UDK 632.9

YU ISSN 0372-7866

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

# ZAŠTITA BILJA
## (PLANT PROTECTION)

VOL. 36 (2), BROJ 172, 1985. GOD.

## CONTENTS

Scientific papers

# LA SENSIBILITÉ DE QUELQUES CULTIVARS DE L'OLIVIER AU MONTÉNÉGRO À *SPILOCAEA OLEAGINEA* (CAST.) HUGH.

par

**M. Mijušković**
Institut d'agriculture, Titograd

Résumé

La sensibilité de 28 cultivars de l'olivier à l'attaque de Spilocaea oleaginea (Cast.) Hugh. a été examinée en 1982 et 1983 dans la collection d'oliviers de l'Institut d'agriculture de Titograd. Les évaluations ont été faites en prenant en considération toutes les feuilles sur quatre branches de trois arbres de chaque cultivar. En donnant les valeurs numériques aux dégrés d'attaques constatés sur chaque feuille, il a été possible d'établir la sensibilité des cultivars examines et de les repartir à des catégories suivantes:

Très sensibles — San Pardo, Morellana di Grecia, Bella di Spagna, Žutica, Moraiolo, Verdale.

Sensibles — Oblica, Drobnica, Levantinka, Uljarica. Sant Agostino, Dužica, Favarol.

Moyennement sensibles — Coratina, Santa Catarina.

Peu sensibles — Rosciola, Frantoio, Uovo di picione.

Résistants à très résistants — Canina, Grozdača, Taggiasca, Ascolana tenera, Lastovka, Pendolino, Mignolo, Picholine, Maurino, Leccio.

Etant donné qu'on a l'intention d'introduire de nouveaux cultivars pour diversifier et amméliorer la production oléicole au Monténégro, il est necessaire de tenir compte aussi de leur sensibilité respective aux maladies, comme element important de la lutte intégrée et d'une production économique.

Ristevski B., Jordanovski B., Kuzmanovski I., Krstevski J., Rizov T., Čilimanov I., Krstevski V. (1984): Sostojba i perspektiven razvoj na ovoštarstvoto na SRM od aspekt na možnosti za proizvodstvo, prerabotka i plasman. Skup »Fakultet — Stopanstvo«, 3. III. 1984, Skopje.

Hristov A. (1972): Opredelitel na bolestite po rastenijata. »Zemizdat«, Sofija.

*(Primljeno 14. 01. 1985)*

## К ИЗУЧЕНИЮ ЭТИОЛОГИЙ УВЯДАНИЯ И УСЫХАНИЯ ОДНОЛЕТНЫХ ПОБЕГОВ, ВЕТВЕЙ И ОДИНОЧНЫХ СТВОЛОВ АБРИКОСА В НЕКОТОРЫХ МЕСТНОСТИ НА ТЕРРИТОРИЙ СКОПЬЕ

**Ф. Пейчиновски, Д. Михайлович**

Сельскохозяйственный факультет, Научно-исследовательский институт для защите растений, Скопье.

Резюме

В труде вынесени результаты изучения проблемой высихания абрикоса иа территорий Скопие. Как основные источники особено выделяются паразитные грибы: **Monilinia laxa, Cytospora cincta** и **Sphaeropsis malorum**, но показывается также присутствие бактериального рака корени — **Agrobacterium tumefaciens** и корневая гниль — **Armillarieella mellea** и другие.

Особенно выделяеться значительная роль зимних, а особенно поздних весенных заморозков в этиологий высихания абрикоса.

В связи с изучением осущенным сортимента потверждено на самую высокую осущенным показывают: Старк Ерли Оранж,- Венгерская, Венгерская самая лучшая и др., а самую нискую показивают: Крупная ранная и Кечкеметска ружа.

Также изучены мери охране абрикоса, где особенно выделяеться значение предварительные агротехнические мери. Зимняя защита в периоде покоя, как и весенние опрыскивание абрикоса, особенно в периоде цветания и после цветания, фунгицидами: Беномил, Ронилан и др., оказывают положительную удовлетворяющую хемическую защиту абрикоса.

LITERATURA

Gäumann E. Pflanzenliche Infektionlehre, Basel.

Republički hidrometeorološki zavod SR Srbije (1970—1984): Agrometeorološke analize i informacije, Beograd.

Stanojević Č., Bratić R. (1977): Ekstremne vrednosti nekih meteoroloških elemenata u SR Srbiji. Interna dokumentacija Rep. hidrometeorološkog zavoda SR Srbije, Beograd.

*(Primljeno 15. 03. 1985)*

## INFLUENCE OF HIGH TEMPERATURES ON GERMINATION OF CONIDIA *VENTURIA INAEQUALIS* (COOKE) WINTER

by

**B. Borlć**

Institute for Plant Protection, Beograd

### Summary

Evaluation of the influence of high temperatures upon temperatures upon germination of conidia and growth of germ tubes of *V. inaequalis* was performed with three-day old conidia originating from the leaves of the apple variety "Bela Ruzmarinka".

These investigations were carried out on dry microscopical slides and on apple leaves. Both groups of conidia were exposed to high temperatures of: 30°, 32°, 40°, 50°, 60°, 65°, 70° and 75°C over 3, 4, 6, 8, 16, 24, 48 and 72 hours, in darkness.

Having been exposed to the influence of high temperatures, the conidia were analysed for germination and growth of germ tubes in a drop of distilled water, at a temperature of 20°C, in darkness. The period of germination testing lasted 24 hours, upon which germ tubes were immediately measured.

Control groups of conidia from each sample were stored on dry microscopical slides, at a temperature of 10°C, in darkness, until the moment germination assessment began.

According to the results, those *V. inaequalis* conidia which had been exposed to temperatures of 30°, 32° and 40°C even during 72 hours, showed a considerably high germability which was practically not reduced in relation to germability of the control conidia.

As the temperature further increased, germability of *V. inaequalis* conidia decreased, which was much more emphasized on the conidia from microscopical slides than on those from apple leaves. A steep decline in germability was particularly evident in the conidia exposed to temperatures higher than 60°C.

Duration of exposing time of conidia to high temperatures also contributes to the reduction of germability, the more so the longer time of exposure and the higher temperature.

Temperature at which conidia (on microscopical slides) do not germinate is 65°C in case the exposure lasted 24 hours, or 70°C if the exposing time lasted 16 hours. Conidia from leaves stop germinating at 65°C after 72 hours, or at 75°C in case that they were exposed to it for 6 hours.

Arsenijević M., Balaž J., Živkov D. (1982): Rasprostranjenost askusnog stadijuma *Blumeriella jaapii* (Rehm) v. Arx parazita višnje i trešnje u Jugoslaviji.

Balaž J., Arsenijević M. (1984): Ispitivanje uticaja rokova primene fungicida u suzbijanju primarnih i ranih sekundarnih infekcija lišća višnje prouzrokovanih gljivom *Blumeriella jaapii* (Rehm) v. Arx.

Josifović M. (1964): Poljoprivredna fitopatologija, Beograd.

Konstatinova A. P. (1967): Kokomikoz višnji, Zašč. rast. 12 (7), Moskva.

Lukjanova E. N. (1963): Kokomikoz kostočkovih *(Coccomyces hiemalis, Cylndrosporium hiemale),* Zašč. rast. 5: 20, Moskva.

Matijević D. (1977): Ispitivanje efikasnosti nekih fungicida prema parazitu prouzrokovaču pegavosti lista trešnje i višnje, »Biljni lekar« br. 1—2, Beograd.

Milatović I. (1956): Pjegavost lišća višnje *Coccomyces hiemalis* Higg. Zaštita bilja, br. 37, Beograd.

Milatović I. (1958): Prilog proučavanju biologije *Coccomyces hiemalis* Higg. u našoj zemlji, Zaštita bilja br. 47—48, Beograd.

Milatović I. (1959): Nova zapažanja o prezimljavanju parazitske gljive *Cylndrosporium padi* (Lib.) Karst u Jugoslaviji. Zaštita bilja br. 55, Beograd.

Pantelić Ž. (1971): Ispitivanje mogućnosti zaštite višnje od *Coccomyces hiemalis* Higg. Agrohemija, No. 1—2, Beograd.

Radman Lj., Ristanović M. (1972): Prilog proučavanja *Coccomyces hiemalis* Higg. u Bosni i Hercegovini. Jugoslovensko voćarstvo, br. 21—22, Čačak.

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

Stojanović D., Borić B. (1974): Uloga saprofitske faze razvojnog ciklusa *Coccomyces hiemalis* Higg. u obnavljanju primarnih infekcija. Zaštita bilja br. 130, Beograd.

*(Primljeno 25. 12. 1984)*

# A CONTRIBUTION TO THE STUDY OF THE SUSCEPTIBILITY OF SOME SORTS OF SOUR CHERRY AND EFFICIENCY OF FUNGICIDES TO *BLUMERIELLA JAAPII* (REHM) v. ARX

by

**R. Garić**
Institute for Plant Production, Peć

**M. Crvenica**
Agricultural Cooperative "Dečane",
BOAL "Agricultural Production", Rznić

## Summary

In the course of 1983 and 1984 we investigated the resistance of five sorts of sour cherry (Rexelle, Haiman's, Keleris — 14, Meteor and Oblačinska) as well as the efficiency of fungicides Baycor WP-25, Benomil WP-50 and Melprex S-65) to the pathogen *Blumeriella jaapii*

(Rehm) v. Arx. The investigations were carried out in the plantation of the Agricultural Cooperative "Dečane", BOAL "Agricultural Production", Rznić.

The highest resistance was shown, among the investigated sorts, by Oblačinska and Meteor, and the lowest one by Haiman's, Rexelle and Keleris — 14 (Tab. 2).

All of the three investigated fungicides proved to be very efficient. The greatest effect, however, was manifested by Baycor WP-25, further by Benomil WP-50 and Melprex S-65 (Tab. 3).

# CONTRIBUTION TO THE STUDY OF SHARKA ON PLUM AND PEACH

by

**M. Jordović**
Institute for Plant Protection, Beograd

Summary

It is presented results of comparative study of Sharka virus originated from plum and peach naturaly infected on some indicator plants and plum and peach cultivars.

It was found that Sharka virus from peach was infective for all examined plants, exept peach cultivar Sunhigh. However, Sharka virus from plum was not be able to infect any examined peach cultivars, but only plum cultivars and tested indicator plants.

# THE POSSIBILITIES AND PROBLEMS OF DIAGNOSING SHARKA VIRUS IN APRICOTS BY THE ELISA TECHNIQUE

by

**M. Ranković** and **Svetlna Vuksanović**
Fruit Research Institute, Čačak

## Summary

The reliability of the ELISA technique in detecting the Sharka virus presence was tested in the infected trees of 7 apricot cultivars, as follows: Alfred, Čačansko Zlato, Göci Magyar Kajsci, Kecskemeti rózsa, Magyar kajsci, Moorpark and Rouge du Roussillon. The infected trees were 4 year old and in the previous years showed conspicuous Sharka symptoms on the leaves, their intensity varying with the cultivar.

The studies were conducted during the growing season using the following samples: petals, leaf buds, leaf with symptoms, leaf without symptoms and young leaf taken from shoot tips. The leaf showing symptoms was tested in the zone of chlorotic spots and outside it, respectively.

On the basis of the results obtained, the following was concluded:

The ELISA technique, despite its high sensitivity, has a limited possibility of application in diagnosing Sharka virus in the infected apricot trees due to the marked localization and low virus concentration. This method can not be used for the detection of the virus in petals and leaf buds, or in the apricot leaves showing no visible disease symptoms.

The ELISA technique should be applied during June, combined with the visual method of disease detection, when the virus can be detected in the chlorotic zones of diseased leaves with high reliability.

The detection of Sharka virus in the infected apricot trees by means of ELISA cannot be successfully carried out in the samples collected at random as occurs with testing plum trees.

# EFFECT OF BEET MOSAIC VIRUS ON GERMINATION OF SUGAR BEET SEEDS AND LENGTH OF PRIMARY ROOTS OF SUGAR BEET SEEDLINGS

by

**D. Stakić**
Institute Pasteur, Novi Sad
**S. Jasnić**
Faculty of Agriculture,
Institute for Plant Protection, Novi Sad

## Summary

The results of two-years investigations showed a harmful effect of beet mosaic virus on the germination of sugar beet seeds and length of primary roots of sugar beet seedlings such as:

— the percentage of germination decreased by 37.40% and the length of primary roots was reduced by 26.56%.

tretiranja. Izrazito povećanje prinosa vidi se kod preparata Indar, pošto je postignuto dobro zaštitno dejstvo u suzbijanju lisne rđe. Za razliku od ovih, tretiranje nije uticalo na povećanje prinosa kod sorte NS rana 2. U poređenju sa Mačvankom 2 ova sorta ispoljava slične stepene osetljivosti, ali je njena ranozrelost znatno smanjila negativan uticaj parazita na prinos.

## LITERATURA

Bošković M., Momčilović V. (1980): Primena preparata Bayleton u suzbijanju bolesti pšenice kombinovano sa folijarnom ishranom 1979. godine. Zbornik radova Prvog jug. sav. o primeni pesticida u zaštiti bilja, sv. 1, str. 103—111, Kupari.

Bošković M., Kostić B., Momčilović V. i Pribaković M. (1985): Suzbijanje uzročnika bolesti na pšenici u 1983. godini. Zbornik radova Jug. sav. o primeni pesticida u zaštiti bilja u Neumu (u štampi).

Momčilović V., Bošković M., Kostić B., Pribaković M. (1981): Suzbijanje bolesti pšenice fungicidima. Jug. sav. o primeni pesticida, sv. 2, str. 90—97. Poreč 1980.

Spasojević B. (1984): Uticaj vremenskih uslova na rast i razviće ozime pšenice u 1983/84. godini.

*(Primljeno 1. 02. 1985)*

## CHEMICAL CONTROL OF *PUCCINIA RECONDITA TRITICI* AND *ERYSIPHE GRAMINIS TRITICI* ON WHEAT VARIETIES

by

**V. Momčilović, M. Bošković, B. Kostić, M. Pribaković and Z. Jerković**
Faculty of Agriculture, Novi Sad

### Summary

Fifteen wheat varieties were included in the trial: NS rana 1, NS rana 2, Partizanka, Yugoslavia, Balkan, Posavka 2, Nizija, Žitnica, Sutjeska, Bezostaja 1, Mačvanka 2, Baranjka, Kv-924, NS-5260 i Little Club.

Two treatments with Calixin (0.5 l/ha), Indar (0.5 l/ha) and Tilt 250 EC (0.5 l/ha) were applied in three variants. Separately, the varieties NS rana 2, Mačvanka 2 and Little Club were treated with Impact (1 l/ha), Indar (0.5 l/ha) and Bayleton WP 25 (0.5 l/ha).

The severity of leaf and powdery mildew was recorded in three intervals before and after spraying. The amount of leaf rust was considerably higher than that of powdry mildew. Meanwhile even in a such condition the verietal specificity referring to the efficiency of the fongicides was differentiated.

The obvious differences in yield components came to the expression with susceptible varieties Little Club and Kv-924. In the other va-

rieties some differences were observed related either to yield components or the fongicides applied.

The varieties such as Yugoslavia, Žitnica, Sutjeska, Baranjka and NS-5260 because of their resistance to leaf rust have not expressed almost any differences in yield components.

In additional trial with three wheat varieties and three fongicides there were typical differences in yield between Mačvanka 2 and NS rana 2. That was due to the earliness of NS rana 2.

# COMPORTMENT OF PARASITES AT THE INCREASED POPULATION DENSITY OF THE EUROPEAN CORN BORER (*OSTRINIA NUBILAL'S* Hbn. *LEPIDOPTERA, PYRALIDAE)* ON VARIOUS HOST PLANTS

by

**B. Manojlović**
Institute for Plant Protection, Beograd

## Summary

There has been studied the comportment of parasites of the European corn borer caterpillars at the increased population density of this pest on eight species of cultivated plants and on the same number of plants of spontaneous flora.

The results have shown that by placing two egg clusters of the European corn borer (about 40 eggs, immediately before the hatching of caterpillars) on each experimental plant, the numbers of parasites of this pest's caterpillars increased with all the experimental plants. However, they differ between individual plant species and in individual years of investigation. The population density of parasites of the European corn borer caterpillars showed the highest increase with the corn plants (calculated on 100 plants, from 5.70 in 1977 to 11.70 parasites in 1974), hemp (by 12.73 parasites at the most on the same number of plants in 1976) and a little less with hop (maximum increase by 5.29 parasites, calculated on 100 plants, in 1975). Further with common burdock and common mugwort in 1975 (2.73 resp. 3.13 parasites/100 plants). With other cultivated plants and weeds, the numbers of parasites of the European corn borer caterpillars increased, in all the years of investigation, by less than one parasite, calculated on 100 plants. Consequently, the population density of parasites was the greatest with corn, hemp and hop in the group of cultivated plants, and with common burdock and common mugwort in the group of weeds.

However, the efficiency of the parasite in the reduction of the European corn borer population under the conditions of the increased population density of this pests has diminished to a considerable extent. This observation results from the fact that, when the egg clusters had been placed on the plants, the population density of the European corn borer increased more, and far less the population of the parasites of its caterpillars. Only with the plants pig weed in 1975 and great burdock in 1977, when egg clusters of the European corn borer had been deposited on plants, the numbers of parasites increased to a greater extent than those of their host, and the efficiency in these conditions was more pronounced (index of infestation amounted to 108 with pig weed plants and to 102 with the great burdock plants). With other plant species, particularly with weeds, the efficiency of the parasites in the conditions of the increased population density of the European corn borer, was reduced by over 50 p.c., which was also the case with common burdock and pig weed in 1977 and with barnyard grass in 1975.

supstrat od ruskog treseta je bolji od humograha koji se najčešće koristi u sjemeništima rasadnika u Bosni i Hercegovini. Ove razlike treba staviti u vezu sa pH supstrata koji je kod humograha iznad 7. Kod svih ispitivanih vrsta, utvrđen je, u prosjeku za 30%, veći broj biljaka na supstratu od ruskog treseta.

3. Za pokrov sjemena u lijehama najbolja je piljevina ili ruski treset, jer je kod svih biljaka ova vrsta pokrivača imala najbolji efekt.

4. Dezinfekcija sjemena nije neophodna ukoliko se obezbjedi zakišeljavanje supstrata, što se postiže upotrebom ruskog treseta ili piljevine.

## LITERATURA

Harley J. L.: Fungi in ecosystem.

Uščuplić M. (1961): Uticaj nekih mikroelemenata na porast gljivice *Fusarium blasticola* Rost. Zaštita bilja, broj 65—66, 113—122.

Uščuplić M. i Lazarev V. (1979): Efikasnost Basamida i drugih fungicida u zaštiti ponika nekih stranih vrsta četinara od bolesti polijeganja. Zbornik radova X, Poreč.

*(Primljeno 5. 01. 1985)*

## EFFECT OF SOME FUNGICIDES IN CONTROLING DAMPING-OFF USING VARIOUS SUPSTRATA

by

**M. Uščuplić** and **V. Lazarev**
Faculty of Forestry, Sarajevo

## Summary

Our previous work showed that effect of fungicides against *fusarioses* depends on many factors. Among these factors type of supstrata and effect of fungicides are investigated in our recent two-year experiments. It was showen that the best results are achieved when artificial supstrata are used, particularly those made from peat of low pH. As a seed cover wood sawdust was the best.

Regarding fungicides the best results were obtained with Orthophaltan, Captan and Benomyl if used during first four weeks after sowing. Unfortunately, some reduction of young plants still exist even if supstrata are chemicaly treated and we thought this due to some enviromental factors that we can not control.

These experiments were carried out on 6 species: Scots pine, Austrian pine, Norway spruce, Douglas fir, European larch and Japanese larch.

LITERATURA

Lazarev V. (1984): *Nectria ditissima* Tul. — značajan problem na staništima izdanačkih bukovih šuma. Zaštita bilja, Vol. 35 (3), br. 169, pp 197—207, Beograd.

Lonsdale D. (1980): *Nectria* infection of beech bark in relation to infestation by *Cryptococus fagisuga* Lindiger. Eur. Jour. For. Path., 10 (2/3), 161—168.

Perrin R. (1974): Le chancre du hétre. Eur. Jour. For. Path. No 4, 251—253.

Perrin R., Vernier F. (1979): Beech canker influence of locality factors on the seriouses of the disease. Rev. For. Francaise, 31 (4), 286—297.

Perrin R. (1983): Specificity of *Cryptococus fagisuga* and *Nectria coccinea* association in beech bark disease in Europe. Proceedings, IUFRO Beech bark disease, Working Party Conference, Hamden, Connecticut.

*(Primljeno 5. 01. 1985)*

## BEECH BARK DISEASES OF COPPICES STANDS

by

**V. Lazarev**
Faculty of Forestry, Sarajevo

Summary

Beech bark necrosis and cankers is likely to become very important bark disease on some localities of beech stands of coppices origin. Various symptoms on bark of stem and branches occur, like changes in colour, necrosis, cankers, twisting etc.

After we made isolates from the diseased part of trees and artificial inoculations of living trees we found the same symptoms after 120 days only on those trees that were infected by *Nectria ditissima* Tul. (conidial stage *Cylindrocarpon willkommii* Wol.). All other isolates that we made, including *N. cinnabarina* (Tode ex Fr.) Fr. were not capable to infect living trees.

# RESULTS OF TWO YEARS' INVESTIGATIONS OF THE EFFECTIVENESS OF SOME FUNGICIDES TO THE PARASITE CAUSER OF THE APPLE MILDEW *(PODOSPHAERA LEUCOTRICHA)*

by

**D. Matijević**
Institute of Plant Protection, Beograd

## Summary

In the course of 1977, 1978 and 1979 were effected the investigations of the effect of the fungicides on the causer of the apple mildew *(Podospaera leucotricha)*. In 1977 and 1978 were evaluated the secondary infections and in 1979 the primary ones. The experiment was laid according to the randomized block system in four repetitions with four trees in each repetition. Seven treatments were carried out before the evaluation of the secondary infections. The application was done with 2000 l/ha of liquid in each treatment. The investigations were carried out on the sort Jonathan in a plantation of free growing, aged fifteen years. The effectivenes manifested to the secondary infections allows the conclusion that there is no difference between the individual systemic fungicides in this respect. The non-systemic fungicides (based on elementary sulphur and dinobuton) lag behind the previous group. However, as regards the control of primary infections, greater differentiations manifested themselves among the investigated fungicides and they can be divided, on the basis of the statistical analysis, into three groups: to the first group belong: triadimefon, phenarimol, ditalimphos+benomil, to the following group pyrazophos and nitrotalizopropyl+sulphur and to the third one (of the poorest effectiveness): bupyrimate, colloidal sulphur and dinobuton.

An equally good effectivenes to the primary and secondary infections was manifested by the fungicides, based on triadimefon, phenarimol and ditalimphos+benomil.

les (XIII). August 1976 — September 1977. J. Agr. Off. Anal. Chem., *67*, 1, 154—166.

Katz M. S. (1967): Determination of Linuron and its known and/or Suspected Metabolites in Crop Materials, J. Agr. Off. Anal. Chem., *50*, 4, 911—917.

Perić Živka, Randjelović B., Vojinović Vera, Nešković N. (1981): Rezultati dvogodišnjih istraživanja ostataka pesticida u prehrambenim proizvodima u SR Srbiji. Zaštita bilja, *32*, 61—70.

Podrebarac D. S. (1984a): Pesticide, Heavy Metal, and Other Chemical Residues in Infant and Toddler Total Diet J. Agr. Off. Anal. Chem., *67*, 1, 166—175.

Podrebarac D. S. (1984b): Pesticide, Metal, and Other Chemical Residues in Adult Total Diet Samples (XIV). October 1977 — September 1978. J. Agr. Off. Anal. Chem., *67*, 1, 176—185.

Vojinović Vera, Kljajić R. (1978): Pesticides Levels in Foodstuffs in Yugoslavia, 1971—1977. IV International Congress of Pesticide Chemistry, Zürich.

Watanabe S., Kaise R., Watanabe S., Ikeda H. (1979): Results of Investigation on pesticide residues on or in vegetables and fruits. Annu. Rep. Kanagawa Prefect. Inst. Hyg. 29, 45.

*(Primljeno 19. 11. 1984)*

## PESTICIDES AND HEAVY METALS IN FOOD PRODUCTS: RESIDUES OF PROPHAM AND CHLORPROPHAM IN POTATOES AND EFFECT OF FOOD PREPARATION PROCEDURES ON RESIDUES CONTENT

by

**Vera Vojinović, Živka Perić** and **N. Nešković**
Institute for the Application of Nuclear Energy in Agriculture, Veterinary Medicine, and Forestry (INEP), Department of Pesticides, Zemun — Beograd

### Summary

In order to prevent germination of potatoes during storage it is treated with propham and chlorpropham. Thus, it can be expected that potatoes which are present on the market almost all year long contain smaller or larger quantities of these compounds' residues.

This paper presents results obtained over a two-year period of research on controlling the content of propham and chlorpropham residues in samples of stored potatoes. Residues were determined in potatoes with peel, peeled potatoes and cooked potatoes (with peel).

Qualitative and quantitative determination of these compounds was performed spectrophotometrically according to the combined method of Katz (1967) and Gard and Ferguson (1964).

The Obtained results show that over 70% of the analysed potato samples contain residues of these compounds, and the established amounts range up to 6.45 mg/kg (in 1982) and 11.30 mg/kg (in 1983).

Propham and chlorpropham residues were established in potatoes with peel, but also in potatoes prepared for eating (peeled and cooked).

In a number of samples the established amount were above the limits allowed by Law. There were 22—24% of such samples in 1982, and 3—16% in 1983.