



CERTIFICATE

This is to certify that

Ihor Didur

has participated at the conference

Biosystems Engineering

held on May 6, 2020

Prof. Jüri Olt
CHAIRMAN
SCIENTIFIC COMMITTEE



Prof. Timo Kikas
CHAIRMAN
ORGANISING COMMITTEE

Biosystems Engineering 2020

Dear PARTICIPANTS of Biosystems Engineering 2020 conference. As we notified in the earlier news and mailing list, the conference will take place in the e-platform this year. We have chosen Zoom as our platform and all the presentations will be done in Zoom environment. Conference will take place on one day only this year. It starts at 11 am Estonian time (UTC+3) with the Welcome words from the Rector of Estonian University of Life Sciences and Mayor of Tartu. Director of the Institute of Technology will then explain the schedule and inner workings of the conference. At 11.15 we will start with the Plenary Session, where our distinguished keynote speakers will introduce us to their work.

After the Plenary Session we will take few minutes to create a virtual "Conference Picture", so stay in the Zoom room until the moderator has called for the "coffee break".

After the break we will continue with 7 parallel sessions. All sessions will start at the same time and take place in different Zoom rooms.

Poster session will be available at least till the end of the week, so take your time to look at the posters and leave your questions at the poster.

[COMPLETE SCHEDULE is now also available!](#)

Conference videos

11.00	Welcome address from rector Prof. Mait Klaassen			
	Welcome address from Mayor of Tartu City Urmas Klaas			
	Opening of the Conference and Plenary session, Margus Arak			
11.15	PLENARY SESSION			
12.45	Photo session			
COFFEE BREAK				
13.30	PARALLEL SESSIONS			
	BIOENERGY AND BIOFUELS	FOOD TECHNOLOGY	NANOMATERIALS AND WASTE RECOVERY	AGRICULTURAL AND LIVESTOCK TECHNOLOGY
	ENGINEERING	RENEWABLE ENERGY	PRECISION AGRICULTURE	

13.45. Ihor Didur. Vinnytsia National Agrarian University. Influence of the of white pea varieties depending on the seeds treatment and foliar fertilizing in Ukraine

The main task of modern agriculture in Ukraine is increasing of grain cultures productivity, which will be promote the formation of plants recourses stock, the providing of livestock by high-quality fully feed, and population – by food products. The pea is taking the important place in solving of this task. Its grain have got approximately 50% of carbohydrates and 26% saturated of essential amino acids, minerals and vitamins protein, that's why it is widely using in mixed fodder production for manufacturing of balanced concentrated feed. The short growing period and ability to fixation of atmospheric nitrogen makes pea like the best predecessor for winter wheat. Besides, that the plants ensure themselves on 2/3 by nitrogen, they leave 60-100 kg of easily accessible nitrogen for subsequent culture. By using compatible bacterization by biofertilizing preparations on the basic of specific kinds of rhizobia and phosphate mobilization bacteria is ability to increase the efficiency of symbiotic nitrogen fixation on 13- 30% and formation high-yield pea plantings. The wheat field doesn't get approximately 1 million ha of the greatest predecessor – pea in Ukraine's crop rotations, that's why the implementation of new high-productive pea varieties of intensive type, which are suitable for direct harvesting will provide the expansion of its acreages. Hence is arise the necessity of conducting the deep investigations with these varieties, to estimate their reaction on using of bacterial preparations on the base of nitrogen-fixing strains and phosphate mobilization bacteria, and complex fertilizers with content of macro- and microelements for foliar fertilizing. Besides, it is extremely important to determine how these methods of cultivation technology of pea under conditions of right-bank ForestSteppe will influence on the processes of symbiotic and photosynthetic activity and realization of moustaches peas varieties genetically potential and grain productivity in general. Marked questions are quite relevant and require proper scientific justification for the conditions of the region.

The maximum yield of pea grains 4,01 t/ha in the sort Tsarevych and 4,31 t/ha in the sort Ulus was formed by using Ryzohumin and Polimiksobakteryn inoculating of seeds and conducting foliar fertilizing by KODA Foul 7-21-7 in the phases of budding and beans formation and KODA complex in the phase of ripening seeds, which is bigger on 1,04 and 1,16 t/ha in comparison to the control. The biggest crude protein output in the sort Tsarevych – 1,02 t/ha and in the sort Ulus – 1,07 t/ha is obtained on the same variant. The sufficient attention is given to increasing crop yields through the use of micronutrients in scientific workshops and conferences. Investigations of scientific institutions confirm the necessity of foliar fertilizing field crops by complex fertilizers, which containing stimulants, amino acids, micronutrients. However, these agricultural practices are causing a lot of questions, that's why we were conducted the research of optimization the mineral nutrition of pea, systematized the results of microbiological interaction and complex fertilizers on the yield and its quality with recommendations for agricultural producers.