

综合评述

线虫作为土壤健康指示生物的方法及应用

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收稿日期 2004-7-19 修回日期 2004-10-2 网络版发布日期 接受日期

摘要

简述了线虫作为土壤健康指示生物的优势, 归纳了常用指数和分析方法, 对成熟指数及基于营养类群的一些指数和分析方法进行了详细介绍. 与其他指数相比, 成熟指数更能敏感地反映土壤环境的受胁迫程度, 基于营养类群的指数和分析方法可以在生态系统功能水平上更好地揭示土壤环境的健康状态. 概述了以上指数和方法在农业、森林、草原及其他生态系统中的应用研究. 结合目前存在的一些问题, 提出以下建议: 加强对土壤线虫生活史和食性等特性的认识; 进一步完善现有指数, 将多种指数和分析方法结合使用; 加强土壤线虫在多种生态系统及大尺度地域空间内的应用.

关键词 [土壤线虫](#), [指示生物](#), [成熟指数](#), [营养类群](#)

分类号

Nematodes as bioindicator of soil health: methods and applications

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Abstract

This paper summarized the advantages of using nematodes as soil health bioindicator. A review of commonly used indices and analyzing methods by means of nematodes was presented, with emphases on Maturity Index, as well as the indices and analyzing methods based on their trophic groups. Compared with other indices, Maturity Index can reflect the stressed degree of soil more sensitively, and the indices and analyzing methods based on their trophic groups can well reveal the state of soil health based on ecosystem functioning. The applications of nematodes as bioindicator in agriculture, forest, grassland, and other ecosystems were also outlined. In view of some practical limitations in the methods, prospective researches and applications were suggested, i.e., intensify the ecological studies to advance the understanding on the characteristics of soil nematodes, such as their life histories and feeding habits, consummate the indication system by integrating various nematode indices and analyzing methods, and extend the applications of soil nematodes in different ecosystems and in different regions at large scales.

Key words [Soil nematode](#) [Bioindicator](#) [Maturity Index](#) [Trophic group](#)

DOI:

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