



# BOOK OF ABSTRACTS

First Legume Society Conference  
*2013: A Legume Odyssey*

9-11 May 2013, Novi Sad, Serbia

First Legume Society Conference  
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# Book of Abstracts

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International Legume Society  
Institute of Field and Vegetable Crops, Novi Sad, Serbia  
2013

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Technical Editors:  
Sanja Mikić and Aleksandar Mikić

ISBN 978-86-80417-44-8

Printed by Abraka Dabra, Novi Sad, Serbia, in 300 copies



Under the auspices of

Ministry of Education, Science and Technological Development  
of the Republic of Serbia

Secretariat of the Science and Technological Development  
of the Province of Vojvodina

Secretariat of Agriculture, Forestry and Water Management  
of the Province of Vojvodina

# Programme

9

Session 1

Achievements and challenges in crop legume research

15

Session 2

Legume genetic resources and phylogenetic relationships

47

Session 3

Legumes in foods and impacts on human health

69

Session 4

Advances in legume breeding concepts and tools

115

Session 5

Legume seed production, meeting market requirements and economic impacts

137

Session 6

Translational omics for legume improvement

185

Session 7

Responses to biotic and abiotic stresses in legumes

225

Session 8

Non-food, non-feed and other alternative legume uses

235

Session 9

Understanding and enhancing the legume cropping environment

275

Session 10

Mechanisms of beneficial legume-microbe interactions

289

Session 11

Legumes in animal feeds: requirements and impacts

305

Session 12

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

## Intercropping autumn-sown annual legumes with cereals for forage production

Vojislav Mihailović<sup>1</sup>, Aleksandar Mikić<sup>1</sup>, Branko Čupina<sup>2</sup>, Svetlana Antanasović<sup>2</sup>, Đorđe Krstić<sup>2</sup>, Đura Karagić<sup>1</sup>, Nikola Hristov<sup>1</sup>, Ankica Kondić-Špika<sup>1</sup>, Borislav Kobiljski<sup>1</sup>, Srblislav Denčić<sup>1</sup>

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Intercropping annual legumes such as pea (*Pisum sativum* L.) and vetches (*Vicia* spp.) is one of the most ancient cultivation practice throughout the world, especially in temperate regions of Europe, Asia Minor, Near and Central East and North Africa. This kind of intercropping may serve for both forage and grain production. In Serbia and throughout the Balkan countries, intercropping annual legumes with cereals is used mostly for providing a high quality fodder in feeding ruminants, especially dairy cows. In a small-plot trial, carried out during the trials years of 2009/2010, 2010/2011 and 2011/2012, there were included the intercrops of eight autumn-sown cereals, namely einkorn (*Triticum monococcum* L.), emmer (*Triticum turgidum* L. subsp. *dicoccon* (Schrank) Thell.), spelt (*Triticum aestivum* L. subsp. *spelta* (L.) Thell.), durum wheat (*Triticum turgidum* L. subsp. *durum* (Desf.) Husn.), common wheat (*Triticum aestivum* L. subsp. *aestivum*), barley (*Hordeum vulgare* L.), oat (*Avena sativa* L.) and triticale ( $\times$ *Triticosecale* spp.), seven spring-sown annual legumes, such as pea, common vetch (*V. sativa* L.), Hungarian vetch (*V. pannonica* Crantz), hairy vetch (*V. villosa* Roth), faba bean (*V. faba* L.), grass pea (*Lathyrus sativus* L.) and white lupin (*Lupinus albus* L.), and the sole crops of each intercrop component. Each intercrop was sown at a rate of 75% of a legume and 25% of a cereal in comparison to the sowing rates in their sole crops. All intercrops and sole crops were cut in the stages either before spike or raceme appeared in cereals or in full bloom in legumes. Despite the average three-year values of forage dry matter yields that often surpassed 10 t ha<sup>-1</sup>, barley and hairy vetch had the largest individual contribution in the tested intercrops, being rather aggressive within a stand and competitive for natural resources, such as light, water and nutrients. On the other hand, intercrops such as those of einkorn with Hungarian vetch, emmer and spelt with faba bean or pea, common vetch and grass pea with oat had the highest three-year values of land equivalent ratio (LER), thus proving economically most reliable. Further investigations will be aimed at forage dry matter quality and stress resistance.

### Acknowledgements

The projects TR-31016, TR-31024 and TR-31066 of the Ministry of Education, Science and Technological Development of the Republic of Serbia

CIP – Каталогизација у публикацији  
Библиотека Матице српске, Нови Сад

633.31/.37(048.3)

**INTERNATIONAL Legume Society. Conference (1 ; 2013 ; Novi Sad)**

Book of abstracts / First Legume Society Conference 2013  
A Legume Odyssey ; editors Aleksandar Mikić, Diego Rubiales,  
Vuk Đorđević. - Novi Sad : International Legume Society :  
Institute of Field and Vegetable Crops, 2013 (Novi Sad :  
Abraka dabra). - 328str. ; 29 cm

Tiraž 300. – Registar.

ISBN 978-86-80417-44-8

a) Махунарке – Апстракти  
COBISS.SR-ID 278447623



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.

Published by:

International Legume Society

Institute of Field and Vegetable Crops, Novi Sad, Serbia

