麦红吸浆虫及其卵寄生蜂混合种群空间格局

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Spatial pattern of *Sitodiplosis mosellana* and its egg parasitoids mixed population.

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摘要

运用地统计学方法对不同时期麦红吸浆虫及其卵寄生蜂混合种群（宽腹姬小蜂和尖腹黑蜂）的空间格局进行了分析.结果表明： 麦红吸浆虫休眠体的半变异函数的最优模型为球型，成虫的最优模型为球型-指数型，幼虫最优模型为线性有基台型，卵寄生蜂混合种群半变异函数的最优模型为球型-指数型.麦红吸浆虫休眠体、成虫羽化初期、成虫羽化高峰期、幼虫和卵寄生蜂混合种群的空间相关范围分别为53.6、190.6、154.1、4.2和280.3 m，空间变异强度分别为30.5%、95.6%、96.3%、14.9%和95.3%.采用普通克立格插值法模拟的空间分布模拟图可较好地从时间、空间两个角度直观地分析不同时期麦红吸浆虫及其卵寄生蜂混合种群的动态变化.

关键词： 麦红吸浆虫 卵寄生蜂混合种群 地统计学 空间结构 模拟

Abstract:

Geostatistis methods were adopted to analyze the spatial pattern of *Sitodiplosis mosellana* (Diptera: Cecidomyiidae) at its different development periods and of its egg parasitoids mixed population (*Tetrastichus* sp. and *Platygaster error*; Hymoneptera: Eulophidae and Platygastridae). The aggregated spatial arrangements for *S. mosellana* cocoon, adult, and larva and for egg parasitoids mixed population could be well described by spherical model, spherical-exponential model, linear sill model, and spherical-exponential model, respectively. The spatial dependence range of *S. mosellana* cocoon, adult at initial emergence period, adult at peak emergence period, and larva, and of egg parasitoids mixed population was 53.6, 190.6, 154.1, 4.2 and 280.3 m, and the aggregation intensity was 30.5%, 95.6%, 96.3%, 14.9% and 95 3%, respectively. The simulated maps of the spatial distribution produced by Kriging model could intuitively analyze the dynamic changes of *S. mosellana* at its different development periods and of egg parasitoids mixed population from the two aspects of time and space.

Key words: *Sitodiplosis mosellana* egg parasitoids mixed population geostatistics spatial structure simulation

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