

FOOD PLOTS

FALL FOOD PLOT MANAGEMENT

Following a long Pennsylvania winter, spring conjures images of tillers in gardens and farmers planting fields. But during the dog days of summer, most of us are thinking of beating the heat instead of planting crops. Although it's 95 degrees in the shade as this article goes to press, it's time to think about planting food plots. As the name implies, food plots are intended to provide an additional food source for wildlife, especially deer. As herbaceous foods diminish through summer, fall food plots can become attractive to wildlife. Luckily, some of the best wildlife plantings establish and grow well as things cool off in September and October.

The contributing participants in the first leg of this new feature will be from the agency's Southeast Region, which covers 13 counties in southeastern Pennsylvania. Within the region, there are five land management groups that are managed by land management group supervisors, foresters and members of the Food & Cover Corps. Follow weekly to see and learn more about how these groups – and many agency conservation partners – do their jobs and make a tremendous difference for wildlife and the folks who enjoy wildlife and wild places. Thank you for your interest in wildlife and the management of the State Game Lands habitat that supports it.

COOL-SEASON PLANTINGS

Many food plot forages grow best when temperatures are 60-65 degrees F. These "cool-season" plants include clovers, brassicas, birdsfoot trefoil, winter peas, winter wheat and oats. Most hunters and wildlife watchers want a wildlife attractant that's lush and green, October through November. Cool-season plants are the ticket as they can withstand several rounds of frost. Some plants, such as brassicas (turnips and rape), even remain green after the snow begins to fly, perfect for drawing a buck drained from rutting rigors into the open. Although not apparent on your favorite hunting show, there's a great deal of preparation leading up to that dream hunt over a food plot. Without doing a little homework on food plot strategies, you may find yourself sitting over a field of dirt instead of a deer attractant in December.

Legumes The majority of plantings for fall food plots are legumes, dominated by clovers. Legumes are advantageous because of their relatively high grazing preference, cold hardiness, and ability to fix nitrogen. By incorporating nitrogen from the atmosphere, legumes improve soil conditions for future crops and cut costs associated with high nitrogen fertilizers. Further, many legumes are available at reasonable cost through local seed providers.

Grains Cool-season grains play an important role in food plot management. Crops such as winter wheat and oats germinate and grow quickly, provide desirable forage, and serve as a "nurse crop" to nurture slower growing plants.

Brassicas Brassicas have received a great deal of attention because of their ability to provide quality forage during fall and winter. Brassicas are available in two basic forms, turnips and rape. Rape varieties are preferable as they devote greater resources to leaf growth compared to turnips that develop a large tuber. The tubers are generally not eaten by wildlife.



Brassica food plot on right of way. Ben Jones

SOIL LIMING-ITATIONS

Soil characteristics ultimately determine what can and can't be planted on a site. Fortunately for food plot managers, soils can be amended to a certain extent. The first step is collecting a soil sample and submitting it to a testing lab. This easily accomplished and critical step is often overlooked by novice agronomists. The minimal effort and cost of soil testing will pay big dividends in the future.

Soil tests with detailed instructions are available from County Extension offices. Simply send samples to the testing lab and results will be mailed (or e-mailed) back to you within about 10 days. Results include easy to read instructions to amend soils for the intended crop. On most Pennsylvania soils, liming will be recommended. Rates of anywhere from two to five tons per acre (10 to 20 pounds per 100 square feet) can be expected. Recommendations for additional nitrogen, phosphorus and potash also will be included. Following fertilization and liming, it takes about six weeks for modifications to be incorporated in the soil, so plan ahead.

Despite our ability to "tweak" soil chemistry, overall site characteristics may limit planting options. For example, deep valley soils are conducive to plants that may not prosper on stony ridge-tops. If you happen to own ground on the latter, fear not, there are mixes that can produce on lower quality sites. Just remember your expectations should not exceed site limitations.

ANNUALS VS. PERENNIALS

An understanding of plant life cycles can help in evaluating food plot strategies. Not only do life cycles describe longevity of plants, they relate to germination and growth rates. Annuals complete their life cycle (germination-growth-flower-seed-death) in one growing season. Perennials may live for several years or more. Biennials have a two-year lifespan, producing flowers and seed during their second growing season.

Annuals tend to germinate quickly and exhibit relatively rapid growth. Because they germinate and green up quickly, an annual should be included in food plot mixes to stabilize soil and provide forage soon after planting. Annuals (especially wheat and oats) also serve as a nurse crop for perennials and biennials. A potential disadvantage of annuals is they must be re-planted every year. However, some annuals (e.g., crimson clover) reseed well and can be maintained over years without subsequent plantings.

Perennials and biennials generally take longer to establish, with maximum above ground growth occurring the year after planting. As noted above, the slow start can be mediated by including annuals in the mix. Although plants may live for several years, activities such as liming, fertilizing and weed control are necessary to maintain perennials. Some perennials often require better soil conditions compared to annuals (deeper, more fertile soils that retain moisture). Therefore, it is important to

select varieties to match site conditions. Table 1 provides life cycle, winter hardiness, drought tolerance and relative grazing preference for various legumes and other cool-season plantings.

Table 1. Common cool-season plantings and their utility in food plots.

Planting	Life Cycle	Winter Hardiness	Drought Tolerance	Relative Grazing Preference
Cool-Season Legumes				
Crimson clover	annual	good	good	high
Austrian winter peas	annual	excellent	poor	high
Red Clover	biennial	good	moderate	high
Ladino clover	perennial	moderate	poor	high
White-dutch clover	perennial	good	poor	moderate
Birdsfoot trefoil	perennial	good	moderate	low
Alfalfa	perennial	good	good	moderate
Cool-Season Grains				
Oats	annual	moderate	good	high
Winter wheat	annual	excellent	good	high
Ryegrass	annual or perennial	good	poor	low
Other Plants				
Turnips	annual	good	good	low
Rape	annual	excellent	good	high

FOOD PLOT MIXES

The following food plot mixes have been planted with success in Pennsylvania and across the Appalachians. These mixes are recommended assuming soil amendments have been made according to test results. Over time, you may "mix and match" plantings to achieve desired results on a particular site. For example, oats and wheat can be interchanged and numerous brassica varieties are available. Experimenting with mixes is part of the fun, but remember, good record keeping is important to track results over the years!

ANNUAL UPLAND MIX 1 (POOR SITES)

- 10# crimson clover
- 3# medium red clover
- 20# Austrian winter peas
- 25# oats or wheat

ANNUAL UPLAND MIX 2 (POOR TO MEDIUM SITES)

8# crimson clover

3# medium red clover

2# rape (Dwarf Essex rape is a good variety available at low cost)

25# oats or wheat

PERENNIAL UPLAND MIX (MEDIUM TO HIGH QUALITY SITES)

2# white dutch clover

4# ladino clover

5# medium red clover 1-2# rape

25# oats or wheat

ANNUAL DEER MAGNET (ALL SITES)

100# oats (approximately 3 bushels)

ANNUAL BRASSICA PLOT (MEDIUM TO HIGH QUALITY SITES)

8-10# rape

(*all mixes are expressed in per acre rates)

TIMING AND METHODS

Fall plantings should occur 40-50 days before the first frost. South of Interstate 80, this is near the middle to end of August with a cutoff date around September 1. North of I-80, planting should be completed by the second or third week in August. Perhaps more important is to put seed in the ground just prior to a rainfall. When August rolls around, have seed and equipment ready and keep an eye on the weather for an approaching cold front (associated with rain). Pennsylvania is often in the path of hurricane remnants that are forecast to reach the Keystone State as much as a week in advance. Planting just prior to arrival of these weather systems will greatly increase fall planting success. Seeds can be broadcast or drilled. However, most private landowners and lessees won't have a no-till drill available. If broadcasting is used, seeds should be disced into the plot, followed by cultipacking. This increases seed to soil contact and improves germination. A good technique is to:

Prepare the plot by discing (preceded by plowing or tilling if necessary);

Broadcast larger seeds first (oats, wheat and/or rape);

Disc to one-inch depth;

Cultipack;

Broadcast smaller seed (clovers);

Cultipack again.

In the absence of a cultipacker, a lawnroller partially filled with water will suffice. With the growing popularity of food plot management, numerous companies are marketing implements designed for ATVs and small tractors. A quick internet search will reveal equipment sources.