RECOMMENDED PROCEDURES FOR USING TURF TO STABILIZE ROADWAYS, DIKES AND DITCHBANKS

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Vegetative ground cover is probably one of the most effective and efficient methods of stabilizing a soil surface and reducing potential erosion. In cranberry production, roadways and dike areas often receive considerable vehicle pressure throughout the growing and harvesting seasons. Without adequate base, most turf grasses will have a difficult time holding up to the pressure from equipment moving over the soil surface.

Establishing a grass cover crop that forms a dense sod, is probably the most efficient way of reducing the risk of destabilizing the area.

In cranberry production, we are confronted with maintaining existing surfaces as well as establishing new cover as a result of damage, new construction or expansion. In each case, getting an adequate turf cover crop to take hold may require different approaches.

There are numerous criteria you will need to consider to insure a successful seeding and potentially an adequate sod.

Soil Type: In most cranberry production areas the major soil type to work with is likely to be sand, a sandy loam or a loamy peat. In any event, none of these soil types are especially good at retaining water and maintaining a sound turf sod. whenever possible, a layer of 4-6 inches of peat loam or topsoil should be used as the top surface to prepare for the seed bed.

Soil pH: As a direct result of the source of the soil being used, most sites will test low in soil pH. For maximum turf growth response, liming to a 6.0-7 pH will greatly increase your chances for good sod development.

Plant Nutrient: Good sod development will require ample soil phosphorus and potassium. A soil test should outline for you the lime, phosphorus and potassium needs of your soil type. Soil phosphorus should range from 75-l00#/acre nd potassium should be in the 150-200 lb. range. Levels lower than these may still be adequate to maintain turf on the marsh. In addition, a 10-10-10 or other balance fertilizer should be spread and worked in prior to seeding.

Grass Type: There are a limited number of grass types suitable for heavy traffic areas under Wisconsin growing conditions. In order to survive, a grass must be perennial, winter hardy, able to withstand dry conditions, take occasional rough treatment, be cost effective and readily available.

The major turf types of grasses that might work under marsh conditions would include Kentucky bluegrass, tall and fine fescues and turf type ryegrasses. Other types of grasses available but less desirable would include annual ryegrass, as well as forage type grasses like timothy and red top.

The major turf type grasses fall into two categories - creeping or spreading grasses and bunch type grasses. Grasses that grow by spreading, produce horizontal stems called stolons or rhizomes that form a dense tight sod. Grasses that have this ability can fill in a small area or heal a break in this sod. Bunch type grasses on the other hand grow with out the ability to spread. They offer less sod forming capabilities but can enlarge their clumps as they get older. A desirable turf mix would contain a blend of both types to take advantage of the various characteristics.

There are many cultivars of Kentucky bluegrass, tall fescues, fine fescues and turf type perennial ryegrasses on the market. Keep in mind, however, that the marsh environment is much different than a home lawn or golf course environment might be. Your major selection criteria should favor grasses that sod readily, tolerate drought conditions, respond to low maintenance, and can take the type of traffic your equipment will hand out. The following types of turf lawn grasses should be considered for our particular need.

Kentucky Bluegrass - While used extensively in home lawn mixes, Kentucky bluegrass does not tolerate acid or wet soils, requires more nitrogen than some turf types, sod well and are winter hardy. They respond well to a mowing height of 2-3 inches, and require about 1 inch of rainfall or water per week.

Fine Fescue - This group of grasses is probably the second most popular turf grass in the state. it includes the creeping red, chewings fescue and hard fescue. Creeping red fescue spreads by short rhizomes to form a dense turf. Chewings and hard fescue are bunch type grasses. Fescues are more shade and drought tolerant, and respond well to a cutting height of 2 inches or higher.

Tall Fescue - This fescue is generally a coarse, tall bunch grass used often in rough turf areas such as road banks and grass waterways. In addition, a number of “turf-type” tall fescues are emerging onto the market offering fewer leaf blades and darker green color. They do tend to thin with age and have not been fully evaluated in Wisconsin for winter hardiness. Tall fescue is very adaptable to many locations. It does well in sun or shade, infertile soils and dry or acid situations. These fescues should not be mowed lower than 3 inches to retain its vigor.

Perennial Ryegrasses - Two types exist, common perennial ryegrass and improved turf type perennial rye grass. Ryegrasses are bunch type grasses that do not spread by horizontal stems. The common perennial ryegrass is coarse-textured, and lacks winter hardiness. The newer turf type perennial ryegrasses are more winter hardy but do not match the hardiness of Kentucky bluegrass or the fescues. The perennial ryegrasses do, however, establish rapidly and provide fast cover when needed. Most often they are used in a mixture of grass types. They present a tough surface that wears well and responds well to cutting 2-3 inches in height.

Forage Type Grasses - This group would include such grasses as red top, brome and timothy. While less expensive to seed, none are turf type spreading grasses. These grasses will do little to help stabilize a grade and will not tolerate a lot of traffic.

The last area of concern is how to seed these grasses and how much seed will be needed for a particular job.

Generally most seeding jobs will require either a board cast seeder, slit-seeder or grain drill with a grass seeder attachment. The type of equipment needed will likely be dictated by the size of the job. The slit-seeder equipment is available in some areas from equipment rental outlets. It is used to reseed into existing turf to improve plant density or add another grass type to the sod.

Seeding rates vary considerably from grass type, soil and site demands, and technique used to seed. Small hand thrown patching may require double the seed that a seeder-spreader would apply. Fine turf fescues are seeded much heavier than a bluegrass/fescue mix. Ryegrasses may be seeded heavier to compensate for their lack of a spreading habit. Proper rates for the grass type you choose can be secured from the source you purchase the seed from.

There are many other factors that need to be considered when seeding turf grass seed. Among these are soil moisture, mulching, soil temperature, season and numerous other environmental factors. Check with your county Land Conservation Department, Soil Conservation Service, or University Extension Office for further help.