

Seed Saving Chart

The isolation distances and plant populations listed below are the optimal numbers for garden-scale seed saving. That said, the best way to build solid seed skills is a combination of researching the ideal methods and experimenting with your own approach. The only real mistake you can make is to not try. Have fun.

	FAMILY, GENUS, SPECIES	POLLINATION	ISOLATION DISTANCE	# OF PLANTS	SEED LIFE	MISCELLANEOUS INFORMATION
Annual Vegetables						
Arugula	Brassicaceae (<i>Eruca sativa</i>)	Insect	1/2 mi.	40	5 yrs.	Easy outcrosser for beginners
Bean	Fabaceae (<i>Phaseolus vulgaris</i>)	Self	20 ft.	10	4 yrs.	Good for beginners
Bean, Fava	Fabaceae (<i>Vicia faba</i>)	Self	50 ft.	20	4 yrs.	Primarily selfers, but insects do pollinate
Corn	Poaceae (<i>Zea mays</i>)	Wind	1–2 mi.	100	6 yrs.	Seed matures 6–8 weeks after eating stage
Cucumber	Cucurbitaceae (<i>Cucumis sativus</i>)	Insect	1/2 mi.	10	8 yrs.	Male and female flowers
Eggplant	Solanaceae (<i>Solanum melongena</i>)	Self	50 ft.	10	6 yrs.	Harvest seed from overripe fruit
Lettuce	Asteraceae (<i>Lactuca sativa</i>)	Self	20 ft.	10	3 yrs.	Good for beginners
Melon	Cucurbitaceae (<i>Cucumis melo</i>)	Insect	1/2 mi.	10	7 yrs.	Does not cross with watermelon
Mustard	Brassicaceae (<i>Brassica juncea</i>)	Insect	1/2 mi.	40	5 yrs.	Will cross with wild species
Pea	Fabaceae (<i>Pisum sativum</i>)	Self	20 ft.	25	5 yrs.	Good for beginners
Pepper	Solanaceae (<i>Capsicum spp</i>)	Self	100 ft.	10	4 yrs.	Primarily selfers, but insects do pollinate
Pumpkin	Cucurbitaceae (<i>Cucurbita pepo</i>)	Insect	1/2 mi.	10	7 yrs.	Male and female flowers
Radish	Brassicaceae (<i>Rapistrum sativum</i>)	Insect	1/2 mi.	50	5 yrs.	Can cross with wild radishes
Spinach	Amaranthaceae (<i>Spinacia oleracea</i>)	Wind	2 mi.	50	4 yrs.	Male and female plants
Squash	Cucurbitaceae (<i>Cucurbita spp</i>)	Insect	1/2 mi.	10	7 yrs.	Cross only within species
Tomato	Solanaceae (<i>Lycopersicon spp</i>)	Self	10 ft.	10	5 yrs.	Good for beginners
Watermelon	Cucurbitaceae (<i>Citrullus lanatus</i>)	Insect	1/2 mi.	10	6 yrs.	Does not cross with other melon types
Biennial Vegetables						
Beet	Amaranthaceae (<i>Beta vulgaris</i>)	Wind	1 mi.	30	6 yrs.	Crosses with chard
Broccoli	Brassicaceae (<i>Brassica oleracea</i>)	Insect	1/2 mi.	40	5 yrs.	Crosses with all oleraceae
Brussels Sprout	Brassicaceae (<i>Brassica oleracea</i>)	Insect	1/2 mi.	40	5 yrs.	Crosses with all oleraceae
Cabbage	Brassicaceae (<i>Brassica oleracea</i>)	Insect	1/2 mi.	40	5 yrs.	Crosses with all oleraceae
Cauliflower	Brassicaceae (<i>Brassica oleracea</i>)	Insect	1/2 mi.	40	5 yrs.	Crosses with all oleraceae
Carrot	Apiaceae (<i>Daucus carota</i>)	Insect	1 mi.	60	3 yrs.	Crosses with Queen Anne's Lace
Celery, Celeriac	Apiaceae (<i>Apium graveolens</i>)	Insect	1/2 mi.	30	5 yrs.	Difficult to overwinter
Kale	Brassicaceae (<i>Brassica napus</i>)	Insect	1/2 mi.	40	5 yrs.	Russian and Siberian varieties
Kale	Brassicaceae (<i>Brassica oleracea</i>)	Insect	1/2 mi.	40	5 yrs.	Scotch and Tuscan varieties
Kohlrabi	Brassicaceae (<i>Brassica oleracea</i>)	Insect	1/2 mi.	40	5 yrs.	Crosses with all oleraceae
Leek	Amaryllidaceae (<i>Allium ampeloprasum</i>)	Insect	1 mi.	20	2 yrs.	Seed tightly encased in seed head
Onion	Amaryllidaceae (<i>Allium cepa</i>)	Insect	1 mi.	50	2 yrs.	Very short seed life
Parsley	Apiaceae (<i>Petroselinum crispum</i>)	Insect	1 mi.	30	5 yrs.	Seed heads shatter easily
Parsnip	Apiaceae (<i>Pastinaca sativa</i>)	Insect	1 mi.	20	1 yr.	Extremely short seed life
Rutabaga	Brassicaceae (<i>Brassica napus</i>)	Insect	1/2 mi.	40	5 yrs.	Crosses with some Russian kales
Swiss Chard	Amaranthaceae (<i>Beta vulgaris</i>)	Wind	1 mi.	30	6 yrs.	Crosses with beets
Turnip	Brassicaceae (<i>Brassica rapa</i>)	Insect	1/2 mi.	40	5 yrs.	Crosses with broccoli raab



Isolation distance: Varieties of the same species can cross-pollinate, producing offspring with new characteristics. To keep seed varieties “pure,” seed savers create “isolation”—planting related varieties at appropriate distances to minimize the chance of crossing.

Number of plants: To maintain genetic integrity, it's important to save seed from a diverse population of individual plants. The optimum population size differs depending on whether a variety is wind or insect pollinated, or self-pollinated.

For more seed saving resources, check out our Community Seed Toolkits at www.seedmatters.org

Six Tips for Saving Seed

Seed saving can be complicated, but if you start with these solid tips you'll be on the path to saving and sharing quality seed:

- 1 Know your seed.** Don't save seeds from a hybrid variety (often labeled as "F1" in catalogs or seed packets). They won't grow "true to type" to the original parent, and the next generation of plants will be highly unpredictable in overall type, quality, and flavor.
- 2 Save information, not just seed.** Keep good records from the start. The information you pass on is as important as the seed. Make note of common and Latin names; dates of planting, plant maturity, and seed harvest; whether off-types were culled; population size and isolation distance; and any other important observations about the variety.
- 3 Watch for cross-pollination.** Different varieties of crops of the same species can cross-pollinate, producing offspring with different characteristics than the original variety. To keep a variety "pure," you should plant in isolation to minimize the chance of crossing. Crops that are wind or insect pollinated (often called "outcrossers") require a greater isolation distance from other varieties of the same species than those that have flowers that self-pollinate (often called "selfers"). See the *Seed Matters Seed Saving Chart for isolation distances*.
- 4 Consider plant populations — numbers count.** To maintain the genetic integrity of a variety, it's important to save seed from a diverse population of individual plants. The optimum population size differs depending on whether a variety is wind or insect pollinated, or self-pollinated. See the *Seed Matters Seed Saving Chart for population sizes*.
- 5 Choose ideal plants for ideal seed.** Healthy, vigorous plants are more likely to produce healthy, vigorous seed. Save seeds from disease-free plants to help prevent seed-borne disease. Also, collect seeds from plants that show ideal characteristics (shape, color, dates to maturity) that match the variety's description.
- 6 Make it last.** Good storage practices will increase the long-term viability of your seed. Store only seed that has been checked for pests and is fully mature and dry. The storage area should be dark, dry, cool, and protected from pests.



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For more seed saving resources, visit exchange-seedsavers.org/csrp/resources.aspx

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Bill McDorman's Principles for Seed Saving:

Bill McDorman is the executive director of Rocky Mountain Seed Alliance in Idaho, and developed this list with help from seed heroes Rowen White and Don Tipping, inspired by the principles of permaculture.

- 1) No one should suffer from hunger, food insecurity or malnutrition.
- 2) The survival of the food system depends upon its seed diversity.
- 3) Every food crop seed is a gift resulting from thousands of years of human care and should not be privatized.
- 4) With seeds we inherit a responsibility to care for and pass on seed diversity to future generations.
- 5) More seed diversity is created when more gardeners and farmers save seeds.
- 6) Seed education is fundamental to the creation of more seed savers and thus more seed diversity.
- 7) Complicated rules to assure uniformity need not be applied to small scale seed saving for diversity.
- 8) Each region has a responsibility to provide safety back-up for its seed diversity.
- 9) Seed stories teach us how to care for our seeds and ourselves and must be preserved.
- 10) Do it. Save seeds.