UDK 632.9

YU ISSN 0372-7866

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

ZAŠTITA BILJA
(PLANT PROTECTION)

VOL. 33 (4) BROJ 162 1982. GOD.

Zaštita bilja, Vol. 33 (4), br. 162: 363—520 (1982), Beograd

CONTENTS

Scientific papers

Zaključak

Na osnovu navedenih ispitivanja i dobijenih rezultata mogu se izvesti ovi zaključci:

— izazivač truleži plodova jagode je *Botrytis cinerea;*

— konidije parazita su okruglaste do jajaste, veličine 10.3—18 × × 7.7—10.3 μ;

— konidifore sa konidijama najobilnije se razvijaju na plodovima a slabo na lišću i cvetovima;

— porast kulture i fruktifikacija parazita se odvija na nekoliko hranljivih podloga;

— intenzivniji porast je na podlozi krompir dekstroznog agara i agara sa šargarepom;

— fruktifikacija je najobilnija na agaru sa crnim lukom;

— porast i razvoj patogena odvija se na temperaturama od 1—30°C sa optimumom između 20° i 25°C kada je i fruktifikacija najobilnija;

— konidije klijaju na temperaturama od 1—30°C, a najveći procenat klijanja je na 20° do 25°C;

— najpovoljnija temperatura za porast inicijalnih hifa nalazi se, takođe, između 20° i 25°C.

LITERATURA

Brooks, T. F. (1953): Plant Diseases.
Dobrozrakova, L. T. (1956): Opredelitelj boleznej rastenij.
Nataljina, B. O. (1963): Bolezni jagodnikov.
Pidopličko, M. H. (1977): Gribi — paraziti kulturni rastenij.

(Primljeno 25. 12. 1982)

BOTRYTIS CINEREA AS THE PARASITE OF STRAWBERRIES

by

M. Perišić and M. Babović
Faculty of Agriculture, Beograd — Zemun

S. Stojanović
Institute for Plant Protection — Beograd

Summary

In the course of 1978 and 1979 there occurred a mass appearance of the grey mould of strawberries in the surroundings of Belgrade, Grocka, Smederevo, Valjevo, Čačak, which caused considerable damages. This disease attacked several sorts and particularly struck was the Early Čačanka sort. The diseased fruits became soon watery, covered with a thick grey layer of spores of the parasite. From the diseased tissue there was isolated the parasite *Botrytis cinerea* and maintained on the artificial nu-

tritious base of potato-dextrose agar. There were also studied its morphologic and breeding characteristics.

The conidia are rotund to egg-shaped, of grey colour and with a thickened exterior membrane. The size of conidia is 16—18 × 7.7—10 microns.

The growth of the culture of pathogen has been observed on the following bases: potato-dextrose agar, carrot agar, onion agar, prune agar and malt agar, at the temperature of 25°C. The growth is more intensive on the potato, dextrose agar and carrot agar and less intensive on the prune agar, onion agar and malt agar. The development of mycelia, however, is the most luxuriant on the onion agar and potato-dextrose agar and the poorest on the prune agar and malt agar.

The fructification of the parasite evolves, also, on all the base. It is most abundant on the onion agar and the poorest on the prune agar.

The growth and development of the culture of pathogen take place within the temperature range from 1°C to 30°C. The optimum temperature is at 20—25°C and at those of 1°C and 30°C the growth and development cease. At the optimum temperature the fructification is also most abundant.

The sclerotia are formed at the temperatures between 10 and 15°C.

The germination of conidia is possible at the temperatures of 1—35°C, with the optimum at 20°C, the minimum of 1°C and the maximum between 30° and 35°C.

The conidia germinate with one to three and exceptionally up to six initial hyphae. In the zones of minimum and maximum temperatures they germinate with one, and at the optimum temperature with one to three and in some cases even up to six initial hyphae. The most favorable temperature for the growth of initial hyphae is at 20C and the unfavourable one at the temperatures below 5°C and above 30°C.

STUDIES FOR RESISTANCE OF WHEAT TO *FUSARIUM GRAMINEARUM* SCHW.

Preliminary Report
by

Ivanka Milatović
Faculty of Agricultural Sciences, University of Zagreb,
Institute of Plant Protection, Zagreb

Viktorija Vlahović and S. Tomasović
Faculty of Agricultural Sciences, University of Zagreb,
Institut for Breeding and Production of Field Crops,
Zagreb

Summary

Fusarium graminearum Schw. is the more prevalent and important species associated with the disease head blight of wheat in Croatia.

Resistance of wheat lines to head blight of *Fusarium graminearum* was studied in field trials, using artificial infection by macroconidia from several potato-dextrose agar oultures or from diseased seeds which were some days in clamp petri plates at room temperature (approximately 24°C). The heads were two times inoculated during flowering stage using »spray« method. The some lines were investigated to resistance in natural conditions.

The results were shown that lines differ in susceptibility.

SORDARIA FIMICOLA (ROB.) CES. ET NOT. — A NEW PARASITE OF SUNFLOWER IN YUGOSLAVIA

by

M. Aćimović
Faculty of Agriculture,
Institute of Field and Wegetable Crops, Novi Sad

Summary

For more than 10 years we could almost regularly isolate pure culture of the fungus from brown spots on sunflower stems and leaves. Pure culture was most frequently isolated from plants with retarded growth which had a large number of relatively small brown spots on stems and leaves. The disease was manifested on the infected plants usually in June and July.

In pure culture, the fungus forms mycelia and perithecia.

The mycelial film on PDA is brownish-black. Young mycelia are light brown, becoming darker and septated with age.

The diameter of the mycelium is 2.77—6.92 or 5.40 microns on the average; cell length between septa is 5.54—30.47 or 18.14 microns on the average.

The perithecium is pear-shaped and black. The ascus is hyaline, containing eight one-celled ovular pale brown ascospores. The dimensions of the perithecium are (186.84—539.76 × 145.32—373.68) (178.88—420.04) microns, of the ascus (102.49—160.66 × 9.70—16.62) (12.46—127.70) microns, and of the ascospore (13.85—30.47 × 8.31—13.85) (10.53—19.39) microns.

Ascospores germinate in waterdrop after four hours at 25°C.

In greenhouse, the incubation period on young sunflower plants inoculated with a suspension of ascospores lasts for seven days.

Mihaljčević, M., Petrov, M., Muntanjola — Cvetkovic, M. (1980) *Phomopsis* sp. novi parazit suncokreta u Jugoslaviji. Savremena polj., 11—12 N. Sad.

Muntanjola — Cvetković, M., Mihaljević, M., Petrov, M. (1981): On the identity of the causative agent of a serious *Phomopsis-Diaporthe* disease in sunflower plants. Nova Hedvigia, 34, Braunschweig.

Muntanjola — Cvetković, M., Mihaljević, M., Petrov, M. (1981) Vrste rodova *Diaporthe* i *Phomopsis* zabeležene u Jugoslaviji. Savremena poljoprivreda, 29, 7—8, N. Sad.

Sacardo, A. P. (1898): Sylloge fungorum, vol. 13.

Wehmeyer, L. E. (1933): The genus *Diaporthe* Nitschke and its segegates. Unives. Mich. Stud., 9: 349, pp.

CONTRIBUTION TO THE STUDY OF *PHOMOPSIS* SPP. *(DIAPORTHE* SP.) THE CAUSER OF GRAY SPOT OF SUNFLOWER STEM

by

A. Marić, S. Maširević and **Šu Li**
Faculty of Agriculture, Novi Sad

Summary

A new sunflower disease hat been for the first time observed in 1980 in Yugoslavia. The appearance of gray spots on stem in the beginning of flowering time, deterioration of stem tissue and wilting of plant in the milk stage of sunflower development, are the main symptoms of this disease. It caused great damages during three years period 1980—1982), decreasing yield for more than 50% in the main growing area. Gray spots of stem became the most destructive sunflower disease in Yugoslavia.

Some authors (Muntanola et al., 1981) recently described *Diaporthe helianthi (Phomopsis helianthi)* as the only causer of the disease and the fungus as a new species specialized on *Helianthus* sp. Others (Aćimović and Straser, 1982), studying the same disease, they found some morphological and biological differences between two isolates of *Phomopsis* and they supposed that there were two species or two ecotypes of the same fungus.

Studying the etiology of the disease in the same period, we recognized two different species of *Phomopsis* on diseased sunflower plants. Their morphological and biological properties are described in this report.

In our isolations from diseased plants during three years period, one species of *Phomopsis,* which produced also perithecia (*Diaporthe* sp.) was always prevalent. According to the morphological properties, it was similar to the species described. Because there are no investigations on specialization of the fungus, we describe it here under the name *Phomopsis* sp. (*Diaporthe* sp.) isolate 1.

This fungus produces pycnidia on sunflower stem and on artificial media, in which B conidia are mainly found (A conidia are rare). Perithecia of the fungus was found on artificially inoculated plants in glasshouse conditions and also in the field, at the end of sunflower vegetation. It means that the fungus can produce perithecia without tempe-rature below 0°C.

The fungus is capable to produce perithecia during winter time after transfering pieces of infected sunflower stem in moist chamber at room temperature. Intensive production of perithecia on sunflower residue under field conditions was observed after a longer rainy period in the spring. Such conditions are favourable for perithecia production during the whole growing period of sunflower. Ascospores are actively liberated by discharging them from perithecia on about 3 mm height. They are probably taken by wind and deseminated on longer distances from the source of infection.

Pycnidia of *Phomopsis* sp. *(Diaporthe* sp.) has been also found on sunflower seed. By this way parasite can be transmitted from one to the other region of the country.

The disease was reproduced in glasshouse conditions by using different methods of inoculation of plants. It was experimentaly proved that the hybrides which are commercially used become sussceptible to the disease at the heading time of plants (buttonisation). By this fact it could be explained that the first symptoms of the disease appear in field condition in the flowering stage of sunflower development.

An other similar fungus which was rarely isolated from infected sunflower plants, we describe here under the name *Phomopsis* sp. isolate 2. In pycnidia it produces mainly A conidia. We could not find perithecia of this fungus on plant debris. This fungus caused similar symptoms on artificially inoculated plants in glasshouse condition as previous species.

On infected sunflower residues which overwintered under natural conditions, after transfering in moist chamber and room temperature, we regularly found two other kinds of perithecia. (Isolate 3, Isolate 4). By growing them on artificial media, they produce conidial stage similar to fungi from genus *Cephalosporium.* These two species were also pathogenic to sunflower under glasshouse conditions. It could be supposed that these two fungi also take part in pathogeneses of the disease or that they can be potential parasites of sunflower.

STUDY OF THE PARASITE *PHOMOPSIS SOJAE Leh.* ON THE SOY-BEAN

by

M. Dimitrijević and Draženka Jurković

Faculty of Agriculture, Osijek

Summary

In 1981 and 1982 we established, on the territory of East Slavonia and Baranva a strong attack of the parasite *Phomopsis sojae* on the soy-bean. The first symptoms of the disease were observed on the cotyledons in form of light brown spots of different sizes. Later on, in the course of vegetation, such spots were found on the lower parts of the stalk. At the time of ripening of the soy-bean, on the diseased plants were found the pycnidia, arranged in rows in such a way to form shorter or longer lines on the stalk. We established their forming also on the leaf, leaf-stalk and pods. The size of individual pycnidia varies and on the stalk it amounts to 149 × 164 microns and on the pods 97 × 101 microns on an average. The fructiferous bodies were also formed on the stromatic formations in the pure culture. In the pycnidia on the material infected in a natural way there appear two kinds of spores A — pycnospores of the size of 7.6 × 2.1 microns and B-pycnospores the size of which is 15.5 × 1.6 microns. In the pure culture there formed but pycnidia containing A-spores.

The parasitic fungus develops well on the base of potato-dextrose agar (pH 6.2 and at the temperature of 26 ± 2°C) and in 7 days it attains the edge of the Petri box with a diameter of the Petri box with a diameter of 9 cm. The investigation of the germinating capacity of A-pycnospores showed that the spores, formed under natural conditions germinate earlier than those which were formed in the pure culture.

The systemic fungicides, used for spraying the soy-bean seeds and for the treatment of plants in the course of vegetation produced no greater effect on the parasite *Phomopsis sojae* than the standard preparations Radotiram.

STUDY OF *FUSARIUM SPP.* OF THE PARASITE *CINERARIA HIBRIDA* GORT.

by

M. Perišić, Zvezdana Pešić, Azemina Pantić and Gordana Mitrović
Faculty of Agriculture, Belgrade — Zemun

Summary

From the obtained results one may draw the conclusion that the studied fungus isolated from the root neck of *Cineraria hibrida* belongs to the species *Fusarium spp.*

The symptoms caused by artificial inoculations correspond completely to the symptoms of the disease observed in the nature.

On the nutritious bases the fungus forms: microconidia, macroconidia and chlamydospores.

Microconidia are monocellular, size 10.55 × 3.90 μ.

Macroconidia are sickle-shaped with 3 to 5 septa, size 28.90×4.22 μ.

Chlamydospores are of globular form, size 11.34 μ.

The influence of nutritious bases on the development of the parasite is different. It attains the best growth on the corn flour, carrot and potato-dextrose agars.

The optimum temperature for the development of the parasite in pure culture was 28°C.

The protective measures of Cineraria against *Fusarium spp.* were satisfactory if applied in time, and particularly if the plant is sprayed every 10—15 days with Benomil 0.03% and Kaptan 0.15%.

CONTRIBUTION TO THE STUDY OF THE INFLUENCE OF RELATIVE AIR HUMIDITY UPON THE GERMINATION OF SPORES OF *PLEOSPORA HERBARUM* (PERS. EX FR.) RABENH.

by

B. Borić
Institute for Plant Protection, Beograd

Summary

The investigation of the influence of relative air numidity upon ermination of spores of *Pleospora herbarum* (Pers. ex Fr.) Rabenh. *nphyllium botryosum* Wallr.), the number and growth of germ s, was effected on conidia and ascospores which were spread over bject glasses and then put to germinate into the pots with regu- l relative air humidity by means of saturated water solutions of (proceeding of Zwölfer, 1932). As check served the conidia ascospores, set to germinate in distilled water at the temperature)°C resp. 25°C.

After 20 hours since the spores had been put to germinate, there established the percentage of germination, number and growth of ı tubes.

Conidia germinate within the range of relative humidity from 90)0 p. c. The highest percentage of germination is obtained in the aturated with steam. The growth of germ tubes increases with the ase of relative humidity, but on this occasion their number shows ssential rise. The germination of conidia in the steam saturated air orer than in the distilled water and in the same way the growth number of germ tubes are less.

The ascospores germinate within a somewhat wider range of re- e humidity than the conidia — from 84 to 100 p. c. At the relative idity of 93 to 100 p. c. the germination is the same or insignificantly than in the distilled water. The number and growth of germ tubes with the increase of relative humidity. However, the growth of ı tubes under such conditions of germination is much poorer than e distilled water, whereas the differences is not as marked as regards number of germ tubes.

PRACTICAL ASPECTS OF STUDY OF SHARKA VIRUS DISEASE

by

M. Jordović
Institut za zaštitu bilja, Beograd

Summary

It is presented some practical aspects of study of Sharka (Plum pox) virus disease. Author consider that from practical standpoint the main results got in study of Sharka disease are:

— introduction of epidemiological properties of Sharka virus;
— discovering of tolerant plum cultivars to Sharka virus and
— establishing of a method for production of Sharka virus free planted materials.

In relation to the epidemiological properties of virus it is presented results of the study of possibility of virus spread in nature, the main factors for the virus spread and the spead of virus spread in nature.

Considering to study of plum cultivar resistance, author consider that there are more tolerant than sensitive ones. The main problem was to find out some cultivar with good quality and good resistance. At this moment the most convenient one is Stanley.

At the end of paper it described a original method for production of Sharka virus free planted material of plum.

INVESTIGATION OF THE POSSIBILITY OF DETECTION OF APPLE VIRUS INFECTION USING DIFFERENT SOURCES OF INOCULUM

by

M. Babović and Milanka Matijević
Faculty of Agriculture, Beograd — Zemun

Summary

In this work the authors have investigated the possibility of detection of apple virus infection using leaves, flowers and young apple fruits from different apple cultivars.

The preparation of inoculum was done in 2.5 percent nicotine. *Chenopodium amaranticolor, Ch. quinoa, Nicotiana glutinosa* and *Phaseolus vulgaris* have been used as test plants. Out of over 1.800 tested samples the highest number of virus infected apple trees of different cultivars was discovered through flowers (698), and the lowest one through apple fruits. (26).

CONTRIBUTION TO THE STUDY OF VIRUS ETIOLOGY OF SUGAR BEET INFECTIOUS ROOT DWARFING (RIZOMANIA)

by

M. Tošić
Faculty of Agriculture, Beograd — Zemun

Summary

The presence of tobacco mosaic virus (TMV) in sugar beet plants, diseased due to infectious root dwarfing (rizomania), as well as in beet necrotic yellow vein virus (BNYVV) isolates was studied during the course of these investigations. Virus isolations were done from rootlets of sugar beet seedlings cultivated in infectious substratum, watered in excess. Substratum was prepeared from rootlets of infected plants sampled from fields, and mixed with soil, or it was prepared from soil collected from rhizosphere of sampled sugar beet plants.

Sugar beet plants diseased due to infectious root dwarfing (rizomania) for these investigations were collected from Srem and Banat regions.

Presence of TMV was checked in rootlets of diseased sugar beet seedlings, cultivated in infectious substratum, or in BNYVV isolates during reinoculations.

For TMV detection the bioasay test was applied. Beside test plants for BNYVV isolation, *Nicotiana glutinosa* and *N. tabacum* var. Samsun were also included in inoculations and reinoculations.

Identity of TMV was proved on the base of *N. glutinosa* and *N. tabacum* var. Samsun reactions, as well as serological analysis.

In the course of these investigations TMV was found in rootlets of sugar beet seedlings along with BNYVV. TMV was also descovered in ten isolates of BNYVV during reinoculations: four during first one, one during second, two during third, two during fourth and one during seventh reinoculation.

From these data it can be concluded that TMV can be found in mixed infections with BNYVV in sugar beet plants.

In order to explain the role of TMV in pathogenesis of sugar beet root dwarfing (rizomania) further investigations should be done.

RESISTENCE OF LINES OF WHITE KIDNY BEANS IN F_8 GENERATION TO THE COMMON BEAN MOSAIC VIRUS

by

Ž. Miladinović, N. Marinković, D. Čorokalo, Ž. Aleksić
Institut for vegetables, Smed. Palanka

Summary

The reaction of F_8 generation of homozigous bush lines of white kidny beans has been investigated to the infection by common bean mosaic virus. In total of 132 lines from hybrids Mediana x Tetovac, Biser x Tetovac and Gradištanac x Biser were tested.

On the basis of that investigation can be concluded as follows:

The obtined lines were genetically different in resistence to the common bean mosaic virus.

From the resistant lines two (60/218 and 37/216) are in shape, color and diameter of grain very similar to Tetovac and Gradištanac.

According to reaction of the progenies on the artificial and spontaneous infections, the line 37/216 likes high homozygous in view of resistence to mosaic.

Zaključak

Ispitivano je postojanje askusnog stadijuma *B. jaapii* na prikupljenom lišću višnje i trešnje poreklom iz raznih krajeva naše zemlje. Konstatovano je da se apotecije sa askusima i askosporama formiraju na svim prikupljenim uzorcima obolelog lišća.

Prema tome askusni stadijum gljive ima široko rasprostranjenje u Jugoslaviji.

LATERATURA

Arsenijević, M., Balaž Jelica (1980): Prilog proučavanju biologije i mogućnosti suzbijanja Blummeriella jaapii (Rehm) v. Arx parazita višnje i trešnje. Jugoslovensko savetovanje o primeni pesticida, Poreč, 8—12. decembra, 1980.

Burkowich, A. (1964): Blumeriella jaapii (Rehm) v. Arx. on Cultivated Stone Fruits in Poland. Phytopath. Zeit., Band 51, Heft 4.

Gorlenko, M. V. (1968): Seljskohozjajstvenaja fitopatologija. »Višśaja škola«, Moskva.

Kaszonyi, S. (1966): The Life Cicle of Blumeriella jaapii (Rehm) v. Arx. Infecting Stone — Fruits. Acta Phytopath. Acad. Sci. Hung., Vol. 1, № 1—2, Budapest.

Stojanović, D., Borić, B. (1973): Askusni stadijum Coccomyces hiemalis Higg. u Jugoslaviji. Zaštita bilja, br. 122, Beograd.

Veličkova, S. (1971): Cilindrosporioza po čerešata i višnata. Ovoščarstvo, № 10, Sofija.

(Primljeno 6. 08. 1982)

SPREAD OF ASCUS STAGE OF BLUMERIELLA JAAPII (REHM.) V. ARX. PARASITE OF CHERRY- AND SOUR CHERRY-TREES IN YUGOSLAVIA

by

M. Arsenijević, Jelica Balaž and **D. Živkov**
Faculty of Agriculture, Novi Sad

Summary

There was investigated the existence of the ascus stage of *B. jaapii* on the gathered leaves of sour cherry- and cherry trees, originating from different parts of our country. It was observed that the apothecia with asci and ascospores formed on all the collected samples of diseased leaves.

Consequently, the ascus stage of this fungus is very widespread in Yugoslavia.

GALLICOLE SPECIES FROM THE FAMILY *CECIDOMYIDAE (DIPTERA)* IN THE FEMALE BIRCH CATKINS AND THEIR PARASITES

by

Duška Simova-Tošić
Faculty of Agriculture, Beograd — Zemun
Lj. Mihajlović
Faculty of Forestry, Beograd
Dragica Vičentić
Faculty of Agriculture, Beograd — Zemun

Summary

In the course of 1981 and 1982 on a number of localities in Yugoslavia the occurence of galls on the female birch catkins was observed. The following gall inducer were found: *Semudobia betulae* Win., *S. tarda* Rosk. and *S. skuhravae*. The last two species have not been found in Yugoslavia ap to now. Among the host plants *Betula verucosa* Ehrh., *B. pubescens* Ehrh. have been registrated above all as well as various hybrids wich are being cultivated as decorative plants.

The first pupa noticed in nature (the first half of March were that od *Semudobia skuhravae*, followed by *S. betulae*, and last of *S. tarda* (April 1st. The imagos flight in 1982 started with the beginning of April. The first galls were noticed by the middle of May. Adult larvae were noticable by the middle of July.

Judging from the galls which were brought to the laboratory by the beginning of September and kept at room temperature, the imago emergence began approximattelly one month later (Table, 1), *Semudobia* species have no stable diapause in our conditions.

The species registrated in our country occur in mixed populations. The intensity of attack was from 0—80 per cent (*Semudobia betulae* and *S. tarda)* and to 100 per cent (*S. skuhravae*).

Nine parasitic species belong to the parasitic complex of the *Semudobia* species on the territory of Yugoslavia. All species, except *Euplemus urozonus* Dalm., are mentioned for the first time for the fauna of Yugoslavia.

For the species *Psilonotus achaeus* Walk. and *P. hortenzia* Walk. the hosts have been determined: *P. achaeus* live as a parasite on larvae of *Semudobia betulae* and *S. tarda*, and *P. hortenzia* only on *S. betulae*.

For the polyphagous species *Eupelmus urozonus* the list of hosts is broader since it has been established as a parasite of *Semudobia betulae* and *S. skuhravae*.

The parasites of *Semudobia tarda* have been established for the first time (*Liotherphus fuscicornis* Walk., *L. nitidulus* Walk., *Psilonotus adamas* Walk., *Tetrastichus* spp. and *Metaclisis* sp.) and of *Semudobia skuhravae Psilonotus achaeus* Walk., *Eupelmus urozonus* Dalm., *Tetrastichus* sp.).

The reducing role of parasites can be very significant. The greatest reduction for *Semudobia betulae* has been noticed by *Liotherphus* sp., *Psilonotus adamas* and *Metaclisis* sp. parasited up to 78 per cent, and for *S. skuhravae* by *Psilonotus achaeus, Tetrastichus* sp., and *Eupelmus urozonus* ap to 39 per cent.

The investigations on the parasites of *Semudobia* are begin continued with the aim of finding out a possibility for biological control.

INFLUENCE OF HUMIDITY UPON THE FECUNDITY OF BEAN WEEVIL *ACANTHOSCELIDES OBTECTUM* Say *(Coleoptera, Bruchidae)*

by

Smiljka Krnjaić
Faculty of Agriculture, Beograd — Zemun

Summary

Under laboratory conditions there were investigated the effects of different degrees of humidity (20%, 40% and 90%) upon the fecundity, the course and intensity of ovipozition of *Acanthoscelides obtectus* Say at the constant temperature of 29°C. The imagos which were used in the experiment were previously acclimatized to the humidity the influence of which was object of investigation and held in glass containers, 20 pairs in each repetition. The results of experiments allow the following conclusions:

Different degrees of humidity exert an influence on the fecundity of bean weevil. With the increase of humidity there increases also the number of eggs laid by a fermale. The least number of eggs (48,73) has been achieved at 20% of humidity and the greatest one 72,70) at 90%.

At higher degrees of humidity the course of oviposition is normal, at the lower ones it is disturbed.

Different degrees of humidity did not act on the preovipositional period, for the females laid eggs on the first day after hatching and copulation in all the combinations.

The degree of humidity influenced the duration of oviposition: it lasted longer (21 days) at higher humidities and shorter (13 days) at the lower ones.