



SEED SAVING FOR THE BACKYARD GARDENER



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Learning Objectives

- You will learn the importance of saving your own seed
 - You will learn how to save dry seed crops
 - You will learn how to save wet seed crops
- You will learn the importance of cross pollination and how to prevent it



WHY SAVE SEED?



- Convenience and cost savings
- Variety preference
- Adaptability
- Biodiversity
- Security
- *Resiliency*
- Why do you want to save seeds?
- **Resource page for local seed banks
- <https://extension.arizona.edu/yavapai-gardening>

A Brief History

- EARLY BEGINNINGS
- A DEVELOPING COUNTRY
- THE MARKET TODAY



Where to Start?



No two seeds are alike. Not even every plant in the home garden goes to seed at the end of the season!

We've tried to organize the following information about seed types in a way to help you start understanding the art and science of saving seed.

Types of Seed

Open Pollinated

- This seed will produce a plant like the parent plant. It will be true to type.



Heirloom

- An open pollinated seed that has been passed down for at least 50 years. This is a cultural definition and not a biological definition.



Types of Seed continued...

Hybrid

- This seed is a cross between two different parent plants. Seeds saved from a hybrid plant will NOT produce a plant identical to the parent.



Genetically Modified Organisms (GMOs)

- These seeds have been developed in a laboratory setting. They are developed to withstand a large dose of herbicide and/or pesticide, usually in commercial operations.

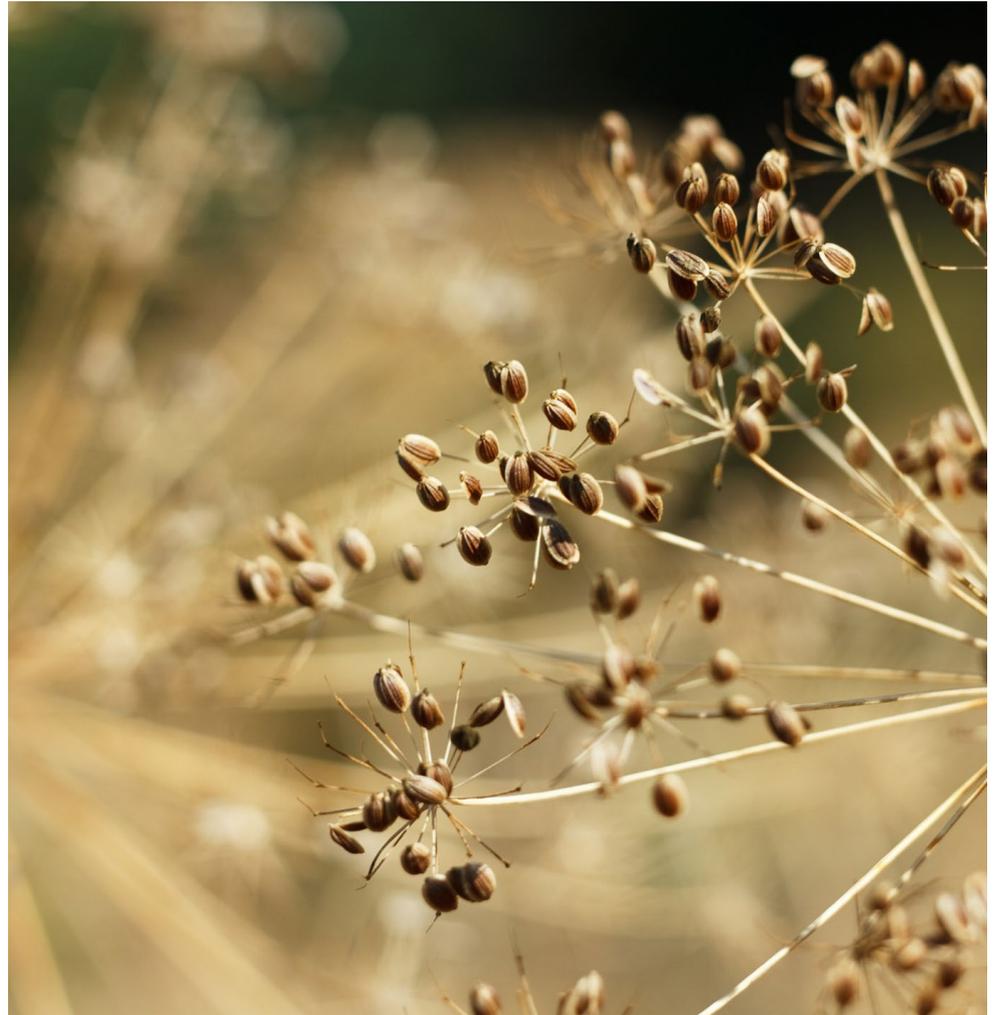


Botanical Terms and Definitions to Consider

<https://extension.arizona.edu/sites/extension.arizona.edu/files/attachment/SeedSavingDefinitions.pdf>

For more resources and
handouts on this topic
please visit our website:

<https://extension.arizona.edu/yavapai-gardening>



Pollination and Fertilization

- Inbreeding

- Self-fertilization
- Off-spring will be like the parent plant
- Male and female parts are in the same flower
- Generally does not require wind, insects or animals to transfer pollen.

Examples; modern tomatoes, peas, lettuce & common beans



- Outbreeding/cross pollination

- Sperm of one plant fertilizes ovule of a different plant
- Off-spring will be genetically different than both parents
- Requires a vector to transfer pollen, wind, insects or animal

Examples; beets, broccoli, carrot, cucumber, kale, spinach



Pollination & Fertilization continued...

- **In-between plants**
 - Ex: Fava bean



- **Learning scientific names**
- ***Only species can cross-pollinate
- Beet and Chard—*Beta vulgaris*.
- Broccoli and Brussel Sprouts—*Brassica oleracea*
- Zucchini & Yellow Squash—*Cucurbita pepo*

2nd generation pumpkin that crossed with some other squash last season. Franken pumpkin!

**If cross pollination does occur it does not affect this year's fruit it only affects the seeds for next year's crop. THE EXCEPTION IS CORN.

Things to consider crop by crop

- Getting good seed set
- Timing
- Physical Barriers
- Spacing
- Isolation Methods
- Population size

**see handouts



Netting

Harvesting & Processing

Only save seeds from HEALTHY plants.

Seeds should be firm and plump.

Materials needed:

- Coffee filters
- Jar
- Strainers
- Buckets
- Screens
- Pillow cases



Dry Seed



Dry Seed Saving Process

- **Threshing:**
To separate seed from chaff via crushing, stomping, beating, or mechanical process. Might need a screen or two!
- **Winnowing:**
To remove chaff from seed by blowing air through it, allowing lighter particles of chaff to blow away.
- **Drying:**
Seeds should be dry before they are packaged for storage to prevent molding and to ensure they will keep for a long period of time. Try the shatter test!



Common Flowers to Save Seed

Calendula
Poppy
Penstemon
Chocolate flower
Coreopsis
Cosmos
Echinacea
Gaillardia
Four o'clock
Hollyhock
Larkspur
Marigold
Mexican hat
Marigold
Yarrow



A note on biennials in the garden...



Biennials, like carrots, beets, chard, cabbage, cauliflower, celery, kale, kohlrabi, onion, parsley, turnip, need to undergo a cold period (vernalization) in order to set seed in the 2nd year. Be sure to separate each species by the needed distance or grow only one variety when planning to save seed.

Wet Seed

Advantages of wet method:
Replicates natural process seed goes through in nature.



Solanaceae

Wet Seed continuing...

- Fermentation
- Yeasts and Molds
- Scoop out seeds and add water
- Hold at 75-80 degrees Fahrenheit and stir over 3 days
- Ok if mold appears on top



Viable tomato seeds sink to bottom,
Harvest tomato when you normally would to save seed.

If possible, leave fruit until first frost. With winter squash, store up to 2 months to let seeds mature/set.



Tip: How do you know when its ok to harvest? Leave it! Tough skin, fruit is matured to its final color, and the stem is dry or drying.





Some final tips for your seed saving adventure:

- Save seed from multiple plants to ensure genetic diversity and because sometimes cross pollination does occur.
- Keep notes! Being well organized, labeling everything, and keeping a garden journal helps you in the long run.
- Remember to experiment and to share your seed!

Remember to save seeds in a cool, dry, dark place!

This will ensure both longevity and viability.





Questions?!



Books/Articles:

- Basic Seed Saving by Bill McDorman. ISBN (978-0-615-33231-4)
- The Seed Garden, The Art and Practice of Seed Saving. Edited by Lee Buttala & Shanyin Siegel. ISBN (978-0-9884749-1-8)
- Saving Seeds in the Southwest, Techniques for Seed Stewardship in Aridlands. By Joy Hought and Melissa Kruse-Peebles. www.nativeseeds.org
- Seeds, How Grains, Nuts, Kernels, Pulses, & Pips Conquered the Plant Kingdom and Shaped Human History by Thor Hanson. ISBN (978-0-465-05599-9)
- National Geographic, How Slaves Shaped American Cooking, Karen Pinchin 3/14/2014
- The New York Times, Enjoy those Vegetables, but Don't Forget to Save Some Seeds, Margaret Roach, 8/5/2020
- The Triumph of Seeds, How Grains, Nuts, Kernels, Pulses, & Pips Conquered the Plant Kingdom and Shaped Human History, Thor Hanson, 2015.

Organizations and Websites:

- Organic Seed Alliance—Seed Saving Guide, www.seedalliance.org
- Native S.E.A.R.C.H.—Basics of seed saving, pdf www.nativeseeds.org
- Seed Savers, www.seedsavers.org
- Center for Food Safety, History of Seed in the U.S., The Untold American Revolution, Debbie Barker, August 2012, www.centerforfoodsafety.org
- Rocky Mountain Seed Alliance, www.rockymountainseeds.org
- The Urban Farm-Garden education organization in Phoenix. They host monthly “seed chat” talks with Bill McDorman. www.urbanfarm.org

Local Seed Resources:

- Prescott Farmers Market seed exchange www.prescottfarmersmarket.org
- Cottonwood Public Library seed library <https://www.ctwpl.info/>
- Prescott College seed library <https://www.prescott.edu/>

Extension Publications:

<https://extension.umaine.edu/publications/2750e/>

<https://extension.oregonstate.edu/sites/default/files/documents/12281/savingseeds.pdf>

<https://extension.umn.edu/planting-and-growing-guides/saving-vegetable-seeds>

<https://extension.colostate.edu/docs/pubs/garden/07602.pdf>

Video Tutorials:

https://www.youtube.com/watch?v=TcsuRkFQkV4&mc_cid=30c1031d09&mc_eid=348928e9df

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