WEEDS FROM FIELDS PLANTED WITH TOMATOES

Akhmedov Khasan,
Arabova Nodira,
Khaydarova Khalima
Department of Environmental Safety in Agriculture and Botany,
Faculty of fruit and grapes, Tashkent State Agrarian University

Abstract: *The composition of weed species in tomato fields in Kibray district of Tashkent region was studied. The dominant species of weeds, the degree of contamination and the number per 1m^2 of land were determined. The most common weed species are shown.*
According to the results of the study, weeds were found in the fields planted with tomatoes, mainly belonging to 28 species. Of these, the most common in 1 m^2 area is 25-40 % in Amaranthus retroflexus L., Echinochloa crus-galli (L.) Beaw. 6-33 % per 1 m^2, Chenopodium album L. was found to be 19-25 % per 1 m^2, Cyperus rotundus L. and Xanthium strumariumL. were found to be 4-5 % per 1 m^2. Of the weed species found in the study areas, 11 % are perennial weeds. The presence of perennial weeds in fields planted with tomatoes indicates the presence of perennial weeds in the same field before the tomatoes were planted. Therefore, it is necessary to pay attention to additional agro-technical measures in clearing the area from perennial rhizomes, rhizomes, bulbs, tubers. Perennial weeds are found everywhere in vegetable-grown fields, mostlyin small separate places, and if they are not eradicated in a timely manner in these areas, they multiply slowly and spread throughout the field.
It has been stated that the widespread use of crop rotation in vegetable growing poses certain difficulties in identifying weed species specific to each crop type.

Key words: *Tomato, weeds species, the number of land units - 1 m^2, pieces, past crops, alternate planting.*

I. Introduction

Weeds have been damaging crop yields since humans started farming, and are still causing a lot of damage. They have survived for a long evolutionary period, have adapted to various positive and negative effects of environmental factors, and as a result have become more resistant to the negative effects of environmental factors than cultivated plants. Therefore, they absorb moisture and minerals from the soil earlier than cultivated plants, resulting in faster growth, development, and impede cultivated plants, slowing down the photosynthesis, metabolism and other processes that take place in them. Because the seeds of vegetable crops are small, they initially form slender grasses. Meanwhile, the grasses of some weeds germinate earlier, others germinate evenly, and grow, develop, and damage faster than the grasses of cultivated plants.

Especially perennial weeds cause great damage to vegetable crops. Because they have rhizome, илдиз бачкилари, they form grass earlier, and during ўтоқ қилишand row spacing, they cause the destruction of the grass of many cultivated crops. Because weeds have a known natural immunity, their seeds can easily maintain their germination for 40-50 years [1].

According to research institutes, the yield of weed-infested fields of collective farms decreases from 2-3 quintals of grain, 30-50 quintals of potatoes, 30-40 quintals of carrots, 40-50 quintals of root crops [2].

It was found that in the fields where weeds are widespread, the yield of cultivated plants decreases by 10.0% in vegetable crops, 13.4% in legumes, 6.5% in potatoes and 10.6% in cereals[3].

The composition of weed species in cotton fields, orchards, wheat fields is well studied [4, 5, 6, 7, 8].

The composition of weed species in vegetable crops, their number per unit area and their biological properties are not well studied. Taking this fact into consideration, we studied the species composition and number of weeds in the fields where vegetable crops were planted.

II. Methodology

Research paper was carried out on the basis of the methods proposed by A.I. Maltsev [9] and B.G. Aleev, A.J. Jurakulov, X.A. Akhmedov and A.M. Mirzaev [10]. To do this, herbarium was collected from several points, weeds encountered in these areas, walking along the diagonal of the fields where the tomatoes were planted, and their botanical names were determined.In order to determine the number of weeds, the plots were separated from the studied fields in four repetitions per 1 m^2, and the composition and number of weed species within these plots were counted.

III. Research results

Weeds are highly adapted to natural conditions, and their seeds enter the fields where cultivated plants are planted every year through water, wind, manure, animals, birds, humans, agricultural machinery, and other means. In addition, weeds that live in the fields can easily germinate in the fall. Their seeds are sown in the ground. When plowed in the fall, all of these seeds mix with the soil, seeds that fall to the depth of germination germinate, the remaining seeds do not rot and remain as reserve seeds in the soil as most can retain their germination for 40-50 years. That is why in the fields where all cultivated plants are planted, different weeds species are found. The conditions themselves require a comprehensive study of weeds and the development of perfect control measures against them.

We conducted our research in the fields of vegetable crops of farms of Kibray district of Tashkent region.

1.1-Table.

species and number of weeds in the field where tomatoes are planted

(1 м^2/piece)

№	Weeds species	Number in 1м^2, piece	
		2018	2019
1.	*Amaranthus retroflexus* L.	20,0	32,0
2	*Echinochloa crus-galli* (L.) Beaw.	5,0	27,0
3	*Chenopodium album* L.	15,0	20,0
4	*Cyperus rotundus* L.	4,0	3,0
5	*Xanthium strumarium* L.	4,0	3,0
6.	*Solanum nigrum* L.	3,0	3,0
7.	*Sorghun halepense* (L.) Pers.	2,5	2,0

8	*Cynodon dactylon* (L.) Pers	2,0	2,0
9	*Convolvulus arvenses* L.	2,0	2,0
10.	*Rorippa islandika* Brob	1,0	1,0
11	*Malva neglecta* Wall.	1,0	1,0
12	*Rumex crispus* L.	0.5	0,75
13	*Platango major* L.	0,5	0,75
14	*Abutilon theophrasti* Medik	0,5	0,5
15	*Sisymbrium loeselli* L.	0,25	0,25
16.	*Fumaria vaillantii* Loisel	0,25	0,25
17.	*Conum maculatum* L.	0,25	0.25
18	*Setaria viridis* L.	0,25	0.25
19.	*Polygonum aviculare* L.	0.25	0,25
20.	*Polygonum heterophyllum* Lindm.	0.25	0,25
21	*Physalis ixocarpa* Brot. Ex Harnem	0,25	0,25
22	*Descurainia sophia* (L) Webb ex Prantl	0,25	0,25
23.	*Datura stramonium* L.	0,25	0,25
24	*Cirsium ochrolepidium* Juss	0,25	0,25
25	*Bromus scoparius* L.	0,25	0,25
26	*Hordeum Leporinum* L.	0,25	0,25
27	*Capsella bursa pastoris* (L) Medik	0,25	
28	*Dodartiaorientalis* L	0,25	

As can be seen from the table, in the fields where tomatoes are grown, there are mainly weed species belonging to 28 species. The most common of these are *Amaranthus retroflexus* L. 20-32 pieces per 1 m^2, *Echinochloa crus-galli* (L.) Beaw. 5-27 pieces per 1 m^2, *Chenopodium album* L.15-20 piecesper 1 m^2, *Cyperus rotundus* L. 3-4 pieces per 1 m^2, *Xanthium strumarium* L.3-4 piecesper 1 m^2.

It should also be noted that 9 of the weed species listed in the table are perennial weeds. In olericulture, cropping alternately is widely used, vegetable crops belonging to one family per field are not replanted the following year. This poses certain difficulties in identifying the weeds species that are specific to each type of vegetable crop. It has been observed that the types of weeds found in the fields where tomatoes are planted are on the one hand dependent on the previous crop. It was found that the greater the number and variety of weeds in a field planted in the past, even moreshould bethe variety and number of weeds per unit area where tomatoes are planted in the same field the following year. Moreover, the presence of perennial weeds in tomato-growing fields indicates the presence of perennial weeds in the same field before tomato was planted. Because whatever type of perennial weed is found in the field where the previous crop was planted, it was determined that these perennial weed species were encountered when tomatoes were planted in that field the following year. Perennial weeds are found everywhere in vegetable-grown fields, mostly in small separate places, and if they are not eradicated in a timely manner in these areas, they multiply slowly and spread throughout the field.

Conclusion

Weeds belonging to 28 species are mainly found in the fields planted with tomatoes. The most common weed species are *Amaranthus retroflexus* L., *Echinochloa crus-galli* (L.) Beaw., *Chenopodium album* L., *Xanthium strumarium* L. Of the weeds found in the fields where tomatoes are grown, 9 are perennial weeds, and special attention should be paid to them when developing control measures.

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