

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	
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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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SUNFLOWER BROOMRAPE – UPDATE ON VIRULENCE IN SERBIA

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Abstract

Broomrape *Orobanche cumana*, widespread achlorophyllous plant parasite, is considered as major constraint in sunflower production. Presently, research of parasite virulence indicating new and continuously changing patterns in most areas of its distribution. This is commonly noticed as occurrence of isolated parts of field with parasite presence. In sunflower production regions in Serbia race E dominates although race F was reported. The aim of this research was to further improve knowledge of *O. cumana* virulence in Serbia. Sunflower broomrape for this research was sampled on six locations for virulence determination. Universally susceptible inbred line, four inbred lines with resistance to race E and a line resistant to race F were used. Results of interaction were obtained after growing sunflower in pots with broomrape seed for seven weeks. Broomrape from each sample was successful in attaching to roots of line AD66 and line LC-1003. Inbred line P96 was completely resistant to all broomrape populations. Two lines, NR5 and CMS1-90, were also resistant and line SL58 was susceptible to two populations of broomrape. Lines NR5, LC-1003, CMS1-90 and SL58 have been described to be resistant to race E. This result indicate that broomrape described as race E in Serbia is not homogenous regarding virulence. Categorizing virulence in two cases shown in this research, could be misleading. Clarifying virulence is essential in effort for breeding for resistance to broomrape as a dominating control strategy. Further research will focus on selecting sunflower germplasm and testing using representative sample of broomrape.

Keywords: sunflower, broomrape, *Orobanche cumana*, virulence

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