SUMMARY

Trophic guilds response of true bedbugs (Hemiptera: Heteroptera) to the agricultural management of chayote crop *Sechium edule* (Jacq.) Sw.

Chayote (*Sechium edule* Jacq.) Sw. is a crop of economic importance for Mexico, because it is the main producer and worldwide exporter. Although several arthropods, including insects from the suborder Heteroptera, have been reported associated with chayote crop, little is known about the mechanisms driving their diversity and trophic interactions. This study analyzed the response of trophic guilds to the agricultural management in 15 plantations of chayote in Ixtaczoquitlan, Veracruz, Mexico. True bugs were collected by installing pit-fall traps bimonthly during 2018. Agricultural management of the plantations was characterized in terms of its structure, soil cover and use of agrochemicals. In total, 371 individuals were collected, belonging to 16 families, 44 genera and 52 species, which were cataloged in “predator”, “phytophagous” and “mycophagous” guilds. Abundance of "predators" responded positively to use of herbicides and fertilizers, negatively to the height of the tapanco (plantation roof) and the planting density. Abundance of "phytophagous" responded positively to the use of insecticides and negatively to the ground cover by litter and the duration of the productive cycle. Abundance of “mycophagous” responded positively to planting density. The chayote crop established in central Veracruz is associated with a wide diversity of true bugs throughout a complete productive cycle, among them are phytophagous and predators, which are influenced by some of the agricultural management practices that are implemented in the plantations. Identifying the practices of agricultural management that influence the diversity of trophic guilds of bedbugs, will allow to plan and implement efficient strategies of integrated pest management for this crop.

Key words: Agroecology, abundance, guild, agroecosystem.