Scientific Association of Geneticists and Breeders of the Republic of Moldova (SAGBRM)
Institute of Genetics, Physiology and Plant Protection (IGPPP)
Center of Functional Genetics, Moldova State University (CFG, MSU)
Moldovan Research and Development Association (MRDA)

XIth International Congress of Geneticists and Breeders from the Republic of Moldova

ABSTRACT BOOK

June 15-16, 2021
Chisinau, Republic of Moldova

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Abstract book, Chisinau, 2021

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TUESDAY - June 15, 2021			
9^{30}	**-**	**10^{00}**	**Registration**
10^{00}	**-**	**10^{30}**	**Opening Ceremony**
10^{30}	**-**	**11^{00}**	***Public lecture*** presented in the cycle of Academic Lectures **''MOLECULAR TECHNIQUES AND INFORMATION TECHNOLOGIES IN MODERN AGRICULTURE''** Acad., Prof., Maria DUCA, Moldova State University
11^{00}	**-**	**11^{15}**	*Coffee Break*
11^{15}	**-**	**13^{00}**	**Plenary Session**
13^{00}	**-**	**14^{00}**	*Lunch Break*
14^{00}	**-**	**17^{00}**	**Thematic Sessions**
15^{00}	**-**	**17^{30}**	***International Webinar*** **''SUNFLOWER GENETIC RESOURCES FOR BREEDING: GERMPLASM EVALUATION AND CONSERVATION''** organized under the auspices of *International Sunflower Association (ISA), France*
WEDNESDAY - June 16, 2021			
10^{00}	**-**	**12^{00}**	**Thematic Sessions**
12^{00}	**-**	**13^{00}**	*Lunch Break*
13^{00}	**-**	**13^{30}**	**Congress conclusions on Thematic Sessions**
13^{30}	**-**	**14^{00}**	**Final decision of the Congress**
14^{00}	**-**	**14^{30}**	**Report on the activity of the SAGBRM**
14^{30}	**-**	**15^{00}**	**Election of the leadership of the SAGBRM**

GENERAL AND MOLECULAR GENETICS

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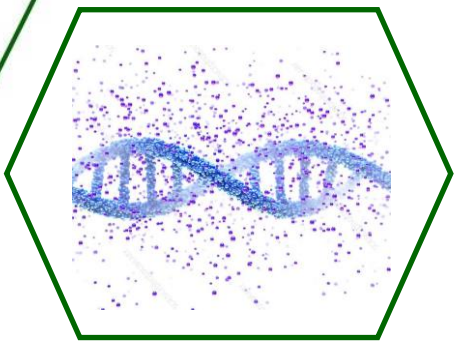
Institute of Genetics, Physiology and Plant Protection



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BIOSTIMULATORS ROLE IN SUNFLOWER SEEDLING DEVELOPMENT

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Sunflower seedling performance can affect on seed yield and oil quality. Biostimulators improve seedling conditions and can help to increase plants immunity and decrease stress effect. The aim of this work was evaluation of biostimulator effect on sunflower seedling and to observe which inbred line has the best reaction on biostimulator treatment.

Three inbred lines (L_1, L_2, L_3) from Institute of Field and Vegetable Crops Novi Sad in three repetitions were treated with commercial biostimulator (BACILLOMIX SEMENNOPS) in dosage 100ml on 5kg of seed and compared to control without biostimulator. Germination energy and germination rate were calculated on 50 plants per inbred line per treatment, and seedling length and seedling mass were measured on 20 plants per inbred line per treatment. Germination energy was measured on 4^{th} day of propagation setup on filter paper and germination rate on the 10^{th} day. Seedling length was measured on plants that germinated before 4^{th} day after propagation. A 12 day old seedlings mass was measured on plants that were grown in 1L pots filled with substrate. Obtained data were analyzed with multivariate analyses of variance and Duncan post-hoc test.

It was noticed that highly significant differences are recorded among inbred lines in view of germination energy, germination rate and seedling mass. Significant differences were recorded in view of seedling length. Highly significant differences among treatments are recorded in view of germination energy and germination rate, while significant differences were observed in view of seedling length. There were no significant differences regarding seedling mass. Interaction between inbred lines and biostimulator treatment was highly significant for all exanimated traits. This experiment has shown that biostimulator can improve germination rate in all inbred lines. However, seedling length and germination energy may be increased but not in case for every inbred line. According to examined inbred lines, inbred line L1 showed the highest average values for germination energy, germination rate and seedling mass.

It can be concluded that use of biostimulators can improve seed germination of sunflower. Inbred line L_1 has the greatest values for almost all traits. This experiment gave preliminary results for further testing of biostimulator effect on seedling germination.