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THE EFFECT OF SOME HERBICIDES ON PEPPER HOST- VIRUS RELATIONS

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Plant viruses make up about 15-30% out of the whole plant diseases (plant physiological, genetical, caused by microorganisms). Chemical protection against viruses is unsuccessful *in vivo* or causes not only the death of viruses but also the death of the host. In spite of this, several natural and artificial substances are known to inhibit the spreading and replication of chemical plant protection is the major part of the integrated plant protection and that 50% of the pesticide sales is made up by herbicides, from practical point of view it is important to know the side effect of herbicides, including also the effect on host-virus relation. The best known in this respect is the antiviral activity of some triazines, carbamide, dinitroaniline and auxine-type herbicides. Virus diseases are one of the major limiting factors in successful pepper cultivation. The extent of infection varies between 20 and 60%, and 5-40% yield losses may occur due to virus infection. Pepper is known as natural host of ten economically important viruses in Hungary.

Greenhouse experiments were carried out to examine the effect of some commonly used herbicides in pepper (STOMP 330, DEVRINOL 45F, FUSILADE S) on host [(*Capsicum annuum* L.)(Csipke, Beleckskai, Szentesi piacos, Macskapiros cultivars), *Solanum nigrum*] – tomato mosaic *tobamovirus* (ToMV-Ob) relations. DEVRINOL 45F and STOMP 330 were applied as preplant treatments one week before planting. FUSILADES and STOMP 330 were used also as postemergent ones mixed to the tissue sap of *Nicotiana tabacum* 'Samsun' at the time of virus infection. It has been concluded that the inhibitory effect of herbicides on ToMV-Ob greatly depends on host (species, varieties), type of herbicide, mode and dosage of application. Our results pay attention to the fact that certain herbicides may play important role not only against weeds, but also have inhibitory effect on economically important viruses, occurring on cultivated plants and also on weeds in agricultural ecosystems.

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