

Isolation and Determination of Plant Growth Promotion Traits of Non nodulating Root Nodule Associated Bacteria in Vegetable Legumes

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ABSTRACT

The present investigation was conducted to determine the plant growth promotion traits *viz.*, ammonia production and phosphate solubilization of eight non nodulating nodule associated bacterial isolates obtained from the root nodules of cowpea and garden pea grown in different locations of Andhra Pradesh and Karnataka. These isolates were selected from a collection of one hundred and two bacterial isolates, based on a rapid preliminary screening. The isolates *Enterobacter sp* CPH64., *Enterobacter sp* CPK42., *Chryseobacterium sp.* CPM11, *Stenotrophomonas sp.* CPH62 originating from cowpea nodules and *Enterobacter sp.* GP44, *Enterobacter sp.* GP71, *Enterobacter sp.* GP84, *Bacillus sp.* GP102, from garden pea nodules were able to solubilize phosphates and produce ammonia, which are considered the most important traits for the growth and development of crop plants.

Key words: *Ammonia production, Cowpea, Garden pea, Non nodulating bacteria, Phosphate solubilizatio.*