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Contrasting behavioural responses of two egg parasitoids to buckwheat floral scent is reflected in field parasitism rates

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The use of food supplements in conservation biological control (CBC) programmes is considered an essential element for increasing parasitoid fitness and their population density leading to an increase in overall parasitism levels. However, non-crop habitats that substitute the necessary resources for natural enemies have not always achieved the desired effects. It is suggested that the composition of flower strips in agricultural systems around/in agricultural fields plays an important role because not all plant species are equally suitable and the consumption of food resources by parasitoids can shape direct and indirect interactions with other arthropods and the community complex. We developed a set of experiments to examine the performance of *Trissolcus basalis* (Hymenoptera: Platygasteridae) and *Ooencyrtus telenomicida* (Hymenoptera: Encyrtidae), two egg parasitoids of the stink bug *Nezara viridula* (Hemiptera: Pentatomidae) into the tomato agro-ecosystem where a margin of buckwheat (*Fagopyrum esculentum*, Polygonaceae) plants was grown. The results indicate that buckwheat flowering plants enhance the efficiency of *T. basalis*. Additionally, it was evident an earlier colonization of the field by *T. basalis* that emphasize how the efficacy of the inclusion of buckwheat plants can positive effect the ability of the egg parasitoids to kill insect pests before the crop-feeding stage. Surprisingly, the occurrence of *O. telenomicida* was significantly lower in the treated plot with buckwheat margin. The evidence that insect forages from a particular flower species while repel others, open a new scenario of the criteria in selecting plants species to intercrop in CBC programmes.