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Overview of the IV International Conference on Agribusiness, Environmental Engineering and Biotechnologies – AGRITECH-IV – 2020

To cite this article: I V Kovalev *et al* 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **677** 011001

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240th ECS Meeting ORLANDO, FL

Orange County Convention Center **Oct 10-14, 2021**



Abstract submission due: April 9

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Overview of the IV International Conference on Agribusiness, Environmental Engineering and Biotechnologies – AGRITECH-IV – 2020

I V Kovalev^{1,2,3}, N I Pyzhikova², A A Voroshilova¹ and Z E Shaporova²

¹ Krasnoyarsk Science and Technology City Hall of the Russian Union of Scientific and Engineering Associations, Krasnoyarsk, Russia

² Krasnoyarsk State Agrarian University, Krasnoyarsk, Russia

³ Siberian Federal University, Krasnoyarsk, Russia

E-mail: krasnio@bk.ru

Abstract. The overview describes the main directions and results of the International Conference “AGRITECH-IV-2020” held in Krasnoyarsk in November 18-20, 2020. It gives the details about the participants and the proceedings. The anchor partners of Krasnoyarsk Science and Technology City Hall were Krasnoyarsk State Agrarian University, Volgograd State Technical University and the Volga region research Institute of manufacture and processing of meat-and-milk production. A description of the main trends in modern agribusiness science as well as in the development of the agrarian university are given in the overview.

The Volume contains Proceedings of the IV International Conference on Agribusiness, Environmental Engineering and Biotechnologies – AGRITECH-IV-2020 which was held in Krasnoyarsk, Russian Federation in November 18-20, 2020.

The purpose of the Conference was to share the results and prospects of the achievements in using advanced high-tech chemical, biological and information technologies in agriculture and agribusiness, in the fields of energy, chemical, environmental, oil and gas engineering, mining and soil treatment technologies, as well as in modern areas of biodiversity and ecosystem stability research.

The Conference “AGRITECH-IV-2020” was jointly organised by the International and Russian Union of Scientific and Engineering Associations (Moscow, Russia), Krasnoyarsk Regional Union of Scientific and Engineering Associations, Krasnoyarsk Science and Technology City Hall and Krasnoyarsk State Agrarian University. The scientific direction of the Conference "Innovative Development of Agrarian-and-Food Technologies" was carried out by partners from Volgograd: Volgograd State Technical University and the Volga region research Institute of manufacture and processing of meat-and-milk production.

The Program Committee and Editorial Board included prominent professors and scientists from the Russian Academy of Sciences, University of Maribor (Slovenia), Ruhr University in Bochum (Germany), Krasnoyarsk State Agrarian University (Russia), Institute in Belgrade (Serbia), Siberian Federal University (Russia), University and Institute of Volgograd (Russia) as well as specialists from Russian and foreign leading industrial enterprises.



A wide range of fundamental and applied problems in various biological and agri-technological systems has undergone consideration during the meeting.

The Conference was organised in 8 main directions:

- Agribusiness, Economics and Organization of Agritech Engineering.
- Innovative Development of Agrarian-and-Food Technologies
- Information Technologies, Automation Engineering and Digitization of Agriculture.
- Chemical, Ecological, Oil and Gas Engineering.
- Biological Technologies in Agriculture: from Molecules to Ecosystems.
- Environmental Engineering and Management, Mining and Soil Treatment Technology.
- Biodiversity and Ecosystem Stability.
- Agroforestry and Digitalization of the Forest Technology.

The scientific session of the Conference was held at three organizations: Krasnoyarsk Science and Technology City Hall, Volga region research institute of manufacture and processing of meat-and-milk production (Volgograd, Russia) and Krasnoyarsk State Agrarian University.

The activities of the Volga region research institute of manufacture and processing of meat-and-milk production is carried out within the framework of an extensive program for the development and implementation of a scientifically grounded system of animal husbandry and forage production, improvement of methods and technologies for selection and breeding work, and integrated processing of animal products to obtain environmentally friendly food products. It is practically the only one in the system of the Russian Agricultural Academy, where they comprehensively approach the solution of the issue of agricultural production according to the system "from field to counter". Scientists of the Research Institute have improved the feeding system of farm animals and developed methods for regulating the biosynthesis of the main components of animal raw materials in order to increase the conversion of feed into animal products and their biological value.

Krasnoyarsk State Agrarian University is a modern educational and scientific complex, the activity of which is aimed at training personnel for the agricultural sector, performing research and development of rural territories of the Krasnoyarsk Territory. Therefore, the task of the Krasnoyarsk Agrarian University is not only to provide highly qualified personnel for agricultural producers, but also to promote the introduction of scientific developments in agricultural production.

The international scope of the Conference was confirmed by the participation of representatives from 10 countries besides Russia (Japan, Uzbekistan, Ukraine, Kyrgyzstan, Brazil, Kazakhstan, Armenia, Czech Republic, Belarus, Vietnam):

- | | |
|---|---|
| <ul style="list-style-type: none"> • "Agrixim", Tashkent, Uzbekistan • Institute of Mechanics and Seismic Stability of Structures after M.T. Uzarbayev, Tashkent, Uzbekistan • Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, Tashkent, Uzbekistan • Center for Certification and Testing of Agricultural Machinery and Technologies, "Uzagrotekhsanoatholding" JSC, Tashkent, Uzbekistan • Alfred Nobel University, Dnipro, Ukraine • Bukhara Engineering Technological Institute, Bukhara, Uzbekistan • Central-Asian Institute for Applied Geosciences, Bishkek, Kyrgyzstan | <ul style="list-style-type: none"> • Federal Institute of Espirito Santo, Espirito Santo, Brazil • Graduate School of Science and Technology, Niigata University, Niigata, Japan • Innovative University of Eurasia, Pavlodar, Republic of Kazakhstan • Karaganda State Technical University, Karaganda, Kazakhstan • L.N. Gumilyov Eurasian National University, Nur-Sultan, Republic of Kazakhstan • Luhansk state agrarian University, Luhansk, Ukraine • National Polytechnic University of Armenia, Yerevan, Republic of Armenia • National Scientific Center "Institute of Mechanization and Electrification of Agriculture", Glevaha, Kyiv region, Ukraine |
|---|---|

- National University of Architecture and Construction of Armenia, Yerevan, Republic of Armenia
- National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine
- Niigata University, Niigata, Japan
- Publishing House "Education and Science" s.r.o., Praha, Czech Republic
- S. Amanzholov East Kazakhstan state University, Ust-Kamenogorsk, Kazakhstan
- S. Seifullin Kazakh Agrotechnical University, Nur-Sultan, Republic of Kazakhstan
- Sh. Ualikhanov Kokshetau State University, Kokshetau, Republic of Kazakhstan
- Shakarim State University of Semey, Semey, Republic of Kazakhstan
- SHEI Ukrainian State University of Chemical Technology, Dnipro, Ukraine
- Shushi University of Technology, Shushi, Republic of Armenia
- State Agrarian Technical University, Minsk, Republic of Belarus
- State Scientific Research Institute of Laboratory Diagnostics and Veterinary and Sanitary Expertise, Kyiv, Ukraine
- Tashkent Institute of design, construction and maintenance of automotive roads, Tashkent, Uzbekistan
- The Scientific and Practical Center of the National Academy of Sciences of Belarus for Animal Husbandry, Zhodzina, Belarus
- Toraigyrov University, Pavlodar, Kazakhstan
- Vietnam National University of Agriculture, Hanoi, Vietnam
- Vitebsk state academy of veterinary medicine, Vitebsk, Belarus
- Zhangir Khan West Kazakhstan agrarian - Technical university, Uralsk, Republic of Kazakhstan
- Zhetysu University named after I. Zhansugurov, Taldykorgan, Kazakhstan
- Belarusian State Technological University, Minsk, Republic of Belarus
- Graduate School of Science and Technology, Niigata University, Niigata, Japan

The participants from Russia (more than 50 regions) represented over 280 universities, scientific institutes and organisations, industrial enterprises:

- "DMP", Stavropol
- «DOZA-AGRO», Nizhny Novgorod
- A.V. Zhirmunsky National Scientific Center of Marine Biology, Far Eastern Branch of the Russian Academy of Sciences, Vladivostok
- Achinsk branches of Krasnoyarsk state agricultural university
- All-Russian Dairy Research Institute
- All-Russian Horticultural Institute for Breeding, Agrotechnology and Nursery, Moscow
- All-Russian Research Institute for Hydraulic Engineering and Land Reclamation (VNIIGiM)
- All-Russian Research Institute for Starch Products
- All-Russian Research Institute of Horse Breeding
- All-Russian Research Institute of Irrigated Agriculture
- All-Russian Research Institute of Phytopathology, Bolshie Vyazemy
- All-Russian Scientific Research Institute of Animal Husbandry named after academician L.K. Ernst
- All-Russian Scientific Research Institute of Fundamental and Applied Parasitology of Animals and Plants
- All-Russian Scientific Research Institute of Soybean
- All-Russian Scientific Research Institute of the Poultry Processing Industry, of the Federal Research Center "VNITIP" RAS (branch), Moscow region
- All-Russian SRHF named after Prof. B. M. Zhitkov, Kirov
- All-Russian Veterinary Research Institute of Pathology, Pharmacology and Therapy
- Altai State Agrarian University, Barnaul
- Anapa Zonal Experimental Station of Viticulture and Wine-making - Branch of "Federal State Budgetary Scientific Institution" North-Caucasus Federal Scientific Center of Horticulture, Viticulture, Wine-making"
- Astrakhan State University
- Banzarov Buryat State University, Ulan-Ude
- Bashkir State Agrarian University, Ufa
- Bashkir State Pedagogical University named after M. Akmulla
- Bauman Moscow State Technical University

- Belgorod State Agricultural University named after V. Gorin, Maiskiy, Belgorod region
- Belgorod State National Research University
- Belgorod state technological university named after V. G. Shukhov
- Branch of Reshetnev Siberian State University of Science and Technology in Lesosibirsk
- Branch of the All-Russian Scientific Research Institute of Experimental Veterinary Medicine named after K.I. Scriabin and Ya. R. Kovalenko of the Russian Academy of Sciences, Moscow
- Bryansk State Agrarian University
- Bunin Yelets State University
- Center for Hygiene and Epidemiology of the Chelyabinsk Region in Magnitogorsk and Agapovsky, Kizilsky, Nagaybasky, Verkhneural'sky Districts, Magnitogorsk
- Central Research Institute of Dental and Maxillofacial Surgery, Moscow
- Chechen State University, Grozny
- Chuvash State Agricultural Academy, Cheboksary
- Chuvash State University named after I.N. Ulyanov, Cheboksary
- Dagestan State Medical University, Makhachkala
- Dagestan State Technical University, Makhachkala
- Dairy Plant "Stavropolsky"
- Department of AgroBioTechnology, FSBEI HE Kuzbass State Agricultural Academy, Kemerovo
- Department of ecology, forest protection and forest hunting of the Voronezh state forest engineering University named after G. F. Morozov
- Department of forestry of Vologda state dairy Academy named after N. V. Vereshchagin
- Department of Land Management, Land and Urban Register, Altai State Agricultural University, Barnaul
- Department of Metrology, standardization and quality management, Russian State Agrarian University – Moscow Timiryazev Agricultural Academy
- Department of Zoology and Ecology, Institute of Biology, Ecology and Agricultural Technologies of Petrozavodsk State University
- Department of zootechnology and recycling of animals products, Primorsky State agricultural academy, Ussuriysk
- Don State Agrarian University
- Don State Technical University
- ECOPRODUCT, LLC, Volgograd region
- Emperor Alexander I Saint Petersburg State Transport University
- Engineering and Technology Institute of Primorskaya State Academy of Agriculture, Ussuriysk
- Faculty of Biology, Lomonosov Moscow State University
- Faculty of Foreign Languages, Krasnoyarsk State Pedagogical University named after V.P. Astafiev
- Far East State Agrarian University, Amur region, Blagoveshensk
- Far Eastern GAU, Blagoveshchensk
- Far Eastern State Technical Fisheries University, Vladivostok
- Farm "Pokrov"
- FBU Northern Research Institute of Forestry, Arkhangelsk
- Federal Agricultural Research Center of the North-East, Kirov
- Federal Altai Scientific Centre of Agro-BioTechnologies, Barnaul
- Federal Research Center – All-Russian Research Institute of Experimental Veterinary Medicine named after K.I. Scriabin and Ya. R. Kovalenko of the Russian Academy of Sciences, Moscow
- Federal Research Center «Informatics and Management»
- Federal Research Center for Information and Computational Technologies, Krasnoyarsk
- Federal Research Center of Biological Systems and Agrotechnologies Russian Academy of Sciences
- Federal Research Centre «Kola Science Centre of the Russian Academy of Sciences»
- Federal Research Centre of Biological Systems and Agro-technologies of the Russian Academy of Sciences, Orenburg
- Federal Research Centre of Nutrition and Biotechnology, Moscow
- Federal Rostov Agrarian Research Center
- Federal Scientific Center "All-Russian Research and Technological Poultry Institute", Russian Academy of Sciences, Sergiev Posad
- Federal Scientific Center for Legumes and Groat Crops, Streletskiy settlement, Orlov region
- Federal scientific center of legumes and groat crops, Orel region
- Federal Scientific Rice Center
- Federal Service for veterinary and phytosanitary surveillance in Chelyabinsk Region

- Federal State Budget Institution "North Caucasian Federal Scientific Agrarian Center", Mikhailovsk
- Federal state budget scientific institution "Federal research center "Krasnoyarsk scientific center of the Siberian branch of the Russian Academy of Sciences" (FRC KSC SB RAS)
- Federal State Budget Scientific Institution All-Russian Scientific Research Institute of Soybean, Blagoveschensk, Amur region
- Federal State Budget Scientific Institution Federal Research Center of Agribiotechnology of the Far East named after A.K. Chaika, Ussuriisk, Primorye region
- Federal State Budget Scientific Institution North Caucasus Federal Scientific Center for Horticulture, Viticulture, Winemaking (FSBSI NCFSCHVW)
- Federal State Budgetary Scientific Institution (Giproniselkhoz Research and Design Center), Moscow
- Federal State-Funded Institution of Science "The Nikita Botanical Gardens - National Scientific Center of the RAS", Yalta
- Filippov Buryat State Academy of Agriculture, Ulan-Ude
- Financial University under the Government of the Russian Federation, Ufa Branch
- Firm "August", Moscow
- Gorsky State Agrarian University, Vladikavkaz
- Grozny State Oil Technical University named after Academician M. D. Millionshikov
- Gubkin Russian State University of Oil and Gas, Moscow
- Herzen State Pedagogical University of Russia, Saint Petersburg
- Higher School of Economics (HSE University), Moscow
- Immanuel Kant Baltic Federal University, Kaliningrad
- Institute for Engineering and Environmental Problems in Agricultural Production – Branch of Federal State Budgetary Scientific Institution "Federal Scientific Agroengineering Center VIM", Saint-Petersburg
- Institute of Amelioration, water management and construction named after A.N. Kostyakov
- Institute of Biological Problems of the North, Far Eastern Branch of the Russian Academy of Sciences – IBPN FEB RAS, Magadan
- Institute of Biophysics SB RAS, Federal Research Center "Krasnoyarsk Science Center SB RAS"
- Institute of Computational Modelling SB RAS, Krasnoyarsk
- Institute of Environmental Sciences of the Kazan Federal University
- Institute of Life Sciences, North Caucasus Federal University, Stavropol
- Technological Institute of Service (branch) of Don State Technical University, Stavropol
- Institute of Life Sciences, North-Caucasus Federal University
- Institute of Natural Resources, Ecology and Cryology, Siberian Branch of RAS, Chita
- Institute of North Industrial Ecology Problems of the Federal Research Centre «Kola Science Centre of the Russian Academy of Sciences», Apatity
- Institute of Photon Technologies of Federal Scientific Research Centre "Crystallography and Photonics" of Russian Academy of Sciences, Moscow
- Institute of Problems of Chemical Physics, Russian Academy of Sciences
- Institute of service and entrepreneurship (branch) of DSTU in Shakhty
- Institute of Solid-State Chemistry and Mechanochemistry of SB RAS, Novosibirsk
- International preparatory school, Kazan (Volga region) Federal University (KFU)
- International research center of health protection of people, animals and environment, Moscow
- Irkutsk Interregional Veterinary Laboratory
- Irkutsk National Research Technical University
- Irkutsk Scientific Research Institute of Agriculture
- Irkutsk State Agrarian University named after A.A. Ezhevsky
- Irkutsk State Transport University
- ITMO University, Saint Petersburg
- Izhevsk state agricultural Academy
- K.G. Razumovsky Moscow State University of Technologies and Management (the First Cossack University), Moscow
- K.I.Skryabin and Y.R.Kovalenko Federal Research Center "All-Russian Institute of Experimental Veterinary Medicine" (VIEV), Russian Academy of Science, Moscow
- Kabardino-Balkarian state agricultural university named after V.M. Kokov, Nalchik
- Kalmyk State University named after B. B. Gorodovikov, Republic of Kalmykia

- Kaluga State University named after K E Tsiolkovsky
- Katanov Khakass State University, Abakan
- Kazan (Volga region) Federal University
- Kazan Cooperative Institute of the Russian University of Cooperation (KCI RUC)
- Kazan National Research Technological University
- Kazan State Agrarian University
- Kazan State Power Engineering University
- Kirov SMU MOH
- Krasnodar Research Center for Animal Husbandry and Veterinary Medicine
- Krasnodar Research Institute for Storage and Processing of Agricultural Products
- Krasnoyarsk Agricultural Research Institute, Federal Research Center “Krasnoyarsk Scientific Center of the SB of the RAS”
- Krasnoyarsk Institute of Railway Transport, branch of Irkutsk State Transport University
- Krasnoyarsk Research Institute of Agriculture
- Krasnoyarsk Science and Technology City Hall of the Russian Union of Scientific and Engineering Associations
- Krasnoyarsk Scientific-Research Institute of Agriculture – separate subdivision of FRC KSC SB RAS (KrasSRIA FRC KSC SB RAS)
- Krasnoyarsk State Agrarian University
- Krasnoyarsk State Medical University named after Professor V.F. Vojno-Yasenetskiy
- Krasnoyarsk State Pedagogical University named after V. P. Astafiev
- Kuban State Agrarian University named after I.T. Trubilin, Krasnodar
- Kuban state technological University
- Kurgan State Agricultural Academy by T.S. Maltsev, Lesnikovo village, Kurgan region
- Kursk federal agricultural research center
- Kursk Institute of Cooperation
- Kursk State Medical University
- Kursk State University
- L.K. Ernst Federal Science Center for Animal Husbandry
- Laboratory of Nature-Inspired Technologies and Environmental Safety of the Arctic of the Federal Research Centre «Kola Science Centre of the Russian Academy of Sciences», Apatity
- Law Institute of the Krasnoyarsk State Agrarian University
- Lesosibirsk Branch of the Reshetnev Siberian State University of Science and Technology
- LLC "Business School", Abakan
- LLC “ECORESURSOVOLZHE”, Togliatti
- Lomonosov Moscow State University, Faculty of Geography
- M. K. Ammosov North-Eastern Federal University, Yakutsk, Republic of Sakha (Yakutia)
- Mari State University, Yoshkar-Ola, Republic of Mari El
- MBEI SGES No. 15, Irkutsk
- Melentiev Energy Systems Institute of Siberian Branch of the Russian Academy of Science, Irkutsk
- Michurinsk State Agrarian University
- MIREA - Russian Technological University
- Moscow Affiliate of Russian Research Institute of Information and Feasibility Study on Engineering Support of Agribusiness
- Moscow Aviation Institute (National Research University)
- Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Moscow Region
- Moscow State Academy of Veterinary Medicine and Biotechnology - MVA named after K.I. Skryabin
- Moscow State Institute of International Relations (MGIMO University)
- Moscow State University of Civil Engineering
- Moscow State University of Food Production (Institute of Veterinary Medicine, Veterinary Sanitary Expertise and Agro-Security)
- Moscow State University of Geodesy and Cartography (MIIGAiK)
- Moscow State University of Technology and Management named after K.G. Rasumovsky (PKU)
- Murmansk Arctic State University
- Naberezhnye Chelny Institute (branch) of Kazan Federal University
- National Library of Bashkortostan, Ufa
- National Research Tomsk State University
- Nizhny Novgorod State Engineering and Economic University, Knyaginino
- N-Novgorod Agricultural Academy, N-Novgorod, Nizhny Novgorod
- North Caucasus Federal University, Stavropol
- North Ossetian State University, Vladikavkaz
- North-Eastern Federal University named after M.K. Ammosova, Yakutsk
- Northern Arctic Federal University named after M.V. Lomonosov, Arkhangelsk
- Northern Trans-Ural State agricultural university
- Novocheboksarsk reclamation engineering institute named after A.K. Kortunov – branch

- federal state budgetary educational institution of higher learning «Don state agrarian university»
- Novosibirsk State Agrarian University
 - Novosibirsk State Technical University
 - Ob-Irtysh Directorate for Hydrometeorology and Environmental Monitoring, Omsk
 - Omsk state pedagogical University
 - Omsk state technical University
 - Orel State Agrarian University named after N.V. Parakhin
 - Orel State University named after I.S. Turgenev
 - Orel State University of Economics and Trade
 - Orenburg State Agrarian University
 - Orenburg State University
 - P. A. Stolypin Omsk State Agrarian University
 - Penza State Technological University
 - Peoples' Friendship University of Russia (RUDN University), Moscow
 - Perm Institute of the FPS of Russia
 - Perm Military Institute of National Guard Troops of the Russian Federation
 - Perm National Research Polytechnic University
 - Perm State Agrarian-Technological University named after academician D N Prianishnikov
 - Peter the Great St. Petersburg Polytechnic University
 - Petrozavodsk State University
 - Platov South-Russian State Polytechnic University (NPI), Novocherkassk, Rostov region
 - Plekhanov Russian University of Economics, Moscow
 - Polytechnic Institute, Vyatka state university, Kirov
 - Povolzhskiy State University of Telecommunications and Informatics, Samara
 - Povolzhsky Research Institute for the Production and Processing of Meat and Dairy Products, Volgograd,
 - Primorskaya State Agricultural Academy, Ussuriisk
 - Prof. B.M. Zhitkov Russian Research Institute of Game Management and Fur Farming, Kirov
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 - Rosinformagrotekh FSBSI, Pravdinsky Township
 - Rostov State Medical University
 - Rostov State University of Economics
 - Russian new university, Moscow
 - Russian Potato Research Centre, Moscow
 - Russian Research Institute of Information and Feasibility Study on Engineering Support of Agribusiness
 - Russian State Agrarian Correspondence University, Balashikha
 - Russian State Agrarian University – Moscow Agricultural Academy named after K.A. Timiryazev
 - Russian State Social University, Moscow
 - Russian State University of Justice
 - Ryazan State Medical University
 - Saint Petersburg State University of Aerospace Instrumentation
 - Saint Petersburg State University of Industrial Technology and Design
 - Saint-Petersburg Mining University
 - Saint-Petersburg State Agrarian University, Pushkin
 - Saint-Petersburg State University of Veterinary Medicine
 - Samara State Agrarian University, Kinel
 - Samara State Medical University (SamSMU University)
 - Samara State Technical University
 - Samara University
 - Saratov State Vavilov Agrarian University
 - SEC "Gorin collective Farm" Belgorod region
 - Siberian Federal Scientific Center of AgroBioTechnologies of the Russian Academy of Sciences, Krasnoobck, Novosibirsk Region
 - Siberian Federal University, Krasnoyarsk
 - Siberian Fire and Rescue Academy EMERCOM of Russia, Zheleznogorsk
 - Siberian Institute of Plant Physiology and Biochemistry Siberian Branch of the Russian Academy of Sciences, Irkutsk
 - Siberian State Medical University, Tomsk
 - Siberian University of Consumer Cooperation, Novosibirsk
 - Smolensk branched of Plekhanov Russian University of Economics
 - Smolensk State Agricultural Academy
 - SMU MOH All-Russian SRI Fundamental and Applied Parasitology of Animals and Plant - a branch of the FSBS Institution "Federal Scientific Centre VIEV", Moscow
 - South Ural State Agrarian University

- South Ural State University, Chelyabinsk
- South Ural University of Technology, Chelyabinsk
- South-Ural State Agrarian University, Troitsk
- Southwest State University Kursk
- SRO, JSC "ECO-Engineering", Achinsk
- St. Petersburg State Forestry University named after S. M. Kirov
- State Agricultural Academy, Ivanovo
- State budgetary professional educational institution for secondary vocational education Moscow state educational complex
- State Humanitarian Technological University
- Stavropol State Agrarian University
- Sukachev Institute of Forest SB RAS, Federal Research Center Krasnoyarsk Science Center of the SB RAS
- Surgut State University
- Synthesis of Oxide Micro- and Nanostructures Laboratory, Institute of Physics and Technology of Petrozavodsk State University
- Tananaev Institute of Chemistry, Laboratory of medical and biological technologies, Apatity
- The All-Russian Research Institute for Horse Breeding, Ryazan region
- The viticulture and wine-making Anapa Zonal Experimental Station - the "Federal State Budgetary Scientific Institution" branch The Horticulture, Viticulture, Wine-making North-Caucasus Federal Scientific Center", Anapa
- Togliatti State University
- Tver State Technical University
- Tyumen State University
- Udmurt state University, Izhevsk
- Ufa State Petroleum Technological University
- Ural Institute of the state fire service of the EMERCOM of Russia, Yekaterinburg
- Ural State Agricultural University, Yekaterinburg
- Ural State University of Economics
- V M Gorbатов Federal Research Center for Food Systems of Russian Academy of Sciences, Moscow
- V. V. Dokuchaev Soil Science Institute, Moscow
- Vladikavkaz Scientific Center of the Russian Academy of Sciences
- Vladimir State University named after A.G. and N.G. Stoletov
- Vladivostok State University of Economics and Service
- Volga NIIS - branch of the Samara Scientific Center of the Russian Academy of Sciences, Ust-Kinelskiy
- Volga Region Research Institute of Manufacture and Processing of Meat-And-Milk Production, Volgograd
- Volga Research Institute of Production and Processing of Meat and Dairy Products, Volgograd
- Volgograd State Agrarian University
- Volgograd State Socio-Pedagogical University
- Volgograd State Technical University
- Volgograd State University
- Vologda branch of FGBNU FNC VIEW RAN
- Vologda branch of The Federal research center-all-Russian research Institute of Experimental veterinary medicine named after K. I. Scriabin and Ya. R. Kovalenko of the Russian Academy of Sciences
- Vologda State Dairy Academy Named After N. V. Vereshchagin
- Voronezh State Agrarian University named after Emperor Peter the Great
- Voronezh State University of Engineering Technologies
- Vyatka State Agricultural Academy, Kirov
- Vyatka State University, Kirov
- West Siberian vegetable experimental station - branch of the Federal state budgetary institution of the Russian Federation, Lebyazhye
- Winogradsky Institute of Microbiology, Research Center of Biotechnology of the Russian Academy of Sciences, Moscow
- World Wildlife Fund Amur branch, Vladivostok
- Yaroslav-the-Wise Novgorod State University, Veliky Novgorod
- Yelets State University named after I. A. Bunin
- Yuri Gagarin State Technical University of Saratov
- Zabaikalsky State University
- All-Russian Scientific Research Institute for Fundamental and Applied Parasitology of Animals and Plant - a branch of the Federal State Budget Scientific Institution "Federal Scientific Centre VIEV", Moscow

The event has offered a platform for bringing together students, postdocs, innovative academics and industrial experts to exchange their ideas and contribute new engineering approaches to research agri-mechanical and automation processes in various technological-, biological- and eco-systems.

Great interest was aroused by the section devoted to economics and organization of agritech engineering, biological technologies, biodiversity and ecosystem stability.

The Conference provided the premier interdisciplinary and multidisciplinary forum for researchers, practitioners and educators to present and discuss the most recent innovations, trends, concerns, practical challenges encountered and the solutions adopted in the fields of environmental and biological sciences, agritech engineering, chemical, mining and soil treatment technologies, digitization of agriculture, aerospace technologies for the development of agribusiness and precision farming [1-3] etc. Although the schedule of the Conference was very tight, there were very vivid discussions among the participants. The participants who could not come to the Conference due to different reasons including the problem of high transportation costs presented on-site presentations which are available on the web-site of the Conference. Participants who could not come due to the restrictions connected with COVID-19 presented poster presentation which can be found at the website of the conference and took part in the online session with reports which had been prepared and sent to the Organizing Committee beforehand. The online section was held on the Zoom platform (zoom.us) which let all the participants to watch the reports and ask questions online as well as to write them in the chat format. The speakers answered the questions online. The participants who could come to the Krasnoyarsk State Agrarian University (Krasnoyarsk) and to the Volga region research institute of manufacture and processing of meat-and-milk production (Volgograd) also participated in the discussions and question sessions. The overall technical quality of the conference was good, the platform let to add up to 500 participants simultaneously. The participants could watch the reports, write questions and communicate. The moderator could change the roles so that the speaker could answer questions and make comments.

All participants were invited to present their papers in this Volume and all submitted manuscripts went through the independent peer review process. We are very grateful to all reviewers from Russia, China, USA, Slovenia, Germany, Serbia and Republic of Kazakhstan for their time and highly professional comments. We deeply believe that their reviews gave opportunity to improve the scientific quality of the presented papers which may be useful for academic, scientific and agri-industrial partners.

More than 800 reports were submitted to the Organizing Committee of the Conference. 473 reports were selected for inclusion into this Volume after the review process. All the papers were subjected to rigorous peer-review by conference committee members and international reviewers. The papers were selected based on their quality and relevance to the Conference directions and on the results of their presentation at the Conference session. The proceedings present to the readers the recent advances in the field of agribusiness, economics and organization of agritech engineering, biological and information technologies, environmental, chemical, ecological, power, oil and gas engineering. These papers reflect modern engineering approaches in all Conference directions, broaden the researches of the previous Conferences [4-15].

We chose the IOP Conference Series: Earth and Environmental Science (EES) to provide all contributors with the opportunity to publish their papers in an international, peer-reviewed journal. This is understood and appreciated by all the participants of our Conference, and therefore this Volume provides an excellent overview of the main topics of our Conference. The Proceedings of the I Conference AGRITECH were published in IOP Conference Series in August 2019 [5], the Proceedings of the II Conference AGRITECH were published in IOP Conference Series in January 2020 [9] and the Proceedings of the III Conference AGRITECH were published in IOP Conference Series in September 2020 [11].

Acknowledgements

We express our gratitude to Rector of Volgograd State Technical University, Professor Alexander Navrotsky and to Director of the Volga region research Institute of manufacture and processing of meat-and-milk production, Corresponding member of the Russian Academy of Science, Professor Marina Slozhenkina who were the co-chairs of the Programme Committee of AGRITECH-IV-2020

for the organisation of the Conference and preparation of the papers for this Volume. The Committee of the IV AGRITECH Conference highly appreciate the contribution of the Academician of the Russian Academy of Science, Scientific Supervisor of the Volga region research Institute of manufacture and processing of meat-and-milk production, Professor Ivan Gorlov for cooperation in organisation of AGRITECH-IV-2020. We are grateful to scientists and professors of Krasnoyarsk State Agrarian University, Volgograd State Technical University, Siberian Federal University, Volga region research Institute of manufacture and processing of meat-and-milk production (Volgograd), Federal Scientific Center VIEV (Moscow), Stavropol State Agrarian University, Vyatka State Agricultural Academy (Kirov), Irkutsk, Omsk, Chelyabinsk, Moscow, Samara, Saratov, Chechen Universities for active participation in the Conference.

On behalf of the conference committee and organizers, we would like to thank all the authors who contributed to this Volume as well as to the reviewers, speakers and all the conference participants for their support to AGRITECH-IV-2020.

We express gratitude to IOP Publishing for an opportunity to publish the Proceedings of the Conference to provide open access and to make them available for worldwide recognition.

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