B-103: Effect of micronutrients on the nodulation potential of cowpea grown on Light Sandy Regosols

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Cowpea *(Vigna unguiculata)* has tremendous potential for Biological Nitrogen Fixation (BNF) if proper conditions and appropriate Rhizobial strains are provided. It has been indicated that micronutrients are one of the factors to promote BNF.

A pot experiment including 3 micronutrients and an untreated control, in a randomized complete block design, was carried out. Molybdenum (2 ppm), cobalt (10 ppm) and boron (20 ppm) were sprayed on a cowpea cv. Wijaya grown on a light sandy regosol in pots and the soil was collected from an area where no crop was grown. Nodulation potential, in terms of number and dry weight of nodules and effective nodules, was assessed after 4th and 6th weeks of planting.

An increase in number and dry weight of nodules was noticed in molybdenum, boron and cobalt treatments over control but a remarkable and significant ($p=0.05$) increase in the number of well developed effective nodules with dark red centres was found in cobalt treatment. In addition, plant dry weight and nitrogen content of nodules also showed a significant increase in cobalt treatment.

The foliar application of cobalt (10 ppm) appears to promote nodulation, Biological Nitrogen Fixation and total biomass production remarkably well in a legume crop like cowpea grown on a light sandy regosol where nodulation is not at a satisfactory level under normal conditions.