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CONTRIBUTION OF UKRAINIAN AGRICULTURAL RESEARCHERS TO THE DEVELOPMENT OF AGRICULTURAL MECHANICS AT THE END OF THE 19TH CENTURY

Summary

The development of agricultural mechanics at the end of the 19th century is closely linked to the activities of Ukrainian researchers in the agricultural sector, who sought to introduce innovative technologies in agriculture and increase the efficiency of agricultural work.

The aim of the study is to clarify the historical and technical significance of the activities of individual scientists and scientific centers in the development of agricultural mechanics and the improvement of agricultural production efficiency at the end of the 19th century. The methodological basis of the study is the principles of historicism, scientific objectivity, and systematicity, which involve considering the development of agricultural mechanics in the broad socio-economic and institutional context of the late 19th century. The contribution of leading representatives of Ukrainian agricultural research to the development of agricultural mechanics, the improvement of agricultural machinery, and the introduction of innovative approaches to soil cultivation is analyzed. Particular attention is paid to their scientific, organizational, and educational activities in Galicia, Kyiv, and Kharkiv, as well as the formation of scientific schools and practices of mechanization. The interaction between research farms and educational and scientific institutions, which contributed to the dissemination of advanced technologies and the exchange of professional knowledge, is highlighted. The historical and organizational aspects of the activities of T. Rylsky, K. Shindler, G. Latshev, and K. Aidukevich, who played a prominent role in popularizing the mechanization of agricultural production, are revealed. It is emphasized that their activities were not only of practical importance, but

also contributed to the formation of the conceptual foundations for the development of agricultural science in Ukraine. It has been proven that the contribution of Ukrainian agricultural researchers was an important factor in the modernization of agriculture and the growth of agricultural productivity in the second half of the 19th century. Particular attention is paid to the sociocultural factors of technical innovation implementation, such as interaction between specialists and farmers, adaptation of machinery to regional conditions, and the role of state and public support in the dissemination of mechanization practices. The results of the study deepen our understanding of the historical preconditions for mechanization and the development of agricultural science in Ukraine.

In addition, the experience of Ukrainian agricultural researchers at the end of the 19th century demonstrates the importance of a comprehensive approach to innovation that combines technical, educational, and social components. It was this model that ensured not only a short-term increase in productivity but also the long-term modernization of agriculture by integrating scientific knowledge into agricultural production practices. In view of this, a historical analysis of the contribution of Ukrainian agricultural researchers is not only informative but also methodologically significant for contemporary research into innovation processes in the agricultural sector.

A personalized approach to analyzing the development of agricultural mechanics allows us to view agricultural science during this period not as an abstract body of knowledge, but as the result of the purposeful activities of specific scientists, engineers, and research organizers. The activities of such figures as T. Rylsky, G. Latyshev, and K. Shindler demonstrate that scientific progress in the field of mechanization was inextricably linked to their personal initiatives, professional competence, and ability to combine scientific research with the practical needs of farms.

Keywords: *history of science, agriculture, agricultural mechanics, agricultural research, Tomasz Rylski, Kamil Shindler, Grigory Latyshev, Kazimir Aidukevich.*