



## COIR PRODUCTS FOR SOIL BIOENGINEERING

### Soil Bioengineering

Soil bioengineering is an interdisciplinary approach to environmental restoration which involves the incorporation of biological systems with engineering principles to restore soil and thereby protect water resources. It is the only environmentally sound technique for restoration of degrading water edges (streambanks, shorelines, wetlands etc.). These techniques believe in the ability of mature vegetation to resist erosion forces.

Natural biodegradable coir products are used to provide the needed protection until establishment of sustainable mature vegetation. These methods not only provide strong, sustainable, aesthetically pleasing shorelines, but also provide habitats for aquatic and terrestrial wildlife. Another big advantage is they filter runoff water. Economical, strong, durable yet biodegradable coir (coconut fiber) products play a significant role in these techniques. Coir products not only provide strong support, but also provide mulch (upon biodegradation) that improve soil conditions for healthy plant growth.

### Preferred Methods

Soft or natural approaches to shoreline stabilization are recognized now as being more environmentally effective. When shoreline repair or stabilization becomes necessary, these methods should be considered first.

### Advantages Of Soil Bioengineering



- Sustain a balanced ecosystem.
- Nourish naturally strong, healthy environment.
- Reduce heat reflection.
- Increase infiltration.
- Support recreational activities.
- Filter sediment and improve water quality.
- Accommodate quality habitats for wildlife and fish.
- Provide aesthetically pleasing environments
- Convey peace of mind for all of us.

## Excellent Solutions for Living Shoreline Projects!

100% Natural and biodegradable products for soil bioengineering, soil erosion, slope stabilization log, sediment control, wetland restoration, landscaping and organic gardening.



**BioD-Block™** is a coir fiber block system consisting of a densely packed elongated mattress coir fiber block attached to a bristle coir woven fabric. Coir fabric is tightly wrapped around two block sizes; 12-in tall, 5-in thick block and 16-in tall, 9-in thick. Both block sizes come in 10-ft long coir blocks. The fabric is connected to the coir block on three sides leaving the other side open to fill with dirt. Each coir block has a female and a male end. These male and female ends in BioD-Block™ create a strong and easy-to-handle connection, providing an excellent face to the soil layers



**BioD-Roll™** coir logs (coir rolls) are made from coir fiber densely packed into a tubular 2 in x 2 in (5 cm x 5cm) outer netting. These stronger coir logs provide initial structural stability for shorelines and streambanks by resisting wave action and flow velocity. The coir fiber core in BioD-Roll™ is an excellent medium for plant growth. After installing the coir logs, desired native plants should be planted on or around coir logs where plants can get sufficient water. With time, plants grow on coir logs. The sediment will be deposited around the coir logs, creating an excellent medium for riparian vegetation. The densely-packed coir logs last over five years providing erosion resistance and supporting establishment of sustainable vegetation.



**BioD-Mat™** blanket is woven from machine-spun bristle coir twines. This semi-permanent 100% biodegradable, strong and durable bristle coir woven blankets provide higher resistance upon installation while supporting growth and development of vegetation. BioD-Mat 70 blanket has field functional longevity of 4-6 years. These blankets allow designers and specifiers to go beyond the design limits of other types of organic erosion control blankets. The open weave in the BioD-Mat 70 blanket allow reseeding before and after installation. The 0.5 in x 0.5 in opening in the blanket allows planting plugs through the blanket without cutting the blanket. The 9.84 ft (3m) and 13.1 ft (4m) wide blankets have one seam in the mat.



LET'S TALK

For more information about this product or other bioengineering options  
Contact a CSI branch office or sales representative or view us on the web at

[www.geoturf.com](http://www.geoturf.com)

800.621.7007

- Eastern Michigan 248.887.6767
- Western Michigan 616.583.0588
- Northern Michigan 231.943.4002