

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

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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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EXTRACTION YIELD OBTAINED BY PRESSING SUNFLOWER SEED

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Abstract

Hybridization of sunflower seeds went in the direction of increasing the oil content of the seeds as a major technological requirement. Today, oily sunflower hybrid seed contain over 40% of the oil. There are two ways of oil extraction: chemically using solvents or mechanically using presses. The oil yield is higher during solvent extraction, however, such oil requires further refining. A lower oil yield is obtained by extracting the oil by pressing but this oil requires minimal additional treatment. Oil yield obtained by pressing on the screw press is influenced by the characteristics of the seed (eg oil content, moisture, hull content, impurity content, etc.) and screw press characteristics.

The aim of this paper is to examine and compare the oil yield of 5 new sunflower hybrids. Oilseed sunflower hybrids grown in the experimental field of the Institute of Field and Vegetable Crops in Novi Sad, pressed on a screw press (capacity 15–29 kg h⁻¹, frequency 27.5 Hz), were tested. The yield was calculated on the basis of the oil content in the seed and the oil content in the cake obtained after pressing. Seed contained 35.26±1.98% (Duško sample) to 43.63±2.71% (NS Oskar sample) of oil. The highest oil yield of 75.61±1.99% was determined for the sample NS Konstantin containing 41.66±2.08% of oil in the seed, while the lowest yield 61.00 ±1.01% was determined for the sample Novosađanin containing 35.77±0.81% of the oil in the seed. Since in the tested samples the oil yields are not directly proportional to the oil content of the seed, it was confirmed that the other mentioned factors influence the oil yield.

Keywords: sunflower, oily hybrids, seed, cake, yield

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