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KOLESNIK M. - FOUNDER OF THE SCHOOL GENETICS IN UKRAINIAN AGRICULTURAL ACADEMY

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Article deals with the years 1952-1984 of outstanding scientist geneticist, Doctor of Biological Sciences, Professor, Corresponding Member of the Ukrainian Academy of Agricultural Sciences Kolesnik Nikolai N. of Ukrainian Agricultural Academy.

Kolesnik Nikolai N., Ukrainian Agricultural Academy, the history of genetics.

Despite the short period that separates us from 23 January 2000, when passed away eminent scientist of the last century Nikolai N. Kolesnik, many aspects of his fruitful work remains illuminated for a few contemporaries and posterity. In this regard, there is a need to study and describe his career. This article is devoted years of labor N. Kolesnik in Ukrainian Agricultural Academy (1952-1984), now - the National University of Life and Environmental Sciences of Ukraine).

Research materials were reports of N. Kolesnik, written with his own, which are stored in the archive of the University of Life and Environmental Sciences of Ukraine, as well as of its publication, article, service characteristics and memoirs of contemporaries scientist [1–5].

His career as N. Kolesnik can be divided into several periods:

- Years 1928-1940 - the period of geneticists in academic school YO Filipchenko, accumulation of factual material on the basis of field expeditions in Kyrgyzstan Kara-Kumah, Mongolia, Uzbekistan, Dagestan, Karachay;

- 1941-1951 - generalization and theoretical foundation of research, which resulted in his doctoral thesis on the origin, evolution and ecological and geographical differentiation of domestic animals in Asia, beginning teaching;

-1952-1964 - Teaching activities in Kyiv farm-governmental institute;

-1965-1984 - Creation and management of the Department of Genetics at the Academy in Kiev.

Nikolai N. Kolesnik began his career in Ukrainian Agricultural Academy in 1952. At that time, as evidenced by the personal record sheet from the staff, filled him personally, N. Kolesnik was 47 years old (he was born December 19, 1904). Nikolai N. Was graduated two universities - in 1925 - Kharkiv breeding Institute (now - Kharkiv Veterinary Academy, in 1929 - the Leningrad State University, won two majors - livestock and biologist. Thus, at the age of 25 years, Nicholas N. was unique expert in the biology of domestic animals. It should be noted that the first published works of MM Kolesnik "Kyrgyz milkiness cattle Semipalatinsk province" (sole) and "Cattle nomadic population of Semipalatinsk province", "On the definition of live weight of cattle on the basis of measurement" (co-author) was published in 1928 when the author was still a student, but as a research associate genetics laboratory (later reorganized into the Institute of genetics, Academy of Sciences of the USSR) in Leningrad, where he served as research assistant in the field and office studies livestock squad Kazakh expedition.

In 1930 N. Kolesnik was the head of the Turkmen Academy of Sciences expedition livestock. After graduation N. Kolesnik concurrently worked as Research Fellow Institute of Animal All-Union Academy of Agricultural Sciences (VASHNYL). In 1931 Kolesnik promoted to the category of researchers and laboratory genetics Academy of Sciences, and the reorganization of the laboratory in the Institute of the Academy of Sciences of the USSR - a senior researcher of the Department of "Evolution and the origin of domestic animals", where he worked until 1941. During this period he also served as chief livestock expeditions in Kyrgyzstan, head east squad Mongolian expedition squad chief livestock complex expedition in Dagestan and Karachay. During this time N. Kolesnik wrote works devoted to the study of livestock in Kyrgyzstan Kara-Kumah, Mongolia, Uzbekistan, Dagestan, Karachay, qualitative improvement of breeds of domestic animal origin, rock formation and geographical distribution of cattle.

From the pen of an outstanding scientist obtained analytical article "The work of the Institute of Genetics, Academy of Sciences of the USSR" (1935), "The genetics of animals in the USSR for 20 years" (1937), "Livestock in the USSR for 20 years" (1937), "The domestic animals of Mongolia" (Mongolian, 1938), "Livestock in 20 years"(French, 1938)," "The creation of new breeds of farm animals in the USSR" (French, 1938"On the formation of breeds of cattle""(1941). The bulk of research papers N. Kolesnik wrote in that period alone (except for works of the Mongolian Commission number 24, 1938, which describes the results of a scientific expedition of livestock in the Mongolian People's Republic, 1931-1932.). At this time, scientists continue to attract the attention the issue of changing growth and precocity of animals (1940). In 1936 the Presidium of the USSR Academy of Sciences N. Kolesnik awarded a PhD degree in Biological Sciences without defending a thesis.

Start a scientific way Nikolai N. inextricably linked with the name of the founder of the first department of genetics and scientific structure, which became henceforth the Institute of Genetics, USSR Academy of Sciences, Petrograd University Professor Yuri Alexandrovich Filipchenko [6]. History of the Department of Genetics, University of Leningrad pre-war period associated with such prominent geneticists like Vavilov, GD Kapenchenko, GA Levitskaya, LI Govorov who died during the repression of the 30s. Among the graduates of the department that period were FG Dobzhansky, A. Prokofiev-Byelhovska, NN Medvedev, A. Kerkis, N. Kolesnik, ML Belhovskyy, NE Lobashev, J. A. Rapoport, YL Horoschenko, TK Lepyn, la la Luz, AI Zuytyn, RL Berg, FA Smirnov [7].

In 1930, after the death of A. Filipchenko, laboratory headed by Vavilov, and in 1933 the laboratory was transformed into the Institute of Genetics, Academy of Sciences of the USSR, who moved to Moscow in 1934 [6]. NI Vavilov remained director Institute until his arrest in 1940 [8].

In 1941 the director of the Institute of Genetics appointed Lysenko, who was in office until 1965, when he was released from his duties as director of the Institute of Genetics, USSR Academy of Sciences, and the Institute is closed [8].

We can assume that the move Nicholas N. Kolesnik in Tajikistan was associated with an extremely difficult situation that arose at the Institute of Genetics after the arrest of its director - NI Vavilov.

Since 1941 N. Kolesnik works in the Tajik Branch of USSR in Stalinabadi (now - Dushanbe). The first year (1942) he served as head of the Department of Zoology, Institute of Zoology and Parasitology, and then - head of the department of animal husbandry in the same institution. Academic activity begins with an analysis of the state and prospects of research in Tajikistan (1943). Nikolai N. dedicated their works kurdyuchnym sheep Eastern Pamir (1946), which Pamir (1946), Tajik origin zebuvydnoyi cattle (1947), by improving sheep in Tajikistan (1946), improvement of cattle in Tajikistan (1946), livestock Tajikistan (1950). Among the fundamental works of this period, it should be noted "Bergmann's rule in the geographical changes of domestic animals " (1948), "Issues of evolutionary ecology of domestic animals" (1947), the book "The Evolution of cattle" (1949), "Some problems of environmental adaptations in domestic animals" (1946). Proceedings of the prominent geneticist noted Diploma of Presidium of Supreme Soviet of the Tajik SSR "for advanced study and popularization of scientific achievements" in 1945.

From 1 September 1944 to December 1947 the main job N. Kolesnik was the Institute of Animal in Moscow, where he served as senior fellow for cattle. At the same time, part-time, continued to work at the Institute of Animal Tajik Branch of the USSR. In November 1946 at a meeting of the Academic Council VYZhu doctorate "The origin, evolution and ecology-geographical differentiation of domestic animals Asia " in the field of biological sciences.

From December 1947 to June 1, 1950 a scientist working at the Institute of Animal Tajik Branch of the USSR Academy of Sciences as head of the Department of sheep at the same time gave a course of breeding farm animals and

Darwinism in the Tajik Agricultural Institute. In 1949 M. Kolesnik received the title of Professor.

This stage in the life and work of N. Kolesnik lysenkovschyny coincides with the period that started in the 30s, accompanied by repression of geneticists and experienced its peak in 1948, after the infamous session of Agricultural Sciences, which is officially banned genetics until 1956 [9].

From 1950 to 1952 N. Kolesnik, head of the department of breeding livestock Ryazan Agricultural Institute. In 1952 he was elected head of the department of animal husbandry Kyiv Agricultural Institute. In 1959, in connection with organization of Ukrainian Agricultural Academy, scientist appointed head of the department of special breeding, and in 1965 - transferred to the department of genetics, which he headed until 1985. From 1960 to 1964 N. Kolesnik was dean zootechnical faculty. Along with work in the UAA, from 1965 he delivered lectures on special animal genetics at the Kiev State University, and from 1967 - worked part-time head of the department of animal genetics at the Academy of Sciences of the USSR.

In 1959 N. Kolesnik was elected a corresponding member of the Ukrainian Academy of Agricultural Sciences.

Analysis related to scientific works of Nikolai N. postgraduate and doctoral students was highlighted. Information science school MM Kolesnik shown in the memories of his students - GS Taranenko, OL Trofymenko, M. Protsenko, AV Herasymchuk, colleagues - DT Vynnychuk,, as well as reports on the work of the department and characteristics. Thus, in the description published for submission to the Ministry of Agriculture of the USSR in January 1964, we find that under the direction of N. Kolesnik defended 12 candidate and one doctoral thesis. In March 1966, for submission to the characterization of the Moscow LCD KP of Ukraine. Kyiv zahaduyetsya considerable work on academic training, and provides information about 18 master's and one doctoral dissertation and management of four graduate students. In 1973 a scientific school N. Kolesnik, there were more than 20 candidates. In 1974 in the characteristic of being re-elected for a new term

of find mention of prepared under the direction of N. Kolesnik 34 PhD theses and work of three graduate students.

On the scale of scientific activity N. Kolesnik in genetics as evidenced by his scientific reports. In April 1964, he wrote that when the department organized problem laboratory of genetics and cytology with a staff of 5 units, t. H. A senior researcher, 2 junior researchers and 2 laboratory. The work of the department are also involved graduate students from 8 separation of production and 9 graduate students enrolled in part-time system. N. Kolesnik described the his scientific work on the years 1952-1964: "My scientific work for the entire reporting period was directed to study the main issues of the constitution with / farm animals - to identify elements of sustainability in individual development, the relationship of the elements of productive and reproductive qualities of animals, patterns of age-related changes. "In the same report mentions Nicholas N. trained through graduate 15 PhDs, 3 issues for students and 15 winners.

In the years 1964-1965 under the direction of Nicholas N. enrolled 17 graduate students, 13 graduate students have written dissertations in t. Ch. 10 - protect them, 4 graduate students continued to work. During the period 1970-1974 years, N. Kolesnik trained 14 graduate students who have successfully defended their dissertations. In 1974-1979 academic years prepared 4 graduate students. During this period, the department trained 5 PhD students - 2 purpose, 2 aliens and 1 - distance learning.

Kolesnik NN describes his scientific career: "My research issues related to the development of the constitution of farm animals, mainly cattle. A new method to determine the types of objective constitution based on the calculation of model parameters variations. Further development of these investigations concerned with the study of patterns of programming and implementation of the genotype in ontogeny. Development of these issues is made on materials received with due regard to observations of age-related changes abdomen, on the following grounds - measurements of animals, live weight, structure distinguish tissue, the main components of blood, immunological parameters and so on. "In the same report we

find information leadership at the department and laboratory of genetics and cytology following work:

- «Correlative links between the exterior, interior and features of productive animals in ontogenesis and a change of generations»;

- “Age-related changes of the blood and immunological reactivity calves black and white cattle in relation to rate of growth “(AV Gerasymchuk);

- "Volatility indices serological and intradermal reactions in black and white cattle in relation to milk production and growth of animals" (ME Procenko);

- "Study of the variability of morphological and chemical characteristics of gametes hogs because of the quality of their sperm" (AL Trofymenko);

- «The relationship between hematological characteristics and milk production of cows' (PhD student. Pavlicenco NF);

- "Heritability and correlation relationships between productive and immuno-biological parameters in black and white cattle" (PhD student. Havruk AF);

- "Hematological features of cows and bulls in relation to growth and meat productivity indicators" (PhD student. Sych NP);

- "Polymorphism of transferrin and haplohlobinov due to breed, age and productive qualities of animals" (PhD student. V. Sokol);

- "Polymorphism of transferrin and other proteins of blood and gray Karakul sheep zabavlenyh due to the vitality and quality smushka" (PhD student. Feruh MA) and others.

Research in this period was conducted in the following areas: "Together with graduate students studying Selection importance of polymorphic blood proteins and dairy cattle. Elucidated the possibility of using electrophoretic types of proteins as indirect genetic tests of different levels of animal performance. In principle, the following features were confirmed, but their implementation need to further develop methods for studying correlations and coordination. It turned out that the reliability of these bonds increases with the expansion of the complex proteins of different systems used to determine the contingency of their level of

productivity, fertility, body weight and other economic indicators cattle. As a result of developments carried out in cooperation with V.I.Sokol compiled and published a monograph "immunogenetic systems in animal breeding" (Izd "harvest" Karl, 1972).

At the same time I was under development methodologies to study patterns of growth in cattle (in live weight and promeram) in postnatal ontogenesis. Based on our and published material on the actual age-related changes in live weight of cattle revealed a pattern of these changes. To study and consideration of the laws derived a formula that allows logarithmic-based equations to predict the initial rates of live weight (at three months of age) endpoints of this feature in the adult animal. The observed pattern of age-related changes in quantitative traits and the possibility of objective methods of forecasting indicates growth in genetic programming ontogeny.

Commenced and is currently ongoing study of the patterns of inheritance of quantitative traits by differences in population analyzes. The main questions of this study are as follows. Identify opportunities and ways of converting a normal distribution Binomial option and quantitative differences in voice quality parameters (rank), followed by an analysis of splitting and use indirect tests. On all these issues by reporting years published 23 works, including one monograph ".

The scientific work of graduate students and employees of the department and the laboratory was united by one theme: "Development of methods for studying the genetics of performance and reproduction of plants and animals by indirect genetic pokazanykamy." As indirect genetic tests studied various systems of polymorphic proteins, chromosomes, mitotic activity of cells, Figure nasal mirror, skinfold thickness and others.

Common themes of the department and research laboratory on the genetics and cytology concerned the study of peculiarities of inheritance of quantitative traits productivity of domestic animals on the analysis of production data on live weight of cattle. The method of interpolation of age-related changes in live weight for cattle. For this purpose, a special formula is derived from the equation of

asymptotic functions. Using this formula considered it possible to determine the value asymptote, ie finite or threshold weight of the animal, depending on the size of the initial weight (newborn) and calculated values of the correction index.

A new approach to the study of patterns of genetic predetermination of quantitative differences in dimensional traits. It was found that this task can not be performed on the basis of the existing method for the analysis of allelic hibrydolohichnoho principle. Hereditary differences in quantitative characteristics between animals are not determined by separate genes, and their complexes that can be considered and identified by genetic balance and the system ranks, given the amplitude of intra-volatility characteristics that study.

Nikolai N. during the period of work in the UAA has written over 100 scientific papers.

Workload Professor N. Kolesnik in all his years at UAA was 750-850 hours. The report for the years 1964-1965, he wrote that in the first year subjects read "Cattle", "Special Livestock", "Principles of animal husbandry" on zootechnical, agronomic and technical departments. In the following years taught a course "General genetics" for students of veterinary faculty, teaching faculty and zootechnical faculty stationary and correspondence departments. Thus, the overall genetics began teaching at UAA since 1965.

N. Kolesnik considered the educational and methodical work of the department (guidelines for external students, complex tasks, homework, Tables, etc.), discussion of open classes of employees of the department.

N. Kolesnik studied social work, acting member and deputy. Chairman of the District Election Commission for elections to the Supreme Soviet of the USSR and the Ukrainian SSR. He was deputy chairman of the Republican Union dissemination of political and scientific knowledge. Was a member of the Republican scientific and technical associations.

Social work scholar was in the performance of duties of Vice President of the Ukrainian Society of Geneticists and Breeders them. Vavilov, President of the Section of Genetics and breeding animals UTHiS, member of editorial board of

"Cytology and Genetics", and interagency book "Meat and breast skotovodstvo", a member of three scientific councils on thesis defense and two teaching academic councils UAA.

In 1970 and 1972 the task Presidium UTHiS hosted two national conferences on genetics and breeding animals. One - the "Askania Nova" (1970), and the second in Odessa (1972). Nikolai N. attended the XIV International Congress of Genetics in Moscow and in the UTHiS was a member of the editorial board of "Cytology and Genetics'.

On the last period of the life of Nicholas N. Kolesnik (1985-2000), little is known. Unfortunately, not preserved manuscripts of his last works, which have not been published. Bibliographic Index of scientific works of Professor N. Kolesnik issued its 100th anniversary, finished a monograph "Genetics of live cattle massы" (K .: Vintage, 1985). Thus, the period of his creative activity continued in '57 - from 1928 to 1985. During this time he wrote and published 138 papers and prepared, according to students and 50 PhDs. A complete list of the students of the scientific school of Nicholas N. require additional bibliographic search.

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The article is devoted to the years 1952-1984 of outstanding scientist geneticist Doctor of Biological Sciences, Professor, Corresponding Member of the Ukrainian Academy of Agricultural Sciences Kolesnik Nikolai N. of Ukrainian Agricultural Academy.

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Освещены 1952–1984 годы работы выдающегося ученого-генетика доктора биологических наук, профессора, члена-корреспондента Украинской академии сельскохозяйственных наук Колесника Николая Никитича в Украинской сельскохозяйственной академии.

Колесник Николай Никитич, Украинская сельскохозяйственная академия, история генетики.