

In the past 30 years, supplemental feeding to assist white-tailed deer populations has become very popular and an increasing trend in Texas. Landowners and hunters across the state have seen the benefits that feeding has on their deer herds, not only in antler growth by males but body condition of animals and population densities as well. Though there are many benefits to supplemental feeding, there are also negative impacts and considerations to be made when deciding to implement a feeding program.

From the literature and the vast amount of research on supplemental feeding in Texas, there are common themes and results expressed in the majority. One of the most important results seen from protein feeding and probably the main goal for most who utilize a supplemental feeding program is increased antler growth for male white-tailed deer.

Given that nutrition in the environment fluctuates throughout the year due of stressors like a drought or wildfire, supplemental feed provides a consistent available food source that can be used for antler growth when environmental conditions are tough. When allowed the opportunity to consume protein feed during key periods like March through September when growing antlers, males are known to increase antler size substantially versus those that do not have access to supplemental feed. They are able to utilize the additional protein rich food source along with their natural habitat forage to increase antler growth and reach their genetic potential.

Supplemental feeding also helps males and females maintain optimum body condition throughout the year. Males following the breeding season are drawn down from the rut and are looking to bounce back with the spring green-up. Providing supplemental nutrition during late winter and early spring allow bucks to regain body weight lost during rut. Therefore, those who supplemental feed usually see lower post-rut mortality in their buck cohort. The same idea applies to pre-rut periods. Males that have access to feed throughout the summer and into fall tend to be in a much healthier condition in terms of body weight and fat reserves than animals not consuming feed. It is also very important to note the dynamic environmental conditions of Texas. Since Texas is variable on precipitation amount and timing throughout the year, providing feed will keep males in great physical condition when droughts do occur. Similarly, these concepts hold true for the female cohort of a population as well except in greater detail.

Providing optimum nutrition for the female cohort of a white-tailed deer population is so important and is often shadowed by the benefits for males. Males need roughly 12%-16% protein for antler growth which is pretty consistent for most supplemental feed. In comparison, females need upwards of 30%-32% protein for successful conception, gestation and lactation to recruit fawns into the population. Does are constantly under nutritional stress! In the winter, does are bred and gestate young for 200 days after date of conception. These 200 days are crucial as females need all the nutrition they



can get to develop, not one but two, fawns (in most cases, does give birth to twins). Following birth, the female then has to lactate to provide nutrients to fawn(s) for 2-4 month. Lactation and weaning is probably the most stringent time of the year for females as lactation is very costly and nutrient dependent. Simultaneously while weaning fawns, the female has to keep her body weight at a healthy level to prepare for mating season from November-February. So as you can see, there is a much higher demand on females to consume a more protein rich diet throughout the year for necessary life processes than there is to simply grow antlers for males. Most who supplemental feed do not realize that feeding impacts the female and juvenile aspect of a deer population much greater than the male cohort. As a result, landowners and hunters who supplemental feed tend to see heavier and healthier bodied females and a higher juvenile recruitment ratio when conducting deer surveys in the fall.



An important point that I touched on briefly above is the benefit that supplemental feed has during critical periods such as a drought. With low, or in some cases no precipitation during the year and especially during the growing season, the habitat will lack in forage and nutrition that is needed by males, females and fawns. When this occurs, landowners will go through what can be characterized as “bust” period. This is when the population takes a major hit and the white-tailed deer population density can see a decrease due to lack of nutrition in forage availability. It is important to note that the opposite of bust would be a “boom” where there is an excess of nutrition in the environment that animals take advantage of and an increase in population density can be seen. Utilizing supplemental feed can smooth out that “boom or bust” cycle to see a more consistent population change from year

to year in a deer herd. In a drought year, supplemental feed acts as a buffer and provides the nutrition to your males and females needed for necessary life processes such as antler growth and lactation that the habitat is unable to provide.

As we can see there are many positive outcomes of supplemental feeding that attract its usage by private landowners including increased antler growth by males and improved recruitment of juveniles by females. All is well in the white-tailed deer world right? However, providing supplemental feed for deer is much more complex than simply filling protein feeders and growing larger antlers. Feeding induces negative effects on a white-tailed deer population that most of the time are overlooked by a landowner but need to be addressed. Negative effects are things such as a more intense management program with a long term commitment, high risk of disease transmission, increased cost to the landowner, increased numbers of non-target animals and probably most important, dependence.

Deciding to start supplemental feeding on your property does not simply mean start feeding one day and expect results the next. There is a long term commitment and effort that is needed by the landowner to provide feed continuously to see the end results that are desired. Deer do not naturally consume feed from a protein feeder so they take time to learn and adjust to a supplemental food source. This is why there tends to be a response time of approximately 2 to 3 years that is needed to start seeing changes in your overall deer population. For example, say that a landowner plans to start feeding this

upcoming spring-summer of 2017. It will take animals time to find the feed and start visiting sites regularly. This may not happen automatically and may take a year or more, potentially until 2019 for animals to adjust. Once consumption of feed does begin to occur consistently, property owners and managers would then hope to start seeing responses in those population characteristics of interest like antler growth, juvenile recruitment and overall body condition. However, seeing responses is not immediate either. It will take time and accurate data recording by the land owner to compare the results of those population characteristics between pre- and post-supplemental feeding periods.

Ok so we now have a growing deer population with more bucks surviving after the rut, all deer are increasing their body weight and females are consistently giving birth to twins. More deer is better, right? Well, it depends. Once that deer population does begin to respond to supplemental feed, there will be an increase in the number of deer, as I briefly stated above. Over time, supplemental feed artificially increases a deer population to a greater number than what the environment can sustain or, in the biological world, greater than carrying capacity (K). With an increased population, animals will begin to apply greater pressure on the habitat than what the environment can sustain long term. This brings me to my next point. A growing deer population needs to be regulated by a management program to handle the increasing deer density on your property. This includes a harvest management program to remove the adequate number of deer per year to decrease the stress excess animals place on the habitat. Doing so will keep your deer population at a healthy population density as to not over stress the habitat and will also decrease density dependent stressors like intraspecific competition and disease transmission. Conversely, unregulated deer populations are at a much higher risk of reduction do to such stressors.

White-tailed deer are susceptible to carry a variety of diseases such as rabies, epizootic hemorrhagic disease (EHD), bluetongue and most recently discovered in white-tailed deer in Texas, chronic wasting disease (CWD). These diseases are naturally occurring in white-tailed deer populations and are mechanisms of population regulation by mother nature. Most diseases found in white-tailed deer are transmittable and are most commonly done so by direct contact between individuals. When protein feed is introduced into a deer population, animals begin to visit feedings sites regularly and congregate in high densities. This poses a problem for populations that may carry a disease. With elevated interaction between animals at high density feeding sites, the chances of diseases transmission increase drastically. Studies have shown a much higher risk of disease transmission associated with supplemental fed deer populations versus non-supplemental fed populations (Sorensen et al. 2014, Thompson et al. 2008, Miller et. al. 2003). For this exact reason, supplemental feeding is banned in many states around the country to try and reduce the spread of disease within populations. Caution needs to be taken when deciding to implement a supplemental feeding program. Be sure to take the time and observe the animals that you harvest. Note any abscesses on animals and the body condition they are in when recording your harvest data. Consult with your local Texas Parks and Wildlife Biologist or private lands biologist about testing for CWD in animals that are taken from your property. Keeping track of such records will allow you to stay on top of any diseases that may be affecting your population.

Supplemental feeding can do wonders for a deer population when implemented correctly and monitored. It can help those landowners and managers finally start to see the results they desire. However, these results will come at a steep price. Protein feed is not cheap and feeding year-round can add up to be an expensive bill. Understanding what your budget is when deciding to supplemental feed

is important because it gives you an idea on how much you will be able to feed as well as when you will be able to feed. Often, landowners decide to simply feed during the most important times of the year such as from spring and through early fall when males are allocating nutrition to antler growth and females are lactating after giving birth. For landowners that are concerned with cost, limiting feeding to only spring and through early fall tends to be adequate for providing necessary supplementation as nutritional requirements for both sexes tends to be highest here compared to winter months.

Lastly, supplemental feed tends to increase populations of non-targets on your property and around your feeders. These animals include raccoons, opossums, rabbits, feral pigs, migratory birds such as crackles, brown-headed cowbirds and others. These animals tend to be general, opportunistic feeders and will jump at the chance at a free meal. Understanding this, landowners tend to try and offer feed where only white-tailed deer can access it. Installing protein feeders that are elevated off the ground can deter small mammals from climbing up and having a buffet. By enclosing the feeder in a feed pen, you can decrease feral swine from making themselves right a home at your feeder. Utilizing these strategies can ensure that the majority of your feed is only being consumed by white-tailed deer or target animal.

I would like to finish by stating that a supplemental feeding program should be just that, “supplemental”. The habitat should be the most important aspect of sound white-tailed deer management. A supplemental feeding program should assist in reaching the goals of a landowner, not dependent upon. White-tailed deer need a variety of different nutrients to survive and meet their nutritional requirements for necessary life processes. Supplemental feed does not give deer 100% of what they need. Supplemental feed merely compliments what the range habitat can provide for those animals. Deer will still depend on their habitat as a necessary food source and in fact, will depend upon it more heavily as deer numbers begin to increase. If a deer herd is on poor range conditions due to overpopulation or poor habitat management, a supplemental feeding program will more than likely not help and more importantly, will be a waste of money. It is very important to use wildlife management tools such as population and vegetation surveys to stay on top of where your deer herd is in terms of numbers and the affect that they are having on your habitat. In doing so as a landowner or hunter, you will begin meeting your property goals.

RECAP

Positives

- Greater antler growth and development by males
- Lower post-rut mortality
- Healthier and heavier animals
- Increased juvenile recruitment
- More consistent population change from year to year

Negatives

- Long term commitment
- Intense management (harvest and feeding)
- Increased risk of disease transmission
- High cost
- Increase in non-targets
- Dependency



Descriptive Points: River Bend Ranch, Mills County

Located on the Colorado River with over a mile of river frontage and a world class hunting operation, this 765-acre high fenced ranch is a sportsman’s paradise. The ranch has been under intense management to improve wildlife habitat and species abundance for almost 20 years. Varied terrain on the ranch goes from mesquite bottoms, oak covered valleys and draws, to some of the most breathtaking elevations in all of Central Texas.

The Ranch also includes living quarters with a 2,000+ sqft lodge located on the property. The lodge has all the comforts and luxuries of home including 3 bedrooms, a very spacious living room, custom stone wood burning fireplace, wrap-around porches, and a bonus room that can bunk more visitors and ample amount of outdoor storage for equipment and game processing.

The has also been sculpted to make access to the river frontage accessible and enjoyable unlike most river ranches. Dive up and down the bank, fish, camp or put your boat in, you will not find an area in Mills County for gorgeous or breathtaking than River Bend Ranch. Also, Native American tribes inhabited this river frontage centuries ago and artifacts are still found along the river bank today.

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“ACHIEVING LANDOWNER GOALS THROUGH KNOWLEDGE AND EXPERIENCE”

