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辽河流域表层土壤碳密度与碳储量浅析

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Preliminary Analysis of Carbon Density and Carbon Storage of Surface Soils in Liaohe River Basin

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中文关键词： 多目标区域地球化学调查 表层土壤 碳密度 碳储量 辽河流域

英文关键词: multi-purpose regional geochemical survey surface soil carbon density carbon storage Liaohe River Basin

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中文摘要:

利用辽宁省辽河流域多目标区域地球化学调查获得的大量表层土壤全碳分析数据, 根据土壤类型和地貌单元计算表层土壤碳密度及碳储量, 探讨了土壤碳密度与碳储量分布规律。辽河流域表层土壤碳储量分布与土壤类型和地貌单元的面积呈正比;土壤碳密度分布与城市规模大小及土壤有机质的含量分布有密切的关系。草甸土土壤类型和平原区地貌单元的表层土壤碳储量最高, 黑土土壤类型和丘陵山区地貌单元的表层土壤碳储量最低。从土壤类型看, 水稻土碳密度最高, 风沙土碳密度最低。从地貌单元看, 丘陵山区碳密度最高, 低山丘陵区碳密度最低。土壤碳密度的研究可为探索中国区域土壤碳固定潜力提供参考数据。

英文摘要:

According to the soil type and landscape unit, carbon density and carbon storage of surface soil were calculated based on total carbon data of surface soil from Liaohe River Basin in multi-purpose regional geochemical survey of Liaoning Province. The distribution of carbon density and carbon storage were discussed. The distribution of carbon storage in surface soil of Liao River Basin is proportional to the areas of soil type and landscape unit, the distribution of carbon density of soil were closely related with the city size and the content of organic matter in soil. The amount of carbon storage in surface soil of meadow and plain landscape unit was maximum, and that of black hill and mountain landform was minimum. From the soil type, the carbon density of paddy soil is the highest, the carbon density of sandy soil is the lowest. From the geomorphological units, the carbon density of soil in mountain and hilly area is the highest, and the carbon density of soil in low montain and hill

regions is the lowest. The study on carbon density of soil can provide the reference data for exploration of carbon sequestration potential of soil in China.

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