

## **Newsletter of the Russian Society of Nematologists**

### **80<sup>th</sup> Anniversary of Professor Alexander Alexandrovich Shestoperov**

Professor Alexander Alexandrovich Shestoperov celebrated his 80<sup>th</sup> birthday on March 27, 2022. A.A. Shestoperov began his career at the All-Union Institute of Helminthology, named after K.I. Skrjabin (VIGIS), in 1966 as a senior laboratory assistant, and then junior, senior, leading researcher, head of the laboratory and chief researcher. In 1973 under the guidance of an outstanding helminthologist, Professor T.S. Skarbilovich, he completed and successfully defended a dissertation on the topic "Nematodes of red clover in the Moscow region". From 1976 to 1978 A.A. Shestoperov worked in the Republic of Cuba as a consultant phytohelminthologist in the General Directorate of Plant Protection. For fruitful work, he was awarded the Honorary Diploma of the General Directorate of Plant Protection of the Ministry of Agriculture of Cuba. In 1996 Professor A.A. Shestoperov successfully defended his Doctoral dissertation; in 1998 he was awarded the Academic title of Professor in the specialty "Parasitology and helminthology".

Professor A.A. Shestoperov is a well-known scientist in the field of plant protection, phytoparasitology, phytohelminthology and epiphytotiology. The subjects of his research are phytonematodes: cyst nematodes, causative agents of crop losses in potato and tomato, root-knot nematodes parasitising vegetable crops in open and protected ground, stem nematodes infecting onion, garlic, potato, aphelenchoidids of rice, and root-lesion nematodes damaging clover. His scientific activities are aimed at studying fauna, biology, ecology, the damage caused by parasitic nematodes, developing methods for diagnosing, accounting for phytohelminths and their controls, as well as solving theoretical issues of phytohelminthology related to the relationship between phytonematode populations and plant hosts. In plant protection and epidemiology, he singled out the epiphytotiology of phytohelminthiases, examined its theory and methodology, and the doctrine of the epiphytotic process. On the basis of the epiphytotic classification and epiphytotiology of harmful phytohelminthiases, integrated systems for the protection of individual agricultural crops have been developed.

The algorithm developed by him for computer simulation of the epiphytotic process in phytohelminthiasis made it possible to create 14 interactive prognostic computer models with a high level of reliability and ease of use. For the first models, certificates of state registration of computer programs were received. The priority of other developments is confirmed by 12 copyright certificates for inventions and patents.

Professor A.A. Shestoperov was one of the first to develop and implement remote methods for diagnosing phytohelminthiases in agricultural crops, with the help of which new infected areas of potato with *Globodera*, a quarantine organism, were discovered for the first time in two regions of Russia.

Professor A.A. Shestoperov is the author and co-author of 12 books, including *Recommendations for the identification and control of outbreaks of globoderosis on potatoes*, *Quarantine phytohelminthiasis*, *Creation of nematode-resistant varieties and hybrids of agricultural crops*, *100 questions and answers about potato harvesting in SCZ outbreaks*, *Ditylenhozes of agricultural and ornamental crops and their control*, *Meloidogynosis of vegetable crops in protected ground and their control*, *Mathematical and computer modeling of the epiphytotic process in potato globoderosis*,



## *Meloidogynoses and heteroderoses of agricultural crops and Epiphytotiology of nematode plant diseases.*

He has published more than 370 scientific papers, including large theoretical and scientific-practical articles. A.A. Shestoperov created a scientific school on phytoparasitology, under his leadership 3 masters, 10 candidates of sciences and one doctor were trained.

A large scientific study was carried out by A.A. Shestoperov on solving practical issues related to the potato cyst nematodes, root-knot nematodes and stem nematodes. A.A. Shestoperov prepared and published more than 30 methodological recommendations, provisions for the identification, accounting and measures to control phytohelminthiasis (aphelenchoidosis of rice, meloidogynosis of vegetable crops, globoderosis of potato, ditylenchosis of onion and garlic), which have been introduced in the farms of the Astrakhan, Kaluga, Vladimir, Smolensk regions, the Stavropol Territory, as well as Uzbekistan, Kazakhstan, Ukraine and Lithuania. With his direct participation in the Russian Federation, a network of regional and republican phytohelminthological laboratories was created to examine agricultural land, identify foci of dangerous phytohelminthiasis and introduce scientific recommendations on controls of parasitic nematodes.

For more than 25 years, A.A. Shestoperov has actively conducted scientific research on the foci of globoderosis in the base farm of the APF "Russia" of the Gus-Khrustalny district of the Vladimir region, in which he developed, tested and implemented methods for examining and mapping infected areas of potato cyst nematodes, a methodology for monitoring and predicting the development of globoderosis, and a system of ISZR of potatoes from phytohelminthiasis in the government and private farms. Currently, nematode-resistant cultivars of potatoes are grown in the agricultural company on an area of more than 400 ha.

Taking into account the need to develop biological methods of plant protection, A.A. Shestoperov contributed to the development of large-scale research in the field of breeding, agrophytogenetic and microbiological methods at VIGIS, which led to valuable theoretical generalisations and important practical results, in particular, to the creation of the first biological product "Mycohelm" based on mycohelminths for control of pink snow mold pathogens.

In 1999 Professor A.A. Shestoperov was elected for the position of professor of the Department of Plant Protection of the Agronomic Faculty of the Russian State Agrarian University (RGAZU) and successfully combines research work with teaching activities. Professor A.A. Shestoperov made major contributions to the training of qualified specialists in the field of plant protection and quarantine and was awarded the Honorary Diploma of the University. He published 4 textbooks and 14 guidelines for the study of plant protection disciplines. He is a member of the Dissertation Council in the specialty "Parasitology".

Professor A.A. Shestoperov pays much attention to the promotion of phytohelminthological knowledge in farms, plant protection and quarantine units, and takes an active part in organising and conducting thematic seminars. For many years, he was the chairman of the Commission on Nematode Plant Diseases of the Plant Protection Department of the Russian Agricultural Academy. Currently, he is the Chairman of the Commission on Parasitic Plant Diseases under the Interdepartmental Coordinating Council for Scientific Support for the Development of the Agroindustrial Complex of the Russian Federation in the field of fundamental and applied parasitology, and a member of the Committee of the Russian Society of Nematologists.

Professor A.A. Shestoperov was awarded the Jubilee Medal of Academician K.I. Skriabin, medals "Veteran of Labor" and "850th Anniversary of Moscow", Certificate of Honor of the Ministry of Agriculture of the Russian Federation, Certificates of Honor of the Russian Agricultural Academy and Certificate of Honor of the Rosselkhoznadzor of the Ministry of Agriculture of the Russian Federation.

We are pleased to congratulate Professor Alexander Alexandrovich Shestoperov on his birthday and wish him many more years of life and further success in scientific and educational activities.

Shubaderov V.J., Lychagina S.V. and Russian Society of Nematologists