ROSELLE

Bissap

Hibiscus sabdariffa Malvaceae

ECHO® PLANT INFORMATION SHEET

Description

Roselle presently is cultivated widely in the tropics and subtropics. The presumed origin is Southeast Asia in the region from India to Malaysia. Roselle is an underutilized multipurpose crop providing farmers with food and cash income when other vegetables have become scarce. Processing generates additional family income, from which women in particular benefit.

Uses

Young Roselle shoots, leaves and calices are used as a cooked vegetable or finely cut and used in sauces. Seeds are ground and used as a meal or as a coffee substitute in Africa. The dried red calyces are commonly used to prepare a hot tea or, more commonly, a cold beverage after adding sugar. It is a sour tasting, refreshing drink. The dried calyces are used in Western countries as a base for many herbal teas and as a source of red food colorants. Roselle tea is used to suppress high blood pressure. The oil of Roselle seed is extracted and used for cooking (in Chad, Tanzania and China). However, the seed oil is claimed to contain some toxic substances and may be better used in the soap and cosmetics industries. The leaves are a source of mucilage used in pharmacy and cosmetics. Extracts are often used medicinally to treat colds, toothache, urinary tract infections and hangovers. Leaf juice is used to treat conjunctivitis in Senegal. Leaves are applied as a poultice to treat sores and ulcers. A root decoction can be used as a laxative. The ornamental value of Roselle is of recent interest, as a garden plant or cut flower. The decorative red stalks with ripe red fruits are exported to Europe where they are used in flower arrangements.

Common Names

- Spanish
  - Rosella
  - Alazán De La India
  - Alazán Rojo
  - Alazán De Jamaica
- French
  - oseile de guinee

Cultivation

- Elevation: 0-2000 m (6500 ft)
- Rainfall: 800–1600 mm (30-60 in) of continuous annual rainfall; minimum of 100–150 mm/month (4-6 in) during vegetative growth
- Temperature:18^{o}-35^{o} C (6^{o}-95^{o} F); frost sensitive
- Soil: well-drained, neutral sandy loams, rich in humus; does not tolerate waterlogging Roselle is an annual plant normally propagated from seed but may be propagated from cuttings as well.

If seeds are sown directly in the field, a planting density of 1-2 m (3-6 ft) apart in rows 1.5-3 m (4.5-9 ft) apart is recommended. Seeds also may be planted in seed beds and transplanted at 7-10 cm (3-4 in) tall. Roselle is a short-day plant species; normally planting is done in early spring in subtropical climates if plants are grown for their herbage. Later planting is preferred (mid-May is ideal for southern Florida) if plants are grown for the pulpy calyces. Roselle may be grown as a summer crop in temperate regions. However, Roselle is frost-sensitive and does not produce fruit in temperate regions. Balanced garden fertilizers may be used in modest amount (approximately half the amount used for vegetable plants in the same region). Early pruning will encourage branching and increase fruit production. Roselle is a photoperiod sensitive plant that flowers best when the daylength is shorter than 12 hours.

Harvesting and Seed Production

The vegetative growth period lasts from 4 months to 6 months. Six weeks after transplanting, the tops of Roselle plants may be cut off for vegetable use. Two additional herbage harvests may be made at 4-week intervals after which the remaining plants are thinned and allowed to produce flowers and fruits. Calyces are harvested manually 2–3 weeks after flowering, usually 4–6 months after sowing, before the fruit has dried. Regular picking prolongs flowering. The calyces are dried in the shade.

Pests and Diseases

Root-knot nematode is a serious parasite. Mealybugs and leaf beetles may become pest problems. Scale insects may attack stems and branches. Aphids attack leaves and flower buds, and the cotton stainer feeds on ripening calyces. A mildew fungus (*Oidium* sp.) causing leaf damage may require control.

Cooking and Nutrition

The flavor reminds consumers from north temperate regions of cranberries. Sauces, jams and jellies can be made from finely chopped calyces. Roselle calyces contain a natural source of pectin to solidify jam or jelly preparations. Strained cooked calyces are a source of syrups added to cakes and

puddings or poured over waffles, pancakes or ice cream. To make Roselle syrup, dried calyces are boiled at a ratio of 1 part dried Roselle to 4–5 parts water. Because of its very tart taste, large amounts of sugar are added. The juice often is diluted with water to make an “ade,” like lemonade. It also may be flavored with ginger and sweetened with sugar or served with ice. Roselle juice also is used to make wine. Roselle calyces are good sources of calcium and iron and the vitamins, niacin, and riboflavin. Fresh leaves contain 2-3% protein and contain traces of calcium, phosphorus, and iron.

ECHO® 17391 Durrance Rd, N. Fort Myers FL 33917 USA
Tel: (239) 543-3246 | Email: echo@echonet.org | Website: ECHOcommunity.org