



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

Preliminary validation of soybean germination test

Miladin Kostić, Vuk Đorđević, Svetlana Balešević-Tubić, Aleksandar Ilić, Mladen Tatić

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On the basis of experience from practice, it is observed certain level of disagreement between results of laboratory germination test (ISTA) and field emergency of soybean. This research should evaluate and validate power of prediction of standard laboratory test of soybean seed germination. Experiment included three soybean varieties from three seed lots. Sample from each lot were sieve fractionated and obtained five sub-samples of different seed size. From each subsample, laboratory germination were determinates, and all subsamples were planted in the field for field emergency evaluation. It was observed influence of thousand seed weight (TSW) on results of laboratory germination test, where the highest germination was observed for TSW between 165 and 172g. This relation was not confirmed in field experiment. In order to sample the predictive power lab test, considered the absolute difference between the lab germination and field emergence (delta). All sub-samples has higher field emergency than predicted by laboratory germination. Although there are varietal specifics, it is observed that the lowest value of delta was for seeds that has TSW greater than 145g. This finding indicates that laboratory germination test has lower power of prediction in small seed samples. Also, higher delta values were observed when laboratory test show lower values. Standard laboratory test has lesser power of prediction in seed samples with lower seed vigor. These results indicate that is necessary to evaluate and validate laboratory test under different field conditions. This is important from practical aspect of soybean seed production, especially when soybean seed is produced under unfavorable condition.

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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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