

古尔班通古特沙漠南缘沙丘水分的时空分布特征

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摘要:

在2006年4-11月, 通过对古尔班通古特沙漠南缘沙丘0~100 cm沙层水分含量的定点观测, 结果表明: 不同季节沙丘含水量表现为春季>夏季>秋季, 春季为沙丘水分的积累期, 秋季为水分亏缺期; 春、夏、秋季背风坡含水量均高于迎风坡, 并且随着土层的加深, 土壤含水量变化的程度表现为春季>夏季>秋季; 沙丘近地表水分含量低, 普遍存在一层干沙层, 厚度为10~20 cm。沙丘各部位水分由高到低依次表现为丘间低地>丘顶>背风坡>迎风坡。研究揭示了古尔班通古特沙漠南缘沙丘水分的时空分布特征, 为干旱地区无灌溉造林和水分利用提供了科学依据。

关键词: 沙丘; 水分动态; 时空分布; 古尔班通古特沙漠

Spatiotemporal distribution of moisture content in sand dunes of the unirrigated forestation along the southern marginal zone of Gurbantunggut Desert

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Abstract:

Based on the stationed observation from April to November 2006, the spatiotemporal characteristics of moisture content in sand dunes in the southern marginal zone of the Gurbantunggut Desert were studied. The results indicated that the moisture content in different season was different; the highest was in spring, followed by summer and autumn. Spring was the accumulation period while autumn was moisture shortage period. The moisture content in sand dunes in windward was higher than leeward and showed the same trend as the seasonal change. A dry sand layer 10~20 cm was observed on the surface, the moisture content in different places ranked as dune bottom > top > leeward > windward. The study provided scientific reference to water use and unirrigated forestation in arid area.

Keywords: ; sand dune soil moisture content spatiotemporal ;the Gurbantunggut Desert

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