

# TOPSOIL CREATION FOR BOND FORFEITED MINED LAND BY USING GREEN SAWDUST AND OTHER SAWMILL BYPRODUCTS<sup>1</sup>

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**Abstract:** When topsoil is lost during excavation and other construction activities, there is an increased potential for drought and drastic chemical changes in the soil. The reintroduction of large quantities of organic matter can help to restore a balanced moisture regime, to balance soil chemistry, and to improve productivity of the land. Even though the carbon to nitrogen ratio of an organic matter source used in this research (green sawdust) ranged from 300:1 to 500:1, fertilizer nitrogen was not added. Previous reclamation efforts had been failures, which was assumed to be due to acidic soils and the production of acid mine drainage. However, my reclamation technique did not use limestone as an additive. Additions of only magnesium, phosphorus, potassium, and sulfur fertilizers gave positive responses. Up to a dozen wood rotting and some mycorrhizal fungi were used to facilitate the creation of topsoil. Initial revegetation was achieved by seeding several nitrogen-fixing species. The lush vegetation and rich topsoil created by sawdust addition, plus the cessation of acid mine drainage, are drastic improvements over attempts using hydroseeders to apply amendments and to sow seed.

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