

Biological Control of Woolly Apple Aphid, *Eriosoma Lanigerum* (Hausmann) in the Nursery Production of Spruce

Authors : Snezana Rajkovic, Miroslava Markovic, Ljubinko Rakonjac, Aleksandar Lucic, Radoslav Rajkovic

Abstract : Woolly apple aphid, *Eriosoma lanigerum* (Hausmann) is a widely distributed pest of apple trees, especially where its parasites have been killed by insecticides. It can also be found on pear, hawthorn, mountain ash, and elm trees. Relatively small to medium-sized aphids, characterized by a reddish-brown body, a blood-red stain when crushed and a fluffy, flocculent wax covering. Specialized dermal glands produce the characteristic fluffy or powdery wax, which gives *E. lanigerum* its characteristic 'woolly' appearance. Also, woolly apple aphid is a problem in nursery production of spruce. The experiments were carried out in the nursery "Nevade" in Gornji Milanovac, "Srbijasume" on the spruce seedlings, aged 2 years. In this study, organic insecticide King Bo, aqueous solution (a. i. oxymatrine 0.2% + psoralen 0.4%), manufacturer Beijing Kingbo Biotech Co. Ltd., Beijing, China. extracted from plants and used as pesticides in nursery production were investigated. King Bo, bioinsecticide is manufactured from refined natural herbal extract several wild medicinal plants, such as *Sophora flavescens* Ait, *Veratrum nigrum* L, *A. Carmichael*, etc. Oxymatrine 2.4 SL is a stomach poison that has antifeeding and repellent action. This substance stimulates development and growth in a host plant and also controls the appearance of downy mildew. The trials were set according to instructions of methods-monitoring of changes in the number of larvae and adults compared to before treatment. The treatment plan was made according to fully randomized block design. The experiment was conducted in four repetitions. The basic plot had the area of 25 m². Phytotoxicity was estimated by PP methods 1/135 (2), the intensity of infection according to Townsend-Heuberger, the efficiency by Abbott, the analysis of variance with Duncan test and PP/181 (2).

Keywords : bioinsecticide, efficacy, nursery production, woolly apple aphid

Conference Title : ICAE 2015 : International Conference on Agricultural Engineering

Conference Location : Lisbon, Portugal

Conference Dates : April 16-17, 2015