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Different appearance in broad bean stocks attacked by *Rotylenchulus reniformis* and *Pratylenchus* spp. in Giza, Egypt

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Abstract

The stocks of twenty broad bean (*Vicia faba* L.) were screened for their relative susceptibility against the reniform nematode, *Rotylenchulus reniformis* and lesion nematode, *Pratylenchus* spp. The experiment was performed under a clay field conditions, pH 8.1 located at the western Experimental Station of the Faculty of Agriculture, Cairo University, Giza. Significant differences ($P \leq 0.05$ and 0.01) in the evaluated stocks are found in both parameters viz., final nematode populations and the plant growth and yield components. The potential reproductive index (PRI) of each stock to support increase of *R. reniformis* and *Pratylenchus* spp., was estimated in relation to that of L 348 or G 3, respectively which were regarded as check stocks and the host category (HC) based on PRI of each cultivar was recorded. In this regard, the stocks could be rated for their susceptibility against *R. reniformis* as follows: Seven stocks, L 57, L 47, L 46, L 92, L 49, L 99 and L 375 were categorized as highly resistant (HR) to the nematode. L 71, L 13, G 429 and G 3 stocks were considered as resistant (R). Four stocks L 9, L 52, L 16 and L 24 were graded as less susceptible (LS). Only L 31 was rated as moderately susceptible (MS). On the other hand, four broad bean stocks L 348, L 241, L 101 and L 50 were categorized as highly susceptible (HS) to nematode infection. As for the response of twenty stocks to the *Pratylenchus* spp., L 57, L 31, L 99, L 101 and L 50 were considered as (HR). L 52, L 47, L 46 and L 375 stocks were rated as (R). Also, five stocks L 71, L 348, L 241, L 92 and L 49 were categorized as (LS). L 9, L 16, L 24 and L 13 stocks were rated as (MS). In contrast, two broad bean stocks G 429 and G 3 were rated as (HS) to the lesion nematode infection. It was noticed that build-up of nematode was favored on highly susceptible and susceptible cultivars but suppressed on resistant ones. Therefore, all stocks evaluated showed great variability in their reaction to the nematode infection based on the host type. Plant growth parameters and yield components of broad bean stocks were also discussed.