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## Saving seed from the home garden

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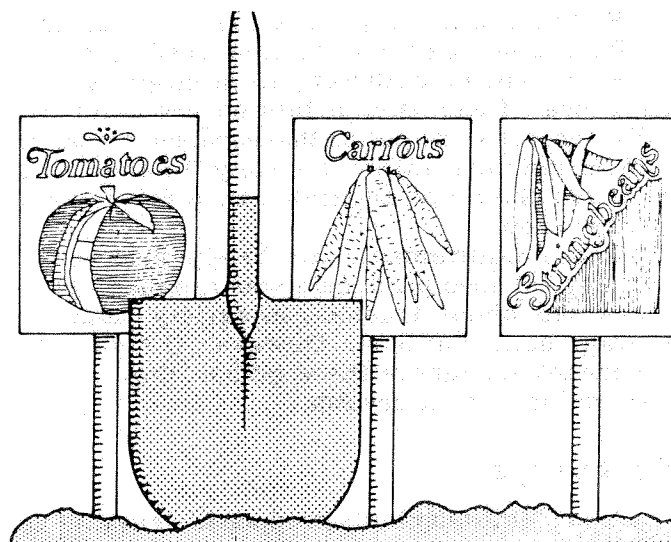
### Quick Facts

- Home gardeners were perpetuating and improving vegetable varieties through seed selection before there were 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. In fact, most of the vegetables and flowers we have today owe their existence to the fact that these early gardeners, with an eye for quality, saved seed of their best plants, sowed them the next year and in this way improved the species.

In recent years, the responsibility for maintaining and improving vegetable seed has been assumed by seed companies; however, it is still possible for home gardeners to save their own seed. To do this successfully they must be familiar with the basics.

Plants are planted in the garden either as seed or transplants. True seed possesses an embryo in a dormant state, which under the right conditions will break dormancy and product a plant in conformity with its genetic makeup. Transplants, on the other hand, are living plants or plant parts that will begin or continue to grow under favorable conditions without benefit of an embryo. In



this group are bulbs, tubers, corms, cuttings ("slips"), and whole living plants.

It is still common practice for home gardeners to dig dahlia and gladiolus before the ground freezes. However, it is not so common for gardeners to save the seed of flowers and vegetables. This is perhaps because seeds are relatively inexpensive and seed producers have a reputation for selling seed that germinates well and is true to the variety named on the package.

Before saving seed, consideration must be given to the method of pollination, the time of seed bearing, whether the plant is a hybrid and the manner of seed collection.

### Pollination Methods

There are three pollination methods of concern to the home gardener: air-borne, insect and self. If the seed produced is to have the same genetic composition of its parents, it must be pollinated with pollen from the same variety. In the case of air-borne pollinated crops, there must be

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no other varieties within 660 feet (201.2 meters) shedding pollen at the same time. If there is, some of the harvested seed will have resulted from a cross between these two varieties. And, the closer the varieties are located, the higher will be the percentage of crossing.

Similarly, if a crop is insect pollinated, there should be one-quarter mile (.4 kilometers) separating varieties; otherwise, some of the seed saved will have resulted from the crossing of the varieties located within this one-quarter mile (.4 km) radius.

Self pollinated crops offer the best opportunity for a home gardener to save seed since the pollen is transferred directly to the stigma within the flower. Even though this occurs automatically, there is some pollen that escapes and can be transferred to an adjacent variety. To avoid this, varieties should be separated by a few rows of another crop.

These requirements are closely observed by commercial seed producers who are much more concerned about trueness-to-variety than the average home gardener. However, if home gardeners totally ignore these guides, they will be disappointed in the results.

## Root Crops

Not all garden plants produce their seed at the end of the growing season. The most noteworthy exception are the biennials. This group, which includes most of the root crops, grows vegetatively the first season. To obtain seed, the roots are due in the fall and stored between 32° and 45° F (0° to 7.2°C) through the winter. As soon as the weather permits, the roots are replanted to produce seed stalks and seed.

## Hybrids

Hybrids result from a deliberate cross between two unrelated inbred lines. They are becoming increasingly popular among vegetables because they usually are more vigorous and uniform than open-pollinated varieties, and they afford built-in protection for the seed producer, since they do not come true from seed. Seed saved from hybrids produce many different plant types and is a disappointment for any gardener who has unknowingly saved and planted seed from a hybrid. Only the person who controls the original parents can produce this hybrid seed. Nearly all corn varieties are hybrid. Other vegetables may be. To be sure, a gardener should check the package to see if it says "F<sub>1</sub> hybrid." F<sub>2</sub> hybrids are not hybrids and lend themselves to seed savings.

## Harvesting Seed

Seed producers have developed some very ingenious equipment for harvesting, extracting and cleaning seed. The home gardener, however,

will have to do with available utensils. Seed is extracted from fruit after it ripens and before it rots. Summer squash and cucumbers should be left on the vine until after frost just as winter squash and pumpkin. The seed is separated from its pulp and dried at room temperature.

Pod crops should be left on the vine until the pod dries, but harvested before the seed is dispersed. Similarly, seed heads should be harvested after they have dried but before dispersal.

## Storage

Once the seed is dried, it may be gently hand rubbed to rid it of any chaff, then stored in an envelope in a cool, dry, rodent-free place. The seed will germinate best the following year. Thereafter, its germination percentage will decline in accordance with the storage conditions, seed type and original seed quality. It is, therefore, best to replant every year and then reselect the best plants for seed.

### I. AIR-BORNE POLLEN

Beets  
Corn  
Spinach  
Swiss chard

Peppers  
(hot & sweet)  
Pumpkins  
Squashes  
Watermelon

### II. INSECT-BORNE

#### POLLEN

Asparagus  
Cabbage group  
Broccoli  
Brussel Sprouts  
Cabbage  
Cauliflower  
Chinese Cabbage  
Collards  
Kale  
Kohlrabi  
Mustard  
Radishes  
Rutabaga  
Turnips  
Carrots  
Celeriac  
Celery  
Muskmelon group  
Casaba  
Crewnshaw  
Honey Ball  
Honey Dew  
Muskmelon  
Persian  
Onion  
Parsley  
Parsnip

### III. SELF-

#### POLLINATED

Beans  
Chicory  
Endive  
Lettuce  
Peas  
Tomatoes

### IV. BIENNIALS

Beets  
Brussel Sprouts  
Cabbage  
Carrots  
Celeriac  
Celery  
Chard, Swiss  
Collard  
Florence Fennel  
Kale  
Kohlrabi  
Leek  
Onion  
Parsley  
Parsnip  
Radishes,  
winter type  
Rutabaga  
Salsify  
Turnips

## Reference

*Knott's Handbook for Vegetable Growers*, second edition, 1980. John Wiley & Sons, Inc.