

Isolation and Characterization of Indigenous Rhizosphere Bacteria Producing Gibberellin Acid from Local Soybeans in Three Different Areas of South Sulawesi

Authors : Asmiaty Sahur, Ambo Ala, Baharuddin Patanjengi, Elkawakib Syam'un

Abstract : This study aimed to isolate and characterize the indigenous Rhizosphere bacteria producing Gibberellin Acid as plant growth isolated from local soybean of three different areas in South Sulawesi, Indonesia. Several soil samples of soybean plants were collected from the Rhizosphere of local soybeans in three different areas of South Sulawesi such as Soppeng, Bone and Takalar. There were 56 isolates of bacteria were isolated and grouped into gram-positive bacteria and gram negative bacteria .There are 35 isolates produce a thick slime or slimy when cultured on media Natrium Broth and the remaining of those produced spores. The results showed that of potential bacterial isolated produced Gibberellin Acid in high concentration. The best isolate of Rhizosphere bacteria for the production of Gibberellin Acid is with concentration 2%. There are 4 isolates that had higher concentration are AKB 19 (4.67 mg/ml) followed by RKS 17 (3.80 mg/ml), RKS 25 (3.70 mg / ml) and RKS 24 (3.29 mg/ml) respectively.

Keywords : rhizosphere, bacteria, gibberellin acid, soybeans

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