

Seed Saving Guideline No. 7

Runner Beans

Phaseolus coccineus
Family: *Leguminosae*

Most runner beans are tall, climbing plants, but there are dwarf varieties and some, called half runners, that are bushy with one or two long shoots. All need a long growing season.

- Black runners have intense red flowers and black seeds.
- Scarlet runners have red flowers and purple or mauve seeds with black blotches.
- White runners have white flowers and white seeds.

The flowers are perfect and self-pollinating, but have to be tripped to set seed.

Growing & Roguing

- Runner beans, unlike French beans, are hypogeal: the cotyledons stay underground as the stem and true leaves emerge. They also twist the other way from most other beans, climbing clockwise when viewed from above. Take this into account if you have to help young plants into their supports.
- As runner beans are outbreeders it is important to grow as many plants as possible to maintain the health and diversity of the variety; a minimum of 20 to 30 if possible. Runner beans also need constant selection to keep them true to type.
- Grow up canes or strings as you would with a normal crop, but before flowering starts remove any that look unhealthy or that have leaves that are very different from the rest of the plants. As soon as the flowers open remove any plants where the flower colour is not true to type.

Practical Tip

Cut off any growth above the top of canes and those pods that form too late for seed saving. This should help the plant put all of its energy into the seeds to be saved.

Pollination & Isolation

Runner beans are pollinated by bees. They will cross with other runner bean varieties readily, though cannot cross with other types of bean. We recommend a minimum isolation distance between runner bean varieties of 800m to be certain of



Runner bean truss in isolation bag



Hand pollinating

maintaining varietal purity. If runner beans are being grown within 800m of your plot, or if you wish to save seed from more than one variety, isolate each variety either with a fleece bag around each truss or with a large insect proof cage around several plants. It may be easier to cage plants grown around a wigwam of canes rather than a row. As insects will be completely excluded from your plants you will have to trip the flowers yourself to ensure a good set. For small quantities of bagged flowers, do this by hand each day, simply pressing down on the lower keel of each newly opened blossom to mimic a bee landing.

Then, using a thin paintbrush transfer the pollen from anther to stigma. Use pollen from another plant of the same variety, rather than from the same flower or plant. If you are growing more than one variety, remember to wash and dry the paintbrush between varieties; or use a different brush.

The characteristics of the seed; its size, shape, colour and markings; should be more or less uniform from generation to generation. A change indicates that crossing has taken place, but the lack of any visible sign of variation is no proof of purity as the seed colour and markings are inherited from the mother. Seed that is the result of crossing will usually reveal itself as in the next generation, as a visible increase in the variability of the plants. Always keep the seed from different years separate. If you do discover evidence of crossing, discard the year harvest from that year and the year before, which may appear fine but obviously harbours hidden crossing. Seed from two generations back should be pure.

Harvesting

Runner beans are very tender and may be killed by early frosts before seeds are mature. Fortunately they are also perennial, forming a poisonous underground tuber. These tubers flower sooner than plants grown from seed, so if your growing season is short dig up the tubers, store them over-winter and plant out once danger of frost has passed. Over-wintering roots can also be a useful when maintaining varieties. The roots will give plants that are true to type even if there have been off-types, or plants of different varieties flowering nearby the preceding year. You can select the best plants one year and save the roots to grow on for seed production in isolation the following year.

Leave the pods to mature and dry on the vines for as long as possible, ideally until the pods become dry and crisp. However, if bad weather threatens uproot the plant, and hang them upside down somewhere warm until the pods are completely dry.

Cleaning

It is best (if not dealing with large quantities) to pod beans by hand; reject any with atypical markings. Large quantities can be threshed by putting the pods into a pillowcase or sack and treading on them or bashing them with a rolling pin; or by shaking the vines vigorously inside a plastic dustbin. Seeds threshed this way will need additional cleaning by winnowing.

Winnowing is best done outside in a stiff breeze. Pour the seed steadily from one container to another, allowing the wind to blow the chaff away. Do this over a tarpaulin, in case a sudden gust wafts away the seed. Repeat until all the chaff has gone and only seeds remain.

Storage

Store in a cool, dry place. Runner bean seeds should last in storage for at least 3 years.

Returning Seed to HSL

It is vital that seed returned to HSL is not cross-pollinated. So not send seed to us that you suspect might have crossed.

Seed must be completely dry and fully cleaned. Seed that retains moisture can go mouldy in transit and will have to be discarded. It can take a few days for seed to get to us in the post so pack seed in breathable material, e.g. a paper envelope or cotton bag, and place it in a padded envelope or stout box to protect the delicate seed from impact damage.