Reclamation of abandoned gold mine tailings in southeastern Manitoba.

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Abstract

A project was initiated in 2000 at the Central Manitoba (Au) mine site in southeastern Manitoba to determine the potential for revegetation, phytoremediation and phytomining of gold mine tailings through the identification of plant species that can avoid or tolerate the presence of heavy metals. Sixteen plant species, seedlings as well as seeds, were planted on three experimental sites of mine tailings and in the greenhouse on the tailing material. Preliminary results have shown that several plant species including tamarack were able to survive for three growing seasons on two of the three selected sites without any additional treatment. Capping of tailings with peat on the third site allowed survival of 10% of seedlings for at least two growing seasons. Among the grass species tested, wheatgrass sp. demonstrated the highest survival rate in both greenhouse and in the field. Accumulation of metals in selected species will be discussed.

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