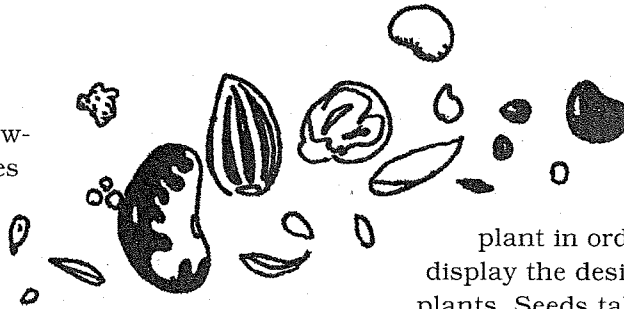


HOW TO: SEED SAVING

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 seeds 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.



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 either sterile, fruitless, or they 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.

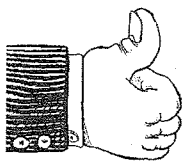
Perfect Flowers — These plants have both male and female parts on the same flower with self-pollination as a result. Perfect flowers will not usually cross-pollinate with other varieties of the same plant. Beans, tomatoes, lettuce,

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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.

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

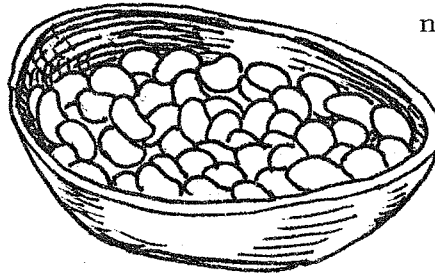
Rules provided by Kay Grimm and Beth Ann Maxon of *Kids in Bloom*, a living history seed company, P.O. Box 344, Zionsville, IN 46077.

amaranth and peppers all have perfect flowers so gardeners can 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, honeybees, insects and 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. So plant only one variety of each to maintain varietal purity.

It is also possible to isolate varieties by distance, enclosure or varying planting times to avoid crosses. Most varieties require a distance much larger than most community gardens; therefore, this is usually 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 there is more than one variety you wish to continue saving, plant 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 multinational corporations. Some heirloom seeds may be difficult to harvest commercially. Here community gardeners can play an important role in preserving the genetic diversity found in heirloom varieties by saving seeds.

USE THE FOLLOWING INFORMATION AS YOU EMBARK ON YOUR SEED SAVING ADVENTURES:

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 grow 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 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 spec 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.

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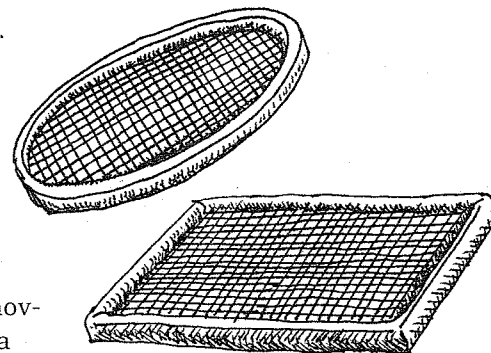
WHAT'S THE BEST WAY TO CLEAN SEED?

Different seeds require different cleaning methods: wet or dry.

Dry Seed Cleaning

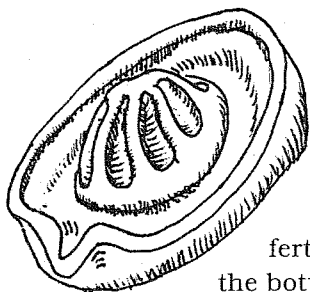
Most flowers, herbs, mints, onions, umbels (carrots and parsley), berries, corn, grain and beans receive dry seed cleaning treatment.

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 are usually the darkest and heaviest so most of the chaff and less viable seed will be blown away leaving the best 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.



Wet Seed Cleaning

Certain seeds are cleaned or separated using a wet process before drying. The seeds of melons, squash, cucumber, tomatoes, tomatillos, citrus, cacti and some chiles are cleaned by this method.



Place the seeds and pulp in its own juice with a small amount of warm water (60 - 70 degrees) for 2 to 4 days. A small citrus juicer is a handy tool for this chore. Stir daily. During this time fermentation will take place.

Fermentation eliminates seed borne viruses and helps in the separation of fertile and infertile seeds. In the wet cleaning process, fertile seeds will sink to the bottom of the jar or bucket while the pulp or hollow seeds will float to the top.

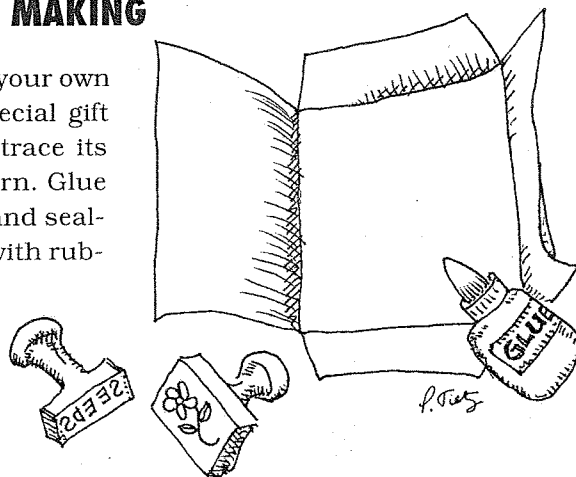
After fermentation, pour off the water, pulp and mold and lay the seeds on a nylon screen or paper towel to dry. If seeds clump together gently break up the clumps.

Dry seeds thoroughly at 80-100 degrees in a shaded spot. Use an oven at the lowest possible setting with the door open a bit if you experience cool weather. Check seeds frequently to avoid overheating. Thicker seeds should be dry enough to break.

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SEED PACKET MAKING

Envelopes make good seed storing packets. Make your own from recycled paper or fancy paper to make special gift packets. Unfold a commercial seed packet and trace its shape onto a piece of cardboard to use as a pattern. Glue 3 sides and allow to dry before filling with seeds and sealing the remaining flap. Personalize your packets 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 plant. Store in a cool, dry place. Share, trade with other gardeners.



STORING YOUR SEEDS

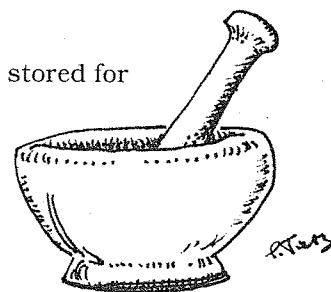


Once seeds are thoroughly dry, proper storage insures that the seeds remain viable. Store only those seeds that are thoroughly dry. Seeds store best when they have been dried to 8 percent moisture level or less. A quick test for moisture level is that seeds will break, not bend, if their moisture level is 8 percent or less. When the seeds have reached the proper dryness, place into a storage container to avoid re-hydration. Good storage containers include mason jars, or make your own seed packets (see side bar).

Dried seeds should receive a cold treatment in their container — one or two days in the freezer to kill any potential pests. If using large containers, add a packet of silica gel, corn starch or powdered milk to the jar to absorb extra moisture. Store in a cool, dry place. The refrigerator is ideal.

Make sure to label all packets or containers with all the information you might need. Write the date, seed type or variety and special treatment necessary, the characteristics of the plant from which the seed was saved and the cultural requirements of the plant on the label.

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 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 through *Organic Gardening Magazine's* "Garden to Garden" listing of seed-savers/seed sharers or as members of Seed Savers Exchange. 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 Seed Starters Handbook, by Nancy Bubel, (Rodale Press, Emmaus, PA), 1978.

Seed to Seed: Seed Saving Techniques for the Vegetable Gardener, by Suzanne Ashworth, (Seed Saver Publications, Decorah, IA), 1991.

Bassett, James. "Saving Your Own Vegetable Seeds: A Pollination Primer." *Horticulture*, August 1978, pp 18-25.

Rogers, M. *Growing and Saving Vegetable Seeds*. Pownal, Vermont: Garden Way Publishing (Storey Communications). 1978.

Silica gel:
Carolina Biological Supply
(800) 334-5551

Seed Savers Exchange
(membership required)
9076 North Winn Road
Decorah, IA 52101
(319) 382-5990

Organic Gardening (by subscription)
P.O. Box 7304
Red Oak, IA 51591
(800) 666-2206

Seed saving supplies:
Crystal Springs Packaging Company
P.O. Box 2924
Petaluma, CA 94952
(send SASE for price list)

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