Supplement of

Status and influential factors of soil nutrients and acidification in Chinese tea plantations: a meta-analysis

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Table S1. A brief comparison of Chinese and international soil classification systems (Shi et al., 2004; Gerasimova, 2010; Wang et al., 2020)

Feature	Chinese soil classification system	American soil classification system	WRB (World Reference Base) soil classification system
Classification Principles	Based on the geographical distribution, genesis, and soil properties	Based on diagnostic horizons and properties, emphasizing soil temperature, moisture, and other classification indicators	Based on modern soil classification concepts, including Soil Taxonomy, the legend for the FAO Soil Map of the World 1988, the Référentiel Pédologique, and Russian concepts
Classification Hierarchy	Includes levels such as soil classes and soil types	Includes orders, suborders, great groups, subgroups, families, and series	Includes two levels: Reference Soil Groups and qualifiers
Naming Basis	Considers the genesis and characteristics of the soil	Based on soil properties and clear criteria for classification units	Combines diagnostic criteria and soil characteristics
International Applicability	Focuses on soil types and distributions specific to China	Used as the primary or secondary classification by more than 80 countries worldwide	Aimed at providing a unified classification and naming standard for global soil types
Scientific Basis	Combines China's soil science research achievements and field survey data	Developed by the U.S. Department of Agriculture (USDA) with the participation of more than 1,500 pedologists worldwide	Based on the work carried out by FAO, ISRIC World Soils, and the Universities of Leuven and Wageningen
Updates and Revisions	Regularly revised to reflect developments in scientific research and survey techniques	Regularly updated, with the latest version being the 12th edition in 2014	Regularly updated, with the latest version being the 4th edition in 2014
International Cooperation	Mainly based on the research achievements of Chinese experts	Accepted by many countries, especially in Latin America and Asia	Coordinated by IUSS, it is the result of international cooperation

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