Quick scan number: QS. VIR.2012.03 (update QS.VIR.2011.01)

	Quick scan date: 20-12-2012	
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? *Add picture of organism/damage if available and publication allowed*.	Dahlia latent viroid (DLVd), family Pospiviroidae. Initially, the viroid was called dahlia viroid.
2	What prompted this quick scan? *Organism detected in produce for import, export, in cultivation, nature, mentioned in publications, e.g. EPPO alert list, etc.*	The initial quickscan QS.VIR.2011.01 was prompted by findings of an unknown viroid in two pot-grown cultivars of dahlia in 2010. Since then the viroid was characterized and a survey was performed. The new data prompted this update.
3	What is the (most likely) area of distribution?	In 2012, a survey in field-grown dahlia showed that DLVd was widespread in the Netherlands: the viroid was detected in 92 out of 100 samples tested [1]. Moreover, infection was found in 71 of 79 tested cultivars. In addition, the viroid was found in five out of ten tested samples of pot-grown dahlia. As a consequence and due to extensive international trade, the viroid is expected to occur in dahlia crops worldwide.
4	Has the organism been detected, sighted and/or has it established itself in nearby countries (DE, BE, LU, FR, UK) *Yes/no. If 'yes', provide details. No interceptions*	No data are known from nearby countries.
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? *Yes/no + host plants + short explanation of symptoms. Please indicate also when the organism is otherwise harmful (e.g. predator, human/veterinary pathogen vector, etc.).*	No damage of the viroid was found, so far [1]. 1) Inoculation of the viroid to a healthy dahlia cultivar did not result in leaf symptoms (Tubers were not produced during the experiment). 2) In the survey no specific symptoms could be associated with the viroid. Moreover, the viroid could not be transmitted experimentally to *Chrysanthemum* sp., *Cucumis sativus*, *Nicotiana benthamiana, Solanum lycopersicum* and *Solanum tuberosum*.

6	Indicate the (provisional) probability of establishment of the organism in the Netherlands regarding climate and ecology. a. No risk b. In greenhouses (low, medium, high risk) c. Outdoors (low, medium, high risk) d. Otherwise (e.g. storage facilities, human environment) *Please illustrate with information/references*	The widespread occurrence of DLVd in dahlia, shown in the survey of 2012, implies that the viroid has been established in The Netherlands. Apparently, neither the climate nor the environmental conditions prevented its establishment.
7	If the organism would become established in the Netherlands, what kind of damage would it likely cause ? *Indicate whether damage is expected to be comparable or different to that in area of present distribution : see question 5.*	Not applicable, the viroid has already been established.
8	Which commercially grown host plants are present and which host plants are present in the natural environment in the Netherlands? *If establishment is restricted to greenhouse climate, list only host plants in greenhouses.*	So far, dahlia is the only known natural and experimental host of the viroid [1]. This crop is grown in glasshouses, fields and gardens.
9	Provide a provisional estimation of type and probable 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?	Direct economic damage is expected to be little due to the absence of aerial symptoms. Moreover, tuber symptoms are either absent or minimal since no obvious symptoms have been reported from infected cultivars whereas many infected lots have been detected in the survey of 2012. Damage might manifest in a reduction of the production of tubers and rooted cuttings, and some premature ageing. These parameters have not been examined.
10	What are the possibilities of spreading, either by natural dispersal or human activity?	DLVd can be transmitted efficiently by the production of cuttings from infected plants and the splitting of infected tubers. In addition, the viroid can be mechanically transmitted by contaminated knives and fingers but transmission is less efficient than for *Potato spindle tuber viroid* [1].
11	In what manner could the organism enter the Netherlands? *Mention pathways*.	New introductions of DLVd into The Netherland are likely to occur via planting material (cuttings, plants and tubers) from dahlia.
12	Has the organism been detected on/in a product (cut flowers, fruit...) destined for the consumer market?	Yes, the viroid has also been detected in pot-grown plants at garden centres in The Netherlands.

	If "no", please go to question 14	
13	If the organism has been found on/in a consumer product, are there any risks of introduction and establishment in crop areas and/or natural environment in the Netherlands?	The risk of establishment after introduction of DLVd via consumer products is rather low in comparison with planting material for growers.
14	Additional remarks	
15	References:	1. Verhoeven JThJ, Meekes ETM, Roenhorst JW, Flores R & Serra P (2012) Dahlia latent viroid: an atypical species of the family *Pospiviroidae* posing intriguing questions about its origin and classification (submitted for publication).
16	**Conclusions**	Dahlia latent viroid (DLVd) is a recently characterized new viroid species. Survey results indicate that DLVd occurs widespread in Dahlia in the Netherlands. Thus far, dahlia is the only known natural and artificial host and no symptoms nor damage to dahlia has been associated with the DLVd. The risk of this viroid for plant health seems very low.
17	**Follow-up measures**	None