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## Saving Seed

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by J.E. Ells and D. Whiting<sup>1</sup> (3/08)

### Quick Facts...

- Home Gardeners were perpetuating and improving vegetable varieties through seed saving, while commercial seed producers.
- Garden plants are wind, insect or self-pollinated.
- Seed saved from self-pollinated Crops are most likely to come true to variety.
- Biennial Crops do not bear seed the first year.
- Hybrids do not come true from seed.

The art of saving seed has been practiced by Gardeners long before there were commercial seed producers. Most of the vegetables and flowers we have today owe their existence to the fact that these Gardeners, with an eye for quality, saved the seed of their best plants, sowed them the next year, and in this way improved the varieties.

In recent years, the responsibility for maintaining and improving vegetable seed has been taken over by seed companies; however, it is still possible for home Gardeners to save their own seed. To do so, they should be familiar with the basics.

Plants in the Garden come from either seed or transplants. True seed possesses an embryo that, under the right conditions, it breaks dormancy and produces a plant based on its genetic makeup. Cuttings, slips, and other plant parts that begin to grow under favorable conditions without being planted are called "slips" and "cuttings." This group are bulbs, tubers, corms, cuttings ("slips") and whole living plants.

It is still common practice for home Gardeners to dig dahlias and gladioli before the ground freezes. This is so common for Gardeners to save the seed of flowers and vegetables. This is perhaps because it is inexpensive and seed producers have a reputation for selling seed that germinates well and comes true to the name named on the package.

Before saving seed, consider the method of pollination, the time of seed bearing, whether the plant is self-pollinated, and the manner of seed collection.

### Pollination Methods

There are three pollination methods of concern to the home Gardener: air-borne, insect and self-pollinated. In order for a variety to have the same genetic composition of its parents, it must be pollinated with pollen from the same variety. In case of air-borne pollinated Crops, there must be no other varieties within a mile shedding pollen. If there is, some of the harvested seed will result from a cross between these two varieties. The closer the varieties are located, the higher the percentage of crossing.

If a crop is insect pollinated, there should be 1/4 mile separating varieties. Otherwise, some result from the crossing of the varieties located within this 1/4-mile radius.

Self-pollinated Crops offer the best opportunity for a home Gardener to save seed because they are self-pollinated directly to the stigma within the flower. Even though this occurs automatically, there is some pollen that can be transferred to an adjacent variety. To avoid this, separate varieties by a few rows of other crops.

These requirements are closely observed by commercial seed producers, who are much more true-to-variety than the average home Gardener. However, if home Gardeners totally ignore these requirements, they will be disappointed in the results.

<b>How Vegetables Are Pollinated</b>				
<b>Air-borne pollen vegetables</b>	<b>insect-borne pollen vegetables</b>		<b>Self-pollinated vegetables</b>	
Beets Corn Spinach Swiss chard	Asparagus Broccoli Brussels sprouts Cabbage Carrots Cauliflower Celeriac Celery Chinese cabbage Collards Cucumber Eggplant Kale	Kohlrabi Melons Mustard Onions Parsley Parsnips Peppers Pumpkin Squash Radishes Rutabaga Turnips	Beans Chicory Endive Lettuce Peas Tomatoes	Beets Brussels sprouts Cabbage Carrots Celeriac Celery Collards Florence fennel Kale Kohlrabi

## Root Crops

Not all Garden plants produce their seed at the end of the growing season. The most notable are the biennials. This group, which includes most of the root Crops, grows vegetatively the first year. The roots are dug in the fall and stored between 32 and 45 degrees F through the winter. In the second year, the roots are replanted to produce seed stalks and seed.

## Hybrids

Hybrids result from a deliberate cross between two inbred lines. They are becoming increasingly popular for home gardeners because they usually are more vigorous and uniform than open-pollinated varieties. However, they require special protection for the seed producer, because they do not come true from seed. Seed saved from

different plant types and is a disappointment for any Gardener who has unknowingly saved. Only the person who controls the original parents can produce this hybrid seed. Nearly all other vegetables may be. To be sure, check the package to see if it says "F<sub>1</sub> hybrid." F<sub>2</sub> plants lend themselves to seed savings.

## Harvesting Seed

Seed producers have developed some very ingenious equipment for harvesting, extracting home Gardener, however, will have to do with available utensils. Seed is extracted from fruit it rots. Leave summer squash and cucumbers on the vine until after frost, just like winter squash. Separate the seed from its pulp and dry at room temperature.

Leave pod crops on the vine until the pod dries. Harvest before the seed is dispersed. Similar after they dry but before dispersal.

## Storage

Once the seed is dried, gently hand rub to rid it of any chaff, then store in an envelope in a cool place. The seed will germinate best the following year. Thereafter, its germination percentage with the storage conditions, seed type and original seed quality. It is, therefore, best to reselect the best plants for seed.

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