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Earl Says...

The economy is still the biggest story around the country as it affects everything we do from our daily jobs to our pastimes of hunting, fishing and land management. We all have to make tough decisions every day about how much to budget for food plots, supplemental feeding, buying or selling a property and more. And all this while enduring severe droughts throughout much of the southeast. But I am encouraged every day when I talk to my subscribers and advertisers who help shape the wildlife management industry. And the old saying is as true today as ever; "what you do today will pay off tomorrow".

Every time I finish proofing the latest issue of *Wildlife Trends Journal* I say the same thing to myself, "This is the best issue we've ever done". Now, I don't know how true that always is because everyone has their preferences on the subjects they want to see. But I am very proud of the work our authors do to provide useful, practical information to our subscribers. It's unbelievable how responsive they are.

Ryan Basinger did a great job on his article on "drought proofing" your food plots after I asked him to address what land managers can do to combat Mother Nature when she wants to play hard ball. This has been a brutal summer for most of us and I know we all could use some timely advice on how to manage around the cyclical weather patterns we've experienced.

I talked to lots of current and new subscribers while exhibiting and attending Hunting and Land Management shows this summer and I appreciate the suggestions and ideas for future articles. I was a little surprised when we had several requests for more Duck Pond articles. This led to the article by Rodney Dyer who happened to be working on building a new Duck Pond on a piece of property he is managing.

I hope you enjoy the new column we're starting this issue by Allen Deese with *The Wildlife Group*. Each issue Allen will spotlight a different tree or plant species for wildlife as well as tips on planting, fertilizing, pruning and care for the investments you make in improving your property.

I hope you can see how we strive every issue to give you, the land manager, timely and practical information you can't get anywhere else. Thank you for subscribing with us and please contact us with your questions and suggestions on how we can serve you better. And remember to tell your friends and neighbors about us so we can help them as well.

Andy Whitaker PublisherXEditor







101 MARKET PLACE, SUITE 500 MONTGOMERY, ALABAMA 36117

> 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. Faircloth Kedric Nutt Brian Sheppard 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 Matt Euten D. Clay Sisson Kent Kammermeyer Allen Deese

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

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Cover photo by Dave Edwards

Drought Resistant Food Plots – Set Yourself Up for Success



By Ryan Basinger

Ryan Basinger is the Wildlife Consulting Manager for Westervelt Wildlife Services where he assists private landowners and hunters in reaching property management goals. Ryan holds a bachelor's degree in Wildlife Science from Mississippi State University and a master's degree in Wildlife Science from The University of Tennessee.

A tiller is a great implement for conserving soil moisture as it reduces the number of passes to prepare a field. Repeated disking dries the soil out.

If you are like me, checking the weather forecast during planting season is an hourly event. I monitor the weather religiously, hoping the 60% chance of rain provided at the end of the 10-day forecast is actually legitimate and not just a courtesy post to make me and other food plot managers feel better about themselves and the food plots we are managing.

With the exception of 2009 when the rain wouldn't stop falling long enough to get a tractor on a field, getting timely rainfall for successfully establishing and maintaining food plots has been challenging over the past several years for many food plot managers across the Southeast. Out of curiosity, I examined historical rainfall data over the past 10 years for the property I hunt and manage in west Alabama. The information I found was quite surprising. With few exceptions, annual rainfall totals have been pretty close to the historical average. However, when analyzed down to

the monthly level, rainfall amounts have varied drastically. That is, although we might end the year near the historical average, some months along the way received far more or less rainfall than the monthly historical average. Take 2009 for example, when we received nearly 20 inches of rain above the 60-year average for my area. However, during the month of June (when my summer crops needed moisture to get off to a good start), we only got about an inch of rain, which was roughly 65% less than the historical average for June. This "all or nothing" type of rain pattern can be devastating when attempting to establish and maintain quality food plots for deer and other wildlife.

Inconsistent rain patterns make managing quality food plots difficult and frustrating. However, there are a number of strategies that can be applied to give your plots a fighting chance during periodic dry spells and other adverse conditions. Doing so will ultimately result in healthier, more productive food plots that provide more benefit to deer and other wildlife that use them, as well as provide a greater sense of accomplishment knowing your efforts and hard earned money are being put to good use. Hopefully the techniques listed below will help you and the wildlife you manage get the most out of your food plots when Mother Nature throws a curve.

Strategies for conserving soil moisture

Minimize soil preparation

For broadcast planting applications, preparing the soil by plowing and disking is needed to create a good planting surface for optimum seed-to-soil contact. However, when conditions are dry and soil moisture is limited, keep the amount of disking to a minimum. Repeated disking dries out the soil, leaving less moisture available for seed germination. Conserving soil moisture is critical to get forages off to a good start, especially if you don't receive rain soon after planting.

Use a tiller

Tillers have recently become a popular method for preparing food plots for planting. They can create a smooth, firm seed bed with a single pass versus making many passes with a disk to achieve similar results. They are particularly useful when planting small seeds (clovers, chicory, brassicas) when a fine seed bed is needed. When conserving soil moisture is the objective, the ability to prepare the food plot with a single pass is very advantageous as it significantly increases the amount of moisture available for germination and seedling development. However, keep in mind that if using a tiller it is almost always necessary to cultipack before planting as tilling causes the soil to be "fluffy", which can reduce germination rates.

Use a no-till drill

Another technique that conserves soil moisture within your food plots is to use a no-till drill. Using no-till planting methods allow you to plant without disking/plowing the soil that causes it to dry out. If you can't afford a no-till drill, don't worry. Many farmer's coops, equipment dealers, conservation organizations, etc. offer no-till drills to rent for a minimal fee. Or, maybe your neighbor has one that you can borrow in exchange for deer meat, a turkey hunt, or anything else that might be of interest. No-till planting also reduces



Controlling weeds with herbicides increases available moisture to planted crops by eliminating the competition.



A couple months ago (July) this was a beautiful stand of perennial clover. However, it didn't receive a drop of rainfall in August and the clover wilted back considerably. Now the plot contains little forage and is not achieving the goal of producing high quality, abundant forage to help the deer herd through the late summer stress period.

weed competition within your food plots because the soil is not disturbed, which exposes the seed bank that contains many weed seeds.

Control weed competition

Not only do weeds compete with your planted crops for nutrients, they also steal valuable moisture during dry



Total annual rainfall in west Alabama since 2001

spells. Thus, controlling weed competition with the appropriate herbicide(s) is important to maximize moisture availability to the crops you plant. This also allows crops to utilize fertilizer more efficiently and makes them more vigorous. This often allows forages to form a "canopy" that casts shade on the ground, reducing the amount of sunlight that reaches the soil that can quickly dry it out. Thus, the soil will be cooler and can retain moisture longer, which may be the difference in preventing crop failure until the next rain event comes along.

Remove the hard pan

Dave Edwards wrote a great article in the May/June 2011 issue of Wildlife Trends Journal (Digging Deeper - volume 11, issue 3, pages 4–10) discussing the benefits of sub-soiling food plots to improve forage production, quality, and longevity. As he mentioned in the article, sub-soiling has major implications for conserving soil moisture within food plots if they have a hard pan. During dry conditions, the presence of a hard pan causes the topsoil (where plant root systems are found) to dry out more quickly. Removing the hard pan (by sub-soiling periodically) allows roots from planted crops to penetrate deeper into the soil column to access moisture that would otherwise be unavailable if a hard pan is present. Deeper roots result in increased drought resistance.

Maintain the deer density in balance with food availability

You may be wondering what the number of deer on your property has to do with providing quality food plots that withstand dry conditions. It actually has a lot to do with it. If your food plots are being browsed heavily due to a high deer density, planted forages will be stressed as they attempt to keep up with browsing pressure. Throw in a dry spell on top of already stressed plots and you've got a recipe for failure. Additionally, heavy browsing prevents the canopy layer mentioned above from forming to restrict sunlight from reaching the soil and drying it out further. Thus, heavily browsed plots result in dry food plots.

Plant when there is adequate soil moisture

Although this is getting back to the basics, I am always amazed at the number of hunters that have a predetermined planting date, regardless of the conditions. For example, many hunters are going to plant on Labor Day weekend, even if it's 100 degrees and it hasn't rained in the past 6 months and there's no chance of rain in the long term forecast! Taking this approach isn't sensible because the quality and potential of food plots are compromised for the entire hunting season simply to get seed in the ground the first weekend in September. This often results in poor production as seed simply sits on the ground for crows, turkeys, doves, and anything else to exploit before it even has a chance to germinate. The best strategy is to be patient and have plots ready to go when planting conditions improve - there are no rewards for having your food plots planted first! Waiting for the appropriate conditions will get your plots off to a good start and will increase plant vigor. This will position them well in the event of stressful conditions that might occur down the road.

Select the right site

Selecting the best location for food plots is critical when establishing new food plots on your property. Don't just pop them in wherever there is an opening on the property. I have found this to be one of the most common mistakes that land managers make. Far too often hunters attempt to establish new food plots in natural openings containing sparse vegetation, thinking this is the most practical solution. Indeed this may sometimes be the case, don't be lured into thinking areas like this will make good food plots. There is a reason why the existing vegetation is sparse and of low quality – it's probably a poor site! If more suitable options exist, why invest your time and money trying to produce and maintain a high quality food plot on a low quality site?

When determining the best spots to install food plots, doing a little homework can spare a lot of unnecessary hard work and frustration. The quality of the existing vegetation is a great indicator of site quality. It also helps to look at a soils map to determine the better quality sites on your property. Selecting well drained sites that will have good soil moisture in the summer will help pull your crops through during dry periods. Doing so will make managing your plots much easier and more cost effective. Lime, fertilizer, seed, diesel fuel, etc. are too expensive to make knee-jerk decisions.

What to plant?

Selecting the appropriate forages to plant depends on overall management goals. However, sub-par weather conditions negatively impact food plot success, which ultimately disrupts management goals. Thus, if your plots aren't success-



Notice the amount of soil exposed outside the cage due to heavy browsing. This is not a good situation during dry conditions. Compare to inside the cage where the soil is better protected from direct sunlight by the canopy created from the forages.

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ful, you are not achieving your goals.

As you are probably aware, food plots are typically classified into one of two categories: annual or perennial (or a combination of both). Annual plots are further broken down into either cool-season or warm-season plots. Since we are on the brink of the fall planting season (at least those of us that haven't already planted), I will focus on cool-season annual and perennial plantings.

Cool-season annual plantings

Cool-season annual forages include species such as cereal grains (wheat, oats, cereal rye, triticale), annual clovers (crimson, arrowleaf, berseem), Austrian winter peas, rape, forage turnips, etc. As long as annual crops aren't planted too early, during a time of prolonged heat with little rainfall (before and after planting), trying to select crops that are drought tolerant really isn't an issue.

Fortunately, winter typically blesses us with enough rain to keep crops going. Day length is also shorter so plots aren't as susceptible to drying out from the sun like they are in the summer. Spring is also typically wet and provides adequate moisture during "green up" to get crops through to early summer when most annuals mature and begin to die back. Thus, with the exception of arrowleaf clover, which typically persists until July, all of the annual species mentioned above mature and die in late spring so they are not around during the sum-

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mer when weather conditions typically take a turn for the worse.

Cool-season perennial plantings

Cool-season perennial crops include species, such as white clovers, chicory, and alfalfa. Maintaining quality perennial plots during dry conditions is a completely different ballgame as they contain cool-season plants expected to persist through the hot, dry summers associated with the South. This is where timely summer rainfall plays a major role in a food plot management program.

Many food plotters devote considerable acreage to perennial forages, hoping to get multiple years of production from a single planting to reduce costs. However, as you may have already learned, this is not a wise strategy. Most perennial plots do very well during their first spring and early summer. However, as the case has been in recent years with "hit or miss" rainfall patterns, many perennial plots in the South have wilted and died out by late summer, which is counter productive to the purpose of planting perennials. Don't get the wrong impression however, as perennials certainly have their place in a food plot program. The key is finding the right balance based on your management goals. If dry conditions have plagued your food plot management efforts, annual crops (fall and summer) will be the better choice as they are much more capable of withstanding these conditions.

However, if you are adamant about planting perennials, there are some options to consider as some are more drought hardy than others. Chicory is one of the most drought resistant forages I have found and is a must if attempting to manage perennial food plots in the South. Chicory produces a long tap root that is able to access soil moisture that most forages can't. Most white clovers are not well adapted to hot and dry conditions. The exception is Durana white clover as it is relatively drought tolerant compared to other varieties of white clover. Another option is red clover, which is a short-lived perennial that produces much more forage during summer than white clover.

Lastly, alfalfa is another quality perennial forage that is very drought tolerant but maintaining successful stands of alfalfa in the South often presents a challenge. However, many improved varieties are now available with specific characteristics that are adapted to different conditions. Thus, if you are interested in planting alfalfa, consult with your local agricultural extension agent to select a variety that is best suited for your area. It is also important to note that careful soil and pest management is a must for maintaining successful alfalfa plots.



Chicory is among the most drought-tolerant cool-season crops preferred by deer.



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Conclusion

As you may have noticed while reading this article, drought-proofing your food plots isn't as much about what to plant as it is <u>how</u> to plant when producing successful food plots. If you experience an extreme drought, there isn't a forage on the planet that will perform well so it really doesn't matter what you plant. Unless you can irrigate your fields, you can do all the right things to conserve soil moisture but Mother Nature ultimately makes the call. Thus, the key is to ensure you take care of the things you can control, applying the appropriate management strategies needed to achieve desired results when weather conditions are marginal, not extreme.

It is also important to ensure plots are limed and fertilized according to soil test recommendations because soil quality and nutrient availability play a major role in maintaining healthy, vigorous plots that are better able to withstand harsh conditions. Forages growing in soils that aren't managed properly will not fare well in the face of adversity.

As we make the final preparations for the upcoming hunting season, I hope the information and management strategies provided will assist you in your future planting efforts. I wish you a safe and memorable hunting season, and most importantly, I wish you rain!

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Predator-Prey Biology



Private land managers who are serious about successfully managing their forest, fish and wildlife resources need to be as knowledgeable about any and all factors which may positively and negatively affect their resources and integrate the most effective management applications available. Natural occurrences such as weather and temperature cannot be manipulated. However, habitat (i.e. food, cover, water, and space), along with the number of predators and prey species can be controlled with the correct knowledge, tools and management techniques. In this article, my intention is to provide you, the serious private land manager, with an overall view of a diversity of limiting factors, regarding predators, which will always be present and have a cause-effect on your management efforts. With the following information, you should be more knowledgeable and better prepared to assess the elements of your private land management program and, therefore, be more capable

By Kevin Patterson

Kevin Patterson is C.E.O. and president of Predator Control Systems, LLC. He has a B.S. in Wildlife Biology and has 30 years of experience in predator control work. He conducts predator control work throughout the south, southeast and Midwestern United States.

When coyotes and domestic dogs cross breed, the result is known as a coy-dog. Many coy-dogs are darker colored, like this melanistic (black) phase and much heavier in weight than full-blooded coyotes. of achieving your desired results. I will begin by providing you with a few important terms and their definitions:

The word, **"predator"** can be used as a broad term, depending on what the discussion pertains. Merriam-Webster's dictionary defines the term as follows: "1. one that preys, destroys, or devours; 2. An animal that lives by predation". Furthermore, the word, **"predacious"** is defined as, "Living by preying on other animals". **"Prey"** is defined as "an animal taken by a predator as food".

Natural Selection, according to renowned scientist Charles Darwin, is the process by which organisms best suited for survival in their environment achieve greater reproductive success, thereby passing advantageous genetic characteristics on to future generations. Additionally, when wildlife, such as whitetail deer, wild turkey, quail, etc., die from predation, disease, or any other "natural" phenomenon, it is looked upon as being a form of natural selection. Note the term, "The weak perish and the strong survive".

Carrying Capacity, at its most basic level, is about organisms and their food supply; where "X" amount of animals need "Y" amount of food to survive. A scientific definition of this term would be "the largest number of individuals of a particular species that can survive over long periods of time in a given environment".

Predator-Prey Relationships: One of the best examples I have found to clarify this term occurs on Isle Royale National Park which is a U.S. National Park in the state of Michigan. It is the largest island in Lake Superior (over 45 miles in length and nine miles at its widest point). The wolves (predators) and moose (prey) which live on this island literally rely on one another for their respective species' long-term survival. Without the wolves, the moose would overpopulate and therefore, overgraze the island's existing vegetation. Without the moose, the wolves would die from starvation.

While reading this article, consider your property and what resources (existing habitat and wildlife) it possesses. Do you feel that you have a good idea of the predator-prey ratio which currently exists on your property? I recently had a private landowner from southern Georgia call me and ask my opinion on how he could better manage his excessive coyote population. Without ever seeing his property, I asked the landowner to provide me with a verbal description of the property's existing habitat. As I had envisioned, the property was mostly timbered with brush. Additionally, artificial clearings had been established where food plots were constructed. I asked the landowner if he had seen an abundance of coyotes, coyote scat/tracks and signs of coyote depredation of other wildlife? He said, "no, but everyone tells me that there are too many coyotes in our area". The landowner went on to say that he had even hired a well respected coyote trapper to trap the coyotes but the trapper had not been very successful and caught only a few coyotes. Before the



This trophy whitetail buck failed to clear both fences and was entrapped between the wire. Unfortunately, several coyotes killed and devoured the buck before the next morning.



Once plentiful, red fox populations have drastically declined in many parts of the United States due to the exploding population and predation of coyotes.



Raccoons pose serious problems by consuming feed meant for other wildlife.

conclusion of our conversation, this landowner realized that he probably did not currently have an excessive coyote population. This is because I asked him if he had been seeing gray fox on a regular basis? He said, "Yes, we see them all of the time." I explained to him that where there are excessive coyote populations, there are a minimum of red and/ or gray fox. This is because coyotes are a natural predator of fox. Coyotes and fox compete for many of the same prey species (mice, squirrel, rabbit, birds, etc.) and the coyotes will kill every fox which provides them the opportunity. Gray fox typically inhabit areas of timber and heavy brush (similar to bobcats) and red fox typically inhabit more opentype areas (pastures, hay fields, etc.) with fence rows and timbered edges. However, coyotes inhabit literally all types of habitat and therefore, are instinctively inclined to minimize their competition for prey species.

From the 1970's through the early 1990's, in the locations that I predominantly pursued fur-bearing predators (southeastern and Midwestern United states), I consistently harvested a diversity of terrestrial (dry land) predators, including fox (red and gray), coyote, bobcat, etc. Since then, the coyote population exploded and the fox population drastically declined. This fact had a direct reflection on my predator harvest. Coyotes and bobcats were and have been the predominant fur-bearing predator I have harvested since the 1990s. On more than one occasion that I have trapped and/or snared a red or gray fox on one of my predator lines, I have found the fox to have been killed and devoured by one or more coyotes. I have even harvested several "coy-dogs", which are a genetic cross between coyotes and domesticated dogs. Coy-dogs are most prominent in higher human density areas where domesticated dogs are more plentiful. Also, coy-dog's mixture of genetics are also reflected in their larger size/weight and diversity of colors versus full-blooded coyotes

(Canis latran).

In the wildlife management arena, when we talk of predators, most of us immediately think of coyotes, bobcats, etc. With a broader perspective, one can determine that there are, in fact, numerous "predators" which inhabit your property. Whether it be a coyote, Belted Kingfisher or a dragon fly, the list of animals, fish, birds and even some insects can be classified as predators.

I have a very good friend who is a private wildlife biologist and very successful in his area. During a recent conversation, he told me of one of his new clients who had moved from a northern state to his area in the southern United States. He told me that this landowner sought his services and asked him to generate a wildlife management plan for his high-fenced property of approximately 300 acres. When my friend visited the property to ascertain the property's available habitat, etc., he found that the new landowner had literally stocked his high fence enclosure with a multitude of whitetail deer and exotic species, including Black buck, Kudu, etc. It did not take a genious to figure out that the property's carrying capacity could not sustain the amount of animals which were contained in the enclosure. This landowner refused to decrease the number of animals he had stocked; therefore, he had no further option other than providing pellitized high protein food, grain, hay, and mineral supplements to this overpopu-







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Bobcats typically inhabit heavy brush and timbered areas. They are natural predators of quail, wild turkey and whitetail deer.

lated and controlled environment.

I have numerous clientele with highfenced enclosed farms and ranches where trophy whitetail deer are the wildlife species selected for primary management on the property. These are individuals who spend up to several thousand dollars per straw of trophy whitetail buck semen for artificial insemination of their whitetail does. As you can imagine, when mortality rates increase on whitetail fawns due to coyote and bobcat depredation, my telephone starts ringing. I have even found myself targeting, not only coyote and bobcats on these properties, but raccoons as well. I have had several highfenced ranches where high protein feed is being fed to the whitetail deer to increase antler growth and the raccoons

were consuming the majority of the feed. Out of curiosity, in two consecutive years on one ranch, I kept statistical data on the amount of money the landowner spent on high protein deer feed compared to previous years before I conducted predator control on this property. The rancher's high protein feed bill decreased approximately one-third in cost due to the dramatic decreased number of raccoons which were available to consume the deer feed. One fact about high protein deer food and raccoons – it certainly does produce extremely fat, pot-bellied raccoons!

On low-fence properties, private land managers who wish to manage for wildlife species need to understand the carrying capacity of their property. It is not only vitally important to have the correct diversity and amount of habitat available for the targeted wildlife species but to also be knowledgeable in regards to adjacent properties and their landowners' management practices. When there are several small tracts of property (i.e. 100-acres or less) which border each other and owned by different individuals, it is highly advantageous for these property owners to work together toward similar habitat management goals. If this does not occur, it will be inevitable that one or more of these properties will draw the majority of wildlife, due to the existing preferred habitat which exists on the properly managed properties. I have seen many times where this scenario has occurred and where at least one of the property owners would not work in conjunction

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with everyone else. It is very difficult to have, say a trophy whitetail deer management program when even one of these adjacent small property owners allows their hunters to consistently harvest 18-month-old bucks. In low-fenced areas, wildlife, including whitetail deer, determine where they prefer to live and man-made property lines provide absolutely no deterrence to the deer. The greatest diversity of food, cover, water and space (habitat) will always prove to be the greatest asset to drawing and keeping wildlife on your property.

As a formally educated wildlife biologist and professional predator control specialist, I firmly believe in incorporating predator control into every wildlife management program. The reason is not because it is how I make my living, it is because I firmly believe that no matter how great and diversified your property's wildlife habitat, if you have an over abundance of predators or even an uneven predator-prey population issue, the overall stress on your game animals will have a direct negative reflection on your game animal's reproduction and recruitment rates.

One of the favorite aspects of my work is when I get that telephone call from a client who has personally experienced the positive benefits from having incorporated a genuine, scientifically approached predator control program into their wildlife management plan. The reproduction and recruitment rates of their whitetail deer, wild turkey, bobwhite quail, etc., are drastically improved. Its not a matter of extirpating all existing predators; its a matter of leveling out the playing field where game species have a much improved opportunity to birth and raise their young without having such a high stressed atmosphere. Having the opportunity to see twin and even triplet whitetail fawn deer recruitment, larger coveys of adult quail and flocks of wild turkeys is something I wish for every wildlife manager.

No matter if you are specifically managing for whitetail deer, bobwhite quail, wild turkey, or for a diversity of fish and wildlife species, allowing these game populations to experience lower stress levels and decreased mortality rates by providing a decreased predator-prey ratio will, undoubtedly, increase recruitment rates and the overall health and viability of your wildlife populations. Consistency of utilizing proven and effective tools and techniques from year to year is key to an overall successful and long-term wildlife management program.

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This whitetail fawn was left hidden by his mom while she went to feed. Fawns like this make easy prey for carnivorous predators such as coyotes and bobcats.



Trophy whitetail bucks, like this one attending a scrape, are what many wildlife managers work for in their wildlife management programs.

The Shocking Truth: A Closer Look at Electrofishing Evaluations



By Matt Euten

Matt Euten works as a fisheries biologistforSoutheasternPondManagement in Birmingham, AL. He earned his Masters degree in fisheries science from Auburn University where he studied the recruitment and growth of largemouth, smallmouth and spotted bass. Contact him at meuten@sepond.com.

Big fish are often collected during electrofishing evaluations.

If you have ever called one of Southeastern Pond Management's offices and talked to a biologist about your lake, then you've probably heard the words, "we need to shock the lake first before doing anything." So what does that mean and why is that always our first suggestion? Many of you may already know what "shocking a lake" entails, but for those of you who don't, it is a common term we use for performing an electrofishing evaluation on your lake. During our electrofishing evaluations we assess the current condition of the fish population and determine what recommendations are needed to manage the lake. A comprehensive management plan is then provided to the lake owner detailing the results of our survey. These management plans contain information about the lake and the fish population it supports and in this article I intend to explain how these results are determined.

Let me first start by saying that we do in fact use electricity to collect fish in

lakes, hence the phrase "shocking your lake." It may sound dangerous but to answer your next question, no shocking your lake does not harm the fish. That is if you have a trained fisheries biologist performing the electrofishing evaluation. We equip and train our staff so that any danger to the fish is eliminated and unless it needs to be harvested most of the fish that get shocked are released immediately. So how do you actually shock fish? Our specially designed boats are equipped with a generator, which allow us to create an electrical field in the water. As fish encounter the electrical field they are slightly stunned and therefore can be collected. These fish are immediately placed in an aerated livewell until they can be processed.

Most every freshwater pond or lake can be electrofished; however, several factors, such as water quality, time of year and lake characteristics can affect sampling success. Lakes that are more acidic, especially those that have never had agricultural limestone added, are usually less conductive which can directly affect our sampling success. On the other hand, those lakes with higher measures of total alkalinity generally produce abundant samples. Lakes can be shocked any time during the year; however, shocking when fish are along the banks (spring and fall) have proven to be the most productive. The presence of structure and a uniquely contoured pond bottom are also factors that allow us to find and collect fish during an electrofishing evaluation. Although there are different factors that do affect our electrofishing success, if we can get the boat in the lake, we can shock it and determine what's going on in the pond!

Now that you know how we shock fish, the next step is to show you why we do it and what the data we collect reveals. Obliviously the main reason to shock lakes is to actually see what's there, but the data that is collected helps determine the fish's health, the robustness of the forage and predator populations and shows what length and harvest limits are needed. During our electrofishing evaluations, we are trying to see a brief "picture" of the fish population so management recommendations can be determined. That "picture" is painted by examining the length and weight data of each fish collected. That length and weight data are the keys to unlocking the condition of the fish population in the pond or lake.

When assessing fish populations in a pond, the first place I look is the lengthfrequency data, or the total number of individuals collected for each length group (Figure 4.). This information allows me to see the size distribution of each species collected and also their abundances for each length. For predator populations such as largemouth bass, the length data helps me decide if the bass are stacking up at in a certain size group, which can help determine the length limit recommendations. For example, let's say we electrofish a pond where the bass collected ranged in size from 3 to 21 inches total length. The length -frequency data from our sample revealed that the majority of the bass collected were 12 to 14-inches and very few bass over 15 inches were observed. From this data, I can tell there is a need for serious bass harvest, where bass 14 inches and less should be removed from the population. Because there were fewer individuals collected above 15 inches, these fish should be protected until the population rebounds. The length-frequency data can also show us the strong and weak year classes for a species which is helpful in preparing for either an increase or a decrease in the number of recruiting individuals into the population.

We also look at the length-frequency data collected from the forage fish species, especially data from the bluegill population. Having the ability to determine what size groups are most limited



Electrofishing evaluations seem to be the most exciting management technique used for sampling ponds or lakes.



Length and weight data is critical information needed to assess a fish population.

in a bluegill population helps when deciding if additional supplemental forage stocking is needed. The total abundance of each length group for a bluegill population is also helpful when establishing harvest rates and sizes for bass. For example, if an electrofishing sample shows that a pond has a low relative abundance of 3 to 5- inch size bluegill and a high abundance of 12 to 14 inch bass, we know the predator to prey ratio is out of balance. Given that bass can eat prey up to one-third of its total body length, we can assume that those abundant 12 to 14-inch bass in your pond are the reason the bluegill

population is suffering. Therefore, to create more balanced conditions between the predator and prey populations, we as biologists know that those more abundant size classes for bass need to reduced. If you have a higher abundance of adult bluegill, those greater than 7 inches, with this same scenario, then we know that the adult bluegill are producing offspring. They just need to be protected. Increasing bass harvest and stocking additional forage species such as threadfin shad is often times recommended to better protect the bluegill's offspring from predation.

Collecting data from a fish popula-

tion is most accurately done using an electrofishing boat at least once each year; however, I always recommend between your annual evaluations that you, the pond owner, collect some of your own data. And this data must be collected with a fishing rod! It is pretty simple, just keep tract of the number of fish in each length group you catch every time you fish. Over the course of a few trips you should be able to see a trend as to the abundance of each size group caught. If you see a size group that is consistently caught, then that is most likely where to focus your harvest efforts. If you are catching fish in all size groups and they look healthy, then you know the lake is doing well and harvest rates should remain the same. Again, this is no substitute for the annual evaluation, but it does allow you to get more involved with science behind the management program.

Another key factor to assessing the condition of the fish population in ponds and lakes is by analyzing data collected from weighing each fish. As I mentioned earlier, the length and weight of each bass is collected and that combination of data is used to determine how robust, or fat, each fish is compared to an average fish of the same species and size. Length is the primary determinant of weight in fish; however, there can be variations among individuals in each population. In other words, most 20-inch fish in relatively good condition should weigh around 4.5 pounds. But, in ponds with healthy threadfin shad and bluegill populations, it is not uncommon to see a 20-inch fish pushing 5.5 pounds. On the other hand, ponds with sub-par forage populations and an over abundance of bass may only produce 20-inch fish that barely reach 4 pounds. Since this is true, a standard such as relative weight (Wr) must be calculated to determine how healthy the fish are in a given population.

Relative weight is the ratio of the actual fish's weight to that fish species' standard weight or the weight of a



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Annual electrofishing evaluations help determine management recommendations which are intended to maximize your fish growth.

healthy, fast growing fish of the same length. Relative weight is calculated by dividing the weight in pounds of the fish you just caught by that fish's standard weight. That ratio will give you a percentage where fish below 90 % are considered in less than optimal condition. Those fish with relative weights between 90 to 100 % are in good condition and anything over 100 % would be considered extremely healthy. Well balanced lakes, those with abundant forage populations and relatively low bass numbers, on average will have relative weights ranging from 93 to 99%. Most bass crowded ponds typically have average relative weights around 83%, but I have seen them as low as 75%.

To explain relative weight a little

better, let's examine the 20-inch bass I mentioned earlier. A 20-inch fish that weighed 4.5 pounds would have a relative weight of 98 % and would be considered a healthy, fast growing fish. If our electrofishing sample showed that there was a high abundance of 20-inch fish with an average relative weigh of 90% or above and the other bass in the population were in good condition, then we would consider that lake in balance. Now if the same 20-inch fish only weighed 4 pounds, its relative weight would only be 87% and would be considered unhealthy. If the average relative weight of all the bass in that population were similar to this unhealthy fish, then we could assume the pond is not reaching it top potential and intense

management is needed. For that 20-inch bass pushing 5.5 pounds, the relative weight would 121 % and the recommendation for a lake containing fish like that would be to "go fishing"!

As you can see, there is a good bit of information that can be collected from "shocking" your lake. Lakes and ponds are closed systems and the fish population dynamics can change quickly so it is always a good management practice to have your lake evaluated each year. Although it sounds simple, I would advise not trying to build your own electrofishing boat; we are trained professionals and shocking can be quite dangerous. I am always available for shocking and there is nothing more exciting for me than to be on a lake rolling up those big pigs!



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Duck Pond Management



On January 19, 1983 I learned my first lesson in waterfowl management. The day before, my father and a friend had crawled up to the edge of a beaver pond and saw several hundred ducks feeding and resting in the shallow water that was backed up on a creek along the Chattahoochee River near Cannonville, Georgia. We woke up early and waded through the pond and of course I was already wet because they didn't make chest waders for a ten year old at the time and hip waders were all that I had. I can remember begging my dad to take me home. All he would say was just "wait". I looked down sulking about having to stay and freeze for several minutes. When I finally raised my chin up toward the sky, the morning light was blocked with hundreds of ducks circling trying to get to our location under the flooded trees. When the hunt was over, I had forgotten I was wet and cold, and every one of us killed our limit in ducks of all different species. As we headed back to the

By Rodney M. Dyer

Rodney Dyer is a private wildlife biologist and consultant in Millbrook, AL. He received his B.S. degree from Auburn University and specializes in deer, turkey and small game management.

Elbow on the downstream side of the pond to control the water level. The pipe will be cut into smaller sizes to riase the water level.

truck, I asked my dad why those ducks liked that spot more than the others we had hunted before. He said that this pond only floods during the winter and during the spring and summer the weeds grow and produce thousands of seeds that the ducks liked to eat. Little did I know I was hearing about moist soil management for the first time. After that day, I was mesmerized with ducks and their lives and my fate was set to be a wildlife biologist.

Waterfowl management is pretty simple; all you need is water and food to attract ducks. Impounding water is sometimes easy when you have the help of beavers but sometimes you have to do it on your own. Waterfowl food preference differs from species to species. Depending on what you like to hunt is how you target your property management plan. In this article, I would like to show you ways to help you maximize the ducks on your property.

Impounding water

Generally, creating a great waterfowl pond in not very difficult. All that is needed is a beaver pond with good access to the dam. Next, install a water control mechanism. I personally prefer the Clemson Beaver Pond Leveler, to allow the water in a pond to drain, but it also keeps the beavers from damming the water flow back up after the pipe has been installed. The leveler is made out of a 10 inch PVC pipe capped on one end and 2 inch holes drilled all over the pipe to allow water to flow. After the holes are drilled, drill four 1/4 inch holes on each end to put supports for the wire cage to connect to. Some levelers that I have seen have just regular dog wire but the best are made out of hog or horse panels.

To install the leveler you need to break the dam, usually in the area of the original creek channel, and place an 8 inch pipe in the opening. Then connect the 10 inch pipe to the 8 inch with a reducer and cover the 8 inch pipe with the dam debris or you can just let the beavers do it. Be sure the 10 inch portion of the leveler is upstream not downstream. You can put an 8 inch elbow on the downstream side and add eight inch pipes to the elbow to adjust the water level in the pond. Using Bernoulli's principle of equal pressures, the water will be the same level in the pond as the height of the pipe on the downstream side. This method is the best for ponds that have beavers or have the potential to have them.

Another great choice in water level control is a Flash Board Riser. This system uses flat boards stacked on top of each other to the height you want the water to flood the waterfowl area. Water needs to be backed up gradually over the hunting season to allow the maximum usage of the seeds and plants of a longer period of time. Water levels



An installed Clemson Beaver Pond Leveler.



A flash board riser. Boards can be added or removed to adjust the water level.

should be between 10 to 18 inches so dabbling ducks can feed in the shallow water for seeds, insects and invertebrates.

Water Management

Once you have water control devices in place, you're ready to start thinking about what you are going to do to attract waterfowl. In some cases, like the beaver pond I was hunting in 1983, just draining the pond and letting the natural plants come back is all you have to do. Plants such as Smart Weed and Arrowhead Leaf will grow rapidly in the moist soil and produce thousands of seeds to attract and hold waterfowl over the winter months and most importantly during the hunting season. Ponds need to be drained in February /March and start flooding them in October. Relying on rain to flood your pond can be variable, depending on the weather, but most ponds will be full by mid December when the majority of waterfowl are in the wintering areas in the South. In these cases, if burning is safe, I strongly recommend burning the pond bed before flooding. Some of the best waterfowl hunting is over flooded burned areas. This exposes the seed and makes it easy to access for ducks and hunters. The managers at the Eufaula National Wildlife Refuge do this and they have thousands of ducks winter in these areas.

If you have the luxury of having a pond you can plant after the water

recedes, the options are wide open on what you can do to attract and hold waterfowl on your property. Corn is king when it comes to waterfowl, especially mallards. If you have flooded corn you will have ducks. Here is a precaution, you cannot mow the corn and flood it, and this is against Federal law. You want to flood the stand and allow the corn to drop off the ears, the ducks will get it. Plus, it will allow the area to have food for a longer period of time. You can have someone harvest some of the area to make openings for the waterfowl to land. I would also limit hunting in these areas to several short hunts. It is best to hunt the surrounding areas and allow this area to be a sanctuary for feeding and midday resting.

Corn is not the only thing you can plant and flood. Basically any plant that produces a hard seed will attract ducks. Plants like Japanese Millet, Dove Proso Millet, Rice, and Chufa are good waterfowl foods. Japanese Millet is very easy to plant and grow. You can plant Japanese Millet and it can grow in standing water after the plant has grown to a height of one inch or more. These plantings as well as corn need to stay standing, mowing is not allowed by federal law, when flooded to hunt waterfowl. Also, check out Dave Edwards' management calendar in last month's issue, it has some great information on seed deterioration when flooded.

I've talked a lot about ponds but let's don't forget about flooding timber. These areas are great for wood ducks and most of all mallards. Every year, thousands of ducks winter in the flooded woods around the Mississippi River. No matter where you are, it will still work for you. You may not get thousands of ducks, but huntable populations will use these areas. Ducks use flooded timber to rest and feed. They feed on acorns and seeds. They also use these areas to feed on invertebrates that live in the water and ones that have been washed up by the flooded water. Flooded timber is also referred to as

green tree reservoirs. These trees are mostly hardwoods that can withstand seasonal flooding. Although these trees can withstand several months of flooding, it is best to drain the areas by the time the spring green-up hits.

Over the last few years on the properties I have managed, we've selectively planted Water Oaks, Nuttal Oaks, and Bald Cypress in several areas that we can flood. These trees are awesome at attracting wood ducks. They love the acorns and the cypress seeds. I choose a spot that is near the back of the area I want to flood and plant the trees throughout the area. I will spread them out about 30 feet apart. For the first couple of years I always put a tree protector on the seedlings to protect them from beavers, deer, and those huge cane cutter rabbits that live in swamps. I always check with Alan Deese with the Wildlife Group to get the low down on the trees to use and for the tree protectors. They are always trying to breed new types of tree varieties and they help me determine the right tree for the right area and target specific species.

Hunt Management

Hunting ducks on your impoundment has to be managed very carefully. You do not want to over hunt the area but you want to get enough hunting in that it was worth the trouble to create the impoundment. I recommend hunting a different area every other week. This allows the ducks to get comfortable and forget getting shot at the week before. Plus have different blinds or locations to hunt. Ducks do get blind shy and decoy shy. If you live in the South you have to realize that the ducks you are hunting have been hunted all the way from Canada to where you are. Larger properties can make sanctuaries that are never or seldom hunted to give the ducks a roosting or resting area that is secure. During the hunt, limit the hours that you hunt and get out of the area. Normally with ducks you can hunt from daylight to about 8am and leave them for the rest of the day. That way they can get back to the area to feed and calm down after the morning hunt.

Waterfowl hunting is great when you can spend mornings with good friends, relatives and most of all your children. Areas that are managed correctly can produce awesome memories over the years. However, areas left unmanaged can be less attractive to ducks and can lead to some frustrating hunting.



Area cleared to plant corn in the spring to flood for waterfowl.

Pears



By Allen Deese

Allen Deese is the Nursery Manager for The Wildlife Group in Tuskegee, Alabama. Contact him at 800-221-9703 or Allen@wildlifegroup.com.

Cluster of pears

Pears are the ideal tree for habitat improvement. How many old home sites have you visited or found on your property that have pears growing and is a hotspot for wildlife? Most everyone you know can tell you where an old pear tree is that has been there as long as they can remember. Why is this?

- Pears are very drought tolerant
- Pears are very hardy & disease resistant
- Pears are the easiest fruit tree to grow
- Pears are a very consistent producer
- Pears will grow in varying soil conditions

Okay! Which pear should I plant? Even though pears are self-pollinating, it is always better to plant more than one variety. It is my belief that planting more than one variety makes your trees more prolific producers with larger, juicier fruit and

gives you an extended drop period. If our whole objective is to increase the food source and productivity of our land, we need to supply food and cover all year, not just during hunting season. So let's just say we plant ten varieties of pears spaced 25 ft. x 25 ft. You are looking at planting ¹/₄ acre and having production from August until December. Planting many different varieties also insures that you will have pears. Fruit, along with all trees can and will be unpredictable at times. So mixing the varieties will almost always insure that you will have some pears each season.

Now how do we choose what varieties and the size of plants that we need to purchase? Several considerations should go into your plant selections.

- Size of plants to purchase
- Water needs the first summer
- Different varieties needed for pollination & overlapped drop period
- Correct spacing
- Correct care & pruning tips
- Protection needed to help with survival

All of these questions should be answered by your Wildlife Tree Nursery. But for starters the trees can be purchased bareroot or in container.

Bareroot will require the smallest amount of effort. The bareroot trees will be a one year grafted plant removed from the ground in December and shipped to your door via UPS. The roots will be dipped in moisture management polymer to retain moisture during shipment. Simply keep the roots moist and out of direct sunlight and wind until the planting date, which should be as soon as possible.

Container plants would be the next choice. These plants will obviously be larger and closer to production. When purchasing containers, you are buying years. A 7 gallon container plant is a two year old plant; a 15 gallon is a three year old plant and typically will be of producing age. But keep in mind that it is very important after planting to give these plants a year of new growth before allowing them to fruit.



(Phoenix Pear) old Home Place Pear named after the original landowners. This tree is some 60 years old.

What this means is that during the first growing season, it is important to remove the fruit so that the tree can put all of its needed energy into growth and survival. Also keep in mind that these plants will require more care and water the first year than the bareroot plants.

Protection

Regardless of which you decide to go with, please make plans to protect the trees from the deer, rabbits & mice. Even though you are planting them for the wildlife, they will destroy them. Purchasing Plantra Jump Start tubes for the bareroot or Tree Bark Protectors for the larger trees is very important to keep bucks from rubbing the trunks or eating the new growth. You can also build 5ft. x 4ft circular fences to put around each tree. However you decide you must protect them.

Spacing, Planting & Care

Space all fruit trees at least 20 -25 ft apart. Plant during late fall or winter months; do not wait until March to decide to plant. You will have poor results (this applies to all trees). If planting in extremely poor soil, (clay clumpy soil), amend the soil in the planting hole and dig a larger hole to give the plant a more desirable area to get established. Typically after a pear gets established it will flourish. Be sure to add moisture management products to the soil at planting and a small amount of slow release fertilizer. NEVER add a regular fertilizer (13-13-13) to the hole while planting. This will kill the tree. If you don't have a quality slow release fertilizer do not fertilize at the time of planting.



7 Gal & 15 Gal Galloway Pear



John Ledbetter Bareroot Pear



15 Gallon Pear Trees

Wait until spring bloom then add about one cup of fertilizer around the drip line of the tree. The trees that you purchase should come pruned from the nursery so no additional pruning will be required the first season. We will have a follow up article on proper pruning in the Jan-Feb issue of *Wildlife Trends Journal*.

Let's all keep in mind that nothing happens overnight. But if you don't plant this season you will be another year behind. By planting on normal years and following the correct procedures for care and planting, you should expect an 80% survival rate at the minimum. Most pears should be producing within 3 -5 years of the planting date depending upon what size you purchased. Good Hunting!

Wildlife Trends Journal Management Calendar



By Dave Edwards

October/November 2011

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

Holding a meeting prior to hunting season to review harvest strategies, management needs, hunting rules, housekeeping, and other pertinent information helps keep everyone informed and increases awareness.

Hold a preseason meeting with your hunting club or people that hunt your property to discuss the progress of the deer management program and harvest strategies planned for the upcoming season.

Holding a preseason meeting to

discuss the deer management program and deer harvest plans for the upcoming season will ensure everyone is on the same page before the season kicks off and hunters head to the woods. Hopefully, you have been collecting harvest, hunter, and population data regarding the deer herd. Use this information to assess the status of the deer herd and how the herd has or is responding to your management strategies. A preseason meeting is a great time to review this information, make harvest decisions for the upcoming season, and share with the group or hunters using the property. As a biologist, I often present this information to hunting clubs or landowners with recommendations for the upcoming season. These meetings are most effective if held just prior to hunting season to ensure the information is fresh on hunter's minds. This is also a great time to review general rules for hunting, discuss housekeeping items around the camp and property, and develop management and/or maintenance project lists. I often see these meetings tied into a work day or work weekend at the property.

Coordinate food plot planting with desired soil conditions

Generally speaking, October through early November is one of the best times to plant fall food plots in the Southeast. The goal is to plant when conditions are favorable for maximum seed germination and plant growth. Don't fall into the trap of planting too early.



Round or square exclusion cages can be easily constructed from 2×4 inch mesh netwire and metal t-posts. Cages remain the best method to determine production and use of food plots by deer.



Building and installing utilization cages is easy and allows managers to assess food plot success and/or failure as well as deer use of a food plot.



Unfortunately, many landowners and hunters plant in early-mid September. Some hunters, particularly hunting clubs, even pick a specific weekend that food plots will be planted well ahead of time and do not have clue what the soil conditions will be like....but they plant anyway because "that's when we plant every year".. This is often a very dry period across the Southeast which will lead to food plot failure. If planted in September, and you are lucky enough to receive adequate rainfall, food plots may grow rapidly which will result in over mature (i.e., high/tall) food plots by the time hunting season arrives. There is also a higher chance of army worm problems if temperatures are still warm. In most areas of the Southeast more consistent rainfall events begin in October as cold fronts move south. Planting "later" (meaning in October-November) will also result in young, tender food plots that are very attractive

to deer and other wildlife during hunting season. There have been several articles related to food plots and planting strategies in past issues of Wildlife Trends Journal. Refer to these articles for more detailed information.

Build and install enclosures on your food plots.

Enclosures are simply small fenced structures that are placed on food plots to observe or monitor deer use of the plot and food plot success. The enclosure does not have to be big, just enough to prevent deer from eating a small area of the food plot. In general, enclosures are nothing more than a short length of 4 foot hog-wire fence that is "rolled" and fastened with either wire or zip-ties to create a tube with a 2-3' diameter opening. The enclosure can then be placed on a food plot and fastened to a stake. Enclosures are particularly helpful if you have a high deer

density. I've often seen food plots in areas with a high deer density appear as though the plants never germinated. The landowner or land manager is beating himself up because he is thinking that he did not plant the food plot correctly, or that the particular seed mix he planted isn't growing well on his property. The fact is that deer have literally eaten the plot to the ground before it had a chance to grow (in this case, I would consider installing more food plots or, depending on your goals, planting lead to reduce the herd!). A food plot enclosure will help answer these questions.

Consider split applications of nitrogen on food plots (not on perennial legume/clover plots).

Applying a split application of nitrogen means that you apply half of the recommended rate of nitrogen at or slightly before planting time, then apply

the remaining half a month after crops have germinated and are growing. Split application reduces the exposure of nitrogen in the soil to elements that can create losses such as leaching and denitrification. The second application of nitrogen provides a boost to the growing crop when it can utilize the added fertilizer resulting in better forage production. Before deciding to apply this technique, consider normal rainfall and soils of your property. If you are in an area that receives a good bit of rainfall during early winter and your soils get muddy easily, preventing you from driving on food plots with equipment needed to spread the second application of fertilizer, split applications may not be an option. Not only will applying a boost of nitrogen increase forage production, but deer and turkeys are attracted to plants that are nutritious and actively growing which will result in better hunts on your property.

Conduct a camera survey to assess the status of your deer herd to make sound/educated deer harvest decisions before you start hunting.

Monitoring the status of your deer herd is the backbone to the success of your program. Collecting and recording harvest data (weights, measurements, ages, etc), hunter observation data (number, sex, and quality of deer you see while hunting), as well as population surveys (such as spotlight counts or camera surveys) provides you information about the deer herd that will allow you to make sound deer management decisions and adjustments in strategies where needed to accomplish your goals. Without this information you are simply guessing. If you are like me, you spend way too much time, money, and energy managing your property to just guess on how many and which deer to harvest this season. I want to know. Conducting a camera survey is the best tool available to assess the status of your deer herd (number of deer, buck quality,

fawn recruitment, etc) and make buck harvest decisions before you head to the woods. The best times of the year to conduct a deer survey is when natural food availability is at its lowest which is generally late summer/early fall and late winter before spring green up. Most managers conduct fall surveys (September through early November) because they also use the photographs to make buck harvest decisions before hunting season.

Conducting a camera survey is more than simply putting out a few trail cameras. A true camera survey, one that is used to determine population characteristics of a deer herd, requires establishing bait sites across a property at a density of 1 site/100 acres (this may vary depending on habitat quality and diversity). These sites are systematically established across the property and within all habitat types present. Each site is pre-baited for a week or so to attract deer to the site. Once deer are using the sites heavily, cameras are placed at each site and operated for 10-14 days or until no new bucks are being photographed. The photographs taken during this period are used to estimate the population and its characteristics. Analyzing the pictures is not as easy as simply counting the number of bucks and does photographed, it is a somewhat complicated process that requires counting total does and bucks photographed, identifying the number of unique bucks photographed, estimating their age, and plugging this information into mathematical formulas. Although some landowners conduct camera surveys themselves, most consult with or use a wildlife biologist to complete a survey. For more detailed information and help in understanding how to conduct a survey, check out, "Deer Cameras: The Science of Scouting", published by the Quality Deer Management Association.

Regardless of whether you conduct a full scale survey or simply use cameras to scout, photographs from trail cameras are a great tool to assess buck quality and make buck harvest decisions before the moment of truth in a deer stand. I have seen many young bucks with great potential make it another year because they were placed on a "do not shoot" list. If you are using the trail camera photographs to make buck harvest decisions, late summer or early fall is when you need to deploy them. We generally try to conduct our surveys soon after bucks shed velvet but before the majority of acorns start to drop.

Calibrate deer scales before hunting season.

Whether the scales you use to weigh harvested deer at your hunting property are 10 years old or right out of the box, they should be calibrated each year before hunting season to ensure accurate wieght data is collected. To calibrate scales, simply hang an object of known weight from the scale (e.g., 50 lbs bag of feed, tractor weight, etc), along with your gambril (normally a triangular metal hanger used to attach deer to scale), then adjust the scale to the known weight if needed. Although there are many makes/models of scales available, most have a calibration screw that can be easily adjusted. Also note that it is not uncommon for a calibrated scale to read something other than "zero" when idle. Recording accurate weights from harvested deer provides insight to the health of deer on your property and will assist in making management decisions (herd and habitat) to achieve overall goals.

Mow and fertilize perennial clover food plots.

While preparing fall annual food plots, do not neglect perennial plots that you have managed through the summer. Early fall is a good time to give them their final mowing and a boost of fertilizer. With cooler temperatures and fall rains, clover will start recovering from the stress associated with the heat of summer. Do NOT mow the clover too low. Just above the clover plants is good (clipping the flowers and other weeds). If you will be tackling this project after mowing roads, pond dams, and other areas on your property, be sure to clean weed seeds and thatch from your mower deck before mowing any food plots. Unwanted weed seeds have a sneaky way of collecting on mower decks then jumping off onto your well managed fertile food plots. Cleaning a mower deck off is easy to do with a gas powered blower or a small broom. While a blower is more effective, keep a small broom on your tractor. Taking 2 minutes to clear weed seeds from a mower deck is much easier than fighting the weed once it gets established in your food plots. Also, do not use a fertilizer with nitrogen. Clover is a nitrogen fixer meaning it makes its own nitrogen. Adding nitrogen will only feed undesirable weeds; particularly grasses. As a rule, 200 lbs of 0-20-20 per acre is a good dose. However, it is always best to test the soil fertility and apply recommended rates. If lime is needed, apply this as well.

Host a cookout with adjacent landowners and/or game wardens.

This is a great way to meet your neighbors and local game wardens. The cookout provides opportunities to exchange ideas on deer and habitat management as well as harvest strategies. If you are trying to convince an adjacent landowner or hunting club to practice quality deer management, this is a great time to show them some of the success you have had. Pictures of harvested bucks and/or scouting camera pictures are usually all it takes to convince others to join your efforts. These cookouts often result in long-term relationships between landowners or hunting clubs that is mutually beneficial. I have yet to meet a game warden that doesn't like BBO - particularly free BBQ! Making friends with your local game wardens has obvious benefits.

Mow lanes through CRP, grassy powerlines, or corn fields to provide additional hunting opportunities.

Growing mature bucks is relatively easy to do if you stick with a sound deer management program geared towards QDM. However, harvesting mature bucks is another story. Through my experience, there is no better place to observe and/or harvest mature bucks than in a long mowed lane or food plot that runs through thick cover (e.g., clearcuts, young pine stands, chest high grassy areas, corn fields, etc). This thick cover is where the mature bucks live. Because these lanes are adjacent to thick cover and are not "wide open", they offer bucks a sense of security which makes them more apt to use these areas during daylight. They know that with a quick bounce, they are in heavy cover and safe. Mowed or disked lanes through thick cover also provide great travel corridors to connect woodlots or mature timber. Deer will often take the path of least resistance and will use these lanes to travel which can make for some exceptional bow hunting opportunities. Mowing a wagon wheel pattern, or hub & spoke design, works well if the situation allows for it. These are some of my favorite places to hunt as they make for some great opportunities.

Conduct pre-season projects that will help reduce or minimize deer hunting pressure and disturbance.

Hunting pressure and disturbance on a property significantly impacts the hunting quality or number of deer you will see. I have lots of hunter observation data that shows as more pressure is applied fewer deer (particularly mature bucks) are seen. Here are a few things that will help minimize hunting pressure: 1) Position stands around food plots so that hunters can enter and exit them without spooking deer. By this I mean place stands slightly inside the woods and/or plant a "screen" that will protect the hunter from being seen by deer in the field. Good screens include the remains of standing summer crops such as corn, Egyptian wheat, Sorghum Sudan. Other, more permanent screens, (which I prefer), include switchgrass, or evergreen type shrubs or conifers. Once stands are placed inside the woods, simply cut shooting lanes for hunters to see and harvest deer on the food plot. 2) Inspect stands to make sure they are safe, but from a disturbance standpoint, check for noises. Oil squeaky chairs, windows, doors, etc. Move around in the stand. Does it creak? Find the source and fix it. Ladders may simply need to be tightened. These little noises can ruin a hunt and disturb deer for future hunts. 3) Cut and clear trails for hunters to get to and from the stand without making a lot of noise. 4) Determine favorable wind directions for each stand and do not hunt the stand unless the wind is right. At my camp, we have a list of stands for each wind direction. We check the wind, review the list, and hunt accordingly. 5) Look at a map of your property and determine which roads will impact or disturb deer or other wildlife. Close these roads down before and during hunting season and only travel them on a "need to" basis. Besides properly managing the deer herd, the key to having high quality hunting experiences it to keep disturbance on the property to a minimum. For more detailed information on managing hunting pressure, refer back to an article called "Steady Under Pressure" published in Wildlife Trends Journal this year.

Harvest deer.

Although biologists provide guidance on how many and what kind of deer to harvest, the hunter is the real deer manager. Remember that each time you pull the trigger you are making a deer management decision. In fact, not harvesting deer is a management decision. Unfortunately, I see many landowners with goals of producing trophy bucks

who are allowing the deer herd to overpopulate because they like to see 20+ deer when they go to a stand. This situation often results in a poor quality deer herd with significant dispersal of deer to surrounding properties, less reproduction and fawn recruitment, and ultimately poor quality antlers. If your goal is to manage for a quality or trophy deer herd, harvesting an adequate number of deer each year is essential to keep your deer herd and habitat healthy. In addition to maintaining a desirable deer density, doe harvest is the primary tool used to manage the adult sex ratio of a herd. Maintaining a balanced sex ratio will result in a much healthier deer herd, better quality bucks, increased fawn survival, and exciting hunting. Balancing the adult sex ratio is also one of the tools I use to increase breeding competition and get mature bucks on their feet so that my clients can see or harvest them (which is always more challenging than growing them!)

Collect data from harvested deer.

This information is the "backbone" of your deer program and allows you to monitor/assess its success and make sound management decisions/adjustments if needed to reach your deer management goals. Collecting this information each year is important because it will allow you to assess trends in the harvest and observation data which will help you determine if

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Collecting biological data from harvested deer is essential to monitor overall herd health and make informed management decisions to maintain or improve the condition of a deer herd.



As the fall flight of waterfowl arrives, allow duck ponds to flood to desired levels. Water control structures are invaluable for manipulating and maintaining water levels in duck ponds.

your program is working and where adjustments are needed. Without this information, you are simply guessing and are less likely to achieve your goals. Contact your local state wildlife biologist or a wildlife consultant to determine what information/data you need to collect. Be sure to stock your skinning shed with the needed data sheets and tools needed to record data before the season starts. Other preparations include calibrating scales, inspecting/repairing and oiling the winch used to hoist deer, checking water hoses and nozzles, cleaning walk in coolers if needed, etc.

Flood duck ponds to "full pool" by early-mid November.

Monitor water levels in duck ponds as fall arrives. Too much water too early can be bad for growing duck pond crops/plants. Water control structures allow managers to regulate water levels and are valuable tools when a rain event such as a tropical storm comes through. Once your crop matures, allow ponds to slowly flood to "full pool" as November approaches. Ideal water depths for dabbling ducks such as mallards, gadwalls, wood ducks, etc is 12-18" with pockets of 4"-6" depths. The reason to have your ponds flooded 2-4 weeks before the hunting season opens is to give ducks a chance to find your ponds and get used to using them. Flooding too early (more than a month before the season) may result in seed deterioration resulting in less food later during hunting season. For best hunting, do not over-hunt your duck pond and allow a "rest" period between hunts. If you have several duck ponds, designate one as a "no hunt area" to provide a place for ducks to loaf. This will keep them on your property.

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