

研究报告

植被覆盖对土壤线虫营养类群空间分布的影响

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摘要

以中国科学院沈阳生态实验站的裸地和撂荒地为研究对象, 采用经典统计学与地统计学相结合的方法, 研究裸地和撂荒地土壤线虫总数及各营养类群的空间分布特征. 结果表明, 裸地和撂荒地植物寄生线虫与土壤pH呈显著负相关; 撂荒地土壤线虫总数的平均值显著大于裸地, 分别为每百克干土 1 485.3 和464.0条; 撂荒地土壤线虫总数、植物寄生线虫和食细菌线虫的块金值/基台值(27.3%~45.6%) 低于裸地(49.5%~100%), 裸地和撂荒地土壤线虫总数及各营养类群的空间分布格局均有明显差异, 表明植被覆盖对土壤线虫的空间分布有较大影响.

关键词 [植被覆盖](#) [土壤线虫](#) [营养类群](#) [空间分布](#) [地统计学](#)

分类号

Effects of vegetation coverage on spatial distribution of soil nematode trophic groups

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Abstract

By the methods of classic statistics and geostatistics, this paper examined the spatial variability of soil nematodes and their trophic groups in bare and fallow plots at Shenyang Experimental Station of Ecology, Chinese Academy of Sciences. The results showed that soil pH had a negative effect on the plant-parasitic nematodes in both bare and fallow plots. The total number of soil nematodes was significantly higher in fallow than in bare plot, being 1 485.3 and 464.0 individuals per 100 g dry soil, respectively. The nugget (C_0)/sill ($C_0 + C$) ratio of total nematodes, plant-parasites and bacterivores were lower in fallow plot (27.3%~45.6%) than in bare plot (49.5%~100%). There was a significant difference in the spatial distribution of total nematodes and trophic groups between fallow and bare plots, indicating that vegetation coverage had an obvious effect on soil nematodes.

Key words

[Vegetation coverage](#) [Soil nematode](#) [Trophic group](#) [Spatial distribution](#)
[Geostatistics](#)

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