

TECHNO GUIDE FOR ROSEMARY

Rosemarinus officinalis L.

INTRODUCTION:

Rosemary from Labiatae family is a tender plant and also essential oil crop. The essential oil yield is 20 to 80 kg oils. A native of Mediterranean, it grows freely in large of southern Europe and is cultivated worldwide. The cultivation is generally confined in small areas and unlimited number of farmers involved in commercial production. In the Philippines there 2.02 hectares of rosemary plantation in Region 1, 2 and CAR. (BAS, 2010). Three (3) kg of fresh leaves/ha yields 0.1% essential oil.

Rosemary is an evergreen, usually erect, bushy shrub that grows to a height of 1 to 2 m. Erect stems are divided into numerous long, slender branches that have ash-coloured and scaly bark. The leaves branches bear opposite, leathery thick leaves which are lustrous, dark green above and white below and aromatically fragrant when crushed. The flowers are small and pale blue to deep blue. Inflorescence racemose, axillary, 5 – 10 floweres terminating in short lateral branches. Fruits composed of 4 subglobose to obovoid nutlets, glabrous and smooth.

USES and NUTRITIONAL VALUE:

Rosemary is grown mainly for its essential oil in culinary purposes and medicinal value. The fresh or dried leaves are excellent flavoring agents in vegetables, meat, sauces, stews, herbal butters, cream soups, fruit salad, jams, biscuits and bread. Rosemary oil distilled from flowering tops and leaves is used to season processed foods, but for most part of it is employed in perfumes, in scenting soaps, detergents, and household sprays, flavor confectionery and liquors.

In medicinal Preparation – a spoonful of leaves mixed with honey and melted butter is used to cure cough. It is applied externally to help aid in rheumatism, muscular injuries and dandruff. It is used to fortify the brain and refresh the memory. Flowering tops and leaves are considered carminative, diaphoretic, diuretic, aperient, emmenagogue, stimulant, stomachic and astringent. Rosemary serves as a household remedy for headaches, bruises, colds, nervous tension, asthma, balsness and sore throat. An infusion of the leaves is used as an eyewash for slight catarrhal conjunctivitis and as vapor baths for rheumatism and paralysis.

Nutritional Value – Dried rosemary contains per 100 g edible portion:

Water – 9.3 g	Na – 50 mg	Dried leaves contain - 1-2% volatile oil
Protein – 4.9 g	Zn – 3.2 mg	
Total ash 6.5 g	Ascorbic acid – 61.2 mg	
Ca – 1.3 g	Thiamine – 0.51 mg	
Fe 29 mg	Niacine 1.0 mg	
Mg – 220 mg	Vitamin A – 3128 IU	
P – 70 mg	Phytosterols – 58 mg	
K 955 mg	Energy value 1387 kJ/100g	

VARIETIES

There are three types of rosemary throughout the world. These are camphor type (produced mainly in Spain), a 1, 8-cineole type (produced mainly in Morocco), and verbenone + bornyl acetate type that is cottage-industry product from Corsica.

CLIMATE REQUIREMENTS:

Rosemary is very adaptable with the temperature of 20 to 25 °C. But can tolerant up to 36°C

SOIL REQUIREMENTS:

The ideal soil conditions, for rosemary is light, well-drained sandy to clay loam soil with a pH 5.5 to 8.0

CULTIVATION PRACTICES:

- Rosemary - can be planted using seeds and stem cuttings.
- Rosemary seeds – Can be grown from seeds by sewing it in a seed box using mixture of soil and compost organic matters.
- Stem cuttings – Cut 7.5 to 12.0 cm of stem cut below a leaf node, remove the lower leaves. Dip the base of the cutting into rooting hormones or liquid fertilizer. It can be plant into plastic bags or small pots or to any containers with good drainage. Keep the pots away from direct sunlight. After 4-6 weeks when new roots have formed placed your new plants in the shady for few days before planting out in the herb garden.
- Planting – Rooted cuttings can be planted in pots with 30 cm diameter and in plots . The required plants per hectare ranges from 50,000 to 60,000. Raised plots with width of 1.2 m rows spaced at 50 cm. Plant the rooted cuttings, 50 cm apart within the row

CARE AND MAINTENANCE:

- a. Watering – Water sufficiently to keep your plants growing, but not so much that the roots became oxygen starved. For small garden hand held hose works well. While for large scale overhead sprinklers or Dip irrigation is used. Check the soil need at root depth to be sure you're watering enough.
- b. Weeding - Hand weeding or hoeing are very important as weeds affect the yield and quality of oil. Care should be taken not to damage roots as rosemary is very sensitive and can cause parts die.
- c. Fertilization – Organic gardener understand that is almost impossible to over fertilize your garden using organic matter. The great advantage in using compost or well-rotted manure is that adding organic matter in the

soil. Now, there are many sources of organic fertilizer such as vermicompost at the rate of 1 kg/sqm.

PREVENTING PEST AND DISEASES:

Get into the habit of checking your plants at least once a week. In an organic garden, as in nature, the life cycle of beneficial predators and parasites are usually closely synchronized with these pests. When the pests increase, so do the predators.

If nature's control aren't doing their job enough, hand pick the pest from plants and drop them into a can of soapy water. You may also resort to using botanical pesticides.

Organically acceptable insecticides are now available in the market; you can select one of the several brands of botanical insecticides that contain rotenone or pyrethrin.

The common pests attacking the rosemary are white flies, spider mites, mealy bugs.

Fungal problems may arise when the plants are over irrigated, while powdery mildew occurs in wet season. When necessary, apply fungicide to control the spread of the diseases or remove and burn infected plants or plant parts.

HARVESTING:

Harvest the terminal shoots once or twice a year, it is done early in the morning. Fresh shoots are cut at least from the tip of the shoot. No brown branches should be included as it lowers the quality of the fresh leaves. The shoots are either dried or fresh bundled in bunches of 8 – 12 tie with rubber band. When the essential oil is to be extracted the plants are cut 2 – 3 years after planting at the onset of flowering.

POST HARVEST HANDLING:

Bunched fresh shoots of rosemary are put in styrofoam containers and delivered as soon as possible to fresh market outlets. The whole fresh leaves can be frozen, preserving the flavor best. For dried herb market, the shoots should be dried immediately on screen trays in a dark sheltered area with good ventilation. The dried leaves are simply stripped by hand from the stems and stored in close containers.

REFERENCES:

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