

Planting Grass on Dams

Vegetation embankment protection

How do I establish optimum grass coverage on a Kansas dam?

Seeding a dam with a uniform cover of healthy sod-forming grass species not only reduces erosion and makes inspection easier, it filters water entering the reservoir.

Developing a grass groundcover consists of site preparation; choosing the optimum species (and adhering to its seeding methods, rates, and dates); and then maintaining the grass.

The ideal seedbed is firm, moist, and weed free. Although steep slopes on dams make seedbed preparation more difficult, grade and shape the soil if necessary. Till soil three inches deep, and use a chisel plow for excessive compacted soil. A footprint should sink one inch deep in properly prepared soil. Add top soil where needed. Avoid using nitrogen fertilizer because it increases weeds. If planting native grasses, know they have a range wide of adaptability and don't require a high level of nutrients.

When planting, drill ¼," ½" or depth recommended by seed suppliers using press wheels to help contact and broadcasting enough to get soil around seed. Another planting options is to use a cultipacker to roll the seedbed, and then broadcast seed before rolling again. Hydroseeding a mix of seed, mulch, and other ingredients also can be used and is effective for steep slopes.

A thick standing cover crop creates a surface mulch. This mulch, ideally kept damp, minimizes erosion and prevents seed from washing out and down the slopes during rains. When planting surface mulch, consider referring to the Kansas Department of Agriculture's Kansas Certified Weed Free Forage Producers found on the [Certified Weed Free Forage and Mulch Program](#) page.

One plan for slope stabilization is to broadcast sod-forming smooth brome seed between August 15 to October 1, depending on zones. Also, fence off the seeded slope to prevent grazing, and control noxious weeds as needed. Through time, native grasses eventually will establish naturally.

To intentionally plant warm season native grasses, do so between December 1 to May 15. After mid-May, use cover crops, for example, annual rye, sterile wheatgrass, or Canada wild rye.

Common species on dams in Zone 1 are prairie cordgrass, also known as rip gut, and Kanlow switchgrass, both of which have adapted to wet sites. Virginia wild rye, likes moist but not saturated soil. Reed canarygrass, too, stands well to flooding but has been invasive farther north.

In Zone 2, big bluestem also known as "turkey foot," grows well on dams to a height ranging from two to seven feet tall. The much-shorter buffalo grass, which creeps well and fills in for bunch grasses, thrives in well-drained sites but will not tolerate shade.

"Buffalo grass is hard to start. It takes about three years to get a solid stand but one plant will really spread," said Richard Feyh, native grass seed producer, Alma, Kansas. "You want to have good seed contact, let it stay damp for five days, and don't plant too late,"

Other Zone 2 grasses are Indian grass — abundant in deep, moist soils, little bluestem — common in Kansas, Sideoats Grama — good for rocky hillsides and limestone soils, and Switchgrass — Blackwell variety most common in eastern Kansas works on broad range of soils, and the sod-forming Western wheatgrass that works well on spillways.

To maintain the grass, protect it from over-grazing and control weeds. For additional information on plant varieties, view [Kansas Wildflowers and Grasses](#).

This publication is based on information provided by Walter Fick, Kansas State University, and Richard Feyh, at the Dam Safety Conference in Topeka, Kansas.

Cool season

Tall fescue
Smooth brome
Canada wild rye
Western wheatgrass
Kentucky bluegrass

Warm season

Indiangrass
Big bluestem
Little bluestem
Sideoats grama
Switchgrass
Buffalograss