



DISTRIBUTION OF PHYTO-HELMINTHS OF RICE PLANTS THROUGHOUT SOUTHERN UZBEKISTAN

Khaydarova Pardakhol Bobokulovna

Candidate of Biological Sciences, Associate Professor,
Department of Zoology and Anatomy, Faculty of Natural Sciences
Tashkent State Pedagogical University named after Nizami

Abdullaeva Dilfuza Rikhsikhodjaevna

Candidate of Biological Sciences, Associate Professor,
Department of Zoology and Anatomy, Faculty of Natural Sciences
Tashkent State Pedagogical University named after Nizami

<https://doi.org/10.5281/zenodo.7935399>

ABSTRACT

This article examines the distribution of Phyto-helminths of rice plant throughout the country of southern Uzbekistan. Rice is grown as an agricultural crop in tropical, subtropical, and warm regions as well as one of the oldest food crops in the temperate regions of the zone. Rice is one of the most important cereal crops, as it is consumed by more than half of the world's population. That's why we have learned and analyzed the distribution of Phyto-helminths of rice plant throughout the country of southern Uzbekistan.

KEY WORDS: Phyto-helminths, Phyto-nematodes rice plants, Oryza, seed, seedling, distribution, cultivation, southern Uzbekistan, growth, nematoda.

INTRODUCTION

Searching for new knowledge, discovering a new world, or developing by introducing new knowledge. It is clear that us, there are a lot of group of annual and perennial herbaceous plants. But we have studied and analyzed the distribution of rice plant phyto-helminths in southern Uzbekistan. It is known that, rice is called *Oryza* in Latin language, it is one of the cereal food products belonging to the group of annual and perennial grass plants.

Rice likes moisture very much and its shoots grow directly from water. It is necessary to take care of rice during the growth period, it can die due to cold.

Nowadays rice is grown mainly in Surkhandarya, the Republic of Karakalpakstan, Khorezm, Fergana, Namangan, Andijan, Jizzakh, Syrdarya and Tashkent regions.

Rice is rich in carbohydrates and relatively poor in protein. The share of the first in dry matter reaches 70%, the second, as a rule, does not exceed 12%. Rice ash is rich in phosphoric acid.

Grain and starch are obtained from rice grains, and oil is obtained from rice germs. Unbleached rice flour is rarely used for bread making because it does not contain gluten. It is mainly used to cook porridge or make pies; in larger quantities, it goes to cosmetic factories for powder processing.

LITERATURE REVIEW

Thus, we have analyzed several literatures theoretically, doctor of Biological Sciences Shesteporov Alexander Alexandrovich in 1996, in his dissertations on the topic "Epiphytology of Phyto-helminthiases of agricultural crops", he noted followings: -Many cases of "soil fatigue" are associated with Phyto-helminths. The suppression of large populations of Phyto-helminths with the help of nematicides on many agricultural crops

makes it possible to increase the yield by several times. Phyto-helminths carry viruses and exacerbate fungal and bacterial diseases, especially root rot, Phyto-helminths p'grasite in various organs and tissues of crops, medicinal, ornamental plants, forest species.

He was one of the first to develop and implement remote methods for diagnosing Phyto-helminthiasis in crops. With the help of which, for the first time, new foci of potato globoderosis, a parasitic disease, were discovered in two regions of Russia.

Experiments show that in the experiments of M. I. Uklonsky in the Tashkent region, the flowering of rice bran took 3 days in July, 4 days in August, 5-6 days in September, and 7 days in October.

There are many varieties of rice in rice growing countries. In Uzbekistan, UzROS-7-13, Lazurniy, Avangard, Tolmas, Gulzar, Nukus-2, Jayhun, Alanga, Arpa rice, Istiqlal, Istiqbol, Sanam varieties of rice are included in the State Register.

Ye.P.Alyoshin and V.P.Kanokhova recommend plowing the fields contaminated with perennial rhizome weeds to a depth of 12-15 cm in the spring. In this case, the rhizomes and tubers protrude to the surface of the soil and die quickly. The resulting pieces are crushed first with a disk and then with a zig-zag hammer. This kind of tillage makes the soil soft and smooth by leveling the field.

According to S.Sh. Makhmudova (1999), when the new variety Alan was planted from April 25 to May 5, Mashal on May 5, A-19 variety was planted on May 15-25, 90.8 in accordance with the conditions of the Tashkent region; 68.6; 55.1 capacity yielded grain. When sowing early or late, the grain yield is reduced by 7-12 capacity.

Theoretically, O.Yakubjonov, S.Tursunov, Z.Muqimov (2009) in their books have analyzed growth of rice plants, and its distribution.

Results show that, the center of origin of rice is South Asia. Academician N.I. Vavilov writes about the origin of rice from India. The famous rice scientist G.G. Gushchin also concluded that the original country of origin of rice was central India. Academician P.M. Zhukovsky confirms that the homeland of the main type of cultivated rice (*Oryza sativa*) is the tropical countries of Southeast Asia. But others believe that cultivated rice - *Oryza globerrima* (husked rice) was cultivated independently in the African tropics.

RESULT AND DISCUSSION

The results were analyzed as follows according to the level of study of the research topic. In short of we say that, Phyto-helminths, Phyto-nematodes are the general name of roundworms that parasitize plants. Belongs to the class of nematodes. More than 10,000 species are known, including about 700 in Uzbekistan. The length of the body. 0.2-5 (sometimes 11) mm, thickness 10-100 μm . There are species that specialize in parasitizing various organs above or below the surface of the plant. A plant infected with a phytohelminth stops growing, withers; a bulge (swelling) appears in the affected organs; tissues decay and become necrotic. In Uzbekistan, nematodes cause great damage to vegetables and sugar crops, cotton, hemp and other plants, and stem nematodes to potatoes. Phytohelminth is studied by phytohelminthology.

We know that in the south of Uzbekistan, in particular, in the Surkhandarya region, extensive research was conducted on the fauna of plant phytohelminths, the sources of phytohelminths and their damage in vine agrocenoses are very few, and they are not enough to solve the phytohelminthological problems of our time. and therefore, further research is needed.



In Uzbekistan, varieties of rice produced by selection are widely distributed, which differ in their fertility, low stem length, and grain non-shedding. Their grain is white, vitreous, and has good technological qualities. Early and mainly late-season varieties are considered fruitful. Because they can effectively use the heat and light before it gets cold.

When choosing a variety, it is very important to take into account how well the field is supplied with water, and how much water it receives during what periods.

Depending on the duration of the growing season, the cultivated varieties of rice are divided into late-ripening, medium-ripening and early-ripening varieties.

A.T. Tolaganov identified 59 species of phytohelminths in the Samarkand region of Uzbekistan, of which 21 species are characteristic of rice plants.

Scientist D. B. Haydarova, who worked on phytonematodes of rice plants in Surkhandarya region, defended her candidate's thesis in 2007. According to him, a total of 107 species were identified from the samples collected from rice fields of 5 districts and 8 collective farms in Surkhandarya region.

Based on the research results, 1-table we gave the list of rice plant Phyto-helminths species that cause yield in rice.

1-Table. Names of propagation of phyto-helminths that cause yield in rice.

Names of rice phyto-gelmints	
FOLIAR PARASITES	H.oryzae
Aphelenchoides besseyi	H. spinicaudata
Ditylenchus angustus	Hoplolaimus indicus
ROOT PARASITES	Meloidogyne graminicola
Criconemella onoensis	M. incognita
Heterodera elachista	M. javanica
H.oryzae	M. arenaria
H. oryzicola	M.oryzae
H. sacchari	M. salasi
Hirschmanniella belli	Pratylenchus brachyurus
H. gracilis	P. indicus
H. Imamuri	P. sefaensis
H. mexicana	P. zeae
H. mucronata	Xiphinema ifacolum

1-picture.Growth stages of Paddy plant.



According to scientific sources, about 90% of rice grown in the world is grown by seedling method. In Uzbekistan, scientific work in this direction has been regionalized since 1993. The scientific basis for the cultivation of many rice varieties by the seedling method has been developed and relevant recommendations have been made. The varieties recommended for planting in Uzbekistan are among the best rice varieties in the world in terms of all their indicators and potential.

CONCLUSION

The analysis and study of the research shows that the distribution of Phyto-helmints of rice plants in the south of the Republic of Uzbekistan has not been studied on a large scale. Rice is a valuable cereal crop, second only to wheat in terms of acreage and higher than wheat in terms of gross yield. Rice is one of the oldest food crops in many countries around the world. Rice in world agriculture is 153.52 million. hectare (2003, information from FAO-Food and Agriculture Organization) is planted on the field. The average yield is 38.3 centners per hectare. Paddy rice is rich in nutrients and quick to digest. Therefore, carrying out large-scale Phyto-helminthological studies to study the distribution of Phyto-nematodes of rice in this territory, as well as the identification and degree of harmfulness of parasitic species, is of great scientific and practical importance in the development of cereal culture in the republic.

References:

1. Аксёнова М. и др. „Злаки “. Энциклопедия для детей. Биология, 7-е изд, М.: Мир энциклопедий Аванта, Астрель, Lua xatosi: bad argument #2 to 'formatDate': invalid timestamp 'Yanvar'. — 355—356 bet. ISBN 9785989862658
2. P. Cubry, C. Tranchant-Dubreuil, A. C. Thuillet, C. Monat, M. N. Ndjondjop, K. Labadie, C. Cruaud, S. Engelen, N. Scarcelli, B. Rhoné, C. Burgarella, C. Dupuy, P. Larmande, P. Wincker, O. François, F. Sabot, Y. Vigouroux, The rise and fall of African rice cultivation revealed by analysis of 246 new Genomes. *Curr. Biol.* 28, 2274–2282.e6 (2018)
3. Ataboyeva H. and others. *Plant science.* - T.: 2000.
4. Posipanov G.S. *Plant growing.* - M.: 2006
5. Recommendations on the technology of growing rice by seedling method in the conditions of Uzbekistan. - T.: "Labor", 1998.
6. Khamroyev A. Sh. and others. *Protection of grain and rice from pests, diseases and weeds.* - T.: 1999.
7. Description of varieties of agricultural crops recommended for planting in the territory of the Republic of Uzbekistan included in the state register. -T.: 2006.
8. O.Yakubjonov, S.Tursunov, Z.Muqimov. *Grain farming.* -T.: 2009.