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RATTAN - A POTENTIAL INTERCROP UNDER RUBBER IN SRI LANKA

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Rattans are climbing palms native to South East Asia and New Guinea. There are about 600 species comprising of number of genera of which *Calamus* is the most important. They grow wild near streams and swamps mainly in humid tropical forests.

Calamus Species found in Sri Lanka

In Sri Lanka many *Calamus* species grow in the wild. Following species are found in the areas mentioned and most of them are endemic (Trimen and Hooker 1898).

C.thwaitesii	Moist low country below 2000ft. Kalutara, Kandy, Kurunegala
C.pseudotenuis	(Heenwewel) low country, Matale
C.rotang	(Wewel)- Dry region, common in wet places
C.rivalis	(Elawel) - Low country, Pasdunkorale (endemic)
C.delicatulus	(Narawel) - Galle, Hiniduma and Pasdunkorale (endemic)
C.radiatus	(Kukulawel)- Hiniduma, Hewessa, Kalutara (endemic)
C.digitatus	(Kukulawel) - Raigama, Pasdunkorale, Galle (endemic)
C.zeylanicus	(Mawewel/Wanduruwel/Thambotuwel), Kalutara, Sabaragamuwa (endemic)
C.ovoideus	(Thamburuwel/Thudarena), Sabaragamuwa (endemic)

Some of these endemic species such as *Calamus zeylanicus*, *C.ovideus* and *C.pseudotenuis* are used in the manufacture of furniture and other handicrafts. As there are no organized plantings, craftsmen totally depend on forests for their supply of cane. Uncontrolled harvesting and depleting forests have lead to the scarcity of cane in their natural habitats and the use of immature, low quality material for the

production of handicrafts. Due to this considerble quantities of cane have to be imported at present. Therefore it has become important to have organized planting of this raw material to supply the local craftsmen with good quality cane.

Malaysia faced with the same problem of depletion of this crop in their natural habitats, has started experimental scale plantings of species such as *C. manan* (Rotang manau), *C.caesius* (Rotang saga) and *C.palustris* as a supplementary crop under rubber in addition to their forest plantings (Aminuddin 1986, Aminuddin & Nur Supardi 1991), making use of the support and shelter of rubber trees. Some of these trials have already been harvested with considerable financial returns (Aminuddin 1992), and now growing of rattans with rubber as an intercrop has been accepted by RISDA (Malaysia) for the purpose of subsidy (Salleh Bin Mohamad & Aminuddin 1986).

Light requirement

Rattan spp. differ in their light requirement (Kuswata *et al* 1986). For some spp. such as *C.manan* 50% of daylight is sufficient for good growth (Mori 1980, Aminuddin & Nur Supardi, 1986). Some grow up into the forest canopy through small gaps while others can grow in dense shade. Still other spp. grow in the large gaps in the secondary forest where light levels are high (Dransfield 1979).

Effect of rattan on rubber

Although the effect of rattan on the growth and yield of rubber has not yet been established, preliminary observations in Malaysia shows that a density lower than 400 plants per hactare of *C.manan* have not shown adverse effects on rubber (Nur supardi MD Noor, FRIM, Malaysia, Personnel communication). Effects of shading by the climbing rattan over the branches of rubber, any incidence of disease due to the presence of rattan are yet to be understood. Access and passage problems also have been observed when the rubber inter row space was 6mx3m (Nor Supardi & Aminuddin 1991).Branch damage due to weight of rattan has not been observed so far even with larger spp. such as *C.manan* (Nur Supardi & Aminuddin 1991).

Harvesting

Harvesting is normally done after the canes reach full maturity in about 12-15 yrs. But some experimental plantings have been harvested 7 yrs after planting (Aminuddin 1992 b), and it seems to be a tedious job of climbing the rubber trees and cutting the rattan fronds hooked on to the rubber trees (Aminudeen 1992). It is

also suggested that harvesting can be done at the time of felling the rubber trees (Salleh Bin Mohmed 1986).

Prospects for Sri Lanka

In Sri Lanka too it may be possible to grow the endemic species of *Calamus* under rubber. Smaller species may be more suitable as their shading and covering effect on rubber canopy and the ground space they occupy may be less than the larger species. The climatic requirements will be favourable for rattan in the main rubber growing districts as most of the endemic species are found in the two main rubber growing areas of Sabaragamuwa and Pasdunkorele. Growing of these rattans in the reservations in estates is yet another possibility. Experiments are now being planned to start small scale trials with *C.zeylanicus C.ovoideus* and *C.psendotenuis* to select the most suitable species of rattan as an intercrop under rubber, particularly those tolerate shade and least competitive with rubber.

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