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Dr. Deer's™ PRESCRIPTION

Managing For Drought

By Dr. James C. Kroll

Whether you call it "global warming," climate change, or just plain normal weather cycles, I do not have to tell any of you this past summer was hot and dry! And, it seems for whatever reason, these conditions are beginning to stack up year after year. My investigations into all this suggest we are about 15 years into a 20-year cycle, so there may be as many as five more years of this fine situation! When coupled with the current economic climate, landowners are faced with significant challenges to producing trophy whitetails. So, I would like to present some considerations and measures you should think about for *your* management program.

The Worst Case Scenario

I learned a long time ago, the successful wildlife manager always develops a management plan based on the worst possible conditions you can face. The critics of intensive deer management basically are right in this regard. Yet, there are misconceptions on all sides about what exactly "intensive management" is. Some landowners want to intensify management so they can carry a large number of animals, often way above what the range will support under drought conditions. Those opposed to intensive management want the landowner to forego activities such as supplemental feeding and food plots, and live within the limitations of the "natural" range. The idea there may be a middle ground is foreign to both sides. The prudent deer manager plans for bad times, developing contingency plans that are truly effective. Let's examine the ones that work, and critique the ones that do not.

Native Habitat

The backbone of any deer management program is the natural forage on your property. A good forage management plan begins with a walk around your property, stopping periodically to ask, "What is there good for deer to eat right here that is available when they need it?" More often than not, the answer is, "Not much!" The basic management unit size for whitetails is about 100 acres, so each 100-acre block (and we all know land always is square) should contain everything a deer needs (food, cover, water, etc.). Since deer only need about 30 percent cover, the remaining 70 percent has to be in deer foods. Depending on where your property is geographically located, what constitutes deer food may change. For example, in eastern Texas plants such as green briar, honeysuckle, blackberries and elms make up a lion's share of quality feeds; whereas, in the Hill Country, hawthorn, kidneywood, rusty blackhaw and Texas mulberry are highly preferred. These and other species not only must be present, but well within the reach of your deer. This is what I call the "deer zone," which is the layer of vegetation within four feet of the ground. The trick is always to have quality forages within the deer zone in each management unit.

How do you do this? You are going to have to tear up some habitat to keep foods in reach. Succession—the natural process of plants maturing—quickly moves toward a situation in which the canopies of trees and shrubs close up and grow upward out of the deer zone. Activities such as roller-chopping, burning and timber harvest (thinning) have to be conducted at regular intervals; the timing of which is dependent on how fast vegetation grows in your area. Here in the Pineywoods, it's a "war" against vegetation. In a short four years, deer foods will grow out of reach, so we have to do some type of disturbance at least every five years.

The white-tailed deer would prefer to eat weeds (forbs) over any other type of plant. Yet, browse (leaves and twigs of woody plants) is the mainstay of natural deer foods. If you live in central Texas, and are "enjoying" the wonderful weather we are having this year, note the only green plant material out there is browse. It is what deer fall back on in bad times. So, a goodly percentage of the 70 percent forage production in your management unit should encourage browse.

Improved Forages

Food plots simply are beneficial weeds. Varieties such as cereal grains, clovers and chicories once were wild forbs that were selectively bred by man to improve their quality as a food or forage producer. The first plant cultivated by man was alfalfa, followed by the cereal grains (about 9,000 years ago). Native weeds also can be cultivated or encouraged by disturbing the soil, and fertilizing the many species of plants that respond. One of these is western ragweed.

Yes, I did say ragweed! Our research over the last three decades clearly has shown western ragweed is not only drought tolerant, but if properly managed, highly preferred by deer. How do you get ragweed? There are two ways. First, you can just disk the soil every two or three years. There is a seed bank in most areas, abundant with ragweed seeds. A fall disking will produce a spring crop of ragweed and other beneficial plants. The second way is actually to purchase seed, and believe it or not you can buy ragweed seed. From a cultural standpoint, we have found periodic applications of fertilizer to ragweed plots substantially increase both nutritional quality and use by deer.

Ragweed is just one of many potential plants you can manage on your property. You need to be on the lookout for plant species that hold up well in drought and are eaten by your deer. Another example is Japanese honeysuckle, which grows over much of the eastern region of Texas. We have found honeysuckle is very drought tolerant. In fact, during the last drought we had about 10 years ago, honeysuckle was the only green native plant available for deer at our research facility. Again, we make periodic applications of fertilizer to improve quality and use. Honeysuckle is easy to promote or establish. Find a spot where it is growing, clear away the competing vegetation, take a soil sample and apply the recommended rates. If you want to establish a honeysuckle plot, use cuttings containing leave nodes that are about two feet long. Disk them into the soil, and they will root and grow just fine. However, this has to be done in early spring (March) in most southern areas.

By always thinking in terms of worst-case scenarios, you can find a host of ways to make your deer forage more drought proof. Be on the look out for places and soil types that tend to keep forage green longer. In general, bottomland areas are better than uplands. Loams and clay loams are better than sands and heavy clays. During dry times, walk around your property and mark such areas on a map or aerial photograph. Unfortunately, on most properties food plots are developed on the worst soils and locations.

Roller-chopping produces the best mix of browse, weeds and grasses. It also improves infiltration of moisture. Periodic chopping is an excellent way to make your natural forage areas more drought resistant.

Food Plots

If you take the advertising claims of many food plot dealers as fact, you can grow food plots just about anywhere. Some even lead you to believe there is no need for rainfall! There is no such thing as a food plot variety that can grow without water. Every year, I get a call from someone claiming to have discovered the latest "magic bean" that will solve all your forage problems. A recent call dealt with a variety of beans found in old Navajo ruins. The claim was a teaspoon of water poured on a planted seed would be all that was needed by the plant throughout its life. Well, that may be true, but how much forage will the plant produce? After almost 25 years of plant breeding experience, I have come to accept that plant breeding is a constant compromise. To gain one thing, you have to give up another. For example, a very drought tolerant plant gives up yield to produce a small amount of seed. A cold hardy plant often produces less forage early in the cool season to allow it to be cold tolerant.

There are some drought resistant plants on the market. The cereal grains were developed in the deserts of Iran and Iraq, so they do carry some drought resistance naturally. Plants such as chicory have developed growth strategies (deep tap roots), making them more tolerant of dry periods. Plain old cowpeas are very drought tolerant, much more so than soybeans. But, there is no such thing also as a plant that is both drought and browsing tolerant. Chicory, for example, can handle drought, but it cannot handle both drought and heavy browsing.

After 35 years of food plot studies, I have come to the firm conclusion summer food plots are a complete waste of time! Where food plots are feasible, I plant a mixture of cereal grain (oats in most cases) and chicory in the fall (October in the south, August in the north). The chicory carries over into the following summer, about all you can ask of any forage plant. In good years, carryover may be through the entire summer, but do not count on it.

Recently, some landowners with means have resorted to irrigation. If you are lucky enough to already have an irrigation system or can afford to drill a well, go for it! But, this may be useful even to the person of less means. I recently toured a small property, where two men had hooked up a mister system of PVC pipe, connected to a small pump. They pumped water from a well or pond at low pressure and produced some

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great small forage areas. Where there is a will, there is a way!

Feeding

It's common to hear landowners refer to pelleted rations as "rainfall in a bag." This is not exactly true. I have been conducting research on and developing deer feeds for most of my career; and, I am here to tell you no deer feed is as good as native forages. But, providing deer feed is an important component to a sound management program. I always place a free-choice feeder near my food plots (where feasible) and/or among my natural forage plots. In general, your deer will eat about two pounds of feed per day per deer in non-drought conditions. Let a drought show up, however, and it is another story!

For years, I have been warning about deer feeds. Landowners and even deer breeders have developed a "glug" mentality. A good friend and colleague is one of the world's top herbicide specialists. "Most people measure herbicides in glugs," he recently told me. Rather than following label instructions, they just pour the concentrated chemical into the tank—glug, glug, glug. If 10 ounces per acre is the recommended rate, bet 20 ounces will kill things even better! The same with deer feeds. I am here to tell you, a whitetail cannot handle more than 17 to 18 percent protein, especially if the feed is highly digestible. High protein in a feed just ends up on the ground as waste in the deer's feces (best case) or causing serious damage to its kidneys and liver (worst case). Young deer do need more protein, but not at the levels being used by a lot of ranchers.

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During the spring and summer of 2009, I received countless calls from excited landowners and deer managers. "We are finding dead bucks every day, most of which are right next to

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our feeders!" Although I have not been able to prove it, I would stake my reputation on the cause; too much protein. In good times, you can get away with a whole lot when it comes to feeding deer. A dairyman can tell you he has a bad feed in a day or two. Milk production declines. A poultry man can tell you he has a bad feed in six to nine weeks, when he weighs his chickens. But a deer man may not ever know he has a poor feed! What I believe happened in 2009 is deer feeding switched from *supplemental* to *straight feeding*. Since bucks tend to dominate feeders, they probably ate much more than about two pounds per day, and the result was disastrous. Anecdotally, one rancher who heeded my advice to reduce the protein content of his feed, later reported no more casualties. Again, I cannot prove it, but please consider what I am saying.

Feeding is a good practice. However, it is meant to *supplement* the diet of your deer. If you do not have a good native and cultivated forage management program, you need to keep your herd size at a level that allows you to cope with drought conditions. Drought happens in the spring and summer, the deer season comes along in the fall and winter. Unless you break the law, there is no way to reduce your herd when drought hits.

Water

Cattlemen long have known water can be used to spread out grazing impact. That is why the Natural Resources Conservation Service (old SCS) provided cost-sharing on water development and distribution. A cow will only walk so far to water, and a ranch with only one water source will not be as productive as one with several. This concept unfortunately has escaped most deer managers. A deer needs about a half to one gallon of water per day. Although water can be obtained from their food, in dry times it has to come from freely available sources. Again, the 100-acre management unit concept applies. At Dos Gringos Ranch, owned by my friends Al and Quad Boenker near Alice, Texas, we have developed a system of 28 watering stations on 800 acres. They laughingly call their ranch, "Lake Dos Gringos." The stations are along a network of pipes, connected to two wells. It is what I have called the "leaky faucet" system; one we used in the 70s at the Diamond H Ranch (Catarina, Texas). We stub out a faucet fixed over small rubber water trough, and let it drip. Water running over the trough (which is sunk into the ground), not only provides water to deer, but also to a host of game and non-game animals. Each station is positioned in a shady spot with protective cover. A float valve can do the same job, but I like the faucet idea better.

These droughty times will pass, no matter what the global warming alarmists will tell you. But, in my 62 years I have seen many droughts; and, hopefully will see a few more before my time is up. Every time I write a management plan for a landowner, no matter where the property lies, I develop it based on the worst rather than the best case scenario. And, that is my recommendation to you. That's what separates the sheep from the goats as far as I am concerned.