



Only seeds from open-pollinated, not hybrid, plants will produce the same crop next year.

The “Medium” seed saver's vegetables produce seed the season they are planted but require separation to keep unwanted cross-pollination from wind or insects from taking place.

These plants need some sort of isolation from each other in order to ensure that the next generation resembles the current generation. One way to separate plants is by distance and different plants need different isolation distances. Another method is by using timing—planting in waves so that only one of that species is flowering at the same time within the recommended isolation distance. Plants can also be mechanically isolated using cages, bags or other means and then be hand pollinated or insect pollinated by introducing those insects to the cage.

Hand pollination:

Male and female plants are easily identified. Female flowers have a miniature version of the vegetable (Squash, pumpkin, cucumber) below the flower. Only females produce fruit if pollinated.

- 1) Tape flowers shut with masking tape the night before they are to open (they will start to turn yellow and bulge out in the center).
- 2) Tape 3 males for each female. The next morning, gently open the female, making sure no insect pollinators are around.
- 3) Rip off the petals of 3 males and swish the pollen grains onto the sticky center of the female.
- 4) Tape the female shut again and mark the stem so that you know this is the fruit with the pure seed.

Arugula:

Different varieties of arugula will cross each other and must be separated by 0.8 km for safe distance isolation. Arugula will not cross other members of the Cabbage Family.

- 1) An established arugula plant will eventually send up little white flowers on dark stalks. This is called ‘bolting.’

- 2) Pods will begin to emerge on the stalk
- 3) Let the pods mature on the stalk until they are brown. Seeds are ready when you hear the seeds rattling around in the pods. Cut off the top half of the arugula plant (the part with the seed pods) and hang upside down in a paper bag for a week or so in a cool dry place inside.
- 4) Once the pods are brown and dry, shake the bag or gently crumble the dried seed pods to uncover tiny dark seeds.
- 5) Put seeds into an envelope, then date and label it.
- 6) Drop the seeds off at the 2nd Floor Information Desk at Burlington Public Library, Central Branch to share with your community next year!

Cucumber:

Separate two different cucumber varieties by at least 0.8 km to ensure purity. Experienced, home seed savers can grow more than one variety at a time in a single garden by using hand pollinating techniques.

- 1) To save seeds from cucumber you must let them ripen on the vine past eating stage. This means they must turn yellow, enlarge, and the vine they are growing on must die.
- 2) Pick the overripe cucumber(s) from the dead vine and place in a dry place and allow to soften.
- 3) Slice cucumber lengthwise, and scoop seeds out into a large bowl or jar.
- 4) Add a few cups of water so that the seeds are floating in the liquid and pulp.
- 5) Cover and allow to ferment for 5 days.
- 6) Fermentation is complete when there is a layer of scum floating on the surface of the pulp and seeds and/or when the seeds have sunk to the bottom of the container in watery liquid with scum/pulp floating on the top. (Once this occurs, DO NOT leave the seeds to sit in liquid as they will begin to germinate).
- 7) Skim/remove scum and thick pulp from the top of the liquid and pour the remainder into a fine sieve.
- 8) Carefully tap and spread seeds out onto a paper or glass plate, not on paper towels as the seeds will stick.
- 9) Gently shake every once in a while to prevent clumping.
- 10) Set in a warm dry spot and allow seeds to fully dry (3 weeks! Or until seeds snap in half when bent) before putting into an envelope.
- 11) Put seeds into an envelope, then date and label it.
- 12) Drop seeds off at the 2nd Floor Information Desk at Burlington Public Library, Central Branch to share with your community next year!

Pumpkin and Squash:

Separate different pumpkin/squash varieties in the same species by at least 0.8 km to ensure purity. Experienced, home seed savers can grow more than one variety at a time in a single garden by using hand pollinating techniques.

- 1) Squash/pumpkin must be fully mature before harvested for seed production. Allow hard shell squashes and pumpkins to cure 3-4 additional weeks after harvest to encourage further seed ripening.
- 2) Slice open a fully matured soft squash (it should be beginning to soften when picked, or pick it and let it soften).
- 3) Remove pulp and seeds with a spoon into a bowl. Seeds should be hard and thick.
- 4) Attempt to extract seeds with your fingers from the majority of the pulp and place them in a strainer.
- 5) Rinse thoroughly and remove remaining pulp under running water.
- 6) Place clean seeds onto a smooth towel and pat dry.
- 7) Spread seeds on a cookie sheet or other large flat surface and allow them to dry completely.
- 8) Put seeds into an envelope, then date and label it.
- 9) Drop the seeds off at the 2nd Floor Information Desk at Burlington Public Library, Central Branch to share with your community next year!

*** Squash and pumpkin seeds benefit from fermentation as it increases germination rates and kills some seed-borne diseases. Squash only need to be fermented for a couple of days. See “Tomato” for fermentation process.

Radish:

Separate different varieties being grown for seed at the same time by at least 0.8 km to ensure purity. Radishes will cross other radishes including daikon, but not turnips (*Brassica rapa*) or other members of the Cabbage Family.

- 1) Allow radish plant to bolt and flower. Stake if necessary as plants may grow to 3'-4'.
- 2) Allow the seed pods to become papery and dry and harvest the entire plants.
- 3) Hang the plants in a cool, dry place if all pods are not dried at the end of the growing season.
- 4) Open pods by hand for small amounts of seed. Pods that do not open when rubbed between hands can be pounded with hammer or mallet.
- 5) Gently remove any remaining fluff from seeds.
- 6) Put seeds into an envelope, then date and label it.
- 7) Drop the seeds off at the 2nd Floor Information Desk at Burlington Public Library, Central Branch to share with your community next year!

Spinach:

It is probably best to grow seeds for only one variety of spinach at a time. These plants need to be caged or bagged in groups so that they can pollinate each other. Leave one male plant for each two females to ensure pollination.

- 1) Some outside leaves can be harvested for eating without harming seed production.
- 2) Wait until all plants have dried brown. Pull entire plant and hang in cool, dry place if necessary at the end of the growing season.

- 3) Strip seeds in upward motion and let them fall into a container. Use gloves for prickly seeded types.
- 4) Put peas into an envelope, then date and label it.
- 5) Drop the seeds off at the 2nd Floor Information Desk at Burlington Public Library, Central Branch to share with your community next year!