

The resurgence of the pests due to the insecticide control of *Leucinodes orbonalis* (brinjal shoot and fruit borer-BSFB)

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In order to prevent yield losses by pests, resurgence state and sources of them, should be identified and properly managed. Resurgence can be the dramatic population increase of either the same pest or some other potential pest. Variations in each pest population, for selected insecticides through questionnaire survey were compared with the untreated control, using Statistical Analysis System considering the factors, treatments (acetamiprid, carbofuran, deltamethrin, imidacloprid, chlorpyrifos and control without any insecticides and spraying of distilled water in the same amount of insecticide spraying), and before/after spraying. Resurgence was evaluated with the following formula for each species of pests found in the due of study.

$$\text{Resurgence} = \left(\frac{TS}{CS} \times \frac{CF}{TF} - 1 \right) \times 100 \quad \text{where,}$$

TS -Damage in treated pots subsequent count.

CS -Damage in control pots subsequent count.

TF -Damage in treated pots first count.

CF -Damage in control pots first count.

Populations of flies and thrips were insignificantly ($P > 0.05$) varying among treatments including control, while having zero possibility to resurge. Though whiteflies and leaf hoppers are infesting the plants, their small population promised the chances of resurgence were very much poor. Aphid

population was significantly ($P < 0.05$) high in control plants followed by carbofuran than other treatments. Mealybugs were higher in deltamethrin and showed mild resurgence against deltamethrin. Red spider mites were resurged tremendously in acetamiprid followed by imidacloprid. Thus, in Batticaloa region aphids have potential to resurge under favourable weather, while mealybugs resurged mildly to deltamethrin and red spider mites have highest efficacy to resurge against acetamiprid and imidacloprid.