

Alternative Fruit and Crops for Cyprus

Capers Production



A longstanding rural tradition for Cypriots has been to collect caper sprouts from the countryside to make pickles. Although pickled caper sprouts are commonly used in home-cooking recipes and in local restaurants, only a very limited amount is produced commercially. The pickled caper flower buds (capers) are a highly prized commodity in the EU. With the increasing interest in Mediterranean Cuisine, the world demand for pickled caper flower buds are also increasing. The annual increase for the world caper consumption has been 6% over the last 14 years.

The EU and the Asian market are the biggest importers for the high quality caper flower buds. The EU rejected imports from Morocco recently because of the toxic residue found in the products. However, for the caper products that are appropriately certified, the world market is wide open. Further, organic production of capers will open an additional market niche. A good marketing concept will bring this local plant to an export success because the growing conditions for capers are outstanding in Cyprus. Capers is a Green Line trade acceptable product which makes sales in the GCC possible.



The KOBI Center is supported by the EDGE project, which is being implemented by BearingPoint and funded by USAID.



Introduction

There is a strong association between the capers and the oceans and seas. Caper (*Capparis spinosa*) is said to be native to the Mediterranean basin, but its range stretches from the Atlantic coasts of the Canary Islands and Morocco eastward to the Caspian Sea and into Iran. Capers probably originated in dry regions in western or central Asia.

Caper plants can grow spontaneously in cracks and crevices of rocks and in stone walls. Plants grow well in nutrient poor, sharply-drained and gravelly soils. Mature plants develop large extensive root systems that penetrate deeply into the earth. *Capers* are salt-tolerant and flourish along shores within sea-spray zones.

Caper plants are small shrubs, and may reach about one meter upright. However, uncultivated caper plants are more often seen hanging, draped and sprawling as they scramble over soil and rocks. The caper's vegetative canopy covers soil surfaces, which helps to conserve soil water reserves. Leaf stipules may be formed into spines. Flowers are born on first-year branches. The caper plant is very versatile and has a range of culinary uses including edible buds, berries and leaves. Future marketing of caper products will be able to make much of the high level of antioxidants that the caper contains making it a healthy, as well as a tasty, addition to a meal. Other potential markets may exist for the beautiful caper flower. While capers are a high value product they are very labor intensive during harvesting, offering new opportunities for employment in marginal areas.

Marketing, Pricing and Profitability

Capers, caperberries and caper sprouts are all Green Line trade acceptable product which makes sales in the GCC possible. The market prices for 1kg are as follows:

Total yield expected in the fourth year per ha: 3300 kg caper buds (capers) 660 kg caper berries

A financial model of the production process of capers including establishing fields, production, processing and packaging is available from KOBI Center.

Growing

1- Site Selection and Field Preparation

Dry heat and intense sunlight make the preferred environment for caper plants. Plants are productive in zones having 350 mm annual precipitation (falling mostly in winter and spring months) and easily survive summertime temperatures in excess of 40° C. However, caper is a cold tender plant and has a temperature hardiness range similar to the olive tree (-8°C).

The ground is prepared for planting through moldboard plowing and harrowing or digging backhoe pits for capers, if the ground is rocky.

2- Cultivars and Varieties

Preferred varieties have no spines, round firm buds, and rich flavor. High-yielding caper plants and types with short and uniform flowering periods have not yet been developed.

Some of the important varieties:

- 'senza spina' Italian selection or form without stipular spines.
- 'spinosa comune' Italian form with stipular spines
- 'inermis' without stipular spines.
- 'josephine' one of the better Mediterranean selections
- 'aculeata'
- 'dolce di Filicudi e Alicudi' From the Aeolian Archipelago
- 'nuciddara' or 'nucidda'
- 'nocellana'- spineless, with globose buds, mustard-green color, and strong aroma
- 'testa di lucertola'
- 'tondino' grown on the island of Pantelleria

We recommend that the variety to be cultivated should be selected according to the market demand and to the demand of the international wholesaler.

3- Propagation

Plants are grown from seeds and by vegetative cuttings.

From seeds:

Fresh caper seeds germinate readily - but only in low percentages. Dried seeds become dormant and are notably difficult to germinate and therefore require extra measures to grow. Dried seeds should be initially immersed in warm water (40° C) and then let soak for 1 day. Seeds should be wrapped in a moist cloth, placed in a sealed glass jar and kept in the refrigerator for 2 - 3 months. After refrigeration, soak the seeds again in warm water overnight. Plant the seeds about 1 cm deep in a loose well-drained soil media. Young caper plants can be grown in a greenhouse (preferable minimum temperature of 10° C).

From Stem Cuttings:

Cuttings should be collected in February, March or April. Stems should be used from the basal portions, greater than 1 cm diameter and 8 cm in length with 6-10 buds. Use a loose well-drained media with bottom heat. A dip in a IBA solution of 1.5 to 3.0 ppm is recommended (15 seconds). A 70% rooting percentage would be considered good.

4- Planting Layout for Fruit Production

Transplanting is carried out during the wet winter and spring periods, and first-year plants are mulched with stones. Plants are usually planted in a square design and space from 2 to 6 meters apart to accommodate their sprawling growth. In Italy, plants are spaced 2 to 2.5 meters apart (depending on the roughness of the topography; about 2,000 plants per hectare). A full yield is expected in 3 to 4 years. Grown from seed, in

California capers reportedly begin to flower in the fourth year, however Italian sources report some flowering from first year transplants.

5- Irrigation and Fertilization

With first year plants, over-watering must be avoided, as wet roots will kill the caper plant. Water should only be provided with drip irrigation. A salinity of 5500 ppm of the irrigation water did not show any growth depression. You can have your water tested at the water and leaf test laboratory in Guzelyurt.

The first fertilization can take place 20 to 30 days before planting and depends on the soil constitution. Phosphate and potassium fertilizer are applied every two or three years.

6- Pruning

Plants are pruned back in winter to remove dead wood and water sprouts. Pruning is crucial to high production. Heavy branch pruning is necessary, as flower buds arise on one-year-old branches. Three-year-old plants will yield 1 to 3 kilograms of caper flower buds per plant. Caper plantings will last 20 to 30 years.

7- Harvesting

The unopened flower buds should be picked on dry days. Harvesting is carried out regularly throughout the growing season. In Southern Italy, caper flower buds are collected by hand about every 8 to 12 days, resulting in 9 - 12 harvest times per season.

8- Processing

Capers are preserved either in vinegar or under layers of salt in a jar. Raw caper berries are bland flavored and need to be cured to develop their piquant flavor. In Italy, caper berries are graded on a scale from '7' to '16', which indicates their size in millimeters. Mechanized screens are used to sort the various sized capers after being handpicked from the hillsides. Caper berries under a centimeter diameter are considered more valuable than the larger ones (up to one and a half centimeters of diameters).

Contact us

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NOTE: This publication is not intended to be a 'step by step implementation guide'. This is only to give an idea on the scope of Capers Production to the people interested in an agribusiness project.