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### Establishment of (*daucus carota* L.) Carrot Populations in Areas Naturally Infested by Root-Knot Nematodes

J.B. Pinheiro\*, A.D.F. de Carvalho, C. da S. Rodrigues, E.M. Cruz; R.B. Pereira and J.V. Vieira.

Embrapa Hortaliças, Rod Brasília/Anápolis BR 060 Km 09, C P 218, CEP 70359-970, Brasília-DF. e-mail: jadir@cnph.embrapa.br;

Low quality and production of carrot is usually caused by nematodes. In Brazil, the most significant damage results from root-knot nematodes attack. The aim of this study was to preliminarily evaluate the Embrapa Hortaliças carrot breeding program for resistance to the root-knot nematode (*M. incognita* race 1 and *M. javanica*) in naturally infested fields. The carrot population '1112603' was evaluated using 59 progenies and cultivars Brasília, BRS Planalto and Kuronan were used as control. Initially, sampling was conducted in the experimentation area to identify and quantify the number of juveniles per 150 cm<sup>3</sup> of soil. After the harvest, screening for resistance to root-knot nematodes was made based on the commercial roots weight in ton per hectare (WCR), final population (FP) and reproduction factor (final population in the soil collected during the harvest / initial population in the soil before sowing). There were significant differences only for the commercial roots weight. Twenty-five progeny were statistically similar to cultivar Brasília (ton.per.ha = 40.09), while thirty-four progenies were similar to cultivars Kuronan and BRS Planalto, which were 33.11 and 30.06 ton per ha, respectively. There were no significant differences for the nematodes' final population (FP) and reproduction factor.

Keywords – disease, resistance, *Meloidogyne*

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