



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

Effect of field pea companion crop on alfalfa pigment content

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Field pea has potential to be a suitable companion crop for alfalfa establishment. It is a fast-growing crop, harvested early and thus reduces duration of competition. Compared to other companion crops, such as small grains, it allows better light transmission through canopy to an undersown species. The aim of this study was to determine the suitability of field pea as a companion crop for alfalfa establishment. A two-factor trial was carried out at the experiment field of Institute of Field and Vegetable Crops at Rimski Šančevi from 2004 to 2009. The experiment involved two pea varieties (Jezero - semi-leafless and Javor - normal leaves with reduced leaflet size) and four pea densities (0, 30, 60 and 90 plants m⁻²) and control variant with oat as companion crop. When the field pea had reached the harvestable stage, samples were taken for determining alfalfa chlorophyll and carotenoids content. In average, chlorophyll and carotenoids content were higher in all treatments of companion cropping than in the sole crop of alfalfa. Weather conditions had significant influence on pigment content during the experimental years. Lower alfalfa chlorophyll content in treatment with Jezero (12.08 mg g⁻¹) indicates better light condition for undersown crop, compared to treatment with Javor (14.54 mg g⁻¹). The lowest content of total chlorophyll was in pure alfalfa (11.13 mg g⁻¹) and increased proportionally with nurse crop density. The ratio of chlorophyll and carotenoids content was 3.5 in pure stand of alfalfa and in all other treatments were more than 4.

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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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