PHYTOSOCIOLOGY OF WEEDS ASSOCIATED WITH BANANA CULTIVATION IN THE MAGDALENA DEPARTMENT, COLOMBIA

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This research was carried out with the aim of characterize the weed communities associated with banana plantations in the Magdalena department, to understand their dynamic and improve their management. The floristic study were carried out during 2016 and 2017, using a hierarchical factorial design, considering four zones with edapho-climatic differences (factor A), denominated Alta, Media, Baja and Norte, and three control methods (factor B), chemical, cover crops and mechanic. Through systematic sampling, with a sampling unit of $1m^2$, species richness and abundance were quantified. The importance value index (IVI), alpha and beta diversity index were calculated. A total of 121 species from 92 genera and 39 families was identified. The IVI demostrated that five species made up 50% of the máximum value, a pattern that is similar in all zones and differs between control methods. Important weeds include *Commelina erecta*, *Axonopus compresus* and *Melothria pendula*. The Alpha indices registered higher diversity in Media (2.91), Baja (2.54) and Alta (2.46) zones in farms with mechanical control, whereas in the Norte zone, the higher diversity was presented in farms with chemical control (2.64). Jaccard index values showed that composition was not homogeneous between zones and control methods, observing a higher dissimilarity between zones (0.34) than between methods (0.41). These results allow us to conclude that the edapho-climatic conditions and the method of weed control determine the structure and composition of the weed communities associated with the banana plantations of the Magdalena department

Palavras-chave: weed community, banana zone, diversity of weeds, tropical cultivation