

**Threshing:** Once seed heads have dried the seeds need to be separated from the stem material. Threshing can be done by rubbing the umbels over a fine mesh screen.

**Cleaning:** Run seed over a smaller sieve to get soil and other debris out. Carefully winnow the seeds to separate chaff from seed. For larger scale seed growing de-bearding should be done (as carrot seed has small hairs) to prevent seeds sticking together when sowing. When growing larger seed quantities SHS\*\* can help to facilitate bulk cleaning and grading.

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%. It is therefore important that the storage is dry and cool to keep the seed from drawing in moisture. The seeds will keep well for 3 years.

**\*Cage system.** It is possible to grow several carrot seed crops in close proximity by erecting a cage over the crop. Fine environ mesh is used for the cage and bumble bee hives or blow flies are placed in the cage and used to pollinate the crop. It is important to ensure no other flying insects can get in, checking that the netting is secure all round, as this will otherwise cause cross pollination of pure line varieties.

**Elite seeds** are seeds from positively selected plants and should be used for elite seed production.

There are approximate 1000 carrot seeds pr gram.

A carrot seed crop can yield between 60-120 grams of seed pr sq meter depending on variety.

For more in detail information see also: The Organic Seed Grower by John Navazio. ISBN 978-1-933392-77-6

## **\*\*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. Please contact us at,

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



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

## **Growing carrots for seed**



### **Using open pollinated varieties.**



**Carrot:** *Daucus carota* has its origin in Afghanistan and was gradually introduced into Europe in the early to middle ages. The original colours of carrots were white, yellow and purple and only in the 17 hundreds did the first orange types appear in Holland.

**Flower biology,** Carrots are perfect flower plants which carry stigmas and pollen in the same flower.

**Pollination:** Carrots are cross and insect pollinated and will cross with wild and other cultivated carrots. They are biennial flowering in their second year.

**Isolation distance:** Ideally a distance of between 800 – 1600 meters should be observed between

two different flowering carrot crops. However, Using cage systems\* allows for more than one crop to be grown in close proximity.

**Minimum number of plants.** There is much debate about the number of plants required to maintain genetic diversity in carrots. But a minimum of 25 for home grown situations and 100 - 200 for professional seed growing is to be recommended, though the more the better.

**Crop characteristics:** Carrots come in different shapes and sizes so it is important to know from the outset whether your crop is a Nantes, Berlicum, Chantenay or Autumn king type as each type will mature at different times and carry their own particular characteristics. Some of the early crops will mature around 90 days whereas 150 days are needed for main and storage crops.

**Agronomy.** (Year 1) Good seed depend on good crop production and good crop production depend on suitable soil and soil preparation. Ensure in year one to produce good roots which have been allowed to reach maturity.

**Positive selection:** At harvest time positively select the best and most true to type roots selecting also for smooth skin texture and avoid rounded shoulders. Twist off or cut leaves at 2 cm above growing point.

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

**A Further selection** can take place during storage which involves cutting the bottom 20%

off to check for core size which should be medium sized and core colour which should aim to match with the outer colour. Select also for taste discarding bitter and rough tasting roots by tasting the 20% cut off pieces.



**Greenhouse:** (Year 2) in the following spring plant the stored roots in March / April so that the shoulders of the carrots are level with the ground. Planting distances should be 20 – 30 cm apart in rows and 60 - 75 cm between rows.

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

**Crop support:** When the shoots are growing and in May when the first flowers appear, support the plants with 5ft stakes or canes at each end of the bed and at 6 ft intervals in the row. Then tie several rows of string along the outside of the crop to keep stems supported.

**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.

**Seed harvest:** During June and July the umbels upon which the seeds grow, will mature the seeds and in August harvesting takes place over several weeks. Usually the primary umbels mature first and should be bronze brown in colour. These umbels are called the 'kings head' and carry bigger and better seeds. Use secateurs to cut umbels with about 3-4 inch of stem into paper sacks. Lay seed heads to dry on drying frames in a warm, dry and airy place. Keep harvesting all umbels as they mature. Keep primary umbel seeds separate for **elite seed** use. The entire carrot seed crop can be harvested in one go once the secondary umbels have matured. The crop is then left to dry further indoors.

