

Dr. Deer's Whitetail World

BY DR. JAMES C. KROLL

From Oat Patches To Food Plots

As I noted in the last issue, there was a time when the concept of planting forages for whitetails did not exist. In 1975, I was working with Temple-Inland, Inc., the largest landowner in Texas. They operated two wildlife/forestry research areas in eastern Texas — one along the Neches River (Boggy Slough) and one on the Louisiana border (Scrappin' Valley). The idea behind these areas was to develop and test strategies to integrate wildlife and forest management in an environmentally sound manner.

The deer herds of both areas were, unfortunately, not much to talk about at that time. The areas were over-populated, after years of bucks-only hunting. In those days, each county made up its own game laws, principally by the county commissioners or judge. This produced some really odd rules. For example, Houston County in east Texas (not where the city of Houston is located) opened its deer season on the Monday following the first weekend in November. When asked why, the local judge told me, "We set it up that way so folks from the city of Houston would be less likely to be there on opening day!"

Adjacent to Houston County was Angelina County. The county commissioners of that county ordered a bag limit and season on javelina (collared peccary). The only problem was, the nearest javelina was about 300 miles south!

Again, as noted last month, the method for planting a patch of oats was simple. You spread about 50 pounds of seed over an acre, and then you applied about an equal amount of fertilizer. The result was a pretty pathetic pale green crop of oats. More often than not, the seed used to establish these plots came from the farm and ranch store as feed oats!

Throughout the South and Midwest, only a handful of folks planted anything on purpose for deer. In 1978 Mr. Arthur Temple Jr. gave me permission to develop something new in the way of planting for deer. We decided to call these test areas *food plots* instead of oat patches to differentiate what we were trying to do. Yes, we did want to lure deer to the gun, but we also wanted to improve the herd's nutrition.

Much of the southern forest in east Texas occurs on very poor soils, producing less than optimum nutrition during critical times. The first step was to analyze what we knew scien-



PHOTO | BILLKINNEY.COM

Formulating the plan because of a need to provide undernourished deer in east Texas with better nutrition, Dr. Deer started experimenting with planting food supplements in 1978. From that research, the static oat patches of the '70s became the "salad bar" food plots of the '80s and '90s.

tifically about the nutritional needs of deer. Published research of the day suggested that deer needed a significant increase in the following nutrients and minerals: protein, carbohydrates, phosphorus, calcium, zinc, selenium and copper. There also was a demonstrated need for other "micro-nutrients," but these appeared to be the limiting factors for most herds. So the question became: *What is the most cost-effective way to get these nutrients into the population of deer?*

Our strategy at Ft. Perry was to determine how many deer we could produce without damaging the natural ecosystems of the research center.

In the last issue, I recounted how in 1975 we had discovered places where deer were eating the dirt. These areas usually occurred along the banks cut by creeks and streams. What made these places so attractive? You could even see the teeth marks made by the deer as they ate the soil. We did two things to answer the above questions.

First, at that time we were tinkering with some new technology as part of a recreational-use study of the national forests. It consisted of a sending and receiving unit that emitted an infrared beam. Using a common tail-light reflector, we directed the beam back at the unit. Any time the beam was broken, it would trigger a counter. Using this device, we counted the number of visits to the area. Even though there were lots of deer tracks, we weren't sure that deer were the only animals using these "mineral licks."

About that time, a company in California developed a simple triggering device that would set off a camera and flash. Using a very expensive Nikon camera and flash, we obtained photographs to confirm that, indeed, it was deer that used the site. (Later, this work would be advanced by others to produce the infrared-triggered cameras now so commonly in use.)

The second thing we did was to analyze the content of the soils in the licks. We compared this analysis against randomly selected soil samples from the area. It turned out that the soil outcrops being used were high in minerals needed by deer. Using this information, we concocted the first deer mineral, which was later marketed by a company under the name "Horns O' Plenty."

So, from this work, we produced a deer mineral in granular form. After 30 years of research, however, I still haven't been able to prove that this supplement does the deer any real good. Yet, having grown up on a ranch, I use mineral supplements because I fully appreciate the need that ruminants have for certain minerals.

Eventually we decided that planting certain crops specifically for whitetails was the best way to provide them with the supplements they needed. To get an idea of what to use, I consulted the many dairy farmers in our area. "I plant a full seeding rate of oats, wheat, rye and clover" was the most common answer I received.

On further questioning, we discovered that the most commonly planted clovers in eastern Texas were crimson and Yuchi arrowleaf. I'll never forget the day when Mr. Temple gave his permission for us to add clover to the food plots at Boggy Slough. I went home and celebrated with an "adult beverage."

The next step was to test those and other plantings for production and use. The results were quite striking. It seemed that the deer tended to feed throughout the fall on the cereal grains, but as spring developed they would slowly switch over to legumes such as clovers. The reasons were simple. Cereal grains in the South tend to flower in early spring. In so doing, they become less digestible and contain fewer nutrients like protein.

Clovers such as Yuchi arrowleaf tend to put on the most growth in early spring, making them much more nutritious. Many new things were discovered through our research, and we eventually found that combination plantings for the cool season were best. The warm

IS A SCOPE THIS GOOD OVERKILL FOR A DEER?

— THE 3-12 X 50 ZENITH —

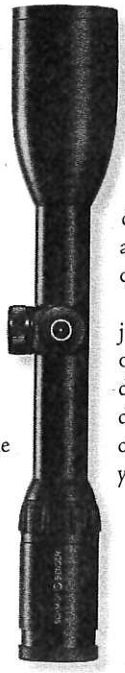


IT DEPENDS HOW SERIOUSLY you take your deer hunting.

It depends upon whether you've had a trophy buck show up at first or last light, and all your scope showed you was a hazy grey shadow.

It depends on if you've ever had to make a long, long shot on a mulie in the Colorado mountains, or at a whitetail reluctant to show himself far across a field.

If you hunt only in the middle of the day, you don't need a Schmidt & Bender. The same goes if your rifle or never gets wet or cold, if it never bounces around in a pickup truck, or if it has no recoil whatsoever. If any old deer is good enough. Or if you never spend any money on hunting. Otherwise, you might consider the scope experts have called "the finest in the world."



The fact is, your choice of riflescope is infinitely more important than your rifle. Any decent rifle is capable of very good accuracy...if equipped with quality optics.

Some hunters say they can't justify the expense of fine German optics. With the time and money deer hunting requires these days—and how often you get a chance at a real trophy—how can you not?

SCHMIDT ⊙ BENDER

See it our way.

Box 134, Meriden, NH 03770
(800) 468-3450
info@schmidtbender.com
www.schmidtbender.com

We conducted the study at more than one location, since we knew that deer population density could have an impact. Each variety was assigned randomly to a plot and replicated across different plots and areas to reduce variation due to plot position and soils. This "salad bar" technique developed by Billy is the backbone of our research program today.

Each year, the Institute tests a host of plant varieties at our research station near Nacogdoches, Texas. We view ourselves as the "Underwriter's Laboratory" of the deer world. Almost annually, new types of plants come on the market touted to help deer. And each year we dutifully test these new varieties. Very few ever make the "cut," but there have been a few that have been added to our list of recommended plantings.

The work by the Institute was summarized in two books dealing with food plots and supplemental feeding of whitetails published in the 1990s. (*A Practical Guide to Producing and Harvesting Whitetailed Deer* was published in 1994, and *Food Plots & Supplemental Feeding* was published in 1998.) Our latest book, *Growing Bigger Bucks: Food Plots and Native Forage,* should be on the market any day now. We also produced a "best seller" video on the topic in 1994, soon to be replaced by a more up-to-date DVD version from our new book. All sales from the books and videos benefit our research program at the university.

I hope this discussion has given you an appreciation for what I call the "institutional history" behind food plots for deer. Since our first work almost 30 years ago, other biologists have published numerous research projects. What started out as a way to deal with an east Texas deer herd in poor condition has become a multi-billion-dollar industry! Few of the successful plantings have happened by accident. Each represents the hard work and dedicated science of many researchers around the country. So, when you plant your food plots this year, think about how this all came to be and the thousands of man-hours by various researchers that led to these great plantings! ■

season was another story.

Our warm-season plantings met with mixed success. Plant varieties such as cowpeas and Alyce-clover were heavily utilized, but there were two problems. First, you had to plant large acreages to keep the deer from over-browsing. Second, warm-season plantings did not compete well with native plants such as grasses. The search for a good warm-season planting has continued to this day.

In 1987, ***North American Whitetail*** initiated our research study on land at Ft. Perry, Georgia. Our goal was to conduct research on intensive whitetail management and share the results in our "Building Your Own Deer Factory" series, which later ran in ***North American Whitetail***. By that time, there were other research studies going on around the country on

Almost annually, new types of plants come on the market touted to help deer. And each year we dutifully test these new varieties. Very few ever make the "cut," but there have been a few that have been added to our list of recommended plantings.

potential deer forages as well. Our strategy at Ft. Perry was to determine how many deer we could produce *without* damaging the natural ecosystems of the research center.

We slowly "inched up" the acreage we planted to cool- and warm-season forages until we reached 22 percent of the 2,000-acre area. Each time a particular forage variety passed our rigorous testing, we quickly incorporated it into the program. This work was not met with universal enthusiasm. Some of the Southeastern deer biologists criticized our work, saying that it was "foolhardy" to try to increase production through agricultural crops. To our delight, our habitat measurements of native forage use clearly indicated we were not hurting the native plant communities, but rather we were helping them. (Some of our biggest opponents back then now write glowingly in other magazines about the advantages of food plots for deer.)

In 1991, Billy Higginbotham, my doctoral graduate student, was given the task of developing a research protocol for evaluating deer forages. He not only looked at plants that potentially could provide a nutritional boost during the cool season, but he also studied those that grew during the warm season. In all, we tested more than a dozen varieties of legumes and cereal grains.

The protocol was pretty simple. We used 10x20-foot plots that were replicated to be statistically the same.