B-109 Effect of inoculation of initial growth and nodulation of tropical tree legume *Gliricidia sepium*

Mahinda Atapatthu, Thakshala Seresinhe, Hema Sarathchandra
Dept of Animal Science, Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya

A pot experiment was conducted outdoors at Faculty of Agriculture, Mapalana to investigate the effects of an exotic inoculum TAL 1770 and broth culture of a local rhizobia (BLCR) on the initial growth and nodulation of *Gliricidia sepium*. *Gliricidia* cuttings were grown in black polyethylene sleeves containing acidic soil (pH 4.2) sterilized by burning. 4 weeks after the establishment of cuttings, plants (with uniform growth) were inoculated either with TAL 1770 or BCLR and compared with control plants. At each harvest the dry matter yield (leaf, stem and root) and nodule parameters (number, size, mass and effectiveness) were determined.

Plants inoculated with BCLR, had the highest shoot and root growth. The highest root mass of plants inoculated with BCLR ($p<0.05$) was mainly due to numerous lateral root growth. The nodule number and nodule mass per plant, the size of nodules and nodule effectiveness were also favourably affected by inoculation with BCLR. These results indicate that root growth and nodulation of *G. sepium* was superior, when inoculated with a broth culture of local rhizobium.