



BOOK OF ABSTRACTS

First Legume Society Conference
2013: A Legume Odyssey

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Book of Abstracts

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International Legume Society
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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 spring-sown annual legumes with cereals for forage production

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Growing annual legumes such as pea (*Pisum sativum* L.) and vetches (*Vicia* spp.) in mixtures with cereals is one of the most traditional ways of both forage and grain production in many temperate climates in Europe, Asia Minor and Near and Central East. This practice is considered beneficial kind of intercropping may serve for both forage and grain production. In Serbia and other Balkan countries, intercropping annual legumes with cereals is rather widespread and is extensively used for producing quality and protein-rich forage in feeding dairy cows and other ruminants. In a small-plot trial, carried out during the trials years of 2010, 2011 and 2012, there were included the intercrops of three spring-sown cereals, namely common wheat (*Triticum aestivum* L. subsp. *aestivum*), barley (*Hordeum vulgare* L.) and oat (*Avena sativa* L.), six spring-sown annual legumes, such as pea, common vetch (*V. sativa* L.), Narbonne vetch (*V. narbonensis* L.), 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. Although the average three-year values of total forage dry matter yields in the intercrops were higher than 9 t ha⁻¹, barley and grass pea had the most prominent individual contribution in the tested intercrops and were the aggressive when intercropped and further more competitive for natural resources, such as light, water and nutrients. However, intercrops such as those of pea, common vetch and Narbonne vetch with oat had the highest three-year values of land equivalent ratio (LER), proving its economic reliability. Intercrops of faba bean and white lupin with cereals suffered from a slightly more severe attack by weeds. The goal of further investigations will be assess forage dry matter quality and stress resistance, with emphasis on pests and diseases.

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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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