

عنوان مقاله:

Development of an SNP Marker for Sugar Beet Resistance/Susceptible Genotyping to Root-Knot Nematode

محل انتشار:

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خلاصه مقاله:

Linked and/or gene-based molecular markers have been used widely in marker-assisted selection (MAS) to differentiate resistant and susceptible genotypes. Resistance to *Meloidogyne* spp. in *Beta vulgaris* L. is mediated by a single dominant gene (*R_{fm-1}*). Using allele-specific primers (ASPs), an SNP marker harboring a single nucleotide polymorphism (A/G), linked to the resistance gene was developed to differentiate resistant genotypes. The differentiation among the resistant and susceptible genotypes was elucidated in the polymorphic bands of 555, 478 and 124 bp in size, using PCR amplification. The genotyping data using the SNP marker was firmly associated with the bioassay evaluation in the greenhouse for 100 sugar beet genotypes. This data indicated that the present robust marker allowed reliable, sensitive, faster, and cheaper large scale screening of *B. vulgaris* genotypes for nematode resistance breeding programs.

کلمات کلیدی:

Beta vulgaris, *Meloidogyne* spp, Selection, SNP marker

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