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SCREENING OF PHOSPHATE SOLUBILISING BACTERIA ISOLATED FROM TEA SOIL OF BRAHMAPUTRA VALLEY SHOWING ANTAGONISM AGAINST *FOMES LAMOENSIS* AND *USTULINA ZONATA*

ABSTRACT : A total of 12 phosphate solubilising bacteria were isolated from top soil sample of 17 tea gardens of three different tea growing regions of Brahmaputra valley. The soil samples were collected from rehabilitated, non- rehabilitated , and virgin sections from each 15 tea gardens and from other two tea gardens, soils were taken from disease infested and Non-Infested areas. All the isolated phosphate solubilising bacteria, showed marked clearing zone and were evaluated for their antagonistic activities against two primary root disease causing pathogen of tea , Fomes lamoensis*(Causing Brown root rot) and* Ustulina zonata *(Causing Charcoal stump rot). Against* Ustulina zonata *MM/PH/KMP , MM/PH/BST MM/PH/DLJB-1, MM/PH/DLJB-2 and MM/PH/TY and Against* Fomes lamoensis *MM/PH/KMP , MM/PH/BST MM/PH/DLJB-1 and MM/PH/DLJB-2 showed more than 35% inhibition. Among them two strains MM/PH/KMP and MM/PH/BST were found to inhibit the pathogens more than 55% under study in invitro condition. Physiological study was also conducted for the two most potential antagonist, to see the effect of different pH,carbon and nitrogen sources .*