

UDK 632.9

YU ISSN 0372 - 7866

INSTITUT ZA ZAŠTITU BILJA I ŽIVOTNU SREDINU - BEOGRAD
INSTITUTE FOR PLANT PROTECTION AND ENVIRONMENT - BELGRADE

ZAŠTITA BILJA PLANT PROTECTION

VOL. 47 (2), No 216, 1996.

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(Primljeno 15.05.1996.)

SPECIES OF PREVIOUS GENUS HELMINTHOSPORIUM DETECTED IN YUGOSLAVIA

by

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Summary

In the territory of former Yugoslavia the occurrence of 17 species previously belonging to the genus *Helminthosporium* was proved (Table 1).

Among them six species belong to the genus *Bipolaris*: *B. cactivora*, *B. zeicola*, *B. hawaiiensis*, *B. maydis*, *B. oryzae* and *B. sorokiniana*.

Four species are members of the genus *Drechslera*: *D. avenae*, *D. graminea*, *D. teres* and *D. poae*.

According to the new nomenclature one species (*Embellisia allii*) is representative of the genus *Embellisia*.

Three species belong to the genus *Exserohilum*: *E. monoceras*, *E. pedicellatum* and *E. turcicum*.

Helminthosporium sigmoideum and *H. papaveri* are members of the genera *Nakatea* (*N. sigmoidea*) and *Dendryphion* (*D. penicillatum*), respectively, and for both of them teleomorph was detected in former Yugoslavia.

Only *H. solani* is representative of the former genus *Helminthosporium*.

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(Primljeno 25.05.1996.)

A REVIEW OF PARASITES, CORN DISEASES PROVOKERS ESTABLISHED IN THE WORLD AND IN YUGOSLAVIA

by

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Summary

A great number of disease provokers appear on corn. By reviewing world and domestic literature data it was confirmed that 144 disease provokers appear on this plant species (McGee, 1988); From the above mentioned number 68 are transmitted by the seed (Richardson, 1990).

There are 69 disease provokers described in domestic literature (Group of authors, 1971). Ninety nine of them are determined on seed (Penčić Viktorija and Lević Jelena 1994). According to Milošević Mirjana (1983) 27 different fungal species appear on seed in storage (table 6).

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(Primljeno 25.05.1996.)

GLOEOCERCOSPORA SORGHI A NEW PATHOGEN OF JOHNSONGRASS FOR YUGOSLAVIA

by

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Summary

Zonate leaf spot was studied during two-year (1994-1995) on Johnsongrass as a new parasite, never before identified in Yugoslavia. In this manuscript symptoms of the disease on Johnsongrass and morphological, cultural and pathogenic characteristics of the pathogen are given.

On the basis of morphological characteristics of sporodochia, conidia and sclerotia formed on natural and artificial infected leaves of Johnsongrass and cultural properties of the isolates obtained, grown on potato dextrose agar, the species was identified as *Gloeocercospora sorghi* Bain et Edgerton, the new described pathogen in our country. The artificial inoculation of Johnsongrass in the 4-5 leaf stage confirmed the pathogenicity of the fungus studied.

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(Priljeno 12.12.1995.)

OCCURRENCE OF WHORL LEAVES WILTING AND OF SOFT ROT OF MAIZE STALK UNDER IRRIGATION CONDITIONS

by

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Summary

Causes and consequences of whorl leaves wilting and soft rot of maize stalk were investigated at different localities, under various irrigation systems with different maize genotypes, during the period 1989-1993.

The first symptoms of the disease most often appeared as wilting of four to five whorl leaves. Later, leaves decay and can be easily detached from the healthy part of the plant, while the infected stalk has watersoaked and putrid odour. The bottom part of the plant remains green, leaves are normally developed, and the stalk is, as a rule, firm and flat (fig. 1a-d).

The disease occurred only in maize crop irrigated by water from channels and lakes. Depending on location and genotype, the disease intensity varied from 1 to 32% (tab. 1).

The causal agent of maize wilt and stalk rot was the bacterium identified by Arscenijević et al. (1992) as *Erwinia chrysanthemi* pv. *zetae* (Sabet) Victoria et al.

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(Primljeno 21.06.1996.)

MINERS OF FRUIT LEAVES IN THE WIDE REGION OF BELGRADE

by

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Summary

The collecting and investigations of fruit leaf miners were accomplished on a broad region surrounding Belgrade.

Fiftysix species comprised the investigation (16 cultivated, 32 wild forms and familiar species, which were used as medium for inoculation or in selection, and they are inhabited by the same species of miners, and 8 more species of which three are perspective and in other

countries they are already cultivated on large surfaces, and in our country they are represented in not selected form and only in forest habitats) of fruits.

Among cultivated fruit-trees, the miners of pomaceous (apple, pear, quince, medlar), bony (plum, cherry, sour cherry, peach, apricot), strowberry (strowberry, raspberry and blackberry) and (nut, lumber, domestic chestnut, almond) nut trees were investigated.

On fruit-trees in the region of Belgrade 72 species of leaf miner were established, mostly of the *Lepidoptera* order: 68 species or 94,44% then *Coleoptera*: two or 2,78% and one from the orders *Diptera*: 1,39% and *Hymenoptera* orders: 1,39%. On cultivated plants 48 miner species were determined (*Lepidoptera*: 44 species or 91,67%; *Coleoptera*: two or 4,17%; *Hymenoptera*: one or 2,08; and one *Diptera* or 2,08%).

Some of the proved miner species manifested extremely high economic importance, as cultivated fruit-trees pests. These species (*Leucoptera scitella* Z., *Phyllonorycter blancardella* F., *Ph. corylifoliella* Hb. and *Stigmella malella* Stt.) are known in this region from before, while the rest of them were registered for the first time in the region of Serbia.

SPECIES IDENTIFICATION AND THE POTATO TUBER
RESISTANCE TO *FUSARIUM* SPP.

by

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Summary

Potato dry rot, caused by numerous *Fusarium* spp., is an economically important disease of potato, especially of tubers stored. The greatest losses of yield and quality occur due to planting of diseased seed potato tuber. Furthermore, some *Fusarium* spp. produce mycotoxins which contaminate products intended for food and feed (Booth, 1971).

The purpose of this study was to isolate and identify causal agents of dry rot of potato tubers (*Fusarium* spp.), as well as to investigate resistance of the potato cultivars, Desire and Ranka, and the hybrid S-79-1K/20 to the most distributed *Fusarium* spp.

Naturally diseased potato tubers varieties Desire, Jerla, Primura, Resy, Kondor, Ranka and the hybrid S-79-1K/20 were collected from six potato production localities of Bosnia and Herzegovina during 1989 and 1990.

The *Fusarium* spp. were isolated and identified from the collected material. Healthy tubers of the varieties Desire and Ranka, as well as, of the hybrid S-79-1K/20 were artificially inoculated by the isolated *Fusarium* spp. and after 100 days of storage the disease intensity was evaluated.

The degree of the disease appearance was evaluated on the 1-9 scale after Horačkova (1978), while the indices of disease were esteemed according to this evaluation after McKinney (1923, cit. Šavor, 1983).

According to the results obtained, the most frequently species isolated from naturally diseased potato tubers, were *Fusarium solani* var. *coeruleum*, *F. sulphureum*, *F. graminearum* and *F. lateritium*. The most spread species (41,7) was *Fusarium solani* var. *coeruleum*, while the highest pathogenicity to potato tubers was detected in *F. graminearum* (I=60,8). The most susceptible variety to dry potato rot was Ranka, then Desire, while the hybrid S-79-1K/20 was the most resistant.

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(Primljeno 20.05.1996.)

MICRODOCHIUM BOLLEYI A PATHOGEN OF WHEAT IN YUGOSLAVIA

by

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Summary

A two-year etiological study of root and stem root of wheat has shown the fungus *Microdochium bolleyi* (Sprague) De Hoog and Hermandies-Nijof to be a frequently present pathogen. Under the conditions of artificial inoculations the majority of isolates from wheat, maize, the soil, and some from some weed species proved to be highly pathogenic on the young wheat plants.

The presence of *Microdochium bolleyi* was much greater in 1994 as a dry year than in 1995 in which there was more moisture and the conditions were more favorable for the growth and development of crops. The incidence of this fungus was at its peak towards the end of booting and at the beginning of flowering.

Other highly present fungi in addition to *Microdochium bolleyi* were those of the genus *Fusarium* and the species *Cochliobolus sativus*, while *Gaeumannomyces graminis* occurred only sporadically.