

PRACTICAL WILDLIFE MANAGEMENT INFORMATION



Wildlife Trends JOURNAL

JANUARY/FEBRUARY 2015

VOLUME 15, ISSUE 1



INSIDE THIS ISSUE

Food Plot Management for Wild Turkeys

By G. Ryan Shurette

A Shelterbelt For Wildlife, Your Land and You

By Steve Tillmann

Not All Lakes Are Created Equal

By Scott Brown

Wildlife Trends Journal Management Calendar

By Dave Edwards



BROKERAGE

BLACKRIDGE LAND COMPANY WORKS HARD TO REPRESENT OUR BUYER AND SELLER CLIENTS' INTERESTS AND ACHIEVE THEIR GOALS.

FROM RECREATIONAL TRACTS TO INVESTMENT GRADE TIMBER OR AGRICULTURAL LAND, OUR MARKET KNOWLEDGE, EXPERIENCE, AND COMMITMENT TO OUR CLIENTS ARE SETTING NEW STANDARDS IN THE LAND BROKERAGE BUSINESS.

LAND AND WILDLIFE MANAGEMENT

From 10 to 10,000 acres plus, BlackRidge Land Co. can assist small landowners to corporations with land management activities. We have the equipment, expertise and manpower to perform all of these services and more:

- Mulching/Grinding
- Firebreaks
- Prescribed Fire Support
- Road Construction & Maintenance
- BMP
- Excavation
- Pond & Dam Construction
- Gravel Haul & Spread

- Lime Haul & Spread
- Food Plot Construction
- Broadcast Herbicide Application
- Planting
- Strip Disking
- Sub-Soiling
- Accurate Aerial Photography
- GPS/GIS

- Rotary Mowing or Bush-Hogging
- Hack & Squirt Herbicide Application
- Gate Construction & Installation
- Boundary Marking
- Road Side Management
- Soil Testing & Analysis
- Custom Fertilizer Application
- Custom Mapping



Earl Says...

Research studies at major universities have always been extremely helpful to landowners and land managers around the country. Our authors constantly report and comment on the results of these studies in the articles we offer you.

Well I'm excited about a new study taking place in Alabama, Georgia and South Carolina on how we can cut down on fawn depredation by coyotes. Radio collars will be used on coyotes in these states to give us a better understanding of coyotes through their movements, habits, etc. Believe it or not there really hasn't been a lot of research on coyotes compared to other game and non-game animals.

Now, I know that coyotes have their place in nature and they do help keep certain populations in check. But when you hear a pack of them let loose at dusk it can spook you into a whole new frame of mind. One afternoon a few years ago I was deer hunting over a clear cut and sure enough, about ten minutes before I was planning to get down the pack started their nightly serenade. And it was a bunch of them. The only problem was they were near my truck at the gate and there was no way I could go around them! So first I prayed then got out of my stand and ran/walked as fast as I could with my flashlight in one hand and my rifle in the other while singing and yelling at the top of my voice, "You coyotes better get away and not eat me because I'm a bad man!" And thanks to the Good Lord, Browning and Mag Lights, I survived a mauling that night.

Andy Whitaker
Publisher/Editor



Wildlife Trends JOURNAL

P.O. BOX 640596
PIKE ROAD, ALABAMA 36064
www.wildlifetrends.com
800-441-6826

PUBLISHER/EDITOR
Andy Whitaker

DESIGN
Kim Koellsted/Craftmaster Printers, Inc.
Craftmaster Printers, Inc.
687 North Dean Road, Auburn, AL. 36830
(800) 239-3293

CONTRIBUTING AUTHORS

Dave Edwards
Dana Johnson
Brant C. Faireloth
Wes and Leslie Burger
Dr. Wes Wood
Theron Terhune
Marion Barnes
Ted DeVos
Bryan Burhans
Keith Gauldin
Rodney Dyer
Dr. Keith Causey
Gary Springer
Dr. Stephen Ditchkoff
Anna Huckabee Smith
Tes Randle Jolly
Kevin Patterson
Ryan Basinger
G. Ryan Shurette
D. Clay Sisson
Kent Kammermeyer
Allen Deese
Scott Brown
Dr. Larry W. Varner
Jason R. Snavelly
Steve Tillman

For Wildlife Trends editorial,
advertising, or change of address:
1-800-441-6826
info@wildlifetrends.com

Wildlife Trends Journal is published to provide landowners, land managers and wildlife enthusiasts the latest research-based information in wildlife and game management. Article authors are carefully selected for specific expertise in their respective fields. Subscribers receive six bi-monthly issues and a handsome library binder to save their past issues.

Articles may be reprinted with the permission of Wildlife Trends editorial staff.

Cover photo by Tes Jolly
www.jollysoutdoorvisions.com



Food Plot Management for Wild Turkeys

By G. Ryan Shurette

G. Ryan Shurette is a Certified Wildlife Biologist and Owner/Guide of DragSmoker Fishing Guide Service. Contact him at 256-404-5814.



It seems the vast majority of discussion concerning food plots in the East and Midwest pertains to plantings that focus on white-tailed deer. In deer management and deer hunting, they are used for two plain and simple reasons. First, if certain forage habitats are limited on a particular tract of land, supplemental plantings can be used effectively to provide nutrition during select time periods during the year. Whether high protein blends are employed strategically during the summer months to support antler development and doe fecundity, or hardy cold weather species are used to mitigate the late winter energy crunch, food plots can effectively supplement a deer herd's nutritional needs in some situations. Secondly, highly palatable and preferred food plots are also obviously very effective at concentrating deer for viewing and harvest. The latter is the main reason the deer plot seed mix trade has boomed into a multi-million dollar industry.

With all the hype about food plots planted specifically with deer in mind, it is somewhat surprising how little excitement there is regarding supplemental plantings for wild turkeys. Granted, there are some seed mix manufacturers out there that provide products that give emphasis to turkeys, and turkeys obviously obtain some mutual benefits from deer plots. But the two fundamental reasons people plant crops for deer can also impeccably apply to wild turkeys. In certain situations, strategic turkey plots can efficiently supplement a limited resource, like high-yield bugging habitat or late winter forage. Studies across the Southeast have shown in heavily forested landscapes, openings that provide high-quality brooding habitats are commonly the most restricted habitat parameter regarding a wild turkey's life cycle (Dickson, 1992). And just as in deer hunting, planted openings can also be used to draw toms into close range for

harvest. Now for the record, I personally do not hunt turkeys over food plots, as it is considered taboo in my old-school Alabama turkey hunting culture. According to my elders, calling up a gobbler is the only honorable way to kill him. In fact, any type of ambushing is frowned upon, and a believable story would have to be quickly fabricated if that sort of thing ever occurred. But I do think that a food plot's utility in that regard has value for introducing children and new hunters to the sport. And I am sure if the truth was known, the gobbler-shamans that taught me "the way" have probably whacked their fair share of poor innocent red-headed toms just coming into the patch to eat.

As stated earlier, food plots planted for deer can indeed often have mutually beneficial aspects for turkeys. However, the management, placement, and seasonality of turkey plots often differ from those specifically established for deer nutrition and harvest. This article

will discuss some of those differences and provide a template for the establishment and maintenance of food plots with an emphasis on wild turkeys.

Location Sometimes Matters

The location of turkey food plots on a particular tract of land can be very important. And just because a particular spot would be good for deer or another wildlife species, it may not actually be the best choice for wild turkeys. For example, a half-acre green field in the middle of a large, scrubby, seven or eight year-old cutover would likely be a prime place to coax a buck out for a shot. Deer would likely be using the adjacent thick habitats as bedding and staging cover. However, turkeys may not be so willing to venture through that dangerous rough to access the plot. Granted if turkeys were abundant on the property there would probably be some limited use of the patch from time to time by foraging birds, especially indi-



Food plots planted for deer can sometimes have mutually beneficial aspects for turkeys. However the management, placement, and seasonality of turkey plots can differ from those specifically established for deer nutrition and harvest.

vidual hens around nesting season. But it probably wouldn't get as much consistent use by turkeys. The same food plot on the edge of an open stand of timber, on the other hand, would be expected to readily draw turkeys. The reason for this difference in preference between turkeys and deer can be explained by the dissimilar methods they use to detect and evade predators. While deer rely heavily on their olfactory senses to detect danger, turkeys of course depend mainly on their keen sense of vision to keep them alive. And while deer feel perfectly comfortable in thick brush and cutover habitats, it usually scares turkeys to death. Open habitats like mature hardwoods or grassy pine stands generally make turkeys feel safer from predators like bobcats or coyotes that could otherwise be hiding in the dense brush. There are of course exceptions to this rule, depending on the various regions and ecosystems wild turkeys inhabit. For example, Osceola turkeys in the native scrub habitats of south Florida meander through

dog-hair thick palmetto all day without a care. And we have all had that gobbler circle around us through a tangled jungle instead of down that clean woods road. However, you should try to establish your turkey food plots in a location they will feel comfortable visiting often. And as a general rule that is usually where they will have open, safe access to the patch.

Another important aspect to consider regarding placement of food plots is the interspersion of these openings among other habitats. It is generally a good idea to plot the openings strategically within a property so that all habitat requirements are available to turkeys in a smaller spatial area. A quick assessment of an aerial photo of a property will usually show where open habitats are lacking, as well as revealing some potentially logical areas for plantings. For example, if there are powerline rights of way, gas lines, or similar features on a property, portions of these linear features can often be very easily utilized as food plots. Landowners can usually coordi-

nate with the respective utility company to meet wildlife management objectives as long as they are consistent with the company's maintenance plan.

Turkeys forage throughout the daylight hours, but during most times of the year they concentrate their active feeding during the first couple of hours after leaving the roost and the last couple of hours prior to flying up. If you are planning on hunting turkeys over a particular food plot, you may want to consider the proximity of the patch to existing roosting areas. Even your position in relation to the rising eastern sun should be considered. Ideally, a turkey hunting plot would provide quiet access for you while also proving a good set-up so that you are not looking into the sun. In addition to being blinded, you don't want to be spotlighted for all oncoming turkeys to see. Depending on the timber types, topography, and other variables there may be certain areas on a tract of land that are used more frequently and predictably than others for roosting. For example, in regions with

"It's a Tough World Out There!"

STOP Wildlife, Wind and Weeds from Killing your Seedlings



Choose Plantra® to make sure they **Survive, Thrive, Succeed!**[™]

Tree Tubes • Bark Protectors • Weed Mats
Fertilizer Packets • Deer Repellent

 **Plantra**[®]
Plant Like You Mean It

www.plantra.com
800-951-3806

few large trees, it is common to see the majority of roosting occurring in the riparian corridors along drains or creeks. A food plot within fly-down distance of a stand of tall riparian trees or on the edge of a hardwood bottom can obviously be a deadly place to set up decoys or call to longbeards coming off the roost. If you know turkeys commonly roost in timber on the side of a mountain or hill, planting a patch on the top of the ridge may turn out to be a good strategy. The point is to use your knowledge of how turkeys behave on your land to choose a spot they will use freely, frequently, and comfortably.

Planting Choices for Wild Turkeys

In the Midwest, open herbaceous habitats can be abundant on the landscape. When it comes to maximizing wild turkey numbers, many forested properties in the South however are lacking in the amount of productive herbaceous openings they have. Strategic food plots can help fill these gaps for your flock. Depending on what species of forage crops are being planted, you will first of course want to consider the condition and type of soils you are dealing with. Some soils on a particular tract may be better suited to perennial plots like clovers while others may serve better planted in annual cool season crops like winter wheat. To successfully establish supplemental turkey plantings, just as with other food plots, it is important to test a sample of the local soils to determine liming and fertilization needs.

One highly nutritious supplemental planting choice for wild turkeys is ladino clover. Ladino is a large variety of perennial white clover that spreads via underground running rhizomes called stolons. White clover grows relatively low to the ground which makes it very attractive to feeding turkeys. These fields also make prime strutting zones for wary toms following feeding hens in the spring. Fertile, loamy soils with moderate moisture levels typically grow



A food plot within fly-down distance of tall riparian trees frequently used for roosting can be a deadly place to set up decoys or call to longbeards coming off the roost.



One highly nutritious supplemental planting choice for wild turkeys is ladino clover. Ladino and other white clovers grow relatively low to the ground and these plantings make prime strutting zones for wary toms following feeding hens in the spring.



One of the major ways turkeys differ from deer is in their utilization of food plots, specifically for the insects and other arthropods produced in the warmer months.

clover better than dry, poorer sites. This is a cool-season species that is most commonly established from seed in the late summer or early fall (September-October). Ladino and other white clovers have very small seeds and therefore should be broadcast (or drilled)

into a well-prepared seedbed for successful establishments. This doesn't mean just chopped up a bit with a harrow or disk. Ladino requires a high level of seed-to-soil contact and it is important to spend enough time working the ground to get a smooth, finely

textured seedbed prior to planting. A low-nitrogen fertilizer (5-10-15 for example) is recommended at the time of planting, typically at a rate of 250-300 lbs. per acre. Firming the seedbed before planting with a culti-packer is preferred. Immediately after preparing the seedbed (before any rain) broadcast 5 lbs. of inoculated (with *Rhizobium* bacteria) ladino seed per acre (or 2 lbs./acre if drilled). Inoculant packets are available at most seed stores and can be mixed with water and applied to the seed before planting. *Rhizobium* bacteria are symbiotic with some legumes and can significantly increase the efficiency of the clover's root system. Seed should be covered to no more than a quarter of an inch deep. Most of the time disking over clover seeds will bury them too deeply, whereas one more run of the culti-packer is sufficient to adequately push seeds down into the bed. In many areas, this perennial will last for three years or more but in hot climates it may fizzle out after only one, especially in xeric full-sun locations.

CONSERVING.... PRESERVING... EVOLVING... MOTHER NATURE



Enjoy your escape, protect your investment

Conserving:

- "One-Step" Forestry Mulching
- Forest Floor Preservation
- Forestry Consulting
- Wildlife Habitat Preservation
- Wildlife Trails & Food Plots
- Quail & Deer Habitats

Transforming:

- Pre-Development Site Clearing
- Grading/Grubbing/Excavation:
New Construction Sites
- Trenching of Water, Underground
Retention & Pipe
- Land Subdivision & Utility
- Park & School Zone Clearing
- New Road Construction
- Right-of-Way Clearing
- New Lake Construction
- Shoreline Maintenance

 **JOSEPH**
GREEN FRIENDLY
LAND CLEARING

C E L E B R A T I N G
7 5 Y E A R S

Ladino clover foliage provides wild turkeys with a good source of energy and protein in late winter and spring when acorn crops are often gone. In warmer months a clover patch serves as pretty good habitat for soft-bodied insects, and in turn provides for bugging opportunities during and following the nesting season. White clover is highly nutritious for white-tails too so you can also expect to see a lot of use by deer in a good stand of ladino clover.

Other cool-season plantings preferred by wild turkeys include the traditional cereal mixes planted for deer, including winter wheat, oats, and annual rye. These cereal grass patches will typically become higher and thicker when springtime arrives and may even become dense enough for hens to nest in if they are large enough in area and left uncut. If the local deer herd doesn't clip these cereal grasses down enough to affect their seed production, turkeys will often key in on the ripening heads of wheat and oats around the month of May, along with the grasshoppers and American locusts that will usually be hiding amongst the stems. One of the major ways turkeys differ from deer is in their utilization of food plots specifically for the insects and other arthropods produced in the warmer months. In contrast to cool season varieties, warm-season food plots can significantly supplement turkey nutrition through the hotter summer months. Warm-season plantings may include proso millet, browntop millet, sorghum, and buckwheat. In the South, millets should be planted after the last threat of frost (from late March to May) and most varieties will seed out in about 90-110 days. Seeds of the millet varieties are typically available to wild turkeys by late summer, prior to the availability of acorns. Buckwheat is another preferred warm-season crop. Buckwheat foliage can be used to some extent by turkeys but it is prized for its seed, which averages about 18% crude protein. Buckwheat plants mature fairly quickly in as little as 60 days. All of the aforementioned warm-season species can also provide good insect foraging for poults. Bahia pastures, although they are not typically planted specifically for turkeys, are also often frequented by local flocks for insects, as well as for the tiny black seeds later in the season. However, these pastures are virtually devoid of food during winter months. So a cool season food plot adjacent to an improved pasture planted with an exotic sod such as Bahia can add another seasonal element and help hold wild turkeys on a tract of land, especially on a property with limited mast or other winter food sources. Dense, short-rotation loblolly pine plantations are another example of a landscape that can also be fairly devoid of turkey foods.

PRINT

responsibly.

Craftmaster is proud to be an approved provider of SFI-certified papers.



By choosing to print on paper that is SFI certified, you help create demand for responsibly managed resources, which in turn motivates more suppliers to adopt good stewardship practices.

Buying products made from wood doesn't have to add to the problems facing our planet. Visit our website to find out how you can purchase quality SFI Certified wood products and help sustain our forests for future generations.



CRAFTMASTER
PRINTERS, INC.



334.502.3456 800.239.3293 687 North Dean Road Auburn, Alabama 36830 www.craftmaster.com



We Know Natives

With over 200 species of native grasses, native wildflowers and wetland plants, our high quality standards are changing the native seed industry.

Whether your land management goals are for wildlife, pollinators, soil conservation, or aesthetics, we would be happy to help you with

your native seed, plugs, seed establishment, and maintenance requirements today!

Visit us at www.roundstoneseed.com or

Call toll free at **1-888-531-2353**.



However, tracts comprised mainly of pine plantations have been demonstrated as capable of supporting fairly dense turkey populations with the inclusion of a relatively small amount of interspersed openings (Sims, 1979).

One often overlooked option for increasing turkey populations on a forested property is the planting of native perennials, especially if no open timber stands or old-fields exist on the property. Native vegetation is sometimes expensive to establish but once the investment has been made, it can easily be maintained in perpetuity by a combination of periodic bush-hogging or burning. Diverse stands of bluestem grass (*Andropogon/Schyzachirium*) mixed with native wildflowers and legumes like beggarweed (*Desmodium* sp.) make excellent bugging, brood-rearing, and nesting habitats. Some common wildflower species options include coreopsis, native sunflowers,

and goldenrods. There are currently several reputable producers of native grass, forb and legume seeds in the East and Midwest, and you can browse the multitude of species and order online. Prior to making an order, it can be helpful to talk to the supplier or a local biologist to help determine which species and varieties may work best for your local soil and geography, based on the origin or ecotype of the seed. These native perennials are often just as good as or better than non-native food plot varieties for wild turkeys, as they can often provide multiple habitat requirements on a single piece of ground. Sometimes disking during various times of the year can release different herbaceous plant communities without the need to plant anything, depending on the local seed bank. Woody encroachment in your native perennial patches, whether they are planted or volunteer, generally must be controlled using fire,

mechanical disturbance, or herbicide. If possible, limit summer disturbance until early August or later to minimize direct impacts to nests and poults. Native patches can be burned relatively easy as the flashy fuels are readily ignited and do not stay hot for long after they are consumed. Selective herbicides such as triclopyr or imazapyr can be effective in addressing brush and saplings issues while maintaining abundant herbaceous cover. Keep in mind, while brush and shrub competition is often undesirable, some native shrubs and vines do provide quality soft mast preferred by turkeys. Some of these include dogwoods, blackberries, sumacs, viburnum, wild grapes (fox and muscadine), Chickasaw plum, red mulberry, cat briar, and red-bud. Managers sometimes have the ability to select for and retain some of these desirable shrubs in native herbaceous stands. In other cases, these shrub species can be purchased and planted



*One of the most popular and effective warm-season plantings for wild turkeys is chufa (*Cyperus esculentus* var. *sativus*). The small tubers it produces are high in starchy carbohydrates, glucose, fats, and protein. The easiest way to establish chufa is to broadcast them at 40-50 lbs. per acre onto a disked seedbed. A complete fertilizer and lime is typically recommended. Drag or lightly disk the planted patch to cover tubers to an average depth of about 1 inch.*

along edges of food plots, pastures, or roadsides if they are lacking.

The Mighty Chufa

One of the most popular and effective warm-season planting choices for wild turkeys is chufa. Chufa (or *Cyperus esculentus* var. *sativus*) is a variety of yellow nutsedge (family Cyperaceae) thought to be native to Africa, India, and the Middle East, although the species itself is known from North and South America and Europe. It is also called zulu nut, tiger nut, or earth almond. Many nutsedges can become weedy in turf and agricultural situations, and in fact, the *C. esculentus* species is considered to be invasive by some. However the *sativus* variety doesn't typically persist in a patch for longer than a few years, and the species is still recommended by conservation-based organizations like the National Wild Turkey Federation (NWTf). Chufa, like many other sedges, is characterized by its grass-like appearance, a triangle-shaped stem, and the produc-

tion of numerous, small underground tubers. These tubers are high in starchy carbohydrates, glucose, fats, and protein. The species is quite edible by humans and is actually grown as a food crop in some parts of the world. In rural North African towns, for example, chufa tubers contribute a significant percentage of the daily diet. In Spain, a non-alcoholic drink derived from the nuts, called "horchata de chufa", is highly sought after. To wild turkeys, the nuts must be just as tasty, because once they have been exposed to them, they can't seem to get enough of them either.

Chufa tubers are not technically seed (or nuts) although they are sometimes referred to as such in reference to planting. The tubers are instead modified plant tissues used in storing energy, similar to a potato. Each healthy tuber has the ability to regenerate into a clone of the parent plant. They typically form from 1 to 3 inches under the ground. Therefore, chufa patches are ideally established in sandy or loamy soils so that they can be readily accessed by scratching turkeys.

They will typically grow just fine in clay soils of the piedmont regions. But in those harder, clay soils, it may be necessary to break up portions of the patch when the plants are mature (typically around 100 days) to help expose the chufas. Another indicator of plant maturity is senescing (browning) foliage. Chufa leaves, when green and growing, form thick clumps about 24-30 inches tall, but after the plant matures, the leaves wither and die. When this happens, an abundant crop of small golden tubers should be lying just below the surface.

When planting a chufa patch, a fairly well-prepared (disked) seedbed, free of competitive weeds or pasture grasses, is preferred. The seedbed doesn't have to be manicured to the extent needed for clovers, however. Following disking, the easiest way to establish chufas is by broadcasting dormant "seed" tubers at about 40-50 lbs per acre. They can also be row-planted like corn but most managers prefer broadcasting. Planting should occur after soil temperatures begin to warm up in the spring (typical-



BACH & DEVOS
FORESTRY AND WILDLIFE SERVICES, INC.



Woodland Mulching: It Can Be Addictive!

Land Clearing- Logging Clean-up - Firelanes - Roads
call us at **334-269-2224**



Bach & DeVos operates two woodland mulchers/grinders on forestry based carriers.

Other services include timber sales, forestry/wildlife plans, burning, site preparation and planting, GPS and mapping, land sales.

ly after mid-April in the southern states) and before extremely hot weather sets in (before mid-summer). A complete fertilizer (13-13-13) and lime is typically recommended on most soils, however

exact rates will depend on your soil test. Drag or lightly disk the planted patch to cover tubers to an average depth of about 1 inch. Even after covering them, keeping the turkeys from prematurely

devouring your recently planted chufa patch can be a challenge. Scarecrows or brightly-colored flagging can work temporarily in some cases. Conversely, in other areas where turkeys have not been exposed to this somewhat un-natural food source, they must often be shown the tubers after they are mature. This is easily achieved by running a couple of disk strips through the patch. Some landowners re-disk the patch the following spring and let any un-eaten tubers regenerate for a second year. If there are lots of tubers left this can be successful, but in most cases (especially if the turkeys found them) it is best to replant each year. You should be able to gauge the density of available propagules by inspecting the ground after disking. If they are sparse, replant. Since the demand is usually much lower, chufa “seed” are sometimes more difficult to find than the more common wildlife



Food plots are excellent locations for conducting camera surveys for wild turkey flocks, and in many cases individual birds, on a property.

seed like wheat, oats, and clover. Therefore, it is a good idea to order early if you are planning to plant chufa.

Just as in other warm-season food plots, sometimes weeds and perennial grasses can be a problem in chufa patches. A non-selective herbicide such as glyphosate can be used to eliminate competition prior to planting chufas or other summer food plot species. However if weeds remain a problem after establishment there are selective herbicide options, as nutsedges are resistant to some commercially available chemicals. For grass competition, Sethoxydim can be applied directly over the chufa with no significant impacts (different formulations contain various amounts of active ingredients so see label for specific rates). For broadleaf weeds, 2,4-D is an inexpensive option that can also be applied directly over established chufa patches.

Monitoring

Like other management practices, it is a good idea to monitor the effective-

ness and use of supplemental plantings by wild turkeys. Periodic monitoring throughout the year will provide insights about if and when turkeys are using the investments you have made. If a high level of use is observed, it may be worthwhile to increase the size or availability of that particular type of planting to maximize the time turkeys spend on your tract of land. If your tract has mostly closed-canopy hardwood habitats, holding turkeys in the winter can be easy. But keeping them around through the spring hunting season can be difficult without an adequate amount of openings. A wild turkey flock's home range can vary significantly; from a couple hundred acres to tens of thousands of acres on landscapes with sparse resources. But as we established earlier, food plots can be significant in filling some of these habitat gaps. As circadian changes occur throughout the year, movements and feeding patterns can be gauged to some extent by monitoring food plot activity and use. Turkeys, like deer, can also be effective-

ly patterned and censused using remote cameras. Food plots are excellent locations for conducting these camera surveys for wild turkey flocks, and in many cases individual birds, on a property. By tuning in to how turkeys respond to openings on a property you can better understand local habits and habitat use. This understanding can be then be used to anticipate needs and provide supplemental nutrition and increased harvest opportunities through a strategic wild turkey food plot management program.

References

- Dickson, J. G. 1992. *The Wild Turkey: Biology and Management*. Stackpole Books. Mechanicsburg, Pennsylvania.
- NRCS. 1999. *Wild Turkey (Meleagris galapavo); Fish and Wildlife habitat management leaflet. Number 12.*
- Sims, K. R. 1979. *Seasonal habitat preference and food habits of the eastern wild turkey in an area under intensive even-aged timber management in west central Alabama*. M.S.Thesis, Auburn Univ., Auburn, Ala. 66pp.



We are a full service lake and land management company with over 50 years combined experience researching and managing natural resources throughout the southeast. We offer high quality service and proven products to help you achieve your fish and wildlife management goals.

“Creating quality fish & wildlife habitat from Texas to Florida”

North Carolina: Scott Brown

(336) 941-9056

Florida: Steve Lopez

(904) 484-6773

Visit us on the Web:

southernsportsmanaquaticsandland.com

A Shelterbelt For Wildlife, Your Land and You

By Steve Tillmann
Plantra, Inc.

Steve Tillmann is the Research and Development Director at Plantra, Inc., a leading designer, manufacturer, and supplier of seedling establishment and crop protection technology.



Figure 1: Shelterbelts protect a Midwest farm. The curving shelterbelt in the foreground was planted to respect the contours of a drainage course. Photo Courtesy – North Dakota State University

Winter is at again. Yet another “polar vortex” recently made the headlines when cars wouldn’t start, frozen pipes burst and folks as far south as the gulf coast felt the cold, icy reach of an unforgiving arctic blast. You’ve felt it, the kind of bone-chilling cold that can test even the best fleece, down or Thinsulate™. Yes, winter weather can make life unpleasant for us but imagine what cold temperatures and biting winds can be like for wildlife trying to simply survive. When the mercury drops, the nights are long and food is in short supply, wildlife need every advantage and a well designed shelterbelt could be the difference between making it through winter...or not.

With planting season coming up, now is the time to plan a shelterbelt for your property that will provide many years of benefits for wildlife, improvements and added value to your land and long-term enjoyment for you. To help you plan we will cover the basics and though much that follows is geared for colder climates which often

receive snow, it is important to remember that shelterbelts can have an impact wherever the wind blows, hot or cold.

Before we get too far, what are shelterbelts and how do they function? Shelterbelts are living windbreaks often consisting of evergreen and deciduous trees and shrubs planted in parallel rows that are perpendicular to prevailing winds. In its simplest form, a shelterbelt is a windbreak to reduce and redirect wind to create a protection zone. Windbreaks became common to help conserve topsoil largely in response to the dust bowl 1930's and drought years of the 1950's. Today it's hard to drive very far in many rural regions of the central and eastern US and not see farms protected by a windbreak of some kind - see figure 1.

Shelterbelt function is fairly straight forward. As wind comes in contact with a shelterbelt air pressure builds up on the side facing the wind (windward side) and decreases on the side away from the wind (leeward side). Some of the wind hitting the shelterbelt flows through or is deflected to the ends but most is directed up and over the top. Wind reduction to the leeward side creates a sheltered zone both inside the shelterbelt and behind it - see figure 2.

Shelterbelt structure, including the number of rows, type of plant species

and spacing, orientation to prevailing winds, maximum height and total length determine how effective the shelterbelt is at reducing wind speeds and achieving other benefits. More complex shelterbelts, including those that include herbaceous materials, can provide food, cover and travel routes for wildlife in addition to other landowner benefits to be discussed coming up.

Well-planned shelterbelts offer many benefits but for best results they should be designed to meet specific goals and objectives for you and your land. The first step is to define your purpose,

goals and objectives to achieve and just as importantly, to avoid outcomes that would negatively impact you or neighbors. After that we'll discuss how to plan for a shelterbelt tailored for your land and offer resources for further research. Defining goals and objectives for your own shelterbelt can benefit from a review of some of the most common functions and associated benefits.

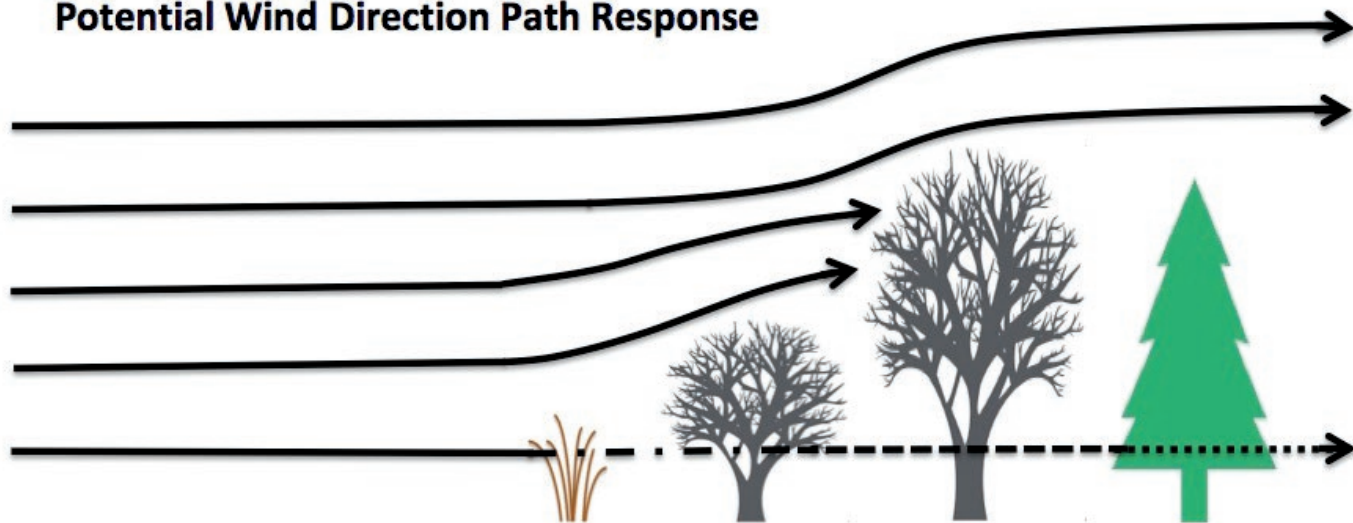
Benefit – Wildlife

On a macro level shelterbelts function to serve wildlife by increasing the size of habitat area, protecting sensitive



Figure 3: Conifer windbreak planting shown above will reduce wind in the future but if more rows had been planted to food producing deciduous trees and shrubs the benefits to wildlife would have been much greater. Photo Courtesy – Jeff Cordes

Potential Wind Direction Path Response



© Plantra 2015

Figure 2: General response paths of wind interacting with shelterbelt.

Access Bridges for all Off Road Vehicles



ATB
ALL TERRAIN BRIDGE

Better Access Better Management

Light-duty bridges for tractors, ATV's, UTV's, & more
Lightweight, long-lasting, and easy to install
Delivery and installation available

Contact us at **877.448.4282**
www.allterrainbridge.com

Proud Partner of



Proud Partner of



habitats, connecting nearby habitats, and increasing species diversity. On a species level, the benefits of shelterbelts to wildlife are many but one of the biggest is “thermal protection” to defend against harsh weather. We know winter is a tough time of year but quantifiable statistics regarding health and survival for wildlife exposed to wind and cold are tough to come by. However, extensive data does exist for how shelterbelts can help livestock and this information can testify to related benefits to wildlife.

Studies from the US and abroad report that shelterbelts dramatically increase feed efficiency and survival and reduce weight loss for cattle and other livestock in open feedlots. An Iowa study showed weight loss for cattle protected by windbreaks was slashed a whopping 50% when compared to unsheltered animals. Because shelterbelts have been proven to help the farmer's regularly fed livestock imagine the impact a shelterbelt could have for deer, turkey, quail and other wildlife below the fringe of healthy weight trying to fend off winter's cold.

In addition to thermal benefits, shelterbelts offer critical concealment for rearing, roosting, and bedding. Overhanging branches, especially on evergreen trees, and dense cover can help hide young of the year from predators. When planted to connect habitats, shelterbelts can be effective corridors allowing safer travel for wildlife and encouraging longer-term residency on your property throughout the year. Increasing the number of shelterbelt rows and plant species can significantly increase protective cover and grow the number of wildlife species that benefit.

Wildlife food was often overlooked in early shelterbelt plantings focused on soil retention and thermal benefits to structures. Today, providing food is a standard consideration for wildlife-focused landowners and managers. Shelterbelts planted with soft and hard mast producing



Figure 4. Well designed mix of herbaceous, deciduous and evergreen plants, shrubs and trees will make this young shelterbelt a future magnet for wildlife. Photo Courtesy – USDA NRCS

trees and shrubs provide important food sources during many parts of the year. Along with protective cover and safer travel routes, planting a food component in your shelterbelt can increase the carrying capacity for the area.

Benefit – Water Quality

Wildlife may be the primary consideration for many but shelterbelts can deliver many other benefits and chief among them is increasing water quality. Designing and locating your shelterbelt with water quality in mind can enhance your property (and your neighbor's) by reducing erosion and subsequent sediment and nutrient runoff. Reducing water runoff alone is huge but shelterbelts can also increase water retention, infiltration and even remove pollutants from water. If enhancing water quality is a key objective pay particular attention to both design and location for your shelterbelt to maximize its impact.

Benefit – Soil Productivity

Topsoil retention and improved soil productivity have long been at the heart of even the simplest windbreak designs. We know that losing even a few millimeters of topsoil can add up to lost tons of soil on every affected acre. One report estimated that during the mid 1930's, 850 million tons of topsoil was stripped from fields in the plains states. Considering that it takes takes years, even decades to improve topsoil and only a few short seasons to lose it the potential value of shelterbelts is hard to miss.

Today's shelterbelts can go further to stabilize and improve soil conditions by reducing scouring wind and runoff energy. They can reduce runoff and evapotranspiration by plants and capture snow all to increase soil water infiltration and recharge. Locating shelterbelts in proximity to riparian areas can aid with stream bank and shoreline stabilization. As with other desired benefits, careful design and location are critical to maximizing shelterbelt impact for soil productivity.

Benefits – Aesthetics, Visual Quality & Outdoor Recreation

Looking deeper into your shelterbelt's design can enhance how your property looks and sometimes more importantly, how another's property isn't seen. With proper plant material selection shelterbelts can enhance visual quality and interest by adding beauty to your property and by screening undesirable views. But the aesthetic benefits don't stop there as shelterbelts can reduce noise, control air pollutants, odor, and separate potentially conflicting human activities. If located near roads and other public viewpoints shelterbelts can enhance privacy by reducing visual intrusion and temptation to trespass. From a recreational view, shelterbelt design that encourages a range of wildlife use that can favor not just the sportsman but also the nongame "watchable-wildlife" enthusiast.

Benefit – Economic Opportunity

Economic return is an important reason to consider a shelterbelt for your property. Shelterbelts can provide income, increase economic diversity and boost overall value for your property.

We briefly touched on benefits to livestock, but crop yields from soybeans to strawberries can benefit from the wind-stopping power of shelterbelts through reduced evaporative demand on leaves and stems. Traditional windbreaks provided thermal protection to many a farmer's home, barn and garden. Today, shelterbelt use extends to protecting a variety of climate-controlled structures to reduce energy consumption and improve economic return to the landowner. As mentioned earlier, enhanced aesthetics, noise abatement, dust reduction and improved water and soil quality can also enhance property value.

Benefits – Protection and Safety

Not always considered at the top of the shelterbelt planning list, but no less important, is the potential to improve protection and safety for people, property, livestock and sensitive historical and natural sites. In colder regions of the country proper shelterbelt location can trap snow away from roadways, homes, commercial buildings, feedlots and other areas where accumulations could be hazardous. If located in prox-



*Figure 5. Shelterbelt protects farm crops. Though only several rows wide this shelterbelt contains thick cover and a mix of plant species that can also benefit wildlife.
Photo Courtesy – Robert Harsel, NDFS*

imity to riparian areas or highly erodible zones shelterbelts can reduce water energy and related floodwater damage – see figure 6. Visual screening can prevent poachers from shooting at game on your property and risking people and livestock as they do – see figure 7.

Planning

The best shelterbelts start with a plan. And central to a good plan are purpose,

location and design. Identifying what you want to accomplish from the outset will help guide plant selection, reduce installation costs, and help maximize benefits to your property.

Purpose - Be clear and honest about your goals, objectives and budget to establish a shelterbelt. Think the entire process through to determine:

- Why am I doing this? What do I want to accomplish and are the benefits I

want to see realistic for my property?

- Do I want to provide food, cover and travel routes for wildlife? Be specific to match the needs of target wildlife species, compatible plant materials and design.
- Does the shelterbelt need to provide thermal protection for buildings and livestock areas? Understand the design and location implications to maximize impact.
- Do I want to minimize soil erosion and nutrient run-off, enhance crop yields and encourage water infiltration? A thorough site assessment will help clarify potential benefits and impacts.
- Am I concerned about safety issues including lack of privacy or protection from storm or floodwater damage? Knowing how your property is impacted both within and beyond its boundaries is crucial.

Site Assessment – Inventory – Before breaking ground it is absolutely critical to take stock in your property's resources and regional location to maximize the benefit from your shelterbelt and to minimize negative outcomes to neighbors. There are many considerations to be



Figure 6. Two-legged shelterbelt protects community by trapping snow in the field between the shelterbelt and nearby homes. Because of its large size this shelterbelt is able to connect distant habitats and act as a travel corridor for wildlife. Photo Courtesy – MN D.O.T.



Figure 7. Heavy, thick rows of conifer trees on backside of shelterbelt can screen prying eyes from vehicle travel routes. Photo Courtesy– Aaron Bergdahl, NDFS

made but the list below is a good start:

- Complete physical land description with aerial and topography maps showing existing resources, property boundaries, utilities, water resources, man-made structures, adjacent land uses and potential impacts. Also, does your land qualify for cost-sharing initiatives?
- Soil map and descriptions especially as they relate to hydrology, susceptibility to erosion and suitability to support the type of herbaceous and woody plants you would most like to grow and that would grow best on your site.
- Thorough existing vegetation inventory including herbaceous, woody, and aquatic shoreline plants. For woody plants include data on species/stand composition, age class data, density, health and quality. Included here would be site index and suitability ratings for plants you would like to see in your shelterbelt.
- A wildlife survey of existing species and desired species will be essential to making choices about shelterbelt location and plant species composition.

Location On The Property –

Understanding where to plant your shelterbelt can make all the difference:

- Wildlife habitat – Locate shelterbelts in close proximity to other productive habitats, especially winter food and dense cover that will persist over the coldest months. Doing so will encourage wildlife to use your shelterbelt more frequently as a travel corridor and stay on or near your property more during the year.
- Energy conservation – Locating shelterbelts in proximity to climate controlled buildings, open feedlots and corrals can reduce energy and livestock maintenance costs.
- Soil, Water, and Crop Benefits – Consider locating shelterbelts to protect sensitive, high value crops, areas susceptible to wind and water erosion, and areas with potential to enhance water infiltration and quality.
- Safety and Privacy – Locate shelterbelts to screen your land from uninvited guests. Know where your property boundaries are and be sure to keep shelterbelts a safe distance

from roads and driveways to minimize snow accumulations directly on the roads in colder climates.

Also keep the ends of shelterbelts from obstructing driveways where visibility should be maintained.

Shelterbelt Design

Knowing what you want to accomplish and where to plant are the first steps in shelterbelt planning. Choosing the proper design will maximize the desired benefits. The following are general considerations. Consult with a forester or local conservation professional before making specific plans.

Shape – Size – Many shelterbelts have one leg oriented perpendicular to the prevailing wind for the season of greatest benefit. Others have two, three or more legs to block the wind from multiple directions. As a general rule, wider is better but your land, budget and objectives will be the deciding factors. Figure 8 illustrates how adding a leg to or doubling the length of a single leg shelterbelt can increase the protection zone.

Many older shelterbelts were only 1-3

CONSERVING.... PRESERVING... EVOLVING... MOTHER NATURE



Specialty Lumber:

- Cabins
- Pavilions
- Barns
- Structural Beams
- Custom Lumber Siding
- Band Sawn Lumber
- Multiple Native Species
- Up to 26" wide
- Up to 26' long

Wood Products

- Pallets
- Crates
- Wood Biomass
- Mulch, Natural & Colored
- Pine Bark
- Topsoil



S I N C E 1 9 4 0

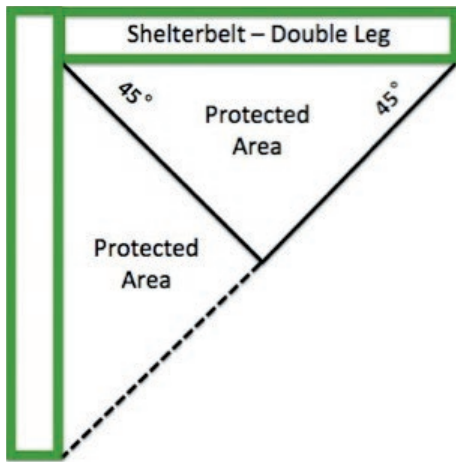
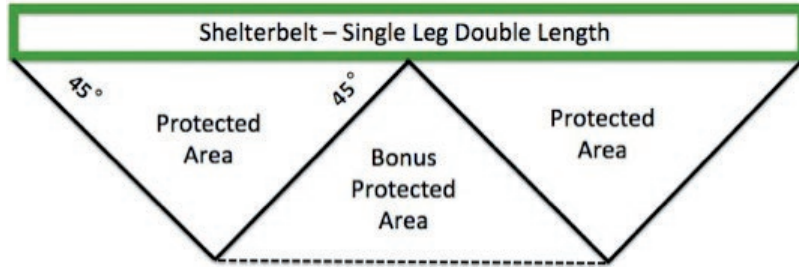
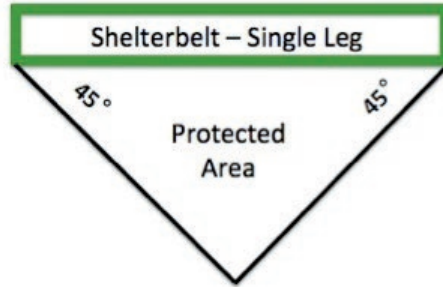


Figure 8. Shelterbelt design can produce a range of protection zones. Adding length and/or legs to your shelterbelt can dramatically increase impact.



rows deep. New designs often recommend at least 5-7 rows of woody plants for effective wind breaking power and if one of the goals is wildlife habitat then even more rows should be considered. For maximum benefits shelter-

belts should:

- Be at least 150ft wide on each leg or side to maximize wind stopping power enhance habitat potential;
- Have the ends extend at least 50ft past livestock corrals and buildings

and have the back edge located at least 75ft from the nearest structures, driveways or roads to avoid snow accumulation directly into these areas.

Density – Defined generally, shelterbelt density is a measure of resistance to wind moving through or across a shelterbelt. Resistance is related to the mass of vegetation including stems, trunks branches and foliage present to block wind. More precise definitions include “vegetative surface area density” which is the vegetative surface area per unit canopy volume and “cubic density” which is the vegetative volume per unit canopy volume. But for our purposes here a low-density shelterbelt would allow more wind to pass through than one with a higher density.

When considering shelterbelt density it is important to balance plant choices with desired wind-stopping potential. For trees and shrubs of similar size conifer trees stop and deflect more wind than deciduous trees. However, many deciduous trees, shrubs and

THE ROAD TO PARADISE IS PAVED WITH DIRT.

Hunting? Fishing? Or just muddin'? Alabama Ag Credit and Alabama Farm Credit offer financing for any type of rural recreational land, so you can enjoy your home away from home. Or your home away from everything. We can help with a loan for a weekend cabin or permanent home, as well as improvements such as wells, fences, new lakes or land clearing. If you choose to build on your land, we'll roll your construction and real estate loan into one easy mortgage, at terms that meet your personal needs. Call us today to check out your financing options. Then head for the country to live life at your own pace.

FINANCING LAND & FARMS SINCE 1916



AlabamaAgCredit.com
1-800-579-5471



AlabamaFarmCredit.com
1-877-681-6087

- Land purchasing and refinancing
- Operating expenses
- Livestock financing
- New and used equipment purchases
- Varying terms and rates



grasses can provide more food, rearing and nesting habitat options for wildlife. As mentioned earlier, a good shelterbelt design incorporates evergreen, deciduous and herbaceous plants for maximum benefit.

Plant spacing within the row and between rows impacts shelterbelt density. Be sure to consult with your area forester and land expert to determine optimal plant spacing for your project based on soil characteristics and annual precipitation - see table 1.

Height – Depending upon their density shelterbelts can reduce wind speeds by 65%-75% in the protected area within 5 times the height of the tallest shelterbelt trees. For example if the tallest trees in the shelterbelt are 40ft tall maximum wind reductions could occur in a zone extending 200ft beyond the center of the leeward side. The further the distance from the backside of the shelterbelt the less impact the shelterbelt has which is a good reason to include tall trees in your design as shown in in figure 9.

Species Composition – The best

Recommend minimum spacing between trees and shrubs within a row	Irrigated or dry land receiving 16 inches or more annual precipitation		Dry land receiving 16 inches or less annual precipitation	
	Multiple-row Shelterbelts (feet)	Single-row Shelterbelts (feet)	Multiple-row Shelterbelts (feet)	Single-row Shelterbelts (feet)
Dense shrub	4	3	4	3
Medium sized deciduous	10	6	10	8
Tall deciduous	12	8	12	10
Medium evergreen	10	6	10	8
Tall evergreen	12	8	12	10

Note:
 Min. spacing between rows for irrigated or dry land with > 16in annual precipitation = 16ft
 Min. spacing between rows for irrigated or dry land with < 16in annual precipitation = 20ft

Table 1 – Recommended minimum spacing between trees and shrubs within a row and minimum spacing between rows. Data Courtesy USDA NRCS

shelterbelts for wildlife include multiple rows with a mix of herbaceous, deciduous and evergreen species. One proven design uses the following row arrangement - starting from the windward side: grasses, deciduous shrubs, small deciduous trees, large deciduous trees, ending with tall conifer trees - see figure 10.

Be sure to choose a diverse mix of

plant materials that will grow well on your site and that provide the greatest range of benefits. Diversifying with evergreen, deciduous and herbaceous plants and within each group will promote better health and reduce the risk of disease or insects taking out all or a large part of your shelterbelt in a short period of time.

Thank You to our loyal Customers for 15 years of support!

- Late season Pears, Apples, Crabapples and Persimmon.
- Chinese Chestnuts producing 50-100 lbs of nuts per tree at ten years of age
- Grafted female late drop American persimmon



Improving Wildlife Habitat One Tree at a Time!

See Us on Facebook !!



The Wildlife Group

2858 County Road 53 • Tuskegee, AL 36083

800-221-9703

www.wildlifegroup.com • email Allen@wildlifegroup.com



Prevailing Wind Direction →

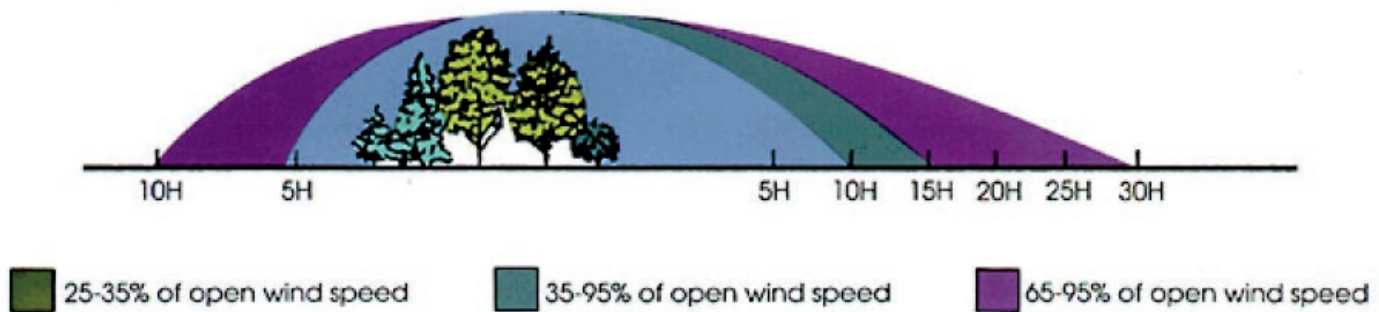


Figure 9. Diagram illustrates effect of shelterbelt height on protection on leading and trailing protection zone size. Values represent multipliers of height (i.e. 5H = 5 X the maximum height of the tallest trees in the shelterbelt). Image Courtesy University of Arkansas

Our experience in the 1970's with Dutch elm disease taught us a painful lesson when we rely too heavily on one species. Unfortunately many locales did not learn from this mistake and opted to plant overwhelming numbers of ash trees. Today these communities are paying a severe price as the emerald ash borer ravages its way across many parts of the eastern US killing countless ash trees in its path.

Another way to diversify your shelterbelt is to select trees having different lifespans and growth rates. Doing so will allow future replanting of part of the shelterbelt without having to replant entirely. Also, don't forget to include plant species that will provide a range of food and cover sources for wildlife. For example, plant soft mast (fruit) for summer and early fall food, hard mast (acorns and nuts) for fall and winter food and conifers to provide thermal cover.

Other considerations – Pay attention to practical aspects of shelterbelt design and location. Avoid blocking winter sun, scenic vistas, and the ability to see approaching traffic near driveways and road access points. Leave enough room

to use mowing and other equipment in around the shelterbelt. Protect shelterbelts from grazing animals that damage and kill shrubs and trees. Be a good neighbor. If trails or access lanes are included in your design be sure to orient them at angles to prevailing winds to minimize wind that could otherwise blow through -see Figure 11.

Shelterbelt Establishment & Maintenance – Planning and planting a shelterbelt are only the beginning of the project. To maximize shelterbelt potential you'll need to budget for seedling protection including tree grow tubes and flexible stem-building support stakes for the broadleaf trees and wider mesh tubes for the shrubs and conifer seedlings - see Figure 12. And don't forget about weed control. Weed barrier in rolls or individual weed mats can help get your seedlings growing faster and healthier. And to keep your trees growing strong provide supplemental water during drought periods and prune storm or animal damaged stems and limbs. Your shelterbelt will deliver benefits for many years to come. Extra

efforts to keep your plants healthy and growing in the early years will pay off many times over down the road.

So what's next? Contact your local forester or conservation professional to learn if a shelterbelt would be a good fit with your property and explore cost-sharing options that may be available. Start gathering data on your property and estimate what you would be willing to pay to enjoy what shelterbelts can do for your land. Spending time during the winter months to plan your shelterbelt will make things go faster in the spring when it comes time to plant. Why wait? A shelterbelt that's right for your property can start delivering benefits in a few short seasons that will last for generations to come but only if you get going now!

References

- Boehner, Patricia and Brandle, James R., *Windbreak Establishment, University of NE-Lincoln Extension Bulletin EC1764*
- Bentrup, Gary, *Conservation Buffers – Design Guidelines For Buffer, Corridors, and Greenways, USDA Forest Service Southern Research Station, General Technical Report SRS-109 September 2008*

Prevailing Wind Direction →



© Plantra 2015

Figure 10. Recommended blending of herbaceous, deciduous and evergreen plant materials.

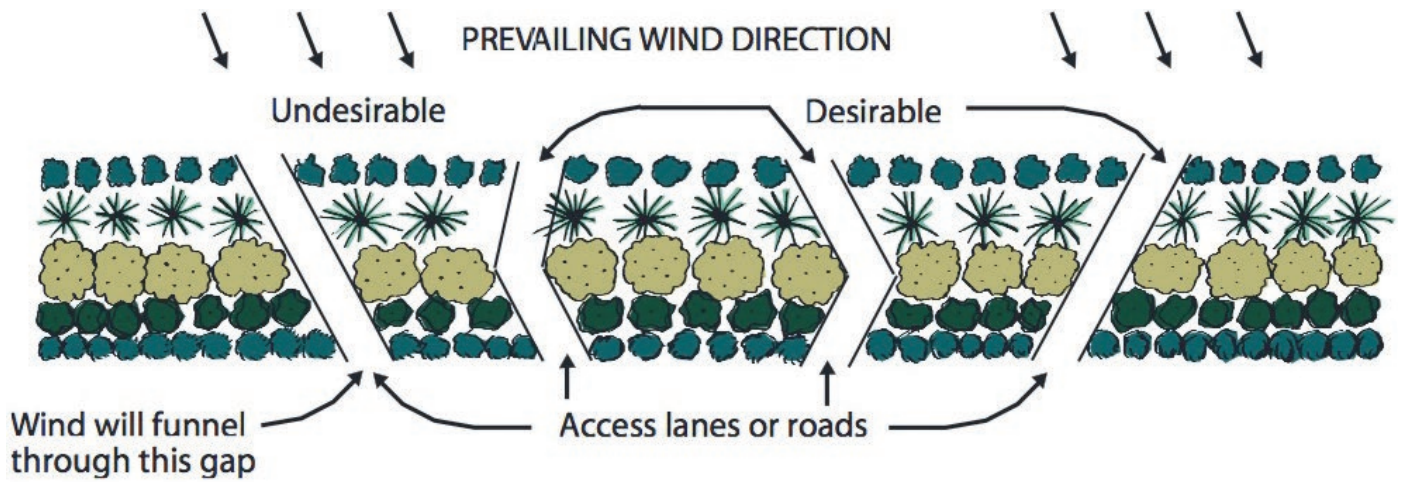


Figure 11. Orient access lanes away from prevailing wind direction to minimize wind through these corridors. Image Courtesy University of NE-Lincoln Extension

Bolen, Eric G. and William L. Robinson. 1995. *Wildlife ecology and management*, Third Edition. Prentice Hall. Englewood Cliffs, New Jersey: 279-283.

Brandle, James R., Hodges, Laurie and Zhou, Xinhua, *How Windbreaks Work*, University of NE-Lincoln Extension Publication, EC1763

Brandle, James R. and Wright, Bruce, *Windbreaks For Rural Living*, University of NE-Lincoln Extension Publication, EC1767

Brandle, Gardener, John, and Quam, Vernon C., *Windbreaks For Rural Living*, University of NE-Lincoln Extension Publication, EC1772

Cowen, William F. Jr. *Windbreaks*. Ohio State University Extension.

Gregory, N. G. (1995), *The role of shelterbelts in protecting livestock: a review*, *New Zealand Journal of Agriculture Research*, 38:4, 423-450

Gimme Shelter – *Shelterbelts and Food Plots For Wildlife*, *Wildlife and Your Land* Publication, WI DNR

Hanley, Donald P. and Kuhn, Gary, *Windbreak, Shelterbelt and Landscaping Technology*, Technical Note #13, Spokane, WA USDA NRCS, 2005

Josia, Scott A. and Wilson, Jon S., *Windbreak Design*, NEB Guide G1304, University of NE-Lincoln Extension, March 2004.

Kotchman, Larry A., *North Dakota Forestry Best Management Practices*, NDSU-ND Forest Service, 2010

Kuhns, Michael, *Windbreak Benefits and Design*, *Utah Forest Facts*, UT Extension May 2012.

Ohio Trees. Ohio State University Extension.

Rodewald, Amanda D. and Santiago, Mellisa J., *Shelterbelts For Wildlife*, Fact Sheet W-16-04, Ohio State Extension

Slusher, John P. and Wallace, Doug, *Planning Tree Windbreaks In Missouri*, *Agricultural MU Guide*, University of MO-Columbia. August 1997.

The Economics of Native Shelterbelts Report, Basalt to Bay Land Care Network, VIC, AUS, Jan 2014

Windbreaks/Shelterbelts as Wildlife Habitat, Job Sheet Insert 380, USDA NRCS SD, April 2004

Windbreak/Shelterbelt Conservation Practice Job Sheet, USDA NRCS April 1997

Working Trees For Wildlife, USDA National Agroforestry Center Publication

Zhou, X. H., Brandle, J. R., Takle, J. S. and Mize, C. W., *Estimation of the three-dimensional aerodynamic structure of a green ash shelterbelt*, *Agricultural and Forest Meteorology* 111 (2002) 93-10



Figure 12. Soft mast trees loaded with fruit help this shelterbelt maximize benefits to wildlife. Note that the fruit trees are protected with grow tubes. These trees were planted as 12in bare-root seedlings and were in their 5th growing season when the photo was shot. Photo Courtesy –Plantra, Inc.

Not All Lakes Are Created Equal



After an initial site visit to electrofish, collect water chemistry data, physical data (acreage, depth, shape and contour) and inventory aquatic vegetation, it's hard to tell a client (landowner) the issues with his lake(s). They want to hear, and we want to tell them, it is in good shape and we can make it even better to Quality or Trophy status with little work or money. However, not all lakes are created equal, and this doesn't always mean the landowner has done anything wrong. Knowing the potential of a waterbody helps in setting goals and creating a lake management strategy. Some lakes and ponds are naturally highly productive and grow lots of fish, and quality fish. Those are easy for a lake manager to improve from Good, to Quality or Trophy status. I've seen these lakes tucked away on farms or out in natural areas where everything is just right with no management techniques implemented. Some lakes are naturally average, but with the proper management techniques implement-

By Scott Brown

Scott Brown is a biologist and regular contributor to *Wildlife Trends Journal* with over 30 years experience in research and managing natural resources throughout the southeast. Scott founded Southern Sportsman Aquatics & Land Management in 2007 and now has clients from Texas to Florida, and into the Carolinas. Scott can be reached at scott@southernsportsmanaquatic-sandland.com or (336) 941-9056.

This area of this waterbody is shallow, with submerged vegetation at the surface. Without deepening, this will never develop into a quality fishery.

ed, become Quality or Trophy Lakes. Then there are those lakes that have a key, or several key elements lacking that may require a lot of work and money just to reach Good status, and never become Quality or Trophy status. We have seen waterbodies where without substantial financial investment they will never be more than decent fisheries. There is no waterbody that cannot be improved, but knowing the limitations based on the budget helps. We tell all our clients that almost any waterbody any size can be turned into a high quality fishery. But it may take endless hours of work and a substantial financial investment that will never end.

Waterbody Location

The location of a lake is important to assure it gets enough water to sustain depths beneficial to fish. A lake that is too deep is generally easier to manage than one that is too shallow that will habitually cause issues and create setbacks until it is deepened. Problems most associated with lack of depth are water temperature and dissolved oxygen. Some fish species have a cold water temperature threshold where they become stressed or die if water temperatures in the winter drop below a certain level. Some species become stressed and die when water temperatures reach certain elevated levels in the summer. If the waterbody has some depth, the fish can move up and down in the water column during these periods stress free, continue to grow at a desirable rate and thrive. If the waterbody is four-to-six feet deep, temperatures on the bottom are exactly the same as the surface and certain species and size classes may struggle at different times of the year. Lack of depth during summer can raise temperatures and reduce dissolved oxygen levels, stressing or killing juvenile and adult fish. Stress to a fish interferes with their feeding habits, reproduction cycles, and young-of-year survival. All are detrimental to creating a quality fishery. Obviously moving a lake is not

feasible, but if lack of water is the issue, redirecting water, or adding a well or pump can help. Each comes with a price tag that may or may not fit your budget, and has its limits on how large of a waterbody this can be performed.

The location also may be where the waterbody receives water with poor water chemistry from upstream. This may be from high nutrient agriculture runoff or soft, low productive swamp/marsh water where the pH, hardness and alkalinity are below desirable levels. In a waterbody 5-10 acres, these can be remedied. But if your waterbody is over 25 acres, techniques to fix these problems become expensive. The first thing land owners say is “I can add lime to correct the water chemistry”, which is somewhat correct. However, the cost on larger waterbodies deters most folks from being able to do that. Also, the rate that the undesirable water flows in determines how long the lime treatment will last, before it has to be repeated.

Physical Characteristics

We’ve already touched on depth in regards to a lack of water being added. Lack of depth can also be caused if the

lake was not originally built deep enough to begin with or it has filled in over the years. Lakes have a life span and gradually fill in with sediment from erosion and/or with organic materials from dead vegetation. The shallower they get the more vegetation grows in them and the quicker they fill. A lake can be restored by draining and scraping or dredging. This process turns back time and rejuvenates the lake by improving water chemistry and habitat, which as a result improves the fish population.

Most desirable private pond fish species are edge (literal zone) species, the more shoreline the more largemouth bass and bream/panfish you will have. If you do perform a lake restoration project (deepen lake) consider creating irregular shorelines or use removed material to make earthen “fingers” that extend out from the existing shoreline to create additional shoreline.

If building a new lake or restoring an old one, make sure it starts deep enough (eight feet during drought) so it will last several decades without needing deepening, along with irregular shorelines. Also, create fairly steep shoreline slopes to deter excessive vegetation growth.



This aerial is the same waterbody as the picture on page 24. There is an area that can be deepened and managed for quality fish, while leaving the swamp and marsh areas as a juvenile fish nursery and for adults to feed and reproduce when water quality is good in spring and fall as well as a waterfowl area for observing or hunting.

Proper design, erosion control and vegetation management will all help prolong the life cycle of the waterbody.

Water Chemistry

Water chemistry is the foundation of an aquatic ecosystem, and the better it is, the better the fish population. Not every lake has a perfect constant dissolved oxygen level or pH and an algae bloom (green water) with visibility of 24 inches 10 months of the year. Some lakes have constant muddy water. Some lakes have tannin stained dark tea-colored, low pH, hardness and alkalinity water. Some lakes have crystal clear, possibly spring fed, able to see 20 feet down water. All types will grow fish, but the one with the algae bloom is the most productive. Research has shown green waterbodies can be up to 400% more productive than the others. Management techniques can be done to change the other types of waterbodies to achieve a highly productive green lake, or changing other factors besides water chemistry will improve the fish

population. Again, if the waterbody is too large to implement certain management techniques, you will have to deal with what you have, and help the fish population in other ways via habitat improvements, stocking and/or supplemental feeding.

Looking at what causes these water chemistry issues and trying to fix the source is better than trying to solve the problem with temporary fixes. Sometimes the cause is much easier to identify than implementing a long term solution. In some instances, the short term fix is all that is available and must be decided on by the landowner to fund or not.

Vegetation

Vegetation for a lake manager is a constant battle, with either too much, the wrong species (exotic) or not enough. Having too much or exotics present usually means herbicide treatments and/or the stocking of grass carp. Depending on the problematic plant species, herbicide treatments can be expensive even on small waterbodies,

and not feasible on large lakes due to cost. In many situations, excess vegetation may be the result of excess nutrients in the lake either from organic build-up on the lake bottom or nearby runoff. High organic build up on the lake bottom can be caused from vegetation dying in the lake or organics washing in from nearby. High nutrient runoff can be produced by residential areas (lawns), agricultural areas (livestock and/or crops), and natural areas where flooding may have occurred in an area where there is a lot of dead plant material, such as a marsh or floodplain. A normally green waterbody will turn clear if the vegetation in the lake is using up all the nutrients and not allowing an algae bloom (planktonic) to form. Excessive filamentous algae (sometimes referred to as pond slime) will start on the lake bottom, then pop to the surface during its life cycle causing an unpleasant looking eyesore when out of control.

Too little vegetation in a large or small waterbody can be corrected by trans-



GROW 'EM STRONG

Improving deer quality & the hunting experience in Alabama

Alabama DEER ASSOCIATION

For membership questions, please contact Belinda Kennedy:
256.990.3840 or bmk@mindspring.com

planting desirable plant species either purchased from a nursery specializing in aquatic plants, or from a donor site in the existing waterbody (works best).

Fish Population

The waterbody's physical features, water chemistry and habitat need to be evaluated before looking at the fish population. Knowing the limiting factors and whether you want to and can change those factors need to be decided on and performed before stocking additional fish. Knowing the limitations of the previously mentioned parameters will provide you with an idea of the potential of the fish population you desire in your waterbody. If you are not starting from scratch (building or restoring a lake) be flexible and know



These fish are generally associated with poor water quality. Upper Left: spotted gar. Upper Right: American eel. Lower Left: yellow bullhead. Lower right: bowfin.



This healthy largemouth bass lives in a small, unproductive, shallow lake/marsh, but there are very few of them. Some management techniques can be implemented to improve the fishery and increase the numbers, but cold or hot weather and poor water quality will always play a role in slowing down growth and reproduction of the desirable species.

the limitations. Don't try to create a trophy largemouth bass fishery in a situation that doesn't allow it. If your existing waterbody is more suited for feeders and bream/panfish or channel catfish, consider it. You can still have largemouth bass, but maybe not as many as your neighbor who has lots of big bass in his lake that is suited for growing them. Knowing the dynamics of the waterbody will also provide information to help with stocking strategies. Just stocking more species of the fish you want is normally not the correct solution. Many lake owners think if they want more largemouth bass they just need to stock more. If you think that way, you need to look at the problem in the opposite direction. Throwing more bass into a waterbody that is currently at carrying capacity is a waste of money and detrimental to the bass already present. There are already limiting factors in place, and those need to

be identified and improved upon so the bass already there will grow and reproduce at full potential.

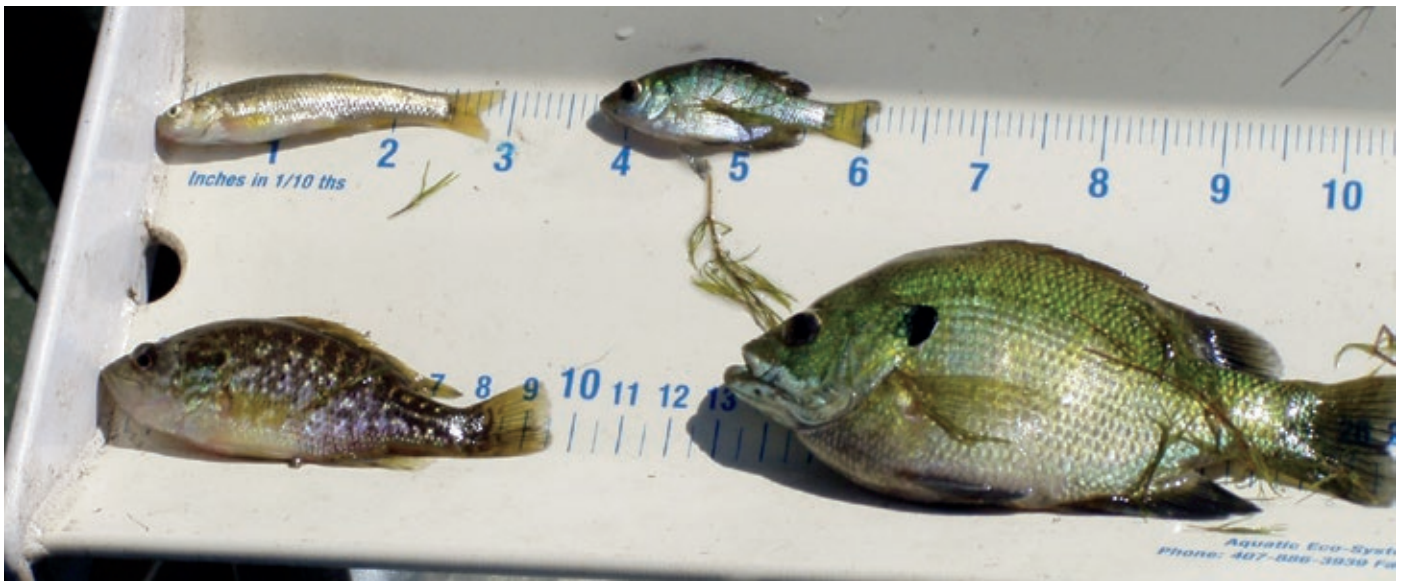
If additional stocking of a species (usually additional forage) can be done to improve the fishery and assist you in achieving your objectives, try to do it in a way where they will be self sustaining and not just an expensive fish feed. On many occasions we have advised against a threadfin shad stocking due to lack of food for them (planktonic algae) in the waterbody. They can be stocked in a crystal clear lake, but chances are they will not survive or reproduce, so once they are eaten or perish due to lack of food they will need to be restocked. There are only so many options available when it comes to stocking. Just because a desired fish species is in a nearby public lake doesn't mean they are available from a hatchery. Sometimes this is discouraging to both the Lake Manager and landowner

because you know the species will survive but there is no way to obtain enough individuals to get a population started in your lake. There are forage species such as tilapia, trout and yellow perch that we know will perish from water temperatures being too warm or too cold, but as long as we know that up front it may be acceptable and a forage option. Although not a fish, crayfish can also be used as an alternative forage for some predator species. However, unless your waterbody will support them, you will have to frequently restock, and it could be annually.

In some situations maybe the parameters mentioned above are best suited for open water fish species. If this is the case, consider creating a crappie or Morone hybrid fishery instead of largemouth bass and bream/panfish. But make sure there is forage in place, or forage can be stocked and it will survive and reproduce.



This lake owner hit the jackpot! The lake has deep water, plenty of fish habitat for bream/panfish, largemouth bass, crappie and all their forage. The annual algae bloom helps grow fish at an accelerated rate and keeps numbers higher than average.



Here are various forage species found in a crystal clear lake that has a Southern Naiad problem which is kept in check with herbicides and grass carp.

This article is in no way to discourage you from trying to improve your fishery. All fisheries can be improved and need constant tweaking. This information is also helpful for someone looking at property with an existing lake or with plans on building a dream lake. But know the limitations of the waterbody

and your budget so you don't get discouraged. Bigger waterbodies generally require bigger budgets for intense management practices, depending on what is being done to improve the lake. There are bigger lakes needing little management for quality or trophy fisheries, and there are smaller lakes requiring intense

management practices and large budgets to create Quality or Trophy status. If your goals are unachievable, you and your Lake Manager will get discouraged. But if you both know the possibilities and stay within those parameters, you will have a waterbody you are happy with for years.



**DISTRIBUTION OF HERBICIDES • AERIAL APPLICATION OF HERBICIDES USING HELICOPTERS
FORESTRY, RIGHTS OF WAY, AQUATIC, RANGELAND AND PASTURE • AGRICULTURE**

HEADQUARTERS: LOUISVILLE, MS • 662.779.2183



Wildlife Trends Journal Management Calendar

By Dave Edwards

February/March 2015

Dave Edwards is a certified wildlife biologist and regular contributor to *Wildlife Trends Journal* and other hunting/wildlife publications. Dave was honored as QDMA's 2007 Deer Manager of the Year and nominated in 2011 as Alabama Wildlife Federation's Wildlife Conservationist of the Year. Dave is General Manager for Cabin Bluff Lodge and President of Tall Tines Wildlife & Hunting Consultants, Inc. Contact him at Dave.Edwards@CabinBluff.com or 912-464-9328.

Although habitat management ranks much higher on my priorities, intense and routine predator removal can benefit game species.



Scout for new deer stand locations.

Late winter/early spring is a great time to be outdoors and the perfect time to learn more about your property, find areas that could be improved, and figure out how deer or other wildlife use your property. Learning these things will help you maximize the value and use of your property. I often use squirrel hunting as an excuse to be in the woods learning a property and scouting

for deer sign. Squirrel season runs through February in many states and can offer some great excitement. As I have mentioned in past calendars, February and March is my favorite time to learn how deer use a property and strategize on new stand locations. Because deer have been exposed to a great deal of hunting pressure over the past few months, they are using areas that they are most comfortable in and feel safe. If you find out where they are

“hiding” now you will know where to find them next season once the hunting pressure builds and deer seem to disappear. During this time of year, buck sign such as trails, rubs and scrapes are still fresh. Relocating stands now allows deer to get used to seeing them over the summer. Although you will have to touch them up before the season starts next year, late winter is also a good time to trim shooting lanes around deer stands. Late winter or early spring

scouting also reduced the need to conduct full-scale scouting missions right before or during the hunting season next year. Scouting during that time of year leaves a lot of scent through the woods and in key areas you plan to hunt adding to existing “hunting” pressure altering deer movement.

Trap Predators.

Hunters are quick to blame predators such as raccoons, opossum, skunks, coyotes, fox, or bobcats where populations of game wildlife are declining. However, in most cases the cause for game species population decline is often caused by reduced reproductive performance or survival of their young due to poor habitat or harvest management strategies. That is, it’s foolish to blame predators for poor quality deer hunting if your deer herd is “crashing” as a result of being overpopulated and is experiencing poor fawn production due to poor overall herd health. Or blame predators for a declining turkey population if you are not managing or providing quality nesting and brood rearing habitat to promote good poult survival. So before initiating efforts to remove predators, consider habitat quality and/or strategies you are applying to improve it. If habitat quality is not good, your time and money may be best spent managing habitat verses predator control. Having said this, on properties where habitat quality is generally good, intense localized predator control can increase survival/recruitment rates of species such as rabbits, quail, turkeys, and deer. Intense is the key word here. Simply throwing a few traps out on the weekends will not have much effect on predator populations. Having a significant impact will require intense trapping over a period of time that results in many predators being removed. It is also worth noting that predator populations can rebound quickly. Similar to the response of a deer herd after an aggressive harvest, a reduced predator population with less competition for



Post-hunting season is THE time to scout for next season.

quality resources will have increased reproductive rates. Thus, trapping efforts need to be applied every year to be most effective and produce the best results.

Plan and schedule timber harvest activities

If you have timber that needs to be harvested, cutting it during the dormant season (winter) or early in the growing season (spring) enhances its wildlife value during the first year after the harvest. Harvesting timber during this period gives plants the entire growing season to regenerate resulting in increased desirable food and cover for wildlife. Conversely, if timber is harvested in the middle of summer (mid-growing season)

plants do not have as much time to germinate and grow. Thus, the resulting vegetation will not provide as much benefit to wildlife during the first year. Obviously, local timber markets and timber prices play a significant role in the decision to harvest timber, but if markets are right, harvesting during winter or spring will increase the wildlife value of the area during the first year.

Collect shed antlers.

Trail cameras can be a great tool to help determine when bucks shed antlers on your property. Timing of antler shedding varies across the whitetail's range. However, once you determine when it occurs on your property, it is safe to say that it will take place around the same

time each year. Research has shown that bucks normally shed both antlers within 1-3 days. While conducting late winter camera surveys I've observed many bucks that shed both antlers within a matter of hours. Collecting antler sheds can be a fun spring activity for the whole family. Shed collecting not only provides a great opportunity to spend time with your family, but also provides some insight to the quality of your deer herd. After a few seasons, compare the quality of sheds found from different years. If your program is moving in a positive direction, you should be finding more and larger antlers each year. Obviously, larger antlers are easier to find! Key areas to concentrate your searches include food plots, fields,



Trail cameras are a great tool to help determine when bucks shed their antlers in your area. It certainly feels good finding the sheds of a buck you hoped survived the hunting season!



Fertilizing roadsides or patches of quality vegetation is a great way to increase food and cover on the property you hunt. Isolated patches often turn into great hunting locations. Note the significant growth response of the left side of this patch of honeysuckle.

around feeders, and along trails where deer must jump (over fences, ditches, etc.). Training Labrador retrievers to find sheds has become relatively common and may offer additional outdoor adventures for you and your best friend.

Fertilize select roadside areas to increase food and cover for wildlife.

Roadsides and right-of-ways generally have more native plant growth than areas deeper in the forest – especially if there is a closed canopy. The abundance of vegetation along a roadside is the

result of receiving additional sunlight. Coincidentally, areas along roadsides are usually areas that are easy to manage by disking, mowing and fertilizing to enhance the quality and quantity of plants beneficial to wildlife. Once spring green up begins, select areas that have wildlife friendly plants such as ragweed, greenbriar, honeysuckle, etc, and apply fertilizer to enhance their growth and nutritional value. If you are fortunate enough to have a side broadcasting spreader, simply drive down the roadside broadcasting fertilizer. If you have a typical cyclone spreader, select

areas you want to fertilize, then back the tractor up to the spot and spread the fertilizer. This method obviously takes more time than a side broadcast, but it more common. Although some people take soil tests to assess soil nutrient levels to determine how much fertilizer to apply, a general application is 200 lbs. per acre of a balanced fertilizer. An additional strategy that will promote desired plants/vegetation is to apply selective herbicides within the areas you are fertilizing or managing. Doing so will remove undesirable or less valuable plants and reduce competition for



the vegetation that remains. One of my favorite times to apply spot-specific or roadside area fertilizer is a few weeks after the area has been burned.

Prune fruit trees.

Pruning is a management strategy that will improve the health of fruit trees as well as enhance fruit production. Moderate pruning is usually best. Heavy pruning dwarfs trees and may delay fruit bearing, and is especially undesirable for young trees. Proper pruning shapes the tree's structure for life. Prune young trees to establish a strong scaffold system with wide-angled, well-spaced branches that will not split from high winds or heavy crops. A well-trained young tree bears heavy crops early and continues to bear efficiently. The dormant season is the best time to prune fruit trees, although dead or diseased branches may be removed any time. Prune fruit trees regularly, preferably every year. It is a mistake to neglect



Old apple trees often respond well to pruning. Be sure to keep primary support limbs to support abundant fruit crops.

trees for years and then prune them severely. Old trees, such as in an abandoned apple orchard, can sometimes be rejuvenated and will respond better with an initial heavier pruning.

Plant supplemental fruit trees and/or other wildlife friendly plantings.

Supplementing your property with plantings of oaks, chestnuts, pears, crabapples, plums, or other wildlife friendly trees and shrubs is a great way to enhance both the esthetics and wildlife value of your property. Late winter through early spring (before spring green up) is the best time to plant most wildlife friendly trees/shrubs. Planting a variety of trees/shrubs will ensure that a variety of food sources are available throughout the year. The plantings should be strategically placed around food plots or fields, along roadsides/intersections, or other areas that will receive adequate sunlight. If quail management is one of your goals and your property has lots of open land, you may consider establishing hedgerows for additional quail habitat. Hedgerows are often created using wildlife friendly plantings such as plums, dwarf chinquapin or sawtooth oaks along with other shrubs. Hedgerows can be enhanced by planting adjacent strips of partridge pea or food strips of corn, Egyptian wheat, sorghum, or millets this spring/summer. The Wildlife Group is an excellent source for obtaining beneficial wildlife trees/shrubs as well as getting advice on planting strategies and tips.

Deer stand preventative maintenance

While it is not a fun job, deer stand maintenance will prolong the life of stands and their accessories and in some cases will prevent tree damage during the growing season. Things such as removing seat cushions, camo wraps, shooting rest padding, and/or actually pulling deer stands out of the woods and storing them out of the weather will

significantly increase their life and save money in the long run. Squirrels and Mother Nature can and will ruin a deer stand in as little as one summer. Taking the time to label parts (cushions, wraps, ladder sections, etc.) will help keep loose items “marked” and make reinstallation next fall much quicker and easier. Before storing stands for the summer I check them for needed repairs, touch them up with paint, and lubricate any moving parts. This helps protect the stands but also allows time for the odors associated with paints and oils to fade before next fall. If you have enclosed shooting houses, take time now to close windows, doors, and make attempts to “seal it up” where needed to keep unwanted pests out. While exterminating a few wasps is easily done next fall, removing 6 months’ worth of owl droppings is another story! If you plan to leave ladders and lock on stands in the woods over the summer be sure to loosen the fasteners, straps, or chains that attach them to the tree to allow room for the tree to grow during summer. You may be amazed at how fast a tree can “absorb” (grow around) a chain! From a safety standpoint, I replace all ratchet straps used to secure lock-ons and ladders to the tree every year. Many tree stand accidents, particularly with lock-ons, are caused by not replacing a \$10 strap. As a side note, while in the area, I often use this time to do a little scouting for next hunting season as well.

Erect new wood duck boxes and/or clean out existing boxes in preparation for the nesting season.

January and February is the time to install and/or clean out existing nest boxes in preparation for the nesting season. Wood duck nesting season varies but is generally February through May. For existing boxes, start by cautiously making sure there are no critters in the box. Many other animals use the boxes. Animals that are commonly found in

wood duck boxes include wasps, fire ants, gray squirrel, flying squirrel, rat snakes, screech owls, and flycatchers. Always be careful when opening wood duck nest boxes – particularly if you are on a ladder in the water! Once the box is clear of other animals, clean the box out completely. Small hand held gardening tools are handy for this task. Well-designed boxes have hinged bottoms allowing you to drop the bottom and “dump” any contents. Once cleaned out, place 4”-6” of sawdust or wood shavings in the bottom of the box for nesting material. I prefer shavings versus sawdust because they do not absorb moisture as easily which causes rotting and mold – check with a wood shop that uses a planer for shavings. Cedar chips that are used for dog bedding can be good nesting material as well. Erect new boxes before February in highly visible areas near good brood rearing habitat. Adequate protective cover is essential for brood survival. Brood habitat should include a dependable source of water with plenty of shrubs and emergent vegetation for food and cover. These areas are generally along the perimeter of a pond or swamp. Wood duck boxes should be cleaned out and inspected at least once per year. Building wood duck boxes, putting them out and checking them after nesting season to monitor use is always an adventure and gratifying. This is a great project to include children. There is a lot of hands on work and makes them feel good about helping animals...plus it teaches them good stewardship.

Plant shrubs to screen unnatural structures or add aesthetics.

While this has nothing to do with wildlife management, it may enhance experiences around the property you hunt. Late winter is a great time to install or transplant shrubs or other plants to hide unnatural objects around your camp or property. Examples of such items may include electric boxes, AC units, pump houses, clay target

throwers, etc. While purchasing shrubs or plants is always an option, consider transplanting natural plants that exist on your property. These plants are well adapted for the soils and climate of your property and best of all they are free. Choose shrubs/plants that are evergreen or will provide the “cover” needed to do the job. A few plants I have had great success with include wax myrtle, broomsedge grass, and various holly and ferns. Transplanting small dogwood trees is a great way to add spring highlights to key areas. When digging up plants keep as much of the root ball intact as possible. That is, leave plenty of room around the base of the plant and cut a circle around the plant with a shovel working deeper and under the plant until the root mass (full of dirt) breaks free. Handle the root mass with care while transporting to its new home. The goal is to keep as much of the existing soil around the roots in place

as possible – which protects smaller roots of the plant. A large plant container (black pot that shrubs or trees are grown in) is useful to have when transporting to protect the root ball. Dig the new hole larger than the original and loosen soil in and around the hole. After placing the plant in its new home, use soil from the hole to pack around the root ball. Ensure no air pockets exist and firmly pack the soil (firm not compact) around the plant. If possible, water the plant. During its first year of life (particularly the first summer), the shrub or tree will need a little TLC. Make sure it has plenty of water and keep competing vegetation under control. Depending on the situation, native shrubs can provide great screen along property lines where needed.

Provide supplemental feed for deer.

This recommendation/activity is

directed towards landowners or managers that have done a good job managing natural habitat, food plots, and deer herd conditions. That is, before thinking about starting a supplemental feeding program for deer on your property, you need to take care of the “important” things first. In other words, you can not hang shutters if you do not have a house – and you will not grow big bucks and a healthy herd with supplemental feed alone. It is a supplement to other management strategies and activities. However, when done in combination with other core management practices, supplemental feeding can be valuable for deer. Be sure to check your local game laws before providing feed on your property. Many states do not allow the use of feed during hunting season. Ideally, providing supplemental feed throughout the year is best, but supplemental feed will be most used and most valuable for deer in late win-



Mowing the back of this field created an exceptional spring gobbler hunting spot. Key ingredients were the roost site being nearby and an abundance of nesting habitat.

ter and late summer. These are periods when natural food availability is at its lowest. So if you have a limited budget and can not or do not want to feed throughout the year, provide it during the periods deer need it most.

Mow early or wait until early summer.

If you have areas that need to be mowed, mow them before turkey nesting season (which is generally March-May in most of the Southeast) to prevent destroying nests. Unless necessary, I recommend leaving as much of roadsides, fields, and other openings unmowed to provide additional nesting habitat for turkeys and other birds. Much turkey nesting research shows that these areas are valuable and heavily used for nesting by hen turkeys. Even if turkeys do not use all of the unmowed areas, these areas will host an alternate food source (small mammals – rats, mice, and rabbits) for potential turkey nest predators. Having this “extra habitat” also increases the “search area” and reduces predator success in finding tur-

keys and their nests giving turkeys a better chance of producing a clutch and surviving. This strategy is more valuable for landowners whose property has limited nesting habitat.

Make preparations for spring turkey season.

One of the best ways to ensure you have gobblers in the spring is to manage your property throughout the year to promote quality nesting cover (see turkey habitat management article in the January-February 2009 issue for more detail on creating nesting habitat). I have worked with many landowners that had gobblers on their property most of the year, but they disappeared during the spring. After closer inspection, their property didn't have good nesting habitat and the hens had moved to adjacent properties carrying the gobblers with them. Quality nesting habitat is created by maintaining a patch work of early successional habitat throughout your property. Burning, herbicide applications, strip disking, timber harvest, and roadside management strategies are all

tools that can help you create quality nesting habitat for turkeys. Besides the key element of creating nesting habitat, creating strutting zones in strategic areas around your property will help put turkeys where you want them to be. February or early March is a good time to create strutting areas. A mower, disk, fire or combination of these are the tools of choice for this task. Fire is my preferred tool if it can be used. Strutting areas are simply areas that have relatively little or open ground cover that will be attractive to turkeys for breeding courtships. I often create these areas between roosting and nesting areas and preferably near a food source such as an old field, chufa patch, or food plot. Areas that often lend themselves well to creating strutting areas are powerlines, old fields, food plots and roadsides. Lastly, mowing hunter access trails will help you slip into areas to hunt without making a bunch of noise. If these trails go through thick habitat, don't be surprised if turkeys use the same trails.



Blanton's

LONGLEAF CONTAINER NURSERY

MADISON • FLORIDA

850-973-2967 PH & FAX

blantonsnursery@earthlink.net

SINCE 2001, THE LARGEST
PRIVATELY OWNED
PRODUCER OF
CONTAINERIZED PINE
SEEDLINGS IN THE STATE
OF FLORIDA.

GROWERS OF 6" PREMIER
CONTAINERIZED PINE SEEDLINGS

*Improved & Natural Stand Longleaf
Advanced Generation Slash & Loblolly*

www.blantonscontainernursery.org



LOCATED IN NORTH FLORIDA ONLY MINUTES FROM VALDOSTA, GA & I-75

C. J. (JAY) BLANTON III
850-566-1884

JASON M. BLANTON
850-566-7175

C. J. BLANTON JR.
850-673-7421

Obtain an updated aerial photograph of your property.

Updated aerial photographs are an invaluable tool in land/wildlife management. In fact, it is the first thing I want to see when someone asks me to help them improve their property for wildlife or create a management plan. In my opinion, aerial photographs are best if taken during the dormant season when deciduous trees have lost their leaves (i.e., late winter or early spring before green up). This allows you to distinctly see differences in pine or evergreen habitats and hardwoods. Infrared images taken during the growing season can do this as well, but I prefer color photos taken during winter. An aerial photo puts everything into perspective by allowing you to see the various habitats and how they lay across a property. While this may sound odd, it also allows you to see habitat diversity and layout of your neighbor's land which may play a role in

how you manage your property. For example, if your goal was to manage for turkeys and you see on an aerial that your neighbor's property is primarily mature timber, increasing nesting habitat on your property will likely attract nesting hens (and gobblers) from the surrounding property in the spring (not that you want to "steal" turkeys from your neighbor. Ha!) Also, aerial photographs often become my "drawing board" when devising plans to improve a property. That is, having a map of the entire property in front of me I can see everything; where various habitats are on the property, where food plots are located, etc. Having this, I can visualize how hunters, deer or other wildlife use the property and/or how we can improve the property to not only ensure quality habitat is provided across the landscape, but where habitat management can be used to direct wildlife to areas for improved hunting. There are many companies that

specialize in taking aerial photographs, adding geographic features (roads, property lines, habitats, etc.), and providing a custom aerial map to the customer's specifications. While using these companies is obviously more expensive than pulling your property up on something like GoogleEarth, the resulting map/photo will be of high quality, up-to-date, customized to your liking, and can be uploaded into GIS type programs that allow you to pull useful information about your property (e.g. number of acres of each habitat type) and create detailed habitat management plans. While I prefer professionally flown custom maps to work with, I often use free online satellite imagery, such as GoogleEarth, Bing Maps, etc. if needed. The downside of these images is that they are often outdated and harder to work with in professional mapping programs which can handicap your map building/management planning process.

Give *Wildlife Trends* as a Gift this Year

Why not give your friends and family the gift of wildlife education by giving them a subscription to *Wildlife Trends*?

Call us at 800-441-6826 to order and we will include a gift card announcing your gift.

This is the perfect gift for the person who has everything!





Prime hunting land. A quiet cabin on the river. A place where you can invest in your future. Whatever your dream, we can make it happen, with a loan package customized by professionals who understand rural land and rural lending.

When you find the land, call the South's land and farm lending experts. Call First South Farm Credit.

**THIS DREAM
FINANCED BY**

 **First South**
Farm Credit

Financing land, farms and dreams.

firstsouthland.com
800-955-1722



Because the Season Never Ends.

Private Hunting Leases & Wildlife Consulting

Leasing land from Westervelt is more than simply having a place to hunt.



Westervelt Wildlife Services offers

- Private hunting leases
- Personal access to our experienced certified wildlife biologist, for deer management and hunting advice
- Quality deer management cooperatives with adjoining hunting clubs
- Professionally installed network of wildlife foodplots
- Enjoy the security of a long term lease, with no lease bidding

Producing quality deer herds is what we do best.



800.281.7991 | www.westerveltwildlife.com