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VI International Conference on

Agriculture Digitalization and Organic Production

ADOP 2026

Conference Programme and Abstracts

June 1-5, 2026

Kaliningrad, Russia

SPC RAS

КГТУ

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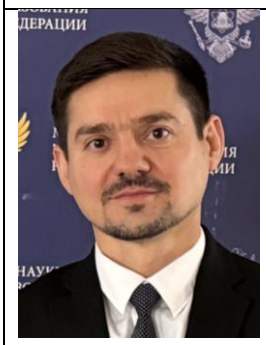
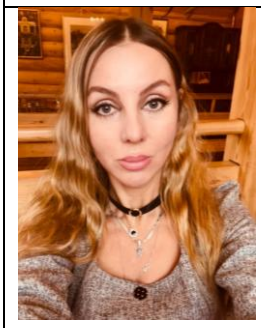
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14:00-17:00	**Oral Session 6: Biologization of Livestock Production** https://us06web.zoom.us/j/87926743169?pwd=Y1RWWGtua1JtWEgyZEZob3ZUNlp4UT09 **Cochairs:** Vladimir Surovtsev, Roman Nekrasov
	Valentina Filippova, Georgi Laptev, Larisa Ilina, Elena Yildirim, Kseniya Sokolova, Daria Tiurina, Ekaterina Ponomareva, Evgeniy Brazhnik, Vasiliy Zaikin, and Kristina Kanz. Effect of Glyphosate on Gut Microbiome Biomarkers Associated with Reproductive Longevity in Laying Hens.
	Roman Nekrasov, Alexei Butenko, Ivan Pishulin, Artem Studenkov, Konstantin Ostrenko, Nadezhda Bogolyubova, and Julia Bogolyubova. Efficiency of BSFL Conversion of Grain Waste Into Protein Meal for Animals.
	Elena Yildirim, Valentina Filippova, Larisa Ilina, and Kseniya Sokolova, Georgi Laptev, Daria Tiurina, Natalia Novikova, Nataliia Patiukova, Alesya Savicheva, Vasiliy Zaikin, and Vladislav Bolshakov, Irina Klyuchnikova and Anna Fisenko, Elena Korochkina, Darren Griffin, and Michael Romanov. Bioinformatics Analysis of the Genome of E. Faecalis E-10 Strain Isolated from Cow Endometrium.
	Tatiana Lashkova. Use of a Biologically Active Lake Sapropel–Based Preparation in Calf Feeding Under the Conditions of the Novgorod Region.
	Anton Utkin, Gleb Sutula, Jan Puhalsky, Svyatoslav Loskutov, Alyona Kondrat'eva, and Alexey Eremin. Black Soldier Fly (Hermetia Illucens) as a Source of New Biologically Active Substances of Protein Nature.
	Svyatoslav Loskutov, Jan Puhalsky, Lyudmila Molodkina, and Maria Andrianova. Dispersed State Evaluation by Dynamic Light Scattering for Alkaline Suspension of Black Lioness Fly Frass (Zoohumus) after Its Mineralization.
	Mikayel Mikayelyan, Gurgen Karapetyan, Valery Grigoryan, Astghik Pepoyan, Liana Grigoryan, Zhanna Melkonyan, and Spartak Yeribekyan. Eco-Epidemiology of Poultry Parasitic Diseases in Armenia: A National Synthesis and Implications for Sustainable Control.
	Su Jian, Ma Juan, Li Hao, and Kong Lingzhuo. Experimental Study on Physical Properties of Co-composting Cow Manure and Walnut Branches and Load Calculation of Compost Turner.
	Aloyna Zelenchenkova. The Effect of the Adaptogen Complex on the Immune Status and Intestinal Microbiocenosis of Broiler Chickens under Simulated Environmental Conditions.
	Nadezhda Bogolyubova, An alimentary complex of adaptogens for maintaining the productive health of poultry and obtaining high-quality poultry products.
	Vladimir Surovtsev. Digitalization as a Factor of Production Biologization and Sustainable Development of Dairy Farming in the Leningrad Region.

	short-chain fatty acid synthesis, such as Bacteroidetes and Ruminococcaceae. Furthermore, laying hens from a line with high reproductive longevity were found to exhibit significantly greater resistance to the negative impact. Dietary glyphosate broadly altered hen's gut microbiome metabolism, activating different pathways, upregulating chorismate degradation despite shikimate pathway targeting, and boosting pyrimidine biosynthesis potentially for defense against replication stress.
	**Roman Nekrasov, Alexei Butenko, Ivan Pishulin, Artem Studenkov, Konstantin Ostrenko, Nadezhda Bogolyubova, and Julia Bogolyubova,** L.K. Ernst Federal Research Center for Animal Husbandry. **Lecture Title:** Efficiency of BSFL Conversion of Grain Waste Into Protein Meal for Animals. **Abstract:** The use of grain waste in BSFL cultivation technology represents an innovative approach aimed at increasing sustainability and improving the economic performance of agribusinesses. The aim of the study was to compare the effects of different feed mixture compositions on the chemical composition of BSFL and to assess their nutritional potential for producing protein meal from dried biomass. The experiment was conducted under laboratory conditions, cultivating BSFL on a grain mixture (GM) and grain waste (GW). A significant improvement in the digestibility of organic matter, fats, and carbohydrates ($p<0.05$), as well as nitrogen deposition and assimilation, was observed in larvae when grain waste was included in the feed mixture. The final analysis demonstrated that larvae grown on GW are a more efficient option in terms of biochemical value and nutritional potential. The total protein content was higher in protein meal obtained from the biomass of GW larvae (55.14 g/100 g) compared to the group consuming the grain mixture, GM (51.18 g/100 g). Larvae reared on grain waste (GW) had better protein quality, characterized by increased levels of essential amino acids necessary for complete animal nutrition. Grain waste can serve as a basic feed in larval rearing technology and the production of high-protein concentrates to compensate for the deficiency of traditional feeds in the diets of farm animals. The obtained results open up prospects for using agricultural waste for the sustainable development of larval cultivation technologies and the creation of environmentally friendly and cost-effective methods for producing high-quality feed.
	**Elena Yildirim, Valentina Filippova, Larisa Ilina, and Kseniya Sokolova,** Molecular Genetics and Microbiomics Laboratory, BIOTROF+ Ltd, Federal State Budgetary Educational Institution of Higher Education «St. Petersburg State Agrarian University». **Georgi Laptev, Daria Tiurina, Natalia Novikova, Nataliia Patiukova, Alesya Savicheva, Vasiliy Zaikin, and Vladislav Bolshakov,** Molecular Genetics and Microbiomics Laboratory, BIOTROF+ Ltd. **Irina Klyuchnikova and Anna Fisenko,** Federal State Budgetary Educational Institution of Higher Education «St. Petersburg State Agrarian University».

	Elena Korochkina, Federal State Budgetary Educational Institution of Higher Education «St. Petersburg State University of Veterinary Medicine». **Darren Griffin,** School of Natural Sciences, University of Kent, Animal Genomics and Bioresource Research Unit (AGB Research Unit), Faculty of Science, Kasetsart University. **Michael Romanov,** Federal State Budgetary Educational Institution of Higher Education «St. Petersburg State Agrarian University», School of Natural Sciences, University of Kent, Animal Genomics and Bioresource Research Unit (AGB Research Unit), Faculty of Science, Kasetsart University, L.K. Ernst Federal Research Center for Animal Husbandry. **Lecture Title:** Bioinformatics Analysis of the Genome of E. Faecalis E-10 Strain Isolated from Cow Endometrium. **Abstract:** Studying the microbiome of the cow's reproductive system is crucial for maintaining the animals' reproductive capacity. In 2025, the E. faecalis E-10 strain was isolated from the endometrium of a healthy Ayrshire cow kept at the Valaam Monastery eco-farm. The aim of the study was a whole-genome analysis of the strain using the MiSeq sequencer (Illumina, Inc., USA) and bioinformatics tools, including the RAST (https://rast.nmpdr.org), KEGG (https://www.kegg.jp), and Prokka (https://github.com/tseemann/prokka) databases. Whole genome analysis of the E. faecalis E-10 strain showed that the genome consists of 108 contigs and has a total length of 2,882,409 bp. Analysis of the antimicrobial activity of the strain showed that the largest growth inhibition zones (up to 29±1.5 mm) were noted for test cultures of Clostridium perfringens, Streptococcus agalactiae, Aspergillus spp. and Penicillium spp. The genes for the synthesis of organic acids were found in the genome of E. faecalis E-10, such as ldh1 and ldh2, pta1/2 and ackA, pflA/B, and fumC, frdA, and mae. Genes for resistance to oxidative and osmotic stress were also identified. These included genes encoding glutathione biosynthesis, the CoA-disulfide thiol disulfide redox system, the choline and betaine uptake system, and betaine biosynthesis. These results indicate a potential role for E. faecalis E-10 in maintaining a favorable microbial balance in the endometrium.
	**Tatiana Lashkova,** Novgorod Research Institute of Agriculture – branch of St. Petersburg SPC RAS. **Lecture Title:** Use of a Biologically Active Lake Sapropel–Based Preparation in Calf Feeding Under the Conditions of the Novgorod Region. **Abstract:** The aim of the study was to evaluate the effectiveness of using a biologically active sapropel-based preparation in the feeding of farm animals and to assess its effect on the productivity of young stock. The study was conducted on Holstein calves aged four months after weaning at the Ermolin skoye peasant farm in the Novgorod Region. Based on the principle of analog selection, three groups (n = 10) were formed: one control group and two experimental groups. Calves in the experimental groups received, in addition to the basal diet, 5 and 10 mL of the supplement, respectively. The results showed that supplementation with 5 mL of the preparation increased the digestibility of major dietary nutrients by 1.56–3.73 percentage points and improved the protein index. The absolute and average daily weight gains of calves