



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

Ideotypes in breeding vetches (*Vicia* spp.)

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Vetches (*Vicia* spp.) are one of the oldest annual legume crops used in animal feeding throughout the temperate regions of Europe, Near and Middle East and North Africa. The most important species are bitter (*V. ervilia* (L.) Willd.), Hungarian (*V. pannonica* Crantz), common (*V. sativa* L.) and hairy (*V. villosa* Roth) vetches. They are used mostly in the form of fresh forage, forage dry matter, forage meal, silage, haylage, mature grain and straw, as well as for grazing. Generally, breeding programmes on bitter vetch, common vetch and Hungarian vetch are more advanced in the countries of South Europe, Asia Minor and Near East, while hairy vetch is becoming more and more interesting as green manure in North America and Japan. If cultivated for forage, an ideotype of a vetch plant should be characterised by slender stems with determinate growth, a number of photosynthetically active leaves of at least 15 in full flowering and large leaflets. Determinate growth is one of the essential traits, since it prevents excessive lodging and an economically significant loss of lower leaves that, in a lodged stand, easily degrade. Closely related is uniform maturity, in terms of both concurrent flowering and pod and seed development, unlike the wild type in all vetches, especially in hairy vetch, notorious for its indeterminate stem growth and extremely prolonged time of flowering and seed maturing, with flowers, young pods and shattered seeds at the same time in one plant. A good model for a vetch cultivar ideotype may be found in bitter vetch that, despite short stems in comparison to other vetches, extremely well uses the volume of a stand and is able to produce considerably high forage yields. A separate aspect in vetch breeding is achieving to combine all desirable traits related to forage yields with high and reliable seed yield, necessary in commercialising a developed variety. In vetch cultivars aimed at using in non-ruminant feeding, an emphasis is also on seed chemical composition, with significantly reduced content of various anti-nutritional factors.

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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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