B-113: Preliminary studies and the inoculation with *Albizia falcataria* with a selected *Rhizobium*

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Albizia falcataria is a fast growing Nitrogen fixing tree, commonly used as a shade tree in tea plantations. In this study the effect of inoculation of *A. falcataria*, using an exotic improved strain of *Rhizobium* (TAL 45) was examined during preparation of nursery plants.

Germinated seeds were planted 2 seeds in each polybag (20 cm x 5 cm) containing a mixture of garden soil, compost and coir dust in equal proportions. One set of polybags was inoculated with YMA broth culture (10^7 cells per ml) of *Rhizobium* using 1 ml per bag, while the other set was left as uninoculated control. The seedlings were maintained under outdoor conditions.

A dose of 10 kg N/ha (urea) was added after 40 days to half the inoculated and half the non-inoculated plants. After 2½ months, 5 plants were selected randomly from each treatment for the following measurements: shoot dry weight, nitrogenase activity *(in vitro)* of the roots, number of nodules, nodule dry weight per plant anf root dry weight per plant.

The results showed a significant increase in number of nodules, nodule dry weight per plant and nitrogenase activity per plant under inoculum but these increases were not reflected in the shoot and root dry weight.

Thus inoculation has resulted in seedlings with a higher dinitrogen fixing ability and these may produce more vigorous plants after out planting.