

研究报告

## 北方农牧交错带土地利用类型对土壤养分分布的影响

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### 摘要

对北方农牧交错带多伦县5种土地利用类型进行118个土壤样点分析表明, 农田土壤养分含量最低, 草地含量处中等, 林地含量最高. 分别对4种不同土地利用类型在4种 $>15^\circ$ 坡的小流域进行布点采样, 研究不同土地利用结构对土壤有机质、速效磷、速效氮和全氮的影响. 结果表明, 在垂直方向上, 由坡底到坡中到坡顶, 对应的耕地 草地 林地土壤养分要比对应草地 林地 耕地这一土地利用类型中土壤营养元素含量高1倍左右, 说明此种土地利用类型具有较好的土壤养分保持能力, 从而优化出最适合当地的土地利用类型, 为改善生态环境、提高当地经济效益提供科学依据.

关键词 [北方农牧交错带](#), [土地利用结构](#), [土壤养分](#), [土壤侵蚀](#)

分类号

## Effects of land use type on soil nutrient distribution in northern agro-pasture ecotone

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### Abstract

Soil samples under five land use types were collected from Duolun County in the northern agro-pasture ecotone. Chemical analysis showed that soil nutrient content was the lowest in farmland, medium in grassland, and the highest in woodland, indicating that reclamation accelerated the decomposition of soil organic matter and the further loss of soil nutrients. To investigate the effects of land use type on soil organic matter, available phosphorus, available nitrogen and total nitrogen, soils from four different land use types in the catchments with slopes steeper than  $15^\circ$  were sampled and analyzed. Vertically, the content of soil nutrients from slope bottom to its top was two times higher in land use type cropland-grassland-woodland than in grassland-woodland-cropland. Such a difference indicated the positive effects of the former land use type on soil nutrient retention. Therefore, selecting this optimal land use type in studied area could improve local eco-environment and economic benefits.

### Key words

[Northern agro-pasture ecotone](#) [Land use type](#) [Soil nutrient](#) [Soil erosion](#)

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