

## Pasture improvement – Keeping soil covered

A grazing system for livestock operators can provide a cost effective way to feed the herd and manage the land. A good grass stand provides nutritious grasses and legumes for the herd and helps protect soil from erosion. A well-managed rotational grazing system can also help reduce fuel, feed, and labor costs.

If you consider grazing animals on your farm, remember that good management will help prevent unwanted bare pastures and heavy animal-traffic areas. A bare pasture or exercise lot is defined as an animal heavy use area. Farmers are required to have a written erosion and sediment control (E&S) plan or a conservation plan addressing the heavy use areas over 5000 square feet. Heavy use areas and worn pastures near streams can also fall under the new manure management regulations, expected to be finalized later in 2011. Manure and soil runoff need to be controlled where animals congregate near streams. A pasture management plan may help you meet E&S and manure management requirements. A technician from your County Conservation District, Penn State Cooperative Extension, or USDA-Natural Resources Conservation Service can assist with the development of a grazing plan. Agency technicians can also help find a program or grant funding to offset the installation costs of a grazing system.

Rotational grazing can be managed as intensively as needed, depending on your objective for the farm. Increasing the number of paddocks can increase the forage yield per acre. This method requires the animals to move to different paddocks frequently. An intensive rotation could mean the animals are on one paddock between 12 hours – 2 days. This short period on pasture limits the amount of wasted grass due to trampling and heavy loads of manure. The challenge for a more intensive rotation is having enough paddocks and acreage in the system to allow for pasture rest and regrowth. Summer time is the most challenging. It is recommended the pastures have at least 35-40 days rest to allow for forage regrowth in the summer.

If frequent rotation and high forage yield is not your goal, the pasture rotation can be less intensive. A less intensive system means fewer fences, fewer paddocks and more days the herd has in each paddock. This system works best if animals are not on a paddock for longer than six consecutive days. After six days, the livestock can harm the pasture regrowth. New, tender grass shoots are prime choice for livestock. Not allowing sufficient rest time and pasture regrowth will damage the sod, leaving bare pastures.

Overgrazed pastures can be renovated by reseeding with a combination of grass and legume species. Late fall is a good time to reseed. If pastures have some slope, consider no-till planting a pasture mix. Frost seeding is another good way to renovate pastures where the sod or thatch is thin. Good legume species for frost seeding are Red Clover, Alsike Clover, and Birdsfoot Trefoil. Grass varieties used to frost seed pastures are Perennial or Annual Ryegrass and Orchardgrass, but check with your local extension agent to select the best varieties for your farm. Regardless of how you renovate your pastures, take and follow soil test recommendations prior to planting to ensure good pasture yield.

Other common bare areas in the pasture are around feeders, waterers, gate entryways. These areas are regularly trampled causing destroyed sod. Melting snow and spring rains can cause bare spots in pastures to turn into mud, becoming a problem for both animal and environmental health. Many bacteria lurking in mud can cause foot rot, scours, or other infections in cattle. In addition, manure and soil runoff from these areas can cause a pollution problem in nearby streams.

During spring thaw, it is a good idea to remove livestock and renovate the muddy areas. These areas are usually rough and damaged from hoof traffic, so a light disking maybe needed before reseeding. To maximize good grass establishment, a soil test to determine nutrient and lime needs should be done before renovating the pasture. Keeping the livestock out of the area during renovation until the new grass is well established will also improve establishment.

Consider hardy grass species, such as tall fescue, when reseeding high traffic areas. Tall fescue works well in wintering or heavy traffic areas due to is tough, deep root system and vigorous growth under poor soil conditions. Some fescue varieties can become unpalatable and contain a harmful fungus called endophyte. This fungus can lower animal performance and health. Choose endophyte-free varieties to help ensure good animal physical condition.

A well-managed grazing system has many benefits to a livestock producer. It can improve forage production, as well as help producers meeting State regulations. Follow soil test recommendations and select the best type of forage varieties to meet your management goals. Manage the herd rotation to keep good sod cover and pay special attention to heavy use areas. If you need assistance, contact your local Conservation District, PSU Extension Office, or USDA-NRCS office.