



FEDERATION OF THE SCIENTIFIC ENGINEERING UNIONS (FSEU)

VII INTERNATIONAL SCIENTIFIC CONGRESS
AGRICULTURAL MACHINERY



PROGRAM

ORGANIZER:

SCIENTIFIC -TECHNICAL UNION OF MECHANICAL ENGINEERING

ROUSSE UNIVERSITY - ANGEL KANCHEV

BULGARIAN ASSOCIATION OF AGRICULTURAL MECHANIZATION

26.06 – 29.06.2019
BURGAS, BULGARIA

20	MATHEMATICAL MODELING OF PROCESSES IN THE SYSTEM OF PERFORMANCE AUTOMATIC CONTROL OF THE SMALL FEED-PROCESSING PLANT	Prof. DSc Keshuov C. ¹ , Dr. Berdimurat A. ² , senior lecturer Charibayeva S. ³ , Dr. Usipbekova D. ⁴ LLP «Kazakh scientific research institute mechanization and electrification of agriculture» ¹ - Kazakh national agrarian university ^{2,3} Almaty University of Power Engineering and Telecommunications ⁴	04	KZ
21	DEVELOPMENT OF INNOVATIONAL TECHNOLOGIES OF AGRICULTURAL MACHINES PROJECTING AND THEIR INFLUENCE ON THE FORMATION OF PROFESSIONAL COMPETENCIES OF AGRICULTURAL ENGINEER	Assoc.Prof. Dr. Viktor Pryshliak Vinnytsia National Agricultural University	66	UA
22	LONGITUDINAL DISTRIBUTION OF THE LIQUID FALL WITH THE ADDITION OF ADJUVANTS IN CONDITIONS OF THE AIR STREAM	Student Bartłomiej Gašior Wrocław University of Environmental and Life Science	32	PL
23	Selected parameters of spraying and addition of adjuvants and their impact on the degree of coverage of sprayed objects	Student Kacper Szlaski Wrocław University of Environmental and Life Science	33	PL

19:30 – 24:00

"WELCOME" COCKTAIL - The restaurant for breakfast

Tuesday (26.06)	09:00 – 19:00	POSTER SESSION	CONFERENCE HALL 1	
Wednesday(27.06)	09:00 – 12:00	"Agricultural machines. Research and testing. New machine designs."		
24	COMPUTERIZED TEST BENCH FOR TRACTOR CABS	Assist. prof., Dr. of Tech .Sc. Girutski I.I., Assist. prof. Senkov A.G. PhD. Belarussian State Agrarian Technical University	15	BY
25	IDENTIFICATION OF "TEKRONE" MATERIAL AND JUSTIFICATION OF ANALOGUES FOR MANUFACTURING MOULDBOARD PLOUGHS	Prof. DSc. Kobets A. ¹ , Assoc. Prof. Dr. Derkach ¹ , Assoc. Prof. Dr. Kabat O. ¹ Assoc. Prof. Dr. Makarenko D. ¹ , Prof. DSc Aulin V. ² , PhD Student Muranov E. ¹ , Eng. Shapoval A. ³ ¹ Dniprovsky State Agrarian-Economic University ² Central Ukrainian National Technical University, ³ Research and Production Enterprise "Soyuz Composite"	16	UA
26	STUDY OF THE CHANGE OF THE MOMENTS OF FRICTION FOR ELECTROLYTIC RECOVERY IRON COATINGS	Prof. Kangalov P., PhD, Beleva D. PhD stud., University of Ruse	43	BG
27	DEVELOPMENT OF PNEUMATIC SEEDER FOR SOWING GRAIN CROPS	Aduov M. A. Nukusheva S. A. Kaspakov E. Z. Isenov K. G. Volodya K. Tulegenov T.K. S.Seifullin Kazakh Agrotechnical University, Astana	45	KZ

*time for presentation 10-12 minutes,
questions after each presentation*



**SCIENTIFIC AND TECHNICAL
UNION OF MECHANICAL ENGINEERING
BULGARIA
AWARDS**

A

DIPLOMA
**FOR THE PARTICIPATION IN THE
VII INTERNATIONAL SCIENTIFIC CONGRESS**



AGRICULTURAL MACHINERY 2019

TO

*Candidate of Tech. Sc., Assoc. Prof.
Pryshliak V.*

FOR THE REPORT

**DEVELOPMENT OF INNOVATIONAL TECHNOLOGIES OF AGRICULTURAL
MACHINES PROJECTING AND THEIR INFLUENCE ON THE FORMATION OF
PROFESSIONAL COMPETENCIES OF AGRICULTURAL ENGINEER**

Prof. D.S.C. Eng. Georgi Popov
Chairman of the
Scientific-Technical Union of Mechanical Engineering

Burgas

26 - 29.06.2019



Pryshliak V.M.

DEVELOPMENT OF INNOVATIONAL TECHNOLOGIES OF
AGRICULTURAL MACHINES PROJECTING AND THEIR INFLUENCE ON
THE FORMATION OF PROFESSIONAL COMPETENCIES OF
AGRICULTURAL ENGINEER

The development of innovative technologies of designing agricultural machines and their influence on the formation of professional competencies of agroengineer is presented. The course designing topics and stages of work implementation are highlighted, which states that during designing a review and analysis of existing structures of this type is performed, the mechanical and technological properties of agricultural materials with which the machine will work (soil, seeds, fertilizers, root crops, etc.) are determined, the agrotechnical requirements and technical requirements for the car are formed, the technological scheme of the design is substantiated and the principle of its work is described, the basic technological, kinematic, hydro or pneumatic mechanical parameters, the forces acting on the working bodies, traction resistance and power consumption are determined, calculations are made for the strength of the changed structural elements, the technical passport of the machine is drawn up, the technical and economic indicators are determined, the technological scheme is drawn up, the description is made and the formula of the invention is compiled according to the requirements of the patent documents. It is noted that the successful completion of the course work on agricultural machines involves interdisciplinary connections with other disciplines, for example, such as the mechanical and technological properties of agricultural materials, the basis of engineering methods for calculation of strength and rigidity, machine parts and design principles, agriculture, the basis intellectual property, the basis of scientific research, etc. An example of an approximate algorithm for calculating and designing an agricultural machine on the example of a grain seed drill is given. The factors emphasizing the quality of preparation of agroengineering specialists, development of capabilities for performing design functions are highlighted.

The educational discipline "Agricultural Machines" [1] is the basic in the structural-logical scheme of training specialists in specialty 208 – "Agroengineering". Students learning the structure and principle of the operation of agricultural machines, adjust the optimal operating modes, the theoretical foundations of the technological processes of the working bodies, the method of designing and designing new and improving the existing structures, learning the discipline. Total volume of educational discipline "Agricultural machines.

Fundamentals of theory and calculation " is 162 hours, of which 108 hours. assigned to classroom work, and 54 – for selfstudy. In recent years, changing the number of hours in this discipline tends to reduce the number of class hours, while the time for self-employment is increasing. Independent work consists in studying software material in the laboratory of the estimated course of agricultural machines, on the site of storage of equipment, in libraries, at the branches of the department. Individual tasks of self-fulfillment include calculation, calculation and graphic work, and most importantly, it is course work (project).

The aim of the course work is the technological development of structures of agricultural machines or their units or the improvement of existing production processes for the cultivation and production of agricultural products or the improvement of operational and economic indicators. It is intended to consolidate the theoretical positions of the basic discipline "Agricultural Machines" by substantiating and calculating the processes that execute agricultural machines and the formation of students' ability to make optimal decisions on technological design of new and improvement of existing means of mechanization taking into account specific agrotechnical and relief conditions.

Successful implementation of the course work on agricultural machines involves interdisciplinary connections with other disciplines, for example, such as the mechanical and technological properties of agricultural materials, the basis of engineering methods for calculating strength and rigidity, machine parts and design basics, agriculture, the fundamentals of intellectual property, the basis of scientific research, etc. During the issuance of individual tasks for course design, account is taken of the agronomic requirements, the technical characteristics of the machines, the economic activity of the particular enterprise, the practical direction of the project activity of the future agroengineer. When doing the course work adhere to the basic provisions of the algorithm for the development of a new agricultural machine