

桃园生草对桃树节肢动物群落多样性与稳定性的影响

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Diversity and stability of arthropod community in peach orchard under effects of ground cover vegetation.

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摘要 对种植白三叶草的桃园(生草桃园)和非生草桃园的桃树节肢动物群落进行分析比较.结果表明:生草桃园桃树天敌、中性类群和植食类群数量分别是非生草桃园的1.48、1.84和0.64倍,而节肢动物群落个体总数无显著差异;与非生草桃园相比,生草桃园桃树节肢动物群落丰富度(83.733 ± 4.932)、多样性(4.966 ± 0.110)和均匀性指数(0.795 ± 0.014)均显著升高,而优势度指数(0.135 ± 0.012)显著降低.稳定性指数 S/N 、 S_d/S_p 与非生草桃园均无显著差异,但 N_n/N_p 、 N_d/N_p 及 S_n/S_p 均显著高于非生草桃园.生草桃园桃树节肢动物群落多样性与稳定性指数 N_d/N_p 、 S_d/S_p 、 S/N 存在显著的负相关关系,而与 N_n/N_p 、 S_n/S_p 无相关性;非生草桃园多样性与稳定性指数 N_n/N_p 、 N_d/N_p 存在显著的正相关关系,而与其他稳定性指数无显著相关性.

关键词: 白三叶草 桃园 节肢动物群落 多样性 稳定性

Abstract: A comparative study was conducted on the arthropod community in peach orchards with and without ground cover vegetation. In the orchard with ground cover vegetation, the individuals of beneficial, neutral, and phytophagous arthropods were 1.48, 1.84 and 0.64 times of those in the orchard without ground cover vegetation, respectively, but the total number of arthropods had no significant difference with that in the orchard without ground cover vegetation. The species richness, Shannon's diversity, and Pielou's evenness index of the arthropods in the orchard with ground cover vegetation were 83.733 ± 4.932 , 4.966 ± 0.110 , and 0.795 ± 0.014 , respectively, being significantly higher than those in the orchard without ground cover vegetation, whereas the Berger-Parker's dominance index was 0.135 ± 0.012 , being significantly lower than that (0.184 ± 0.018) in the orchard without ground cover vegetation. There were no significant differences in the stability indices S/N and S_d/S_p between the two orchards, but the N_n/N_p , N_d/N_p , and S_n/S_p in the orchard with ground cover vegetation were 0.883 ± 0.123 , 1.714 ± 0.683 , and 0.781 ± 0.040 , respectively, being significantly higher than those in the orchard without ground cover vegetation. Pearson's correlation analysis indicated that in the orchard with ground cover vegetation, the Shannon's diversity index was significantly negatively correlated with N_d/N_p , S_d/S_p , and S/N but had no significant correlations with N_n/N_p and S_n/S_p , whereas in the orchard without ground cover vegetation, the diversity index was significantly positively correlated with N_n/N_p and N_d/N_p and had no significant correlations with S_d/S_p , S_n/S_p , and S/N .

Key words: *Trifolium repens* peach orchard arthropod diversity stability

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- [1] 顾伟, 马玲, 丁新华, 张静, 韩争伟. 扎龙湿地不同生境的昆虫多样性[J]. 应用生态学报, 2011, 22(09): 2405-2412.