Preventing and Reducing Erosion

By Susan Camp

When we moved into our York County home in 1985, a new neighbor told us a humorous story. Our house was situated on a big corner lot, with a drainage ditch running along the sides of the property. The original owner had planted two lovely weeping willow trees. When he and his family had moved into the house, cattails and sea oats were growing in the ditch, which didn't drain well. The owner thought the native plants looked messy, so he planted two young willows to soak up the water. They performed so well that the mini-marsh soon dried up. The teller of the tale swore that the homeowner had been fined for destroying a wetland.

When my husband and I moved to Gloucester, we discovered a similar problem: a large sloping area at the edge of our field stayed wet and spongy. No protected plants grew in that area; it was just a mudhole. We remembered the story about the willow trees and decided to plant two small ones. They survived for a few years before succumbing to a mystery disease or pest, and we still had a big mud puddle every time it rained. Jim installed a perforated pipe drain under our gravel drive and the problem solved itself, although that area still receives a lot of water during periods of heavy rain.

Gloucester County terrain rolls gently toward our waterways, which we all work hard to protect from pollution, silt, and erosion, which occurs when rain or water from irrigation loosens soil particles, which are carried by runoff toward a stream, creek or river. The resulting silt is deposited at the bottom of the waterway, leaving areas of land denuded of healthy soil and vegetation. When the eroded areas dry, winds pick up soil particles and cause further erosion.

Bare ground is not the only problem caused by runoff. Fertilizers, pesticides, herbicides, and animal waste also enter adjacent waterways, polluting the water. Nitrogen and phosphorous fertilizers have been found to contribute to oxygen depletion of the water and overgrowth of algae.

Providing cover for bare, sloping ground, besides beautifying your property, will help prevent storm runoff from carrying away precious soil. In addition, many plants that thrive in wet conditions help filter out pollutants. Caution should be taken when selecting groundcover, especially if you plan to use non-native plants. Creeping liriope (Liriope spicata), an Asian native, forms thick mats that are difficult to remove. While its dark-green, grass-like leaves, lavender flowers, and black drupes are attractive, the plant spreads aggressively by underground rhizomes. In a few seasons, liriope can successfully crowd out other plants and could invade native wetland areas. The Virginia Cooperative Extension/Virginia Gardener publication "Reducing Erosion and Runoff" includes creeping liriope as a groundcover to reduce runoff. I would not plant it. English ivy and periwinkle also are invasive.

Native groundcovers or grasses are better choices. The publications "Native Plants of the Northern Neck" and "Native Plants for Southeast Virginia," both of which were produced by various regional and state organizations, provide examples of native plants that are suitable for preventing or decreasing erosion.

Other suggestions are included in the VCE publication. A low terrace or retaining wall provides architectural interest and serves as a barrier to runoff. Small plants can be grown between the stones to soften the wall's appearance and filter pollutants. A perforated drainage pipe, set at a 2 percent slope into a gravel bed, will drain runoff into an appropriate area.

Caring for the soil in an area at high risk for erosion is imperative. Add organic material to improve absorption and draining. Plant a cover crop over gardens in the off-season and mulch around trees to avoid runoff. Avoid driving cars or heavy equipment in the yard. Plant vegetables across a slope, rather than in vertical rows.

With forethought and planning, we can take steps to prevent erosion of precious soil and pollution of our waterways.

May 4, 2017