Better Nutrition Means Better Deer!

Part 2

Whitetails face many difficult times throughout the year, but perhaps none is tougher than right now. If your goal is to provide your deer herd with a nutritional boost in the cold months, read on.

by Dr. James C. Kroll

In the first installment of this series last month, I discussed the basic nutritional needs of whitetails. As noted, in much of the species' range, native forage fails to meet all of their needs. Whitetails have adapted to these regional and seasonal deficiencies quite well; however, adaptations to suboptimum conditions usually result in smaller body size and smaller antlers, as well as reduced reproductive performance. This raises two questions: 1) Should we improve deer nutrition?; and if so, 2) How can we do it?

In the remaining two parts of this series, I will address both of these questions. Hopefully, I will give you some logical strategies to improve the nutrition of your deer.

SHOULD WE SUPPLEMENT DEER DIETS?

This is a question being debated by those of us in the professional whitetail community on a daily basis. There are two basic "camps" on this issue. One philosophy is that we should accept the limitations imposed by the land and learn to appreciate the level of buck quality imposed by site limitations. In Florida, for example, many regions have such poor soils that 100 percent of yearling bucks, and a very high percentage of 2 1/2-year-olds, are spikes. Fawn production in these same areas is extremely low, due to poor nutrition. In most of the whitetail's range, managers can expect to see an increase in fawn production and survival by reducing the herd to below carrying capacity. But you can shoot does in south Florida for years without seeing any response in the fawn crop — the range is just that poor.

This mature Southern buck is frolicking in a well-maintained plot of oats, a winter staple in that region. But even hunters and landowners in more-northern climes can provide cold-weather forage. Photo by George Barnett.

A second camp includes those who believe deer quality and production can and should be increased to the genetic potential of the species, not the habitat. Active participation in the lives and management of deer outweighs any biological questions resulting from "tampering with nature." Indeed, it is possible to significantly improve conditions. Dr. Harry Jacobson of Mississippi State University has been working for some time with the Coco Ranch in south Florida. Using a year-round supplemental planting program, he has not only increased fawn production, but a hunter there recently harvested a 160-class buck.

Obviously, I fall into this second group of folks. But my position one way or the other is not important.

(Continued)

SELECTED DEER PLANTINGS FOR COOL-SEASON FORAGE

Successful food plots depend on a wide variety of factors, including specific site conditions, weather patterns and the farming skills of the person preparing the area and maintaining it. However, the following plant types have proved to be of use in giving deer a nutritional boost during the winter season:

NORTHEAST

LEGUMES
red clover
ladino clover
regal clover
white Dutch

CEREAL GRAINS
winter wheat
rye
winter-hardy oats

MIDWEST

LEGUMES
red clover
ladino clover
regal clover
white Dutch
Austrian winter peas

CEREAL GRAINS
winter wheat
rye
winter-hardy oats

SOUTH

LEGUMES
Arrowleaf (yuchi, meechi) clover (mildly acidic soils)
crimson clover (mildly acidic to basic soils)
red clover
ladino clover (rich, non-droughty soils)
regal clover (rich, non-droughty soils)
berseem clover (basic soils)
Austrian winter peas
Singletary peas
vetch

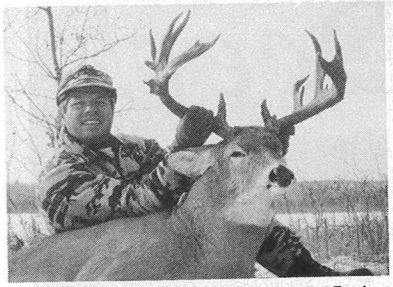
CEREAL GRAINS
wheat (spring or winter)
winter-hardy or improved oats
rye

WINTER GRASSES
ryegrass

(Conduct a soil test prior to planting any food plot; proper fertilization enhances yields.)

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The fact is, most hunters today genuinely want to do something good for deer. Furthermore, given that the amount of land available to the average guy is declining annually, we will have to intensify our efforts on a smaller land base to continue to provide quality hunting experiences. Also, in order for the non-hunting public to continue to support sport hunting, studies have showed the hunter has to demonstrate he is an important part of management for the good of the species. However, there are many misconceptions as to what you can and cannot do to improve the nutrition of whitetails. Let's try to clear up some of the mysteries.

HOW DO WE BEST SUPPLEMENT NUTRITION?

Now we move to an important point. In order to develop strategies to augment deer diets, we first must understand what supplemental feeding is *not*. It is not "welfare" for deer. Too often, folks implement a feeding program solely to increase the number of deer on their property. In most cases, however, there already are more than enough deer present, in terms of the habitat. *The most important component of deer management is population control.* A herd living within the productive capacity of the land is one that will produce trophy-class bucks, assuming the deer are allowed to mature. A herd that is not within the productive capacity of the land never will produce a good buck, no matter how much you feed or plant.

Supplemental feeding is not replacement feeding; it is designed to even out the nutritional plane over the entire year. The accompanying illustration shows what I mean.

In order for any supplemental feeding or forage-management program to be effective, you will have to address each of the stress periods in your area. The relative importance of each depends on geographic area. In the North, for example, more emphasis should be placed on the winter stress period, while in the South, we have found you get more "bang for your buck" by addressing late-summer shortages.

Unfortunately, the average landowner or hunter is not properly informed as to what are effective supplemental feeding strategies. If you just throw some seed on the ground, for example, what have you really done? Is it the right variety? Have you addressed the right stress period? In other words, will supplementation be there *when* the deer need it? There is an entire menu of options available to you. Anyone, regardless of their situation, can do something positive for deer.

SUPPLEMENTAL FEEDING STRATEGIES

We already have identified two basic stress periods in which deer nutrition is subpar. The winter stress period is as good a place as any to begin, as deer both in the North and South experience deficiencies at this time. How can you address supplementation for this season? In order to develop an effective strategy, return to what we discussed in Part 1 about the changing nutritional demands on deer.

Take some time to find out what deer will eat. The mere fact that it is green does not necessarily make it deer food.

What is happening as we move from fall to winter, and how does this affect deer? Remember, whitetails are marvelously adapted to doing without. The primary demand on them during the colder months is for energy, not protein. So, an effective supplemental feeding program should be aimed at increasing the amount of digestible energy at this time.

Energy normally is provided in one of two forms: carbohydrates or fats. Foods such as acorns, soft fruits and cereal grains provide large amounts of both. Winter forages are easily digestible and provide abundant carbohydrates. Hunters in many states and provinces attempt to take advantage of this carbohydrate need by baiting. Now, this certainly is a volatile issue. Some states have made baiting completely illegal, while others condone its use. Personally, the idea of a guy sitting in a blind, staring at a 10-foot-tall pile of turnips is more than I can bear. What is that same fellow doing in January? Is he still providing this high-energy source? Probably not.

Continued on page 72

NUTRITION ... *Continued*

That's the basic difference between baiting and supplemental feeding. Your goal is not to lure deer but to provide an even availability of good nutrition.

A much better way to do this is by winter food plots. Now, I know you have seen all the ads hawking one plant variety or another, but please hear me out. If properly done, cool-season plantings are very effective as supplemental feeding. The operative phrase here, however, is "if properly done." Most hunters are not farmers; unfortunately, neither are most landowners nowadays. More dollars are wasted annually by hunters on food plots than almost any other aspect of this business. Yet with a little attention to detail, supplemental plantings can be the most effective tool in deer management. Let's take a look at how to do it right.

Before you buy anything to plant for your deer, demand a positive answer to all of the following questions:

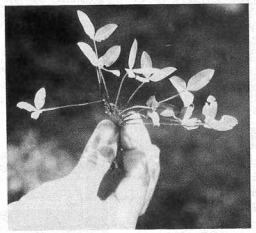
1. Is the cost of planting and establishing this planting justified by the amount of forage produced?
2. Is it a preferred food of deer?
3. Will it be available *when* the deer need it?
4. Will it stand up to heavy deer browsing?

This four-question test will save you more time and money than anything. Let's take them one at a time.

There are many cool-season plants on the market, and most are very good forages. However, there are some that are very expensive. In order to justify spending $3 or more per pound of seed, it is important to determine if the yield will be adequate. Most cool-season forages should produce at least 10 tons of highly nutritious food per acre. Don't be afraid to ask for performance reports concerning anticipated yields. Some of the commercially available varieties produce only a few hundred pounds of plant material per acre, which hardly justifies the expense of planting and maintaining them.

Next, consider question two. Over the years, I have seen some of the strangest things planted for deer. I asked one landowner why he planted a particular type of plant. "Well, it just grows so well, I knew it had to be good for deer," he answered. The truth was that deer don't even eat the plant he had so carefully cultivated. Take some time to find out what deer will eat. The mere fact that it is green does not necessarily make it deer food.

The third question is one of the most important. There are many plantings that provide highly digestible, high-quality forage, *but* there is one basic problem. These plants go dormant just when the deer are needing it. No matter how good it may be, if it's not available when they need it, don't plant it. Again, ask for details.



Arrowleaf clover works well as a cool-season forage producer in mildly acidic soils across much of the southern United States. Photo by Gordon Whittington.

Finally, some forages are so preferred by deer, they are eaten even when the native plants are more than adequate. We call these plants "ice cream" varieties, meaning deer will eat them just like a kid will eat ice cream if his mother is not looking. Remember, the idea behind supplemental feeding is to level out the nutritional plane. If they are eating it when they don't need it, and it's gone by the time they do, then why plant it?

Even if a forage variety meets all four of these requirements, there still are some questions to ask. First, will it stand up to cold? In much of the range, winter temperatures may stay below zero for many weeks. A non-cold-hardy variety easily will be killed during these times. Varieties such as wheat and rye, which already are adapted by selective breeding to resist winterkill, are superior to plants such as ryegrass and most oats. Recently, winter-hardy oats have been developed that not only are highly preferred by deer but hold up to extremely cold temperatures in the North.

Second, I know of no plant that will grow without water. When some of the ladino clovers first appeared on the scene, believe it or not, thousands of pounds of seed were planted in South Texas — of all places. Although winter normally is wetter than summer, there are many areas not suited to supplemental plantings. Our research has shown that when annual rainfall drops below 30 inches, it becomes questionable to plant forages.

No variety of plant has been developed that will grow anywhere and at any time. So, we have come to use combination plantings of mixed cereal grains and legumes for cool-season plantings. Legumes such as clover not only provide high-protein forage that is easily digested, they also are rich in calcium, a nutrient important to antler growth. Cereal grains provide early growth and are good sources of phosphorus, another component of antlers and milk. Planting combinations of these plants accomplishes two things. First, they ensure adequate forage production, since growing conditions are different each year; second, they provide diversity of nutritional supplements. A deer has access to "one-stop shopping" when it visits a mixed-variety food plot.

One of the top questions I am asked concerns how much land should be planted. Again, we have researched this aspect for many years. As a rule of thumb you should plant about 2 percent of your area to food plots. A well-planted acre of forage will be equal to 50 to 100 acres of native forage. But remember that more is not better. If you plant more than this percentage, you probably are wasting your money. Telemetry research has shown that deer do not normally move outside their home ranges to food plots, so the 40 or so tons of forage you produce per 100 acres cannot be consumed by the deer living there.

The distribution of plots is very important. As I noted above, deer do not normally move out of their home ranges to feed on food plots. So, you will have to see to it that deer have a food plot located within their existing home range. Since deer in most areas have winter home ranges of about 640 acres or less, it is a good idea to provide at least one plot in this area. I prefer to break up plot acreage so that there is one plot per 160 acres.

The size of plots should be considered as well. The idea of scattering a handful of seed in a small clearing may be appealing, but it is not very effective. Deer will eat up a small planting quickly, losing the desired effect. So, we have found that food plots should be no less than 1/4 acre in size. The upper limit depends on the minimum percentage criterion and the particular situation.

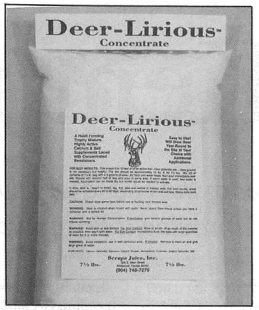
The No. 1 mistake made by folks planting food plots is improper cultivation practices. You are growing an agricultural crop, and the methods you use to establish the crop will influence success. Adding fertilizer and lime to the soil will go a long way toward ensuring success, yet folks persist in taking short cuts that lead nowhere. Legume seeds must be inoculated with bacteria in order for them to grow and produce nutritious forage. A $3 packet of inoculant will yield thousands of pounds of protein.

In most cases, you can expect to spend about $100 per acre to establish food plots. After establishment, annual maintenance costs are about $60 to $75 per year. That's far less than what you and the deer are getting in return, making this a pretty sound investment. In general, supplemental forage produced in food plots costs about a penny per pound. Commercial deer feeds cost 25 to 30 cents per pound.

Recently, companies with powerline and pipeline rights of way have hit on the idea of cost-sharing plantings with landowners in return for right of way maintenance. The company supplies the seed, fertilizer and lime, and the landowner or hunting club provides the labor. This idea, first developed by David Baggett of Champion Paper Co. Inc., is spreading rapidly and promises to provide millions of pounds of highly nutritious feed to wildlife across the country.

So far we have addressed the first stress period: winter. In the final installment of this series next month, I will present what you can do for summer supplements, including food plots, feeds, minerals and fertilization.

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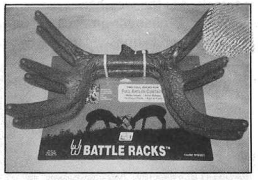
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