

Seed Saving and Vegetable Breeding for Everyone

Why save your own seeds? There are many reasons, more control over what you grow, more varieties available, to preserve rare varieties, economics... or an act of resistance against an increasingly aggressive industrial agriculture system bent on absurd uniformity and corporate control. Come learn the basics skills and techniques needed to save the seeds of all your favorite crops.

Why save seeds?

- More control over what you grow
- More cultivars
- Preserve rare cultivars
- Economics
- Act of resistance
- Food security
- More connection to plants
- Breed your own varieties
- Landraces

Overview of plant lifecycles:

- Annual – Produces seed and dies in one year.
- Biennial – Grows leaves and roots in year one, produces seeds and dies in year two.
- Perennial – Lives three or more years.
 - Woody – Grows permanent woody stems
 - Herbaceous – Dies back to the ground in the fall and regrows in the spring.

F-1 Vs Open Pollinated – F1s are the first generation offspring of two stable breeding lines.

Species, Crop, Landrace, Variety, Cultivar – Each successive term refers to a more specific group

Monecious & Dioecious – Monecious have male and female flowers on the same plant, dioecious = 2 plants

Self-Pollinated vs Outcrossers

- Selfers – typically pollinate themselves
- Outcrossers – typically need to be pollinated by a separate plant / easily crossed.
- Self-Incompatibility – the inability of a plant to pollinate itself
- Common Selfers: Beans, Peas, Tomatoes, Peppers, Lettuce
- Common Outcrossers: Corn, Cucumber, Muskmelon, Radish, Spinach, Squash/Pumpkin, Beet/Swiss Chard, Brassica oleracea (broccoli, brussels sprout, collards, cauliflower, cabbage and kale), Carrot, Onions, Brassica campestris (root turnips, Italian turnips, rapa and broccoli raab etc)

Saving Outcrossers

- Isolate by time – by sowing different varieties at different times or cutting back flowers.
- Isolate by distance – you can cut the safe distance by making use of existing barriers
- Isolate by barrier / Alternate day caging – extra work, but highly effective. Don't forget pollination
- Population size – The larger the better, be aware of minimum for each species.

Basic Mechanics of saving seeds

- Wet process (cucumbers, Tomatoes, Melons, etc)
 - Scoop – The fruit is often perfectly usable, so eat up!
 - Ferment – Seeds are left in a jar with some extra water in a warm spot for awhile
 - Wash – a tea strainer works well for small amounts
 - dry – paper towel, newspaper or window screen can be helpful.
- Dry process
 - Harvest – If possible do this on a dry day in the afternoon.
 - Dry – on screens, in paper bags, generally you want some air flow.
 - Thresh – break seeds free of their containers / stems.
 - Winnow – separate seeds from everything else.
- Storage
 - Cool and dry – Unheated closet, refrigerator, dry basement.
 - Super dry seeds may be frozen – seeds with too much moisture may be damaged.
 - Silica Gel – can be used to get seeds super dry.

Preservation Vs. Breed your own

- Roguing – Getting rid of unsuitable or off type plants.
- Inbreeding depression – poor results from having too small a population.
- New Crosses – breed your own F-1s
- Turning F-1s into OPs – Who wouldn't want a stable breeding Sungold?!

Resources: Feel free to contact me with questions at edgewoodlandscapes@gmail.com // 207-653-2065

Books:

- Seed to Seed: Seed Saving and Growing Techniques for Vegetable Gardeners by Suzanne Ashworth, Seed Savers Exchange; 2 edition (March 1, 2002)
- Breed Your Own Vegetable Varieties: The Gardener's and Farmer's Guide to Plant Breeding and Seed Saving by Carol Deppe, Chelsea Green Publishing; 2nd edition (December 2000)

Web:

- International Seed Saving Institute – www.saveseed.org Not as much detail as is available in the books, but free and a great quick reference
- Dave's Garden – www.davesgarden.com A good resource for trading seeds through the mail, also good for looking up botanical terms and other plant info.
- North American Permaculture Nursery Exchange www.facebook.com/groups/1518976338351628/ A good place to buy/sell/trade seeds for permaculture.
- Plant Breeding For Permaculture - <https://www.facebook.com/groups/PlantBreedingForPermaculture/>
- Discussion group about breeding new varieties adapted for permaculture. Lots of exciting work being done here.

Organizations:

- Seed Savers Exchange: <http://www.seedsavers.org> the largest national seed saving org. Many dedicated members stewarding many excellent varieties. \$40 / year. (\$30 for student / senior)
- Grassroots Seed Network: www.grassrootsseednetwork.org A new seed saving network founded as a response to SSE becoming more centralized and taking a direction that some members objected to. GSN is intended to be DAFT (Democratic, Accountable, Frugal and Transparent). \$15 / year (dues waived if needed)

Podcast and video – I made a podcast episode and some videos on this topic – <https://edgewood-nursery.com/podcast/2021/10/11/october-11th-2021-seed-saving>