


SHORT COMMUNICATION

The Influence of Rachis Anatomy of Common Ash (*Fraxinus excelsior*) on the Pathogenicity of *Hymenoscyphus fraxineus*

Aleksandar Vemić  | Sanja Lazić | Suzana Mitrović | Aleksandar Lučić | Ljubinko Rakonjac | Milivoje Ćosić | Vladan Popović

Institute of Forestry, Belgrade, Serbia

Correspondence: Aleksandar Vemić (aleksandar.vemic2@gmail.com)

Received: 25 August 2025 | **Revised:** 22 December 2025 | **Accepted:** 29 December 2025

Keywords: ash dieback | infection onset | rachis structure | suppression

ABSTRACT

In order to slow down the spreading of *Hymenoscyphus fraxineus*, the examination of the influence of dimensions of different anatomical elements of *Fraxinus excelsior* rachises on development of ash dieback symptoms was carried out. The experiment included inoculation and anatomical analysis of *F. excelsior* rachises. The thickness of the epidermis and collenchyma at the base of the rachis influenced the length and width of necrotic lesions. The width of necrotic lesions was also affected by the dimensions of the pith at the base of the rachis. A large number of rachis base tissues influenced leaf dieback, whereas leaf mortality was not affected by the thickness of any tissue at the base of the rachis. At the inoculation site, the anatomical elements of the rachis showed an inseparable association during the development of necrotic lesions but were not significant for the occurrence of leaf dieback or leaf mortality. For the first time, this study showed the influence of different anatomic elements of *F. excelsior* rachises on the rate of development of symptoms caused by *H. fraxineus*. The practical application of these results enhances the effectiveness of various protection methods against ash dieback.