

Isolation, Morphological and Cultural Characterization of Bacterial Endophytes Associated with Different Groundnut Varieties

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ABSTRACT

The present investigation was conducted to determine the morphological and cultural traits of the bacterial endophytes associated with groundnut, which were obtained from different parts like root, stem and leaves of groundnut. Out of the 125 morpho types, 25 were selected based on morphological and physiological characterization and pure cultures obtained by quadrant streak method. Morphological and physiological characterization of isolates was done based on colony shape, size, elevation, surface, margin, colour, pigmentation, motility, gram's reaction and cell shape. The colony characters in agar plate varied from cream white to yellow pigmented, with wrinkled, smooth and glistening surfaces and on the nutrient broth medium varied from surface growth, clouding of the broth and sedimentation. Among 25 isolates obtained, 68 % (18 isolates) were found to be Gram negative (-ve) and 32 % (Seven isolates) were found to be gram positive (+ve). Around 80 % of isolates (20 isolates) were found to have rod shaped cells with varied size ranging from small rods to long rods and 20% (Five isolates) of the isolates found to have cocci shaped cells. About 60 % (15 isolates) of the isolates were found to have motility function while 40 % (10 isolates) of bacterial isolates were found to be non-motile and motility is one of the attributes of being an endophyte.

Key Words: *Broth, Glistening, Gram's reaction, Morphotypes, Motility, Nutrient, Pigmentation, Quadrant streak method, Sedimentation, Wrinkled.*