Seed Production of Uberlandia Carrots in Semi-Arid Africa

ECHO Inc.

The carrot is a popular vegetable crop in sub-Saharan Africa. It is very rich in betacarotene, the precursor of Vitamin A.

Currently, seeds of all carrot varieties grown in hot sub Saharan Africa are imported from regions with temperate climates such as Europe and USA. It has not been easy to produce carrot seeds in hot Africa, because carrots require exposure to cold temperatures (vernalization) to induce flowering.

For some time, ECHO has been promoting the Uberlandia carrot, developed in Brazil, that can flower and produce seeds under tropical conditions.

For seed production, ECHO recommends digging up the carrot roots about 90 days from planting, then replanting them. This action should induce flowering.

However, we tried this technique at ICRISAT research station in Niger, and found that it gave unsatisfactory results.

The roots are usually replanted in March, when ambient temperatures start rising to higher than 40°C. Flowering and seed production are then carried out during the hottest months of the year (April to June). Under these circumstances, seed yields are quite low.

We have developed an alternative way for seed production as follows: Carrots are sown in a nursery at the beginning of November. Plants are thinned to a spacing of 1 to 2 cm between plants. Carrots are then transplanted in mid-December at a spacing of 15 cm between plants. All the plants treated this way will produce an abundance of flowers and viable seeds, starting in February.

We think that this technique can replace the approach recommended by ECHO, particularly in hot regions.

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