Erosion Control on Alberta Highways

Research and Development Branch
Alberta Transportation and Utilities

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Abstract

Between 1983 and 1986, several projects were undertaken to control erosion on Alberta Highway projects. The aim, in each case was to control the erosion of backslopes, sideslopes and ditches as well as to control the amount of sediment entering watercourses. Products known as Gridlock, Curlex and Velmat as well as burlap and steel sheet piles were incorporated in the design of these installations. From this evaluation we concluded that some of the materials tested were not suitable for the medium velocity and slope conditions we defined. Gridlock and burlap were found suitable for slopes up to 10 – 15%, while Velmat performed up to 25%. Some of the premature failures were caused by improper design and installation, therefore much care should be given to these tasks. Erosion control installations can be very dynamic, therefore, regular inspection and/or maintenance are necessary.

As research data on new erosion control materials is still very limited, further research in this area is required.

Key Words

Distribution