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Anais



Platygastridae diversity in rice crops in Southern Brazil

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Platygastridae parasitoids have been referred as important biological control agents in several agricultural systems, including rice crops. Thus, we studied the richness, abundance and fluctuation of these Hymenoptera parasitoids assemblage through distance gradients of vegetation near cultivated areas, under different management of rice. The work took place in two irrigated rice crops, one with organic management (O.M.) and the other with conventional management (C.M.), in the municipality of Nova Santa Rita, RS, Brazil, during the 2013/2014 and 2014/2015 seasons. The parasitoids were collected with Malaise trap arranged at different distances in relation to the wild vegetation at the edge of rice crop in both places. Specimens were collected twice a month from seedings until the rice harvest. Among the collected genera in both seasons, Idris (12 morphospecies), Telenomus (8 morphospecies) and Baeus (5 morphospecies) presented the highest richness. Telenomus podisi was the most abundant in both areas with 31.30% in O.M. and 38.4% in C.M., and Telenomus sp.3 the second most abundant with 21.03% (O.M.) and 15.1% (C.M.). In the second season, pesticide use possibly had a negative pressure upon the parasitoid assemblage in conventional management since diversity was much lower in C.M. The rarefaction curve shows differences between the two areas for Platygastridae diversity, because in the cutoff point (around 250 individuals) the observed diversity in the smaller community (C.M.) did not reach the 95% confidence interval of the larger community (O.M.). The high abundance of Platygastridae family indicates that the natural biological control may be occurring in the rice crop, particularly in organic management.

Palavras-chave: Conservative biological control; egg parasitoids; native vegetation

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