REPORT

on scientific internship in Warsaw University of Life Sciences – SGGW (Institute of Mechanical Engineering)

of ScD. in Engineering of the Institute of Energy, State Agrarian and Engineering University in Podilya (Kamianets-Podilskyi, Khmelnytskyi region, Ukraine)

Taras Hutsol

From October 1, 2019 till March 31, 2020.

Scientific supervisor: Szymon Głowacki – D.Sc. in Engineering, Institute of Mechanical Engineering, Warsaw University of Life Sciences - SGGW, Warsaw, Poland.

1. The results of the study were discussed during the seminars

- 1) Made a speech with a report on the topic: «Formulating scientific and technological foundations for the process of agrobiomass torrefaction» on Scientific and practical 1st seminar «Agrobiomass of Ukraine for power potential of Central and Eastern Europe», which be held January 13-15, 2020 at the Institute of Mechanical Engineering, Warsaw University of Life Sciences (SGGW).
- 2) Made a speech with a report on the topic: «Agrobiological and technological aspects of shaping the efficiency of energy crops» on Scientific and practical 2st seminar «Agrobiomass of Ukraine for power potential of Central and Eastern Europe», which be held January 22, 2020 at the Department of Development Policy and Marketing, Institute of Economics and Finance, Warsaw University of Life Sciences (SGGW).
- 3) Participated in a meeting of the Polish Council on Biogas and Biomass to be held at the Forest Research Institute, December 12, 2019.
- 4) Seminar «Powermeetings», «Green Deal w przemyśle i energetyce» February 6, 2020.

2. The results of the study were tested at conferences

- 1) Scientific conference on «Contemporary Dilemmas Rural Development XI» from the conference cycle "Changes in the food economy in European countries" December 5, 2019, Department of Economy and Economic Policy, Institute of Economics and Finance, Warsaw University of Life Sciences (SGGW).
- 2) Scientific conference «Media as a source of farmer's knowledge» Institute of Rural and Agricultural Development of the Polish Academy of Sciences, December 9, 2019 at the Staszic Palace in Warsaw.
- 4) European Economic Congress Trends 2020 February 25,2020, Warsaw, Sheraton Hotel.

3. The results of the study were published in articles and in common monographs

1) Sadovoi O., Nazarova O., Bondarenko V., Pirozhok A., Hutsol T., Nurek T., Glowacki Sz.: Modeling and research of electromechanical systems of cold rolling mills. Monograph. – Krakow: 2020. – 138 p.

- 2) Mykhailov Ye., Golebiewski J., Kiurchev S., Hutsol T., Kolodii O., Nurek T., Głowacki Sz., Zadosna N., Verkholantseva V., Palianychka N., Kucher O.: Economic and technical efficiency of sunflower seed processing. Monograph. Warszawa: 2020. 161 c.
- 3) Tryhuba A., Hutsol T., Mudryk K., Nurek T., Golebiewski J., Lub P., Głowacki S., Sharybura A.O., Tryhuba I., Kucher O., Mykhailova L., Rud A.: Planning of soilbased processes based on modeling. Monograph. Warszawa: 2020. 132 c.
- 4) Boyarchuk V., Ivanyshyn V., Tryhuba A., Zasada M., Hutsol T., Tatomyr A., Tryhuba I., Nurek T., Głowacki Sz., Brys A.: Substantiation of the configuration of agricultural power supply systems using wind energy based on computer simulation. Monograph. Warszawa: 2020 122 p.

5) Hutsol Taras, Rozkosz Anna: Energy potential biomass torefecation. V International scientific and practical seminar «Development of Bioenergy Potential in

Rural Areas to the Farm. February», 2020 - pp.7-8.

6) Horetska Iryna, Głowacki Szymon, Hutsol Taras: Biomass Energy Potential After Beer Production. Actual aspects of development in the context of globalization. 2020 – pp. 100-101.

- 7) Hutsol Taras, Jurczyk Michał: Polish 2040 Energy Plans. V International scientific and practical seminar «Development of Bioenergy Potential in Rural Areas to the Farm. February», 2020 pp. 22-23.
- 8) Prokopova O., Hutsol T., Shevtsova A. To The Problem Of Cultural Preparation Of Higher Education Professionals. Conference Socio-cultural activities in higher education. L'viv, 2019 pp. 57-59.

4. In the process of research participated in such activities

- 1) Ptak Warsaw Expo, Central Agricultural Fair, From January 31 till February 01, 2020, Warszawa.
- 2) International Food Technology Fair «Food Tech Expo» Ptak Warsaw Expo on March 3-5, 2020.

5. The topic of the study was discussed with business representatives

- 1) "Galmet Sp.z o.o." Sp. K. Robert Galara;
- Przewodnicząca Polskiej Rady Biowęgla i Biomasy oraz Polish Biomass Torrefaction Council – Anna Rozkosz;
 - 3) Ergomat SP. z.o.o.

6. During the Fellowship I had the opportunity to have meetings and consultations with many scientists:

- dr. hab. Jarosław Gołębiewski, prof. SGGW;
- dr. hab. Kshyshtof Mudryk, Uniwersytet Rolniczy w Krakowie;
- dr. hab. Agata Malak-Rawlikowska, Warsaw University of Life Sciences (SGGW);
 - dr. Serhiy Zabolotnyy, Warsaw University of Life Sciences (SGGW);
 - dr. Anna Jasiulewicz, Warsaw University of Life Sciences (SGGW);
 - prof., dr. hab. Inż. Jadwiga Laska, w Tarnowie;
 - dr. hab. Inż. Łukasz Jęczmionek, prof. PWSZ w Tarnowie;

- dr. Michał Pajda, Instytut Nafty i Gazu w Krakowie;

- prof. dr hab. Krystyna Krzyżanowska, Warsaw University of Life Sciences (SGGW);

- Patrick Shaya, Ursula Kokosynska, Centrum Badawcze Polskiej Akademii Nauk Konwersja Energii i Źródła Odnawialne «KEZO»;

- Christopher Zuber, Witold Witowski, European Business Club Association.

Each of the meetings mentioned below was very informative and useful for my future scientific work.

7. Improving of Polish language and acquaintance with Polish Culture Visiting:

- The Polish Sejm;
- Old town in Warsaw;
- National Museum in Warsaw;
- Warsaw Uprising Museum;
- Łazienki Królewskie Park in Warsaw;
- Belvedere Palace, Warsaw;
- Wilanow Palace Museum, Warsaw;
- Cultural Center of the Teutonic Castle, Toruń;
- Wieliczka Salt Mine.

Vice-Rector for International Cooperation, Warsaw University of Life Sciences - SGGW, Sc.D. in Forest Sciences, Professor

Scientific coordinator

Director Institute of Mechanical Engineering, Warsaw University of Life Sciences - SGGW, Sc.D. in Engineering, Professor

Scientific supervisor

Sc.D. in Engineering, Institute of Mechanical Engineering, Warsaw University of Life Sciences – SGGW

Report

ScD. in Engineering, Associate professor,

State Agrarian and Engineering

University in Podilya

PROREKTOR

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Tomasz Nurek