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Production of Indole-3-Acetic Acid by *Azotobacter spp.* using crude sources of Tryptophan.

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Indole -3-acetic acid, also known as IAA is a plant growth promoting hormone. IAA is considered to be the most active auxin. IAA has many different effects on plant growth such as inducing cell elongation, cell division, tissue differentiation and responses to light and gravity. Many rhizobacteria have ability to produce IAA. The present study was aimed to screen *Azotobacter spp.* for production of IAA. *Azotobacter* a free living nitrogen fixer produces IAA as a secondary metabolite by using precursor tryptophan. So we have studied the ability of IAA production in presence and absence of tryptophan as well as in presence of five natural precursors, in which soyabean flour was found to be the most active precursor, which reduces time span, required for IAA production and also increases yield. The effect of IAA production was studied by taking pot trials using saline soil and normal fertile soil.

Isolation and Screening of Potassium Solubilising Microorganisms

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Abstract : Potassium (K) is an essential macronutrient that plays an important role in the growth and development of plants. In plants potassium deficiency results into poor development of roots, decrease in the growth rate, production of small seeds and lower crop yields. In soil potassium exists in three forms as unavailable, slowly available or fixed and readily available or exchangeable. The soluble form of potassium is present in very low concentration in soil and it is only utilised by the plants. Many soil microorganisms have ability to solubilise well as ecofriendly over chemical fertilizers. In this study twenty bacterial strains having ability of potassium solubilisation were isolated from the soil samples collected from different areas of Maharashtra. Aleksandrov's agar medium containing potassium aluminosilicate as insoluble potassium source was used for study. All strains were further screened for their potassium solubilisation ability so as to identify the potent strain.

Keywords : Potassium solubilisation; Insoluble potassium; Bioinoculant.