



A Perennial Plan

By John Gruchy

Based on reports from food plot managers around the Magnolia state, many converted a significant portion of food plot acreage to perennial forages in an attempt to cope with rising fuel costs. An equally large number of residents left perennial plots looking lush and green at the end of turkey season only to return during the summer to a weedy mess.

Over the years Mississippians have come to realize that in pursuit of bigger bucks and more turkeys, there is no magic bean to plant and walk away from without suffering disappointment at the hands of Mother Nature. All plantings, annual and perennial, require active management to be successful. The following are a few tips to improve the success of perennial food plantings.

Annuals vs. Perennials

Supplemental food plantings are often grouped based on the time of year in which they grow best, warm-season or cool-season, and whether they grow for one year or persist for more than one year. When selecting whether to plant annual or perennial forages, landowners should consider their objectives. If the objective is improving available forage for white-tailed deer, plantings should address the nutritional stress periods for whitetails, late winter and late summer. Though cool-season perennial plantings (i.e. white clovers, red clover and alfalfa) produce large amounts of high quality forage throughout most of the year, cool-season annuals (i.e. crimson clover, wheat, and oats) and warm-season annuals (i.e. soybeans, cowpeas and American jointvetch) provide more forage when whitetails need it most. In short, no one planting will meet all nutritional needs of deer, turkeys or other game animals. Several different plots including warm- and cool-season annuals and cool-season perennials are often necessary.

Common shortfalls in most perennial forage maintenance programs involve managing soil fertility and problem weeds. The process of managing soil fertility begins long before the plow breaks ground. One of the most important steps in ensuring a successful food plot is selecting a good site. Avoid wasting time and money trying to force a planting to grow in an unsuitable site. It is important to note that perennial forages such as clovers, birds-foot trefoil, chicory and alfalfa require well-drained, fertile soils. Heavy clays, deep sands and dry ridges should be sown to annual plantings or not at all.

After selecting good quality planting sites, the next step in managing soil fertility is applying soil amendments including lime and fertilizer. In order to properly apply lime and fertilizer, collect a soil test and have it analyzed by the Cooperative Extension office. Separate soil tests should be collected for each field and each planting within a field. Be sure to fill out the soil testing form with the appropriate crop code(s) and follow the recommendations on the soil test results. Soil test recommendations are designed to maximize forage production and save you money by not applying more or less lime and fertilizer than needed. Perennial forages should be limed as needed and fertilized at the time of planting then top-dressed with fertilizer in the spring (March) and/or fall (September) based on soil test recommendations.

Selecting Perennial Forages

Many landowners ask for advice selecting perennial forages. While almost any of the dozens of varieties of perennial clovers, alfalfa, and chicory will perform well when managed appropriately, one thing is certain ... deer don't eat much grass. Cool-season grasses, such as tall fescue, orchardgrass, and ryegrass, may produce quality forage for livestock, but are rarely eaten by deer and provide poor habitat for turkeys and bobwhites.

Clover varieties should be selected based on the moisture holding capacity and fertility of the planting site. Wetter sites are more suited for varieties such as LA-S1 (white clover) and alsike clover while drier sites are more appropriate for varieties such as Durana white clover and red clover. Regal Ladino clover, Red Gold and Redland III red clover and Oasis chicory are a few plantings that grow well across a wide variety of sites. Alfalfa is high yielding, drought tolerant, and highly preferred; however, it is very susceptible to inadequate soil fertility and damage from insects and disease. Properly managing soil fertility will improve insect and disease tolerance in alfalfa and other perennial legumes and may improve herbicide activity, thus weed control.

Careful attention to soil fertility and weed control often yield outstanding results, such as the red clover plot in the foreground.

Unfortunately, unwanted plants often take advantage of well managed soil fertility just as well as high priced plantings. Steve Payne, owner and operator of Oak Haven Forages in Senatobia, has found that customers often willing to commit hundreds of dollars per acre to seed and fertilizer often fall short when it comes to weed control. "Folks don't realize that perennials are just as much work as annuals." He recommends an integrated weed management program including mowing and herbicide applications when managing perennial food plots.

When planting perennial forages in the fall (September – November), it is a good idea to include 25 – 50 pounds per acre of wheat or oats in the planting mix to help manage browse pressure and reduce winter weeds. Avoid mixing annual clovers with perennial legumes when planting in the fall since they may increase the chance of crown rot, a fungus that will hurt clovers and alfalfa.

Many forage legumes are adapted to hold bacteria on their roots that allow them to use nitrogen in the atmosphere, eliminating the need for nitrogen fertilization. Unfortunately, bacteria specific to legumes commonly planted as forages do not occur naturally in the soil, but must be applied to the seed at planting using a process known as inoculation. Many perennial legumes are sold pre-inoculated, while most annuals must be inoculated at the time of planting.

The Bottom Line

The question remains, will landowners save money by converting annual plots to perennial forages? Dr. Craig Harper, a wildlife biologist with the University of Tennessee Cooperative Extension Service, has spent several years researching annual and perennial plantings in a variety of habitats. Harper notes, "When you consider the cost per pound of forage produced, annual plantings are actually less expensive."

Indeed, annual forages such as cowpeas and wheat may produce as much as 19,000 pounds of dry forage per acre per year when cropped side by side while perennial forages such as the white clovers often produce less than 8,000 pounds of dry forage per acre per year on average. Many landowners see perennials as a way to avoid the input costs and labor of replanting annuals each year; however, properly maintaining perennial plots may require just as much time and expense.

"Landowners are simply trading time spent disking and planting annuals for mowing and spraying weeds in perennials," said Harper. There are certainly good reasons to maintain a combination of annual and perennial forage plots, both biologically and financially.



When planting perennial clovers or alfalfa in the winter and spring (February – March), Prowl herbicide may be applied (1 – 3 pints per acre) at the time of planting to control crabgrass and several broadleaf weeds before they emerge. Prowl should be sprayed on a prepared seed bed and lightly disked in just before sowing the clover. If broadcasting clover, culti-packing the seed to improve germination is recommended and will not affect the herbicide activity. Planting just prior to a rain will greatly increase herbicide activity. When using this method, there is no need to include wheat or oats in the planting mix.

Most perennial forages should be mowed 2 – 3 times during the summer to keep the sward healthy and to aid in weed control by preventing weeds from going to seed. Steve Payne recommends beginning to clip perennials early in the spring.

"Start clipping around March before weeds become a real problem," he said. He also recommends setting the bushhog high enough to avoid clipping flowering heads of clovers and other perennials. He likes to let perennial forages flower and seed so the stand can persist longer.

Established perennial legumes like clovers, alfalfa and birdsfoot trefoil may be sprayed with several different herbicides to control a variety of weeds. Pursuit herbicide



ing some chemicals outside of label recommendations may kill your plots.

Don't be intimidated. Managing high quality perennial food plots is not as difficult as it sounds. The biggest mistake you can make is assuming that once you plant a perennial all of the work is over. In fact the work is just beginning. Still, the benefits of a well managed food plot are well worth the effort. For more information about managing perennial forages contact your local Cooperative Extension office or the Mississippi Department of Wildlife, Fisheries, and Parks.

John Gruchy is a wildlife biologist for MDWFP.



Jerry Hazlewood

Above, Selective herbicides and mowing have been used to control weeds along this green firebreak planted to Duranna clover. Below, The author is top-dressing a Ladino clover plot with phosphate and potash in September.



(4 ounces/acre) may be sprayed during the fall (November) or winter (February) on established clovers and alfalfa to control winter weeds. Pursuit is also useful in the spring (April – May) for controlling some broadleaf weeds and preventing yellow nutsedge, johnsongrass, crabgrass, broadleaf signalgrass and other weeds from emerging.

For grass weeds that are already emerged, spray a grass-selective herbicide such as Select (10 ounces/acre) or Poast (1 – 4 pints/acre). Adding a sticking agent or non-ionic surfactant (1 quart/100 gallons of solution) to the spray tank will improve herbicide uptake when spraying emerged weeds. Most herbicides work best when weeds are small (3 – 6 inches). Herbicides will be less effective on weeds that have already begun to form seed heads.

Select or Poast may be tank-mixed with Pursuit and sprayed from March – June or September – November over the top of established clovers, alfalfa, or chicory to control grass and broadleaf weeds. Select or Poast may be tank-mixed with Butyrac herbicide (2 quarts/acre) and sprayed over clovers and alfalfa from March until May to control grass and broadleaf weeds. Butyrac may damage perennial clovers causing red speckling and stem twisting and will kill chicory. Healthy clover swards often recover from Butyrac damage in 2 – 3 weeks. Read herbicide labels closely; spray-