Maize Research Institute
ZEMUN POLJE
Serbia, Belgrade

International Conference

The Frontiers of Science and Technology in Crop Breeding and Production Conference

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BOOK OF ABSTRACTS

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HIGH QUALITY SEED AS THE ULTIMATE GOAL

Tanja Petrović*, Marija Milivojević, Dragana Branković-Radojčić, Snežana Jovanović, Vojka Babić

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High quality seed can be defined as the ability of seed to germinate vigorously and provide normal seedling and uniform crop establishment under wide range of environmental conditions. This complex trait results from a sound genetic background, good practice during seed production, favorable environment during development on the mother plant, optimal time of harvest, appropriate processing and storage. To identify seed quality marker(s) which will predict the seed quality has been a challenging task for seed researchers for a long time which has not been successfully accomplished yet. Therefore, testing germination and other traits in seed testing laboratories is still the only reliable source of information on seed quality. For commercial testing are developed standard methods aiming to provide good prediction of seedling establishment in the field. Very often, there are several standard methods developed for testing seed germination of one plant species. They can differ in germination substrate or temperature applied during the testing. In most cases, irrespective on testing conditions, seed quality will not differ significantly; however, at seed lots with declining quality testing conditions applied can be highly discriminative. Since the seed quality depends on more than one factor, it is understandable that it is not targeted in the breeding programs, however, efforts should be constant in identifying the impact of genetics on this trait and be focused on varieties which have potential in providing high seed quality.

Key words: *seed quality, seed testing, testing conditions, germination*.

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