Netherlands Food and Consumer
Product Safety Authority
Ministry of Economic Affairs

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National Plant Protection Organization
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Update
***Diaporthe vaccinii* – Blueberry twig blight - on one blueberry plant at one fruit production facility in The Netherlands**

Introduction
This report concerns an update of two previous reports on the first finding of the fungus *Diaporthe vaccinii* in the Netherlands. *D. vaccinii* is listed as a harmful organism in the EU directive 2000/29/EC (annex IIAI) and is regulated for plants for planting of *Vaccinium* spp. An infected plant was found in 2006 and the pathogen was identified as *Diaporthe vaccinii* in 2007 (see First pest report of April 2009).
Identification of the pest is difficult. In May 2011 symptoms of fungal damage were found at another fruit production facility in the same area of the Netherlands as the first finding. In the same year similar symptoms were detected in a forest (see second pest report April 2013). In contrast to our second pest report of April 2013, it appeared that findings in 2011 were not *Diaporthe vaccinii*, but *Diaporthe eres* (Lombard et al., 2014).

Reason for reporting: Update situation following incorrect identification of *Diaporthe* isolates found in 2011

Identity of the pest: *Diaporthe vaccinii* Shear
Diaporthales, Valsaceae, Diaporthe

Categorization of the pest EPPO A2 (2010, transferred from A1 (1995))

Locations 2011 **:**
1. America-Horst, Province of Limburg. Found in a production field of blueberries (*Vaccinium corymbosum*)
2. Forest/moor Planken Wambuis, near Ede, Province of Gelderland (*Vaccinium myrtillus*)

Pest status: Absent, eradicated, confirmed by survey

Pest significance
Date of findings
In May and June 2011 several samples were taken at aforementioned places. These samples were taken by the National Reference Centre (Wageningen) of the NPPO.

Detection and identification (correction of diagnosis reported in Pest Report of April 2013)
First symptoms appear usually at the tip of non-woody shoots or around flower buds. Infected current-years shoots wilt in 4-6 days and become covered with minute lesions. On stems, *D. vaccinii* causes a brown discoloration of the xylem below wilt symptoms. Normally, pycnidia of the anamorph *Phomopsis vaccinii* are seen on infected shoots/twigs in the field, ascomata (belonging to the teleomorph *D. vaccinii*) have very rarely been reported.

Identification can be done on the basis of morphological characteristics of pycnidia, conidia and growth characteristics of colonies on agar media, but nowadays certainly needs

confirmation by DNA sequencing (Lombard et al., 2014). Lombard et al. (2014) describe the identification of *Diaporthe* spp. on the basis DNA-sequencing of four loci : β-tubulin (BTUB), calmodulin (CAL), translation elongation factor 1-alpha (TEF), and the internal transcribed spacer region (ITS) of the nuclear rDNA. For routine diagnosis it is highly recommended to perform at least ITS and TEF amplicon sequencing on a pure culture to confirm the identification. The consensus sequences for test samples should be compared with those from reference strains (e.g. CBS 160.32) deposited in NCBI database Genbank.

Impact
Some visual symptoms were observed on twigs of the affected plants. No impact on yield or harvest of the crop was recorded at the affected company (2006/2007).

Origin of the pest
The pest is known to occur in North America (USA, Canada) and Chili. Since many years there are regular imports of *Vaccinium* plants for planting from North America which could be pathway for this pest. At present, in Europe there have been confirmed records of *Diaporthe vaccinii* from Lithuania, Latvia, and the Netherlands (Lombard et al., 2014). The National Reference Centre in Wageningen confirmed the finding of an isolate of *D. vaccinii* in Poland in May 2014 (EPPO, 2015). In Europe there have been some findings in the past, which have all been eradicated in Germany, Lithuania, United Kingdom, Poland and Romania (EPPO Global database, last access 30 June 2015).

Phytosanitary Measures
In 2013 and 2014 surveys were conducted at production-sites and in public green, to gain further information about the distribution of this organism in the Netherlands. No more findings of *D. vaccinii* were made.
Measures will only be applied on plants for planting. The infected plants will be destroyed.

References:

- NPPO The Netherlands
- EPPO, 1995. Data sheets on Quarantine Pests, *Diaporthe vaccinii*, www.EPPO.org
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- EPPO, 2015. EPPO reporting service, no 1. First report of *Diaporthe vaccinii* in Poland and its subsequent eradication.
- Lombard L, van Leeuwen GCM, Guarnaccia V, Polizzi G, van Rijswick PCJ, Rosendahl KCHM, Gabler J, and Crous PW (2014) *Diaporthe* species associated with *Vaccinium,* with specific refrence to Europe. Phytopathologia Mediterranea 53(2): 85-97