

**Kolesnik N.N. – outstanding Ukrainian geneticist,
stockbreeder and pedagogue**

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Fundamental scientific researches by outstanding Ukrainian geneticist, stockbreeder and pedagogue Kolesnik N. N. are stated. In thirties of the 20th century he took part in archeological expeditions to Russia, Mongolia and other bordering countries inspecting condition of cattle breeding and evolutionary descent of aboriginal cattle.

Having no mean mathematical abilities he successfully solved complicated scientific challenges at the confluence of selection and animal genetics. Fully participated in international, scientific, public and teaching activity of separate organizations, institutions and Ukraine in general. Professor Kolesnik N. N. created scientific school and his original developments provided the basis for thesis research of Petrenko I. P. Trofimenko A. L. and others.

***Professor Kolesnik N. N., expeditionary inspections, animal genetics,
dispersive complexes, exterior, research actuality***

Outstanding Ukrainian geneticist-breeder NN Kolesnik began his professional career in 1925. He graduated from the Kharkov Veterinary Institute and immediately entered the second year of the biology speciality at Leningrad University at the Department of Genetics. At the beginning of the twentieth century genetics began its rapid development, especially in Europe (Germany, United Kingdom, Denmark, Sweden) and in Russia (Leningrad, Moscow).

N.N. Kolesnik was involved in expeditions to survey livestock state in Central Asia and Mongolia. Biological aspects had particular value of cattle research: skeleton, skulls and exterior measurements. Generalized materials devoted to research the age dynamics of live weight indicators of young cattle and the consistency of genetic variation in body weight of individuals in a certain age.

N.N. Kolesnik has also participated in expeditions to survey the livestock in the outlying areas of Russia. Has developed standards for the selection of animal by the live weight, measurements of the exterior, disease resistance, etc.

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In the early seventies of the XXth century in Ukrainian zootechnical science intensive analysis of variance was used to assess the effects of environmental and heredity factors on the resulting productivity (milk, meat, fertility). Such articles were sent, usually to the editors of the journal "Cytology and Genetics, where Professor NN Kolesnik made a comprehensive analysis, and gave general conclusion.

He emphasized that biologists use mathematics to solve such basic questions:

- How to select objects, how many to choose from the total population?
- How to obtain generalized results across species studied together based on individual measurements?
- How to receive general characteristic of this category of individuals with sufficient accuracy on the research basis on a selected group of animals?

Special positive global response has received mathematical development of N.N. Kolesnik on assessment types of constitution in Zootechnology and Biology.

In his later life N.N. Kolesnik has developed an original method for the genetic study of live weight of animals on the basis of the inclusion of information "triples": parents - descendant. Monograph "Genetics of live weight of farm animals" uses not only among the scientific community of Ukraine but in neighboring countries.

N.N. Kolesnik research on the number of phenotypes remained relevant, which are formed on the basis of the same genotypes under different environmental conditions. The scientist made a significant contribution to

theoretical propositions regarding the balance of genes in the genome of animals of different levels of productivity.

Professor N.N. Kolesnik not only organized the first genetics department in the system of agricultural universities of Ukraine, but also developed guidelines and programs of scientific research on genetics of plants and animals in the scientific institutions of the Ministry of Agriculture for a long period (1990-2005), organized Ukrainian association of breeders and geneticists named after N.I. Vavilov with regional offices, held a number of congresses and edited published works and papers presented at these events, contributed to the organization of the scientific magazine "Cytology and Genetics".

The contribution of prof. N.N. Kolesnik to the modern theory of selection and cultivation practice of farm animals breeds is priceless and remains relevant, his individual works have not yet been studied. Apprentices of N.N. Kolesnik continue the work of their teacher. They publish books, tutorials and practical courses on genetics for agricultural specialists.

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