

Study of Police Crops Nematodes History

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Annotatsion: The results of the scientific research of scientists and scientists of the world who studied the damage, economic importance of nematodes found in polys crops, the properties of nematode pests were analyzed. In addition, information about diseases caused by nematodes in rice crops and measures to prevent them is presented.

Key words: Nematoda, Pratylenchus pratensis, Ditylenchus dipsaci, species, genus, family, adaptogen, microorganism, antagonists, Meloidogyne incognita.

In today's rapidly developing social and economic life, it can be observed that the population is increasing intensively from year to year. The increase in the number of the population at such a speed, in turn, causes their need for food products to increase, and we can see that these two processes are developing in direct proportion to each other. Therefore, in order to eliminate the problems that may arise in the society, the most important indicator is to multiply the agricultural products in accordance with the needs, it is of decisive importance. This, in turn, shows that it is necessary to select high-yielding, disease-resistant varieties through crop selection.

The Development Strategy of the Republic of Uzbekistan for 2022-2026 of the President of the Republic of Uzbekistan for the period of 2022-2026 also specifies specific tasks to increase the productivity of agricultural crops and develop measures to combat plant pests [1].

Agriculture is the main branch of the national economy in our republic, and extensive scientific research is being carried out aimed at increasing the productivity and quality of a number of agricultural crops, including rice crops. In particular, watermelon, melon, pumpkin crops are being planted for food, fodder and technical purposes. Also, measures are being developed aimed at expanding the cultivated areas of rice crops, increasing productivity, and fighting against pests. Uzbekistan, including the Surkhondarya region, specializes in the agricultural sector and occupies a leading place among the regions in the production of agricultural products. Among many agricultural crops, rice crops are also affected by various pests, among which there are microscopic organisms that cause significant damage, namely phytohelminths. Parasitic phytonematodes are extremely dangerous organisms that, although they are microscopic animals that feed on the sap of plant tissue cells, can cause macroeconomic damage. Based on the above-mentioned ideas, the study of nematodes that cause damage to the growth and development of rice crops, as well as causing a sharp decrease in productivity, to determine the composition of species and to develop measures to combat them, is not only of scientific but also practical importance. the works of several scientists who did scientific work on nematodes were also analyzed.

Based on the analysis of the literature, in 1987, based on the data collected in this area by the Crop Loss Assessment Committee of the American Nematological Society, 10% of the watermelon crop and 3.5% of the melon crop were lost due to parasitic plant nematodes. [2]

In 1990, diseases causing wilting of watermelon due to viruses and root nematodes were diagnosed. Scientific research was carried out by Japanese scientists Kiso Akara, liboshi Himori [3].

Scientists on the basis of development of biological means of protection of plants from natural enemies of phytohelminths and helminths A.A. Shesteporov, V.D. The Migunovas conducted their scientific

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research. Theoretical and practical aspects of biological control against phytohelminths were considered in the scientific work [11].

Phytohelminthologist S.M.Rizaeva and A.Z. Nematode complex of vegetables and rice crops in Bukhara region of Uzbekistan was analyzed by Osmanova. In the course of research, analysis of 9 types of nematodes of vegetables and rice crops was carried out on the location of these plant organs and the types found in the soil [5].

Prohibition scientists A.Z. Usmonova, E.P. Azizova studied the nematode composition of pumpkins in Fergana region. 37 species, 3 genera, 14 families, and 27 genera of nematodes were recorded in the melon plant and rhizosphere, and 14 of them are new for the fauna of Fergana region. *Merlinius dubius* is listed as a dangerous species from 14 nematodes. 22 types of nematodes were found in watermelon plant and rhizosphere. Among the pathogenic parasitic species, *Pratylenchus pratensis* and *Ditylenchus dipsaci* were recorded [8].

According to information, one of the main problems in the agriculture of tropical countries is the pollution of the environment with chemicals and its consequences on the choice of agrotechnical strategies. As an element of this selection, biocontrol, along with crop rotation and organic fertilizers, is very useful in the fight against phytoparasitic nematodes, and includes the use of isolates of microorganisms produced in the form of special preparations for tropical conditions. However, it was mentioned that farmers need the support of state organizations and donor organizations to participate in nematode biocontrol research. Zaria. [12; 62-67].

In 2011, scientists Udalova J.B., Baycheva O., Pridannikov M.V., Zinoveva S.V. based on the physiological and molecular mechanisms of interaction between plants and nematodes. provided information on the most promising directions of protection. In this regard, the scientists emphasized the following directions: restoration of damaged metabolism of damaged plants (using mineral nutrients of plants, as well as natural compounds with adaptogenic properties per 1 kg of soil), use of elicitors as immunity inducers; use of micro-organisms- antagonists of nematodes; development of plant varieties resistant to grass nematodes; creation of transgenic forms of plants resistant to nematodes [13; 109-115].

Chemical control of phytoparasitic nematodes causes many ecological problems. Researchers Elekc, Toglu, I. Halil, Uygun Nedim studied biological methods of combating nematodes. Currently, the most promising natural agents are the use of bacteria and fungi. Bacteria: *Pasteuria penetrans* and fungi: *Paecilomyces lilacinus*, *Dactyella oviparasitica*, *Verticillium chlamydosporium*, *Arthrobotrys irregularis* and *A. robusta* have been studied in recent years and their use in biological control against phytoparasitic nematodes was considered the most promising. However, it was found that the results of such biological control were not always effective due to various adverse conditions occurring in the soil [14; 251-258].

Scientists Ferrari Valentino, Caioni Marcello, Piccinini Enrico, Campanelli Gabriele, Ficcadenti Nadia, Principe Nunzio studied the effectiveness of fostiazate liquid formula against root nematodes in tomatoes and muskmelon for two years. In 2004, fostiazate (F) drug against *Meloidogyne incognita* and *M. javanica* was effectively used in muscat type of tomato and melon. In 2005, when treated with fostiazate (F) against these nematodes, it was confirmed to be more effective than fenamiphos and oxamyl before planting. However, only oxamyl reliably controlled nematodes in the post-planting variant. It was determined that treatment of this plant at a dose of 1.5 kg of (F) per hectare before planting had the most effective effect against parasitic nematodes. [15; 117-179 b].

R.F. Davis in 2007, Tifton C.A. in 2004-2006 to experimentally determine the effect of *Meloidogyne incognita* on watermelon yield. field trials in which methyl bromide was fumigated showed that significantly more fruits and a higher weight of watermelon were harvested in the fumigated plots.

Root nematodes are a growing problem in vegetable and pulse crops due to long-term restrictions on the use of some chemical nematicides with active compounds in France. In 2007-2010, the National Center for Agronomic Research (INRA) in Sofia Antipolis (Provence-Alpes-Côte-d'Azur regional



center) in collaboration with more than 30 scientific research institutes based on questionnaires on measures to overcome the existing problem. polled. This review showed that 40% of fruit and vegetable farms in the Provence-Alpes-Côte d'Azur region were infected with different species of Meloidogine. In some regions, it has become impossible to grow pumpkins. Also sometimes other genera of nematodes were found [16; 127-137 b].

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Similarly, in Jizzah A.Z. Usmanova, A. Ikromov, S. M. Rizayeva [9,6], Andijonda S.R. Kostina [4], in Samarkand A.T. Tolaganov [7] and B. Khaliqnazarov [10] conducted scientific research in Surkhondarya.

According to the results of the analysis of the literature, in the Republic of Uzbekistan, including in the Surkhondarya region, the parasitic nematode fauna of rice crops has not been sufficiently studied, and as a result of the negative consequences caused by parasitic phytonematodes, plants such as watermelons, melons, and pumpkins die without completing their vegetation. and it has been analyzed that the sharp decrease in productivity creates a significant microeconomic risk. This requires extensive study of parasitic nematodes of rice crops and the development of effective measures to combat them.

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