# 11th International Triticale Symposium

## June 26-29, 2022

## Programme

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| **Sunday, 26th June** | **Arrival, accommodation** | |
| 17:00 - 20:00 | **Thematic meetings** | |
| **Monday, 27th June** | | |
| start at 7:30 | **Registration** | |
| 9:00 - 9:40 | **Opening Ceremony** | |
| | Dr Michał Rokicki, | Director of IHAR-PIB, Poland |
| | Bartosz Dąbrowski, | A representative of the Ministry Agriculture and Rural Development, Poland |
| | Prof. Edward Arseniuk, | Honorary Chair, Poland |
| | Prof. Andreas Börner, | President of EUCARPIA, Germany |
| | Prof. Geert Haesaert, | President of the International Triticale Association, Belgium |
| | Dr hab. Magdalena Szechyńska-Hebda, | Deputy Director for Science of IHAR-PIB, Poland |

**Plenary Session**

Chairs: Dr Michał Rokicki, Dr hab. Magdalena Szechyńska-Hebda

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|---|---|---|
| 9:40 – 10:20 | Prof. Andreas Börner, | Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben, Germany |
| | A. Börner, M. Nagel, M. A. R. Arif, U. Lohwasser, D. Riewe: 'Plant genetic resources for future breeding and research'. | |
| 10:20 – 11:00 | Prof. Geert Haesaert, | Department Plants and Crops, Faculty of Bioscience Engineering, Ghent University, Belgium |
| | G. Haesaert, R. Zustovi, M.C. Piro, K. Dewitte, S. Landschoot, V. Derycke: 'Alternative use of triticale as a tool for acreage expansion'. | |
| 11:00 – 11:20 | Prof. Edward Arseniuk, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |
| | E. Arseniuk: 'Triticale breeding research & production in Poland and elsewhere'. | |
| 11:20 - 11:30 | **Coffee break** | |

**Session 1** **Challenges and prospects - genetic resources and biodiversity**

Chairs: Dr hab. Gabriela Gołębiowska, Prof. Jerzy Henryk Czembor

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|---|---|---|
| 11:30 - 11:50 | Prof. Michał Tomasz Kwiatek, | Department of Genetics and Plant Breeding, Poznań University of Life Sciences; Institute of Plant Genetics of the Polish Academy of Sciences; Poland |

M. T. Kwiatek: 'Transfer of chromatin of wild goatgrasses (*Aegilops* sp.) carrying genes responsible for resistance to leaf rust into triticale (× *Triticosecale* Wittmack) using chromosome manipulation'. ONLINE.

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|---|---|---|
| 11:50 - 12:10 | Dr hab. Gabriela Gołębiowska, | Institute of Biology, Pedagogical University of Krakow, Poland |

G. Gołębiowska, M. Dyda: 'The genomic regions associated with abiotic and biotic stress tolerance, as well as other important breeding traits in triticale'.

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|---|---|---|
| 12:10 - 12:30 | Prof. Jerzy Henryk Czembor, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |

J. H. Czembor, E. Czembor: 'AGROBANK platform: ICT-based solution for supporting crop biodiversity and breeding programs'.

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|---|---|---|
| 12:30 - 12:50 | Dr Bogusław Łapiński, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |

B. Łapiński: 'Unique triticale stocks from the gene bank in Radzików'.

13:00 - 14:00 **Lunch**

**Session 2** **Improving acclimation to abiotic stress**

Chairs: Dr hab. Maciej Grzesiak, Dr hab. Magdalena Szechyńska-Hebda

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| 14:00 - 14:20 | Prof. Marcin Rapacz, | Department of Plant Breeding, Physiology and Seed Sciences, University of Agriculture in Krakow, Poland |

M. Rapacz, A. Macko-Podgórni, B. Jurczyk, L. Kuchar: 'Modelling of wheat and triticale winterhardiness under current and predicted winter scenarios for Central Europe'. ONLINE

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| 14:20 - 14:40 | Dr hab. Maciej Grzesiak, | The *F. Górski* Institute of Plant Physiology Polish Academy of Sciences, Poland |

M. Grzesiak: 'The role and significance of triticale root system structure in response to abiotic stresses'.

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| 14:40 - 15:00 | Dr hab. Krystyna Rybka, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |

T. Oleksiak, D. Pacoń, K.Rybka: 'Yield-based selection of triticale results in drought tolerance improvement. Evidence based on data from Poland from the years 1992 to 2021'.

15:00 - 16:10 **Coffee break**

**Session 3** **Improving resistance to biotic stress**

Chairs: Dr Hans Peter Maurer, Prof. Paweł Czembor

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| 16:10 - 16:50 | Dr Hans Peter Maurer, | University of Hohenheim<br>State Plant Breeding Institute, Germany |
| | H. P. Maurer: 'Breeding for resistance to biotic stress: an ongoing challenge'. | |
| 16:50 - 17:10 | Dr hab. Tomasz Góral, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |
| | T. Góral, H. Wiśniewska, P. Ochodzki: 'Resistance to *Fusarium* head blight, kernel damage, and concentration of *Fusarium* mycotoxins in grain of winter triticale lines'. | |
| 17:10 - 17:30 | Prof. Paweł Czembor, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |
| | P. Czembor: 'Yellow rust and brown rust on wheat and triticale in Poland'. | |
| 17:30 - 17:50 | Prof. Edward Arseniuk, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |
| | E. Arseniuk: 'Triticale biotic stresses subjected to control through resistance breeding '. | |
| 17:50 - 18:10 | Prof. Jerzy Henryk Czembor, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |
| | J. H. Czembor, P. C. Czembor, U. Piechota, O. Doraczyńska, G. Czajowski, D. R. Mańkowski, H. J. Czembor: 'Review of changes in virulence structure of the powdery mildew (*Blumeria graminis*) population occurring on triticale (x *Triticosecale*) in Poland'. | |
| 19:30 - 1:30 | **Gala Dinner (Hotel Lord)** | |

**Day 2 Tuesday, 28th June**

**Session 4** **Increasing quantity of biomass and grain yield**

Chair: Prof. Jerzy Henryk Czembor

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| 8:40 – 9:00 | Prof. Adam Łukaszewski, | University of California, Riverside, United States |
| | A. Łukaszewski: 'Male sterility and fertility restoration system for triticale based on the cytoplasm of *Aegilops kotschyi*'. ONLINE. | |
| 9:00 - 9:40 | Prof. Patrizia Galeffi, | La Sapienza University; ENEA CR Casaccia; Rome, Italy |
| | P. Galeffi: 'High yields Triticale lines as resource for many different applications: peculiarities, environment adaptation and final use'. ONLINE. | |
| 9:40 - 10:00 | Prof. Wenhua Du, | College of Grassland Science, Gansu Agricultural University, China |
| | W. Du: 'Advantages of the forage triticale and their importance in alpine pastoral area of Qinghai-Tibet Plateau'. ONLINE. | |

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| 10:00 - 10:20 | Dr Gennadii Shchipak, | Department of Breeding and Genetics of Winter Triticale, Yurjev Plant Production Institute, Ukraine |
| | G. V. Shchipak, V. G. Shchipak: 'Hexaploid triticale breeding for adaptability, yield and quality'. ONLINE. | |
| 10:20 – 11:20 | **Coffee break** | |
| **Session 5** | **From lab to field – breeding and biotechnology** | |
| Chairs: Dr Jörg Plieske, Prof. Janusz Zimny | | |
| 11:20 – 11:40 | Prof. Janusz Zimny, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |
| | J. Zimny: 'Multigenerational analysis of transgenic triticale'. | |
| 11:40 – 12:00 | Dr Mariana Ittu, | Academy of Agricultural and Forestry Sciences, Section of field crops, Romania |
| | G. Ittu, N. Săulescu, M. Ittu, P. Mustățea, C. M. Marinciu, G. Șerban: 'What's achieved and new in breeding of triticale in Romania!' | |
| 12:00 – 12:20 | Dr Jörg Plieske, | Institut Fresenius GmbH TraitGenetics Section, Germany |
| | J. Plieske, H. Gnad, A. Polley, D. Kulosa, T. Gross, M. W. Ganal: 'Genotyping of Triticale using an optimized SNP array'. | |
| 12:20 - 12:40 | Dr Hristo Stoyanov, | Agricultural Academy, Dobrudzha Agricultural Institute – General Toshevo, Bulgaria |
| | H. Stoyanov V. Baychev, I. Belchev: 'Doubled haploid lines in triticale breeding in Bulgaria - results and achievements'. ONLINE. | |
| 13:00 - 14:00 | **Lunch** | |
| 14:00 - 20:00 | **Excursion: Experimental fields and Folk evening / dinner bus transport: Warsaw–Radzików–Warsaw** | |
| **Day 3 Wednesday, 29th June** | | |
| **Session 6** | **Crop management - agronomy, plant protection, marketing policy, socio-economic issues** | |
| Chairs: Dr Lajos Bona, Dr Piotr Ochodzki | | |
| 9:00 - 9:40 | Dr Lajos Bona, | Cereal Research Nonprofit Ltd. Hungary |
| | L. Bona, S. Purgel, T. Pugris, P. Fónad, J. Matuz, B. Mihály-Langó: 'Genotype and agronomical input level effects the yield and protein content of triticale'. | |
| 9:40 - 10:00 | Dr Aneta Kramek, | Institute of Plant Genetics, Breeding and Biotechnology, University of Life Sciences in Lublin, Poland |
| | A. Kramek: 'The characteristic of triticale genetic resources collected in the Polish gene bank'. ONLINE. | |

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| 10:00 - 10:20 | Dr Roman Warzecha, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |
| | R. Warzecha, P. Ochodzki, M. Żurek, E. Bartosiak: 'The study on winter triticale (*Triticosecale* Wittm.) and winter wheat spelt (*Triticum spelta* L.) seed production for organic farming'. | |
| 10:20 – 10:40 | Dr Hossein Shahsavand Hassani, | Department of Crop Production and Plant Breeding, Shiraz University, Iran<br>Field Crop Central Research Institute, Ministry of Agriculture and Forestry and Ankara University, Turkey |
| | H. S. Hassani, A. Salantur, K. M. Khawar, C. Karagoulu, S. Najafi, M. Taghvaei, S. J. Saharkhiz, B. Heidari, M. Abdolahi, F. Hassani, M. Keshavarz, F. S. Hassani, M. Mahooti: 'The evaluation of Iranian new salt tolerant cereal, *Tritipyrum*, as second sister of Triticale, and its production in Turkey'. ONLINE. | |
| 10:40 - 11:00 | **Coffee break** | |
| **Session 7** | **Farm to fork - nutritional value, food and feed products, industrial uses** | |
| Chairs: Dr Przemysław Matysik, Dr hab. Anna Fraś | | |
| 11:00 - 11:40 | Dr Bernadett Mihály-Langó, | Cereal Research Nonprofit Ltd. Hungary |
| | B. Mihály-Langó, E. Ács, S. Purgel, S. Tömösközi, L. Bóna: 'Recent results on food-use quality of Hungarian triticale genotypes: nutritional and technological aspects'. ONLINE. | |
| 11:40 – 12:00 | Dr Przemysław Matysik, | Strzelce Plant Breeding Ltd. IHAR Group Poland |
| | P. Matysik: 'Triticale in Poland, breeding, production, seed business'. | |
| 12:00 – 12:20 | Ing. Anneleen De Zutter, | Department of Plants and Crops, Faculty of Bioscience Engineering, Ghent University, Belgium |
| | A. De Zutter, J. De Boever, H. Muylle, I. Roldán-Ruiz, G. Haesaert: 'Feeding value evaluation of triticale forage (x *Triticosecale* Wittmack) grown in Belgium'. ONLINE. | |
| 12:20 – 12:40 | Dr Joshua M. Hegarty, | University of California, Davis, CA., USA |
| | J. M. Hegarty, G. V. Shchipak, Ye. A. Nichiporuk, V. G. Shchipak, L. I. Relina, J. Dubcovsky: 'Triticale grain quality: It's not just for animals anymore!' ONLINE. | |
| 12:40 – 12:50 | Summary and closing words. | |
| 13:00 - 14:00 | **Lunch**<br>Departure | |

**Poster Session**

Posters are presented on two screens. Each poster is displayed for 10 minutes once per hour, as follows:

**Screen I**

| | | |
|---|---|---|
| 0 – 10 min | Atefeh Majidi, | Agronomy and Plant Breeding Department, University College of Agriculture and Natural Resources, University of Tehran, Iran. |

Session 2
M. Majidi, A. Abbasi: 'Studying the effect of drought stress on proline, chlorophyll content, protein, guaiacol peroxidase and ascorbate peroxidase in At.TC rapeseed (*Brassica napus* L.)'.

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|---|---|---|
| 10 – 20 min | Myoung Ryoul Park, | National Institute of Crop Science, RDA, Republic of Korea |

Session 2
M. R. Park, J. Kim, K. Ra, Y-H. Kim: 'Selection of moisture proof-triticale lines under waterlogging condition in paddy field'.

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|---|---|---|
| 20 – 30 min | Dr hab. Gabriela Gołębiowska, | Institute of Biology, Pedagogical University of Krakow, Poland |

Session 3
G. Gołębiowska, M. Dyda: 'The genomic regions associated with abiotic and biotic stress tolerance, as well as other important breeding traits in triticale".

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|---|---|---|
| 30 – 40 min | Prof. Paweł Czembor, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |

Session 3
P. Czembor, P. Słowacki, U. Piechota, M. Radecka-Janusik, D. Piaskowska: 'Stem rust on triticale in Poland'.

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|---|---|---|
| 40 – 50 min | Andreea-Sabina Eșanu, assistant research, agronomist engineer, | Agricultural Research-Development Station Secuieni, Romania |

Session 5
A.-S. Eșanu, M-D. Bărcan.'Breeding triticale – a new approach at A.R.D.S. *secuieni'*

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|---|---|---|
| 50 – 60 min | Gallia Butnaru, | Banat University of Agricultural Sciences and Veterinary Medicine King Mihai I of Romania from Timisoara, Romania; Academy of Romanian Scientists |

Session 5
G. Butnaru, D. Mathiu, J. P. Gustafson: 'Triticale improvement: problems and prospects in the west part of Romania' .

**Screen II**

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|---|---|---|
| 0 – 10 min | Jarosław Haremza, | Danko Hodowla Roślin Sp. z o.o., Poland |

Session 5
M. Niewińska, J. Haremza, P. Kaźmierczak, D. Kurleto, E. Czerwińska, A. Fornalczyk, M. Koneczny, M. Pojmaj, B. Ługowska, J. Bogacki, W. Brukwiński, K. Banaszak, R. Krysztofik, A. Katańska-Kaczmarek, E. Paszkowski, H. Bielerzewska-Kaźmierczak, J. Kaczmarek, P. Urbańczyk, M. Hanek, Z. Banaszak, M. T. Kwiatek, J. Nawracała: 'Efficient transfer of *Rht* semi-dwarf genes from wheat (*Triticum aestivum* L.) to triticale (*xTriticosecale*) breeding materials'.

| | | |
|---|---|---|
| 10 – 20 min | Dr Mariana Ittu, | Academy of Agricultural and Forestry Sciences, Section of field crops, Romania |

Session 5
G. Ittu, N. Săulescu, M. Ittu, P. Mustățea, C. M. Marinciu, G. Șerban: 'What's new in breeding of triticale in Romania!'

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|---|---|---|
| 20 – 30 min | Małgorzata Niewińska, | Danko Hodowla Roślin Sp. z o.o., Poland |

Session 5
M. Niewińska, B. Ługowska, M. Pojmaj, J. Bogacki, W. Brukwiński, P. Kaźmierczak, D. Kurleto, K. Banaszak, E. Czerwińska, R. Krysztofik, J. Haremza, A. Fornalczyk, M. Konieczny, A. Katańska-Kaczmarek, E. Paszkowski, H. Bielerzewska-Kaźmierczak, J. Kaczmarek, P. Urbańczyk. 'New plant variety breeding of Triticale (x *Triticosecale Wittm.* ex *A. Camus*) based on innovative biotechnological methods' .

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|---|---|---|
| 30 – 40 min | Aleksandra Pindor, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |

Session 5
A. Pindor, M. Szechyńska-Hebda: 'Breaking down barriers. Method of androgenesis induction versus quantity and quality of green plants regenerants' .

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|---|---|---|
| 40 – 50 min | Dr Jörg Plieske, | Institut Fresenius GmbH TraitGenetics Section, Germany |

Session 5
J. Plieske, H. Gnad, A. Polley, D. Kulosa, T. Gross, M. W. Ganal: 'Genotyping of Triticale using an optimized SNP array'.

| | | |
|---|---|---|
| 50 – 60 min | Dr hab. Anna Fraś, | Plant Breeding and Acclimatization Institute – National Research Institute, Poland |

Session 7
A. Fraś, K. Gołębiewska, M. Wiśniewska, Dariusz R. Mańkowski: 'The effect of addition residual oat flour on the chemical composition and quality of triticale breads'.

## Organizers

IHAR EUCARPIA International Triticale Association

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