

Releasing Two Insect Predators to Control of Aphids Under Open-field Conditions

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Abstract : Aphids are noxious and serious persistent pests in the open fields worldwide. Many authors studied the possibility of aphid control by applying Ladybirds and Lacewings at different releasing rates under open-field conditions. Results clarify that releasing 3rd instar larvae of *Coccinella undecimpunctata* at the rate of 1 larva:50 aphid was more effective than 1:100 or 1:200 rates for controlling *Aphis gossypii* population in Okra field; reflecting more than 90% reduction in the aphid population within 15 days. When *Chrysoperla carnea* 2nd larval instar were releasing at 1:5, 1:10, and 1:20 (predator: aphid), it was noticed that the former rate was the most effective one, inducing 98.93% reduction in aphid population; while the two other rates reflecting less reduction. Additionally, in the case of double releases, the reduction percentage at the 1:5 rate was 99.63%, emphasize that this rate was the most effective one; the other rates induced 97.05 and 95.64% reduction. Generally, a double release was more effective in all tested rates than the single one because of the cumulative existence of the predators in large numbers at the same period of the experiment. It could be concluded that utilizing insect predators (*Coccinella undecimpunctata* or *Chrysoperla carnea*) at an early larval stage were fair enough to reduce the aphids' populations under open fields conditions.

Keywords : releasing predators, lacewings, ladybird, open fields

Conference Title : ICAEA 2021 : International Conference on Agricultural Entomology and Applications

Conference Location : Istanbul, Türkiye

Conference Dates : December 20-21, 2021