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Production of Roselle

PRODUCTION OF ROSELLE

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Economic Importance

Roselle (*Hibiscus sabdariffa*), sometimes called "Jamaica sorrel", is a plant the enlarged calyces or flower bases and swollen bracts of which possess excellent qualities for the making of jellies and similar products. The jelly made from the fruit of this plant is acid, of a transparent nature, and possesses a bright-red color. The fruit is also used for making an acid drink and as a substitute for cranberries and currants in regions where these fruits do not grow. The variety usually grown is of a rich red color; the yellow forms do not appear to be adapted, by reason of color, to the making of preserved foods. The plant also yields a fiber called "roselle hemp."

Climatic Limitations

This plant is quite sensitive to frost and is usually found in subtropical gardens. For this reason there is doubt as to its fruit-producing qualities north of Florida, unless the so-called "early" strains prove satisfactory. However, evidence has been produced which leads to the belief that, although the floral portions may not develop in the northern latitudes, the leaves and terminal shoots possess some merit as a jelly-making product. Every effort should be made to secure seed from plants that give evidence of ability to fruit in latitudes north of Florida, in order that strains may be secured for cultivation throughout a larger productive region.

Description

Roselle is an annual of tropical origin related to okra, cotton, and ornamental hibiscus. In habit it resembles cotton, and in Florida it reaches a height of from 5 to 7 feet. The stems are reddish and branch profusely. The leaves are entire in the young plant, becoming palmately five-parted on the upper growths. The large, almost sessile flowers are usually borne singly in the axils of the leaves. The fragile, yellow corollas, much like miniature hollyhocks, last only a day. Subsequently the red calyces and bracts enlarge. The fruit, developing in from 3 to 4 weeks, is tart, resembling the cranberry. Latent flower buds may develop after the first picking.

Propagation

The plants may be grown from seed or cuttings. Experiments in Florida and Hawaii with standard strains lead to the conclusion that October is the normal flowering period and that best results will be

obtained by planting the seed during March. Seedsmen are now offering a strain designated as "early", which, it is stated, will mature before frost occurs. The seed is sown in special beds or in flats 4 to 6 inches apart, covered with soil to a depth of from one-quarter to one-half inch. When 3 or 4 inches high, the seedlings should be potted and given the same treatment as the plants of tomatoes, peppers, or eggplant.

Soil

Roselle will grow in any soil that is moderately rich. In order to hasten maturity, it is advisable to avoid extremely rich soil or the application of nitrogenous manures, since these tend toward the development of large plants at the expense of flower production. The soil should be well drained. One of the precautions for northern culture should be to grow the crop on rather dry instead of moist land. A sandy loam is best for use north of Florida.

Culture

The soil should be prepared deeply, because the plant makes a large root system which descends to greater depths than the roots of many other crops. Seedlings that are started indoors can be planted in the open at the same time as tomatoes. They produce best when planted in rows 4 feet apart and from 3 to 4 feet apart in the row. If not too highly fertilized, the plants will grow 4 to 5 feet high, producing a bush-like growth. The culture recommended for tomatoes should give good results with roselle, but the plants should not be given too much water. Pruning or cutting back the plants during the early stages of growth induces the production of a larger number of branches, increased leafage, and a larger number of terminal shoots.

Harvesting and Utilization

The fruit is ready to gather when the calyces or flower bases are plump, crisp, and of a deep red color, and before any woody matter has formed in the tissues of the fruit. The fruit is picked by breaking it off with a sharp, sudden snap. The yield will vary with the region and conditions of growth, but may be anywhere from 3 to 12 or 15 pounds to the plant.

The fruit may be used in the preparation of jelly, jam, marmalade, a fresh or bottled drink, a flavoring extract, tarts, sauce, and a number of other products. One of the interesting features of this plant is that after jelly is made, the pulp can be used for jam.

It is best to use the fruit before it has lost its plumpness unless one wishes to dry it. In either case, the fleshy calyces or flower bases are used. The seed capsules should be removed, because they have a parchmentlike nature and are covered with a large number of minute curved hairs, which are reported to be somewhat injurious when eaten.

In the preparation of the fruit for preserving or drying, hold the pod stem end up and cut off the stem and the basal end of the calyx at the point where the seed pod is united with the calyx. A slight pressure or tearing apart of the calyx will force the seed pod to drop away. In making jam, it is essential that none of the woody portion be included in the material used. Stringiness should be avoided if sauces or jams are to be made.

Jelly

Wash 4 pounds of fruit, open and remove the seed pods. The weight of the flesh will be about 2 pounds. Add 4 cups of hot water and boil to a pulp. Drain through a cloth jelly bag without pressing. Measure the juice and boil it continuously 20 minutes. Then add 1 cup of sugar for each cup of juice. Cook until on testing the drops run together and slide off in a flake or sheet from the side of the spoon, leaving the edge clean. Remove from the fire, skim, and pour into jars. Four pounds of fruit will make about 2 pounds of jelly.

Jam

Wash 4 pounds of fruit, open and remove the seed pods. The weight of the flesh will be about 2 pounds. If the pulp from the fruit used in jelly making is used, the original weight of the roselle material may be calculated and used in the above proportion. Add 1½ cups of water to the fruit and cook for about 1 hour or until reduced to a soft pulp. The juice and a part of the rind of a lemon is frequently added before the material is boiled. Measure the cooked fruit and add 1 cup of sugar to each cup of fruit. Cook 20 minutes.

Other Uses

In making sauces, the usual procedure should be followed. In the making of fresh or bottled drinks, the cleaned calyces are placed in enough water to cover them and allowed to stand overnight. In the morning the material is boiled until it assumes the consistency of pulp. Then strain and bottle the juice for use as a drink or for future jelly making. The pulp may be used for making jam or preserved without the addition of sugar.

The young stems or tip shoots are reported to have been used in making good jelly. One experimenter has taken the leaves, added water, and boiled the material until the liquid was thick. Then the juice was strained through a cloth, sugar added, and the liquid was boiled until it reached the jelly stage. The use of the leaves of the roselle in the same manner as those of the rose geranium, mint, wintergreen, and several other plants in jelly and jam has been suggested as of possible value. For these special uses the plant can be grown almost anywhere in the North or South.

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