

# 31st International Symposium of the European Society Nematologists

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## S16–P8

### Use of Mi23 and Pmi SCAR markers for *Mi-1.2* gene in pure tomato lines and F2 populations

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Root-knot nematodes have a wide range of host plants and cause important yield losses in many crop plants. The resistance gene *Mi* was introduced to the cultivated tomatoes from the wild tomato species *Solanum peruvianum* in 1940. The gene confers resistance to *Meloidogyne arenaria*, *M. incognita* and *M. javanica*. Molecular methods are used extensively in tomato breeding programmes. Developed SCAR markers linked to the *Mi-1.2* gene, the co-dominant gene *Mi-23* and *Pmi* markers have been used in tomato breeding programmes. In this study, tomato genotypes including pure lines, F1 and F2 were screened for their resistance as susceptible, homozygote or heterozygote resistant by using *Mi23F-Mi23R* and *Pmi* specific primers for *Mi-1.2* gene. Using these markers in Alata Horticultural Research Institute, 40 pure tomato lines yielded homozygote resistance bands, F1 and some F2 heterozygote resistance bands yielded markers. These findings suggest that these markers can be used to develop nematode resistant standard and hybrid tomato cultivars.

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