ABSTRACTS
Experience of biological control of thrips pests (Thysanoptera: Thripidae) in a commercial greenhouse in Hungary

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Abstract: Polyphagous thrips as western flower thrips, Frankliniella occidentalis (Pergande) and onion thrips, Thrips tabaci Lindeman are both important pests in various ornamentals and vegetable crops in greenhouses throughout the world. Both species can cause serious economical losses by their direct damage and by transmitting the Tomato spotted wilt virus (TS WV). Both of these polyphagous thrips species frequently cause severe damage in many greenhouse crops in Hungary as well, especially in commercial sweet pepper, where the success of plant protection is based on the management of thrips. Chemical control is not always feasible because of ecological characteristics of these thrips species: thigmotactic behaviour, high reproductive capacity and tolerance to insecticides. The efficiency of thrips management in sweet pepper could be improved by using predatory arthropods like the predatory mite Amblyseius swirskii Athias-Henriot (Acari: Phytoseiidae) and the flower bug Orius laevigatus Fieber (Hemiptera: Anthocoridae). According to Blockmans et al. (2005) and Wimmer et al. (2008) Amblyseius swirskii is a promising control agent in biological control systems because it predates, reproduces and develops on western flower thrips and onion thrips as well, furthermore it can be released preventively when the crop is flowering and remains present in the crop throughout the entire growing season. A greenhouse trial was conducted in a commercial sweet pepper crop (Capsicum annuum cv. HÓ F1) at the Experimental and Research Farm, Faculty of Horticultural Science, Corvinus University of Budapest. The effectiveness of the predatory arthropods as biological control agents of F. occidentalis and T. tabaci in greenhouse conditions is discussed.

Keywords: biological control, greenhouse sweet pepper, Amblyseius swirskii, thrips
