



Renovation

Over time producers encounter poor stands of desirable forages or biomass on their farms. Through no fault of the manager these conditions may have started after periods of drought. However, sometimes the decline of the vegetation may be related to poor management of the soil fertility, weeds or harvesting by machinery or livestock.

As producers monitor conditions of the vegetation and make plans for their operation, they consider options to revive declining stands. The producers must evaluate the existing condition to determine if a complete renovation is needed or if proper management will be enough to reinvigorate the forages. The Biology Technical Note - AL117, Evaluating Stands of Herbaceous Vegetation describes evaluation methods for this purpose. However, once the vegetation decline starts, complete renovation may be the best option to bring the stand back into satisfactory condition.

Renovation may be needed if a producer wants to change some of the forages in the grazing system. The changes may be needed because there are better cultivars available or because there is a desire to extend the livestock grazing season.

The planting site preparation is a very important part of the renovation process. Without it renovation efforts may fail or may not be very successful. Key considerations in the renovation process are discussed below.

Tall Fescue

The most common perennial, cool-season forage species in Alabama is tall fescue. Most tall fescue renovation actions are to replace it because of failed endophyte-free plantings or to improve livestock

performance by replacing endophyte-infected plantings.

According to the University of Georgia (UGA) College of Agriculture and Environmental Sciences publication, [Forage Establishment](#), "farmers have been successful in renovating tall fescue stands using several methods that do not require tillage. One is generally referred to as the spray-smoother-spray method. The old KY 31 fescue is sprayed in the early spring with one or two applications of glyphosate and then a summer annual crop like millet is planted using no-till methods. The summer crop is harvested or grazed and the area is sprayed again, if needed, with glyphosate just prior to replanting fescue in the fall. The Auburn University Cooperative Extension System (ACES) fescue conversion guidance also includes the use of the herbicide "paraquat".

Another technique is to graze or mow the area to keep KY 31 tall fescue from seeding in the spring. Continue grazing or mowing through the summer. Prior to replanting fescue in the fall make two successive glyphosate applications. The first should be 4 to 6 weeks prior planting and the second just prior to planting to kill any tall fescue that survived the first herbicide application. Remember that hay brought into the field being renovated can contain seed of undesirable tall fescue. Seed can also be introduced through the dung of animals that have grazed seedy toxic tall fescue. Great care should be taken to avoid reintroducing toxic tall fescue. For pastures with KY 31 (endophyte infected) tall fescue, 90-99 percent renovation can be accomplished in one season.

Paspalums (bahiagrass or dallisgrass)

At times, the efforts to replace some grasses require much more effort due to their physiological nature. Plants like bahiagrass or dallisgrass have seed with waxy seed coats that can stay viable in the soil for

several years. For instance, the UGAES says, "To destroy a warm season grass like Pensacola bahiagrass and replace it with hybrid bermudagrass, the pasture needs to be sprayed in late summer with glyphosate. This should be followed by a glyphosate spray in late fall and planting of the site with a winter grass such as rye or ryegrass. The following spring, the site should be cut or grazed close, then seeded to the desired hybrid bermudagrass variety. One or two selective grass herbicides will likely be needed to destroy new bahiagrass seedlings.

To renovate an old bahiagrass stand with a new bahiagrass variety is even more challenging because there will usually be dormant, viable bahiagrass seed in the soil for some time. These seed can germinate and become a significant part of the new bahiagrass stand. To be successful, the old bahiagrass should be killed, and the site should be planted to something other than bahiagrass for at least one season so that bahiagrass escapes can be destroyed with tillage or selective herbicide treatments. The best planting time for bahiagrass will be in the spring, soon after the last killing frost."

Bermudagrass

Common bermudagrass can be a renovation problem as well. According to the UGAES, "Even with repeated glyphosate sprays, there will be some survival of old rhizomes. Some tillage in combination with glyphosate sprays will help expose rhizomes and increase their control. Common bermudagrass can be more completely controlled if the land can be rotated for one to three years to crops where intensive grass control measures can be employed. The addition of glyphosate treatments may be needed.

Soil Fertility

Soil fertility can play a major role in the decline of some forage species. This particularly applies to bermudagrasses and legumes. It is known that bermudagrass hayfields often decline due to low soil potassium levels. Additionally, legumes require a soil pH that is near 6.5 and medium levels of phosphorous and potassium. Perhaps adjusting the soil fertility is all that is needed to significantly improve the stand quality of a pasture or hayfield.

When it is determined that renovation is needed, plan to adjust the soil fertility at least six months prior to the expected planting date of the new forage. This especially applies if no-till plantings are planned.

References:

University of Georgia, College of Agriculture and Environmental Sciences, *Forage Establishment Guidelines*, <http://www.caes.uga.edu/commodities/fieldcrops/forages/establishment.html>

Auburn University Cooperative Extension System, IPM, Pasture and Forage Crops, <http://www.aces.edu/pubs/docs/I/IPM-0028/IPM-0028.pdf>

Proper soil fertility also aids in keeping the desired forage species competitive with the weed problems.

Harvest Management

Renovation with management is certainly possible. Proper harvesting of vegetation with either animals or machinery can greatly improve the health of the plants. This will enable the plants to recover faster after a harvesting event and to be competitive with weeds.

Livestock should graze less than 15 consecutive days on a pasture. At least three pastures should be used for warm-season or for cool-season forage grazing systems. The pastures should rest three to five weeks between grazing events.

Mechanical harvesting of herbaceous vegetation should be done at the correct growth stage and plant heights, allowing plants adequate time to recover from the harvest and to maintain their health. Guidance on implementation of prescribed grazing and forage harvesting can be found in the: AL NRCS Guide Sheet 528, Design, Layout and Management of a Rotational Grazing System; and the AL NRCS Job Sheet 511, Forage Harvest Management.

Weed management

Anytime weeds are significant problems in pastures or hayfields, the effort should be made to control them. This will include the use of herbicides, proper fertility and harvest management of the forage system. The soil fertility is important to keep grasses competitive with any weeds problems that may develop. Proper harvest management helps plants to keep healthy root systems, maintain carbohydrate reserves, and promotes competition with weeds.

Weed control prior to establishing legumes is also important. There are very few herbicide options for controlling broadleaved weeds that do not harm legumes. Mechanical control, crop rotations and herbicide desiccations may be the best options.

For those wanting to establish native warm season grasses, planting into sites that are weed-free or have very low weed pressure is really important. These grasses do not compete very well with weeds during the establishment phase.