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RESEARCH PAPER

Evaluation of different rice genotypes for resistant against rice root-knot nematode, *Meloidogyne graminicola*

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Abstract : Screening of different rice genotypes were tested for their resistant reaction against rice root-knot nematode, *Meloidogyne graminicola*. In the present studies, 79 rice genotypes/lines (44 genotypes from OG series and 35 genotypes from AR series including Pusa 1121 and TN-1 as susceptible checks) were evaluated for resistant reaction against *M. graminicola* was carried out under screen house, Department of Nematology, CCS Haryana Agricultural University, Hisar, Haryana during *Kharif*, 2019-20. Seeds of each genotype were sown in the earthen pots (1 kg soil capacity) containing steam sterilized sandy loam soil. One week old seedlings of rice genotypes were inoculated with freshly hatched second stage juveniles of *M. graminicola* @ 2000 J_2/pot. Forty five days after inoculation, observations were recorded such as number of eggs and second stage juveniles. The result reveals that the genotypes showed great variation in reaction to *M. graminicola* from resistant to highly susceptible reaction. Out of 44 genotypes from OG series, 34 showed resistant reaction. However, two genotypes (OG-4 and OG-37) were found moderately resistant and remaining was categorized as susceptible reaction. Similarly, out of 35 genotypes from AR series, two genotypes (AR-08, AR-31) showed resistant reaction against *M. graminicola*. Four genotypes (AR-06, AR-20, AR-21 and AR-32) showed moderately resistant reaction and rests of the genotypes were categorized as susceptible reaction against *M. graminicola*. Most of the genotypes were found resistant/moderately resistant to *M. graminicola* which can be used for future breeding programmes to develop resistant reaction in these genotypes.

Key Words : *Meloidogyne graminicola*, Rice, Resistant, Screening, Genotypes

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