



## \*\*Seed cooperative

[www.seedcooperative.org.uk](http://www.seedcooperative.org.uk)

To support the seed cooperative become a share owning member. Minimum shares are 100 at £ 1 pr share.

We are looking for certified organic growers to join our seed grower's network. To grow for the seed cooperative please contact us at,

[info@seedcooperative.org.uk](mailto:info@seedcooperative.org.uk)



**Storage:** Once seeds have been cleaned and graded they should be stored in paper bags and labelled well.

Seeds are mostly dry matter of up to around 85 % and it is therefore important that the seed storage is dry and cool to keep the seed from drawing in moisture. Beetroot seeds can be kept up to 5 years if stored well. After 3 years a simple germination test can be made counting 100 seeds with each seed representing 1% to ascertain the seeds viability.

The seed yield pr square meter is aprox. 70 – 90 grams and there are approximately 50 - 70 seeds to the gram.

For more in detail information see also:

The Organic Seed Grower by John Navazio.  
ISBN  
978-1-933392-77-6



[www.open-pollinated-seeds.org](http://www.open-pollinated-seeds.org)

## Growing beetroot for seed



### Using open pollinated varieties



**Beetroot: *Beta vulgaris*.** The beetroot has its origin along the Mediterranean coast lines where it presumably was cultivated from the sea beet. It was cultivated by the ancient Greeks and Romans who used the leaves for culinary purposes and the roots medicinally. The root colours were yellow and white and it was only after 1550 that there was first mention of the swollen roots. The red beet as we know it today was first mentioned in the 17<sup>th</sup> century. Only by the 19<sup>th</sup> century were the tapered and globe shaped roots widely cultivated in Europe.

**Flower biology:** beetroots are perfect flower plants which carry stigmas and pollen in the same flower. They are protandrous meaning the pollen is mature several days before the stigma is mature.

**Pollination and seed formation:** Beetroot is cross and wind pollinated but will also be pollinated by insects and will cross with any of the other cultivated Beta Vulgaris crops like beetroots, sugar beets, and fodder beets. They produce multigerm clusters from 2 - 5 seeds per cluster. Beetroot are biennial flowering in their second year.

**Isolation distance:**

Because of the distances the pollen can travel, ideally a distance of 1600 meters should be observed between different flowering beetroot crops and double this space between different types of beta vulgaris species.

**Minimum number of plants.**

There is some debate about the number of plants required to maintain genetic diversity. But a minimum of 20 – 30 for home grown situations and 120 for professional seed growing is to be recommended, however always the more the better.

**Crop characteristics:**

There are many types of beetroot ranging from the globe shaped to the cylindrical to the tapered. There is also variation to the leaf colour and maturation times. It is therefore important to maintain the characteristics that are true to type of the crop which you grow.

**Agronomy.**

(Year 1) Good seed depend on good crop production and good crop production depends on suitable soil and soil preparation. The beetroot crop should be raised as any commercial crop for the market ensuring that the roots manage to reach proper maturity.

**Positive selection:**

At harvest time positively select the best and most true to type roots selecting also for smooth

skin texture. Twist off or cut leaves at 2 cm above growing point.

Positive selected plants give **elite seed.**

**Storage:** Then store the roots in moist cool conditions, sand is ideal. Make sure to **label clearly** your selected roots or sacks / crates of roots. Discard damaged or rotting beetroots during storage.

**A Further selection** can take place during storage which involves cutting a wedge to check for inner colour and taste. Then dip in wood ash to help heal the wound

**Greenhouse:** (Year 2)

After storage around March/April depending on weather conditions, the beetroots can be planted out planting the roots firmly into the soil with tops being at ground level. Planting distances should be 30 cm apart in rows and 75 - 90 cm between rows.

**For outdoors:** Plant in the same way as indoor crops, when the soil is warming up, usually a few weeks later.

**Crop support:**

When the shoots are growing the crop will need supporting. Place 5ft stakes or canes at the end of each row and at 6 ft intervals in the row. Then tie several rows of string or wire along the outside of the crop to keep stems supported and off the ground.

**Rouging:** any plants which fail to grow well, which look weak or are insect infested should be pulled out and discarded **before flowering** .

This is called rouging.

**Flowering and Seed harvest:**

During May and June the crop will flower, and the first seed harvest can start in August depending on location, with manual harvesting taking place over several weeks as the crop

doesn't mature all at the same time. An indication of seed maturity can be seen by seeds turning brown starting from the bottom of the stem and maturing upwards.

The seeds are also bigger at the base of stems and smaller at the top.

Use secateurs to cut off seed stems and harvest into paper sacks or builder bags. Do this with care as seeds will easily shatter , fall off. Lay seed stems to dry on drying frames or on plastic sheeting in a warm, dry and airy place. Keep harvesting all seed stems as they mature. The entire beetroot seed crop can be harvested in one go once about 60% of the seed crop has matured. The harvested crop is then left to dry further indoors.

**Threshing:**

Once seed stems have dried the seeds need to be separated from the stem material. This can be done manually and quite successfully by wearing gloves stripping the seeds from the stems.

**Cleaning:**

Once the seeds have been threshed they need to be cleaned. Using a small fan can help to winnow the seeds by pouring the seeds from one container into another with the fan blowing away the residual leafy and stem material. Then sieve the seeds carefully using meshed sieves to separate out small seeds and bits of soil and rubbish. For larger scale and Bulk seed cleaning SHS\* can help to facilitate bulk cleaning and grading.