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SPREAD AND DEVELOPMENT OF BLACK MURTAK DISEASE IN WHEAT GRAINS

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Abstract:

Currently, 80% of the population is currently endangered. Ichida pardoi eng considers it important. Gillard's world uzishining temp Yukori, pardoy Donny etishtir esa regarding the kamaiganliga kuzatilgan. In the event that the population of uzishining is ready for this campaign against the Shu, the etsa, the Kelg of the Pardoi clan will continue, the product of Bilan is provided, which will grow in kelshiliklarg. Issues of cooperation between Tajikistan and China were discussed in Dushanbe. The article discusses the issue of harming affected mushrooms.

Keywords:

INTRODUCTION. The organization (FAO) conducts expert research and provides expert data in certain countries, while still valid grain is downing the number of countries and countries at National Risk of kumsatk [1]. Uzbekistan Adam has grown 280 kg per head in 2013, MDR of the country in 1997-543 kg, and starting-780 kg of grain Donny. Don with has been ensuring Uzbekistan's success for a long time. Including area is 50.0-50.6 quintals per acre in 2009 and 2010 with 1.0 million syllables of sogoriilable, 2013. Along with the bay further granary development and harvesting of sharp (Hector area of 85-90 sq. km) exists as an opportunity for reconciliation. Grain crops productions were mainly coordinated (intensive technology).

Yellow rust in Uzbekistan, brown rust in some fields, flour-dew, Root and stem rot, dust and hard scab, blemishes and other diseases are much more damaging. The spread and development of some diseases is increasing from year to year in the wheat fields. One such disease is black murtak disease.

When it penetrates deep into the inside of the fungus, the grain becomes pout or semi-pout. The grain can be damaged from the flowering phase to the wax ripening period. The flowering-grain termination period is fertile, in seasons with temperatures from 15-20os and air humidity above 90%, the grain is heavily damaged. Proportionally, 10.67% and 89% of wheat grains were found to be damaged when air humidity was 40.60% and 80% [2]. Repellent fungi can exist externally in the form of mycelium on the tops of healthy grain and, latently, on the inside of grain. In regions with Sernam climates, internal (latent) infection can reach 48-87% [3].

Alternaria alternata in the provoked "black murtak", the fungi settle on the bark, endosperm and aleyron layer of wheat and barley grains, do not enter the murtak or can enter very rarely. Although it is more common in grains of wheat and other grain crops compared to the type of Bipolaris sorokiniana during fungi-phytoexpertiza, it has little effect on grain size and flourish, and it does not trigger grass and murtak stem rot [4, 5]. Other sources have reported a 60-70% decrease in the germination of soft and hard wheat seeds infected with Alternaria alternata, a considerable crop loss [6, 7], and a decrease in the quality indicators that flour from the damaged grain would need for baking [8].

I. MATERIALS AND METOHODS. A 5-point a modified by the following author to determine the prevalence of "black murtac" disease in wheat grains.T.The Tropova scale was used: 0-grain undamaged;0,1 – the stain – coated portion of the grain surface is less than 1%; 1 – 1-5% of the grain surface is stain-coated; 2-6-25% of the grain surface is stain-coated; 3-more than 25% of the grain surface is stain-coated [9]. To detect disease triggers, the grains were washed for 2 hours in running water from the impeller, then their top was sterilized with a 0.5-0.7% solution of sodium hypochlorite or 70% alcohol, washed 2-3 times with sterile distilled water, excess moisture was removed using sterile filter paper and planted in Petri dishes in an Hungry agar-agar or KSA nutrient medium (with the addition of 1 g/l it was examined and found fungi [10, 11, 12].

II. RESULTS AND DISCUSSION. Wheat's black murtac is mainly caused by the facultative parasitic fungi of the deuteromycete group, Bipolaris sorokiniana and Alternaria alternata (synonym Alternaria tenuis) species. B. the hyphae of the sorokiniana fungus belong to the shields and endosperm of wheat (and barley) grains, and often to the murtak and murtak rootlets. A. the hyphae of the alternata fungus settle on the grain shell, endosperm, and aleyron layer, not entering the murtac, or may enter very rarely.

It is a fungus that can be found in wheat (and b.) during phytoexpertiza. grain crops) in grains B. sorokiniana is more common in the species. In our observations, it was found that 11 out of 13 samples collected from wheat fields

of 8 farmers-peasants in 5 districts of Tashkent region contained damaged grains. The amount of grain damaged in the samples was 0.9-23%, and the damage levels were 0.1-1 points (2 points in only one Sample) (Table 1). Black pepper of wheat grains

Table-1

Spread and development of black murtak disease in wheat grains obtained from the fields of some districts and farms of Tashkent region

№	Sampled F / X*	Nav	Number of grains in the analysis, pieces		Different levels (Points) number of damaged grains, pieces		
			Total	Black mutilated	0,1	1	2
1	Yu-Ch, Rahimjan f / x	Krasnodar	156	10 (6,4%)	9	1	–
2	Yu-Ch, Almat ota f / x	Tanya	153	0 (0,0%)	–	–	–
3	Yu-Ch, Rahimjan f / x	Krasnodar	340	3 (0,9%)	2	1	–
4	Q-Ch, Gulistan f / x	Muscovite	110	23 (20,9%)	16	7	–
5	Yu-Ch, high future f / x	Tanya	123	1 (0,8%)	–	1	–
6	White-q, Gulistan area	Krasnodar	526	16 (3,0%)	10	6	–
7	Boka t-ni, son of Khudoyberdi Toshtemir f / x	Muscovite	192	11 (5,7%)	11	–	–
8	Boka t-ni, Aburaykhan Velvet f / x	Zamin	253	13 (5,1%)	8	5	–
9	Pskent t-ni, Amirkhan Gulbahor f / x	I left Ie	86	2 (2,3%)	1	1	–
10		Jaxartes	100	16 (16,0%)	7	4	5
11		Tanya	73	0 (0,0%)	–	–	–
12		Saidaziz	118	1 (0,8%)	1	–	–
13		Intensiv	85	1 (1,2%)	1	–	–

Note: * - yu – Ch-upper Chirchiq district, q – Ch-lower Chirchiq District, White – q-Swan district.

The results of the analysis showed that the grain damage in all samples was triggered by Alternaria alternataturi, and this species was recorded in 60-100% of the grains.

Table-1

Results of Mycological analysis of wheat grains infected with black pepper

Identified fungi	The following 6 specimens show fungal occurrence rates, %					
	1	5	6	7	8	10
Acremonium spp.	0	0	33	0	0	0
Alternaria alternata	67	100	67	100	80	60
Cladosporium spp.	44	0	33	0	0	40
Fusarium spp.	0	0	0	0	20	0
Mucorales spp.	33	0	0	0	0	20
Penicillium spp.	11	0	0	0	0	0

Fusarium spp identified in sample number 8 from other species in the analysis. it is noteworthy because the species is known for its ability to synthesize strong toxins in grain grains and trigger poisoning in humans and livestock that consume it.

In the farms of Tashkent and Syrdarya regions, samples of wheat cobs obtained in 2014-2015 alsocontain grains infected with black pepper, and the spread of the disease is noted to be close to the values in this table, while the levels of grain damage are stronger. Even in these specimens, colonies of Alternaria alternaturin grew mainly from grains infected with black pepper, while other pathogenic fungi (including Bipolaris sorokiniana, Septoria tritici, Drechslera tritici-repentis) have not been recorded.

III. CONCLUSIONS. . Sernam has been observed to be more likely to have black mite in seasons. Wheat cobs are infected with olive spotting and grains with black murtac, and they are treated by the fungi Cladosporium spp. and Alternaria alternata species have been found to induce..

REFERENCES.

1. Koyshibaev M.Bolezni Zernavix Kultur. Almaty:" Bastau", 2002, 368 P.

2. Gorlenko M.V.Pshenisi of bolez. M.: "Selkhoziz", 1951, 253 P.
3. Azbukina Z.M., Barbayanova T.A., Lukyanchikova V.P., Zaitseva A.V. Vozbuditeli gribnix bolezney Zernovix Kultur. Str. 84-224 v kn.: "Vozbuditeli bolezney s.x. rastenius Dalnego Vostoka". M.: "Nauka", 1980.
4. Voytova L.R. Helminthosporiosis xlebnix zlakov v usloviax Belorussii. Str. 10-15 v " SB. Nauch. Tr. BSXA. Rationalnie priyomi zatshiti rasteniy ot vrediteley, bolezney i sornyakov". Gorky, 1971.
5. Dorovskaya L.M. Vidovoy sostav vozbuditeley kornevoy gnili Yarovoy pshenisi v Uralskoy obl. Str. 65-73 v kn.: "SB. nauchnix rabot Saratovskogo Xi". VIP. 118. Saratov, 1978.
6. Karamshuk Z.P., Aripov K.K., Muranes A.P. Vredonosnost alternariaza semyan tvyordoy pshenisi. Vestnik selsko khozyaystvennoy nauki Kazakhstana, 1988, No. 3, p. 37-40.
7. Peresipkin V.F., Tyuterev S.L., Batalova T.S. Bolezni zernovix Kultur pri intensivnix technologyax ix vozdelivania. M.: vo "Agropromizdat", 1991, 272 P.
8. Southwell R.J., Brown J.F., Wong P.T.W. Effect of inoculum density, stage of plant growth and dew period on the evidence of black point caused by Alternaria alternata in durum wheat. Ann. Appl. Biol., 1980, v. 96, No. 1, pp. 29-35.
9. Chulkina V.A. Vliyanie" chyornogo zarodisha " na posevnie kachestva semyan v Gornom Altae. Mycology I Phytopathology, 1970, t. 4, No. 5, p. 435-440.
10. Kiray Z., Clement Z., Shoymoshi F., Veresh Y. Method phytopathologii. Per. s angle. M.: "Colossus", 1974, 343 P.
11. Dudka I.A., Wasser S.P.. Ellanskaya I.A., Koval E.Z. I dr. (vsego 37 avtorov). Method experimentalnoy mycologii. Spravochnik. Kiev:" Naukova Dumka", 1982, 552 P.
12. Hasanov B. A., Gulmurodov R. A. Methodological instructions for testing seeders, fungicides and biologically active substances in grain and rice crops. Tashkent, 2013, 37 p.