



National Plant Protection Organization, the Netherlands

**Quick scan number: QS.nem.2019.02**

<b>Quick scan date:</b> 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><b><i>Cacopaurus pestis</i></b> Thorne, 1943</p> <p>Order: Tylenchida Thorne, 1949 Suborder: Criconematina Siddiqi, 1980 Family: Paratylenchidae Thorne, 1949 (Raski, 1962) Subfamily: Paratylenchinae Thorne, 1949</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 plant-parasitic species was recently detected at Hilversum during a survey for <i>Meloidogyne mali</i> on a <i>Ilex aquifolium</i> L. tree. This finding is rather unique, as it is the first time detected in the Netherlands, but also for the first time detected in northern Europe.</p>
3	<p>What is the current area of distribution?</p>	<p>USA, (California: type locality), France (Scotto La Massese, 1971), Italy (Inserra, 1973), Spain (Bello &amp; Belart, 1975) and Iran (Sturhan, 1977).</p>
4	<p>What are the host plants?</p>	<p><i>Juglans regia</i> L. (Persian Walnut) = type host; <i>Syringa vulgaris</i> L. (Lilac); <i>Populus nigra</i> L. (Poplar); <i>Rosa indica</i> L. cv Major (Rose); <i>Citris aurantium</i> L. (Sour Orange); <i>Ilex aquifolium</i> L. (Holly) = new host.</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>The original description (Thorne, 1943) reports on the dieback of <i>Juglans regia</i> trees of about 35 years old. This nematode develops as a slow decline disease comparable to <i>Tylenchulus semipenetrans</i> on <i>Citrus</i> trees, i.e. it takes years before symptoms (o.a. declining trees &amp; fruit reduction) become visible. Additional research suggests <i>C. pestis</i> root feeding reduces the protective function of the root periderm and favours invasion of other pathogens (Inserra &amp; Vovlas, 1981).</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"> <li>In greenhouses (low, medium, high)</li> <li>Outdoors (low, medium, high)</li> <li>Otherwise (e.g. storage facilities, human environment)</li> </ol>	<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 has been found already in the southern parts of the EU (Spain, France and Italy).</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 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 (see also 5).</p>

	respectively?	
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>Cacopaurus pestis</i> is linked to the finding of <i>Meloidogyne silvestris</i> (same locality and same host), see also QS.nem.2019.03.
13	References	<p>Bello, A. &amp; Belart, C. (1975). <i>Cacopaurus pestis</i> Thorne, 1943 (Nematoda: Criconematoidea) en Espana. <i>Nematologia Mediterranea</i> 3: 167-171.</p> <p>Inserra, R. N. (1973). Rinvenimento di <i>Cacopaurus pestis</i> Thorne in Italia. <i>Nematologia Mediterranea</i>. 1: 60-62.</p> <p>Inserra, R. N. &amp; Vovlas, N. (1981). Parasitism of Walnut, <i>Juglans regia</i>, by <i>Cacopaurus pestis</i>. <i>Journal of Nematology</i>. 13: 546-548.</p> <p>Scotto La Massese, C. (1971). Nouveaux hotes et nouvelle localisation d'un nematode (<i>Cacopaurus pestis</i> Thorne). <i>Phytoma</i> 23 (233): 17-20.</p> <p>Sturhan, D. (1977). First record of the Persian sessile nematode, <i>Cacopaurus pestis</i> Thorne, in Iran. <i>Nematologia Mediterranea</i>. 5: 125-126.</p> <p>Thorne, G. (1943). <i>Cacopaurus pestis</i> nov. gen. nov. spec. (Nematoda: Criconematinae), a destructive parasite of the walnut, <i>Juglans regia</i> Linn. <i>Proceedings of the Helminthological Society of Washington</i>. 10: 78-83.</p>

14	<b>Conclusions</b>	This Quicksan was prompted by the finding of the nematode species <i>Cacopaurus pestis</i> on roots of <i>Ilex aquifolium</i> in the Netherlands. As far as we know this concerns the first finding of the species in the Netherlands. The species was already known to be present in other EU member states (Spain, France and Italy). The species is not under official control in the EU.
15	<b>Follow-up measures</b>	No measures