

林学—研究报告

马鬃岭自然保护区土壤有机碳分布的研究

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摘要:

以安徽省金寨县马鬃岭自然保护区为研究对象, 选取56个样点采集土样, 分析该区域森林土壤有机碳的时空分布状况。结果表明, 该研究区域的土壤有机碳含量随土壤深度、海拔高度、季节的变化而变化。0~20 cm土层有机碳平均含量为3.07%, 变幅0.94%~15.67%; 30~40 cm平均含量为1.98%, 变幅0.17%~8.54%; 50~60 cm平均含量为1.68%, 变幅0.46%~7.81%。有机碳含量随海拔高度升高有增加的趋势, 高海拔处有机碳含量稳定, 低海拔处变化大, 这是由于人类活动影响造成。有机碳含量季节变化显著, 秋季含量高于春季, 表层季节变化比深层显著。该林区0~20 cm土层碳蓄积量为(8.28~8.31) × 10⁵ t, 30~40 cm土层碳蓄积量为(5.46~5.73) × 10⁵ t, 50~60 cm土层碳蓄积量为(4.68~5.33) × 10⁵ t。

关键词: 时空分布

Research on Soil Organic Carbon Distribution in Mazongling Nature Reserve

Abstract:

56 sample points were selected in Jinzhai Mazongling nature reserve of Anhui province in order to analyze forestry soil organic carbon content and the distribution of space and time. The results showed that the distribution of soil organic carbon content in this research area varied with soil depth, altitude and different seasons. The average soil organic carbon content was 3.07% in 0-20 cm soil layers, ranged from 0.94% to 15.67%; the average soil organic carbon content was 1.98% in 30-40 cm soil layers, ranged from 0.17% to 8.54%; the average soil organic carbon content was 1.68% in 50-60 cm soil layers, ranged from 0.46% to 7.81%. Organic carbon content increased with altitude. The impact of the seasons on the organic carbon contents in the top soil is greater than that in the deep soil. The seasonal variation was obviously. Soil organic carbon content in autumn was higher than it in spring. The impact of the seasons on the organic carbon contents in the topsoil was greater than that in the deep soil. In this area, the soil layer of 0-20 cm fixed carbon was from 8.28 × 10⁵ t to 8.31 × 10⁵ t. The soil layer of 30-40 cm fixed carbon was from 5.46 × 10⁵ t to 5.73 × 10⁵ t. The soil layer of 50-60 cm fixed carbon dioxide was from 4.68 × 10⁵ t to 5.33 × 10⁵ t.

Keywords: distribution of space and time

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