

ECOLOGICAL PEST CONTROL STRATEGIES FROM VEGETABLE CROP ECOSYSTEMS

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SUMMARY

The animal pests impact in environment is essential, because they cause extensive damages in different ecosystems. The irrational use of chemical pest control determined a new pest management broach to study and use of some ecological control means in different agroecosystems. Our aim was to study and use some ecological control methods based on indirect and direct strategies: 1) the pest monitoring in vegetable crop ecosystems and useful fauna identification (by visual control, manual collection - direct with pincers, striking method – shaking down on a tarpaulin); 2) the use of some physico-mechanical and biotechnical methods (manual collection - direct with pincers, striking method – shaking down on a tarpaulin; use of barriers – panels, vases, attractant traps – alimentary, visual, reflective mulching) to control the pests from studied ecosystems. The experiences were carried out in 2006 at Cluj-Napoca (Romania), in laboratory and some private gardens. 1) The indirect strategies have been organised in field and greenhouses with vegetables. After the collection and identification of biological materials, the harmful fauna proved to be very different, represented both by invertebrates and vertebrates, damaging both at underground and superterrestrial level; the useful fauna is represented both by predators and parasites. 2) The direct strategies has aim the use of unpollutant, alternative methods in studied vegetable crop ecosystems. 4 experiences has been organised: 1) reflective mulching with different materials in 3 variants (alluminium film, white and grey plastic films) applied between the plant rows (at cabbage, tomatoes and mild pepper), which had a very good repellent action, removing the different pests (aphids, thrips, white-flies, flea beetles) from the host plants; the alluminium film was the most efficacy; 2) colored sticky panels in 7 variants (white, silver, light-green, emerald-green, light-blue, dark-blue, red) + control (yellow) at cabbage and mild pepper, recorded a very good efficacy at all variants, catching aphids, adult flies, small beetles, wasps, thrips; 3) colored ceramic plates with water in 5 variants (white, orange, green, blue) + control (yellow) at cabbage, recorded a very good efficacy too, at all variants. The best results recorded the control - variant 5 (yellow), followed by variant 1 (white) with 850 captures; 4) attractant traps with alimentary baits in 2 variants, the both had a good efficacy by continuous capture of butterflies and flies.

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