

Potassium Solubilizing Bacteria and their Application in Agriculture

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Abstract—Potassium (*K*) is one of the major macronutrients which assume a critical part in plant development and advancement. Potassium (*K*) is seventh most normal component in the earth's crust. It constitutes around 2.5 per cent of the lithosphere layer. Absence of potassium in the soil prompts to poor advancement of roots, less branches and produce smaller seed size with less yield and fertility. Total soil potassium reserves are typically large: but, significant segment of it exists in insoluble *K* minerals and no potassium gets to be distinctly accessible to plants.

There are certain microorganisms which utilize various natural procedures to make potassium accessible from inaccessible forms. Potassium solubilizing bacteria can serve as inoculants.

To evaluate this, 2 promising organisms (*KSB-1* and *KSB-7*) of capable of solubilization of each organic and inorganic metal as investigated beneath in vitro conditions were evaluated in a very pot trial for his or her rhizosphere activity and mineralization potential of organic *K* in soil, plant growth and yield. In response to vaccination with these selected *K* solubilizing bacterium (*KSB*), vital increases in seed germination, root and shoot length and range of leaves grain yield were discovered that were increase to severally, over uninoculated management within the presence of spar in Aleksandrov's agar medium. Potassium uptake of plants can be increased by victimization metallic element solublisers as bio-inoculants more increasing the crop production. These potassium solubilizing bacteria (*KSB*) can be used as a promising approach to increase presence of *K* in soils, thus initiating a significant role in crop establishment.

Keywords: Potassium solubilizing bacteria (*KSB*), modified Aleksandrov media, germination rate, agar medium, lithosphere layer.