

Comparative study between coir geocell and geotextile on slope land stabilisation and cultivation

Published on: Proceedings of the International Seminar: Coir Kerala, 4th-8th December, 2019

Authors

Dr. Anil K.R., Director, National Coir Research & Management Institute, Kudappanakunnu. Trivandrum

Sibi Joy, Scientist (R&D), National Coir Research & Management Institute. Kudappanakunnu. Trivandrum

Aneesh R., Technical Officer (Civil), National Coir Research & Management Institute. Kudappanakunnu. Trivandrum

Vilasini L, Research Assistant, National Coir Research & Management Institute. Kudappanakunnu. Trivandrum

Abstract

Over the past few years, world over, the need for application of eco-friendly geotextiles in ground improvement is increasing steadily. Coir geotextiles are one of the versatile products under this category. India is the major producer of coir geotextiles. In view of the cost effectiveness of these products, there is a great necessity for exploring the prospects of their usage in geotechnical engineering applications. Agri coir cells are excellent for erosion control and vegetation establishment on steep slopes devoid of top soil. Once placed and secured on slope, the geocell can be filled with soil. On steep barren slopes where it is difficult to place top soil, agri coir cell are good alternative. Agri coir cell of higher GSM with tightly woven coir geo-textile bound in a honeycomb cell like structure are laid and fixed on steep slopes using bamboo. The honey comb shaped structure can be filled with soil and saplings planted in them. In a field study conducted in the premises of NCRMI campus, for a 40% slope, top soil was filled in the agri coir cell and brinjal (Haritha variety) seedlings were planted after application of the basal dose of manure & fertilizers according to package of practice.

Key Words: Geocell, Agricoir cell, Slope land cultivation