



AVRDC - The World Vegetable Center

Fact Sheet

Saving Seeds of Carrot

Production

Carrot (*Daucus carota*) seed production requires two years. Roots form during the first year and then require a cold period (at least 10 weeks of temperatures below 15 °C) to stimulate flowering and seed production. Two methods of production are used:

Seed-to-seed. Pencil-sized or larger roots are left in the ground overwinter. In late fall, plants are thinned to 5 cm apart, tops are cut back to 5 cm high, and mulched. Once temperatures rise in spring, the mulch is removed and leaves will regrow. After several weeks, a seed stalk will appear. Superior plants are thinned to stand up to 75 cm apart.

Root-to-seed. Harvest eating-sized roots for replanting in early spring. Clip tops to 5 cm and store at 4 °C in a humid location or layered in sawdust or sand. Replant roots 75 cm apart with soil just covering shoulders. This method is most reliable and allows for inspection of roots for seed production.



Fig. 1. Cluster of flowers (umbel)

Isolation

Carrot plants produce perfect flowers (Fig. 10) that are pollinated by insects. Separate different varieties 800 m apart. Remove wild carrot weeds since they will pollinate with carrot.

Selection

Rogue off-types taking into consideration the root color and shape, plant habit, and plant vigor. Plants that bolt and go to seed early should be removed. Save seed from many carrots to maintain crop vigor.

Harvesting

The seed turns brown 6 weeks after pollination (Fig. 2). Before the seed shatters, cut and place umbels into paper bags to dry completely. Late-season rains will reduce seed quality. For small amounts, handpick each umbel as it dries brown. Large amounts of seed can be harvested by cutting the entire stalk as umbels begin to dry.



Fig. 2. Cluster of mature seeds

Processing

Allow seed to mature in a cool, dry location for an additional 2–3 weeks. Seeds can be removed by hand-beating or rubbing umbels between hands. Winnow to clean. Remove spines from dry seed by rubbing.

Storage

Dried seeds can be safely stored for at least three years. Place seeds in jars, manila envelopes, cloth or mesh bags, plastic containers, or foil envelopes. The best containers are air-tight, such as a sealed glass jar, metal can, or foil envelope. Protect seed from sunlight.

Store seeds in a cool (below 15 °C is ideal), dry location. Place the seeds in a refrigerator for long-term storage. For short-term storage, keep the seeds in a cool, shady and dry place.

References

- Kelly, A.F. and R.A.T. George. 1998. Encyclopaedia of seed production of world crops. New York: John Wiley & Sons.
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- Simon, P.W. 2005. Carrot seed production. United States Department of Agriculture, Agricultural Research Services, Washington D.C.. <<http://www.ars.usda.gov/Research/docs.htm?docid=5235>>. Accessed December 2005.