



TRI UPDATE

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A NEW COVER CROP

Although the virtues of cover crops in soil fertility management are well known, the benefit that would accrue by the adoption of this sound agronomic practice is not fully exploited.

Cover crops are grown to protect particularly the top soil against erosion, ameliorate soil structure,

enhance soil fertility and suppress weeds. These can play an important role in sustainable agriculture as it improves the soil aggregation, increases infiltration capacity and hence decreases risk of run off. Cover crops control weeds through competition, allelopathy and/or physical effect.

In tea plantations, cover crops are mainly grown during the new clearing (young tea) stage. The soil is exposed during this period and cover crops provide an adequate ground cover until the tea is brought into plucking in 18-24 months. Cover crops could also be grown in vacant areas in mature tea, embankments and road sides in tea plantations.

At present, several leguminous species are used as cover crops; among them, the most common species are *Desmodium ovalifolium* and *Stylosanthus gracilis*. Difficulty in establishment, competition for moisture during dry periods, non-availability of planting materials and lack of suitable species are some causes for the non-adoption of the practice widely. The TRI has screened several species provided by the CIAT (Centro Internacional de Agricultura Tropical), Colombia. Among these, *Arachis pintoii* was the most promising. This is a legume and the plant resembles ground nut (*Arachis hypogea*). However, in contrast to ground nut, it has a prostrate growth habit. The flowers are sterile and yellow in colour. This species is propagated vegetatively by nodal cuttings. Cutting with 3-4 nodes are suitable for planting and in young tea the cuttings should be planted in the middle of inter-rows at a spacing of 30-45 cm (12"-18"). Observations to date indicate that it does not compete with tea for moisture during dry periods and also that it does not climb on the tea and encircle it. Ease in establishment and the ability for fast spreading even in degraded lands are the other advantages. Observations have shown that there is a large number of

active root nodules. *Arachis pintoii* was found to be a non-host for root nematodes. *Arachis Pintoii* could, therefore, be considered a versatile cover crop for degraded tea lands.

Cutting of this species (for multiplication purposes) could be collected from the TRI sub-station, Hantane.

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