How to Save Seeds

An Introductory Guide from the

SICANGU CDC
FOOD SOVEREIGNTY INITIATIVE

You've Decided to Save Seeds. Now What?

The best time to start thinking about saving seeds is before planting your garden. What crops do you want to save seeds from? What are their isolation distances?

Isolation distance refers to the distance that two crops of the same type (e.g. two kinds of corn) should be planted away from each other so they don't crossbreed. Why don't you want plants to cross breed? Because the seeds you save from those plants and their descendants won't grow "true to type," meaning that they won't be replicas of their parent plant.

Producing seeds that are "true to type" is also why you'll want to plant open-pollinated varieties, rather than hybrids. Hybrid varieties are produced by breeding two different varieties of the plant, and the seeds they produce will not be the same as the parent plant.

Once you've made your planting plan according to isolation distance recommendations, take note of whether your plants are **annuals, biennials, or perennials.**

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Annuals, Biennials, Perennials

Annual plants produce seeds the same season they're planted. Perennials are plants that survive from year to year, so before you plant them make sure you pick a spot where they won't need to be moved in a year or two.

A **biennial** plant is one that requires **two growing seasons** to complete its life cycle (go from seed to seed). Biennials need a period of cold, called vernalization, in order to flower and produce seeds their second year. Winter naturally provides this period for plants in areas with changing seasons.

Common biennial crops include **carrots, beets, rutabaga, turnip, parsnip, leeks, onions, kohlrabi, Brussels sprouts, kale, broccoli, chard, and celery.** For most biennials (other than leek and onion), plant in late summer/early fall if you want to overwinter them to save seed.

Once nighttime temperatures are regularly in the mid 20°'s (F), dig up the plants for winter storage. Remove all the leaves and store the crops in a container. Common storage mediums are sand, sawdust, and shredded leaves. Ideal storage conditions are just above freezing and slightly moist, since humidity will prevent the plants from dying. A basement or root cellar is a great place to store plants.

Plant your overwintered crops as soon as the soil can be worked in the spring. For Rosebud (gardening zone four), this usually means mid-April. Save seeds following the dry processing method in the summer and fall.

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Caring for Your Seed Plants

Once you have planted an open-pollinated crop,you'll want to take care to select the strongest plants to save seed from. Notice which plants are thriving in your garden, and save seeds from those. Saving seeds from the strongest plants will mean that your seeds will be healthy and well adapted to your local growing conditions. If you want a plant to produce seeds with a specific trait, you can try to alter the growing conditions in your garden. For example, if you want to save tomato seeds that are drought tolerant, try watering the plants you'll save seed from slightly less than your other plants.

In Case of Frost

For a **soft frost** (between 28° - 32° F), **water the plants well and cover them** with sheets, blankets, or landscape fabric for extra insulation and warmth.
For a **hard frost** (less than 28°F, which will kill most annual crops), **if your seed pods or fruits aren't ready, pull the plant up by the roots** and hang it upside down to dry. The plant will draw nutrients from the roots to give the seeds a better chance of ripening to maturity.

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Get Ready to Save Seeds

You're ready to save seeds. Now what?

First, **make sure the fruit or vegetable is mature -** otherwise, the seeds won't be mature either, and they won't germinate (sprout).

The time it takes for the fruit to mature varies depending on the plant. For some plants, like tomatoes and winter squash, you can harvest and save seeds when the fruit is ready to eat. For others, like zucchini, cucumber, radishes, and beans, the fruit (or seed pod) should stay on the plant until it's no longer edible.

There are 3 main ways to save seeds: Dry processing, wet processing, and fermentation.

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Dry Processing

Common crops: legumes (beans), grains, brassicas (broccoli, cauliflower, cabbage), grains, lettuce, onions, beets, carrots, celery, most flowers

General guidelines: If the seed and its surroundings are dry and brittle to the point that they crack open, the seeds are ready to be harvested

For crops like lettuce, make sure to harvest the seeds when the pods are dry but before the seeds are blown away. You can cut the plant at the root (leave roots in the soil to help prevent erosion, unless planting cover crops!) rather than removing individual seed pods if that's easier.

To harvest seeds, remove the seed pod from the plant. Separate the seeds from the chaff (the other plant material surrounding the seed, like the pod); there are a few ways to do this. If you have a brown paper bag, place lettuce seeds inside and shake it to remove them from the pods, followed by using a fine mesh screen or kitchen sieve to separate the seeds from the chaff. For plants that are more secure in their seed pods (marigolds, radishes) you may need to separate the seeds from the pod by hand.

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Wet Processing

Common crops: soft fleshed fruits, melons, peppers, eggplant, tomatillo, winter squash

Step 1: Remove the seeds from the fruit

Step 2: Rinse the seeds either in a colander or a bowl or jar of water, and make sure they're free from debris.

Step 3: Decant the seeds by pouring in clean water, mixing, and pouring out the liquid - repeat until the water is clear and only seeds remain on the bottom. Get rid of any floating seeds - they aren't mature and won't germinate. Remove the sunken seeds and let them dry for several days before storing.

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Fermentation Processing

Common crops: tomatoes, cucumbers, pomegranate, some melons, and any seeds that have a gel sack surrounding them after washing

Step 1: Remove the seeds from the fruit.

Step 2: Ferment the seed pulp by placing it in a jar and covering with water for a few days. Cover the jar with newspaper, a paper towel, or a rag to allow air flow while preventing insects from entering the jar. Your water may get moldy - this is okay!

Why ferment seed pulp? Wet seeds are encased in a gel that is a germination inhibitor - think of the gel that surrounds tomato seeds. By fermenting the seeds for 3 to 5 days, this gel is removed, meaning your seeds will be ready to plant in the spring!

Step 3: Decant the seeds by pouring clean water into the jar, mixing with the fermented seed pulp, and pouring out the liquid. Repeat until the water is clear and only seeds remain on the bottom. Get rid of any floating seeds; they aren't mature and won't germinate. Remove the sunken seeds and let them dry for several days before storing.

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Storing Seeds

Make sure seeds are completely dry, and store in a cool, dark, dry place, where the seeds won't be found and eaten by mice or other pests.

Be sure to label your seeds with the variety, where they were grown, the date, and any other conditions that would be good to know.

For example: "Pale perfect purple tomato, Three Sisters Farm, 2020, frost hardy" (if the seeds were harvested after a soft frost)

An easy way to store seeds is in sealed paper envelopes inside either a plastic bag or plastic tub. If you're saving seeds for a few years, keeping them in the fridge or freezer can help extend their lifespan, since the germination rate (the percentage of seeds that sprout) goes down as seeds get older.

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