

Organic and intercrop pattern affected biotic structure in *Zizania latifolia* field¹

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Abstract

In this study, the effects of organic farming and intercropping with water spinach on the biotic component of *Zizania latifolia* field were investigated with the variation of pest and nature enemy. The study also calculated the yield and profit of crops. A total arthropods captured in conventional field (1,863) was 2.2 times higher than organic field (819); meanwhile pests in conventional field (1,479) was higher than organic field (440). Conventional field had higher pest numbers and lower nature enemy numbers than organic field. Arthropod species number did not different between conventional and organic fields significantly. The species of arthropods captured in intercropping field (71) was 1.4 times higher than in non-intercropping field (51). The number of arthropods captured in intercropping field (1,588) was 1.3 times higher than in non-intercropping field (1,208). The number of nature enemies in intercropping field was higher than in non-intercropping field. Moreover, the yield and profit of crops in intercropping field were higher than in non-intercropping field. The results indicated that intercropping with water spinach and using organic farming increased arthropods numbers and species in water bamboo field, and it had positive effects on the profit of crops.

Keywords: biotic component, water bamboo, ecological function group, arthropod, paddy field

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