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农业生态与环境科学

Cd污染下蒌蒿生长和Cd积累的阶段特征*

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摘要 以白蒿为试材，采用Cd污染人工河砂盆栽试验，研究了在Cd污染条件下蒌蒿生长发育和Cd积累的阶段性差异。结果表明蒌蒿根茎叶对Cd的积累具有显著的阶段性特征，且与干物重和根系活力的阶段变化一致。根茎叶3月Cd积累量较小，5月积累量增加，7月达到最大，到本季落叶和下季萌发时又开始下降；根系活力和地上、根系干物重的最大值出现在Cd积累量最大的7月；在河砂Cd浓度为0～240mg/kg内，根茎叶Cd积累量与Cd浓度成正相关，但Cd浓度>180mg/kg，就会降低根系和地上部干物重，并减弱根系活力。蒌蒿可以耐受的Cd浓度上限为180mg/kg。

关键词 蒌蒿； Cd； 阶段特征； 超强积累植物

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The Periodic Properties of the Growth and Cadmium Accumulation of Seleng Wormood in the Contaminated River Sandy Medium

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Abstract

With Nanjing Baihao as the materials, the periodic properties of the growth and Cd accumulation of Nanjing Baihao were investigated in the contaminated potted experiment in the river sandy medium. The results showed that there was the significant periodic characteristics in the accumulation of roots and shoots of Seleng Wormood to Cd, which was in concordance with the periodic change of the dry matter and root activity. The concentration of Cd in the roots and shoots was the highest in July, so were the shoots and roots dry matter and the root activity. Cd concentration in Seleng Worwood correlated positively（$P<0.05$）with the respective ones existed in the sandy medium ranging from 0 to 204mg/kg Cd, but over 180mg/kg Cd, there was outstanding decreased in the dry matter of roots and shoots and root activity. The upper limti of Cd reached 180mg/kg for Seleng Worwood beared.

Key words Seleng Wormood； Cadmium； periodic property super-accumulated plant

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