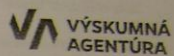




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BOOK OF ABSTRACTS

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Biotic relationship between phytopathogenic bacteria and entomofauna in pear plantings

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Abstract

Plant diseases in the garden are very important and can be a significant source of frustration and loss to the gardener. Biotic diseases occur when a host plant is invaded by living organisms. Most of these organisms are microbes, and can also be referred to as parasites which attack plants. The investigation is devoted to study of biotic relationship between activators of bacteriosis and insects of pears plantings. Bacteriological analysis of insects showed that in nature 7 pest species (*Anthonomus pyri*, *Stephanitis pyri*, *Psylla pyri*, *Dysaphis reaumuri*, *Hyphanthria cunea*, *Laspeyresia pomonella* L., *Laspeyresia pyrivorana* Danil.) are vectors of the causative agent of crust necrosis.

The transfer of phytopathogenic bacteria on trophic chain "the struck plants→insects-phytophages→insects-entomophages" was analysed. All pests (Aphis pomi), which eat infected plants, were hosts of *Erwinia amylovora*, and *Pseudomonas syringae* pv. *syringae*. After eating herbivores, from 40% of entomophages (*Coccinella septempunctata*) were isolated pathogens of fire blight. It noted the ability of *Erwinia amylovora* to cause mortality of larvae *Psylla pyri*. On 12 day in experiment, 100% of the insects died out, despite the fact that in the control at the same time mortality of psyllites was approximately 31%. Also some effect on larval mortality *Psylla pyri* had *Pseudomonas syringae* pv. *syringae* (44% on day 12). Analyse of morphological, cultural, physiological, biochemical and serological properties of pathogenic bacterial strains isolated from insects, shown that they are identical to collection strains. It was established that isolates of *Erwinia amylovora* and *Pseudomonas syringae* pv. *syringae* from various insects have a high degree of aggression and pathogenicity to plants-hosts.

Keywords: biotic relationship, phytopathogenic bacterias, phytophages, entomophages

Development of environmental education and training in the world and Slovakia

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Abstract

The relationship between man and nature has always existed. During the lifetime of mankind human activity changes the natural circulation of elements and substances. But if before the influence was not threatening to the environment, the relationship man - nature has become a critical problem ever since man began to apply advanced methods of economic management. This resulted in various negative changes in the environment. This implies the need for measures to make society aware that further harmonious development is not possible without environmental education, ecological culture and consciousness, informing people about the state of the world's environment and their immediate surroundings. Environmental education and training are critical elements of environmental protection; they are designed to form an active position of a man in environmental issues.

The article highlights the history of environmental education and training development in the world since the UNESCO Intergovernmental Conference on Sustainable use and protection of the biosphere resources which took place in Paris in 1968 till the UNESCO Conference on Environment which took place in Rio de Janeiro in 1992 and where 198 countries adopted the International Partnership Programme of activities within XXI century - "Agenda - 21". The founders of the Environmental education and training in Slovakia were mentioned. The role of schools in environmental education of the younger generation was analysed not in the destructive tradition of using the gifts of nature, but in their respect to the environment, as well as the targets of environmental education of pupils of the primary and secondary schools. Legislative acts are being considered with target to elevate environmental training and education as the basis of human culture. The proposition is made to support the introduction of a separate school subject that would synthesize knowledge to a common view of the ecological foundations of environmental protection.

Keywords: environmental issues, environmental protection, primary and secondary school, natural environment