

PROCEEDINGS OF THE

20th INTERNATIONAL SUNFLOWER CONFERENCE



Novi Sad, Serbia
June 20-23, 2022

Proceedings of the

20th International Sunflower Conference



Novi Sad, Vojvodina, Serbia
June 20-23, 2022

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Proceedings of the 20th International Sunflower Conference
Novi sad, Serbia, June 20-23, 2022

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The proceedings of the 20th International Sunflower Conference contain 153 contributions from scientists of 30 countries. They include plenary lectures, oral talks and regular communications presented with posters, among which, selected contributions were emphasized with short oral talks. The manuscripts are classified by research areas in ten separate sections. They offer a thorough review of the current state of the art of sunflower research and production around the world. The Organizing Committee is grateful to Tanja Vunjak and Aleksandar Vojisavljević for their excellent editorial assistance in the preparation of these Proceedings.

ISC2022 Organizing committee



Conference program

Sunday, 19 June

16.00-21.00	Registration
19.00-21.00	Welcome Reception

Monday, 20 June

8.00-17.00	Registration	
9.00-9.30	Opening Ceremony	
9.30- 10.15	Invited talk Section 1: Dr. Felicity Vear (France)	
10.15-11.00	Coffee break	
11.00-12.00	Section 1: Breeding – New/old breeding goals and challenges	Section 2: Oils and proteins – Innovations for increased quality and feedstock supply
	Oral and short oral presentations	Oral and short oral presentations
12.00-13.30	Lunch	
13.30-14.30	Invited talks Section 3: Dr. C.C. Jan (China) Section 4: Dr. Sreten Terzić (IFVCNS, Serbia)	
14.30-15.00	Coffee break	
15.00-16.00	Section 3: Confectionery sunflower – Emerging crop	Section 4: Genetic resources – Investment for the future
	Oral and short oral presentations	Oral and short oral presentations
16.00-17.00	Poster session – Sections 1, 2, 3, 4	
18.00-21.00	Novi Sad and Petrovaradin fortress tour	

Tuesday, 21 June

8.30-17.00	Registration	
9.30-10.30	Invited talks Section 5: Dr. Leire Molinero Ruiz (CISC, Spain) Section 6: Dr. Philippe Debaeke (INRAE, France)	
10.30-11.00	Coffee break	
11.00-12.00	Section 5: Biotic stress resistance – New and emerging pests and diseases	Section 6: Crop production and modeling – Yield stability in changing environment
	Oral and short oral presentations	Oral and short oral presentations
12.00-13.30	Lunch	
13.30-14.30	Invited talks Section 7: Dr. Nicolas Langlade (INRAE, France) Section 8: Etienne Pilorgé (Terres Inovia, France)	
14.30-15.00	Coffee break	
15.00-16.00	Section 7: Abiotic stress resistance – Challenges of changing environment	Section 8: Economy and market – Trends and prospects
	Oral and short oral presentations	Oral and short oral presentations
16.00-17.00	Poster session – Sections 5, 6, 7, 8	

Wednesday, 22 June

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10.30-11.00	Coffee break	
11.00-12.00	Section 9: Broomrape – Constant challenge	Section 10: Bees and seeds – Exploring new venues for increased yield and seed production
	Oral and short oral presentations	Oral and short oral presentations
12.00-13.30	Lunch	
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14.30-15.00	Coffee break	
14.30-15.30	Poster session – Sections 9, 10	
15.00-16.30	ISA Assembly	
16.30-17.00	Closing ceremony	
20.00-24.00	Gala Dinner Pustavoit Award Presentation Ceremony IFVCNS Best Poster Award Presentation	

Thursday, 23 June

9.00-15.00	Field day
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GROWTH PROMOTING ACTIVITY OF *TRICHODERMA* SPP. ON SUNFLOWER SEEDLINGS

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Abstract

Plants are constantly exposed to biotic and abiotic stress and are forced to efficiently balance growth, reproduction and tolerance to different pathogenic organisms. *Trichoderma* species belong to beneficial fungi that are capable for root colonization which frequently enhances root growth and development, crop productivity, resistance to abiotic stress and nutrients uptake and utilization. Therefore, seed priming with *Trichoderma* spp. has successfully demonstrated to improve seed germination and seedling establishment for many field crops, such as wheat, sugar beet, maize, soybean, and sunflower. Due to that, objectives of this study was to test growth promoting ability of *Trichoderma* spp. isolates, which previously indicated good antagonistic activity, on sunflower seedlings. *Trichoderma* spp. isolates were obtained from soil samples originating from various soil types and localities in Serbia, but mainly from the Vojvodina Province, in 2012. Growth promoting activity of 10 *Trichoderma* spp. isolates was tested on sunflower seeds of sterile parental line VL-A-8A according to modified Mukhtar et al. (2012) method. One hundred surface-sterilized seeds were tested per each isolate on wet filter paper under optimal laboratory conditions. Seeds treated with sterile distilled water were used as a control. Germination energy was registered on 4th day of seeds germination, while germination and growth parameters (root and shoot weights and lengths) were measured on 10th day. Obtained results indicated that three out of 10 isolates significantly enhanced root weights, while one isolate significantly enhanced germination energy and germination. Obtained results confirmed that even within a single *Trichoderma* species, not all isolates are capable of promoting plant growth. Additionally, isolates' possible efficacy on certain crop while it is less efficient in interaction with some other crop, indicate that appropriate isolate selection and plant-isolate interaction test is of crucial importance.

Keywords: vigor index, seed priming, germination, *Trichoderma*

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