

Red ants can be used to increase yield of Poonseed oil

The evergreen tree, Alexandrian Laurel, *Calophyllum inophyllum* Linn. is grown for its oil known as Poonseed oil. The oil is used for soap-making, as an illuminant and applied externally in rheumatism and skin affections. Bark of the tree is also used for various medicinal purposes.

The tree bears fruits during August to October but 26-42% of the fruits between 1 and 2.4 cm in diameter are destroyed by the five-striped palm squirrels. The squirrels make holes in the soft seed coat and consume the developing embryo. Spraying chemicals is not advisable therefore, Kumaresan at Vivekananda College, Tamil Nadu found a natural or biological method to prevent the damage by squirrels.

The Red Weaver Ants, *Oecophylla smaragdina* Fb., are known for their pest control activity on date palm, coconut and citrus. Giving importance to these tiny controller, Kumaresan, introduced them on Poonseed tree to check the damage of fruits by squirrels. Three years' experiment resulted in higher number of young fruit in trees harbouring ants. Fruit damaged by squirrels was less than one per cluster. The reason for this is that the red ants bite invading squirrels therefore, they remain away from the trees, thus reducing the fruit damage. Further, red ants act as pollinators and increase fruit set at the following stage.

Thus red ants could be used as a good biological control to increase fruit yield and ultimately oil yield of the tree (Kumaresan, *J Bombay Nat Hist Soc*, 2001, **98**, 148).

Tannin

New process for the preparation of Katha from Gambier extract

The increasing demand of *Katha* for its use in *Pan Masala*, *Gutka* and natural dye for hair has necessitated the search of an alternative source. *Katha* is extracted from the heartwood of a mature tree of *Acacia catechu* Willd. which needs to be cut by *Katha* entrepreneurs. Another known source for *Katha* substitute is Gambier, *Uncaria gambier* Roxb. (Hindi – *Kath-kutha*) which is found in Malaysian region and imported into India. Extraction of Gambier is done by boiling the young shoots and leaves in water and the decoction is evaporated to a specific consistency and allowed to cool and solidify into agglutinated cubes. These cubes are the commercial forms of the Gambier. Dr Soni and Dr Sharma at the Centre of Advance Studies in Chemistry of Forest Products, Forest Research Institute, Dehra Dun developed a process of making Gambier *Katha*. The process comprises the following steps: (i) subjecting purified extract of Gambier to a reaction to change (+) isomer of catechin to (-) isomer of catechin; (ii) treating the Gambier solution with a decolourising agent; (iii) concentrating the solution; (iv) cooling the solution (5-10°C) overnight to crystallise the *Katha*; (v) filtering/pressing, cutting and drying of *Katha*.

The yield of *Katha* obtained by above process is about 34-36 per cent and yield of Cutch (Gambier tannin) is approximately 35-40 per cent and its characteristics are comparable to *Katha* obtained from *Acacia catechu*. Evaluation of oral toxicity and oral mucosa toxicity on rats showed that it is mildly irritant and non-toxic. Physico-chemical characteristic of Gambier *Katha* is better than *Katha* from *A. catechu* (Soni & Sharma, *Indian For*, 2001, **127**, 879-882).