

B-09: Rice straw : a possible source of nutrients for young rubber

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Management of ground covers, is an important aspect of rubber cultivation for the preservation of soil fertility and soil conservation. At the same time ground covers may compete for the nutrients with young rubber plants. A circle of about 1 m radius around each rubber plant should be therefore clean weeded to avoid competition with young rubber plants. By doing this there is a possibility of soil degradation around the base of the rubber plant due to the exposure to adverse climatic conditions. Providing a protective layer of mulch-rice straw around the base of the rubber plant therefore can be considered as a better agronomic practice. As rice straw is rich in potassium and some other nutrients, this study was undertaken to investigate the effect of mulching on growth and nutrient status of young rubber plants.

Growth from planting showed that the trees under mulching were superior to the trees in other management practices such as growing leguminous covers or naturals. Contribution of soil nutrients *viz.* N, P, K, Ca and Mg were all in favour of mulching. Other benefits of mulching included higher organic C %, lower C/N ratio, favourable soil pH and CEC compared to other management practices. The trees under mulching also had the higher leaf N, P, K, Ca and Mg contents.

Data obtained in the incubation study on the nutrient release by decaying rice straw was also consistent with the above results. It was further noted that the soil micro nutrients *viz.* Mn, Zn and Cu contents were increased by mulching while soil Fe content was decreased.