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DISEASES OF CULTIVATED AND WILD CEREALS IN KASHKADARYA REGION

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Abstract
The article studies the spread of fungal-parasitic diseases on cereal plants of Kashkadarya region. From diseases of cultivated and wild- growing cereals m Kashkadarya region. The most important are smut, rust, powdery mildew and septoria.

Keywords: Smut, rust, powdery mildew, septoria.

Introduction

Of the diseases of cultivated and wild cereals in the Kashkadarya region, the most significant are smut, rust, powdery mildew and septoria.

Of the smut diseases, the following are found on cultivated cereals: stone smut (Ustilago hordie) and loose smut (Ustilago nuda) of barley, loose smut of wheat (Ustilago tritici), blister smut (Ustilago zeae) and loose smut (Sorosporium reilianum) of corn, loose smut (Sphacelotheca holci) and small-blistered smut (Sphacelotheca sorghi) of sorghum, loose smut of oats (Ustilago avenae), etc. The prevalence of these diseases varied in individual fields from 0.3 to 3-4%. The most common loose smut of barley was found in the fields of the Karshi district. Stone smut has been repeatedly found in the Shakhrisabz region.

Wheat smut is also found in many areas of the region. The development cycle of pathogens of these diseases has been studied sufficiently in different areas of the country, including Uzbekistan, so we will not dwell on them. But it should be emphasized that in order to destroy the pathogens of these diseases, it is necessary to pay even more attention to seed treatment, the introduction of resistant varieties into crops and compliance with all agrotechnical measures for the cultivation of cereal crops.

On wild cereals, 30 species of smut fungi have been found. Some of them have been found on several species of the same genus. For example. Ustilago bromivora abundance rated at 4 affects Bromus japonieus. B. macrostachys, B. oxyodon, Ustilago turcomanica - affects the ovaries of Erernopyrum buonapartis and E. triticeum [12].

Under the influence of U. tuberculata the whole ear of Aegilops cylindrica and quarrosa is destroyed. On Agropyruim trichophorum the causative agent of dwarf smut of wheat (Tilletia contrversa) was found. Couch grass infected with this fungus was found only in tay. The presence of this smut in the mountains corresponds to the range of the fungus. In the CIS it extends from Kazakhstan to the western regions of Ukraine. The manifestation of the disease on wheat and couch grass is usually observed at an altitude of over 150 m above sea level [3]. [1] also was not found in the mountainous regions of Turkmenistan. The abundance of the encountered smut fungi can be estimated at 4 and 5 points. In addition to these fungi affecting the reproductive organs of

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cereals, it is also necessary to mention U. phrygica. On Thaenintherum crinitum. U. cynodontis On Cynodon dactylon. Sphacelotheca schweinturthiana Ha Imperata cylindrica.

Such species as Ustilago salvei, U. trichophora. U. poarum, U. williamsii and others affect the vegetative organs of cereals, developing on leaves, leaf sheaths, stems, causing their premature drying. Seasonality is observed in the development of fungi on wild cereals. The first to appear are species parasitizing on leaves, leaf sheaths and stems of cereals. The appearance of smut on ears of panicles-inflorescences is confined to a later phase of their vegetation. This is due to the biological characteristics of smut fungi, the development of which is closely dependent on the biology of their hosts.

Of the rust fungi, the most widespread on cultivated cereals are the pathogens of brown (Puccinia triticina), linear or stem (P. graminis) and yellow (P. glumarum) rust of wheat. All three types of wheat rust are found in crops everywhere. Yellow rust is especially widespread in the foothills. In some farms of the Chirakchi, Yakkabag and Shakhrisabz districts, the prevalence of this disease reaches 10-20%. In the flat areas of the region, linear and brown rust predominate. Thus, in 1999, in one of the fields in the MTP (Sh. Rashidov Kasbinsky district), the prevalence of linear rust reached 100% [11]. These rusts, developing on the vegetative organs of cereals, contribute to a significant decrease in their yield. According to many authors [8], in Kyrgyzstan and other regions, wild cereals can act as reservoirs and transmitters of leaf and stem rusts. For example, Bromus tectorum. B. japonicus B. oxyodon. B macrostachys. thaeniatherum crinitum, etc. During our research, rust pathogens of cultivated cereals were noted on some of them. It is possible that they play a similar role in the Kashkadarya region, but this should be verified experimentally. During the work, we repeatedly observed the primary manifestation of diseases on winter crops. Therefore, we believe that in the region, the overwintering of these rusts mainly occurs on winter grains, and where there are no winter crops, the overwintering of rust can occur on wild cereals.

Rust of wild cereals is also widespread. 15 species of pores were found on them. Uredinales. Puccinia agropyri (score 5) are especially abundant. P. cynodontis (score 4). P. aeluropodis (score 4). etc. P. poarum and P. bromine were found on weeds in crops, which is consistent with the data [7, 9]. The latter author, studying the microflora of forage plants in the Samarkand region, noted that rust fungi affect many forage cereals, including Hordeum E., Avena L., Aegilops L. The same pattern was noted in the Kashkadarya region. Powdery mildew fungi, as noted above, are widespread and often affect 100% of both cultivated and wild cereals. Of the cultivated crops, barley is most susceptible to this disease. Thus, in the village of Khodja-Khairone, the prevalence of the disease was 45%. The causative agent of barley powdery mildew Erysiphe graminis f. hordei was found on Hordeum vulgare, H. ditichum, H. bulbosum. Septoria Sacc. Wild barley is probably a reservoir of infection in nature and serves as its constant source. All powdery mildew fungi, affecting leaves and stems, significantly weaken plants and reduce their forage value [11].

Numerous spottings caused by imperfect fungi. They also affect the productivity of cereals. Of these, the most common are fungi of the genus Septoria Sacc. In the Shakhrisabz, Yakkabag, and Kamashinsky districts, the prevalence of wheat septoria reaches 25%, especially under dry farming conditions. This is also noted in [5]. In total, 5 species of fungi of this genus have been recorded on cereals. Their abundance is significant (score 4). S. tritici was found on wheat. S. glomerate was found on Dactylis glomerate, Aegilops cylindrical, and B. ectorum. It is known that [3, 10, 4] species of the genus Septoria on cereals are distinguished by a narrow specialization and are not

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capable of causing infection of host plants that are not typical for them. [3] suggested the existence of physiological races in the causative agents of cereal septoria. Due to the strong spread of septoria of cereals in the region, these issues require further resolution. According to our observations, the pathogen of septoria of wheat overwinters on self-seeding or winter crops and on plant residues, from where the primary spring infection occurs.

Helminthosporium blight of barley is also often detected. Its prevalence in crops reaches 25-30%. The source of infection can be plant residues and wild barley. This disease has been studied quite well in our Republic [7]. Thus, barley is the most affected crop, on which 12 pathogens have been noted. According to the number of fungi species parasitizing on forage wild cereals, they can be arranged in the following order: 6 species were found on Dactylis glomerate, 5 on Поа bulbosa, 4 species each on Bromus tectorum, Gynodon dactylon, Aelupopus littoralis, Eremopyrum triticeum, 3 species on Aegilops cylindrical, etc.

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