're in the ground).

Rules provided by Kay Grimm and Beth Ann Maxon of Kids in Bloom, a living history seed company; P.O. Box 344, Zionsville IN 46007, 317-290-6996

grow several varieties of these plants and not worry about varietal purity.

Imperfect Flowers—Plants that have male and female parts on separate plants. These plants require wind, insects (like honeybees), or humans to carry pollen from one flower to the next for pollination to occur. This is called open pollination. Parsley, chard, cabbage, broccoli, mustard greens, celery, spinach, cauliflower, kale, Chinese cabbage, radish, beets, onions, leeks, basil, chiles, squash, cucumbers, and melons all have imperfect flowers.

These plants will cross-pollinate with plants within their group. Plant only one variety of each to maintain varietal purity. It also is possible to isolate varieties by distance or enclosure, or by varying planting times, to avoid crosses. Most varieties require a distance much larger than most community gardens; therefore this usually is not an option. Use of enclosures or sequential planting require paying close attention to the plant growth cycle. While this is possible, it takes time and effort. Plant one variety of each species to avoid potential cross-pollination. If you wish to continue saving more than variety, plant them on alternate years to continue both varieties.



Heirloom Varieties—Seeds that have been passed from one generation to the next, often for many generations, are called *heirloom seeds*. Heirloom varieties traditionally have been passed over the garden fence. Locally and regionally, popular performers were exchanged and tested. Many of these open-pollinated varieties are no longer sold by larger companies. More are lost each year as small regional seed companies go out of business or are bought by larger national or multi-national corporations. Some heirloom seeds may be difficult to harvest commercially. Here, community gardeners can play in important role in preserving the genetic diversity found in heirloom varieties by saving seeds.

Harvesting Seed

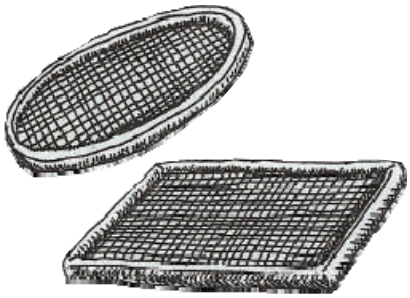
It is important to harvest seeds that are fully mature. Signs of maturity include faded or dried flowers or puff-like flower tops. Plants that produce pods will have mature seed when the pods are exposed and brown. If the flower heads or pods grown on a stalk, the optimal time to harvest is when most of the seeds are ripe. Waiting for the last seed pod to ripen will risk losing the seeds that were first ripe.

Carefully select the plants that have the characteristics you desire. The tallest, shortest, prettiest, tastiest, earliest, latest, or most disease-resistant plants are likely candidates.

Clearly mark the plants you have selected and keep a seed journal with the date, botanical name, and other pertinent information so that you remember from which particular plant to collect the seeds.

Seeds come in a variety of sizes and shapes. Some seeds are as big as a speck of dust, while others are larger and more easily handled. Some seeds have hard coats. Generally, when seeds are mature or ripe they turn from white to cream in color, or from light brown to dark brown.

Cleaning Seeds



What's the best way to clean seed? Wet and dry seeds require different cleaning methods.

Cleaning Dry Seeds

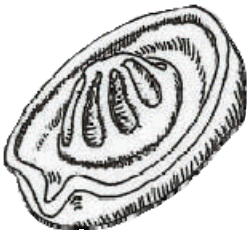
The seeds of most flowers, herbs, mints, onions, umbels (carrots and parsley), berries, corn, grain, and beans receive the dry-seed cleaning treatment.

Depending on the size of the seed, use screens or flat pans to separate seed from chaff. Finer material can be removed by moving the seed around in the pan while blowing gently or using a fan. The most viable seed usually are the heaviest (and darkest). This means that most of the chaff and less-viable seed will be blown away, leaving the highest quality seed for saving. Lightweight, feathery seeds are a little trickier to handle. Place them in a bag before handling, opening pods, or separating from flower heads.

Cleaning Wet Seeds

The seeds of melons, squash, cucumber, tomatoes, tomatillos, citrus, cacti, and some chilies get the wet-seed cleaning treatment before drying.

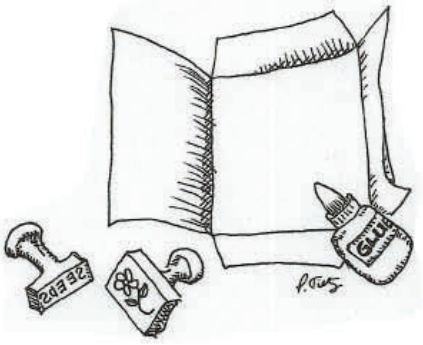
Place the seeds and pulp together with a small amount of warm water (60-70 degrees F) for two to four days to ferment. Stir daily. Fermentation eliminates seed-borne viruses and helps in the separation of fertile and infertile seeds: the heavier, fertile seeds will sink to the bottom of the container while the pulp or hollow seeds float to the top.



After fermentation, pour off the water, pulp, and mold. (A small citrus juicer is a handy tool for this chore.) Lay the seeds on a nylon screen or paper towel to dry. Gently break up any seed clumps.

Dry seeds thoroughly at 80-100 degrees F in a shaded spot. If you're experiencing cool weather, use an oven at the lowest possible setting with the door open a bit. Check seeds frequently to avoid overheating. Thicker seeds should be dry enough to break, not bend.

Making a Seed Packet



Envelopes make good seed-storing packets. Make your own from recycled paper, or use fancy paper to make special gift packets. Unfold a commercial seed packet and trace its shape onto a piece of cardboard; cut this out to use as a template. To use this, trace the shape onto your packet paper and cut out.

Personalize your packet with rubber stamps. Be sure to include information about the seed on the packet, including date, name of plant, cultural requirements, and any special characteristics of the plan.

Glue and seal three sides, then allow to dry completely before filling with seeds and sealing the remaining flap. Store as described on Page 4. Share and trade with other gardeners.

Storing Your Seeds

Once seeds are thoroughly dry, proper storage ensures that the seeds remain viable.

It is important enough to repeat: store only those seeds that are completely dry. Seeds store best when they have been dried to a moisture level of about eight percent or less. A quick test for moisture level is to bend a larger seed. A thick seed and the right moisture level will break, not bend.

When seeds are properly dried, place them into a storage container to avoid re-hydration. A Mason jar with tight-fitting lid makes a good storage container for loose seeds. A vacuum sealed food-packaging bag works well for seeds in seed packets (see sidebar on Page 3). If you are using large containers, add a packet of silica gel, corn starch, or powdered milk to the jar to absorb extra moisture.

Once dried seeds are sealed in their container, give them the "cold treatment": one or two days in the freezer to kill potential pests. Then store in a cool, dry place. The refrigerator is ideal.

Seed viability decreases over time. Onion, parsley, and sweet corn should be stored for only one year. Others, like cucumbers, collards, and broccoli, can be stored up to five years. For most seeds it is best to grow them out at least once every three years.

Share Your Seeds

You can trade seeds with gardeners in other areas as a member of Seed Savers Exchange (seedsavers.org) or locally through your local garden club. Sharing or exchanging seeds with your neighbors informally or through organized seed swaps is a great way to pass along your favorite varieties or gain new ones for your garden.

Resources

The New Seed Starter's Handbook by Nancy Bubel. Rodale Books, Emmaus PA, 1988

Seed to Seed: Seed Saving and Growing Techniques for Vegetable Gardeners by Suzanne Ashworth and Kent Whealy. Seed Savers Exchange, Decorah IA, 2002

Saving Seeds: The Gardener's Guide to Growing and Storing Vegetable and Flower Seeds by Marc Rogers. Storey Publishing, 1991

Seed Savers Exchange (membership required), Decorah, Iowa, (563) 382-5990, seedsavers.org

Organic Gardening Magazine (by subscription), Emmaus PA, (800) 666-2206, organicgardening.com

Seed-Saving Supplies: Granny's Heirloom Seeds, 1-866-608-8554, grannysheirloomseeds.com