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生态资源环境

盘锦芦苇湿地土壤温度剖面特征分析

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摘要:

土壤温度是影响湿地气候重要的环境因素之一，对地温的深入研究有利于正确把握湿地土壤呼吸的变化规律。笔者对盘锦湿地野外观测站芦苇沼泽2005—2009年的0?-80 cm土壤温度剖面资料进行分析。结果表明：芦苇湿地土壤温度日变化呈正弦曲线，由表层向下振幅减小；-40 cm以下基本无日变化，3月份日较差为全年最小，生长季日较差大。土壤剖面温度的季节变化表现为：冬季温度梯度明显，热量传输缓慢；夏季热量传输快，温度梯度小，其中9月份温度梯度最小。土壤温度的变化将影响芦苇生长，尤其是芦苇的萌芽和根系发育期。研究成果可为湿地碳通量研究提供参考依据。

关键词: 盘锦湿地；芦苇；土壤温度；剖面特征

Characteristics of Soil Temperature Profile in Panjin Reed Wetland

Abstract:

Soil temperature is an important environmental factor in wetland climate, the study on soil temperature will be helpful to understand the changes of soil respiration. In this paper, soil temperature profile data was analyzed from 0 to -80 cm at Phragmites swamp in panjin wetland ecosystem research station since 2005 to 2009. The result suggested that: soil temperature diurnal variation of Phragmites swamp expressed as a sine curve, and its amplitude decreased from the surface to deep layer. There was almost no diurnal variation under the depth of -40 cm. In March, daily variation range of soil temperature was minimum all of the year, and maximum in the growing season. Seasonal change of soil section temperature showed that: soil temperature gradient was obvious in winter, for the heat transferred slowly; in summer, heat transferred quickly, and temperature gradient was small, and minimum in September. The changes of soil temperature would affect the growth of reed plant, especially in the period of budding and root development. Research results could provide the references for the changes of carbon flux in wetland.

Keywords: panjin wetland reed soil temperature profile characteristics

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