The Influence of Geotextiles as Water storage Medium on the Plant Growing Success on Vegetated Slopes

The goal of the field experiment was to determine the influence of different geotextiles on the plant growth on vegetated slopes. Particular focus was given on the comparison of **Lite-Drain nets** (made from a nonwoven geotextile) and conventional coir mats.

Test Performance

On a test slope a coir mat, a **Lite-Drain net** and different combination mats (consisting of Lite-Drain nets with integrated biological superabsorbant, substrate and fertilizer) were applied and partly covered with top soil. After a period of three months under extreme dry climatic conditions were compared.



Test slope after application of hydro-seeding

Test Results (Exctract)

- After 24 hours, the Lite-Drain net showed an approx. 6 times higher water storage capacity per kg as the coir mat
- The flexible nonwoven net **adjusted better to the unevenness of the surface**, thereby offering a higher erosion protection
- The uncovered nonwoven net had a significantly **higher vegetative** effect on the growth of the plants compared to coir mats (covering rate 93% vs. 59%)







Total greening effect of the variants



Lite-Soil GmbH

Neustiftgasse 94/23 A-1070 Vienna T +43 1 5227310 office@lite-soil.com www.lite-soil.com

Summary

The vegetative effect of nonwoven nets (Lite-Net) is by approx. 50% higher than that of coir mat.



Lite-Net



Coir mat

Performed by:

University of Natural Resources and Applied Life Science, Vienna - Departement of Civil

Engineering and Natural Hazards

- Institute of Soil Bioengineering and Landscape Construction

