Materiallar to'plami · Conference Proceedings
"ZAMONAVIY TADQIQOTLAR VA BARQAROR RIVOJLANISH" respublika ilmiy-amaliy konferensiyasi
04 August 2026
UDK 63
TABIIY FANLAR

ISSIQXONA SHAROITIDA BULG'OR QALAMPIRI O'SIMLIGINING NEMATODALAR FAUNASI

Dilsora Norxonovna Mardonayeva*, Alisher Shukurovich Xurramov, Siroj Hamzayevich Choriyev
Termiz davlat universiteti
✉ mardonayevadilsora@gmail.com

ANNOTATSIYA

Maqolada Surxondaryo vohasida issiqxona sharoitida bulg'or qalampiri (*Capsicum annuum* L.) o'simligida uchrovchi nematodalar faunasi tahlil qilingan. Tadqiqotlar natijasida bu o'simliklardan 2 ta sinf, 4 ta kenja sinf, 7 ta turkum, 12 ta kenja turkum, 17 ta katta oila, 29 ta oila, 32 ta kenja oila, 40 ta avlodga mansub 76 turdagi nematodalar uchraganligi qayd etilgan.

Kalit so'zlar

fitonematodalar, issiqxona, bulg'or qalampiri, fauna, ildiz, ildiz atrofidagi tuproq.

DOI: 10.5281/zenodo.21743205

KIRISH

Mamlakatimizda yopiq maydonlardagi qishloq xo'jaligi ekinlarining nematodalar faunasi tarkibini aniqlash, ularning bioekologik xususiyatlarini tahlil qilish, parazitlarning keng tarqalgan turlari bo'yicha o'simliklarga zarar yetkazish darajasini baholash, shuningdek, o'simliklarning nematodalar faunasini rivojlantirish borasida muayyan natijalarga erishilmoqda va ularga qarshi kurashish chora-tadbirlari ishlab chiqilmoqda. Xususan, 2022-2026-yillarda Yangi O'zbekistonni rivojlantirish strategiyasida "Qishloq xo'jaligini jadal rivojlantirish va ilg'or ilm-fan yutuqlarini qo'llash orqali fermer va dehqonlarning daromadlarini kamida 2 barobar oshirish, qishloq xo'jaligi hajmining har yili kamida 5 foizga o'sishini ta'minlash" vazifalari belgilab berilgan [1]. Ushbu vazifalardan kelib chiqib, Surxondaryo viloyatida issiqxona ekinlaridagi parazit nematodalari faunasining tarkibini, bioyekologik xususiyatlarini va issiqxona ekinlarining keng tarqalgan parazit turlari tomonidan zararlanish darajasini aniqlash, shuningdek, ularga qarshi kurashishning ekologik toza chora-tadbirlarini ishlab chiqish, muhim ilmiy va amaliy ahamiyatga ega.

Tadqiqot materiali va metodlari. Fitogelmintologik faunistik tadqiqotlar 2024-2025 yillar Surxondaryo vohasi tumanlaridagi issiqxona xo'jaliklaridan marshrut usulidan foydalangan holda bulg'or qalampiri o'simligidan 238 ta tuproq va 238 ta ildiz namunalari yig'ildi[2]. Ushbu namunalar Termiz davlat universiteti Zoologiya kafedrasi qoshidagi Gelmintologiya ilmiy laboratoriyasida Bermanning voronkali metodidan foydalangan holda tuproq va ildiz namunalaridan nematodalar ajratib olindi[3]. Preparatlar Saynxorst metodi asosida tayyorlandi[5]. Nematodalarning turini, jinsini aniqlashda N-300M Trinokulyar mikroskopidan, shuningdek, nematodalar aniqlagichlari va atlaslaridan foydalanildi. Nematodalarning o'lchamini o'chashda ko'pchilik tadqiqotchilar tomonidan qabul qilingan, Mikoletskiy tomonidan qayta ishlangan De Man formulasidan foydalanildi[6]. Nematodalarni sistemaga solishda De Ley va M.A.Blaxter lar tomonidan ishlab chiqilgan fitonematodalar sistemasidan foydalanildi[7].

Natija va muhokama. Tadqiqotlar natijasida bulg'or qalampiri (*Capsicum annuum* L.) o'simligida nematodalarning 2 ta sinf, 4 ta kenja sinf, 7 ta turkum, 12 ta kenja turkum, 17 ta katta oila, 29 ta oila, 32 ta kenja oila, 40 ta avlodga mansub 76 turi aniqlandi (1-jadval).

1-jadval

Bulg‘or qalampiri o‘simligi va rizosferasida nematodalarning taqsimlanishi

№	Nematoda turlari	Individlar soni rizosfera	Ildiz	Jami	100 %
1	*Prismatolaimus dolichurus*	5		5	0,19
2	*Mononchus truncatus*	8		8	0,30
3	*Dorylaimus stagnalis*	11		11	0,42
4	*D.bastianoides*	7		7	0,27
5	*Mesodorylaimus parasubulatus*	12		12	0,46
6	*Eudorylaimus labiatus*	10		10	0,38
7	*E. pratensis*	14		14	0,53
8	*E. monohystera*	2		2	0,08
9	*Aporcelaimus superbus*	2		2	0,08
10	*A. regius*	3		3	0,11
11	*Xiphinema index*	5	1	6	0,23
12	*Alaimus primitivus*	3		3	0,11
13	*Trichodorus primitivus*	8	2	10	0,38
14	*Monhystera simplex*	4		4	0,15
15	*Plectus cirratus*	5		5	0,19
16	*Proteroplectus tenuis*	2		2	0,08
17	*Heterocephalobus elongatus*	28	13	41	1,56
18	*H. filiformis*	4	2	6	0,23
19	*Cephalobus persegnis*	40	12	52	1,97
20	*C. nanus*	17		17	0,65
21	*Eucephalobus mucronatus*	5	2	7	0,27
22	*E. striatus*	20	6	26	0,99
23	*E. cornis*	4		4	0,15
24	*Acrobeloides buetschlii*	46	21	67	2,54
25	*A. emarginatus*	34	11	45	1,71
26	*A. obliquus*	6		6	0,23
27	*A. nanus*	13	5	18	0,68
28	*A. maximus*	4		4	0,15
29	*Chiloplacus symmetricus*	11	3	14	0,53
30	*Ch. propinquus*	45	18	63	2,39
31	*Ch. lentus*	35	13	48	1,82
32	*Ch. demani*	13		13	0,49
33	*Cervidellus desidiosus*	4		4	0,15
34	*Panagrolaimus rigidus*	162	65	227	8,61
35	*P. armatus*	29	6	35	1,33
36	*P. longicaudatus*	8	5	13	0,49
37	*P. obesus*	5		5	0,19
38	*Teratocephalus terrestris*	6		6	0,23
39	*Xylorhabditis operosa*	4		4	0,15
40	*Rhabditis longicaudata*	18	6	24	0,91
41	*Rh. brevispina*	31	11	42	1,59
42	*Aphelenchus avenae*	123	57	180	6,83
43	*A. eremitus*	7	4	11	0,42
44	*Paraphelenchus tritici*	13	5	18	0,68
45	*P. pseudoparietinus*	32	8	40	1,52
46	*Aphelenchoides parietinus*	55	28	83	3,15
47	*A. blastophthorus*	19	6	25	0,95
48	*A. clarolineatus*	15	5	20	0,76
49	*A. composticola*	77	18	95	3,61
50	*Tylenchus davainei*	25	6	31	1,18

№	Nematoda turlari	Individlar soni rizosfera	Ildiz	Jami	100 %
51	*T. arcuatus*	8	3	11	0,42
52	*Filenchus filiformis*	28	8	36	1,37
53	*F. multistriatus*	7		7	0,27
54	*Lelenchus discrepans*	6	2	8	0,30
55	*Lelenchus leptosoma*	8	4	12	0,46
56	*Aglenchus agricola*	14	5	19	0,72
57	*Tylenchorhynchus brassicae*	27	11	38	1,44
58	*T. claytoni*	21	9	30	1,14
59	*Merlinius brevidens*	18	7	25	0,95
60	*Psilenchus clavicaudatus*	7	4	11	0,42
61	*Helicotylenchus dihystera*	72	27	99	3,76
62	*H. pseudorobustus*	34	12	46	1,75
63	*H. multicinctus*	17	6	23	0,87
64	*Rotylenchus robustus*	19	9	28	1,06
65	*R. buxophilus*	12	5	17	0,65
66	*Pratylenchus pratensis*	93	36	129	4,90
67	*P. penetrans*	54	20	74	2,81
68	*Meloidogyne incognita*	56	203	259	9,83
69	*Hemicycliophora arenaria*	8	5	13	0,49
70	*Paratylenchus macrophallus*	29	11	40	1,52
71	*P. goodeyi*	16	7	23	0,87
72	*Ditylenchus dipsaci*	115	53	168	6,38
73	*D. destructor*	56	21	77	2,92
74	*D. tulaganovi*	18		18	0,68
75	*D. intermedius*	9	3	12	0,46
76	*Nothotylenchus acris*	9	5	14	0,53
Jami	Turlar soni	76	51	76	100 %
	Individlar soni	1820	815	2635	

Bulg‘or qalampiri (*Capsicum annuum* L.) o‘simligi ildizi hamda ildiz atrofidagi tuproqdan 76 turga mansub 2635 ta individ topilgan bo‘lib, o‘simliklar ildizida 51 ta, ildiz oldi tuproqda 76 ta nematoda turlari qayd etildi. Aniqlangan nematoda turlari individlar sonining dominantlik darajasi (Kasprzak va Niedbala, 1981) o‘rganildi[8]. Dominantlik darajasi bo‘yicha eudominant turlar qayd etilmadi. Nematodlarning 4 turi ya’ni, *Aphelenchus avenae, Panagrolaimus rigidus, Ditylenchus dipsaci, Meloidogyne arenaria* kabi turlar dominant turlardir. Nematodalarning 8 turi ya’ni *Chiloplacus propinquus, Acrobeloides buetschlii, Aphelenchoides parietinus, A.composticola, Pratylenchus pratensis, P.penetrans, Helicotylenchus dihystera, Ditylenchus destructor* kabi turlar subdominant turlardir. Aniqlangan nematodalarning 14 turi ya’ni, *Cephalobus persegnis, Heterocephalobus elongatus, Chiloplacus lentus, Acrobeloides emarginatus, Rhabditis brevispina, Panagrolaimus armatus, Tylenchus davainei, Paraphelenchus pseudoparietinus, Filenchus filiformis, Helicotylenchus pseudorobustus, Tylenchorhynchus brassicae, T.claytoni, Paratylenchus macrophallus, Rotylenchus robustus* kabi nematoda turlari resedent turlar, 50 turdagi nematodalar subresedent turlar ekanligi qayd etildi.

XULOSA

Bizning tadqiqotimizda nematoda individlar soni bo‘yicha bulg‘or qalampiri (*Capsicum annuum* L.) o‘simligi ildizi hamda ildiz oldi tuproqda eng ko‘p uchragan turlar sifatida *Meloidogyne incognita, Panagrolaimus rigidus, Aphelenchus avenae* turlari qayd etilgan bo‘lsa, eng kam uchragan turlar sifatida esa *Eudorylaimus monohystera, Aporcelaimus superbus, Proteroplectus tenuis* turlari qayd etildi. Aniqlangan nematodalar dominantlik darajasi bo‘yicha eudominant turlar qayd etilmadi. Nematodalarning 4 turi dominant, 8 turi subdominant, 14 turi resedent va 50 turi subresedent turlarni tashkil etdi.

FOYDALANILGAN ADABIYOTLAR

1. O‘zbekiston Respublikasi Prezidentining 2022-yil 28-yanvardagi “2022-2026-yillarda yangi O‘zbekistonni rivojlantirish strategiyasi to‘g‘risida”gi PF-60-son Farmoni.

2. Choriyev, S., Khurramov, A., Khurramov, S., & Mardonayeva, D. (2024). Ecological analysis of peanut nematodes in Surkhondaryo region. In *BIO Web of Conferences* (Vol. 100, p. 04006). EDP Sciences. https://doi.

org/10.1051/bioconf/202410004006

3. Hamzayevich, C. S., Shukurovich, K. A., Khurramovich, K. S., Ugli, K. N. D., Norxonovna, M. D., & Qurbonmuratovich, R. S. (2024). Phytonematodes of peanut plants in the south of Uzbekistan. :https://doi.org/10.33472/AFJBS.6.8.2024.104-110.

4. Khuramov A., Bobokeldieva L., Choriyev S., Rakhmatullaev B., Khimmatov N., Raimov S., & Karshieva M. (2024). A Comprehensive study of phytonematodes of grape plants in the conditions of the Surkhandarya valley, Uzbekistan. *Biodiversitas Journal Of Biological Diversity*, *25*(11).

5. Choriyev, S., Khurramov, A., Amirov, O., Mardonayeva, D., Bobokeldiyeva, S., Asliddin, B., ... & Khusanov, N. (2025). Molecular-genetic analysis of Meloidogyne (Heteroderidae) species from Surxondaryo Region, Uzbekistan based on ITS markers. *Regulatory Mechanisms in Biosystems*, *16*(4), e25217-e25217.

6. Hamzayevich, C. S., Xurramovich, X. S., & Shukurovich, X. A. (2024). SURXONDARYO VOHASIDA YERYONG'OQ O'SIMLIGIDA UCHROVCHI ADENOPHOREA KENJA SINFIGA MANSUB NEMATODA TURLARINING FAUNISTIK VA SISTEMATIK TAHLILI. *Science and innovation*, *3*(Special Issue 21), 725-729.

7. De Ley P. & Blaxter M.L. Systematic position and phylogeny // The Biology of Nematodes, Donald L. Lee (Ed.). London: Taylor and Francis, 2010. – P. 1-30

8. Kasprzak K., Niedbała Wskaźniki biocenotyczne stosowane przy porządkowaniu i analizie danych w badaniach ilościowych // „Metody stosowane w zoologii gleby", PWN, – Warszawa, – 1981. - Str 397 - 408.