

COCONUT FIBER ROLLS

Coconut fiber rolls are cylindrical structures made of coconut husk fibers bound together with coconut husk twine. The roll is staked to the toe of the slope. Rolls are about 12 inches in diameter and up to 20 feet long.



Figure 15. Coconut roll staked to bank with coconut fiber fabric across slope to protect exposed soil

Advantages and Disadvantages

- Shallow earth slips are prevented.
- Undermining at the toe of a streambank is prevented.
- Plants can grow in the roll.
- A flexible roll allows the roll to conform to the bank.
- Disturbance to the streambank is limited.
- Sediment is trapped in the fibers.
- The roll provides erosion control for 6 to 10 years.
- The materials are relatively expensive.

Materials

- Coconut fiber rolls long enough to cover the area of reinforcement.
- Stakes to hold the roll to the streambank.

Preparation

- Dig a trench at the toe of the slope to a depth slightly below the base flow elevation of the stream.
- Prepare stakes that are 2 by 2 by 36 inches (see Figure 16).

Installation

- Place the coconut roll in the trench, but not at a depth where stream is above the roll.
- Place stakes through the coconut roll on both sides of the roll about every 2 to 4 feet.
- A stream with fast-flowing water will need more stakes to hold the roll to the bank.
- Use vegetation to stabilize the rest of the streambank.



Figure 16. Installation of stakes to secure a coconut roll