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Short Communication

Breeding of Predator Bug Macrolophus Pygmaeus on Several Banker Plants and Assessment of its Behaviour

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Integrated Pest Management is an effective and safe way to protect crop from different economically important pests and diseases. First of all, using beneficial insects gives grower chance to avoid resistance, developed after repeated pesticide applications which leads to form resistant organisms against pesticides.

IPM method is not common method of pest management in Azerbaijan. So, some growers have applied it, but because of various factors (pesticide residue issue on propagation, lack knowledge about IPM strategy, uncontrollable summer climate and etc.) they were unsuccessful.

The experiment took place at Baku Agropark tomato greenhouse, in Zira region, located on the East of Azerbaijan, where climate is complicated (wintertime humidity is high, temperature is variable, mostly windy, summertime dry (rains very rarely), temperature is high).

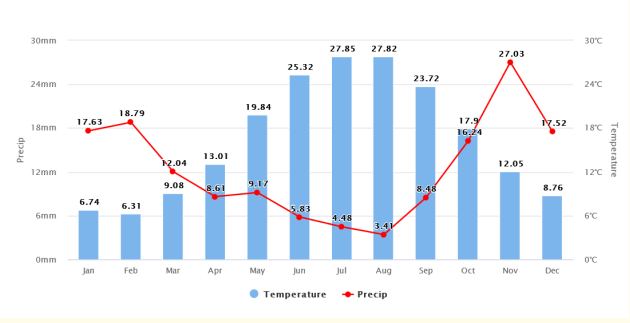

Figure 1: Climate graph.

Monthly temperature and precipitation of Zira in recent years.

Most problematic side of using beneficials in Azerbaijan is the cost of this project. Since there is no local production of beneficials in Azerbaijan. Growers are forced to buy it abroad. As it increases the production cost, it is not profitable for companies to use IPM.

This trial's aim was to produce one of beneficial insects - Macrolohus pygmaeus (Hemiptera: Miridae) as an experiment, at the same time to study behavior of above mentioned beneficial's behavior (especially feeding and egg laying activity) on different host plants.

The study is based on breeding Macrolophus p. on several banker plants growing in the container equipped with shelfs for plants, artificial light (Phyto lamps), simple irrigation system, air conditioner, temperature and humidity sensor.

Banker plants chosen for trial was -Nicotiana tabacum, *Ocimum bacilicum*, Pelargonium zonale, Coriandrum sativum, Capsicum annuum, *Solanium licopersicum*, Pelargonium citronellum, Euphorbia pulcherrima.

In order to avoid pesticide residue issue, all plants were growing in the greenhouse from seed (not from ready propagation supplied from propagator) without any chemical treatment.

Macrolophus p. was successfully breeded on above mentioned condition. The highest number of eggs layed observed on Capsicum annuum, but the least number was on tomato plants. Tobacco plant was the most attractive plant by *Bemisia tabaci* pest which consist

of the main diet of Macrolophus pygmaeus. Pelargonium zonale was more attractive for Macrolophus p. than Pelargonium citronellum. *Ocimum bacilicum*, Capsicum annuum and Coriandrum sativum are almost same by beneficial's attractness.

Figure 2: Macrolophus p. on tomato plant.

Figure 3: Macrolophus p. feeding on Bemisia tabaci larvae on Euphorbi pulcherrima.

Figure 4: Banker plants' seedling period.