

Types And Description Of Weeds Distributed In The Grain Crops Of The Zarafshan Valley

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Abstract – The scientific work States that 80 types of weeds spread on grain fields in the upper (Tailak district), middle (Ishtikhon district) and lower (Khatyrchinsky district) parts of the Zarafshan valley that were irrigated and cultivated, 33 annual weeds, 2 biennial weeds, and 25 perennial weeds.

Keywords – Chorny plants, annual weeds, biannual, perennial weeds, ephemerals, early spring weeds, late spring weeds, overwintering weeds, rod weeds, rhizomatous roots weeds, root-spreading weeds, brush-root weeds, groundcovering weeds.

I. INTRODUCTION

Weeds appeared as a result of the fact that they formed a group of plants and lived in constant competition with cultivated plants. They adapt cultural plants to the way they live, giving them characteristic features. In agricultural crops, weeds grow together with cultivated plants, forming a thriving agrophytocenosis and lagging behind cultivated plants in competition due to their high viability [1; 7-14-p.].

The data shows that the species and number of weeds are increasing at this time. For example, in the CIS countries after the 90 - ies of the last century, more than 2000 species of weeds were found, while in Uzbekistan 841 species of weeds belonging to 72 families were identified, with 519 species of them being annual and 322 species-perennial weeds. However, in terms of damage to the agroculture, annual weeds predominate. Perennial bulbous rootstocks (Rod weeds) -21%, Rhizomatous roots weeds 7 and weed in all the remaining biological groups is about -2% [2; 110-p.].

According to V.A.Zakharenko, A.V.Zakharenko's [5; 3-p.] data, the most economically harmful weed species in the world, belong to L. Holm that has 206 species of weeds from 59 families, of these: 80 type is extremely dangerous, belonged to in the following families: Poaceae (Gramineae) -44, Cyperaceae -12, Asteraceae (Compositae)-32, Polygonaceae-8, Amaranthaceae-7, Brassicaceae (Cruciferae)-7, Leguminosae-6, Convovulaceae -5, Euphorbiaceae -5, Chenopodiaceae -4, Malvaceae -4, Solanaceae -4. The remaining 47 families have 1-3 harmful species of weeds.

According to D.S.Bullock, D.G. Bullock [6; 71-101-p.] E.P.Denisov, A.P.Tsarev, A.M. Kosachev's datas [4; 3-5-p.], at the moment more than 30000 species of weeds distributed, and 1800 species of them cause very high economic damage every year. The main agricultural crops compete with more than 200 types of weeds, and from 10 to 60 of them pollute food crops and fodder crops.

II. MATERIALS AND METHODS

Field research was carried out on studying the types, systematics and ecology of weeds spread in the upper part of Zarafshan valley (Taylak district of Samarkand region), the middle part (Ishtikhon district) and the lower part of valley (Khatirchi district of Navoi region), where our republic is irrigated and grown winter wheat.

Weeds in the fields of grain were determined by the method of accurate counting [3; 145-p.]. With an accurate account of weeds, the frame was made of ordinary wood with sides of 100 cm, that is, 1 m². In the calculation of weeds, walking along the diagonal of the crop field, the field is framed in 10 places, weeds within 10 points are counted and added, divided by 10, and the number of weeds in 1 m² is determined then calculated per hectare. During the detection of weeds are divided into family and species, an assessment is made of what kind of weeds are contaminated with.

III. RESULTS AND DISCUSSION

Our studies have shown that Zarafshan valley has more than 80 species of weeds spread in winter wheat, of those: They consist of following species: ephemerals–2, early spring weeds –6, late spring weeds –31, overwintering weeds – 4, biannual –4, perennial bulbous rootstocks (Rod weeds)–11, rhizomatous roots weeds–8, root-spreading weeds –10, brush-root weeds –2, and groundcovering weeds–1 (table 1). Among the most polluting weeds of winter wheat fields, 54.4 % are annual weeds, 5.1% are biannual, 40.5% are perennials.

Our research shows that in winter wheats of Taylak district, which is located at the top of Zarafshan valley, more than 58 species of weeds spread, of those: annual weeds- 33 (56.89 %) pieces, including: ephemerals -3, early spring weeds –5, late spring weeds –22, overwintering weeds – 3 pieces, biannual -2 (3.44 %), perennial weeds – 23 (39.6 %) pieces, moreover perennial bulbous rootstocks (Rod weeds)–9, rhizomatous roots weeds -5, root-spreading weeds -7, brush-root weeds -1, and groundcovering weeds consist of -1 species.

According to the data, in the winter wheat fields, the annual (56.9 %) and perennials (39.6 %) are spread in huge amount, the most damaging rhizomatous roots weeds and root-spreading weeds make up 21.7 and 30.4% of perennial weeds, cause a sharp decline in grain yield and quality. Ishtikhan district, located in the middle part of the Zarafshan valley, has an index of contamination with 60 types of weeds on typical sierozem soils and it is detected that they consist of annual weeds-31 (51.7 %), of those: ephemerals - 3, early spring weeds – 4, late spring weeds – 21, overwintering weeds – 3, biannual 2-3 (4.83); perennial weeds 26 (43.3 %), including: perennial bulbous rootstocks (Rod weeds)- 9, rhizomatous roots weeds – 6, root-spreading weeds – 9, brush-root weeds – 1, groundcovering weeds – 1 (table 1). 62 species of weeds belonging to 36 families were identified in the fields of the Zarafshan valley of the Khatirchi district, it was noted that these indicators were 31-36 and 58-60 species, respectively, in the Tailak and Ishihan regions located in the upper and middle parts of the oasis.

Annual weeds make up 35 (56.5 %) out of 62 species of weeds in the meadow grey soils of Khatirchi district in the winter wheats, of those: ephemerals -3, early spring weeds –4, late spring weeds –25, overwintering weeds – 3 pieces, biannual -2 (3.2 %), perennial weeds – 25 (38.7 %) pieces, moreover perennial bulbous rootstocks (Rod weeds)–7, rhizomatous roots weeds -7, root-spreading weeds -9, brush-root weeds -1, and groundcovering weeds -1.

Table 1. Family and types of the main weeds distributed in the fields of winter wheat of the Zarafshan valley

Family	Latin name	Family	Latin name
Annual weeds		Late spring weeds	
Ephemerals		12.Malvaceae	34. Abutilon theophrastii Medic.
1.Caryophyllaceae	1. Stellaria media	13.Brassicaceae	35. Malva neglecta Wall
	2.Lepyrodiclis holosteoides (CAM)F.		36. Descurainia sophia (L.) Schur.

2.Papaveraceae	3.Roemeria refracta	14.Primulaceae	37. Anagallis arvensis L.
Early spring weeds:		Papaveraceae	38. Fumaria vailantii Loisl.
3.Polygonaceae	4. Polygonum aviculare L.		39. Hypecoum parviflorum
4.Poaceae	5. Avena fatua L.	15.Fabaceae	40. Pisum arvense
5.Chenopodiaceae	6. Atriplex tatarica L.	16.Rubiaceae	41. Galium aparine
		Overwintering weeds	
		Brassicaceae	42. Thlaspi arvense L.
			43. Capsella bursapastoris (L.), Medik
			44. Euclidium syriacum(L.) R.Br.
	7. Atriplex flabellum.		45. Sisymbrium loeselii L.
	8. Chenopodium rubrum L.	Biannual	
	9. Chenopodium album L.	Fabaceae	46.Melilotus officinalis Dosr.
Late spring weeds		Asteraceae	47.Carduus sp.
6.Amarantaceae	10. Amaranthus retroflexus L.	17.Apiaceae	48.Daucus carota L.
	11. Amaranthus albus L.	Brassicaceae	49.Thlaspi arvense
	12. Amaranthus blitum L.	Perennial weeds:	
Poaceae	13. Hordeum murinum	Rod weeds	
	14. Hordeum spontaneum	Asteraceae	50.Tragopogon capitatus
			51.Taraxacum vulgare L
			52.Cichorium intubus L.
			53.Achillea millefolium
			54.Lactuca tatarica F.et.M.
	15. Echinochloa crus galli (L.)	18.Polygonaceae	55.Rumex acetosella
		Poaceae	56.Hordeum bulbosum
	16. Lolium temulentum L.	Malvaceae	57.Althaea armeniaca Ten.
		Boraginaceae	58.Trichodesma incanum (Bge)
	17. Setaria glauca (L.)	Apiaceae	59.Echinophora sibthopiana
7.Asteraceae		19.Putaceae	60.Haplophyllum perforatum
	18. Setaria viridis (L.).	Rhizomatous roots weeds	
	19. Xanthium strumarium L.	20.Eguisetaceae	61.Eguisetum arvense L.
			62.Eguisetum ramosissimum Des
		Poaceae	63.Sorghum Halepense (L.) Pers.
			64.Cynodon dactylon (L.) Pers
			65.Elytrigia repens (L.) Desv.
	20. Xanthium spinosum		66.Cyperus rotundus L.
	21. Xanthium calirnicum	Fabaceae	67.Vexibia pachycarpa (Schr.)
			68.Vexibia alopecuroides (L.)
		Root-spreading weeds	
	22. Artemisia annua L.	Fabaceae	69.Lagonichium farctum (Banks.et. Sol.)
Chenopodiaceae			70.Alchagi pseudoalchagi (MB.) Des.
	23. Carthamus turkestanicus M.		71.Glycyrrhiza glabra L.
	24. Sonchus arvensis	21.Convulvulaceae	72.Convulvulus arvensis L.
		22.Scrophulariaceae	73.Dodartia orientalis L.
	25. Spinacia turkestanica	Asteraceae	74.Acroptilon repens (L.) DC.
	26. Salsolacollina Pall.		75.Cirsium ochrolepidum Juz.

8.Boraginaceae	27. Heliotropium Dasycarpum. F.et M.		76.Karelinia caspia (pall.) Less.
			77.Sohchus arvensis L.
	28. Lycopsis orientalis L.	Brassicaceae	78.Lepidium latifolium
9.Zygophyllaceae	29. Tribulis terresteris L.	Brush-root weeds	
10.Portulacaceae	30. Portulaca olearcea L.	23.Plantaginaceae	79.Plantago major L.
11. Solanaceae	31. Solanum nigrum L.	Groundcovering weeds	
	32. Hyoscyamus niger	24.Ranunculaceae	80.Ranunculus arvensis L.
	33. Datura stramonium L.		

IV. CONCLUSIONS

More than 80 species of weeds are found in the irrigated wheat fields of Zarafshan valley, and in the winter wheat fields of Taylak in the upper part of the oasis, Ishtikhan in the middle part and Khatirchi in the lower part, about 58, 60, 62 types of weeds have been identified. annuals - 56.9; 51.7 and 56.5%, biennials - 3.44; 4.83 and 3.2% and perennials 39.6; 41.6 and 38.7%, respectively. It should be noted that in terms of damage caused by autumn wheat fields, annual weeds predominated, reducing the yield of winter wheat by 7.8-15.0%, and in some fields by 10.8-25.8%. The presence of more or less weeds depends not only on soil structure, mechanical composition, water properties, nutrient supply, but also on other environmental factors: land use patterns and farming culture in each district, soil contamination with weed seeds, water resources and water supply. Therefore, in the development of measures to control weeds in crops, first of all, to learn their type, family, description and the degree of contamination of arable lands with them, and on this basis to develop a plan to eliminate them, the most appropriate for the region. it is necessary to use the optimal method.

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