One of the most important plant disease in viticulture is gray mold caused b y *Botrytis cinerea* Pers. Fr., the anamorph of an ascomycete fungus (*Botryotinia fuckeliana* Whetzel). Gray mold development on grape berries depends on the genetic structure of the pathogen population but is also driven by some key factors, including climatic conditions, cluster architecture and berry susceptibility. Numerous treatments with fungicides are required for management of the gray mold which intensifies the risk of resistance development since *B.cinerea* has a high risk of resistance development. The forecasting model for *B. cinerea* Pers. Which will be shown here is only pioneering attempt to prevent development of gray mold. The white grapevine varieties Smederevka and Zilavka was continuously observed at last three years in the two experimental fields located at Smilica and Sopot, Kavadarci, Republic of North Macedonia. The working hypothesis was to follow the development of the disease after increasing glucose over 11%, until the time of the grape harvest.

The author team are particularly interested to solve the most complicated situations in the protection of the vines, especially interested in the factors that contribute to the increased number of chemical treatments in the field, which leads to pesticide pollution.

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Development of *Botrytis cinerea* under different climatic conditions

Determination of microclimatic conditions at vines upon development of gray mold (*Botrytis cinerea*)

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Cover image: www.ingimage.com

Publisher:
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Dodo Books Indian Ocean Ltd., member of the OmniScriptum S.R.L Publishing group
str. A.Russo 15, of. 61, Chisinau-2068, Republic of Moldova Europe
Printed at: see last page
ISBN: 978-620-4-20348-5

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DEPARTMENT FOR PLANT AND ENVIROMENTAL PROTECTION

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DEVELOPMENT OF *Botrytis cinerea* UNDER DIFFERENT CLIMATIC CONDITIONS AT VINES

Gligor Bojkov, Emilija Arsov, Sasa Mitrev

Abstract

One of the most important plant disease in viticulture is gray mold caused by *Botrytis cinerea* Pers. Fr., the anamorph of an ascomycete fungus (*Botryotinia fuckeliana* Whetzel). Gray mold development on grape berries depends on the genetic structure of the pathogen population but is also driven by some key factors, including climatic conditions, cluster architecture and berry susceptibility. Numerous treatments with fungicides are required for management of the gray mold which intensifies the risk of resistance development since *B.cinerea* has a high risk of resistance development. The forecasting model for *B. cinerea* Pers. Which will be shown here is only pioneering attempt to prevent development of gray mold. The white grapevine varieties Smederevka and Zilavka was continuously observed at last three years in the two experimental fields located at Smilica and Sopot, Kavadarci, Republic of North Macedonia. The working hypothesis was to follow the development of the disease after increasing glucose over 11%, until the time of the grape harvest.

Key words: gray mold, forecasting model, pathogen population, climatic conditions, fungicide treatments.

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