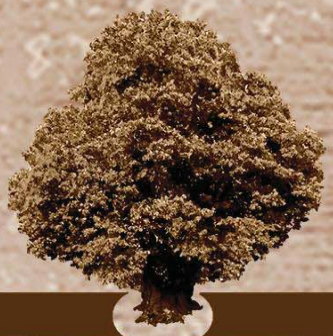

IV SIMPÓSIO DA CASTANHA

Vila Real • 2022

7 a 9 Julho 2022

UTAD – VILA REAL

Livro de resumos

REFCAST PORTUGAL

SCAP
SOCIEDADE DE CIÊNCIAS AGRÁRIAS DE PORTUGAL

utad

REPÚBLICA PORTUGUESA | AGRICULTURA MAR
DIREÇÃO REGIONAL DE AGRICULTURA E PESCAS DO NORTE

VILA REAL

VIVEIROS SERVIRURI

coopenela

Aguiar Floresta

CERNAS
Centro de Estudos de Recursos Naturais, Ambiente e Sociedade

CIMO

Linking Landscape Environment Agriculture and Food
LEAF Research Center

ipvc cisas
Centro de Investigação e Desenvolvimento em Sistemas Agroalimentares e Sustentabilidade
Instituto Politécnico de Viana do Castelo

15 YEARS
CITAB
Together for Excellent Science

Ficha técnica

SIMPÓSIO NACIONAL DA CASTANHA, 4, Vila Real, 2022
IV Simpósio Nacional da Castanha : livro de resumos / [ed. lit.] Mário Gonzalez Pereira... [*et al*.]. - Vila Real : Universidade de Trás-os-Montes e Alto Douro, 2022. - Contém referências bibliográficas

ISBN : 978-989-704-495-3

1. Castanha--[Simpósios]

CDU 634.53
633.87
061.3(469.202)"2022"

Dose-Response Effects of Copper, Potassium Silicate, Potassium Fosfonate, Metalaxil-M and Fosetil-Al on *Phytophthora* Mycelial Growth in vitro and on chestnut seedlings under greenhouse conditions

Filipe Marques[3], *Valentim Coelho*[1,3], *Luísa Moura*[2,4] *e Eugénia Gouveia*[1,3]*

[1] *CIMO - Centro de Investigação de Montanha, Campus de Santa Apolónia, 5300-253 Bragança, Portugal*
[2] *CISAS - Centro de Investigação e Desenvolvimento em Sistemas Agroalimentares e Sustentabilidade*
[3] *Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal*
[4] *Instituto Politécnico de Viana do Castelo, 4900-347 Viana do Castelo, Portugal*

* *egouveia@ipb.pt*

RESUMO/ABSTRACT

European Chestnut (*Castanea sativa*) is one of several tree species that is affected by *Phytophthora* root rot. Disease syndrome include root rot that is evidenced above soil by yellow discoloration of leaves, die-back and continuous and severe tree decline. Apoplectic symptoms also occur and tree suddenly collapse during hot weather conditions of summer. Phytophthora root rotting of fruit trees are frequently treated with fungicides which inhibits the growth of pathogens. For chestnut, in Portugal, there is currently no authorized chemical substances for direct control of soilborne *Phytophthora* species. However, strictly avoidance of disease spread is a basic requisite for disease management of initially localized spots of infected trees which can be largely improved by direct applications of efficient active substances. In this work we focused on the study of direct effects of copper, potassium silicate, potassium fosfonate, metalaxil-M and fosetyl-Al on *Phytophthora* mycelial growth to improve IDC therapeutic of localized treatment. Crop management still remains the most efficient measure to maintain tree vigor during the long-life span of chestnut trees and conservation tillage methods to reduce inoculum potential and waterborne inoculum spread. A collective management approach integrating all sanitary measure will be necessary to control IDC in chestnut ecosystem.

Palavras-chave/Keywords: active substances, copper**,** metalaxil-M**,** *Phytophthora* root rot, potassium silicate.

Agradecimentos/Acknowledgments: Support was provided by Project BioChestnut-PDR2020-101-030943 – "Biochestnut-IPM – *Implementar estratégias de luta eficazes contra doenças do castanheiro e amendoeira"*