

## MACHINERY AND EQUIPMENT MEKHANIZATSII

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### DEPARTMENT "MECHANIZATION OF LIVESTOCK" - 55 years

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*The historical aspects of the formation of the department of animal husbandry mechanization, the contribution of scientists and stages of development of material resources in training in animal husbandry and mechanization of production processes.*

***Anniversary, Science, Department of mechanization livestock, history, milestones, scientific school training.***

**Resolution of the problem.** The weight of a department, as the main structural unit of the university, determined not only by the same name, but primarily because they teach (content), what made training (physical infrastructure) and who teaches (Staffing).

**Analysis of recent research,** Literary and legal sources say that during the period of its existence the department of animal husbandry mechanization has significant achievements in all areas of activity.

**The purpose of research.** Analysis of the history department of mechanization of animal husbandry as the main structural unit of the university.

**Results.** Pretty simple story no department can be divided into several stages, namely development, intensive development and prosperity and even the modern state. Separately discipline "Mechanization of livestock farms" was dedicated back in 1951 at the rate of agricultural machines. Status as an independent unit department acquired in 1960 by order of the Federal Ministry of Higher and Secondary Education. The founders and organizers of the department were Associate Professors PI Kondratiuk and VM Sinyavsky, assistants AL Ivashin and DA Domaschenko [1]. The first head of department was elected Associate IT Osmak.

After 1965, the country began to occur intensification of agricultural production. Including rapidly developing livestock, expanded range of machines and equipment for the industry, increased their technical level.

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Fig. 1. In the years of the department was headed by Associate Professor: (left to right) IT Osmak (1960-1963 gg.), PI Kondratyuk (1963-1964 gg.), VM Sinyavsky (1964-1966 gg.).

In 1966 the leadership of the department came to AA Associate Jaworski, who had a large production and management experience. Since that time, began intensive development department. Its base was relocated in educational building №7, greatly expanded area laboratories. Each year, they were filled with new machinery and equipment, developed new laboratory work. Increasing the number of teaching staff and, in some years reached 12-15 people [2, 3].

Over time assistant professor of management DS Chubovym at the department created Interfaculty complex technological laboratory. Continued completing their new equipment. This was aided by the active assistance association "Ukrsilhosptehnika."

In 1989, the department was recognized as a model [4, 5]. In the same year, the Department had conducted a workshop Union heads of related departments and teachers, which included representatives of 104 universities. They noted that our department has the best material and technical base.

Postdoctoral in 1991, its head was one of the authors of this article [6-10]. As a result of strengthening and expanding relations department of industrial enterprises and research organizations JSC "Bratslav", JSC "Umanfermmash" factories Novograd Volyn "Silsham", "Kovelsilmash" and "Nizhynsilmash" international firms "De Laval" ( Sweden) in Ukraine and "Landtechnik-Westphalia" (Germany), NSC "IMESH" "UkrCTT" and other continued renewal and replenishment of logistics new domestic equipment. In 1999, the laboratory department was assembled piece installation of new generation of leading world company "Alfa Laval". At the opening of milking machines was present then president of Ukraine Leonid Hairy fur cap.



Fig. 2. Intensive development department and its top falls between management teams of lecturers AA Yavorsky (1966-1976 gg.) And DS Chubovym (1977-1992 gg.), Professor II Revenko (1992-2006 gg.).



Fig. 3. Visiting Chair President of Ukraine Leonid Kuchma at the opening of milking machines.

For a long time the Department carried out the first study on the subject "Mechanization of livestock farms", whose name was changed to "Mechanization of livestock production." Names quite consistent with the content of training specialists technological and economic aspirations,

but not quite suited for technical professions, especially after the emergence of a new faculty "Construction and design of machines."

In 1993-1994. In the development of Ukraine's first new curricula and in connection with expanding the range of specialties and the introduction of new specializations, our department has initiated the introduction of new disciplines. As a result, were initiated new courses "Machines and equipment for animal", "Mashynovkorystannya in animal", "Design of mechanized processes in animal husbandry", "Installation and commissioning fermoskyh machinery and equipment." With the guidance and direct participation of teachers of the department have been developed and implemented in the educational process complete software and provide all literary disciplines cycle "Mechanization of livestock," according to this has been changed and the name of the department. Total staff of the department are co-authors of 8 textbooks and 29 manuals.

Department of Livestock is mechanization profiling (graduates) i prepare 20-30 year bachelors direction "processes, machines and equipment for the agricultural production", 10-15 bachelors direction "Mechanical Engineering" and 25-40 masters in "Mechanization of agriculture" and "machines equipment agricultural production. "

Unfortunately the new curriculum for veterinary specialists Profile no place for the study of the mechanization of livestock. Probably when you change the name of veterinary medicine at some consider optional maintenance work professionals. Specifically machine technology, the specifics of the use of mechanization can contribute to the health of both animals and cause its violation.

In 90 of the last and the beginning of the XXI century (until 2005) was the center of our department of professional development for teachers of agriculture and related departments of universities. Routes acquaintance with our university the majority of domestic and foreign delegations and guests included, usually visiting laboratories and livestock department of mechanization.

But over time by the administration imposed increasingly short-sighted and unreasonable proposals, in particular, the appropriateness of the translation department zooengineer faculty. This decision obviously would Lowering rating department, from the top of profiling transferred to a secondary level. Neither was perceived as the staff of the Department and the leadership of the faculty and the institute. The next step was already implemented the transfer of some laboratories of our department of technology of production and processing of milk and beef, pig and sheep breeding, poultry farming. Despite the fact that these departments are housed in machinery and equipment are not objects of study. And practically they do not need. We also did not become opportunities to

conduct classes in these laboratories through space-time.

The active "assistance" from the administration was sending the premises of a number of newly established department building. The majority of our faculty training equipment was originally submitted to the courtyard, and then distributed to educational farms. Now instead existed in this complex 9 technological laboratories were 3 study and one educational, scientific and industrial laboratory. Among them are full to the educational process is the only laboratory "milking machine".

Thus the material base, which was created for nearly half a century, was destroyed in three or four years, the department has remained virtually with nothing, which dramatically worsened levels of laboratory studies.

Recent years as the head of the department was Associate Professor OO Zabolotko (2006-2010 gg. And 2012-2014 gg.), And then became Professor GA Golub (2011-2012 biennium.) And the end of 2014 today. Now teaching staff - 2 professors, 6 candidates of sciences and associate professors, 2 assistants [11]. The department participates in training level "Bachelor" faculty of mechanics and technology, engineering and design, Energy and Automation, livestock and aquatic biological resources, biotechnology, and environmental, economic, agricultural management, and level "Master" faculty of mechanics and technology, design and design.

Besides educational and methodical work department staff regularly and actively took part in the research. The research work of the department was focused on the following two areas:

- improving existing and developing new means of mechanization of livestock production;
- study of scientific principles, technological and technical solutions resource in the production of animal products.

Currently, the scientific work of the department focuses primarily on the development of mechanized technologies, processes and technical means for competitive environmentally friendly agricultural production, energy autonomy of biotechnology. All heads of department and professor OO Omelchenko, who has long worked in combination with our department as far as possible carried out training of highly qualified personnel. Based on research carried out during the existence of the department prepared and defended 3 doctoral and 21 master's theses.





Fig. 4. The staff of the department of animal husbandry mechanization (2015): seated (from left) Associate Professor OO Zabolotko, Ph.D. SE Potapov, Professor II Revenko, Head of Department, Professor GA Golub, Assistant AM Achkevych, master of education A.Ch. Kostenko; are Associate VI Child, master of education TN Nechupiy assistant V. Radchuk, associate MM Chos and VS Hmelovskyy, senior assistant MO Tetervak, head of laboratories VM Sorokin.

The first doctoral thesis prepared by the department, was protected in 1991 - "The intensification processing fodder choppers Hammer" (II Revenko); then in 1998 - AI Fenenkom "Technical and technological aspects of improving milk-milking vacuum systems" (scientific advisor, Professor. Revenko II), and in 2005, Associate Professor VM Manko thesis "Theoretical and methodological foundations degreeal train future mechanical engineers of agricultural production."

In addition to educational materials, staff and graduate students published 4 books and over 900 scientific papers; received more than 500 patents for inventions, including 28 in collaboration with students; developed and produced more than 20 samples of new machines and equipment. Some developments have been presented in exhibitions at various levels, and members of the department were 3 silver (prof. I. Revenko, Assoc. A. Pylypenko) and bronze (doc. SP Lishchynsky) medals ENEA USSR and bronze medal diploma of 3 degrees ENEA Ukraine (prof. I. Revenko, p. off. EP Dobrovolsky).

The main scientific and technical results of research carried out over the years by the department, include:

- development of the theory of grinding, the development of quantitative criteria and classification of materials according to their ability to crushing; grounding system resource principles in the production of animal products (prof. I. Revenko);
- development of technological processes and new technologies, mechanization of feed distribution used in the construction of feeder KTU-10 and 3-ANGLE (prof. O. Omelchenko, Assoc. A. Jaworski);
- roughage processing flour and pasta Hammer choppers without cutting and rational allocation schemes hammers on a drum - in a pilot mill crusher series DKM and DKM-5 and DM-F-4 (prof. I. Revenko);
- cleaning of milking and other equipment - in the farms of Ukraine (Assoc. VP Zvenigorod);
- preparation for feeding grain soybean (doc. A. Pylypenko);
- calculation methodology units for thermal processing of food (Assoc. V. Sinyavsky) and hammer shredders (prof. Revenko II) which are used in textbooks and learning process;
- regulations quality assessment grinding feed (OST 70.19.2-84., Prof. Revenko II) test equipment for the processing (OST 70.20.3-83) and installations for methane fermentation (RD 10.20.1-87 Assoc. Chos MM) manure JMA 29.3-37-440: 2006 "Complex of machines and equipment for industrial dairy farms. General technical requirements" (doc. Zabolotko AA and Assoc. Lishchynsky SP) and 29.3 SOU -37-441: 2006 "chain Conveyor rod-manure system with housing for the animals. General technical requirements" (doc. Chos MM);
- together with SNAU develop methods and laboratory equipment for the assessment of lubricants used in engines fermsskyh (prof. I. Revenko, associate IM Rebenko Rebenko and VI);
- Research methodology process of grinding grain definition technology, energy and quality of crushers, substantiated rational parameters developed design Hammer crusher capacity 2 t / h, and press for processing oilseeds for feed (doc. A. Pylypenko) ;
- new structural and functional layout and prototypes milking machines in pairs, the combined actions that can reduce the duration dodoyuvannya machine in 1,9-2,1 times conducted their trial production, improved design-assembly and circuit designs milking basic elements that implemented in three farms of Kyiv and Mykolaiv regions (prof. I. Revenko, associate OO Zabolotko Lishchynsky and SP);
- improved design-assembly and circuit designs basic elements milking (OA associate Zabolotko and Lishchynsky SP) that are embedded in the 3 farms of Kyiv and Mykolayiv regions;

•developed advanced solutions means preparation and distribution of the mixed feed for cattle farms, watering animals (Associate Professor VS Hmelovskyy).

In addition, studies and development of new technical solutions and roller hammer zernodrobarok, shredders stem feed, combined feed preparation method and devices for their implementation, stryhalnoyi rotary type machines and more.

**Conclusion.** During its existence the department of animal husbandry mechanization has significant achievements in all areas of activity. The present capacity of the team is also able to multiply. However, to successfully address the important tasks of training and implementation of modern scientific and technical issues are extremely important to carry out resuscitation laboratory facilities department.

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*Rassmotreny Historical Formation of the department mechanization aspects of animal husbandry, the contribution of the Scientific and personnel development etapy materialnoy bazy in the preparation professionals in the industry and animal husbandry mechanization processes proizvodstvennyh*

***Yubiley, science, department, mechanization animal husbandry, History, etapy, nauchnaya school Preparation specialists.***

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