

## *Stemphylium vesicarium* Causing *Stemphylium* Leaf Blight on *Veratrum album* in Turkey

**Türkçe Başlık:** *Veratrum album*'da *Stemphylium* Yaprak Yanıklığına Neden Olan *Stemphylium vesicarium* Türkiye'de

Ünal ASAV<sup>1\*</sup>, İzzet KADIOĞLU<sup>2</sup>, Yusuf YANAR<sup>2</sup>

<sup>1</sup>Director of Plant Protection Central Research Institute, Ankara, Turkey

<sup>2</sup>Gaziosmanpaşa University, Agricultural Faculty, Tokat, Turkey

\*Corresponding author e-mail: unal.asav@tarim.gov.tr

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False helleborine (*Veratrum album* L.) is among the most noxious weedy herbaceous plants of mountain pastures in Trabzon province, Turkey. This species, which exhibits acute toxicity to mammals, may reach high densities and displace fodder plants.

*V. album* exhibited symptoms of blight on the leaves in many locations in 2008 and 2009. Symptoms initially appeared as small circular spots, light brown in colour. Later, became dark brown. A fungus was isolated from lesions on leaves showing symptoms. *Stemphylium vesicarium* (Wall.) Simmons was identified on the basis of morphological characters of conidia and conidiophores (Ellis, 1971). Conidia were medium brown to dark brown, oblong to oval with one to four transverse and several longitudinal septa, constricted at one to three of the major transverse septa. Conidia dimensions ranged from 12 to 22 × 30 to 40 µm (Fig 1).

For the pathogenicity test, inocula were prepared by growing isolates on potato dextrose agar (PDA) at 25°C for 20 days. Sterile distilled water (10 mL) was added to each plate and colonies were carefully scraped with a sterile needle.



**Figure1:** Conidia of *Stemphylium vesicarium* isolated from *Veratrum album*

The resulting conidial suspension from each isolate (diluted to  $5 \times 10^5$  cfu ml<sup>-1</sup>) was used to infect 12 *V. album* plants, using an atomizer to spray leaves. After inoculation, plants were covered with polyethylene bags for 72 hours to maintain a high humidity, after which the bags were removed and plants were kept under laboratory conditions until symptoms appeared. Ten days after application, light brown spots were observed on inoculated leaves but no symptoms were seen on water-treated control plants (Fig 2).



**Figure2:** Symptoms on leaf of *Veratrum album* after inoculation

Koch's postulates were fulfilled by re-isolating *S. vesicarium* from diseased leaves. In Turkey, only *S. vesicarium* has been reported as a pathogen of garlic (Polat *et al.*, 2012).

To our knowledge, this is the first report of *S. vesicarium* on *V. album*. Given its limited host range, *S. vesicarium* has great potential to become a myco-herbicides in pasture areas.

## REFERENCES

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