

TRI - ADVISORY CIRCULARS



SI

SHADE, GREEN MANURE & INTERCROPS



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GREEN MANURE CROPS IN TEA

(This replaces the existing Circular No. 0-3, Serial No. 7/90.)

1. Objective

Considerable quantities of green manure can be obtained from well-managed medium shade trees and green manure crops that are interplanted with tea. Their loppings provide organic matter in large quantities. The organic matter from loppings improves the soil physical properties and also provides nitrogen and other mineral nutrients. Lopping should be carried out at the proper time. The frequency of lopping will depend on the species and the agro-ecological zone in which they are grown.

2. Loppings of Shade Trees

- 2.1 Medium shade trees such as *Erythrina lithosperma* (dadaps) and *Gliricidia sepium* have a dual purpose in that they afford physical shade to tea and serve as green manure crops. These trees should be lopped with the onset of rain. *Gliricidia* could be lopped 2 – 3 times a year depending on the growth and weather conditions, and dadap 1- 2 times a year.
- 2.2 Species of *Acacia* that thrive well in elevations above 1370 m (4500 ft) do not stand up to hard lopping. They should, therefore, be lopped lightly with the commencement of rain.
- 2.3 *Calliandra* grows well up to an elevation of 1500 m (5000 ft) and it could be lopped 1-2 times a year, well before pod set.
- 2.4 Loppings of shade trees should be chopped and spread evenly between tea rows and not heaped up in several places.

3. Green Manure

- 3.1 Bush varieties like *Crotalaria anagyroides* or *Crotalaria usaromoensis* could be grown as green manure crops between every four rows of tea in new clearings. These plants grow fast and attain a height of 1.5 m (5 ft) in 3-4 months. They should be lopped at the time of flowering before pod formation, and the loppings spread evenly between tea rows. About 2-3 loppings could be done in a year.
- 3.2 As *Crotalaria* competes with tea for moisture during dry periods, it should be lopped immediately before the onset of drought.
- 3.3 *Sesbania sesban* is also recommended as a green manure crop for all elevations. This particular species is not a threat to tea as far as tea nematodes are concerned.
- 3.4 Apart from protecting the young tea plants from wind damage, the above green manure species also conserve soil and provide nutrients from their loppings.

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