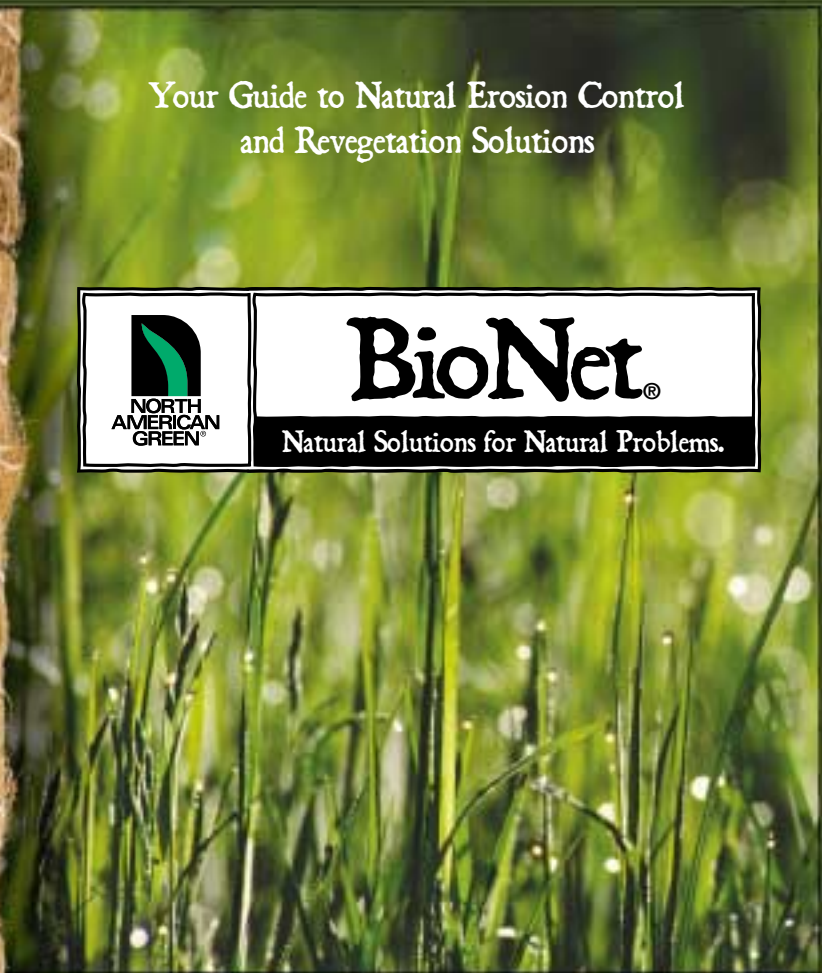


Your Guide to Natural Erosion Control
and Revegetation Solutions



BioNet[®]

Natural Solutions for Natural Problems.



BioNet®

Natural Solutions for Natural Problems.

BioNet® 100% biodegradable erosion control blankets from North American Green provide effective and all-natural erosion control and vegetation establishment in an environmentally and wildlife friendly manner. All products in the BioNet series – S75BN™ Single Net Straw Blanket, S150BN™ Double Net Straw Blanket, SC150BN™ Double Net Straw-Coconut Blanket and C125BN™ Double Net Coconut Blanket – are composed of 100% organic, biodegradable materials.

North American Green BioNet products offer the following features and benefits to guarantee the “*natural*” success of your project.

Woven Net Structure

- Little to no risk of wildlife entrapment
- Easy to sprig or plant through

Leno-Weave Top Net

- High durability, fiber retention & mechanical stability

Flexible Jute Netting

- Increased water absorption
- Improved blanket conformance & adherence to soil
- Enhanced erosion protection and mulching capabilities

Stitched on 1.5-inch Centers

- Biodegradable thread
- Excellent durability & flexibility

Patented DOT System®

- Standard on most products
- Simplifies proper installation

Performance Guaranteed

- Backed by North American Green's Ultimate Assurance Guarantee

Ideal Applications Include

- Bioengineering applications
- Environmentally sensitive sites
- Shaded areas
- Streambanks/shorelines

Guaranteed Complete Degradability

Unlike erosion control blankets with photodegradable plastic netting and yarn that depends on sunlight to degrade, BioNet blankets are completely biodegradable. Leaving absolutely no synthetic residues on site after vegetation is established, BioNet blankets are ideal for use in bioengineering projects, wetland mitigation, riparian area protection, shaded areas, streambank restorations and environmentally-sensitive areas where synthetic products may pose a threat to wildlife.

Increased Erosion Control & Mulching Capabilities

With a dense mulch layer, BioNet blankets offer much greater erosion control and mulching capabilities than jute or coir netting alone. BioNet blankets also exhibit increased erosion control and mulching capabilities versus their synthetic-netted counterparts. The jute netting on these products increases their water absorption capacity, which helps weigh the blanket down and conform the fiber matrix to the soil surface (upon saturation). This conformance and adherence to the soil surface aids in effective erosion control, soil temperature regulation and moisture retention to promote seed germination and early plant growth.

Increased Strength & Structural Integrity

The jute top netting on all BioNet products is constructed using the leno weave method (Fig. 1) to ensure superior mechanical stability and fiber retention under severe conditions. By intertwining and securing the cross directional netting strands, leno weaving affords BioNet blankets higher tensile strength, greater durability and better erosion protection than many other “biodegradable” blankets which use easily distorted cross-lay netting (Fig. 2) only.

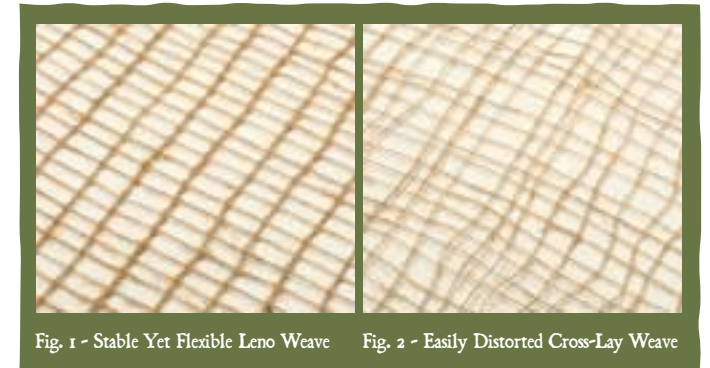


Fig. 1 - Stable Yet Flexible Leno Weave Fig. 2 - Easily Distorted Cross-Lay Weave

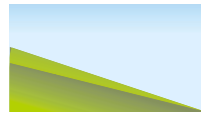
Less Risk To Wildlife & Easy To Plant Through

The interwoven strands of the BioNet netting can move independently of each other. This flexibility minimizes the risk of accidental wildlife entrapment; and enables the use of live stakes and the installation of trees, shrubs and other plantings through the blanket without compromising erosion control performance.



S75BN™ Single Net Straw Blanket

S75BN™ features a 100% agricultural straw matrix stitched with biodegradable thread to a leno woven jute top netting. Designed to provide erosion protection and vegetation establishment assistance for up to 12 months. S75BN is much more effective than loose straw, hydro-mulch or conventional jute netting. The S75BN is generally recommended for use on moderate slope and low-flow channel lining applications.



4:1 – 3:1 Slopes*



Low-Flow Channels*
1.60 lbs/ft² (76 Pa)
Max. Shear Stress

*NOTE: This guide is for general purposes only. Actual project design and product selection should be developed using North American Green's Erosion Control Materials Design Software (ECMDS®). Visit www.nagreen.com for more information about ECMDS®.



S75BN is often applied to shallow slopes or flat areas where disturbance has taken place. In this role, the BioNet blankets will protect seed, retain soil moisture and enhance seed germination while posing little risk of wildlife entanglement.

Netting

Leno woven, 100% biodegradable, natural jute fiber
9.30 lbs/1,000 ft² (4.53 kg/100 m²)
approximate weight

Matrix Material

100% agricultural straw
0.50 lbs/yd² (0.27 kg/m²)

Stitching

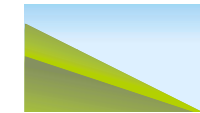
Biodegradable thread on 1.5-inch centers

Standard Roll Specifications

Width: 6.67 ft (2.03 m)
Length: 108 ft (32.92 m)
Weight: 46 lbs (21.05 kg) approx.
Area: 80 yd² (66.89 m²)

S150BN™ Double Net Straw Blanket

S150BN™ features a 100% agricultural straw matrix stitched with biodegradable thread between a leno woven jute top netting and a woven jute bottom netting. The double net structure of the S150BN blanket makes it more durable and effective at controlling erosion and assisting with vegetation establishment in more demanding applications, such as moderate-flow channels, streambanks and steep slopes, for up to 12 months.



3:1 – 2:1 Slopes*



Moderate-Flow Channels*
1.85 lbs/ft² (88 Pa)
Max. Shear Stress



Streambanks*

*NOTE: This guide is for general purposes only. Actual project design and product selection should be developed using North American Green's Erosion Control Materials Design Software (ECMDS®). Visit www.nagreen.com for more information about ECMDS®.



All BioNet products, such as S150BN, are fully biodegradable instead of photodegradable like plastic netted products. This makes BioNet products ideal for streambank protection by ensuring netting degradation without direct sunlight and affording effective erosion control without environmental impact.

Netting – Top

Leno woven, 100% biodegradable, natural jute fiber
9.30 lbs/1,000 ft² (4.53 kg/100 m²)
approximate weight

Matrix Material

100% agricultural straw
0.50 lbs/yd² (0.27 kg/m²)

Netting – Bottom

100% biodegradable, natural jute fiber
7.70 lbs/1,000 ft² (3.76 kg/100 m²)
approximate weight

Stitching

Biodegradable thread on 1.5-inch centers

Standard Roll Specifications

Width: 6.67 ft (2.03 m)
Length: 108 ft (32.92 m)
Weight: 52 lbs (23.69 kg) approx.
Area: 80 yd² (66.89 m²)





SC150BN™ Double Net Straw-Coconut Blanket

SC150BN™ is comprised of a 70% agricultural straw / 30% coconut fiber matrix stitched with biodegradable thread between a leno woven jute top netting and a woven jute bottom netting. The double netting structure and the integration of coconut (coir) fiber in the matrix afford increased durability, longevity and erosion control effectiveness. The SC150BN is ideal for use in applications where vegetation will require up to 18 months for establishment, in medium-flow channels, streambanks and severe slopes.



2:1 - 1:1 Slopes*
Medium-Flow Channels*
Streambanks*

2.10 lbs/ft² (100 Pa)
Max. Shear Stress

*NOTE: This guide is for general purposes only. Actual project design and product selection should be developed using North American Green's Erosion Control Materials Design Software (ECMDS®). Visit www.nagreen.com for more information about ECMDS®.

Netting – Top

Leno woven, 100% biodegradable, natural jute fiber
9.30 lbs/1,000 ft² (4.53 kg/100 m²)
approximate weight

Matrix Material

70% agricultural straw
0.35 lbs/yd² (0.19 kg/m²)
30% coconut fiber
0.15 lbs/yd² (0.08 kg/m²)

Netting – Bottom

100% biodegradable, natural jute fiber
7.70 lbs/1,000 ft² (3.76 kg/100 m²)
approximate weight

Stitching

Biodegradable thread on 1.5-inch centers

Standard Roll Specifications

Width: 6.67 ft (2.03 m)
Length: 108 ft (32.92 m)
Weight: 52 lbs (23.69 kg) approx.
Area: 80 yd² (66.89 m²)

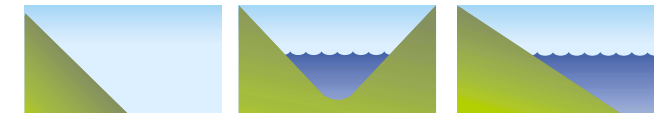


Steep slopes and drainage channels in wildlife sensitive areas, like this roadside application near Yellowstone National Park, naturally benefit from the increased longevity and erosion protection of the SC150BN.



C125BN™ Double Net Coconut Blanket

C125BN™ features a 100% coconut fiber matrix stitched with biodegradable thread between a leno woven jute top netting and a woven jute bottom netting. The combined strength of the coconut fiber and double netting structure offers the highest levels of durability, longevity and effectiveness available in a biodegradable erosion control blanket. C125BN is ideal for use in applications where vegetation will require 18 to 24 months for establishment, on slopes with a 1:1 or steeper gradient, and in high-flow channels, streambanks or shorelines.



1:1 Slopes*
High-Flow Channels*
Shorelines and Streambanks*

2.35 lbs/ft² (112 Pa)
Max. Shear Stress

*NOTE: This guide is for general purposes only. Actual project design and product selection should be developed using North American Green's Erosion Control Materials Design Software (ECMDS®). Visit www.nagreen.com for more information about ECMDS®.

Netting – Top

Leno woven, 100% biodegradable, natural jute fiber
9.30 lbs/1,000 ft² (4.53 kg/100 m²)
approximate weight

Matrix Material

100% coconut fiber
0.50 lbs/yd² (0.27 kg/m²)

Netting – Bottom

100% biodegradable, natural jute fiber
7.70 lbs/1,000 ft² (3.76 kg/100 m²)
approximate weight

Stitching

Biodegradable thread on 1.5-inch centers

Standard Roll Specifications

Width: 6.67 ft (2.03 m)
Length: 108 ft (32.92 m)
Weight: 52 lbs (23.69 kg) approx.
Area: 80 yd² (66.89 m²)



Arid and semi-arid climates can be harsh, often requiring additional time for vegetation establishment. The C125BN provides up to 24 months of high-performance seed and soil protection in a wildlife-friendly manner.



BioNer® Product Application Guide

Product	Description	Longevity	Applications	Permissible Shear Stress	Maximum Flow Velocity	FHWA FP-03 Category
S75BN	Single Net Straw Blanket	Up To 12 Months	4:1 - 3:1 Slopes Low-Flow Channels	1.60 lbs/ft ² (76 Pa)	5 ft/s (1.52 m/s)	Type 2.C
S150BN	Double Net Straw Blanket	Up To 12 Months	3:1 - 2:1 Slopes Moderate-Flow Channels	1.85 lbs/ft ² (88 Pa)	6 ft/s (1.83 m/s)	Type 2.D
SC150BN	Double Net Straw-Coconut Blanket	Up To 18 Months	2:1 - 1:1 Slopes Medium-Flow Channels	2.10 lbs/ft ² (100 Pa)	8 ft/s (2.44 m/s)	Type 3.B
C125BN	Double Net Coconut Blanket	Up To 24 Months	1:1 & Greater Slopes High-Flow Channels	2.35 lbs/ft ² (112 Pa)	10 ft/s (3.05 m/s)	Type 4

NOTE: This guide is for general purposes only. Actual project design and product selection should be developed using North American Green's Erosion Control Materials Design Software (ECMDS®). Visit www.nagreen.com for more information about ECMDS®.

BioNer Fastener and Installation Options

SureLock® II

Convertible Staple Gun

Efficiently and effectively install 4" (10.16 cm) or 6" (15.24 cm) BioSTAKEs® or 6" (15.24 cm) wire cartridge staples with the SureLock® II Convertible Staple Gun. Available in manual and pneumatic-drive models, the SureLock II can be easily converted from one drive system to the other. Features all composite metal components for reduced wear and easy cleaning and maintenance.



BioSTAKEs®

Our BioSTAKEs® are available in 4" (10.16 cm) and 6" (15.24 cm) lengths, and provide an environmentally friendly alternative to metal staples. Sturdy and rigid when used, BioSTAKEs will break down over a period of one to three years after being driven into the ground.



EcoSTAKEs®

Our wooden EcoSTAKEs® are available in 6" (15.24 cm), 12" (30.48 cm), 18" (45.72 cm) and 24" (60.96 cm) lengths. They are ideal for use in bioengineering, streambank and other critical applications requiring greater anchoring capability of longer stakes.



North American Green is a leading erosion control solution provider with a worldwide network of qualified distributors with trained Erosion Control *Specialists*. In addition to offering a full line of rolled erosion control products, North American Green's Erosion Control *Specialists* are trained to provide site-specific project design and product specification assistance using North American Green's Erosion Control Materials Design Software (ECMDS®); and offer the most comprehensive guarantee in the industry, the Ultimate Assurance Guarantee. More information about North American Green products and services is available at www.nagreen.com or by calling (800) 772-2040.



EROSION CONTROL Products
Guaranteed SOLUTIONS



A **tensor** Company

14649 Highway 41 North • Evansville, IN 47725
1.812.867.6632 • 1.800.772.2040 • www.nagreen.com



We are a proud participant in AASHTO's National Transportation Product Evaluation Program for RECPs.

This brochure is printed on recycled paper



©2004 North American Green