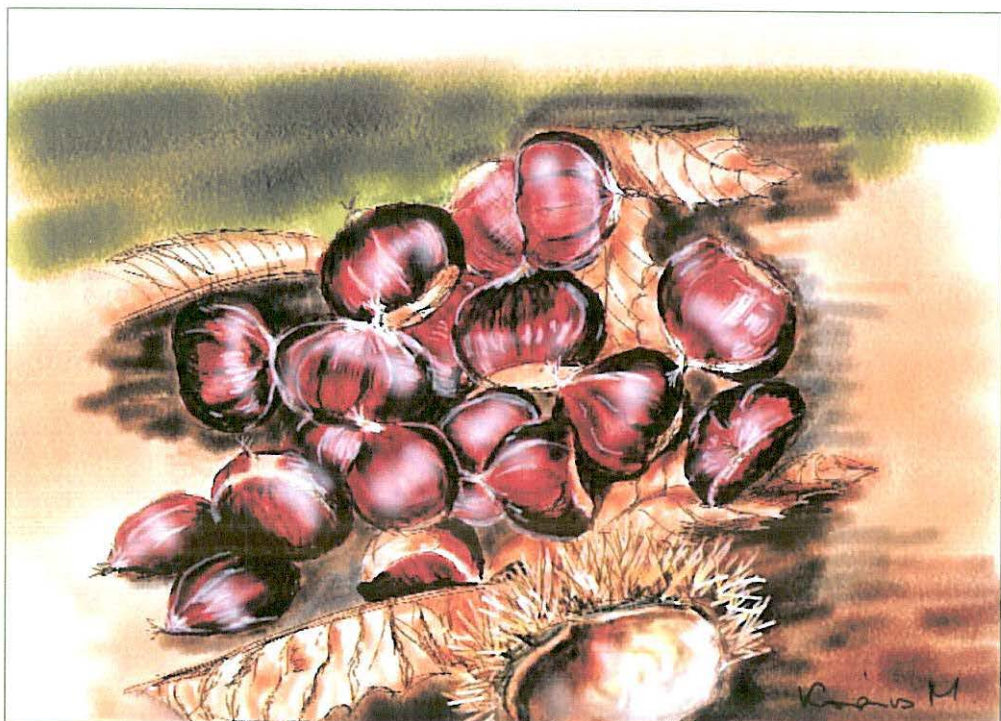


BOOK OF ABSTRACTS

II. EUROPEAN CONGRESS ON CHESTNUT
09–12. October, 2013.



DEBRECEN – BAIA MARE – MODRY KAMEN

Biological control of chestnut blight in Portugal

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Abstract

Plant protection is a multi-disciplinary subject and different strategies need to be addressed for sustainable plant health management. Biological control is an ecosystem-based approach extending from lab based investigation to field applications. Hypovirulence is a specific method for biological control of Chestnut Blight a lethal disease of the American and European chestnut. The causal pathogen of Chestnut Blight is *Cryphonectria parasitica* a fungus of Asian origin which is an A2 quarantine organism in Europe. Chestnut Blight was recorded in Portugal since 1990, one of the last European countries where Chestnut Blight has been introduced, and is now well established and widespread with a fast expansion in all regions of chestnut. Biological control with hypovirulent strains of *C. parasitica* is considered an efficient mean to control the disease and improve chestnut recovered. One of the first goals of this study is applying hypovirulence as a biological method for Chestnut Blight control and producing a solid scientific base to extend the method all over the chestnut region. It will have a very high practical impact on crop productivity, and on social perception of applied research. Field records and studies include parameters related to trees (dendrometric parameters and plant health status) and the physical characteristics of the plots (type of soil, exposure, geographic coordinates, age of trees, actual management of soil, etc.). Other scientific issues are related with population structure of the pathogen, namely: evolutionary forces that are present or dominate at population level (clonality, selfing, self-incompatibility, vc type structure, vc type segregation, CHV presence, CHV species). The effect of the founder population and driven forces on actual and future populations can be answered with the data generated by this work. The study can also be an innovative and a realistic approach and has potential for large and extended field application with a real positive impact in chestnut production