

second a whole crop will be rogued to eliminate the undesirable types, the remainder being grown on for seed production. The first method tends to give superior types of plants, but a longer time may be required to build up a seed supply. For the home gardener the single-plant method undoubtedly is easier and more practical and should provide sufficient seed for his purposes. The mass-selection method with roguing of off-type plants is the method often used in commercial practice where large quantities of seed are required. As it is not possible to give detailed attention to each plant under mass-selection conditions, seed saved in this manner tends to give more variation of strain than seed from single-plant selection.

Plants can be divided into two main groups according to their seeding habits, annuals and biennials. Annuals grow and produce seed in one year, whereas biennials produce seed during their second year of growth. A simple classification is as follows:—

**Annuals:** Beans, peas, corn, cucumbers, pumpkins, tomatoes, marrows, lettuce.

**Biennials:** Cabbages, cauliflowers, carrots, parsnips, beetroot, onions, leeks, potatoes, turnips.

Vegetables of which the seeds and fruit are eaten are annuals and most root, leaf, and stem vegetables are biennials. The production of seed from annual vegetables does not present any particular difficulties, nor does it take much longer than the normal growing time of these crops. Biennial plants, however, must be grown for two seasons, unless the locality is favoured by conditions that allow a long growing season. Where possible individually selected annuals should have their entire crop left until the gardener is certain that the plants selected are the best available. He then can discard the inferior fruits from each plant, leaving the remainder to mature fully.

Advice on the selection of seed of the main kinds of vegetables follows. In all cases only plants that appear disease free should be selected. Apparently healthy plants growing beside diseased ones should not be chosen, as they may carry a primary infection not noticeable to the naked eye.

#### Beans

Bean plants with the capacity to produce heavy crops held well off the ground should be selected. Tenderness (lack of strings), flavour, and size of pods are other important characteristics. Where possible selected plants should be marked and all pods allowed to mature. Any pods showing undesirable characteristics can then be destroyed. The gardener should try to select plants that are most alike in varietal characteristics. Pods should be allowed to ripen well before plants are pulled, but plants should not be left until the pods shatter. If plants are pulled in early morning, shattering of pods will be reduced considerably. Plants can be hung head downward in bundles in an airy, dry place until the seed is hard, when it should be shelled and spread out to dry off thoroughly before being stored.

Photograph at top right on opposite page by Green and Hahn Photography Ltd.; all others by Sparrow Industrial Pictures Ltd.



(Sparrow Industrial Pictures Ltd. photo.)  
Good trusses of uniform fruit of the type of tomatoes that should be selected for seed.

#### Peas

Most desirable characteristics of beans apply similarly to peas. An additional one, which is fairly important, is sweetness, which has helped to make peas so popular. As usually the seed only of peas is eaten, selection should take into account the size of the seeds and the number in each pod. Pea seed should be harvested in the same way as bean seed.

#### Tomatoes

Robust tomato plants that bear good crops of high-quality fruit should be selected. Consideration should be given to uniformity of size, smoothness, fleshiness, colour, sweetness, freedom from cracking, and texture of skin. Some strains of tomatoes produce fruits with very little flesh and a great amount of juice. This characteristic should be eliminated. It is better to select plants showing whole trusses of uniform fruit than plants with isolated fruits of good quality but carrying mainly uneven or inferior fruits.

Fruits should be allowed to ripen until they are past edible condition but before they decay. Seed may be extracted by cutting the fruits transversely and then squeezing the pulp into a glass or earthenware container. After a small quantity of water has been added, the pulp can be allowed to ferment for 24 hours. Frequent stirring will assist in separating the seed from the flesh. After 24 hours more water should be added and the mixture stirred vigorously and then allowed to settle. The water and pulp can then be poured off carefully. By repeating this operation several times it is possible to extract a fairly clean line of seed.

There are several other methods of seed extraction, one of which includes the use of hydrochloric acid. However, the only other suitable method for the home gardener is somewhat similar to

that described. Freshly extracted pulp is folded into a square of coarse muslin or similar material, which is worked vigorously with the fingers under water. It is possible by this method to force the flesh through the cloth and clean the seed in one operation.

When the seed is clean it should be spread thinly on sheets of paper and dried in an airy place away from direct sunlight. Frequent stirring will permit the seed to dry evenly and thoroughly on all sides. When dry the seed can be bagged.

#### Pumpkins, Squashes, Marrows, Cucumbers

As pumpkins and squashes are usually allowed to mature before being harvested, seed saving is relatively easy, as seed can be extracted when the vegetables are prepared for the table. Cucumbers and marrows, however, must be allowed to mature well before seed is extracted.

Consideration should be given to ability to stand hot, dry conditions when plants of these vegetables are being selected. Long, slender, straight, and dark green cucumbers are desirable and as with other vegetables cropping capacity is important. Thickness and crispness of flesh are two other desirable characteristics. It is said that a heavier set of cucumber seed will develop if the first few fruits are cut off the vines when they reach a desirable size. Later fruits usually produce more seed.

Pumpkins and squashes should be selected primarily for keeping quality. Vines showing all the favourable characteristics should be selected, and from those the best fruits should be taken. Fruits should have the desirable shape for their type and should be heavy for their size. Heaviness should denote thick, firm flesh and hard bark. Squashes with deep orange-coloured and crinkled bark are considered the most desirable types.