



BOOK OF ABSTRACTS

First Legume Society Conference
2013: A Legume Odyssey

9-11 May 2013, Novi Sad, Serbia

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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 of legumes with *Helianthus* species

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Intercropping, or growing together more species at the same time in the same place is one of the oldest systems of cultivation in agriculture. Today, intercropping is recommended in sustainable agriculture due to various positive effects. The main advantage of legumes in intercropping is the possibility to increase soil fertility and protein levels with companion plants. The most common agricultural species of the *Helianthus* genus are sunflower (*Helianthus annuus* L.) and Jerusalem artichoke (*Helianthus tuberosus* L.). Intercropping of legumes with sunflower has been tested more than with Jerusalem artichoke. Intercropping of Jerusalem artichoke with sweet clover and hairy vetch showed that the level of nitrogen in the soil was not significantly lower than the controls. Intercropped sunflower showed large variations in yield depending on the variety and location. Species like *Vicia villosa* Roth, *Melilotus officinalis* Lam., *Medicago sativa* L. and *Medicago scutellata* (L.) Mill. have been intercropped with sunflower with the same sowing time and at the V4 and V10 sunflower growth stages. Intercropping in later growth stages had no negative impact on the development of sunflower. Intercropping with beans produced no significant effect on yield, while alfalfa, soybean, mung and cluster bean significantly reduced sunflower yield. Increased levels of nitrates in the soil have been recorded when sunflower was intercropped with hairy vetch. Most of the research so far on intercropping of legumes with *Helianthus* species has been done in subtropical area, where the best results were obtained when sunflower was intercropped with bean and hairy vetch.

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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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