

THE 29TH INTERNATIONAL SCIENCE CONFERENCE

THE PROBLEMS OF SUSTAINABLE AGRICULTURE, PROTECTION OF RURAL AREAS, WATER RESOURCES AND ENVIRONMENT

PROBLEMY ZRÓWNOWAŻONEGO ROLNICTWA, OCHRONY OBSZARÓW WIEJSKICH, ZASOBÓW WODNYCH I ŚRODOWISKA

On September 26–28, the 29th International Scientific Conference was held at the Institute of Technology and Life Sciences – the National Research Institute in Falenty. The Conference was carried out under the patronage of the Minister of Agriculture and Rural Development, Robert Telus. The title of the Conference was: “The problems of sustainable agriculture, protection of rural areas, water resources and environment”.

During the Conference, the following problems were discussed and analysed:

- sustainable agricultural development, circular economy, with the consideration of the environmental protection and also, counteracting the climate changes;
- innovative technological solutions for the sustainable agricultural production, including animal one, together with renewable energy sources (OZE) and with the particular consideration of the application of agricultural micro bio-gas producing plants;
- innovative and effective agricultural production;
- management of natural resources and soils and natural environment protection;
- water and sewage economy and waste management and elements of technical rural infrastructure;
- protection and ecology of waters, contamination of water and effect on biodiversity.

On 26 September 2023, the plenary lectures concerning water at the rural areas were held; then, the participants of the Conference had the excursion to the Nature Reserve Raszyn Ponds, with a practical show of Moldaenke GmbH company.

On 27 September 2023, the lectures were divided into topic sections: sustainable agriculture and energetics and renewable energy sources (OZE) at the rural areas. In the same day, there was also presented the poster session, covering the subjects of agricultural production, OZE and water.



Fot. 1. Dr. Eng. Andrzej Seliga, Ph.D. Eng. Kinga Borek, Ph.D. Eng. Kamila Mazur



Fot. 2. In the middle, facing Dr. Hab. eng. Adam Koniuszy

The last day of the Conference, i.e. 28 September, 2023 – was dedicated to scientific workshops on the choice of statistical methods in the scientific papers, the data analysis and uncertainty of the measurements.

During the 29th Conference, the presentations developed on



Fot. 3. Ph.D. Eng. Kamila Mazur, Ph.D. engineer Jan Kamionka, prof. Waclaw Romaniuk, prof. Bożena Nowakowicz-Dębek



Fot. 4. Ph.D. Eng. Waclaw Strobel on the left



Fot. 5. Conference participants

the occasion of the 75th anniversary of foundation of the Institute of Construction, Mechanization and Electrification in Agriculture (IBMER) were submitted. It was also 70 years since foundation of the Institute of Amelioration and Grasslands (IMUZ) from the fusion of these mentioned two Institutes, the Institute of

Technology and Life Science was created in 2010. Then, since 2021, the Institute received a status of the National Research Institute.

During the period of 1948–2010, IMER (Institute of Mechanization and Electrification in Agriculture), later on IBMER was occupied with the creative work, scientific and implementing activity in the following areas:

- agricultural engineering for the needs of agricultural farms with a different size;
- automation (robotization) and electrification of farms, including development of non-conventional energy (OZE, renewable energy sources) especially obtaining and application of biogas;
- agricultural building, with the particular consideration of agricultural farms, specialised in animal production and also, vegetal production;
- environmental protection, and, in particular, sewage management at the mountain and sub-mountain territories, technological standards in agriculture, especially in animal production in respect of the requirements, resulting from the accession of Poland to the European Union.

IMUZ, as founded in 1953, obtained the following tasks (recorded in its first Statute):

- conducting the scientific-research work in the field of agricultural ameliorations and the treatment of permanent grasslands, and in particular:
- shaping of the agricultural environment via regulation of soil and water conditions and affecting the climate by forestation, planting of trees and other treatments;
- amelioration of grasslands and arable land (including vegetables cultivation) and depressive areas
- meadow and pasture economy, on permanent grasslands,
- technique of agricultural ameliorations with the particular consideration of work mechanization;
- supply of the centres of agricultural production in water;
- utilization of water energy on small water courses.

All the mentioned above activities were generally implemented during the whole period of the Institute's existence.

During the Conference, more than 40 lectures in Polish and English were delivered. The topic sessions conducted during the Conference may be summed up with the following statements:

- there is a need of further development of agricultural farms according to the principle of the sustainable technologies, with the particular consideration of introducing the innovations, reasonable management of fertilizer components, including natural fertilizers (manure) and energy production from the alternative sources and also, waste coming from agri-food processing;
- it is necessary to take care of the water protection in the country and all over the world due to its limited resources, inter alia, owing to the choice of the appropriate
- management methods.

The 29th International Scientific Conference was attended by 80 participants from the country and abroad, representing the following institutions:

- National Centre for Support of Agriculture;
- International Academy of the Applied Sciences in Łomża;
- West-Pomeranian University of Technology in Szczecin;
- Warsaw University of Life Sciences (SGGW) in Warsaw;
- The Hugo Kołłątaj University of Agriculture in Cracow;
- The University of Life Sciences in Poznań;
- The University of Life sciences in Lublin;
- Institute of Gardening – the National Research Institute;
- Institute of Flow Studies of Polish Academy of Sciences in Gdańsk;
- Moldova University of Technology in Kiszyniów, Republic of Moldova;
- Ferganski Institute of Technology, Fergana, Uzbekistan.

and, also private entrepreneurs:

- Moldaenke GmbH, Kiel, Germany;
- Ekotechnologie Ltd.;
- Stomil Bydgoszcz S.A.;
- TESTMER, Warsaw, S.A.;
- WOLF System Ltd.

The partner of the 29th International Scientific Conference was the National Centre for Support of Agriculture which gave its professional and financial support.

Organization of the Conference was also possible owing to the co-organizers:

- Chair of Engineering of Renewable Energy Sources of the West-Pomeranian University of Technology in Szczecin;
- International Academy of the Applied Sciences in Łomża;
- Warsaw University of Life Sciences.

The sponsors of the Conference were:

- Moldaenke GmbH, Kiel, Germany;
- WOLF SYSTEM Ltd.;
- TESTMER Warsaw S.A.

Medial patronage:

- Polish Technical Review (periodical);
- Internet daily B2B "Teraz Środowisko";
- Internet Portal Agropolska.pl;
- 'Wodne Sprawy' journal ("Water Matters").

On the grounds of the papers, sent by the participants of the 29th International Scientific Conference, two monographs will be published:

1. Monograph: *"The selected problems of sustainable agriculture, including the renewable energy sources and environment protection"*
2. Monograph: *"Problems of sustainable development in agriculture, including renewable energy production and environment protection"*.

The 29th International Scientific Conference was related by the Interactive TV Agronews.com.pl. The materials are available at the following address:



Fot. 6. Ph.D. Eng. Kamila Mazur, prof. Wiesław Dembek, Ph.D. Eng. Kinga Borek, Ph.D. Eng. Anita Koniczna



Fot. 7. Prof. Wiesław Dembek



Fot. 8. Ph.D. Eng. Waclaw Strobel, prof. Bohdan Dobrzański

<https://www.youtube.com/watch?v=gc9hACnNN9s>

We express our words of gratitude to the Partner, Co-organizers, Sponsors, Patrons and Participants for the support and active participation in the Conference!