UDK 632.9

YU ISSN 0372-7866

INSTITUT ZA ZAŠTITU BILJA — BEOGRAD
INSTITUTE FOR PLANT PROTECTION — BEOGRAD

ZAŠTITA BILJA
(PLANT PROTECTION)

VOL. 38 (2), BROJ 180, 1987. GOD.

Zaštita bilja Vol. 38 (2) Br. 180 (str. 97—192) Beograd, 1987.

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INCIDENCE OF *PHIALOPHORA GREGATA* ON SOME SOYBEAN CVS. IN DIFFERENT LOCALITIES OF SERBIA

by

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Summary

The incidence of brown stem rot of soybean caused by *Phialophora gregata* (Allington et Chamberl.) W. Gams. (syn. *Cephalosporium gregatum* Allington et Chamberl.) differs under field conditions with studied soybean cvs., as well as with localities.

The most frequent incidence of brown stem rot of soybean was registered in 1984, probably because of favorable conditions for this disease development. That year brown stem rot was found on 9 out of 10 tested soybean cvs. The highest percentage of infected plants (26%) was with cv. Amsoy. High level of infection was also found with cvs. Wells (13%) and Evans (12%). The most of investigated soybean cvs. belonged to the group with infection from 7 to 9%. In 1984 brown stem rot was not found only on cv. Zvezda (Tab. 1).

In 1985. brown stem rot was registered on 9 out of 14 studied soybean cvs. The percentage of infected plants was low — 1 — 4% (Tab. 1).

In 1986 brown stem rot was not found on any out of 12 soybean cvs. included in field experiments in four different localities. Nonfavorable ecological conditions (no rain for a long period and high temperature prevent infection of soybean at the most susceptible stage of soybean vegetation.

EFFECT OF THE *LEPTOSPHAERIA NODORUM* ON THOUSEND KERNEL WEIGHT ON WHEAT

by

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Summary

The paper presents results of a five-year trial investigating the effect of *Septoria nodorum* disease on the 1000 kernel weight of some domestic high-yielding wheat varieties. The inoculum for artificial infection contained a nimber of the best isolates of *Leptosphaeria nodorum* in the western part of Yugoslavia. The results showed that *Septoria nodorum* can reduce the 1000 kernel weight up to 42,2% All the varities in test (7 in all) exhibited susceptibility to *Septoria nodorum attack*, which resulted in statistically significant reduction of 1000 kernel weight from 4,6% to 42,2%. The decrease of 1000 kernel weight depended to a large extent on the sensitivity of the variety and climatic conditions. The results showed also that decrease of 1000 kernel weight seems to be the best indicator of yield reduction.

CONTROL OF *PUCCINIA RECONDITA F. SP. TRITICI, FRYSIPHE GRAMINIS, SEPTORIA NODORUM* AND *FUSARIUM SPP.* IN WHEAT BY DIFFERENT FUNGICIDES AND INFLUENCE ON YIELD

by

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Summary

In 1984 and 1985, parasites *Puccinia recondita f. sp. tritici, Erysiphe graminis Septoria nodorum and Fusarium* spp. were investigated in wheat in order to evaluate possibilities of their control by fungicides based on active substances as follows: captafol, carbendazim, chlorthalonil, fenpropemorf, flutriafol, iprodion, mancozeb, prochloraz, propiconazol, quazatintriacetate, S—33081, triforin, tradimefon, triadimenol and tridemorf.

The wheat variety Skopljanka was included in the research, on the basic plots covering an area of 10 m² each, according to the random block pattern in four replications. The treatment was performed on May 23, 1984 (phenological phase 51—55), and on May 19, 1985 (phenological phase 59—69) (for Fusarium spp. only). The phenological stages were those as determined by Zadox et al. The trials were evaluated on June 26, 1984, and on June 19 and July 14, 1985 (for *Fusarium* spp. only). Estimates were based on the methods OEPP No. 26/81 for *Erysiphe graminis*, No. 27/81 for *Puccinia recondita*, No. 29/81 for *Septoria nodorum*, whereas for *fusarium spp. counts* were made of infected ears per m². The chemicals were applied with a knapsack atomizer at a rate of 400 l/ha.

The levels of infections by the parasites were as follows:

In 1984, *Erysiphe graminis* amounted to 12.4% and *Septoria nodorum* 15.5%, whereas in 1985 the level of infections caused by the two species was that low that it has not been included in the results presented here. In 1985, there were 7% of the ears infected by *Fusarim* spp. The results indicate that the infection levels of the above mentioned parasites did not substantially affect differentiation in wheat yields.

However, much more intensive was the infection caused by *Puccinia* recondita, its level amounting to 41.8 and 28.2% in 1984 and 1985, respectively. The research results indicate that this parasite played a decisive role in decreasing wheat yield. The most of the fungicides tested were highly effective against this parasite, and the differences obtained in yield level are correlated with the efficiency. Statistically significant differences in yield increase were not observed in 1984 only on the plots treated with the fungicides based on triadimenol, triforin and quazatin-

triacetate, and in 1985 with those based on fenpropemorf and propiconazol. Negative differences in relation to non-treated variant have been obtained with the fungicides based on carbendazim and tridemorf (with the latter, even highly significant negative difference was noticed). This certainly is the result of phytotoxic activity of this fungicide in wheat, which was manifested through a marked chlorosis. The same phenomenon, however in a slighter form, was found in the fungicide combination based on propiconazol + tridemorf.

OCCURANCE AND CONTROL OF SUGAR BEET SEEDLING WEEVILS (*BOTHYNODERES PUNCTIVENTRIS* GERM.) IN THE REGION OF NORTH-WEST BAČKA IN THE PERIOD FROM 1980. TO 1985.

by

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Summary

Great increase in number of sugar beet seedling weevils (*Bothynoderes punctiventris* Germ.) had been noticed in Bačka in the period of several past years. There are 12.000 hectares under sugar beet in the area, controlled by the regional prognosis-report service for crop protection, with its centre in Sombor. The occurance, spread and intensity of pest attacchs had been folowed for the elaboration of long-term and short-term prognosis and working out a system of efficient measures for sugar beet protection from the seedling weevils.

A rapid increase of number and spread of sugar beet seedling weevils in the region of Bačka was caused by very convenient weather conditions for the propagation of these pests in the period between 1980. — — 1985. The permanent focuses of infestation were in the plateau Telečka, which is owing to its edaphic and climat characteristics a perfect environment for the sugar beet seedling weevils. The density of population here was 3 to 24 times higher than on the lowlands.

The emergence of imago on the surface after the over-wintering period depends on the temperature and humidity of the air and the soil. The greatest number of insects appear during the rainless period in April or in the first part of May.

The density of Bothynoderes punctiventris Germ. population was increased 5,5 times after two successional years favourable for the pests. Insufficient number of treatments as well as favourable weather conditions in the time of oviposition and larvae developmen, resulted in the high population in the following years.

The majority of fields under sugar had been treated in order tu control *(Bothynoderes punctiventris* in the past few years. Efficacy of the applied control masures was noticed more in reduced number of destroyed fields than in less numerous weevil population. In the process of modern sugar beet production it is very difficult to save the crop and even more difficult to reduce the weevil populations in a wider area.

In spite of all these problems, applying a SYSTEM OF MEASURES (distance between previous a newly sown sugar beet fields, ditches, application of systemic soil insecticides, crop spraying) showed good results and made possible to keep the plant spacing and a high yield in the end.

EVALUATION OF THE EFFECTIVENESS OF SOME INSECTICIDES IN SUGAR BEET WEEVIL (*BOTHYNODERES PUNCTIVENTRIS* GERM.) CONTROL

by

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Summary

Treatment of the sugar beet crop is the most frequent and accepted measure of protection against seedling weevils. However, the last few years experience had showed it clearly that for saving of the crop, application of other previous agrotechnical and shemical treatments were also necessary. Spraying of the new fields under sugar beet should be undertaken only after all preventive measures against spreading the pests from the fields which had been under sugar beet the previous year, had been applied.

Trials were made in order to choose the appropriate insecticides depending on the crop growth, applying them in cotyledon stage and at 4 leaf stage. First of all the contact and stomach poisoning effect of insecticides was examined (insects, foliage, soil). We tried to determine the span of insecticides effect by putting another group of pests on the plants 3 or 6 days after spraying.

In the cotyledon stage very significant effectiveness was obtained with deltamethrin, flucythrinate, permethrin, cypermethrin and fenvalerate fenthion, fenitrothion and oxamyl, as well as poweders based on carbosulfan and fenitrothion, were very effective. It should be noted that the temperature during this experimental period had been rather low which contributed to the effectiveness of pyrethroids and revealed its advantages in sugar veet weevils control in such weather conditions.

In 4 leaf stage good initial effect was marked (90% effectiveness) even only 24 hours after treatment with fenthion, phoxim, furathiocarb, combination of chloropyrifos and cypermethrin, carbosulfan and oxamyl. The effect of carbofuran, monocrotophos, parathion, aminosulfan and the combination of deltamethrine and dimethoate was felt somewhat slower, but after 6 days they have reached 95—100% effectiveness.

When the insects were placed on the plants 5 days after treatment, where only residual effects could be expressed, good results were obtained only with monocrotophos, while the residual effect of other tested insecticides was not noticed.

A COMPLEX OF GALL FORMING ERIOPHYID MITES (*ACARIDA: ERIOPHYOIDEA* OF PLUM LEAVES

by

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Summary

Two gall forming eriophyid mites of plum leaves are well knowen in Europe: *Eriophyes similis* (Nal.) and *E. padi* (Nal.). Nalepa also described *E. paderinus*, and Massee (1930), a subspecies E. similis prunianus. In North America Keifer (1939) described E. emarginatae K. which was found on 6 *Prunus species* including European plum *Prunus domestica* L. in Ohio. Biology and morphology of this species was studied by Oldfield (1969). Recently it was also found in Japan (1984).

For the past few years gall forming eriophyids are very common in Yugoslavia.

The results of studies on morphological and biological characteristics of individuals from 25 populations are given in this paper. Two species were found: *E. similis* (Nal.) and *E. emarginatae K. E. similis* (Nal.) was less frequent (only 3 populations) and dimorphism in ornamentation of dorsal shield and in shape of featherclaw within a single population was found.

After analysing descriptions which were given by several European authors and our data we mentioned differences in 6 alternative characteristics: shape of dorsal shield, ornamentation of dorsal shield, hysterosomal microtuberculation, number of rays of featherclaw, presence or absence of accessory setae and in striation of epigynium.

After analysing the position of galls and species causing them we can conclud that the position of galls on leaves is not one of the distinctive charecteristics in recognizing two European species as some authors suggest.

E. emarginatae K. was found on 25 localities on Prunus domestica L. and *P. spinosa* L. During our research more than 500 individuals were investigated in various periods of time in the course of a year and as a result only one type of females was found, without hysterosomal microtubercles. Sexual dimorphism was obvious. Males were with ornamented dorsal shield, microtuberculated hysterosoma, and more hysterosomal rings than females. Moreover, females were pink to orange, but males and nymphs were yellowish-white.

These characteristic and the presence of setae accessoriae are important in distinguishing *E. emarginatae* from *E. padi.*

According to these investigations we think that *E. emarginatae* K. exits in Yugoslavia, probably as an introduced species.

In conclusion we need more data from other European countries to solve the problem, i. e. to be sure of the eriophyid species causing finger galls on plum leaves.

INFECTIOUS VARIEGATION DISEASE OF *CAMELLIA JAPONICA L.*

by

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Summary

More than twenty years ago the senior author found in Opatija (Yugoslavia) C. zaponica plants with characteristic white spots on red petals *(»breaking«)* and sumptoms of variegation on leaves. Then it was known that this disease was not transferable mechanically but only by grafting.

Therefore we performed in 1985 electron microscopic invectigation and we revealed in young petals of C. japonica bacilliform particles with dimensions of 30 × 150 nm. This virus-like pathogen had the same form and similar dimensions as the pathogens found in camellias by T. Inouye and N. Inouye (1975) and Hiruki (1985).

ON OUR PROFESSIONAL TERMINOLOGY

I. Diesease and pathogen concept

by

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Summary

Owing to inadequate use of professional terms there arise numerous errors. It often does not fit the essence of the word pronounced or written, there originate misunderstandings and confusions, the indispessable exactness in setting forth the facts etc. is diminished.

Thus, the non-discernament of the notions of parasite and disease, leads in many casses to the distortion of generally known facts, such as that the disease possesses reproductive organs and fruit-bearing bodies, that the disease hibernates, that it is even classified into corresponding taxonomic units, etc.

And it is a known fact the disease arises as the result of the destructive activity of pathogens, during which time there occur various changes in the calls and tissues of the host and which manifest itself at the end by the signs and symptoms of the disease. Consequently, spot, rust, wilting are a consequence of the parasitic activity of the pathogen organisms and in no way their cause.

On account of this it is necessary to emphasize always the full Latin name of the parasite, of the causer of the disease (*Septoria tritici*, *Phytophthora infestans* etc.) and the name of corresponding diseases which are caused by these pathogen organisms (spot, rust wilt) in order to avoid possible errorrs. For instance, *Venturia inaequalis*, causer of the apple scab, *Cercospora beticola*, sauser of the the leaf spot of beet, etc.