



# BOOK OF ABSTRACTS

First Legume Society Conference  
*2013: A Legume Odyssey*

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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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## Forage yield in some legume crop wild relatives

Vojislav Mihailović<sup>1</sup>, Aleksandar Mikić<sup>1</sup>, Vuk Đorđević<sup>1</sup>, Branko Ćupina<sup>2</sup>, Svetlana Antanasović, Đorđe Krstić<sup>2</sup>, Sanja Vasiljević<sup>1</sup>

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Since the abundance of genera and species within the family of legumes (*Fabaceae* Lindl. (syn. *Leguminosae* Juss. и *Papilionaceae* Giseke)), there is a large number of annual legume crop wild species having a great significance in improving their cultivated relatives. Species, such as red-yellow (*Pisum sativum* Sm.) or Ethiopian (*Pisum abyssinicum* A. Braun) peas play an important role of introgressing the resistance to pea weevil (*Bruchus pisorum* L.) and numerous diseases to cultivated pea (*Pisum sativum* L.). On the other hand, there is a certain number of annual legume crop wild relatives that showed a considerable potential for forage production. Two of them is large-flowered vetch (*Vicia grandiflora* Scop.) and narrow-leaved vetch (*Vicia sativa* subsp. *nigra* (L.) Ehrh.), both characterized by extreme winter hardiness, earliness and, in many populations, high and quality forage yield. The main obstacle in successful pre-breeding activities in these two wild vetches major problem that needs to be solved is indetermined stem growth and non-uniform maturity, leading to low and economically non-reliable seed yield. Similar performance, although much less studied so far, has French vetch (*Vicia serratifolia* Jacq.), one of the closest botanical relatives of faba bean (*Vicia faba* L.), with high forage yield and much better resistance to pod dehiscence than two previously mentioned vetch species. Although often considered cultivated crop, both Hungarian (*Vicia pannonica* Crantz) and hairy (*Vicia villosa* Roth) still suffer from many undesirable agronomic traits that may be solved by more detailed evaluation of the existing wild populations in many European floras. Among vetchlings (*Lathyrus* spp.), there are yellow (*L. aphaca* L.) and red (*L. cicera* L.) vetchlings that are characterized by a relatively short growing season and satisfying forage yield, enabling them appropriate to fit into many modern crop rotations. A half-domesticated relative of cultivated pea, 'tall' pea (*P. sativum* L. subsp. *elatus* (Steven ex M. Bieb.) Asch. & Graebn.), may produce up to 50 t ha<sup>-1</sup> of fresh forage.

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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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