B-78: Effect of *Azorhizobium caulinodans* in a paddy soil as influenced by *Sesbania rostrata* green manure

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The tropical legume plant *Sesbania rostrata* could be used as a green manure in paddy cultivation to supplement part of the inorganic fertilizer. Stem and root nodules are formed by *Azorhizobium caulinodans* on its host *Sesbania rostrata*.

To find out the effectivity of the isolates from root collar nodules of *Sesbania rostrata* on stem and root nodulation, a pot experiment was conducted using 12 isolates as inoculums on aseptic plants. In another experiment effect of water as an inoculum carrier was tested with aseptic plants grown under high and low water tables in the pots.

Percentage of stem nodulated plants showed that *Azorhizobium caulinodans* was present as sole or as co-symbiont in the isolates used. Though stem nodules were green, white root collar nodules infected by *Azorhizobium* were also present. Isolates CK 6(3) and CK 5(4) were not significantly different from the test strain ORS571. Some isolates formed only root nodules.

In the absence of other vectors the water could also carry *Azorhizobium* to the above parts of the stem. Since some nodules were found far above the water level, another efficient intern continuous process e.g. *via* xylem sap might have been involved.