



National Plant Protection Organization, the Netherlands

Quick scan number: QS.nem.2019.03

Quick scan date: 9 December 2019		
1	<p>What is the scientific name (if possible up to species level + author, also include (sub)family and order) and English/common name of the organism? <i>Add picture of organism/damage if available and publication allowed.</i></p>	<p><i>Meloidogyne silvestris</i> Castillo, Vovlas, Troccoli, Liébanas, Palomares Rius & Landa, 2009</p> <p>Order: Tylenchida Thorne, 1949 Suborder: Hoplolaimina Chizhov & Berezina, 1988 Superfamily: Hoplolaimoidea Filipjes, 1934 (Paramonov, 1967) Family: Meloidogynidae Skarbilovich, 1959 (Wouts, 1973)</p>
2	<p>What prompted this quick scan? <i>Organism detected in produce for import, export, in cultivation, nature, mentioned in publications, e.g. EPPO alert list, etc.</i></p>	<p>This recently described root-knot nematode was detected at Hilversum during a survey for <i>Meloidogyne mali</i> on <i>Ilex aquifolium</i> L., <i>Ulmus x hollandica</i> & <i>U. glabra</i> trees. It is the first time detected in the Netherlands, but also for the first time detected outside the type locality in northern Spain.</p>
3	<p>What is the current area of distribution?</p>	<p>Spain (Arévalo de la Sierra).</p>
4	<p>What are the host plants?</p>	<p><i>Ilex aquifolium</i> L. (Holly) = type host. <i>Ulmus x hollandica</i> L. (Elm) = new host. <i>Ulmus glabra</i> Hudson (Elm) = new roots</p>

5	<p>Does the organism cause any kind of plant damage in the current area of distribution and/or does the consignment demonstrate damage suspected to have been caused by this organism? <i>Yes/no + plant species on which damage has been reported + short description of symptoms. Please indicate also when the organism is otherwise harmful (e.g. predator, human/veterinary pathogen vector, etc.).</i></p>	<p>Unknown.</p> <p>The original nematode species description does not report any damage to <i>Ilex aquifolium</i> trees (Castillo <i>et al.</i>, 2009). At Hilversum, we noticed relatively small galls on <i>Ilex aquifolium</i>, <i>Ulmus hollandica</i> and <i>Ulmus glabra</i> roots, compared to the galls induced by <i>Meloidogyne mali</i>.</p>
6	<p>Assess the probability of establishment in the Netherlands (NL) (i.e. the suitability of the environment for establishment).</p> <ol style="list-style-type: none"> In greenhouses (low, medium, high) Outdoors (low, medium, high) Otherwise (e.g. storage facilities, human environment) 	<p>A: low.</p> <p>B: It has been found on an established tree and this assumes that it is already established in the Netherlands at least at one locality.</p> <p>C: not applicable.</p>
7	<p>Assess the probability of establishment in the EU (i.e. the suitability of the environment for establishment).</p>	<p>It was described within the EU (Spain). The description suggests it is native to Europe (without a proof).</p>
8	<p>What are the possible pathways that can contribute to spread of the organism after introduction? How rapid is the organism expected to spread (by natural dispersal and human activity)?</p>	<p>Transport of soil or trees with root system (with or without soil). The natural dispersal is considered as very low.</p>
9	<p>Provide an assessment of the type and amount of direct and indirect damage (e.g. lower quality, lower production, export restrictions, threat to biodiversity, etc.) likely to occur if the organism would become established in NL and the EU,</p>	<p>The effect of this nematode on plants/trees in northern Europe is unknown. The description suggests a limited host range. It was found to be a non-host for the following tested plants: tomato, grapevine (<i>Vitis vinifera</i> cv. Cabernet Sauvignon), princess-tree (<i>Paulownia tomentosa</i>) and olive (<i>Olea europaea</i> sp. <i>europaea</i> cv. Arbequina). At Hilversum, however, we found it not only on Holly, but also on adjacent Elm trees. The amount of infestation on Elm roots (many galls and all live stages present)</p>

	respectively?	suggests this is a good host for <i>M. silvestris</i> . Also visible grow reduction was noticed on sampled Elm trees at Hilversum.
10	Has the organism been detected on/in a product other than plants for planting (e.g. cut flowers, fruit, vegetables)? <i>If "no", go to question 12</i>	no
11	If the organism has been found on/in a product other than plants for planting (e.g. cut flowers, fruit, vegetables), what is the probability of introduction (entry + establishment)? <i>Only to be answered in case of an interception or a find.</i>	
12	Additional remarks	This finding of <i>Meloidogyne silvestris</i> is linked to the finding of <i>Cacopaurus pestis</i> (same locality and same host), see also QS.nem.2019.02.
13	References	Castillo, P., Vovlas, N., Troccoli, A., Liébanas, G., Palomares Rius, J.E. & B.B. Landa (2009). A new root-knot nematode, <i>Meloidogyne silvestris</i> n. sp. (Nematoda: Meloidogynidae), parasitizing European holly in northern Spain. <i>Plant Pathology</i> 58: 606-619.
14	Conclusions	This Quickscan was prompted by the finding of the nematode species <i>Meloidogyne silvestris</i> on roots of <i>Ilex aquifolium</i> , <i>Ulmus hollandica</i> and <i>U. glabra</i> trees in the Netherlands. This is only the second report of this nematode species worldwide. Until this finding, it had only been reported from Spain in 2009 and the current area of distribution is highly uncertain. There are no reports of economic damage caused by the species. The species is not under official control in the EU.
15	Follow-up measures	No measures