

Dr. Deer's Whitetail World

BY DR. JAMES C. KROLL

Nutrition—Part 4: A Plan That Works For You

Last month, we talked about the importance of natural forage, and we discussed several aspects of forest management that enhances quality forage for deer. In the conclusion to this series, we'll discuss the importance of food plots and how they can help provide your deer with the 365-day-a-year nutrition that is so vital to any healthy deer herd.

Once you have a timber management plan, the next step is to provide supplemental forage that deals with the issue of poor soil. I rarely find a piece of land that has great soil conditions. Remember, phosphorus is, more often than not, *the* limiting factor to good deer management. Most of the soils in the U.S. are low in phosphorus. In addition, important nutrients such as nitrogen, calcium, magnesium, copper, zinc, selenium, sodium and a few others also may be lacking.

Food plots are the best way to make these critical components readily available to your deer. When done properly, a food plot will support three to five deer per acre at the level needed to produce larger antlers and higher fawn survival. However, food plots usually work best in areas with 25 inches of rainfall annually. In more arid places, food plots often are a total waste of time and money.



Where appropriate, you should carefully place your food plots adjacent to natural forage management areas. Remember that the two areas should be connected to cover by travel corridors if possible. Again, use an aerial photograph to lay out or "landscape" your property for deer. Use soils maps and information to locate the best places to plant your crops.

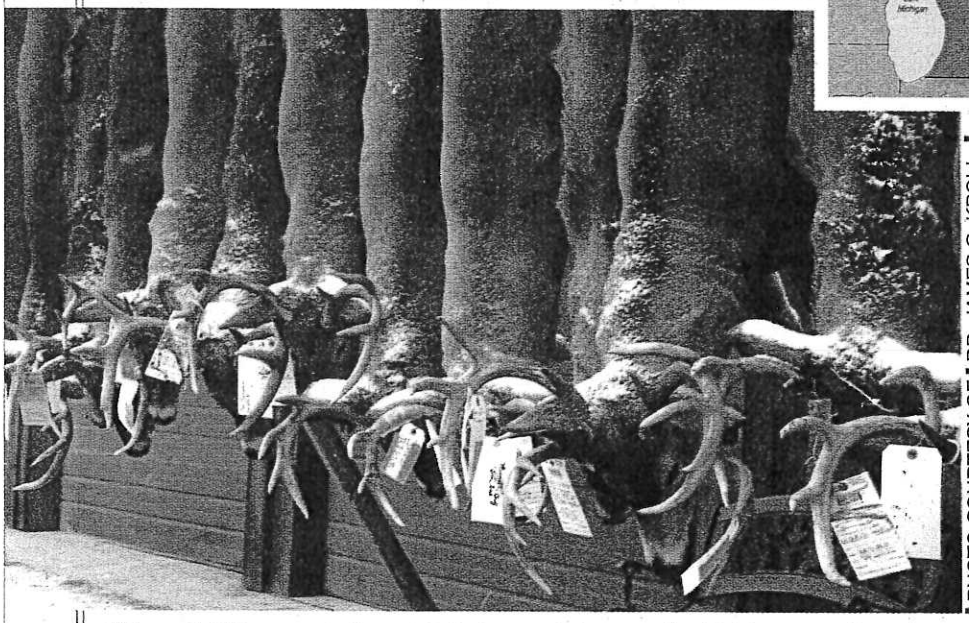


PHOTO COURTESY OF DR. JAMES C. KROLL

Although this recent photo might be reminiscent of a 20th century deer camp in northern Michigan, it is proof positive that good management and proper nutrition can produce some impressive results. Dr. Deer says that these Turtle Lake Club bruisers are the result of three key ingredients: nutrition, nutrition and nutrition!

HIGH-PROTEIN PLANTINGS

What crops do you plant? After 34 years of food plot research, I am here to tell you that a mixture of cereal grains and legumes is the most successful. Which cereal grain or legume you select depends on many factors. My experience has been that, in order of attractiveness, oats are the best, followed by wheat and rye. *Never* plant rye grass for deer. They may eat it, but rye grass does not provide the nutrition your deer need. (Also, if you plant it, you'd better like it, since it will become a noxious pest!)

Legumes such as clovers (red and white) and peas are excellent for providing protein. When mixed with cereal grains, the high phosphorus of the grain and high calcium of the legume will provide the proper calcium-to-phosphorus ratio your deer need. Other plants such as chicory also are great choices for food plots, and are drought hardy.

Food plot strategies are far different from north to south. In the South, cool-season plantings will produce quality nutrition from fall to late spring. In the North, however, all growth pretty well ceases after the first hard freeze. That is why we easily can produce more deer in the southern areas.

Our strategy at Turtle Lake has been to put our deer into the winter in as good a condition as possible. In Michigan, varieties considered as cool-season crops in the South do well most of the summer. We plant a mixture of oats, red clover and chicory. Yet the onset of winter does not necessarily mean our food plots are not useful. The goal should be to produce as much "standing hay" as possible for winter use.

Our desire is to get a covering of

snow early on over the food plots to protect our crops. Believe it or not, once there is a blanket of snow, the temperature beneath is not low enough to completely kill the plants. Deer come to the plots, dig down beneath the snow, and eat the residual, nutritious food. We even use a blade to clear away the snow covering in bands to feed our deer. But the cornerstone of our program is to have natural forage in the form of regenerating timber adjacent to the food plots. Drought or cold may kill planted forages, but browse (leaves and twigs of woody plants) will be there when you need it.

MAKE IT HAPPEN

Back in the 1970s, I conducted research on electric fences. Recently, I utilized a design developed back in those days to keep deer out of portions of food plots over the entire growing season. The design uses only three electrically energized wires — two toward the plot and one as an outrigger 36 inches outside the plot. This work was conducted in Texas in areas with deer populations as dense as one animal to two acres! The idea was to protect, or "bank," forage until needed by the deer.

At the Institute for White-tailed Deer Management and Research at Stephen F. Austin State University in Nacogdoches, Texas, we produced as much as three tons of forage per acre using this system. In 2009, we plan to use the same system at Turtle Lake to produce even more forage for winter use.

What if you cannot plant food plots? What if forest management is not an option? Even with those restrictions, you can enhance the quantity and quality of deer food on your property. Remember: Where there's a will, there's a way! For example, long ago we learned that the invasive exotic plant known as honeysuckle grows extremely well in the South and is highly prized by deer. And since it can't be controlled, it grows profusely and provides a highly digestible source of protein, energy and minerals for deer.

By enhancing existing areas of honeysuckle with fertilizer, we've been able to produce tons of food, without ever planting a thing! All you have to do is keep woody plants from over-topping this "crop" and periodically apply fertilizer according to soil tests. In northern areas, other plants such as blackberries and raspberries provide the same opportunities.

The secret to a successful nutrition management program can be reduced to these simple rules:

1) Always think forage in managing your deer.

2) Develop innovative ways to provide high-quality food within the normal range (80 acres) of your deer.

3) Ensure that adequate nutrition is available year 'round to meet the different needs of your bucks, does and fawns.

4) Landscape your property with food, cover and water to provide "one-stop shopping" for your deer.

If you follow this advice, the deer on your land will benefit and the quality of your deer and hunting will increase dramatically!

NUTRITIONAL RECAP

The following is a nutritional recap on several important topics we have discussed in this four-part series.

Protein — Deer can survive on a 6 to 8 percent protein diet, but ideally they need twice that much. Fawns and yearlings need as much as 24 percent protein but can do well on 16 to 17 percent. Bucks can produce quality antlers with as little as 10 percent protein, but 15 to 17 percent is optimum.

Does need more protein than fawns, yearlings or bucks. During pregnancy and nursing, they need 16 to 24 percent. There are also short-term critical times during the year when does require more protein, like right after weaning, when they need to recoup body mass.

Bucks have two primary stress periods during the year when they need more protein: 1) during the time of antler growing and velvet stripping, and 2) just after antler casting.

Minerals — Minerals are classified into two groups — micronutrients and macronutrients. Micronutrients are used in very small quantities and can be toxic to deer if levels are too high. Macronutrients like sodium are used in high proportions, especially at certain times of the year. The most important macronutrients are calcium, phosphorous, sodium, potassium and magnesium. The amounts needed vary, but the ratios are critical.

Antler Nutrients — In order of abundance, the nutrient components in antlers are calcium, phosphorous, magnesium, sodium, selenium, zinc and copper. Antlers contain about 20 percent calcium and 10 percent phosphorous.

I hope you have enjoyed reading this series as much as I have enjoyed writing it!



PHOTO COURTESY OF DR. JAMES C. KROLL.

What should you plant in your food plots? Dr. Deer says that a mixture of cereal grains (oats and wheat) and legumes (peas and red and white clovers) is the best choice. Legumes provide a high level of protein, while the grains provide much needed phosphorous.