



Resistance of upland-rice lines to root-knot nematode, *Meloidogyne incognita*

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Genet. Mol. Res. 14 (4): 17384-17390 (2015)

Received July 6, 2015

Accepted October 11, 2015

Published December 21, 2015

DOI <http://dx.doi.org/10.4238/2015.December.21.7>

ABSTRACT. Despite the benefits of crop rotation, occurrence of nematodes is a common problem for almost all crops within the Cerrado biome, especially for rice. The use of resistant cultivars is one of the main methods for control of nematodes. Thus, the present study aimed to evaluate the reaction of 36 upland-rice lines, with desirable agronomic characteristics, according to their resistance to root-knot nematodes (*Meloidogyne incognita*). The experimental design was entirely randomized with four replications. Each plot of land consisted of two rice plants in a 3-L vase. The plants were inoculated with 1000 eggs and eventual juveniles of the respective nematodes. Fifty-five days after the inoculation, the roots and the aerial part of the plant were weighed and the egg mass (EM) as well as the reproduction factor (Rf) were estimated. It was determined that the isolated use of EM was not beneficial in selecting rice lines resistant to the root-knot nematode. This procedure must, therefore, take into account the egg counting and the Rf, in order to improve the reliability of the selection. In our study, 30 evaluated lines were observed to be resistant. Among

the recommended cultivars, only BRS Monarca had its performance susceptible to the studied nematode species.

Key words: *Oryza sativa*; Resistant cultivars; Reproduction factor