



National Plant Protection Organization, the Netherlands

Quick scan number: **QS. ent-2013-13**

Quick scan date: 13th December 2013		
1	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>	<i>Tetranychus agropyronus</i> Wang, 1981 (Ref. 1) Acari: Prostigmata: Tetranychidae (spider mites)
2	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>	Sample provided for identification to NVWA, 2013
3	What is the (most likely) area of distribution?	North-China (Xinjiang, Gansu, Ningxia) (Ref. 2)
4	Has the organism been detected, sighted and/or has it established itself in nearby countries (DE, BE, LU, FR, UK) <i>Yes/no. If 'yes', provide details. No interceptions</i>	No
5	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 + host plants + short explanation of symptoms.</i> <i>Please indicate also when the organism is otherwise harmful (e.g. predator, human/veterinary pathogen vector, etc.).</i>	Important pest of maize in China. Heavy damage (in greenhouse) to <i>Dactylus glomerata</i> and <i>Lolium perenne</i> , medium damage to <i>Oryza sativa</i> and <i>Triticum</i> . By sucking cells leaves show brown spots and can successively complete turn brown and die. (Ref. 2)

6	<p>Indicate the (provisional) probability of establishment of the organism in the Netherlands regarding climate and ecology.</p> <ol style="list-style-type: none"> In greenhouses (low, medium, high) Outdoors (low, medium, high) Otherwise (e.g. storage facilities, human environment) <p><i>Please illustrate with information/references</i></p>	<ol style="list-style-type: none"> Low, Poaceae are uncommon in greenhouses. Medium - high, survival of cold winters possible, rainfall reduces populations (Ref. 1). Low
7	<p>What are the host plants? Which host plants are commercially grown in the Netherlands and which are present in the natural environment? <i>If establishment is restricted to greenhouse climate, list only host plants in greenhouses.</i></p>	<p>Poaceae. Described from <i>Agropyron cristatum</i> and <i>Triticum aestivum</i> in Dunhuang, Gansu Province, China, in 1976 (Ref. 1) and also from <i>Dactylus glomerata</i>. (Ref. 2). Wang (Ref. 1) also described specimens from <i>Morus</i> sp. (Moraceae) but it is questionable if <i>Morus</i> spp. are true hosts because the species has otherwise only been recorded from Poaceae.</p> <p>In the Netherlands, Poaceae species are widespread and abundant. Commercially grown species are among others <i>Lolium perenne</i>, <i>Triticum aestivum</i> and <i>Zea mays</i>.</p>
8	<p>Provide a provisional estimation of type and amount of direct and indirect economic damage (e.g. lower quality, lower production, export restrictions, threat to biodiversity, etc.) likely to occur if the organism would become established?</p>	<p>Most of the cultivated Poaceae can likely be attacked and because <i>T. agropyronus</i> populations can rapidly increase during summer, serious damage can be expected. In Xinjiang, China, 12-13 generations are completed annually, with each generation lasting 11-19 days (egg stage 4-9 days, larval stage 3-9 days and nymphal stage 4-6 days) (Ref. 2). Temperature has a significant influence on the development of <i>T. agropyronus</i>, with a generation time of 18 days at a mean daily temperature of 18 degrees C and 12 days at a mean daily temperature of 23.2 degrees C. Control by spraying water will reduce populations indicating less damage in wet summers.</p>
9	<p>How rapid is the organism expected to spread after introduction (by natural dispersal and human activity)?</p>	<p>Spider mites can be easily transported by wind. Grasses are very common in natural als as well as cultivated environments, so spread can go quickly by natural dispersal. <i>Lolium perenne</i> is a common grass in sods and will therefore be easily transported by man.</p>
10	<p>In what manner could the organism enter the Netherlands? <i>Mention pathways.</i></p>	<p>Unknown. Very few grass products are imported from the distribution area. Worldwide interceptions are not reported.</p>
11	<p>Has the organism been detected on/in a product (cut flowers, fruit, ...) destined for the consumer market? <i>If "no", please go to question 13</i></p>	<p>No</p>
12	<p>If the organism has been found on/in product other than plants for planting (e.g. cut flowers, fruit, vegetables), are there any risks of introduction and establishment in crop areas and/or natural environment in the Netherlands? <i>Only to be answered in case of an interception and/or a find.</i></p>	<p>Not applicable</p>

13	Additional remarks	Regulated pest in New Zealand (Ref. 3)
14	References	<ol style="list-style-type: none"> 1. Wang HF (1981) Two new species of <i>Tetranychus</i> from China (Acarina: Tetranychidae), <i>Acta Zootaxonomica Sinica</i>, 6(4): 162-166. 2. Deng DR, Wang YL, Kang N & Hu ZY (1986) A preliminary study on <i>Tetranychus agropyronus</i> Wang in Hetian Prefecture, Xinjiang Uygur Autonomous Region [in Chinese]. <i>Insect knowledge</i> 23(1): 10-12. 3. http://www1.maf.govt.nz/uor-cqi/uor.pl/show?species_id=2471 (2001)[acquired 29-8-2013]
15	Conclusions	The present Quick scan concerns a spider mite species, <i>Tetranychus agropyronus</i> , known to be present in northern China. It causes damage to grasses (Poaceae). It can likely establish in the Netherlands although wet periods may limit population development in the field. Therefore, and also because of the limited information available the potential impact of the species for the Netherlands is difficult to assess.
16	Follow-up measures	The mite was found on a plant sample originating from a quarantine compartment in a greenhouse of a Dutch University. Official inspections of the compartment and all other compartments of the greenhouse where grasses were grown, did not result in any findings of the species. The grasses from which the sample had been taken had been destroyed. Because of the quarantine conditions (PKM-II compartment, with quarantine lock), it was unlikely that the species had escaped from the greenhouse. It was unclear how the spider mite had arrived into the greenhouse. No further measures are planned.