DETERMINATION OF TETRACYCLINE SENSITIVITY AND SALT STRESS RESPONSE IN PHOSPHATE SOLUBILIZING BACILLUS ISOLATES OF RICE RHIZOSPHERE

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Abstract: In the present investigation, a total of eighteen Bacillus isolates obtained from rice rhizospheric soil samples collected from various locations of Uttar Pradesh. The isolates were isolated by using nutrient agar medium and identified as Bacillus spp. Out of 18, only ten Bacillus isolates found positive for phosphate solubilization on Pikovaskaya medium. All phosphate solubilizing Bacillus isolates were screened for tetracycline resistance and NaCl salt tolerance at variable concentrations. Most of the Bacillus isolates shown tolerance up to 6% NaCl concentration only. The isolate Bc-etw-4 and Bc-mth-4 isolates shown tolerance at 7% NaCl. Almost all isolates were inhibited at 10 µg/ml of concentration of tetracycline. Only isolate Bc-etw-2 was able to grow at 20 µg/ml of tetracycline concentration. Whereas the isolate Bc-bsr-1 was found sensitive even at 1 µg/ml concentration of tetracycline in the medium. Our research findings shown that isolates from rice rhizosphere have the potential which may promote plant growth of rice directly and indirectly under saline soils.

Keywords: Bacillus isolates, Antibiotic Sensitivity, NaCl, Phosphate Solubilization, Rice Rhizosphere

REFERENCES


