European Journal of Molecular & Clinical
ISSN 2515- Volume 7, Issue 07,

INFLUENCE OF VARIOUS FACTORS ON THE FORMATION OF PHYTOTENEMATODES OF COTTON AND ALFALFA AGROENOCYTES AND THEIR COMMUNITIES IN TASHKENT REGION

ABDURAKHMANOVA GULNORA[1], SADIKOVA SAYORA[2],
RAKHMANOVA LAYLO[3], ERMATOVA NIGORA[4], XAMZAEVA SURAYO[5]

National University of Uzbekistan, Tashkent, Uzbekistan

e-mail: g.abduraxmonova@nuu.uz, sayorasadikova63@gmail.com

Abstract
This article presents data on agrotechnical factors for the formation of a biocenotic complex of phytonematodes of agrocenosis of cotton and alfalfa. Also the dependence of the formation of fitonematodes communities on the value of agrocenoses of alfalfa and cotton on their surrounding ecosystems is determined, the role of the latter as a place of reservation and the settlement of certain species is determined, the significance of organic – mineral fertilizers in the accumulation of pytonematodes in the soil of agrocenoses.
Agrocenoses are greatly influenced by the formation of the phytonematodes community by soil factors and agro-technical factors in agrosenosis. The formation of the biocenotic complex of phytoenomatodes of agrosenoses is influenced by agro-technical factors and the environmental ecosystems that surround them. be surrounded by the surrounding ecosystems The laws of the ecosystem include the accumulation and distribution of parasitic species in agrosenosis, the deep processing of organic mineral fertilizers in the soil, which results in the accumulation of phytonematodes in agrosenosis.

Keywords: Phytonematodes, soil, biogeocenosis, geese, cotton, alfalfa, pararizobiont, eusaprobiont, devisaprobiont, phytogelmint.
Life Sciences: Zoology

Introduction. The class of nematodes in General is characterized by features inherent to biological progress. There are a huge number of species occupying various habitats on the planet [6,7]. Nematodes – an integral part of all soil ecosystems and they are a component of any biocenosis. Together with other organisms they are involved in the transformation of the substances involved in the different stages of food chains. Currently, they are considered indicators of the direction of processes occurring in the soil, providing in some systems up to 40% of the volume of mineralization of organic matter [2, 3].

To study the role of soil nematodes is especially important for communities of Uzbekistan, in which representatives of other groups of micro - and mesofauna nematodes significantly inferior in number and richness of species composition. Therefore, the accumulation of data on the participation of soil nematodes in the processes of regulation of productivity of both natural and transformed biocenoses is relevant and important practical task. There is evidence that the species composition and number of phytonematode depends on the mechanical composition, structure, chemical properties, humidity and depth of soil [4,5,8].

Based on the ecological valence of phytonematode O.Mavlanov [5] and G.Abdurahmanova [1] had suggested the possibility of their use in the diagnosis of agrochemical properties of the irrigated soils.

Phytonematode being the most numerous group of multicellular soil organisms actively involved in soil forming processes. Their study will help to reveal the processes occurring in the soil. As you know, the agricultural lands are surrounded by natural or semi-natural ecosystems. Latest a certain way can influence the processes of formation of soil communities of phytonematode. This question has so far not been investigated, although the known facts of the transition of certain parasitic species of phytonematode of natural ecosystems to agricultural lands [4,5]. For this reason, a comprehensive study of phytonematode agricultural crops and surrounding ecosystems is of great importance in understanding the laws of formation of their communities in agrocenoses. Knowledge of these regularities is of great importance to assess the effectiveness and antinematode units of agrotechnical actions when growing agricultural crops.

The purpose of the study was to study the taxonomic composition of phytonematodes of cotton and alfalfa agrocenoses, to clarify the role of the surrounding ecosystems in the accumulation and settlement of certain species of phytonematodes, to establish the significance of some agrotechnical factors in the formation of communities of phytonematodes.

1 Material and methods

Soil samples of this study were collected from Buka and Zangiata fogs of Tashkent viloyat. Cotton and alfalfa agrocenoses were examined. Faunistic and ecological studies for species composition and abundance of phytonematode were carried out by the routing method. To obtain the necessary reliability with each sampling of soil samples was carried out five times. Arable (0-30 cm) and sub-arable (30-60 cm) soil layers were examined to a

depth of 60 cm. In total, 360 soil samples were taken, 90 from each ecosystem, three times. About 1000 preparations were prepared.

Experimental studies were carried out by the stationary method in the experimental fields of the zonal laboratory of the Institute of Genetics and experimental biology of plants, Uzbekistan Academy of Sciences. The influence of new methods of agrotechnical measures, in particular the seedbed deep plowing with a turnover of formation, with the introduction of organic-mineral fertilizers on the community structure of phytonematodes and the number of individual types.

Samples to account for soil nematodes were taken in late may, early July, before hay harvest of alfalfa in the second decade of July before plowing alfalfa and in the first decade of September and December.

Isolation of nematodes from soil samples was carried out by the Berman funnel method with subsequent washing of the soil through a sieve (Kiryanova, Kral,1971, Mavlyanov, 1993). Nematode fixation was performed with 4% formalin solution. Determination of nematode species was carried out at the Department of Zoology Of the national University of Uzbekistan. M. Ulugbek.

2 Results and discussion

The result of the comprehensive study of phytonematode of cotton, Lucerne and surrounding ecosystems identified 132 species of phytonematode, of which identified to species 123.

In agrocenosis of Lucerne and its surrounding ecosystem was reported 77 species in the amount of 1610 individis. Numbers of individis of nematodes alfalfa agrocenosis differs little from the surrounding ecosystem. The difference between them is clearly expressed in the composition of species and their vertical distribution. The greatest diversity of species in agrocenosis falls on arable layers. In the subsurface layers there is a sharp decline in both the qualitative and quantitative composition of phytonematode. In the surrounding alfalfa ecosystem, the most densely populated was the top horizon depth cm 0-10.

Compared communities differ little in the composition of the dominant species. There are no dominant species in the agrocenosis. The dominant species are Aphelenchus avenae and Chiloplacus symmetricus. In the surrounding alfalfa ecosystem, 5 species are dominant. *Plectus parietinus, Chiloplacus symmetricus, Aphelenchus avenae, Helicitylencus multicinstus, Pratylenchus pratensis.* Similarities in the composition of the dominant species are in some way related to similar conditions in the two compared ecosystems, in particular,

dense vegetation cover, shading and lack of mechanical treatment of the soil during the vegetation period of plants and the presence of moisture in the soil.

In the community of phytonematode farming alfalfa more or less constantly found 10 species of parasitic phytonematode, including such dangerous parasites as *Pratylenchus pratensis, Helicitylencus multicinstus, Ditylenchus dipsaci.* These types are predominant in the surrounding ecosystem.

In the soil of agrocenosis of the cotton plant and its surrounding ecosystem discovered 70 species of phytonematode in the amount of 1454 individuals, including in agrocenosis 43 species 596 species and the surrounding ecosystem 68 species of 858 individuals.

The surrounding ecosystem is different from the farming of cotton, as well as the qualitative and quantitative composition of phytonematode. In addition compare communities differ substantially by the distribution of phytonematode. In the arable layers of agrocenosis of phytonematode are distributed more or less evenly. A sharp decline in their numbers is observed since the subsurface soil layer.

In the surrounding ecosystem, the greatest diversity of phytonematode observed in the upper layer (0-10 cm). This layer also has the greatest density of phytonematode. With a depth gradually decreasing the diversity of species composition of phytonematode and reduced the density of individuals in soil.

Agrocenosis and the surrounding cotton field ecosystem differ from each other in the composition of the dominant species. The cotton field is dominated by 3 species of *Cephalobus persegnis*, *Paratylenchus brevihastus* and *P. hamatus.* The surrounding ecosystem is dominated by one species-*Paratylenchus brevihastus.*

In the surrounding ecosystem of parasitic phytonematode noted 12 species. All of these species can be found in a cotton field, of which *Meloedogyne* sp.greatly affects crops in many farms in Tashkent region. Perhaps their surrounding ecosystems are home to the reservation and settlement of the above-mentioned parasitic species.

The surveyed agrocenoses and their surrounding ecosystems differ in the composition of ecological groups of phytonematodes. In the field of alfalfa, the most diverse group in terms of species composition is the parasobionts. In the surrounding alfalfa ecosystem is the most diverse group are polarizabilty, but the numerical prevail parasitic nematodes nonspecific pathogenic effect. In the surrounding of the cotton ecosystem, the greatest species diversity observed in deviceprint; in number along with deviceproperties dominated by specific parasitic nematodes. In the agrocenosis of alfalfa, the most common species are

mycogelminth *Aphelenchus avenae* and devisaprobiont *Chiloplacus symmetricus*. For the surrounding ecosystem, these species are the sedentary ectoparasite *Helicitylenchus multicinctus* and the migrating tissue parasite *Pratylenchus pratensis*. In General, the agrocenosis of alfalfa contains almost the same species as in the surrounding ecosystem.

In General, representatives of environmental groups harrisoniana prefer more shaded and moist soil farming of Lucerne and the surrounding ecosystem, and deviceprint – cotton field and surrounding ecosystem. According to some authors (Mavlyan, Eshova, 2011), devisaprobionts are better adapted to the conditions of moisture deficiency than other groups. Probably, the lack of moisture that occurs due to frequent cultivation of the soil in the cotton field, adversely affects many species of phytonematodes, but devisaprobionty has less influence.

In the soil of cotton agrocenosis, the most frequently encountered species include saprobiotic nematodes *Cephalobus persegnis* (devisaprobiont) and *Rhabditis filiformis* and phytoparasitic forms of *Paratylenchus brevihastus, P. hamatus,* while these parasites were markedly superior to other ecogroups. In the surrounding ecosystem is clearly the dominant species otstayut. Relatively often *Paratylenchus brevihastus, Ditylenchus dipsaci, Cephalobus persegnis.* The first two types are real parasites.

As you know, compare the community are considered similar when the coefficient of 0.77 and above. Given this, we can speak of a very close relationship between the farming of the cotton plant and its surrounding ecosystem, and less pronounced relationship between alfalfa agrocenosis and their ecosystem, as well as between the agrocenosis of cotton and alfalfa. There are no similarities between communities of phytonematodes living in the cotton agrocenosis and in the surrounding alfalfa ecosystem. These facts are proof that the surrounding agricultural lands ecosystems influence the formation of a community of phytonematodes in agrocenoses of cotton and alfalfa. There may also be mutual influences between the agrocenoses of alfalfa and cotton.

Thus, the community of phytonematode alfalfa farming is relatively richer than its surrounding ecosystem. In the community of phytonematode farming alfalfa is dominated by two species, and most species occur in small quantity. In the surrounding ecosystem dominants are 4 types. In the first community in tiecheng types included 8, in the second 11 kinds. The variety of types of agrocenosis of cotton is significantly inferior to the surrounding ecosystem. Between the agricultural lands and their surrounding ecosystem there is a link that shows their indexes of similarity. The same, but weaker correlation exists between the

agrocenosis of cotton and alfalfa. It is obvious that the formation of communities of phytonematode agriculture impact surrounding ecosystems. The low similarity index between the surrounding ecosystems of cotton and alfalfa is proof of the lack of communication between them. In agrocenoses, phytonematodes are distributed in the arable soil layer at a depth of up to 30 cm, under which there is a sharp reduction in their number. In the surrounding agrocenosis ecosystems, the bulk of phytonematodes is found in the upper layers of the soil.

Studies on the seasonal dynamics of alfalfa and cotton phytonematodes were conducted over four seasons (spring, summer, autumn, winter) during the year (Fig.1.). In the alfalfa agrocenosis, 63 species and 3915 individuals of roundworms were found (including 46 species and 1430 specimens in spring, 36, 846 in summer, 38 and 1289 in autumn, and 32 species and 350 specimens in winter).

Qualitative and quantitative composition of the fauna of nematodes of alfalfa farming does not remain constant and undergoes significant changes. Higher peak numbers of individuals of nematodes occurs in spring and autumn. The reason likely is the temperature and humidity of the soil. It is during these periods of the year the temperature and humidity of soil are optimal for the breeding of phytonematode. In alfalfa agrocoenosis of the most frequently encountered species include *Plectus minimus, Aphelenchus avenae, Chiloplacus symmetricus* specimens which are particularly common in spring and autumn. Less often, but always met types *Prismatolaimus intermedius, Eudorylaimus monohystera, Eudorylaimus paraobtusicau datus, Rhabditis brevispina, Mesorhabditis monhystera, Panagrolaimus rigidus, Acrobeloide s buetschlii, Aphelenchoides limberi, Aphelenchoides parietinus, Aphelenchoides saprophilus , Filenchus filiformis, Ditylenchus dipsaci, Tylenchorhinchus claytoni.*

The highest density of individuals of phytonematode is noted in the topsoil. In General, for the dynamics of a community of phytonematode alfalfa agro-ecosystem is characterized by two peak population in autumn and spring. With the onset of winter, there is a sharp decline.

For four seasons of the year in the cotton agro-ecosystem discovered 46 2697 species of nematodes, including spring discovered 34 species of 1157 individuals in the summer, respectively 29 species 558, fall 35 types 708, winter 19 species 226 species of nematodes. In the dynamics of the number of phytonematode in agrocenosis of cotton there is only a spring peak, when the number of individuals in two and five more compared to the summer and winter periods of the study. In the summer there is a sharp decline, while in autumn a slight

increase in numbers. A relatively sharp decrease in the population of individuals occurs during the winter study period.

In General, the community of phytonematode cotton farming is characterized by lower diversity and number of species composition of phytonematode. It can be assumed that phytonematode in cotton agrocenosis more strongly exposed to adverse soil and climatic factors. The main reasons for the sharp decline in the number of phytonematode can be moisture deficit and soil compaction due to frequent mechanical treatments. In the studied agro-ecosystem during the study period are: *Prismatolaimus intermedius, Aporcelaimus obtusicaudatus, Rhabditis brevispina, Panagrolai mus rigidus, Acrobeloides buetschlii, Chiloplacus propinquus*
is, Chiloplacus symmetricus, Aphelenchus avenae, Aphelenchoides limberi, Aphelenchoides p arietinus, Aphelenchoides saprophilus,Pratylenchus pratensis. The highest density occurs in the upper arable soil layers. The bulk of the community phytonematode make up of the squad Tylenchida and Rhabditida. Ecological groups according to the number of individuals dominated by representatives of diisopropanol.

In soil samples from alfalfa fields, where plants were grown on ordinary ploughing at a depth of 30 cm, 41 species of phytonematodes were found. During the entire research consistently found in only four species : *Tylencholaimus sp., Eusephalobus striatus, Cephalobus persegnis, Helicitylenchus digitiformis*. It is noted that on the alfalfa field with the usual plowing of the soil, representatives of all ecological groups are found in the upper layer of the soil. Only phytoparasitic species associated with the root system of alfalfa plants in significant numbers penetrate into the sub-arable soil layer. Lucerne appears on the predatory nematode, *Nigolaimus brachyuris* which is found only in samples from the upper soil layer.

Community of phytonematode soil of alfalfa fields by deep plowing of the soil types are 37 to 42 individuals per 10 g of soil. In the upper soil layer at the beginning of the study was dominated by developability, and in summer and autumn, parasitic nematodes specific pathogenic effect. In the upper soil layer at the beginning of the study was dominated by developability, and in summer and autumn – parasitic nematodes specific pathogenic effect. Free-living polarizabilty live in the root the soil is relatively frequent in the autumn training camp. The main part of paraitonion is *Eudorylaimus monohystera.* Deep presowing plowing and layer of fertilizer application have any effect on the vertical distribution of phytonematode. There has been a significant increase in the density of phytonematode in the subsurface horizon in all periods of the study. It shows the emergence of more or less stable

conditions (aeration, humidity, presence of food in the soil etc.) In General, alfalfa grown after deep plowing is characterized by a General depletion of species composition in the upper and accumulation of individuals in the lower layer.

Thus, the agrocenosis of alfalfa was significantly richer in phytonematodes than its surrounding ecosystem (Table.1). When comparing the agrocenosis of cotton with its surrounding ecosystem, the opposite picture is observed. Apparently, the dense vegetation cover and the relatively moderate hydrothermal regime of the soil of alfalfa fields create favorable conditions for the reproduction of phytonematodes, and frequent processing, heating and drying of the soil under the influence of direct sunlight in the cotton agrocenosis lead to a sharp reduction in the species composition and number (Table.2). At the same time, different environmental groups react differently to the above-mentioned actions of external factors. Predatory parasobionts completely disappear from the rhizosphere of cotton, the species composition and numbers of herbivorous parasobionts are greatly reduced, and the number of specific, especially sedentary ectoparasites from the genus *Helicitylenchus* is significantly reduced, and the number of migrating endoparasites remains almost at the same level.

The agricultural lands and their surrounding ecosystems differ in ecological structure of phytonematode, and the character of their vertical distribution in the soil. In the soil of agricultural lands the main part of phytonematode concentrated in the topsoil. In the surrounding ecosystem the most densely populated is the top layer at a depth of 0-10 cm as you know the top layer of soil is always characterized by good aeration more dense development of the root system and high organic matter content. All of these factors are conducive to intensive growth of phytonematode. Frequent handling and reduced soil moisture in agrocenoses on the contrary inhibit the growth of the number of phytonematode. The dependence of the number of phytonematode from soil moisture is particularly pronounced in the farming of cotton. The surrounding agricultural lands ecosystem can become a place of reservation and the focus of the spread of the parasitic species of phytonematode.

Pairwise comparison of phytonematode communities showed the similarity of alfalfa and cotton agrocenoses with their surrounding ecosystem. A similar similarity was observed between the agrocenoses of cotton and alfalfa, between the agrocenoses of alfalfa and the surrounding ecosystem. Very low indices of similarity between the ecosystems of cotton and alfalfa, cotton agro-ecosystem and natural ecosystem of alfalfa (Table.3).

Quantitative and qualitative composition of phytonematode in agrocenosis alfalfa is not constant and varies during the year. Species composition of phytonematode most diverse in the spring, winter is reduced to a minimum. Such a change in species composition observed in the rhizosphere of cotton.

In population dynamics of species of phytonematode alfalfa observed two peaks, and one of cotton (Fig.1). The highest peak strength accounts for the most favorable for reproduction of phytonematode spring, when the soil is moist precipitation and not too warm sunlight. The greatest importance in increasing the number of phytonematodes in the spring period is the occurrence of saprobiotic foci in the soil as a result of rotting plant residues.

The species composition and number of phytonematode in the agro-ecosystem is influenced by the tillage method. Seedbed deep plowing soil with a stratified application of organic and mineral fertilizers promotes the increase of number of individuals and diversity of species of phytonematode in the deeper layers of the soil. The differences in occupancies between nematodes usually plowed and deep-tilled soil is especially noticeable in the early periods of the growing season (June).

The increase in species diversity and number of phytonematodes in deep soil layers is explained by the improvement of aeration and enrichment of these layers with organic substances. Compaction of the soil as plants grow leads to a reduction in the species composition and number of phytonematodes. Deep plowing has a particularly beneficial effect on diisopropanol, paraitonion and of parasitic nematodes specific pathogenic effect.

Indicator properties of phytonematode seedbed to deep plowing and applying fertilizer is expressed in the increase of the total number of consumers of organic residues (devicepresence), basal free-living of phytonematode - harrisoniana and specific parasites consuming the juices of the living plant cells.

3 Conclusion

1. As a result of comparative ecological and faunal analysis of phytonematodes of cotton and alfalfa agrocenoses, 132 species of phytonematodes were found. It is established that the species diversity and number of communities of phytonematodes depends on the type of plants and the density of their standing, as well as edaphic factors (humidity, temperature, organic composition of the soil). In the agrocenosis of alfalfa, the quantitative and qualitative composition of phytonematodes is always greater in comparison with the agrocenosis of cotton.

2. Different environmental groups react differently to external factors. More frequent processing and lack of moisture in the soil lead to a sharp reduction in the number of phytonematodes of parasobionts and sedentary ectoparasites in the rhizosphere of cotton.

3. In the formation of a community of phytonematode agriculture of cotton and alfalfa plays a big role surrounding ecosystem. There is a certain relationship between the communities of phytonematode agriculture and surrounding ecosystems, resulting in the interpenetration of types between the systems.

4. Agrocenoses and their surrounding ecosystems differ from each other in the nature of the vertical distribution and the composition of the ecological groups of phytonematodes. If in agrocenoses the main part of phytonematodes is concentrated in the arable layer (0-30 cm) of the rhizosphere, then in the surrounding ecosystem in the upper soil layer (0-10 cm). In agrocenoses relatively diverse are the parasitic nematodes nonspecific and developability, and the surrounding ecosystem and polarizabilty real parasites. Thus, the surrounding agrocenosis ecosystem can become a place of accumulation and distribution of certain parasitic species of phytonematodes, including *Meloidogyne sp., Ditylenchus dipsaci, Pratylenchus pratensis,* causing significant damage to crops.

5. Community structure of phytonematode of species, ecological composition and size are not permanent, change in the period of vegetation of plants throughout the year. The qualitative composition of phytonematode most diverse in the spring and in the winter reduced to minimum. In the dynamics of phytonematode alfalfa observed spring and autumn peaks, and in the dynamics of phytonematode cotton spring peak. In winter, the number of phytonematodes in both agrocenoses is sharply reduced. The reason for the fluctuation in the number of phytonematodes is the change in the physical and chemical properties of the soil under the influence of irrigation and mechanical treatment of the soil during the vegetation period.

6. Advanced farming techniques like deep presowing plowing with the incorporation of organic and mineral fertilizer, improves the qualitative and quantitative composition of phytonematode in this soil layer. Phytonematode reacting to seedbed preparation and fertilizing, are indicators of agrochemical and physical soil properties, in particular aeration and density of soil, content of organic substances. Such reactions are better expressed in representatives of devisaprobionts, pararizobionts and specific parasites, which can be used to assess the effectiveness of agrotechnical measures used in the cultivation of crops.

Table-1

The ratio of the number of species and number of individuals of environmental groups phytonematode in different horizons soil farming of alfalfa and the surrounding ecosystem

No	The ecogroups	Alfalfa agrosenosis						The surrounding ecosystem					
		Dept take soil samples, see:											
		0-10	10-20	20-30	30-40	40-50	just	0-10	10-20	20-30	30-40	40-50	just
		The number of individuals and species											
1.	Pararisobionts	19/53	22/60	19/90	6/9	4/8	24/220	13/47	17/35	13/25	5/7	2/3	18/117
2.	Eusaprobionts	3/7	3/10	3/5	2/5	1/1	3/28	3/16	3/8	3/7	¼	3/3	3/33
3.	Devisaprobionts	14/50	17/75	17/62	14/43	4/9	14/239	10/104	9/32	9/32	6/10	4/5	10/183
4.	Specifik fitogelmints	7/25	12/62	13/39	7/24	7/12	13/162	9/88	11/72	4/68	8/22	6/12	10/262
5.	The non specific fitogelmintes	4/14	7/29	5/45	6/28	6/9	9/123	10/45	9/44	6/17	6/22	5/9	9/137
6.	Predatory pararizobionts	3/13	4/45	4/9	2/12	1/3	4/52	2/6	2/8	2/8	1/3	2/4	9/29

Note: Figures before the slash is the number of species, below-the number of individuals

Table-2

The ratio of the number of species and number of individuals of environmental groups phytonematode in different horizons the soil of agrocenosis of the cotton plant the surrounding ecosystem

No	The ecogroups	The agrocenosis of cotton						The surrounding ecosystem					
		Глубина взятия почвенных образцов, см:											
		0-10	10-20	20-30	30-40	40-50	Всего	0-10	10-20	20-30	30-40	40-50	Всего
		Количество особей и видов											
1.	Pararisobionts	8/15	6/14	7/29	3/9	5/14	9/81	12/53	12/57	11/33	10/23	7/10	16/176
2.	Eusaprobionts	2/9	2/8	2/6	2/14	1/1	3/38	21/22	2/14	2/7	1/4	1/3	2/50
3.	Devisaprobionts	11/33	8/42	8/40	9/23	5/14	13/152	14/86	17/62	11/26	13/29	13/30	21/233
4.	Specifik fitogelmints	6/21	9/23	8/24	3/7	6/23	6/98	12/69	12/60	13/52	8/48	13/35	13/264
5.	The non specific fitogelmintes	9/81	8/39	6/46	3/39	6/39	11/244	13/39	13/32	6/14	10/17	6/15	13/117
6.	Predatory pararizobionts	2/3	2/6	2/6	1/2	2/6	2/23	2/4	2/6	3/9	2/2	-	3/21

Note: Figures before the slash is the number of species, below-the number of individuals

Table-3

The coefficients of similarity and the degree of connection between the communities of phytonematode agriculture alfalfa and cotton with the surrounding ecosystems

No	Compared communities	The number of species		Ratio similarities	The degree of connection
		In each community	Common species in compared communities		
1.	The alfalfa agrocenosis The surrounding ecosystem	67 51	40	0,70	Weak
2.	The cotton agrocenosys The surrounding ecosystem	44 64	41	0,80	Close
3.	Alfalfa agrocenosis The cotton agrocenosys	67 44	36	0,65	Weak
4.	The surrounding ecosystem alfalfa The agrocenosys of cotton	51 44	18	0,38	Missing
5.	The surrounding ecosystem alfalfa The surrounding ecosystem of cotton	51 64	25	0,47	Missing
6.	The surrounding ecosystem of cotton The alfalfa agrocenosis	64 67	20	0,31	Missing

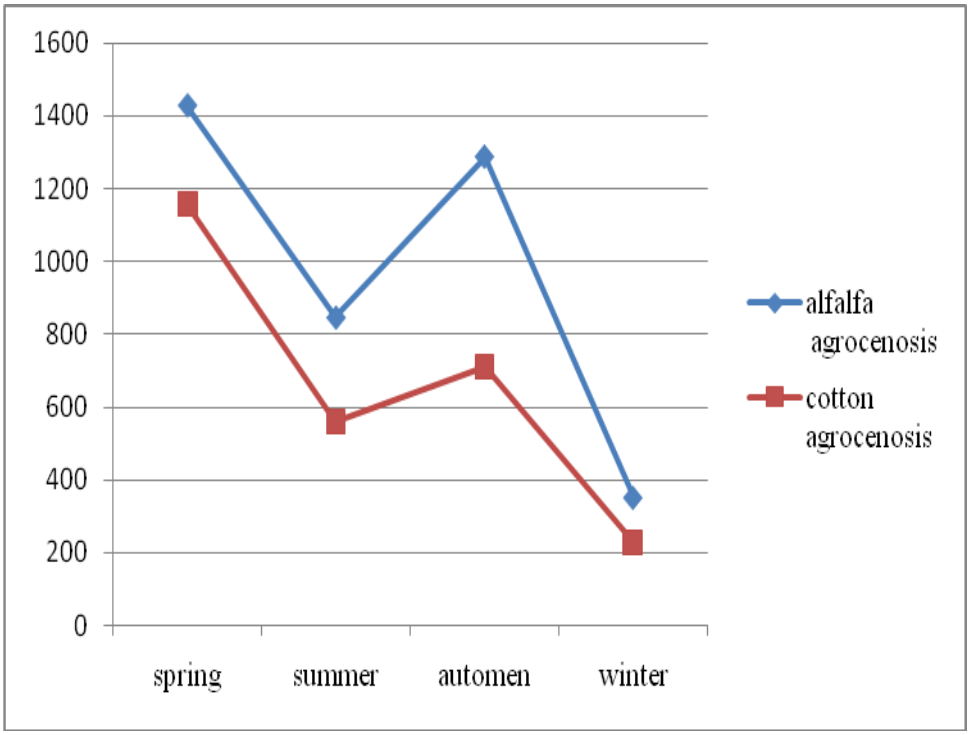

Fig.1. Evolution of the number of phytonematode in the soil of cotton and alfalfa agrocoenosis on steam year

4 References

[1] Abdurakhmanova G.A. Phytonematodes of cotton-alfalfa agrocoenosis and agro technical factors significance in the formation of their associations. // Avtoref. Diss. C.b.B., -Tashkent, 2004. 22 p.

[2] Gruzdeva L.I., Matveeva K.M., Kovalenko T.K. The community structure of soil nematodes as an indicator of the characteristics of the flow of soil processes in seeded meadows of Karelia // Materials of international conference devoted to the 125 anniversary of K.I.Scryabin, to the 60 anniversary of the founding of the helminthology laboratory A.N Russia Institute of Parasitology RAS (14-16 April, 2004. Moscow) Grew.A.N. The main achievements and prospects of development of Parasitology. -Moscow. 2004. - P. 82-83

[3] Kiryanova E.C., Krall E.A. "Parasitic nematodes of plants and measures against them". // L.: “Nauka”, 1969.

[4] Mavlanov O. M., Eshova H. S. Adaptation as evolution of phytonematodes in conditions of sandy desert // IV international nematological Symposium. - Moscow, - Pp. 32-33. (2001).

[5] Mavlyanov O.M., "Phytonematode the cotton agrocoenosis (problems of taxonomy, ecology, zoogeography and measures)". // Avtoref. Diss. D.b.B., Tashkent, 30 p. (1993).

[6] Paramonov A.A. Basics the only scientist who worked. Publishing House "Nauka", Moscow, Volume II. 446 p. (1964).

[7] Paramonov A.A. Basics the only scientist who worked. Publishing House "Nauka", Moscow, Volume III. 270 p. (1970).

[8] Khakimov, H.N. “The ecological characteristics and importance of soil nematodes”. // Actual problems of Parasitology: proceedings of the scientific conference. -K.of medicines: "Nasaf", -S.26-28. (2003).