



BOOK OF ABSTRACTS

First Legume Society Conference
2013: A Legume Odyssey

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Book of Abstracts

Editors:
Aleksandar Mikić
Diego Rubiales
Vuk Đorđević

International Legume Society
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2013

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Technical Editors:
Sanja Mikić and Aleksandar Mikić

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Getting the message out: grow, use, feed and eat legumes

***Phomopsis longicolla* β conidia in naturally infected soybean**

Miloš Vidić¹, Kristina Petrović¹, Vuk Đorđević¹, Luca Riccioni²

Institute of Field and Vegetable Crops, Novi Sad, Serbia

Consiglio per la ricerca e la sperimentazione in Agricoltura, Rome, Italy

P. longicolla is primarily known as a soybean seedborne pathogen but it can be isolated from all parts of the plant. Atypical symptoms have been frequently noted on the basal parts of soybean stems of mature plants: slightly sunken lesions with irregular shapes and sizes, bordered by a thin black margin with diffusely distributed pycnidia with α and β conidia. Initially, it was believed that the causal agent was the fungus *P. sojae*, however morphological characteristics of the isolates suggested that the causal agent was not *P. sojae*. This study was an attempt to prove that, under certain conditions, *P. longicolla* produces masses of β conidia. Beta conidia were observed for quite some time in the field, but they were believed to belong to *P. sojae*, which typically forms this type of conidia. However, after isolation from infected plant parts, the fungus formed colonies and reproductive organs which were identical to the morphological characteristics of *P. longicolla* described by Hobbs et al. (1985). In other words, we found evidence that the isolated fungus was *P. longicolla*. We obtained the same results when several monosporic isolates were separated from pycnidia that contained a high proportion of β conidia. Since morphological characteristics are not a reliable indicator for the identification of *Diaporthe/Phomopsis* species, the final confirmation was obtained by a molecular analysis. The sequencing of three different regions of DNA clearly indicated that the PDS isolates belonged to the species *P. longicolla*. Monosporic isolates, exhibited a high level of pathogenicity on soybean seeds and plants, after artificial inoculation.

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In the rich world of global agriculture, diverse legumes can play key roles to develop environment-friendly production, supplying humans and animals with the products of high nutritional value.

The Legume Society was initiated in 2011 with two primary missions. One of them was to treasure the rich legume research tradition of the European Association for Grain Legume Research (AEP), with emphasis on carrying out its the triennial legume-devoted conferences. Another one is to fulfill a long-term strategy of linking together the research on all legumes worldwide, from grain and forage legumes pharmaceutical and ornamental ones and from the Old World to the Americas.

We do anticipate that the First Legume Society Conference will be a unique and genuine contribution to our common goals: to promote the legume research and all its benefits into all spheres of the society, linking science with stakeholders and decision-makers, and to demonstrate how an efficient, useful and firm network of the legume researchers of the world is possible and sustainable.

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