

研究报告

发生分类半淋溶土在中国土壤系统分类中的归属特征

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摘要

利用最新建立的1: 100万中国土壤数据库,研究了我国发生分类半淋溶土在中国土壤系统分类的归属及其在中国土壤系统分类下的空间和数量特征.结果表明,我国发生分类半淋溶土总面积为427 843.1 km²,可参比归属于中国土壤系统分类中的4个土纲,即淋溶土、雏形土、均腐土、人为土,分别占发生分类半淋溶土总面积的51.3%、35.2%、10.7%和2.8%,其中包含了系统分类的22个土类和38个亚类.对发生分类某一类型土壤分属于系统分类不同类型的面积比例及其标准偏差的分析表明,土壤参比归属的单元级别越低,越易于参比和把握.研究结果对于土壤类型的正确参比、中国土壤系统分类的应用具有很好的参考价值.

关键词 [土壤参比](#) [土壤分类](#) [半淋溶土](#)

分类号

Characteristics of references between GSCC and CST for Semi-Luvisols

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Abstract

In this paper, the references between Genetic Soil Classification of China (GSCC) and the Chinese Soil Taxonomy (CST) for GSCC-Semi-Luvisols were conducted, and their quantitative and spatial distribution characteristics within CST were studied, based on the 1: 1 M Soil Database of China, which consists of 1: 1 M digital soil map, soils profiles attribution database and soil reference system of China. Being a reference system for converting soil names in GSCC into those in CST, ST and WRB, respectively, Chinese Soil Reference System was a computerized retrieving system jointly developed by the experienced scientists of pedology and computer science. The comparison fields and laboratory investigation data of their soil profiles with diagnostic horizons and characteristics related in the target soil classification systems, and 2 540 typical soil species names corresponding in CST, ST and WRB systems were determined, respectively, which were selected from Soil Attributes Database because of their complete sets of attribute data. Finally, the system and reference database were established. "GIS linkage based soil type" method linked the records in the Soil Reference Database to the Soil Spatial Database. In this method, all records of soil profiles in Soil Reference Database as well as their soil reference name in other classification systems were allocated one by one onto corresponding soil type polygons in Soil Spatial Database on the GIS platform, according to the principles of soil type identity and similarity, parent material identity and likeness, and the location of soil profiles relative to linked target polygons. Area statistics of all soils were conducted based on the polygons. The results showed that GSCC-Semi-Luvisols was a type of GSCC soil with a total area of 427 843.1 km², which could be sorted to 4 CST Orders, *i.e.*, Luvisols (51.3%), Cambosols (35.2%), Isohumosols (10.7%) and Anthrosols (2.8%), and further into CST 22 Groups and 38 Subgroups. All dark grey forest

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soil, superficial gleyed black soil, and leached dry red soil of GSCC subgroups could be sorted to Calcaric Haplic Gelic Cambosols, Pachic Argi-Udic Cambosols and Typic Ferri-Ustic Luvisols of CST subgroups, respectively, and all grey cinnamon-like soil, calcareous grey cinnamonic soil and dry cinnamon soil could be sorted to Typic Ustic Cambosols. Making the reference was so complicated that there was no one to one reference relationship among other soils. The analysis of the area ratios and standard deviations of a certain GSCC soil classified by CST showed that the lower the unit for reference, the easier the reference would be. The results of this study were of high reference value to proper reference GSCC and CST, and to the application and development of CST.

Key words [Soil reference](#) [Soil classification](#) [Semi-Luvisols](#)

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