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Commentary

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Commercial production of rubber and its uses

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DESCRIPTION

Rubber trees belong to the *Euphorbiaceae* family. This tree is strong, tall and fast growing. It has a well-developed taproot and lateral branches. The leaves are trifoliate with long petioles. The flowers are unisexual, small and fragrant. *Stamin* flowers are small and numerou s. Pollination is by insects. Latex containers are present in all parts of trees except wood. The genus *Hevea* is native to South America and is native to the Amazon and Orinoco valleys. Before the discovery of the New World, Native Americans used the milky sap of various plants to make balls, flasks, ruff his shoes, and waterproof fabrics. Only one of these plants, *H. brasiliensis* (HBK) Muell Arg, later evolved as the dominant plant for latex production.

Natural rubbers for commercial production are available from Manihot glaziovii (*ceramic rubbe, Ficus Elastica* (rubber), *Castiolla Elastica* (Panam a rubber), *Parthenium argenatum* (Guayul), *Taraxacum koksaghyz* and *Hevea brasiliensis* (Para rubber). Native to Brazil, it was introduced to Asia in 1876. After proper chemical treatment, rubber wood offers sufficient strength and durability over any semi-hard wood available in India, making it useful for door and window parts, furniture, wall panels, upholstery, tool handles, etc. It can be used to manufacture items. Rubber is a tropical tree grown primarily for the industrial production of latex. Like oil palm, it requires little or no dry season, consistently hot temperatures, and high rainfall year-round. The soil should not be particularly rich in nutrients, but should be deep and well-drained. Both crops are often grown in the same ecoregion, and refineries and rubber processing plants are often part of the same industrial park.

Climate and soil requirements, rubber is demanding in its climatic requirements. Areas within 100 degrees of latitude on either side of the equator are ideal for growing rubber. It requires temperatures in the range of 200-300 $^{\circ}$C and precipitation of 200-250 cm per year. Inhabits plains and slopes of mountainous areas at altitudes of 300 to 800m. This particular climate is only available in the Kanyakumari district, Tamil Nadu and Kerala which make up the traditional regions. It does well in deep, well-drained, acidic soils of red laterite or clay loam with a pH of 4.5 to 6.0.

Varieties, institutes such as the Malaya Rubber Research Institute, the Indian Rubber Research Institute, and Kottayam have developed cloned varieties. These clones are broadly divided into three categories, primary, secondary, and

tertiary, based on how the parent tree is developed. When mother trees are selected from seedling populations of unknown parents and vegetatively propagated to produce clones, they are called primary clones. When the mother tree is cloned and then propagated vegetatively, they are called secondary clones.

Propagation

Seeds: Propagation by seed is carried out to grow seedlings for rootstock purposes or polyclonal seedling progeny. Seeds usually ripen in South India from July to September. Since the germination capacity is very short (8 weeks), immediately after sowing, form a raised bed of river sand 1m wide and moderately long, sow the seeds in one layer and press firmly so that the surface of the seeds is just visible. Children's rooms can be protected from direct sunlight by creating temporary shade. Watering is done regularly to keep the bed moist. Seeds start germinating within 6 to 10 days. Such raise seedling stumps or at 60 x 90 cm or 60 x 120 cm to raise bud wood nursery or stumped budding. Otherwise, sprouted seeds can be directly planted in the field.

Budding: The scion of a particular clone is maintained in the bud wood nursery by planting the budded stumps or by budding the clone on the seedlings *in situ* at nursery. Budded stump often refers to the budded plant whose scion shoot is cut very close to the budding zone leaving few dormant buds in the scion shoot. On the other hand, when the rootstock is cut as a stump and germinated, green germination is usually seen in 4 to 5 months, and this is called stump germination.

Planting: For planting new trees, we must first clear and clear the primary forest. Pits are usually dug to a size of 1 x 1 x 1 m^3 and filled with soil and compost. Planting can be done from June to July in a rectangular or square or quincunx system.

Manures and fertilisers: In the life of a rubber tree, he has three stages of growth: nursery, immature and mature. Fertilization depends on the growth stage. The Rubber Institute of India recommends the following manual schedule.

Seedling nursery: He practices applying 25 kg of compost and 2.5 kg of phosphate rock per 100 square meters of nursery bed once every three years. 25 kg applications of 10:10:4:1.5 NPKMg of mixture per 100 m^2 of nursery bed 6-8 weeks after planting 12.5 kg of mixture per 100 m^2 6-8 weeks after first application but before mulching.

Budwood nursery: 1.5kg of phosphate powder per 100 m^2 of cot is applied as a base dressing during cot preparation. Besides 250 g of 10:10:4:1.5 nitrogen, phosphorus, and potassium (NPK) mg mixtures per plant in two doses of 125 g each. The first dose is given after planting the sprouted stump or 2-3 months after pruning if germination is done *in situ*, and the second dose is applied 8-9 months after planting.