

中国矿区土壤种子库研究的必要性与挑战

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Soil seed bank research of China mining areas: Necessity and challenges.

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摘要

土壤种子库是土壤及其表面凋落物中所有具生命活力的种子,可反映区域特有的生物多样性特征,其多数存在于表层土壤.作为植被恢复生长的基础和潜在的绿化材料,表土和土壤种子库是矿区不可再生的有限资源.土壤种子库研究是我国矿区土地复垦与生态重建领域的热点之一.由于矿业生产的特殊性,矿区土壤种子库研究不能仅仅关注土壤种子库中种子类型、数量及其与地表植被相互关系等常规静态内容,还需要借鉴特殊生境下土壤种子库的研究成果,并结合矿区土地利用特征,在研究体系和思路上寻求突破.本文总结了矿区土壤种子库研究的特殊性及相关研究进展,综述了特殊生境下土壤种子库的研究进展及启示,并提出了我国矿区土壤种子库研究所面临的挑战,为强化我国矿区土壤种子库研究、提高我国矿区土地复垦中表土及土壤种子库利用效率、加快植被恢复进程提供参考.

关键词: 土壤种子库 表土 矿区 土地复垦 植被恢复

Abstract:

Soil seed bank consists of all living seeds existed in soil and its surface litter, especially in topsoil, and can reflect the characteristics of regional biodiversity. As the base of vegetation restoration and potential greening material, topsoil and its seed bank are the limited and non-renewable resources in mining areas. The study of soil seed bank has become one of the hotspots in the research field of vegetation restoration and land reclamation in China mining areas. Owing to the special characteristics of mining industry, the soil seed bank study of mining areas should not only concern with the seed species, quantities, and their relations with ground surface vegetation, but also make use of the research results on the soil seed bank of other fragile habitats. Besides, a breakthrough should be sought in the thinking ways and research approach. This paper analyzed the particularity of mining area's soil seek bank research, summarized the research progress in the soil seed bank of mining areas and other fragile habitats, and put forward the challenges we are facing with. It was expected that this paper could help to reinforce the soil seed bank research of China mining areas, and provide scientific guidelines for taking great advantage of the significant roles of soil seed bank in land reclamation and vegetation restoration in the future.

Key words: soil seed bank topsoil mining area land reclamation vegetation restoration

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