

# WHITETAIL NEWS



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**COVER PHOTO:  
SO CLOSE!  
Three Encounters With  
a World Record Class Buck**

Story On Page 5

**120  
Magic Days  
Photos Show  
Antler Growth  
Month-by-Month!**

Story on Page 10

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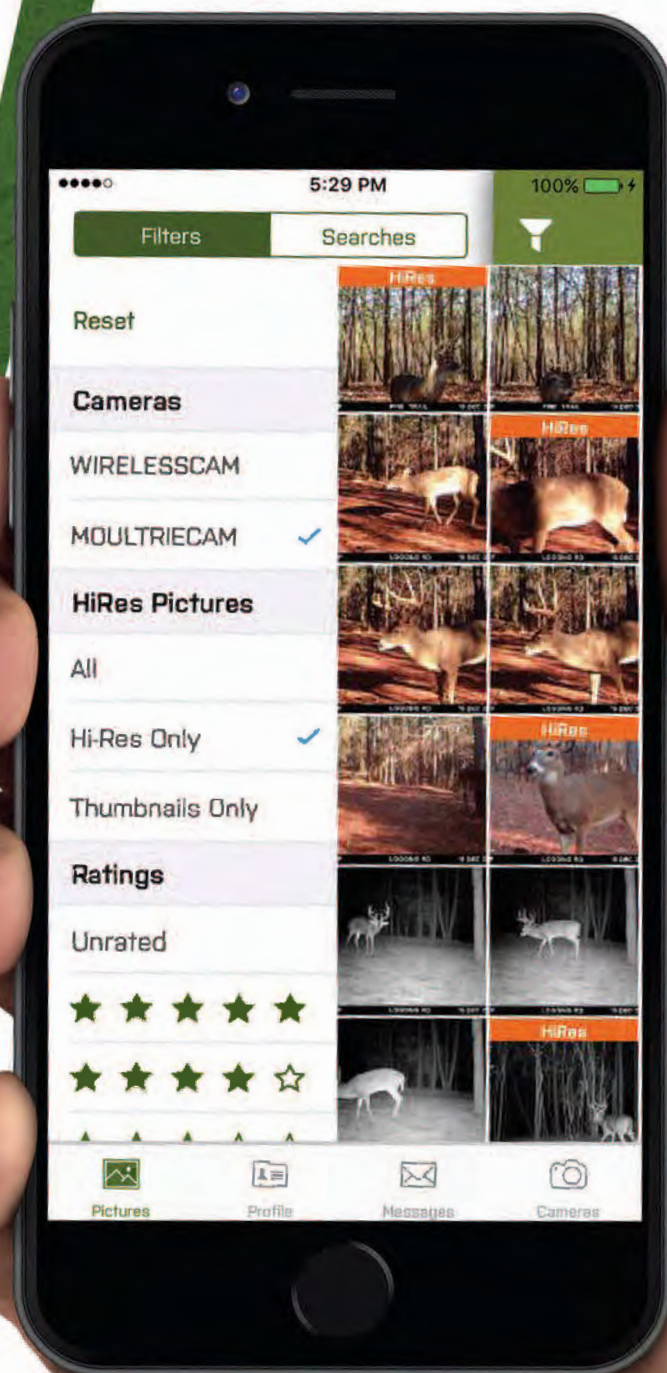
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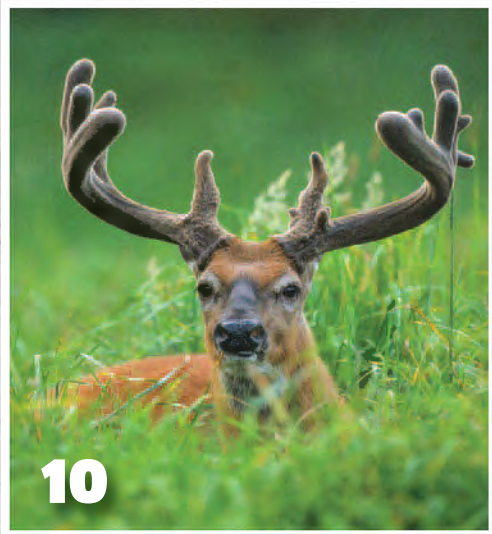
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## 16 Field of Ambush Draws Trophy Buck in Oklahoma

By Brandon Turnbow

The Whitetail Institute's products have been helping grow larger bucks on the author's land. An Ambush food plot helped him kill the biggest deer ever shot on their lease, a brute that scored 178-3/8.

## 20 Popular Imperial Whitetail Ambush for Exceptional Attraction

By Jon Cooner

Ambush is the ideal blend of sweet lupines, sugar beets, Whitetail Oats and proprietary annual clovers.

## 22 Management Strategies Must Change as Deer Numbers Decline

By John J. Ozoga

Some states may have "too many" deer, but most states are seeing declining numbers. The author, a renowned deer biologist, thinks management strategies must change to turn around buck harvests that have declined by 8 percent from 2003 to 2013.

## 28 Perennial Basics: Easy Steps to Perennial Food Plot Success

By Matt Harper

## 38 Winter-Greens and Tall Tine Tubers – Favorite Late-Summer Plantings

By Gerald Almy

## 44 Annuals and Perennials: Finding the Perfect Balance

By David Hart

## 48 Awesome Food Plots on Marginal Sites

By Michael Veine

## 52 Kill-Plots in Planted Pines

By Jon Cooner

## 54 Imperial Whitetail Edge: Precise Blend Flourishes in Wide Variety of Climates

By Whitetail Institute Staff

## 58 Why You Can't Afford Not to Plant Food Plots

By Gerald Almy

## 62 Build a Better Food Plot

By Joe Blake

# Departments

## 4 A Message from Ray Scott

## 26 Customers Do the Talking

Stories and Photos

## 34 The Weed Doctor

By Dr. Carroll Johnson, III, Ph.D.

## 41 Food Plot Planting Dates

## 56 Record Book Bucks

Stories and Photos

## 68 First Deer – The Future of Our Sport

# In This Issue...

## Features

### 5 So Close! Three Encounters With a World Record Class Buck are Memories to Treasure

By Jon Cooner

For most of us, encountering a world-class whitetail in the wild is a rare event. And encountering a buck that would qualify at the top of the record book is unfortunately not likely at all. That's one reason why Dr. Lou Genello's multiple encounters with the same massive buck is so special.

### 10 120 Magic Days: Antlers are the Fastest-Growing Bone Material Known to Man

By Charles J. Alsheimer

Deer antlers have always fascinated man. Antlers are the fastest-growing bone material, and during about 120 days from late March through early August, a mature buck can grow over 200 inches of bone on his head. Month-by-month photos!



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## A Message from **RAY SCOTT**

Founder and President of the Whitetail Institute of North America

In less than 30 years, the Whitetail Institute has pioneered a whole new industry, beginning with its ground-breaking Imperial Whitetail Clover and several other forage products — all scientifically researched and tested under real-world conditions by field testers from coast to coast.

# Food Plotting Is Bright Spot in Future of Deer Hunting

**Y**ou don't have to go far for negative news about deer hunting. According to the QDMA, whitetail populations are falling in many places — an issue addressed by John Ozoga, one of the most respected whitetail experts in the world (see page 22).

There are other troubling factors that biologists fear as well such as disease outbreaks and increasing predator populations. There is also the issue of opportunity. Historically, hunting on public land was comparable to hunting on private land. But that is no longer true as public lands deal with aging habitat and less diverse ecosystems.

There is also the social factor. Although hunters remain a powerful force in American society, their ranks are shrinking. Urbanization has claimed much hunting land as grandpa's farm is now a shopping center, and many families feel they can't afford the time or costs that hunting require. In addition, more and more families are losing the hunting tradition where fathers pass down their experiences to their children.

And demographics are striking. For example, nineteen percent of residents 16 and older hunted last year in Montana compared to one percent in California and Connecticut.

However, as public lands suffer, hunting is getting better on private and leased lands according to a 2012 *American Hunter* article. So much so, that from 2000 to 2009, hunters on these properties made up nearly 40 percent of all the whitetails in the Boone &

Crockett Club book.

At the Institute, we have noted that more and more hunters are purchasing or leasing lands they can actively manage. They're planting food plots, managing timber and working on other habitat projects.

I am confident these increasing number and quality of food plotters will propel our sport to new heights. If there is one thing I have learned from every issue of *Whitetail News* it is the sheer ingenuity and innovative spirit of food plotters. Couple that with the Institute's equal dedication and determination to formulate the best nutrition products possible and you have a recipe for success.

In less than 30 years, the Whitetail Institute has pioneered a whole new industry, beginning with its ground-breaking Imperial Whitetail Clover and several other forage products — all scientifically researched and tested under real-world conditions by field testers from coast to coast.

Research continues to provide more products, with more nutrition and more attraction under more diverse conditions. As nutrition expert and contributing writer Matt Harper points out, there's always unexplored territory whether it's in a new seed, or new blend or improvement on an existing product. Even our flagship Imperial Clover continues to be improved.

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# SO CLOSE!

*Here's Lou Genello's full-body mount with the sheds from a massive Illinois buck.*

## Three Encounters With a World Record Class Buck are Memories to Treasure

By Jon Cooner

For most of us, encountering a world class whitetail in the wild is a rare event. And encountering a buck that would qualify at the top of the record book is unfortunately something that most of us will probably never experience in our lifetimes. That's one reason why Dr. Lou Genello's multiple encounters with the same massive buck is so special.

"I've hunted with Diane Hafford's Rocky Branch Outfitters many times over the years, and her husband, Darrell, has always guided me," Dr. Genello recalls. "Five years ago, Darrell called me and said he had a huge buck on his property and wanted me to come hunt him. He also sent me a photo he had taken of the buck. My very first thought as soon as I saw it was, 'That's a 200-inch class deer!'"

Rocky Branch Outfitters is located in Southern Illinois, which is widely recognized as having bucks with the genetic potential to grow incredibly impressive antlers. Hafford says, "Rocky Branch has pushed the bucks on its private, free-range hunting properties to the pinnacle of their genetic potential for antler size through decades of intensive management of habitat, selective harvests, great soil, great genetics, and Imperial Whitetail Clover and other Whitetail Institute products that help attract deer to our proper-



ties, hold them there, and give them the nutrition they need to flourish.”

Genello took Hafford up on his offer, and the incredible season started with a bow hunt in October.

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## The First Encounter

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“The weather was bad when Darrell picked me up at the St. Louis airport,” Genello recalls. By the time we got to the lodge, it was too late to walk to a stand, so we waited until the next day to hunt. That night, we looked at videos Darrell had recently taken of the deer. In each one, the buck had come out into various food plots following two 2-year-old bucks and a big 170-inch ten-point. It was like clockwork.”

One of the keys to Rocky Branch’s success in attracting, holding and growing big deer is its strategic use of food plots, not only to attract, hold and grow bigger and better deer but also to increase the odds of correctly forecasting where a client will have the best odds of success on a given hunt. Hafford explains, “We’ve been using Whitetail Institute products since 1988, the very first year Imperial Whitetail Clover came out. We use both annuals and perennials in our food plots, but we use them in strategically different ways. The forages we use the most are Imperial Whitetail Clover, Alfa-Rack Plus, Whitetail Oats Plus, Pure Attraction and Tall Tine Tubers. We plant the perennials in larger plots located toward the center of the property, and annuals in staging plots placed near bedding areas.

“Which perennial we plant in a specific centrally located plot depends on how much moisture the soil in the plot holds. For example, if the plot is in bottomland, we plant Imperial Whitetail Clover. We plant Alfa-Rack Plus in areas with well-drained soil. We plant the Whitetail Institute annuals in our staging plots. The annuals provide additional attraction during the early and late season as well as a

highly attractive, nutritious food source to complement the perennials during the cold winter months.”

The first day after Genello’s arrival at Rocky Branch, he took a stand near a staging plot planted with Pure Attraction. “I had been in the stand for about two hours when I saw some movement in an Imperial Whitetail Clover field to my north. A doe came out first, then two young bucks, followed by a much bigger buck. Then I saw him. It was the buck I was after. He was huge!

“Eventually, the group of deer started moving toward me, keeping close to cover. The stand faced south, so I had to lean against the shooting rail to bring my bow into position. Deer kept coming out as the buck moved closer to me, so I had to stay frozen in position for about 40 minutes. The big buck fed in the Pure Attraction to within 15 yards of me, but a tree blocked my shot. Light was fading fast, and all I needed was for the buck to take a step or two either way, and it would have been a slam-dunk 15-yard shot. Eventually, though, he turned around and started to walk out almost exactly the same way he walked in. It was last shooting light, and as he walked away, I was still leaning back to get a clear shot under the tree limb. I settled my 40-yard pin on his vitals, released the arrow and heard a thud.

“I called Darrell, and when he arrived I directed him to exactly where the deer had been standing when I shot. Darrell didn’t see the arrow or blood, so I got out of the stand to help him look. I dropped my backpack next to where the deer had been standing when I shot, and we started searching in circles. We looked with our flashlights for a while but decided to suspend our search until the next morning. The next morning, we found my arrow hidden beneath the leaves of the brassicas planted in the plot and ultimately determined that my shot had been a clean miss. I was upset that I had missed, but glad that at least I hadn’t wounded the buck.

“I hunted him the rest of the week, but I didn’t see him again. The


last evening, the wind was out of the west, so I hunted a different stand. I saw the two younger bucks and the 170-inch buck come out and thought the big buck would be right behind them. The 170 passed within 10 yards of me. It was a perfect scenario for a shot, but I let him walk, hoping that the buck I was after would come in behind him. Unfortunately, he never showed up.”

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## The Second Encounter

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Genello had come so close to connecting on the colossal whitetail during archery season that he wasn’t going to pass up Hafford’s invitation to return during muzzleloader season that same year to try again. “Darrell had monitored the buck’s activity and said he had been coming out in staging plots planted in Tall Tine Tubers and Pure Attraction before moving on to the perennial plots,” Genello re-



*The massive buck seconds before Genello missed with his muzzleloader.*

*“He would have been the No. 1 typical whitetail ever taken with a bow, the No. 1 typical ever taken with a muzzleloader, and would have been the No. 2 typical ever in any category.”*



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calls, “so I took a stand overlooking a staging plot. When I noticed some movement out of the corner of my eye and saw a buck following three does, I could immediately tell the buck was the big one I was after. Darrell had explained beforehand that the deer generally come off a hillside, down a little ravine, then right into the center of the food plot. There was a cameraman with me this time, and he didn’t have a good angle, so I grabbed my muzzleloader and moved to a new spot behind a sycamore tree, figuring the buck would come past either side of the tree and offer a 70-yard shot.

“After waiting there for quite a while, I saw a doe step out about 350 yards away where the ravine enters the plot. Instinct told me that if the big buck continued to follow the doe, their path wouldn’t offer me a shot from behind the sycamore tree, so I carefully moved to a new spot overlooking a road planted in Pure Attraction that I thought the deer would cross and sat down with the gun on my knee. Soon, the first doe crossed the road. Then the second. Then the third. Then the buck stepped into the road, turned broadside, and looked right at me. I guessed the distance at about 180 yards.

“I made sure I was stable and consciously eased the trigger back to make sure I made a good shot. I held center-of-mass, fired, and saw a splash below the deer. The deer jumped, ran a short distance, stopped, and then turned to look back at me before walking off into the sunset. My muzzleloader had been sighted in for 180 yards. I later ranged the shot at 237 yards.”

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### The Third Encounter

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“I went back again the following January for another try at the buck with my bow,” Genello recounts. “Darrell picked me up at the St. Louis airport, and we discussed strategy as we drove toward the lodge. I suggested that I should hunt the same stand where I was when I had missed him with my bow. The next few days were forecast to be gloomy, though, and Darrell said that in such conditions the deer usually go straight to the destination plots during legal shooting hours instead of stopping by the staging plots first.” Based on that, Genello hunted one of the big perennial plots the first day.

“It was raining steadily when I got to the stand about noon. I was pleased to find that even though this was the second week in January, the stand of Imperial Whitetail Clover was still in great shape. About 2 or 2:30 p.m., I saw several deer in the other field at about 400 yards away. I glassed them and, sure enough, the big buck was with them. I climbed down from my stand and quietly slipped down a dry creek bed to a new spot behind a big oak tree near the other plot. From my new vantage point, I could see the buck I was after and several other deer in the food plot, so I eased over to a ladder stand on what I thought would be the buck’s exit route, thinking I’d cut him off.

“From my new stand, I could still see the group of deer 250 yards away. Even at that range, I could still identify the big buck due to the sheer size of his antlers. Eventually, the group of deer started heading



*Dr. Lou Genello holds the sheds that show how massive the buck's antlers were in every way*

my way. As they approached, one of the other bucks, a 10-point, veered off to my right, but the big buck continued to head straight toward me, eventually stopping at 40 yards behind a small thicket in the plot. I knew that if he kept on his straight path, he would eventually step out from behind the thicket broadside at only 15 yards.

As I waited, the 10-point reappeared, and it was obvious that he had circled around. He was looking back on full alert, which also put the big buck on full alert. I didn’t know what they’d keyed in on and thought it might be a coyote. My speculation was cleared up when the neighbor’s dog ran into the plot, spooking the big buck past me at a full run. I hunted another ten days, but never saw him again.”

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### But the Story Doesn’t End There

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Not long after the season ended, Hafford found the big buck’s sheds. Ironically, he found the first antler within a few feet from where the buck was standing when Genello had missed him with his bow, and he found the second one right where the dog had come out and ruined things during his most recent hunt. It took Genello several years of coaxing to talk Hafford into letting Genello have the sheds. Finally, though, they cut a deal that would allow Genello to have replicas made and mounted for Hafford to keep at the lodge and for Genello to have a full body mount with the sheds.

Genello held up his end of the bargain and sent the sheds to a well-known replica maker. The replica maker asked for any pictures and/or video we had of the buck in order to get the antlers mounted as precisely as possible. Hafford provided hours of video footage and lots of photos.

A few weeks later, Genello got a call from the replica company. The man said, “This may surprise you, but your buck gross scored 211 6/8 and nets 207. He would have been the No. 1 typical whitetail ever taken with a bow, the No. 1 typical ever taken with a muzzleloader, and would have been the No. 2 typical ever in any category.”



## The Fourth Encounter

"I got the buck on video again the next fall after that first hunting season," Hafford recalls, "but after that, we didn't see the buck again for two years. He just disappeared, and we feared that he might have died. It seemed unlikely that he would have been killed by another hunter because such a huge buck would have made news all over the country. This past year, though, he showed up again, and I got him on video. His body was still in good shape, and it was obvious to me that it was the same buck, but he was very old — probably 9-1/2 or 10-1/2, and his antlers were nowhere near as big. I called Lou, and two weeks later he flew back to try again." This would prove to be Genello's final encounter with the buck.

"Darrell let me know this year that the buck I hunted so hard five years ago had shown up again on his property. He told me that his body was huge, and that even though his antlers were smaller due to his age, he was still a 140 to 150-class buck. I went back to try again with my bow. I took a stand overlooking the same Imperial Whitetail Clover plot where Darrell had taken the video of the deer two weeks earlier. Later that afternoon, the buck entered the plot about 65 yards away at exactly the same spot where he had entered the plot on Darrell's video. I grunted, and as he moved to my right along a little creek bed I was able to take a few pictures of him. As he closed the distance, I waited for the right moment and switched from my camera to my bow, and I was at full draw by the time he stepped out broadside at 18 yards and stopped. I had him dead to rights.

"I don't know if I can accurately describe all the thoughts and feel-

ings I experienced in a flood at that particular moment. Although he was still a Pope and Young-class buck, the monster buck's antlers were nowhere near as big as before, and he'd had good fortune on his side in my previous three encounters with him. I just couldn't shoot. As I let down the bow, he noticed me and looked at me as if to say "Hello again" and then he turned and walked away.

## Was It the Same Deer?

Hafford is certain that the buck Genello let go this year is the same one he hunted five years ago. Genello feels that it must have been the same deer, given the evidence. "There's no way I can be absolutely certain it was the same deer," Genello explains, "but you have to take into account how incredibly rare it is to find any 9-1/2 to 10-1/2 year-old buck still alive in the wild, and that even though the buck's rack when I last saw him at 9-1/2 or 10-1/2 years old wasn't as massive as it had been five years earlier when he was in his prime, it had all the markings. Adding all that up, in all probability it was the same deer and, if so, I had made the right decision. It's not always about the kill but the experience. I thought to myself, 'I just let him walk away. He deserved it.' It couldn't have ended any better. It was perfect."

"The future is bright here at Rocky Branch because we definitely know he's spread his genes around," Hafford says. "We've seen bucks and found sheds that look just like him over the last few years, and we're even finding some of the sheds in the same fields where Lou missed. I wish Lou had gotten him that first season he hunted him, but it was an awesome season just to have one encounter with a real world-record class buck, let alone three." 🍖



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# 120 **MAGIC** Days

Antlers are the fastest-growing bone material known to man.

By **Charles J. Alsheimer**

Photos by the Author



**D**eer antlers have always fascinated man. Antlers are the fastest-growing bone material, and during about 120 days from late March through early August, a mature buck can grow over 200 inches of bone on his head. What follows is a series of photos that document the antler-growth process of a mature whitetail buck. I photographed this buck in western New York. In the year before this pictorial's time line, moisture and growing conditions were slightly better than average. The buck was eight years old, healthy and in the prime of his life. Typical of a buck of this stature, his antlers scored 154 Boone and Crockett inches after velvet peel in September.

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### How It Happens

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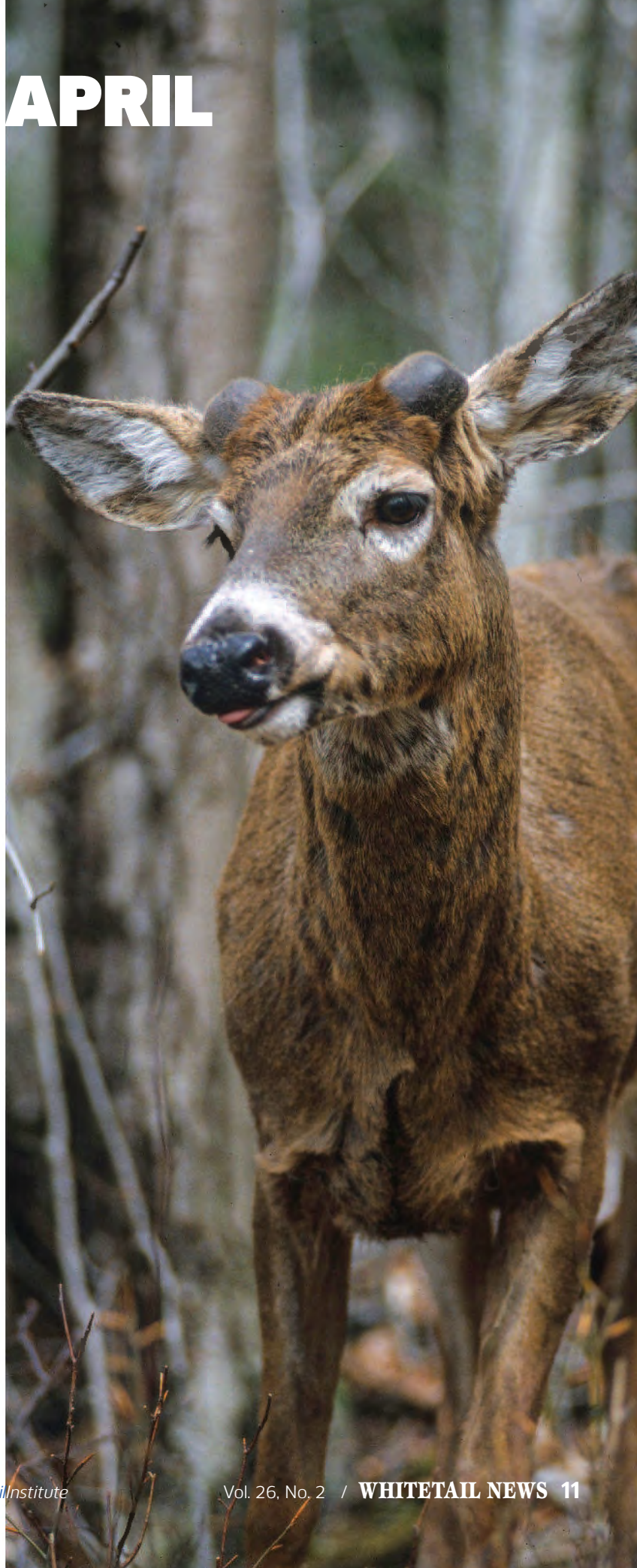
Cookie-cutter bucks don't exist. Each is distinctly different. Some grow antlers that are narrow and tall, but others have drop tines and wide inside spreads. None are identical, which adds to the whitetail's uniqueness. Also, the rate at which a buck's antlers grow depends on several factors, such as genetics, health, age, stress, soil quality and overall quality of natural and agricultural habitat.

Of all the bucks I've raised, most cast their antlers from January 20 to March 10. The earliest I had a buck cast antlers was January 1 (he was injured), and the latest was April 3. When antlers are cast, the pedicle bleeds, causing a scab to form. The scab then heals from the outside to the center. When fully healed, the top of the pedicle is covered with a brownish-gray skin, with a small light-gray dot in the center of the pedicle. Daylight increases as winter wears on, setting the stage for antler growth.

When day length reaches a certain point, blood begins flowing to the pedicle, and antlers begin growing. The skin covering the pedicles pushes upward through a series of arteries that carry blood to the antlers as they grow during the next four-plus months. During the growing process, blood flows through a series of veins and arteries and forms a protein base upon which minerals are deposited.

The skin covering the growing antlers is called velvet because it feels like velvet. The velvety texture is actually a result of hundreds of tiny hairs that grow out of the skin. These hairs serve a purpose: to alert the buck of danger when the antlers touch brush or other obstacles. Because the velvet consists of blood vessels, the antlers are warm

# APRIL







to the touch and only slightly cooler than a whitetail's 101-degree body temperature. The velvet also makes a buck's antlers appear much larger than they actually are.

Most bucks are finished growing their antlers by August 10. Then the hardening process begins, and it usually takes 20 to 25 days. Though the antlers will be solid bone when the velvet is peeled, they are far from hard during the early stages of growth. From the time they begin growing in late March until about July 15, a buck's antlers are bulbous and pliable. Therefore, it's not uncommon for a buck to cut or even sever a beam or tine during the growth process. If the antler is badly cut or severed, the buck can bleed to death.

If a buck is mature and has everything going for him, his antlers might grow 1/2 to one inch per day, especially from June 15 to July 15, when daylight is greatest. During this 30-day period, antler growth explodes.

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### Time Line

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**April:** From when antlers begin growing in late March through the end of April, growth is minimal. That's mostly because the amount of daylight is much less than what it will be in June. Second, most bucks are still stressed from the long winter, so their body is in recovery mode. Another reason antler growth is slow during April is the lack of quality food. Spring green-up doesn't normally occur in states north of the 40th latitude (northern Maryland to northern Missouri) until mid to late April. By the end of April, brow tines and one or two





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inches of additional antler beam should be easy to spot on a fully mature buck.

**May:** In most whitetail locales, May bursts onto the scene with abundant high-octane food, natural and man-created. Natural foods

# JULY



and forages preferred by whitetails are high in protein and other essential nutrients throughout May. This lets a whitetail's body condition improve from the stress of winter, setting the stage for rapid antler growth. By the end of May, the G-2 points (second point on a typical rack) should be noticeable. In addition, the antler beams should now be about half of their ultimate length.

**June:** The lyric, "Summer time, and the living is easy," might be the best way to describe what June is about for whitetails. If rainfall is normal, nutritious food is lush and readily available. Further, the amount of daylight is at its annual peak, providing the hormonal support that lets antler growth accelerate. By late June, almost all the primary points on a rack will have started growing.

**July:** The month begins with a buck's antlers being very bulbous. As the month progresses, the antler's beams and points will finish growing. By July 20, a mature buck's antlers should look massive. Having adequate rainfall is critical to ensure that optimum antler



growth continues during July. If a drought occurs, the nutritional level of food decreases, which can cause a decrease in antler growth. For this reason, it's critical that food plotters offer drought-resistant plant varieties during June and July.

Insects inflict tremendous stress on northern whitetails during July, when temperatures heat up. Those of us who have raised deer believe a whitetail's stress level at this time can rival what deer experience during winter. In years when insect and parasite loads are extremely high, antler growth can be affected in a negative way. When July ends, the antlers on most bucks are fully formed, ushering in the antler-hardening process.

**August:** Most Northern bucks will have completed their antler growth by early to mid-August, at which time blood flow to antlers diminishes. For the next 20 to 25 days, the antlers will begin to calcify and harden. During this time, the overall size of antlers actually appears to decrease because the velvet covering shrinks as the blood flow slows and ends. Sometime in late August through mid-September, most bucks will peel the velvet from their antlers.

### What Does It Take?

Many believe that great summer growing conditions are critical for optimum antler growth. Though extremely important, there is far more to the antler-growing equation than a great summer growing season.

Antler growth is an extension of the animal's body condition. If a buck's body is not healthy and well maintained with proper nutrition,

a buck's antler growth might decrease 25 percent or more. So, optimum antler growth requires great nutrition year-round, not just during the antler-growing season. Science has shown that if a buck enters the winter rut-stressed, with minimal fat, the chances of him growing great antlers the next summer are greatly diminished. Therefore, food plotters should consider a winter forage offering to ensure deer emerge from winter as healthy as possible. Two late-fall and winter forages I use with great success are Tall Tine Tubers and Whitetail Oats Plus.

After bucks exit winter, they are famished and in need of high-octane forages, which means those with protein levels exceeding 25 percent. This is especially important from late May through mid-July in northern regions. During the past 20 years, I've planted several warm-season forages on our farm, with Imperial Whitetail Clover being our No. 1 offering. In addition, there must be adequate rainfall to ensure the forage protein levels remain high. If a drought occurs, forage protein levels decrease, and fiber content rises, making food sources less nutritious. Consequently, when droughts occur, nutrient levels required for optimal antler growth may not be available in deer foods, causing antlers to be smaller. Two Whitetail Institute offerings, Extreme and Chicory Plus (now Fusion), have worked well for me in New York and perform extremely well in dry and drought-prone regions.

It's vital to have great nutrition during the antler-growing season, but it's also extremely important to have excellent food available during September through March. 🔥



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# Field of Ambush

## Draws Trophy Buck in Oklahoma

*This brute scored 178-3/8  
and was the largest buck shot  
in 20 years on Turnbow's  
hunting lease.*

By **Brandon Turnbow**

Photos by the Author



**A**fter deciding to use Whitetail Institute products, I started digging into the company's website and articles to see what I needed to accomplish a great food plot. Boy, was I in for a surprise. I hadn't done anything right on my first plot. Lime? pH? Fertilizer? Plant during a specific time of year? Plant this in that type of soil and not this type? With the information the Whitetail Institute website provides, if you are paying attention, it's nearly impossible to fail. Remember that the pH in the soil is huge, so don't skip the soil test.

I started using Whitetail Institute products four years ago when I planted eight acres of Chicory Plus (now improved and named Fusion). I wanted a product that would yield high tonnage and last into the cooler months. Great product. The deer loved it.

Photo 1 shows what we considered a great buck before we started our food plots. I killed this 10-pointer six years ago. I had always wanted a good food plot because I knew that proper nutrition produced bigger bucks. My first attempt at a food plot was five years ago. With the help of a great friend, Brent Kroeker, and the use of his equipment and farming expertise, I got some generic Roundup-ready soybeans in the ground. The area I planted was an old, dried-up pond bed I had talked the landowner into letting me use. After an unsuccessful plot, however, I was discouraged, so I started to research seed companies.

Photo 2 shows a buck I killed three years ago. Photo 3 shows that the bucks keep getting bigger. I shot this one two years ago, and he scored 167-5/8 inches. During the past four years, I planted Tall Tine Tubers (mini-basketball size turnips), Imperial No-Plow, Whitetail Oats Plus, Pure Attraction, Winter-Greens and, this year, a new product called Ambush, which was in the field where I harvested the biggest buck of my life this past season. Year after year, we keep getting bigger bucks on our property. We now pass on deer that we previously considered shooters, in the 140- to 150 class. Our antler size has increased, and we are shooting 160- to 180-inch deer now. I will only shoulder-mount a deer if it's bigger than one I already have on the wall. I'll bet my taxidermist is happy, because after more than four years of using Whitetail Institute products, I keep sending him business.

As mentioned, I harvested my best buck yet during last year's Oklahoma archery season. I had planted only a quarter-acre of Ambush to see how the new product would do.



*Photo 3 as  
referenced in story.*





*Photo 1 as  
referenced in story.*

Hunting had been slow for big bucks at that time, so I knew I had to find does to increase my chances at a larger, more mature buck. My best buddy was in from Colorado for our annual week-long hunt, so stand space was more limited. I hadn't tried my Ambush plot all year, so in hopes of finding does, I waited for a north wind and made my first sit of the year. Boy, had I been in the wrong place those previous hunts. I saw more than 15 deer that morning, and most were does that had been frequenting the plot. I decided with that many does eating at the secluded quarter-acre plot, I had better continue to hunt it.

My third sit and second morning, I nestled in with my gloves on, binoculars in hand and bow hung next to me to wait for sunrise. As the sun started to come up, I saw movement all around me. It was still too dark for me to see if any were bucks or does, so I used my binoculars to identify potential shooters. Just at legal shooting time, three does came to join the other seven that were browsing on Ambush. A giant followed right behind them. I knew immediately through the binoculars at 100 yards that he was a shooter, and he and the does were headed straight for me.

I was nervous. My heart was pounding. The wind was not in my favor. I still had my gloves on. My binoc-

ulars were still in my hand, my bow was still hung up and I was trying to control my breathing. The biggest deer of my life was 15 yards in front of me, and I had several things to do undetected before I could pull the trigger. All but one of the does were 10 yards downwind of me at the base of my tree. They were visibly nervous, and it wasn't getting better. With the presence of such a dominant deer and my odor blowing right at them, I knew it was only a matter of time before they winded me or he had enough to eat and bolted for something more interesting.

Luckily, he thought the Ambush was good enough to stick around just long enough for me to scoot forward in my stand, set my binoculars on the back of my seat, take my shooting hand glove off, turn to the right, take my bow off the rack, draw my bow a half-inch at a time and make the shot. The deer scored 178-3/8 inches.

As Photo 4 (lead-in photo) shows, he's the best deer we've ever shot off our lease in 20 years. Thank you, Whitetail Institute, for your hard work. I can't wait to start turning up more ground next year. 🦌



*Photo 2 as  
referenced in story.*





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# Popular Imperial Whitetail **Ambush** *For Exceptional Attraction*

By **Jon Cooner**

**I**mperial Whitetail Ambush is an annual food plot product that is one of the most attractive forage products the Whitetail Institute has ever produced. When it was introduced last year, Whitetail Institute sold out of Ambush six weeks before the end of the fall planting season. Although production has been significantly increased this year, Whitetail Institute expects to run out of Ambush early again based on pre-orders, so you'd be smart to order without delay if you want to get Ambush for this fall's hunting season.



Ambush is exceptionally attractive to deer for two reasons: the phenomenal attractiveness of each of its forage components, and the precise ratios in which the components have been combined through Whitetail Institute testing to ensure the stand's overall attractiveness remains at high levels throughout the life of the planting.

## Forage Components

Ambush is a precise blend of sweet lupines, sugar beets, Whitetail Oats, winter peas and proprietary annual clovers. Like other Whitetail Institute food plot products, Ambush contains forage components that are only available in Whitetail Institute products.

If you've never heard of sweet lupines, don't worry — you aren't alone. Lupines, as they're called in North America, are legumes that are more familiar to folks elsewhere in the world, where they're generally referred to as lupins. Here's how the Whitetail Institute's Director of Operations, William Cousins, explains the attractiveness and other outstanding benefits of the sweet lupine varieties in Ambush.

"The Whitetail Institute has been experimenting with sweet lupines for nearly a decade," he said. "Early in that process, it became apparent that there were big differences in how attractive different varieties are to deer. Very few varieties consistently proved so attractive that

deer absolutely devour the plants like a favorite candy. Ambush contains two of these exceptionally attractive sweet lupine varieties."

Cousins said attractiveness isn't the only performance category in which the sweet lupines in Ambush excel.

"The sweet lupines in Ambush are also high in protein, and the high protein content and overall forage quality tends to remain high even as the plants mature," he said. "Since they're legumes, they are also excellent nitrogen fixers, and their strong tap root helps improve soil structure. They will even tolerate mildly acidic soil better than other legumes, which helps them produce even on poorer soils."

Whitetail Oats are the high-sugar, cold-tolerant oats that serve as the primary forage component in other outstanding Whitetail Institute food plot products, such as Whitetail Oats Plus and Pure Attraction. Whitetail Oats are so attractive to deer that independent university researchers had to remove them from grain-production studies because deer browsed them so heavily. As is the case with Whitetail Oats, the winter pea varieties in Ambush are also serving as a major forage component in another highly successful Whitetail Institute annual: Winter-Peas Plus. These winter pea varieties have proven to be the most attractive the Whitetail Institute has ever tested. The proprietary Whitetail Institute annual clovers establish very quickly and add variety to boost attraction even further. They're also nutrient-rich, and they remain highly palatable to deer even as they mature.

Sugar beets can be an excellent attractant and food source for deer, which heavily use the foliage and roots of the plants. Like the other forage components in Ambush, the sugar beets in the blend are also very sweet. In fact, sugar beet roots are often commercially processed for sugar. And like the other forage components in Ambush, sugar beets can also tolerate a fairly wide variety of soil types as long as the site drains well.

## How the Forage Components Work Together

As is the case with all Whitetail Institute products, the forage components in Ambush have been painstakingly chosen to ensure they complement each other, and then repeatedly tested in various combinations and percentages to ensure that Ambush can deliver top overall stand performance.

Ambush is designed to be planted in late summer or fall and to attract deer during early and late hunting seasons. Ambush also continues to provide deer with critical nutrition during the window between winter and spring green-up. It's at that time deer need protein and energy to recover their winter health losses, which they must do before they can devote substantial nutritional resources to antler development. It's also at that time, though, that most natural food sources are exhausted or too tough for deer to effectively use. Ambush can help fill this critical nutritional gap with the abundant protein provided by its annual clovers and sweet lupines.

If you were one of the fortunate folks who tried Ambush last year, you know how enormously attractive it is to deer. As mentioned, whether or not you were able to try Ambush last year, you should not delay in ordering if you want to include Ambush in your food plot plantings for this fall. For more information about Ambush or to order, go to [whitetailinstitute.com](http://whitetailinstitute.com), or call the Whitetail Institute's in-house consultants at (800) 688-3030. The consultants are available from 8 a.m. through 5 p.m., Central Time, Monday through Friday. The call and service are free. 🦌



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# Management Strategies Must Change as Deer Numbers Decline

By John J. Ozoga

**A**lthough some places in North America still have “too many” deer, most states report deer numbers are declining. Needless to say, this is in sharp contrast to circumstances only a few decades ago, when wildlife managers struggled to solve the widespread problem of deer overabundance.

Not all states produce an annual deer population estimate. And, some states that do, base their estimates on questionable data. Nonetheless, pooled estimates suggest there are about three percent fewer deer today than there were 10 years ago, which is probably a conservative figure.

Also, total annual deer harvest numbers are largely driven by antlerless harvest. Because most states use some type of quota system to control the antlerless harvest, the ebb and flow of total annual deer harvest data follows the whims of the managing agency.

In my view, changes in the number of antlered bucks harvested annually might be more indicative of true deer population trends, but even those figures are influenced by declining deer hunter numbers and other factors.

Still, the national antlered buck harvest declined by eight percent from 2003 through 2013, and probably more since then. Antlerless deer harvests decreased by about 12 percent during the same period, likely because fewer harvest permits were allotted.

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## Worrisome Trends

According to a recent report by the Quality Deer Management Association, the antlered deer harvest has decreased most sharply — 18 percent — in the Midwest. Illinois, Michigan, Minnesota, Ohio and Wisconsin reported a buck harvest decline from 17 to 26 percent since 2003, and Iowa tops the list with a 43 percent decline.

Equally worrisome are sharp declines in deer harvest reported in the Southeast. In Alabama, for example, the annual antlered deer harvest dropped from 217,360 in 2003 to 98,000 in 2013, a 55 percent decline, and the antlerless deer harvest decreased by 46 percent. Granted, Alabama changed the antlered deer harvest laws from one a day to three per season but even so, the decline is staggering. Antlered

buck harvest also decreased more than 16 percent in Florida, Louisiana and North Carolina.

Given that recent trend, many deer managers reduced deer harvest quotas, as they strive to stabilize and/or increase slumping deer herds — the primary goal being to put more fawns on the ground to counter the effects of increased deer mortality from all causes.

Meanwhile, many deer hunters, accustomed to super deer abundance and extremely liberal deer harvest regulations, are going home empty-handed and aren't particularly happy.

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## Why the Decline?

Reasons for declining deer numbers vary from one section of the country to the next. Although many factors are involved, the primary reason for fewer deer is that annual deer recruitment rates fail to keep up with deer mortality rates. That simply means on an annual basis, not enough newborn fawns survive to replace those deer that die.

Excessive deer mortality has been attributed to disease, predation, drought, severe winter weather, deteriorating deer wintering habitat, poor fawn-rearing habitat and overharvest of antlerless deer.

It's important to recognize that although lack of recruitment is the common problem accounting for fewer deer, there's no single common solution to the problem.

The decrease in deer numbers has fueled controversy among members of the public, especially deer hunters, as well as politicians, wildlife managers and even deer researchers. Most arguments revolve around the merits of predator control and reducing antlerless deer harvest rates as a means of increasing annual deer recruitment for hunting. Others suggest that coyotes in residential areas benefit management because they help control deer numbers when hunters fail.

I'll admit this is complicated stuff. However, potential solutions to the problem can help stabilize, if not increase, deer numbers at the local level — provided managing agencies and land owners cooperate.

As noted by South Carolina researcher John Kilgo, “Antlerless harvest programs in many states were designed during the 1980s and 1990s to control deer populations that were increasingly overabundant at the time. These liberal harvest limits were largely set prior to the widespread establishment of coyotes in the region and prior to the knowledge that coyotes could substantially affect recruitment.”

The same can be said concerning gray wolves in the Upper Great Lakes region, especially as such knowledge applies to managing deer wintering habitat in deer snow country.

Unfortunately, I've heard little regarding the anti-predator benefits involved in maintaining natural herd sex-age composition of proper deer social structure. Nor have foresters and biologists adequately explained how best to manage habitat to minimize periodically high deer loss to predation.

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## Autumn Nutrition

As I noted in an earlier *Whitetail News* article, “For whitetails, autumn is an especially critical period — a time of physiological change and shift in nutritional requirements in preparation for the approaching stressful winter.”

Young deer (fawns and yearlings) are especially vulnerable to nutritional shortage during autumn because they must simultaneously grow and fatten. Even adult deer nutritionally stressed during autumn can suffer consequences that lead to increased newborn fawn mortality.



All deer are inclined to store some fat in autumn. Like other seasonal events in the whitetail's life, accumulation of fat is cued to photoperiod and is hormonally controlled.

During autumn, deer show a strong preference for energy-rich foods high in carbohydrates. Acorns, beechnuts and other starchy mast crops — as well as apples, cherries and other wild-growing and cultivated crops — are choice deer foods because they promote fattening.

Few other natural forages provide more metabolizable energy or fattening power than oak acorns, and they grow almost anywhere. Acorn production can be increased through wise forest management, sometimes involving planting of new trees. Protection of large oaks and selective thinning is recommended, because acorn production is directly related to tree diameter and crown size.

Food plots are not a substitute for proper forest and deer-herd management, but they add valuable diversity to the landscape. Most important, when carefully planned, food plots can target specific seasonal needs and provide forage much higher in digestible energy, protein, minerals and vitamins than typically is available naturally. Optimal autumn nutrition for deer won't guarantee their winter survival — nor that of the unborn — but it certainly will increase survival prospects.

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### Deer Wintering Habitat

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Winter weather severity and the quality of coniferous deer wintering habitat govern the health and productivity of whitetail deer throughout the Northern Range, where winters are often prolonged.

It's not unusual to lose 30 percent or more of a wintering deer herd because of the combined effects of malnutrition and predation during a tough winter. However, if spring is delayed, 70 percent or more of the newborn fawn crop might die because fawns born to malnourished does are stunted and weak, the doe might not produce milk or pregnant does might abandon their fawns because of a resultant hormonal imbalance that interferes with maternal behavior. Even pregnant does that are food-stressed from January through March are likely to abandon 25 percent of their newborns, which ultimately fall victim to predators.

Typically, northern deer populations demonstrate patterns of boom or bust, increasing during a series of mild winters only to crash after a tough winter. Most recently, this roller-coaster population pattern has been characterized by lower highs and lower lows, resulting in steadily declining deer numbers.

Deer wintering habitat is changing across the Northern Range. More historic deer wintering areas, dominated by lowland conifer cover — commonly referred to as deer yards — are becoming overgrown, browsed-out or otherwise fragmented and degraded by poor forest management practices. Without proper management, these historic wintering areas lose their capacity to support viable deer populations.

As an example, Michigan's Upper Peninsula has always been good deer hunting country, even during the late 1800s and early 1900s, when whitetails were scarce to nonexistent elsewhere. Deer populations in this 16,800 square-mile region peaked at more than 700,000 in the early 1990s but have since decreased to fewer than 200,000 — probably fewer than before men arrived with axes and plows — despite more than 100 years of management.

Even in New York, researchers have reported deer abandoning wintering areas they had used for 200 years and moving into residential



Charles J. Alsheimer



areas during winter. Deer undoubtedly experience various risks while wintering in residential areas. However, the nutritional benefits must outweigh the risks, as many such wintering deer herds seem to be thriving — and will pose interesting management problems in the future.

Likewise, deer populations in Maine have been declining since the 1960s in response to predation, severe winters, poor wintering habitat and excessive doe mortality. Managers generally agree that improving deer winter habitat is the first step in reversing this trend.

Here in Upper Michigan, biologists are striving to manage deer winter habitat more effectively. More than 50 deer wintering complexes have been identified. Now, investigators are in the process of mapping these areas, identifying existing deficiencies in deer shelter and/or food, determining ownership and drawing up management plans to rehabilitate these critically important areas.

The management objective is to maintain 50 percent of each complex in conifer shelter, primarily hemlock and northern white cedar, but including white spruce, balsam fir and white pine if necessary, and 50 percent food stands of aspen and hardwoods. Specific management strategies involve application of proper silvicultural procedures as determined by state, federal and private foresters and biologists, so that shelter and food are distributed throughout the complex to satisfy the sedentary (energy-conserving) nature of wintering whitetails and provide them safety from predators.

On northern range, if deer yards are not managed to accommodate more deer, populations will continue to follow steadily declining boom-and-bust patterns despite other short-term efforts designed to reverse this trend.

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## Spring Nutrition

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The doe's nutrition during the final third of pregnancy will determine the fawn's size at birth and its survival prospects the first few days. Because forest openings within deer wintering complexes are the first to lose snow cover, they provide important early-spring food sources. It is recommended these open areas be cut, mowed and burned as necessary to maintain them in cool-season grasses and forbs or planted with clover for maximum spring deer benefit. Clovers like Imperial Whitetail Clover.

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## Fawn-Rearing Habitat

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Newborn whitetails are hidiers. Soon after birth, mother and infant separate, except for brief periods of nursing and grooming, until the young are old enough and strong enough to more effectively flee from predators. During the interim, good ground-level hiding cover is essential if fawns are to survive the threat from predators.

Given the importance of predation and the whitetail's behavioral "plasticity," it's not surprising that researchers are finding considerable regional variation in whitetail fawn-rearing behavior.

In southern Texas, researchers reported newborn fawn losses ranging from only 10 percent during years of heavy rainfall to up to 90 percent during years of drought and scant low-level vegetation, largely because of predation by coyotes. During such conditions, planting or encouraging the growth of drought-resistant vegetation should help increase fawn survival rates.

Likewise, on the prairie grasslands of South Dakota, researchers have found that most fawns bedded in tall grass, which provides su-

perior overhead vegetation cover, better concealment and greater thermal insulation, compared to surrounding cultivated cropland.

During that study, tall-grass habitat decreased by 41 percent because more land was put into wheat production. As a result, use of wheat cover by fawns increased, as did fawn mortality because of hypothermia and predation by coyotes. If this trend in habitat conversion continues, high fawn mortality rates and a further decline in deer numbers can be expected to occur in the future.

Although researchers in Illinois found predation by coyotes was the principal cause of newborn fawn mortality, they concluded that habitat quality was also an important factor. Fawn "survival habitat" was characterized by large forest patches bordering open areas, with more irregular edge habitat as compared to "mortality habitat." In other words, coyotes seem to be more successful hunting small patches of cover and straight-line cover edges.

When provided with good hiding cover, healthy fawns are well-endowed with inherent strategies that help minimize detection and increase their chances of surviving early life, so plan accordingly.

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## Predator Control

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When debating predator effects, the first task is to determine if predation of fawns is the major cause of mortality rates or if it's merely compensatory in nature. That is, if fawns are likely to die from other causes, predation is compensatory, and fawn losses are inevitable, as is the case with fawn abandonment.

In the Southeast, decreasing deer numbers can be directly linked to the recent spread of coyotes into that region and heavy loss of newborn fawns to predation. In other words, deer mortality because of predation is additive, and control or eradication of coyotes would presumably lead to an increase in annual deer recruitment rates and deer population growth.

Unfortunately, evidence indicates that coyote control is easier said than done, primarily because of the coyote's social behavior and movement patterns.

For one thing, coyotes prefer some degree of habitat openness and tend to travel cover edges. Sound familiar? So do whitetails.

Coyotes exhibit two types of space use. Some can be considered residents and others transients. Resident coyotes are generally reproductive pairs attached to relatively small areas compared to transients — three square miles and 18 square miles, respectively. That alone suggests that resident coyotes hunt relatively small preferred areas and are more likely to cause high fawn mortality within those areas.

Transient coyotes tend to serve as population founders. They avoid areas controlled by resident coyotes but learn their location. When resident coyotes die, for whatever reason, including human-induced predator control efforts, transients quickly settle in and populate the area.

Northeast and Southeast managers used population modeling data for their respective regions to generate various deer population scenarios to investigate the interaction effects associated with declining deer numbers, coyote control and reductions in antlerless deer harvest.

Researchers in New York and Pennsylvania determined that increased deer mortality from coyotes can be addressed simply by reduced hunting of adult female deer "in most instances throughout eastern North America."

The authors also suggest that increasing the proportion of pregnant



females will result in more fawns and a swamping effect, overwhelming coyotes with potential prey and resulting in increased fawn survival rates.

Those researchers acknowledge that their deer population models are not valid in the extreme North, where severe winters contribute to heavy winter deer-kill as well as excessive newborn fawn mortality.

In contrast, studies conducted in central North Carolina indicate that for low-density deer populations with heavy predation pressure on fawns, protecting adult females from harvest might not be a magic bullet.

Instead, they found that coyote predation of adult female deer can represent a greater percentage of mortality than hunter harvest or vehicle collisions. Also, even though adult female harvest was low, newborn fawn mortality remained high.

In addition, their findings indicate estimates of newborn fawn predation by coyotes might be inflated because of other factors such as unexplained observed fawn abandonment.

Despite these contrasting findings, North Carolina researchers admit that a reduction in adult female harvest might produce more favorable results in areas with greater deer density and heavier female harvest quotas.

Deer overabundance can produce certain consequences, but so can too few deer. Heavy doe harvests can disrupt the social order of a deer population and contribute to heavier-than-normal newborn fawn loss for various reasons. For example, older maternally experienced does not only conceive more fawns than younger does but also successfully raise a greater percentage of their fawns, and sometimes even lend anti-predator assistance to younger female family members.

It's important to recognize that those involved in these studies voice the same associated concerns: "Management will need to consider the possibility that some deer populations might be so sensitive to hunter doe harvest that antlerless seasons should be suspended, which could have important implications on hunter satisfaction, retention and recruitment."

## Conclusion

Whitetail deer populations are declining throughout North America, largely because annual deer recruitment rates fail to keep up with deer mortality rates. Without some serious effort by everyone involved, I see no reason this downward trend should not continue.

Reversing this pattern seems relatively easy: Increase fawn survival rates, and decrease adult female mortality rates. Implementing measures to do so, however, might not be so simple.

If we are to stabilize or increase whitetail populations, deer harvest management practices must change, at least in some areas, which could cause some decrease in hunting recreation. Also, critical habitat deficiencies must be identified and corrected by implementing well-planned habitat management practices, probably requiring some economic consequences.

Only time will tell. 🐾

*John Ozoga is a former wildlife research biologist for the Michigan Department of Natural Resources. He spent more than 30 years conducting deer research at Upper Michigan's Cusino Wildlife Research Station. He now devotes much of his time to consulting and popular writing. He is one of the most respected experts in the deer world.*

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# REAL HUNTERS DO THE TALKING

about Whitetail Institute products...

For decades, we dabbled with food plot products that produced mediocre results. Since using Whitetail Institute products these past few years, though, the change has been like night and day! We have a much healthier herd, a lot more deer and racks that quite simply never existed and are unheard of for our area. These two pictures are a perfect illustration of what Whitetail Institute products can do! The first one is the 8-point I harvested three



years ago. This has been our standard buck for decades, both in terms of body and rack size. The second picture was from this past year and showcases the results we're experiencing after three years of using Whitetail Institute products. A breathtaking 9-point with a 17-3/4 inch spread — the largest buck that has ever been taken in the 57 years we've owned the mountain. Unbelievably, he's not even the biggest one we have now either. During archery season, he was gored by an even larger 11-point. Thank you Whitetail Institute of North America!

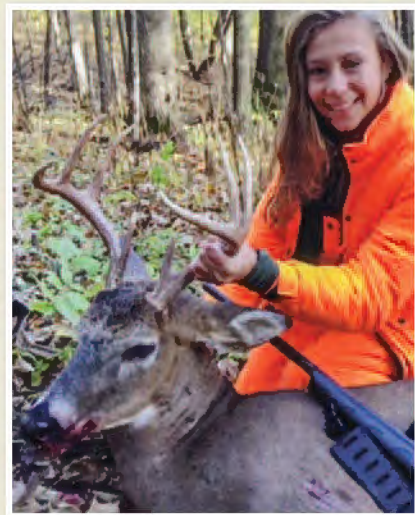
*Kris Klemick — Pennsylvania*

Just wanted to thank Whitetail Institute for putting out a great product. Apple Obsession helped me take the biggest buck of my life Nov. 9 last year. He had 20 points with 12 inch G-2's. Apple Obsession kept him coming back.

*Cody Berry — Kentucky*

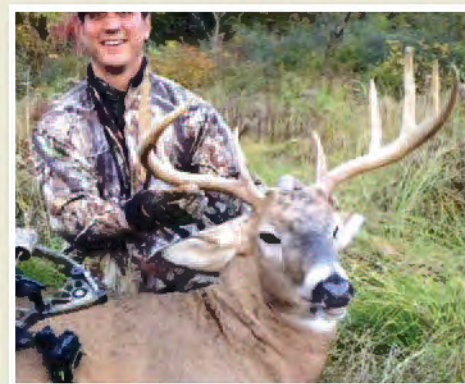


I've been planting Whitetail Institute products since I first bought my hunting land in Wisconsin seven years ago. They always out-perform anything else we have tried. And I am convinced that planting what deer want to eat helps put more protein and nutrients in the deer, which helps them grow healthier and faster. This year, Wisconsin offered a youth hunt with rifle that overlapped with archery season. My daughter has her own stand on the property, just up the hill from a large food plot that we plant half in Imperial Whitetail Clover and half in Winter-Greens. That food plot is where Lauren shot a deer each of her first two years hunting — a doe and an 8-point buck. In the mornings, we tend to hunt between a food plot and a known bedding area, and in the evenings, we tend to hunt right on the edge of the food plots. That morning, Lauren set up on the ridge above that big food plot, and within an hour, this 9-point buck came walking up the hill headed to his bedding area. Lauren's buck was 2-1/2 years old and had 9 points, and it is her largest buck!



The same day, I headed out to bowhunt the afternoon in a stand where I saw a 12-point buck just one week earlier. As I rode out on the four-wheeler, I saw two small bucks feeding on the shaded side of an Imperial Whitetail Clover food plot. I stopped and watched them for a bit, but then decided to keep going to my intended stand and a different food plot. I set up just off an Imperial Whitetail Clover food plot. Within an hour, a 6-point buck came off the food plot and bedded down near me. After a short nap, the 6-point buck got up and walked down a trail right by me, when he suddenly lifted his head and laid his ears back. I looked in the same direction and could see this big 10-pointer coming our way. He was clearly intending to push the smaller buck away. I got my shot at 20 yards, and the deer only ran 30 yards before it was lights out.

We have seen two other 12-point bucks and two other 10-point bucks on the trail cameras. Each year seems to get better than the one before! I don't know how we will beat a year when father/daughter can both shoot a buck on the same day. It was a special day for me as a dad.



*Christian Rosenstock — Wisconsin*



The Imperial Whitetail Clover is an outstanding product. The enclosed pictures show a 4 acre field of clover the deer love. Our camp overlooks this field, and I have counted as many as 26 deer in this field. I have also had good results with Extreme.

*Drayton McClelland - Michigan*



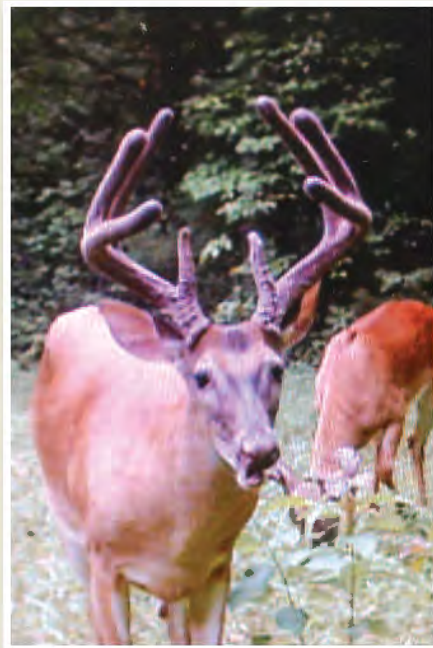
Over the last 10 years I have seen increased numbers of deer and the size of the racks has also improved. At night I will see as many as 20 deer feeding in the Pure Attraction, in the same fields that used to hardly ever produce any deer at all. Pure Attraction seems to be the food source that gets hammered the hardest in the fall on my 50-acre New York farm. The deer love it and it was easy to plant. I took my largest buck ever last year on a Pure Attraction plot.

*Thomas Poweski - New York*



I've been using Whitetail Institute products for four years with great results. Imperial Whitetail Clover has produced a great yield every year so far. The Tall Tine Tubers also provided excellent tonnage, with many turnips growing bigger than softballs. I also planted Whitetail Oats Plus, which proved highly attractive to my deer herd. Thanks to Whitetail Oats Plus, I was able to take this 22-inch 10-pointer while he was foraging in the oats. He scored 144. A nice deer for Virginia standards.

*Brian Murphy - Virginia*



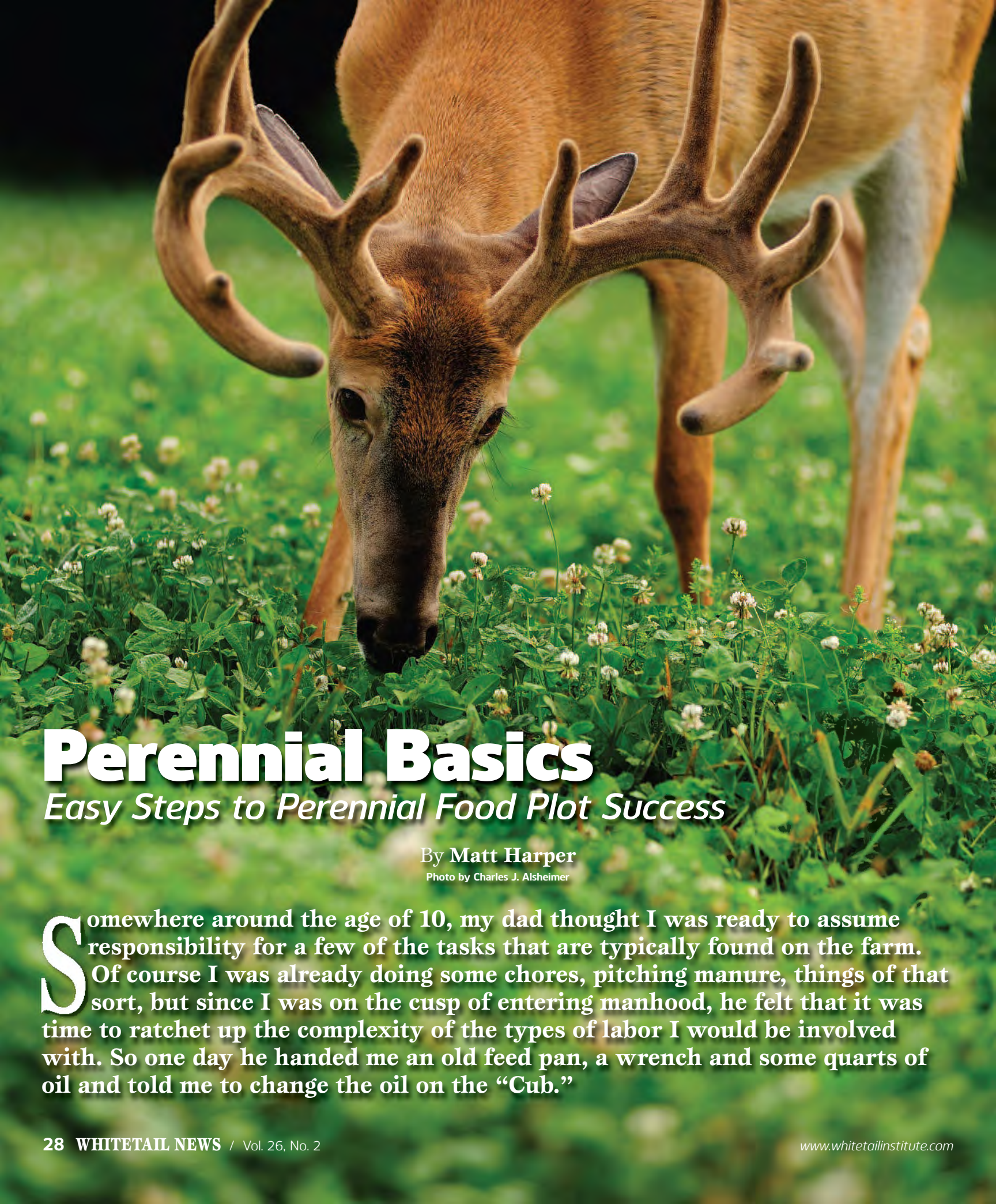
Well I can't say that we saw heavier-antlered bucks in just one season, but we saw more bucks than we had in seasons past, and I believe it's a result of using Whitetail Institute's products. I believe we were able to draw the deer we saw this year to our land because of the food plots we planted with Whitetail Institute products. I have pictures of several nice bucks in a small plot of Imperial Whitetail Clover all summer, and then as seasons changed and weather got cooler they started using the Winter-Greens and Tall Tine Tubers, they hit them hard. I was also blessed to harvest my biggest buck to date a 142-inch 8-point. He was one of seven bucks we watched all summer! Thanks, Whitetail Institute.

*Jason Edge - North Carolina*



(Continued on page 65)





# Perennial Basics

## *Easy Steps to Perennial Food Plot Success*

By Matt Harper

Photo by Charles J. Alsheimer

**S**omewhere around the age of 10, my dad thought I was ready to assume responsibility for a few of the tasks that are typically found on the farm. Of course I was already doing some chores, pitching manure, things of that sort, but since I was on the cusp of entering manhood, he felt that it was time to ratchet up the complexity of the types of labor I would be involved with. So one day he handed me an old feed pan, a wrench and some quarts of oil and told me to change the oil on the “Cub.”



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The “Cub” was a decrepit lawn tractor held together mostly by wire and electrical tape but we still used it to mow around the barn and sheds. I am not sure that Dad even still changed the oil in the thing as it burned enough to assure new oil was in it most of the time. I figure that he thought that this was a good way to get me used to working on equipment and far less risky than having me start my apprenticeship on anything of any value. I stood there for a long time just staring at it and then began to wipe oil and dirt away from places that I suspected may be important parts of this oil-changing process.

I had no idea what I was doing. I might as well have been handed some string and paperclips and been told to build a live cow. After dad had apparently enjoyed enough humor from my perplexing situation, he came to my aid and told me the basic steps needed to complete the job. The first time was a disaster, but after a couple more times, I had it down and eventually graduated to “real” tractors.

No matter the task, if you do not know the basic steps in the process your chances for success are minimal. You might figure it out eventually, but if you rack up too many failures, you may give up before you gain the knowledge of how to complete the job successfully. Growing and maintaining a perennial food plot is not necessarily complicated or even that difficult to accomplish but there are some basic “can’t skip” steps. Knowing these few basic steps will help ensure that you reap the rewards that a perennial food plot can deliver.

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## Why Plant Perennials?

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The first question to answer is why plant perennials. Although not always the case, annuals require a little less work in the planting process so why not just stick to planting year after year. First of all, perennials should almost always be the backbone to any good food plot program. They are the foundation upon which you build the rest of the program. Depending on the type of perennial you plant, that food plot becomes the most constant year-round food source available to your deer herd. It is like fried chicken at grandma’s house on Sunday; you can almost always count on it being there.

From a nutritional standpoint, perennials are the base source of nutrients supplied to the deer herd. You might plant some annuals for specific times of the year or to supply specific nutrients, but the perennial plots still remain the constant nutritional food source. For example, I use Imperial Whitetail Clover in the majority of my perennial food plots. I also use some Alfa-Rack Plus and Extreme where the soils warrant these products, but the bulk of the perennial plots are Imperial Whitetail Clover.

In southern Iowa, Imperial Whitetail Clover will green up in the early spring before any other food source. It provides high amounts of protein and energy in the spring, summer, fall and up to early winter. When snowfall insulates the ground, Imperial Whitetail Clover can stay green throughout the winter and remains a food source for deer, even in the hard winter months.

I also plant some annuals such as Whitetail Oats Plus and Winter-Greens for specific times of the year and specific management functions; Whitetail Oats Plus for early fall and winter and Winter-Greens for late-season hunting and the heart of the cold Iowa winter. But through all of it, Imperial Whitetail Clover remains the constant to the deer herd.

Perennials are also economical. Perennial seed may cost a bit more than annuals originally, but keep in mind that the food plots they produce can last three to five years from a single planting where annuals

need to be planted each year. Also, the cost of planting (equipment, fuel, time) happens once every three to five years as opposed to every year. These factors make perennials actually cost less than most annuals. From a time and labor perspective, perennials may require a bit more (not always) work for the original planting but again, aside from some simple maintenance, you will not have the time and labor of planting every year as you will with annuals.

The fact still remains, however, that some people struggle over the “how to” part of planting a perennial. While it may initially appear daunting, a few simple steps can make the process not only successful but more enjoyable.

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## Step 1 – Picking the Area and Matching up Seed to Soil

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There are a few things to consider when deciding where you are going to plant a food plot. First, will you be planting in an existing open field or will you be clearing an area of trees and brush to create a space for a food plot. Most of the time, people use existing openings, making the process less labor intensive. In general, I like to find a place that is not close to public roads and even better, only visible if you are on the property itself.

Also, having cover on multiple sides of the food plot will encourage more daytime use of the plot as deer feel more comfortable feeding during the day if they have close escape cover. It is also important to choose an area that is accessible to the particular type of equipment you will be using. You might be able to get an ATV or UTV to the future plot and that is fine if that is the type of equipment you will be using. But if you will be using a tractor and some bigger equipment, you must consider if it is possible to get the equipment to the field easily and safely.

Once you have determined the areas you will be planting your perennial plots, you then need to determine the type of soil found in those areas. I am not necessarily talking about soil quality in terms of nutrient level and pH (yet) but more so the water-holding capacity. Most forage varieties perform better in specific types of soil, mostly due to their root structure. For example, clover does better in heavier soils that hold moisture. Imperial Whitetail Clover has a shallow creeping root structure that causes the clover stand to thicken over time, and this type of root structure performs best in a heavier soil that holds moisture.

So for example, clay soils or bottomland-type soils are normally great places for clover plots. To the contrary, alfalfa is a deep-rooted plant and is more productive in good, well-drained soils such as ridges and rolling fields. I plant Alfa-Rack Plus in a few places where I find these conditions. An easy way to determine soil type is to grab a handful of soil that is slightly damp. If it forms a ball and stays that way, you probably have a high concentration of clay. If the ball falls apart easily then the soil is likely a well-drained soil.

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## Step 2 – Soil Testing, Fertilizing and pH

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Regardless of what type of food plot you are planting, the second step will always be to obtain a soil sample. Soil sampling is relatively easy and requires a shovel, bucket and baggie. For each food plot location, take samples, approximately four to six inches deep, from different areas of the field. Put them all in the bucket, mix them up and put a collective sample from the bucket in the baggie or soil testing






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bag if you have one. You can get a professional soil test done through your local soil conservation service, agriculture universities or through the Whitetail Institute. The results you receive back from the lab will show you how much and what type of fertilizer to use based on what you are planting in that field and also the amount of lime that needs to be applied to neutralize soil pH. Whitetail Institute consultants are available to walk you through each part of the soil test results and recommendations. Just call 800-688-3030 Mon-Fri 8-5 CST.

Once the results are analyzed, apply the appropriate amount lime and fertilizer. There are different ways to go about this task. If you have tractor access and the field is large enough to warrant it, a fertilizer cart makes for a quick way to get this job done. Most bulk fertilizer dealers have fertilizer carts available. Also, in many cases lime can be applied for you with a lime truck by whomever you are buying the lime from. If you have a smaller area or one with only ATV or UTV access, an ATV spreader can also get the job done for the fertilizer but you will likely need to use pelleted lime for the liming portion.

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### Step 3 – Tillage and Seeding

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A good seedbed is required to produce a great perennial food plot. A good seedbed means a field where the soil has been broken up and then worked to as fine of particles as possible. The field should also be as weed-free as possible. There are many ways to create a seedbed using many different types of equipment but I will just talk about typical tillage practices and equipment. Soil can be broken up by disk, tiller, plow, chisel plow and several other methods. Regardless, it is best to start with a field that has little debris. A field with a sod layer should first be sprayed with a glyphosate type of product to kill existing vegetation. Doing this will make the initial soil tillage easier and more effective.

Once the soil is broken up, it is a matter of getting the soil particle size as small as possible. Consistent seed depth and maximizing seed/soil contact is critical for germination and a productive food plot, and having large clods of dirt will negatively affect both. Tillers work extremely well to break up the soil into small particles but it can also be done with multiple diskings and a harrow or drag. Each pass will further break the soil down. Most perennials, such as Imperial Whitetail Clover, Alfa-Rack Plus, Fusion or Extreme have small seeds and should not be planted too deeply so a level, firm seedbed is best. A roller or cultipacker can be used to level and firm the seedbed prior to spreading the seeds. Also, cultipacking helps to bring moisture to the surface for better germination.

After the plot has been broken, the soil worked down to a fine particle size and finally cultipacked, it is now ready for seeding. Seeding

can be done with an ATV-type spreader but most of the time a hand-spreader works best. Hand-spreading takes a bit more time and some walking, but you can control the seeding rate more closely to ensure you are not getting too little or too much seed on the ground. Follow the instructions on the bag for seeding rates. I typically like to go over the food plot twice to ensure good coverage, (once walking north and south and then on the second pass, walking east and west). This requires you to adjust the flow of seed to make sure you don't run out before you can get across the field a couple times. After you are done seeding, go over the field one more time with the cultipacker or roller. This presses the seed into the soil and ensures good seed-to-soil contact.

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### Step 4 – Maintenance

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Perennials allow for multiple years of production with a single planting, and some easy maintenance practices will help ensure that your plot stays productive for the longest possible period of time. Plants absorb nutrients from the soil that must be replenished, so yearly fertilizing is required. Furthermore, soil pH will change over time so I typically recommend soil testing at least every couple years for accurate lime recommendations to keep the pH of the soil neutral. Aside from liming and fertilizing, keeping the food plot as weed and grass free as possible will help increase its longevity. One method of weed and grass control is periodic mowing to make sure the weeds and grasses do not go to seed. Also, mowing will stimulate growth of the perennials and will help them outcompete the weeds and grasses. When mowing clover or alfalfa, be sure not to mow when it is excessively hot or dry. If mowing is not enough to control weeds and grasses, selective herbicides can also be used. Whitetail Institute offers a couple different herbicides that can be used on most perennials called Arrest Max (grass control) and Slay (broadleaf control).

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### Conclusion

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A seemingly difficult task is not as daunting once you know what you need to do to complete that task. It may still take a little bit of time and experience to hone your skills but knowing the "how to" before you start will get you to the place you want to be much quicker. Perennial food plots are without question one of the best tools a hunter has to attract and grow deer. The results that have been seen over the years with Imperial Whitetail Clover and other Whitetail Institute perennials are more than enough proof of this and the Record Books validate it. The good news is that growing perennials is not that difficult if you follow some basic steps, and the rewards that come from good perennial plots will be yours to enjoy. 🍖



*Perennial food plots (like this Imperial Whitetail Clover plot) are the most constant year-round food source available to your deer herd,*

Whitetail Institute



FERMINATOR AD



# The WEED DOCTOR

By **W. Carroll Johnson, III, PhD.**, *Weed Scientist and Agronomist*

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## Soil Acidity – The Timeless Problem

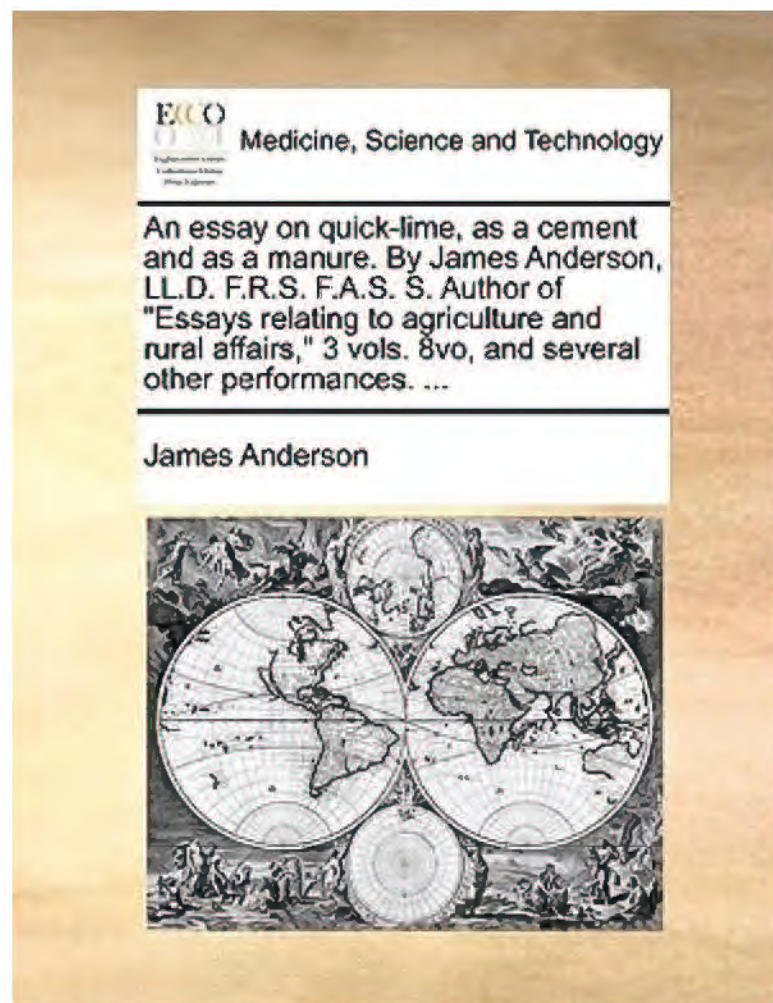
**A**gricultural science is no different from any other form of biological science, including medicine. For centuries, knowledge in those areas was mainly empirical, often based on observation. Astute individuals recorded their observations and theories, some actually being pretty accurate. Case in point: the value of liming agricultural soils. In colonial times, settlers from certain regions of Europe brought the “tradition” of liming to North America. These settlers did not know why, but observed that crops responded favorably to what they called lime.

In fact, James Anderson, a scientist during the early years of our country and member of numerous prominent scientific organizations at the time, wrote an essay in 1799 titled, “Quick-lime as a Cement and as a Manure.” I read the entire publication, and the author provided an amazingly accurate summary of the importance of liming to crop production. Anderson admitted that he did not know how lime worked and why unlimed soils lost productivity. However, his observations of the challenges of liming during the 18th century parallel the issues we face with liming food plots. During the 18th century, sources of lime had not been fully discovered, and those identified were widely scattered. Logistics and cost of moving bulk materials with the primitive forms of transportation of that era meant few farms were limed. As a result, settlers often moved their subsistence farms to new ground when soil productivity petered out. This practice continued through the 19th century.

In the 20th century, science advanced, and basic knowledge greatly improved in agriculture. Some of the accidentally accurate observations soon had a scientifically based explanation, including why liming improves crop growth. A measure of impact of these discoveries was the governmental cost-sharing programs in the mid-1900s that

encouraged farmers to lime their fields. We now know that soil acidity inhibits crop growth and limestone neutralizes acidic soils. Despite our present-day understanding of soil chemistry, acidic soils remain a persistent problem in most segments of agriculture. Acidic soils are almost a naturally occurring phenomenon that our land-use patterns exacerbate.

In the eastern United States, conditions for acidic soils are created by our temperate climate, abundant rainfall and soil mineral composition. Couple that natural tendency with heavy use of nitrogen fertilizers and degraded buffering capacity caused by long-term tillage,



*James Anderson, a scientist during the early years of our country and member of numerous prominent scientific organizations at the time, wrote an essay in 1799 titled, “Quick-lime as a Cement and as a Manure.”*



The crops in this data summary are forage legumes, and the benefits of liming to neutralize soil acidity are crystal clear: Liming does not cost, it pays. I have been conducting agricultural research for more than 30 years and, honestly, have never seen the magnitude of yield responses in any experiment like those seen in this data summary.

Trials	Forage crop	pH of unlimed soil	Forage yield (lbs./A)	Increase because of liming
Unlimed soil    Limed soil				
Trial 1	alfalfa	5.1	402	6,598
Trial 2	alfalfa	5.5	598	6,134
Trial 3	alfalfa	4.9	179	5,214
Trial 4	alfalfa	5.2	2,000	3,643
Trial 5	white clover	4.3	3,321	11,893
Trial 6	white clover	5.2	2,357	3,384
Trial 7	crimson clover	5.1	1,098	1,696
Trial 8	crimson clover	4.9	2,286	2,839
				24 %

For years, Whitetail Institute consultants have routinely and thoroughly discussed these concepts with customers. The reason for this emphasis is the frequency of our customers having problems with soil acidity. To further justify the importance of neutralizing soil acidity with limestone, the agricultural scientific literature has ample reports that prove the devastating effects of soil acidity on forages and beneficial response to liming. A summary of research data is listed below and was published in the American Society of Agronomy monograph titled “Soil Acidity and Liming,” which compiled the information from several articles published in scientific journals. The point to that statement is to emphasize the credibility of the data.

Acidic soils prevent legumes from adequately using atmospheric nitrogen (nitrogen fixation). Bulk limestone is sold as calcitic limestone (calcium carbonate) or dolomitic limestone (magnesium carbonate). These are the most cost-effective liming materials. Calcium and magnesium in any liming material do not neutralize soil acidity. The carbonate portion of bulk limestone is the neutralizing agent. The amount of limestone applied affects the degree of pH adjustment. The fineness/coarseness of limestone affects the speed and duration of pH adjustment. All liming materials tend to be poorly soluble in water and ideally should be thoroughly mixed with the soil using tillage for maximum neutralizing effect.

**Starvation:** Acidic soils alter the valence of essential plant elements, making them chemically unavailable to crops.

a soil from pH 5.3 to 6.2 reduces toxic aluminum by 94 percent.

**Poisoning:** Acidic soils alter the valence of naturally occurring aluminum and manganese, making these elements toxic to crops. Liming acidity and crop planting intentions.

Accredited soil testing laboratories use precise protocols to determine the liming requirement of a soil based on pH, soil buffering capacity and crop planting intentions.

Below is a bullet point list of facts to briefly summarize soil acidity and it is easy to see why soil acidity remains a limiting factor to crop productivity. So far, the context of this discussion is commercial agriculture, but the same conditions and reasons exist for food plots.

Do a soil test through a professional soil testing laboratory. Land-grant universities, soil conservation services or the Whitetail Institute offer the soil testing service you want to use. Lime according to the recommendations and your food plots will look better, last longer, produce more forage and, best of all, have more deer feeding in them.

We do not have the luxury that our colonial ancestors had by simply moving to a new site when soil quality wanes. Liming to neutralize soil acidity sustains food plot productivity.

There should be no doubt that neutralizing acidic soils with limestone is essential for any crop, whether in commercial agriculture, home garden or food plots. Acidic soils equate to infertile soils. This is not anecdotal rhetoric. It is a long-proven scientific fact. I know firsthand the challenges of transporting and applying large quantities (tons per acre) of bulk limestone in isolated food plots. The importance and urgency of liming far exceeds the hassle factor.

The need to thoroughly mix limestone with soil is a persistent mechanical challenge, especially for food plot hobbyists. Commercial agriculture benefits from ample horsepower and state-of-the-art tillage implements developed to improve farmer efficiency and productivity. For many food plot hobbyists, available horsepower is minimal, and small-scale tillage implements sacrifice performance for portability and compactness. When mixing limestone with soil, these shortcomings can be compensated by multiple tillage passes at right angles to the previous pass.

The second point of emphasis that caught my attention was that limestone particles and soil particles need to be in direct, intimate contact for the chemical reactions that neutralize soil acidity. Bulk agricultural limestone (calcitic or dolomitic) is a mixture of fine particles and larger coarse particles. The fine particles give the essential quick neutralizing effect. Coarse particles take longer to react, providing desirable neutralizing benefits for many months. That is why commercial farmers apply bulk agricultural limestone only every two to three years.

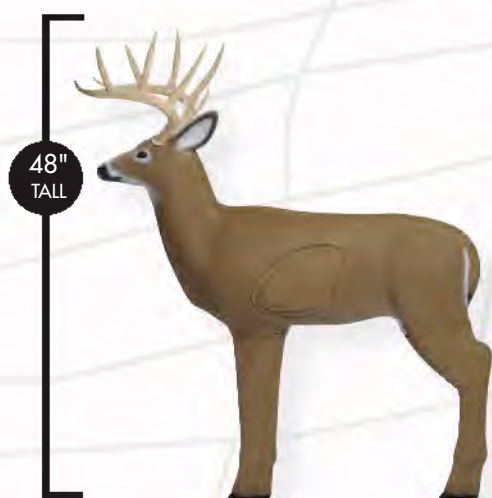
During the literature review for this article, a couple of points of significance caught my attention and are relevant to correcting acidic soils in food plots. First, the soil pH value is an incomplete indicator of the need for liming and does not provide any indication of the amount of limestone needed to neutralize acidic soils. One of the major scientific developments in agriculture in the 20th century was development of comprehensive liming recommendations that consider several soil characteristics along with the pH value. These comprehensive liming recommendations are part of the standard services provided by soil testing laboratories. Soil testing laboratories provide precise fertilizer recommendations along with specific liming recommendations that do-it-yourself kits do not provide.





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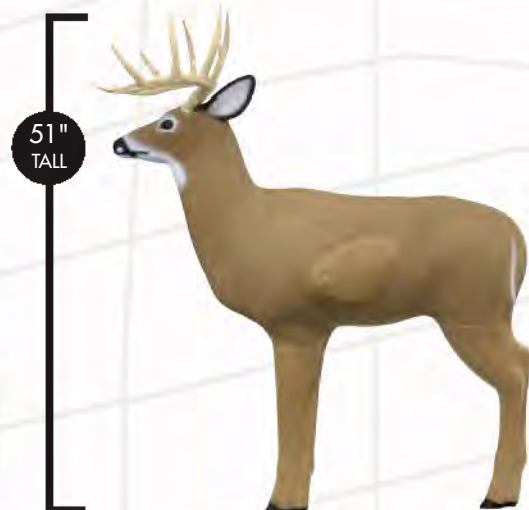
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TALL

**SHOOTER BUCK**



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TALL

**CROSSBOW SHOOTER**



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# Winter-Greens and Tall Tine Tubers

## Favorite Late- Summer Plantings

By Gerald Almy

Charles J. Alsheimer

**I** will never forget the first time I planted brassicas for deer. When the Winter-Greens I sowed first came up, they looked intriguing — something like cabbage or broccoli plants with their attractive bluish-green leaves. I was impressed.

The deer? Not so much. They continued to hammer the lush green Imperial Whitetail Clover plots nearby and ignored the new food offering.

Meanwhile, the brassicas just kept growing. By early October, the plot in front of my house was nearly two feet tall with huge elephant-ear leaves — and still ignored by deer.

Then suddenly, after I returned from a two-day hunting trip to neighboring West Virginia, my small plot of brassicas was almost obliterated. We had experienced a sharp frost both nights while I was gone, and the starches in the plants had turned to sugars.

Then the whitetails were very impressed. They gobbled up the big blue-green leaves almost overnight. It looked like a hurricane had

blown through the plot.

That's the way it often is with brassicas. When you first plant them on a property, deer might ignore them until a frost or several cold nights convert the starches in the plant into sugars. But after deer learn about these plants, they will often begin eating them even before freezing temperatures arrive. In fact, they'll start munching on them almost as soon as they emerge from the soil — typically late summer to early fall.

Most food plot offerings have an optimum time for planting. For brassicas such as Winter-Greens and Tall Tine Tubers, that is mainly July through September and depends on your geographic location. Exact planting dates for your area are printed on the bags of seed and are also available at [www.whitetailinstitute.com](http://www.whitetailinstitute.com). Within a week after seeding and a rain, plants will emerge, and soon after that, deer will start feeding on them — after they become familiar with this new food source.

The brassica genus includes several plants, such as kale, rape, turnips, radishes, true brassicas and others — all part of the mustard family. They are exceptionally popular among wildlife managers because they are simple to grow and offer high protein levels, and deer feed on them regularly. But these plants also have other benefits. They are good for the soil, good for the environment and are highly praised by agronomists.





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## Brassica Benefits

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According to the United States Department of Agriculture, “Brassica crops have a number of beneficial attributes including rapid fall growth, high biomass production, a well-developed taproot, excellent nutrient-scavenging ability, competitiveness with other plants and special pest-resistance capabilities.”

As a premier deer forage, they are high in selenium, vitamin C and digestible fiber. Protein levels can exceed 30 percent. Once, I looked at the label on a bag of rape, and it said to be careful of letting pigs eat too much of it because its protein levels are so high it can blister their skin. Thankfully, that’s not a problem with deer. They can eat as much as they want. And if you plant a few good-sized plots of, say, a half-acre or more each, chances are they’ll have all they need.

That’s because these plants don’t just offer high protein levels. They also offer tremendous quantities of food per plant. Oats, clover, chicory and alfalfa are excellent for deer, but none of them can match the sheer tonnage of food that Tall Tine Tubers and Winter-Greens yield. Steve Scott, vice president of the Whitetail Institute, said these plants can produce “up to eight tons of forage per acre, with an average of around six tons on well-managed plots where everything is done right, including fertilizing, seeding rates, weed control and site preparation.”

In some areas, as I found out with my first-ever Winter-Greens plot, it takes a season or two before deer become committed to eating brassicas. But when they realize those plants offer nutritious food source, they’ll hit them hard. And on many properties, deer will feed on them as soon as they come up, not just after a frost.

To some extent, of course, that depends on what other foods are available and how they are doing. If your clover and chicory are holding up well, deer might continue to focus on that forage instead of brassicas. They seem to sense that those big-leafed annuals will be taller and sweeter later in fall. But if your clover is struggling a bit from drought, or you don’t have enough other summer crops such as PowerPlant available, the deer will turn readily to the young Winter-Greens and Tall Tine Tuber plots in August and September, well before the first frosts.

After deer have eaten down the leaves, some brassicas, such as turnips, still have a root or bulb left in the ground. Deer will dig those up with their hooves and dine on them during winter, when other foods are scarce, providing crucial energy at that difficult time.

To a point, brassica leaves will also grow back after deer munch on them. The best strategy, however, is to put in enough acreage that the local whitetail herd can’t mow down the entire plot. If you do that, deer will have leaves and bulbs for nutrition through winter and you will have great hunting on into the late season.

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## Buy the Best

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Sure, you can purchase some of these types of seeds in generic versions and make your own mixtures, but why bother? The brassicas sold by the Whitetail Institute are higher in quality, tastier to deer and only marginally more expensive than the cheapest bargain-basement seeds. And they are blended in the exact ratios that allow the carefully chosen plant components to complement rather than compete with each other.

In several cases, such as Tall Tine Tubers, you get specific varieties

that were developed especially to fit the nutritional needs and taste buds of deer. Tall Tine turnips are available nowhere else. Winter-Greens include unique lettuce-type brassicas that Whitetail Institute tests showed to be four times more attractive to deer than other brassicas studied. Finally, all those seeds are treated with Rainbond for enhanced germination and survival.

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## Timing

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Before getting into the nuts and bolts of planting and managing brassicas, it’s important to address timing, which I mentioned earlier. Perhaps more than any other type of food plot forage, brassicas and turnips must be planted during a fairly narrow time frame. This is particularly true for folks in the middle and southern half of the country.

If you plant brassicas too early, they will look good for a while, but the summer heat and long hours of daylight will soon get to them. Some of the plants will mature and flower, becoming unattractive to deer. Summer’s scorching heat and dry conditions will take a toll on the others.

I’ve been tempted in the past to put my Tall Tine Tubers in earlier than recommended. And I paid the price. It was basically a wasted crop that withered and died before deer became seriously interested in it, because they had plenty of clover, chicory and Power Plant available. Don’t make my mistake. You’ll regret it.

But on the other hand, don’t wait too late. Then the plants won’t have time enough to become large and offer the tremendous amount of forage they are capable of producing. This is the lesser mistake, because they still will grow and attract deer. But do you want four-inch leaves or leaves more than a foot long? I know which I prefer.

The researchers at the Whitetail Institute carefully test a wide variety of planting dates and recommend very specific ones for each region of the country. In some cases, they even break that down further depending on which part of the state you live in, because climate can vary from region to region. Virginia, for instance, has three planting time frames because of the varied climate from the cool western mountains to the warmer coastal area.

Follow the guidelines, and plant inside the window of dates given, and you won’t regret it. Depending on where you live, that can mean any time from mid-June through September, with a time frame for planting ranging from one to two months.

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## Planting and Managing Brassicas and Turnips

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The first step, as with any food plot planting, is to do a soil test and add fertilizer as needed. Also, add lime, if required, to bring the pH up to at least 6.0. If possible, kill any existing vegetation with glyphosate, and then till or disk the ground repeatedly until you get a firm, smooth seedbed. Cultipack, or use a weighted fence-type drag to smooth the seedbed.

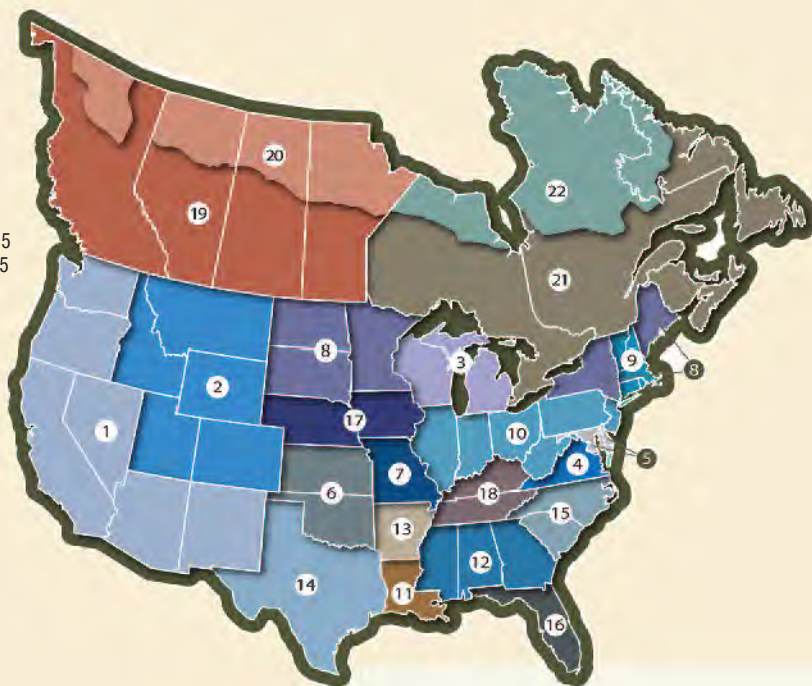
Broadcast the seeds, and cultipack again, or simply spread the seeds and leave alone if you used a drag to smooth the plot. They’ll sprout up within days. If rain is predicted, you can simply spread them on top and get good germination. The following is optional but is a good recommendation; after the plants have reached four to six inches tall, add about 80 to 100 pounds of nitrogen fertilizer, such as 34-0-0 or similar fertilizer per acre to enhance growth and tonnage of forage production.



# Food Plot Planting Dates...

## PLANTING DATES FOR IMPERIAL CLOVER, ALFA-RACK PLUS, EXTREME, NO-PLOW, CHICORY PLUS, CHIC MAGNET AND EDGE

- |  |  |   |
|--|--|---|
| 1 Call for planting dates  | 7 North: Mar 15 - May 1<br>Aug 1 - Sept 15<br>South: Mar 1 - Apr 15<br>Aug 15 - Oct 15 | 15 Feb 1 - Mar 1<br>Coastal: Sept 25 - Oct 15<br>Piedmont: Sept 1 - Oct 5<br>Mountain Valleys:<br>Aug 25 - Oct 15 |
| 2 Apr 1 - July 1   | 8 Apr 1 - June 15<br>July 15 - Sept 5  | 16 North: Sept 25 - Nov 25<br>South: Oct 5 - Nov 30   |
| 3 Apr 15 - June 15<br>Aug 1 - Sept 1   | 9 Apr 1 - May 15<br>Aug 1 - Sept 15  | 17 Mar 1 - May 15<br>Aug 1 - Sept 15  |
| 4 Coastal: Feb 1 - Mar 15<br>Sept 1 - Oct 15<br>Southern Piedmont:<br>Feb 15 - Apr 1<br>Aug 15 - Oct 1<br>Mountain Valleys:<br>Mar 1 - Apr 15<br>Aug 1 - Sept 15 | 10 Mar 20 - May 15<br>Aug 1 - Sept 15  | 18 Feb 1 - Apr 15<br>Aug 20 - Sept 30   |
| 5 Feb 1 - Apr 1<br>Aug 1 - Sept 30   | 11 Sept 15 - Nov 15  | 19 Apr 15 - June 15<br>July 1 - Aug 15  |
| 6 Feb 1 - Apr 15<br>Sept 1 - Nov 1   | 12 Feb 5 - Mar 1<br>North: Sept 5 - Nov 15<br>South: Sept 25 - Nov 15                  | 20 May 15 - July 1  |
|  | 13 Feb 15 - Apr 1<br>Sept 1 - Oct 30   | 21 May 1 - June 15<br>July 1 - Aug 15   |
|  | 14 North: Sept 15 - Nov 15<br>South: Sept 25 - Nov 15                                  | 22 May 15 - July 1  |



## PLANTING DATES FOR DOUBLE-CROSS, PURE ATTRACTION, SECRET SPOT, WINTER PEAS, BOWSTAND AND AMBUSH

- |  |  |   |                      |
|--|--|---|----------------------|
| 1 Call for planting dates  | 7 North: Aug 1 - Sept 30<br>South: Aug 15 - Oct 15   | 13 Sept 1 - Oct 30  | 18 Aug 20 - Sept 30  |
| 2 Call for planting dates  | 8 July 15 - Sept 5                                   | 14 North: Sept 15 - Nov 15<br>South: Sept 25 - Nov 15                                 | 19 July 1 - Aug 15   |
| 3 Aug 1 - Sept 15  | 9 Aug 1 - Sept 15                                    | 15 Coastal: Sept 15 - Oct 15<br>Piedmont: Sept 1 - Oct 5<br>Mountain: Aug 25 - Oct 15 | 20 June 15 - July 15 |
| 4 Coastal: Sept 1 - Oct 15<br>Piedmont: Aug 15 - Oct 1<br>Mountain Valleys:<br>Aug 1 - Sept 15 | 10 Aug 1 - Sept 15                                   | 16 North: Sept 25 - Nov 25<br>South: Oct 5 - Nov 30                                   | 21 July 15 - Aug 31  |
| 5 Aug 1 - Sept 30  | 11 Sept 15 - Nov 15                                  | 17 Aug 1 - Sept 15  | 22 July 1 - Aug 15   |
| 6 Aug 15 - Nov 1   | 12 North: Sept 5 - Nov 15<br>South: Sept 25 - Nov 15 |   |                      |

## PLANTING DATES FOR WINTER-GREENS AND TALL TINE TUBERS

- |  |  |  |
|--|--|--|
| 1 Call for planting dates  | 10 July 15 - Sept 15*  | 16 North: Sept 15 - Nov 15<br>Central: Sept 25 - Nov 15<br>South: Oct 5 - Nov 30 |
| 2 Call for planting dates  | 11 Sept 15 - Nov 15  | 17 July 15 - Sept 1  |
| 3 July 1 - Sept 10*  | 12 North: Sept 5 - Nov 1<br>Central: Sept 15 - Nov 15<br>South: Sept 25 - Nov 15                 | 18 Aug 1 - Sept 30   |
| 4 Coastal: Aug 15 - Sept 30<br>Southern Piedmont:<br>Aug 1 - Sept 15<br>Mountain Valleys:<br>July 15 - Sept 15 | 13 North: Aug 15 - Oct 1<br>South: Sept 5 - Nov 1  | 19 July 1 - Aug 15   |
| 5 July 15 - Sept 30  | 14 North: Sept 5 - Oct 30<br>Central: Sept 15 - Nov 15<br>South: Sept 25 - Nov 15                | 20 June 15 - Aug 1   |
| 6 Aug 1 - Oct 1  | 15 Coastal: Sept 1 - Oct 1<br>Piedmont: Aug 15 - Sept 20<br>Mountain Valleys:<br>Aug 5 - Sept 15 | 21 July 15 - Aug 31  |
| 7 North: July 15 - Sept 30<br>South: Aug 1 - Oct 10  |  | 22 July 1 - Aug 15   |
| 8 July 1 - Aug 30  |  |  |
| 9 July 1 - Aug 30  |  |  |

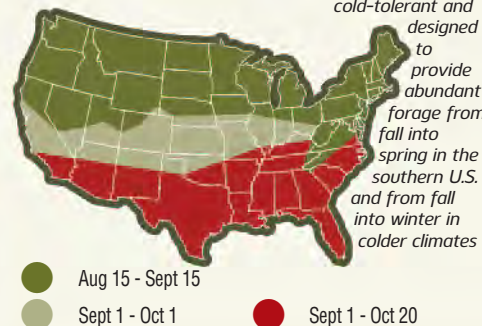
\* Earlier (spring) planting dates may be applicable. Call Whitetail Institute for more information.

\*\* For northern Pennsylvania, earlier (spring) planting dates may be applicable. Call Whitetail Institute for more information.

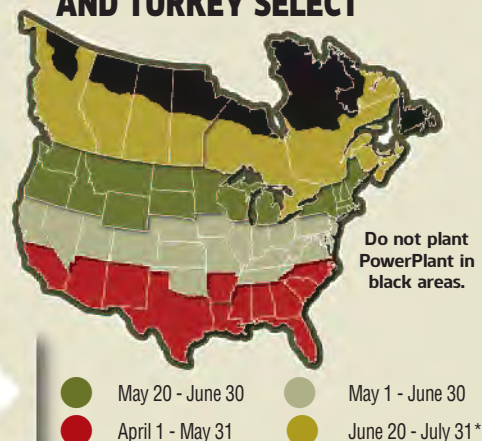
\*Do not plant PowerPlant until soil temperatures reach a constant 65 degrees F. Wait as long as necessary for soil temperatures to reach a constant 65 degrees F before planting PowerPlant.

## PLANTING DATES FOR WHITETAIL OATS PLUS

Use the map below as a guideline for when to plant Imperial Whitetail Oats Plus in your area. For best results, wait to plant until excessively hot, droughty summer weather has passed. Imperial Whitetail Oats Plus is highly cold-tolerant and designed to provide abundant forage from fall into spring in the southern U.S. and from fall into winter in colder climates



## PLANTING DATES FOR IMPERIAL POWERPLANT AND TURKEY SELECT



Do not plant PowerPlant in black areas.



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## Mixtures

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You can also mix brassicas with other types of plants, such as oats, peas or annual clovers and get a terrific food plot. But again, why bother? The Whitetail Institute has already done that for you. Pure Attraction is a blend of the company's brassicas to attract deer after frosts combined with Whitetail Oats and winter peas for early-season appeal. No-Plow also contains brassicas blended with radishes, annual clovers, Whitetail Oats and other cereal grains for use in areas hard to reach with heavy equipment. If you want a mixture, stick with these.

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## Additional Benefits

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Besides offering high-quality nutrition for deer, brassicas also have many benefits for the land and the environment, as mentioned. One of these qualities is the ability to aerate the ground and improve the soil, making it better for future plantings. Many plots suffer from hard, compacted soil. Plant roots can't penetrate compacted soil deeply enough to obtain sufficient moisture and nutrients to thrive. They are basically living off the first few inches of ground and struggling to spread their roots through the extremely hard dirt below that.

Planting Winter-Greens, Tall Tine Tubers or No-Plow can dramatically improve that situation. These grow a deep taproot that will break up or drill through that hardpan and aerate the soil when the root decays. This allows moisture to penetrate and the roots of future crops to use nutrients farther down in the soil. Not only that, they can scavenge nitrogen from these deep layers and make it more accessible to other future crops, reducing fertilizer costs.

According to the USDA, "Brassicas provide excellent nitrogen-scavenging potential and the tap roots are excellent at penetrating tillage

pans and dense soil layers. An acre of brassicas can scavenge 40 pounds or more of residual nitrogen from the soil. The roots help to penetrate and sustain healthy organisms to restore soil structure."

If these reasons weren't enough to plant Winter-Greens and Tall Tine Tubers, here's another: Brassicas provide excellent weed control. These plants grow so fast with such a large leaf canopy and deep roots that they choke out most unwanted weeds and grasses in a plot, preparing it for a future planting of a different crop the next year. One Michigan study showed that growing brassicas reduced weeds by 4,000 pounds per acre compared to fallow fields.

As experienced food plotters know, weed encroachment is your No. 1 enemy. Brassicas will help you win that continuing battle, readying the soil for chicory, clover or alfalfa planting next year.

Finally, here is one more biological benefit the USDA mentioned: "An additional special feature of most brassicas is that they produce compounds, called glucosinolates, which are toxic to soil-borne pests and pathogens. Biotoxins produced by brassicas when they decompose are toxic against many pests including insects, nematodes and weeds." Studies show they can actually reduce the need for the use of pesticides by farmers.

Many qualities — terrific soil enhancement, a valuable tool for combatting weeds, the ability to control harmful pests and a great high-protein food source from fall through winter — make brassicas one of the best plants you can turn to for late-summer food plot plantings that will attract, hold and nourish deer on your property.

Oh, by the way. That first Winter-Greens plot I ever grew — the one the deer nearly demolished while I was away? A few leaves were still left after the frost-induced feeding frenzy, and others started coming back enough that the plot began attracting deer again after a week or two.

Among those was a heavy-beamed 10-pointer that now graces my office wall. 🦌



*Winter-Greens and Tall Tine Tubers get hammered by deer, especially in the late hunting season and even under snow.*

Gerald Almy



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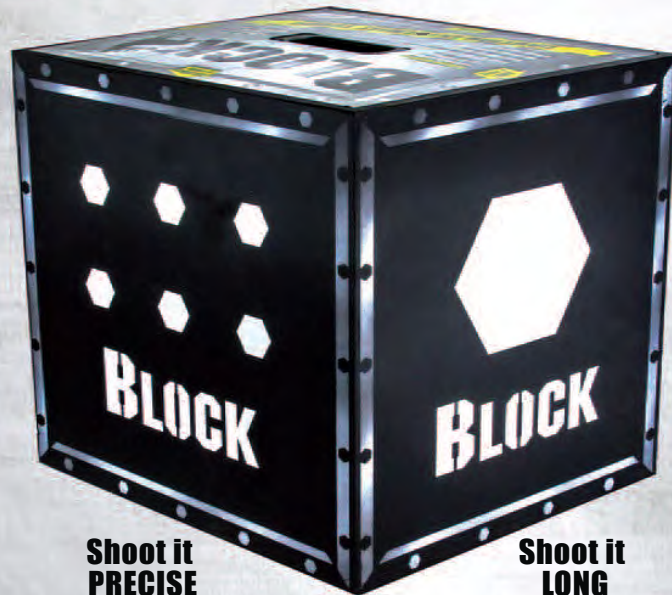
# BLOCK

## VAULT



Shoot it  
CLOSE

Shoot it  
REAL



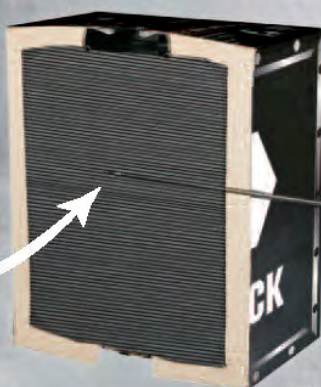
Shoot it  
PRECISE

Shoot it  
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# ANNUALS AND PERENNIALS

## Finding the Perfect Balance

By David Hart

Photo by the Author

**P**lanting season can be a confusing time of year for food plotters. Not only do we have to decide when, where and how much to plant, but we have to figure out what types of plants to put in our plots. Imperial Whitetail Clover or Whitetail Oats Plus? Summer plots or cool-season plots? Annuals or perennials?

*Hardcore bow hunters should consider planting more plots in plants that attract deer early in the hunting season, but gun hunters might want more plants that draw deer later in fall.*



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There isn't necessarily a right answer, said Steve Scott, Whitetail Institute vice-president. What you plant and how much you plant of each variety depends on several factors, including you.

"If you live hundreds of miles from your land and you don't have the time to work on food plots and maintain them on a regular basis, you might consider planting mostly annuals," Scott said. "They require less work and are somewhat easier to plant. You can plant them and forget about them, for the most part."

It's true: Perennials require maintenance to stimulate vigorous growth and control weeds. However, they can last up to five years, which means you won't have to go through the planting process every year.

As a general rule, though, Scott recommends an even split between annuals and perennials. There's no rule about how much of each is best. Deer eat both. Whitetail Institute offers several great choices that provide high-quality nutrition and magnetic attraction all year. Annuals and perennials can attract deer and provide outstanding hunting opportunities from the start of bow season through the last day of gun season.

Pennsylvania hunter Kris Klemick agreed. He and his family plant a variety of Whitetail Institute products on their 250-acre family farm. They've had great luck with all the products they've tried. Although he says it doesn't make too much of a difference to the deer, Klemick typically follows a 60-40 mix, with the majority in perennial plots. "The larger portion is in plots that provide forage during the summer months," he said. "That's seemed to work well for us."

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## The Big Picture

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First, though, remember that food plots shouldn't be the only part of your habitat management equation. To provide everything a whitetail could want, you need to look at the big picture and manage your property on a landscape level. Everything from woods and fields to food sources and bedding areas might need some attention.

However, the general rule is that food plots should account for three to five percent of your land. Klemick's food plot acreage is on the smaller end of the total land area, but only because the property sits atop a mountain, and plantable ground is at a premium. Scott knows some landowners who put as much as 10 to 12 percent of their property into plots. Some plant such a large percentage of their acreage because they have a high density of whitetails and need lots of food to sustain the plots throughout the seasons. Others manage land that provides little natural nutrition for deer, and a few simply like to overwhelm the wildlife on their property with food.

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## Nutrition Matters

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All of the above reasons are viable for planting summer nutrition plots. Keep in mind that an overabundance of deer could be part of a bigger problem. Too many whitetails can over-browse natural food sources, resulting in undernourished deer or over-browsing pressure on your plots. The best solution, at least in the long run, is to reduce the number of deer on your land to strike a healthier balance.

The only way to determine if the deer on your property are healthy is to take a variety of measurements, including body weight and antler-beam diameter. You can ballpark it if you don't want to get too wrapped up in your management. Comparing general body and antler sizes to whitetails from surrounding properties or throughout your

region can give you a rough idea of what's going on. (Your local biologist can offer some guidelines). Thinner antlers, smaller fawns and yearlings, and lower body weights of all deer can be an indication of poor habitat. Deer aren't getting enough quality food when they need it most. However, even when your herd numbers are closer to ideal, you still might need to give them a dose of high-quality nutrition when they need it most. Nursing fawns and lactating does will benefit from an ideal mix of naturally occurring and planted food sources. That's why summer nutrition plots should be a part of your plan.

There is no ideal acreage for summer nutrition plots. However, there's no question it's better to err on the larger side. A field of Imperial PowerPlant, a blend of annuals that includes peas, beans and small amounts of sunflowers and Sunn Hemp, provides high levels of protein and will attract whitetails almost as soon as it sprouts. A small field might not last long.

Perennial plots can also provide high-protein forage during spring and summer. Fusion — a blend of WINA 100 perennial forage chicory and Imperial Whitetail Clover, and Chic Magnet — a single-plant product, are drought and heat tolerant. Clover might go dormant during the hottest period in summer, particularly in southern regions, but the chicory will remain viable thanks to long tap roots that reach moisture deep in the soil.

Klemick includes about three acres of Fusion for spring and summer nutrition sources, plots that no one hunts. They exist to feed deer and keep them on the property. It's clearly worked. The clover stays green all summer, and whitetails flock to Klemick's nutrition plots.

"Before we started planting food plots, we might have seen a few deer in a day," he said. "Now we see lots of deer all the time. Our buck quality has increased, too." It's not a bad idea to plant a mix of perennial blends such as Fusion and an annual blend such as PowerPlant on your land. A 50-50 mix of perennials is a great starting point, but there's nothing wrong with changing that ratio when you determine how deer use the plots and what works into your management activities.

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## The Hunting Factor

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In some regions, summer nutrition plots will continue to provide high-quality forage into hunting season, which means they can also serve as a hunting plot. Sometimes, however, they don't survive into bow season. An early frost can stop the growth of some spring-planted annuals, such as the plants in PowerPlant. "Some guys either don't want to plant a summer plot for whatever reason, or they don't have enough room, and they just want to plant for hunting season," Scott said. "There's nothing wrong with that, but it's important to consider the quality of your habitat and food availability year-round." As Klemick learned, if your land doesn't provide adequate forage during summer, deer might be less likely to use it during fall and winter. Summer nutrition plots aren't just for boosting nutrition. They serve as a great tool for keeping whitetails in your neighborhood.

You'll still need to decide what to plant and how much of each variety to plant. Again, Scott recommends an even split between annuals and perennials when you are starting out.

"Imperial Whitetail Clover is a great choice for your perennial base," he said. "It will remain a viable option at least until the snow gets deep. It's a perennial, so you won't have to replant it for up to five years." Whitetail Oats Plus is a great early-season option. It's an annual, but it grows in a wide variety of soils and is highly attractive to



deer. Even better, it grows fast and provides a lot of forage. As the season progresses, early-season plants can go dormant in cold weather, are eaten down to the stalks or change in such a way that deer prefer them less. However, frost or a hard freeze alters some plants in a way that makes deer flock to them. Winter-Greens, a blend of brassicas and turnips, is a perfect example. Both plants are less palatable to whitetails until they are subjected to a frost or hard freeze. The cold alters the composition of the plant, making it highly attractive to whitetails after it changes. In regions with high deer densities and marginal habitat, whitetails often eat brassicas before they have been touched by a frost or freeze.

"I know a lot of guys will split their food plots in half and plant one side in an early-season annual like Whitetail Oats Plus or Pure Attraction and the other half in a late-season product like Winter-Greens or Tall Tine Tubers," Scott said. "Putting an early annual and a late annual in the same plot is a good idea for hunters with a limited amount of space."


Your preferred hunting method can also dictate your food plot ratios. Dedicated bowhunters, for example, might prefer a higher percentage of plots in perennials such as clover and chicory and alfalfa or annuals such as Whitetail Oats Plus, Pure Attraction, the new Ambush or another Whitetail Institute annual. They tend to attract and hold deer earlier in the season. Gun-hunters might want a higher portion of their plots in late-season annuals like Winter-Greens and Tall Tine Tubers.

"We just make sure we have enough variety to keep us hunting over or near a food plot from the start of bow season through the end of our late muzzleloader season," Klemick said. "There's usually something like brassicas or turnips that still provide food for deer after the seasons end."

## The Bottom Line

If you still aren't sure what to plant and how much of each product type to put in the ground, Scott recommends experimenting. Start with an even mix of perennials and annuals, and don't hesitate to divide individual plots. Some Whitetail Institute products excel at times when others don't do quite as well. Environmental factors such as drought can hamper some plants, and other factors such as soil type, location and browsing pressure can create varying results.

When you find something that works for you and your situation, stick with it. You might find the perfect balance the first season, or it could take several years. However, be sure to rotate brassica plots like Winter-Greens or Tall Tine Tubers at least every two years. "They won't grow well if they are planted in the same spot year after year after year," Scott said.

Blends typically contain at least two plant types and are designed to complement each other. One plant might thrive while another in the blend is dormant. Even better, a blend such as Double Cross contains Imperial Whitetail Clover and WINA brassicas, an annual that deer tend to favor toward the end of the season. You not only get an annual and perennial in the same plot, you get one plant that attracts deer in the early season and another that attracts whitetails later in the season. Scott concluded by saying "50 percent annuals and 50 percent perennials is a good starting point but if you choose to plant 100 percent of one or the other, your hunting will improve and so will the quality of your deer. Have fun experimenting." 



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# AWESOME FOOD PLOTS ON MARGINAL SITES

*How to produce world-class food plots  
on rough and tough ground*

By Michael Veine

Photos by Charles J. Alsheimer

**I**t would be great if all new food plot sites were on level ground, already cleared and easily accessible, with rich, heavy, neutral pH soils and no rocks or other debris in the way. In the real world, though, especially in woodlands, most food plot sites are far from ideal. There's no reason to be discouraged, though, just because your land poses some food plotting challenges. In fact, the satisfaction level is even higher when productive plots are produced on marginal sites. Read on for some tips and know-how on how to cost effectively produce world-class food plots on rough and tough ground.

21 years ago, I realized a dream and purchased a chunk of Michigan's Upper Peninsula for recreational hunting. This remote 160-acre parcel was unimproved, rugged land composed of an even mix of high and low ground. A brush-choked, beaver-pond-studded stream bottom runs through the property, adding character and logistical issues. The property was a gem in the rough, with lots of potential that would take a considerable investment in time, money and effort to realize.

The land hadn't been timbered in more than 100 years, so I didn't waste time contracting for a timber treatment on the property. About 40 acres of mostly aspen were clear-cut, and those areas quickly sprang back into lush, thick, deer-preferred habitat. Other areas were select-cut, and we also had some strip-cuts done in some of the white cedar stands. Those strip-cuts created some highly deer preferred habitat too.

Next on the hit list was improving access to the property and improving the deer nutrition there with food plots. After walking the property with a local excavator, I hired him to make some roads through the property and create a couple of initial food plots. I had no natural openings on my property, so the food plots would need to be carved out of the forests by clearing stumps, tops and standing trees along with pushing rocks and other debris out of the way. This excavator had an hourly rate that seemed very reasonable, so he seemed like a logical choice. Unfortunately, I failed to research him adequately and ended up paying for that mistake big time. It first became apparent that I had made a mistake when he showed up with just an old, run-down bulldozer that seemed inadequate for the task. Sure enough, the small dozer had great difficulty pushing bigger trees and stumps, and he floundered in wet spots. He labored all day using up my budgeted expenditure on the project while only completing about one quarter of what he claimed he could get done in a day. What was done was poor at best, too. The roads were miserable, muddy things that were mostly impassable, and the food plots were only partially cleared.

Lesson learned: When hiring an excavator for hunting property work, the hourly rate needs to be factored into the size and quality of the machines being used. Also, do yourself a favor and really learn all the nuances of whatever excavation work you'll need performed so you can plan and conduct those



projects with confidence about doing it properly while minimizing expenses.

Regardless of the shortcomings of that first food plot project, I was among the legends of official food plotters as I enthusiastically worked on those two small plots until they were covered with a thick stand of Imperial Whitetail Clover. The deer took notice, too, and inspired by that limited success, I made more plans to really improve the access on my property along with greatly expanding my food plot acreage. This time, though, I was determined to do it right, but I'm no rich dude, so it would still have to be done on a budget.

After a lot of research, I decided to rent an excavator and perform a lot of the roadbed prep work myself. I contracted for three days' rental on a mid-sized machine that was big enough that it needed to be delivered by a semi on a lowboy. I had never operated an excavator before, but those things are actually pretty easy to master, and within minutes, I was good to go. Actually, it was a downright blast to operate that magnificent machine. It was big enough that I could knock over trees or just reach out and yank them up from their roots and toss them aside. I built up existing roads and cleared and built up new roadways with great efficiency. In just a few days of work, my property was laced with new roads, and I dug some real nice water holes in strategic spots, too. Had I hired an excavator contractor to do all that work, it would have cost me thousands of dollars more than the rental rate, so I saved a lot of cash in the process.

Because bulldozers are expensive to rent and haul, especially for a big-enough one, I decided to contract with an excavator to grade my new roads and to clear more food plot sites. This time I did a lot more

research though and found an excavator that had the right tools for the job and also lots of experience making food plots. In eight hours of pushing, that experienced and highly skilled operator had nicely finished off my roads and had also cleared five more acres of food plots. It was money well spent.

The closest community to my hunting property is a little hamlet called Rock. There's a reason for that name as the area is very rocky. Clearing small rocks (and other debris) from a food plot is not really complicated. There's the manual way (the way I mostly did it), and there is the easy way by using a rake attachment on a tractor. Where possible I would just toss them off to the side, otherwise I would deposit them in a small, dump trailer pulled behind my ATV and then relocate them to a better home off my food plots. Big boulders though require more work. My ATV has a winch mounted on the front of it. For a bunch of boulders that the dozer missed, I had to dig around them with a shovel and then winch them out with my ATV. It took many hours of labor to remove most of the rocks from my food plots, and every time I run a disc over it, more always work their way to the surface and need to be removed. It just goes with the territory.

Through the years, I have created additional roads and small food plots on my own by renting mini-excavators. These machines are widely available at heavy equipment rental outlets and are a true bargain because of their utility and the broad range of projects they are great for. The best mini-excavators for taming rough terrain are going to be on the larger side, although small ones can suffice but will require additional time. A couple of years ago, I rented a John Deere 27D, with a 9-foot digging depth and a 2-foot-wide bucket. That ma-

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chine weighed in at about 6,500 pounds, and it was great for pulling stumps and small trees. Also, it had a dozer blade, which was awesome for pushing stuff out of the way and leveling things out. With it, I cleared and built up a new roadway, piling up dirt from holes dug (borrow pits). Afterwards, I leveled off the road using the dozer blade. The road was about 1/8 mile long. I also created two smaller food plots of about 1/4 acre each that day. That mini-excavator also had a rock-picker bucket, so ridding the plot of boulders and other debris was especially nice. I even dug some water holes with the machine and did some landscaping by my cabin too — all in just eight hours of working time. I'm planning on installing another road and food plot this year with that machine and highly recommend it for do-it-yourself food plot work.

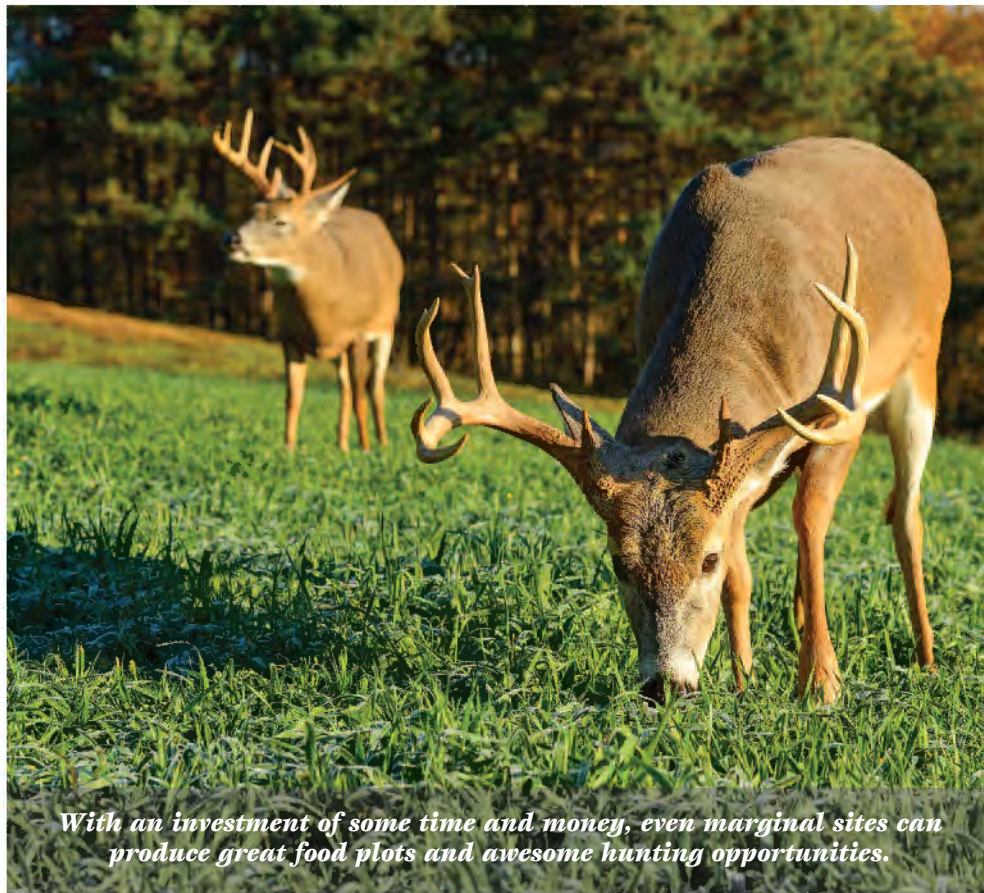
A great spot to install food plots is in and along wetlands, as deer tend to gravitate to these areas because of the thick cover provided. Swampy areas often dry up during summer, allowing food plotters to access these areas with a mini-excavator to dig out water holes with the dredge spoils being spread around the holes forming the food plot area. I have created several of these types of food plots/water holes, and they have all turned out to be fantastic hunting sites that draw in loads of deer and also get lots of use by waterfowl and other wildlife.

There are spots on my property where I wanted food plots but not even an ATV can easily access the locations. The stream that flows through my land creates an obstacle, but I can still have excellent food plots even in areas where access is limited to foot travel. The simple solution is no-till food plots. I have created a bunch of small food plots using nothing but hand tools and a backpack-style sprayer. If there are too many trees in the area, a chainsaw can remedy that situation. I like to clear all the trees and brush from the site and pile up the debris in strategic locations. Leaving stumps on the site is no problem. The next step is to spray the site with a glyphosate-based herbicide like Roundup®. After it is really "brownd down," go over the site with a big leaf rake, removing most of the dead grass and debris and exposing the soil. I usually take a soil test of any potential food plot site before starting any work there and add some lime right away, if needed. After raking the site, I add even more lime right at the time of seeding. Like the name implies, seed selection for these no-till food plots is perfect for Imperial No-Plow. Another awesome annual that I like on my no-till plots is Imperial Whitetail Secret Spot. Deer love forage variety, so in many of my No-Plow food plots, I have some parts of the plot planted with annuals and other sections are planted with perennials like Imperial Whitetail Clover.

Most of the time when a new food plot is carved out of forest land where trees once stood, the pH will likely be rather low and acidic. My pH was about 5.0 on most of my U.P. plots, so lime was recommended, and lots of it. At first I applied lime from 50-pound bags, which worked OK on the small plots. When I expanded my food plot acreage, though, I knew I'd have to get serious about liming. I bought a small tow-behind lime spreader that I pull with my ATV. I get a bulk delivery of lime dumped in a centralized location on my property along the edge of my largest food plot and then spread the lime from there. I still spread the lime by hand from bags on my no-till plots. Liming is certainly a dirty, time-consuming job, but the improvement in forage production is amazing and well worth the investment.

I rely upon regular herbicide applications on my food plots to keep them thriving. I mainly use an ATV sprayer with a double nozzle boom that sprays about a 6-foot swath with each pass. I also use a 5-gallon backpack sprayer on my small plots. These sprayers require lots





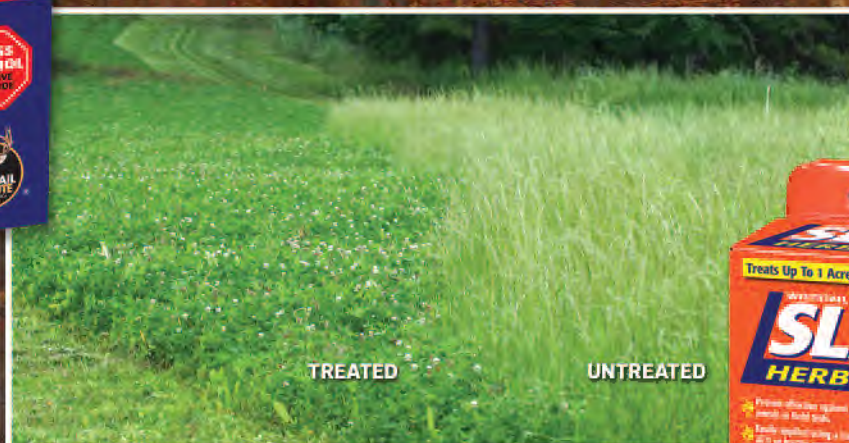
*With an investment of some time and money, even marginal sites can produce great food plots and awesome hunting opportunities.*

of water and unfortunately, my property does not have a well, and even if it did, I don't have electricity to pump it. In the past, I would just take water from the stream that flows through my land. Even a trout stream has dirty water that needs to be filtered, or it will plug up the sprayer nozzles. I made a filter using multiple layers of cheesecloth fastened over the fill-opening of the tank with a big rubber band. I filled the tank with buckets of water, pouring it through the cheesecloth. Eventually, though, I dug waterholes on or near all of my larger food plots and rigged up a 12-volt pump to fill my tanks. I still filter the water through the cheesecloth. The pump hooks up to my ATV battery and makes quick work of the filling process, making the spraying tasks go much faster.

My U.P. hunting property certainly presented food plot challenges galore. After my plots were established and tamed, though, they really produce a lot of high-quality forage for deer and other wildlife. I have seen a marked increase in the average body sizes of the deer in my area that I attribute to better deer nutrition. In fact, 19 bucks that weighed more than 180 pounds dressed have occupied my buck pole the past 15 years, which is proof that food plots using White-tail Institute products on marginal sites can pay big dividends. 🦌

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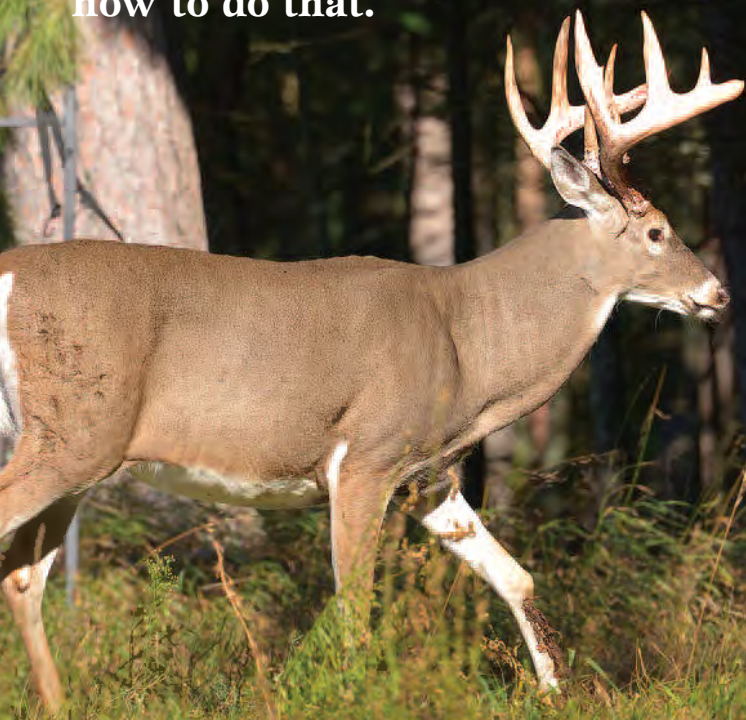
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# Kill-Plots in Planted Pines

By Jon Cooner

**A**t first glance, young pine plantations don't seem to offer much to a deer hunter because they're thick, hard to travel through and usually don't offer deer much in the way of food. These same characteristics, though, can actually make them prime locations for hunting plots if you know what to look for and how to set them up for the best possible results. Let's discuss some ideas on how to do that.



Dusty Reid

In this article, we'll discuss a specific kind of food plot: small kill plots placed within stands of planted pines. The idea of planting small kill-plots in thick, remote places such as pine plantations certainly isn't new. Hunters have been doing that sort of thing for a long time, and I'm certainly not suggesting that I invented the idea. However, it was something that was new to me when I first thought of it. For me, that happened decades ago as I rode with a landowner through an 800-acre parcel my friends and I were considering leasing from him.

The property had a few bottoms and agricultural fields, but most of it was planted in pine trees at various growth stages. As we rode along, I began to notice that the borders of the pine stands weren't uniform. They came all the way out to the road in some places, but in others they tapered back from the road, leaving openings. I didn't know much about pine-tree farming at the time (and frankly, I still don't), so I assumed that the open areas had just not been planted, and I asked the landowner why. He said, "We did plant those areas. The pines just didn't take."

In other words, the open areas weren't intentional. They had just happened because the pines in those particular spots hadn't survived.

That enlightenment gave me an idea that I resolved to check out for myself. I figured that if the pines in areas near the road had died and left openings, there might be other areas farther back in the stands where the same thing had happened. And it occurred to me that such spots would be prime locations for small kill-plots. I immediately put my idea into action and ended up killing my biggest buck to date that same year. Since those early days, I've continued to plant highly effective food plots deep within plantations of standing pines, and I've learned some things by trial and error along the way.

Let's make sure we're all on the same page about what we'll be talking about: planting food plots in small, remote, natural openings within stands of planted pines for the sole purpose of killing deer during hunting season. The rest of this article will explore each part of that definition, although in a different order for ease of explanation.

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## Natural Openings

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We'll start our discussion with the most important point of all: the openings you are looking for are natural, not something you create. You should be able to find the openings you need to plant pine stand kill-plots without having to create them. Never damage or remove trees without the landowner's permission.

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## Within Stands of Planted Pines

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Small hunting plots can work well in any pine stand that has reached a height of at least three feet or so — enough height to provide cover for deer travel. You'll also be able to spot natural openings in the stand pretty easily when the stand has reached that height. More mature pine stands also offer excellent opportunities for small kill-plots. The key issue with them, though, isn't cover. It's sunlight. Natural openings that allow sunlight to reach the ground can exist in virtually any mature stand of planted pines for several reasons, such as management thinning of the stand, pine beetles or just the natural shape of the canopy.

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## Think Small

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Although every situation is different, the type of plots we're dis-



cussing should generally be no less than about 1/10 acre and up to about 1/2 acre. Again, those specific size limits aren't written in stone. The most important factors in deciding what size sites to consider in your specific situation are what I'll call attraction longevity (how long the forage you plant will be able withstand the level of browsing pressure you expect and still keep attracting deer) and intimacy of the site (how safe deer will feel using the plot during daylight hours).

### Attraction Longevity and Minimum Plot Size

To give you a point of mental comparison, 1/10 acre is 66 feet by 66 feet. Again, that's just a starting point for deciding what the minimum should be in your own situation. Take into account deer density and other factors that might affect how heavily the forage in the plot is used by deer. In other words, make sure the site is big enough that the forage you plant will be able to keep attracting deer for as long as possible during hunting season.

### Intimacy and Maximum Plot Size

Intimacy is a term I stole from Neil Dougherty of North Country Whitetails because it's the best one-word description I've found for the most important factor to consider when locating and structuring any food plot in which you expect to harvest deer. They must feel as safe as possible using the plot. That's a product of multiple factors, including the availability of adjacent cover and maximum plot size. Given that the plots we're talking about are within stands of planted pines, they already satisfy the cover issue. Keeping plot size at about

1/2 acre or less can help maintain the site's intimacy.

### To Find Remote Sites, Put Your Boots On

To find the best sites, you're most likely going to have to search on foot. Although on-line tools such as Flash Earth, which provides satellite and aerial imagery from Microsoft and Yahoo, and Google Earth can be time savers when you're initially looking for good places to put standard food plots on unfamiliar property, they won't be of much use in helping you locate some of the best spots for the type of small kill-plots we're talking about in this article. One reason is that some of the aerial photos you'll find on the web were taken at an angle instead of straight down so that trees bordering small openings might block them from the camera's view.

### Food Plots – Forage Selection

As mentioned, the type of plot locations we're talking about will often be remote and difficult or impossible to access with tillage equipment. Also, you'll want the forage you select for such sites to be highly attractive and able to sustain attraction throughout as much of the hunting season as possible. The Whitetail Institute has developed three forage products specifically to meet those requirements: Imperial Whitetail No-Plow, BowStand and Secret Spot.

BowStand and Secret Spot come in 4-pound bags that plant up to 1/10 acre, and Secret Spot XL comes in a 10-pound bag that plants up to 1/4 acre. If you have more than one or two small plots to plant, also consider No-Plow, which comes in a 1/2 acre (9 pounds) bags and



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larger. All three are specifically designed to be planted with minimal ground tillage, and they are exceptionally attractive, fast-growing, browse-tolerant annuals that are specifically designed to draw deer and hold deer during both the early and late hunting seasons.

I can attest to the fact that they work exceptionally well in my small pine stand plots. For example, remember I said that I'd gotten the idea to plant small, remote pine plots decades ago? That year, I did some research and put together my own no-till seed mix to use in those sites, and through the years, I tweaked it until I had the best mix I could make. Years later, I tried No-Plow for the first time in a couple of my pine plots, and I found that it noticeably outperformed my own mix in attraction, production and longevity. That was my first experience with Whitetail Institute forage products, and although I can't say that it was the only reason I later went to work for Whitetail Institute, I can say that my own experience as a user of Whitetail Institute forage products impressed me enough to consider putting my own reputation on the line as their representative.

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## Planting – Seedbed Preparation

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As mentioned, No-Plow, BowStand and Secret Spot can be planted with minimal ground preparation. To make sure your seeds make it all the way into contact with the soil, remove as much of the existing grass and weeds from the seedbed as possible with a string trimmer, hand tiller, a Roundup-type glyphosate herbicide and in some cases even just a hand rake.

If you elect to use a glyphosate herbicide for grass and weed removal, you must make absolutely certain that it doesn't come into contact with the trees or any of their roots which might be exposed.

To make sure that doesn't happen, follow all label directions, including spraying on a calm day to avoid spray drift. I also take the precaution of completely covering seedling pines, and covering the root area and bases of older pines, with visqueen or plastic trash bags before I spray to make absolutely certain no herbicide gets on any part of the trees. That's a quick, simple, inexpensive step that adds an additional measure of protection for the pines.

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## Killing Deer During Hunting Season

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**Plot Shapes and Stand Setup:** Because you'll be planting areas where the pines have been naturally compromised, or where more sunlight reaches the ground than elsewhere due to gaps in the canopy, the shape of your plots will already be set out for you. They'll generally be roughly rectangular or irregular (something other than rectangular).

Rectangular plots usually occur when specific rows of trees have been compromised. The long sides of the rectangle will run the length of the rows where the trees are missing or spindly, and the short sides will span the width of the adjacent row spaces. I generally hunt my rectangular pine plots from ground blinds placed within cover at both ends of the plot. That allows me to hunt the site in a wider variety of wind directions.

Irregular openings are those in which compromised trees lie in a patch (for instance a few trees in one row, more in the next row and a few in a third), or where a gap in the canopy of a more mature stand allows more sunlight to reach the ground. If the opening's shape isn't too irregular, I also hunt these from ground blinds. If cover surrounding the plot site is tall enough, I also sometimes use tripod stands instead of ground blinds and, again, I put at least two in cover at

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By Whitetail Institute Staff

*Designed to flourish in a wide variety of climates from Florida to Canada, Imperial Whitetail Edge is winter-hardy and heat and drought tolerant. But most important, Edge is extremely attractive to deer. It took the Whitetail Institute years of scientific research, development and real-world testing to create Edge, including testing on wild free-range deer to ensure that it meets the Whitetail Institute's stringent standards for forage palatability and attraction.*

Edge is a precise blend of sainfoin, browsing alfalfas, Persist forb and WINA-100 chicory (perennials) and a small amount of annual

clover. It owes its heat and drought tolerance to deep roots, which can grow as far as three feet into the soil. All the forage components in Edge are also winter-hardy. Like other Whitetail Institute products, Edge contains plant varieties that are available only in Whitetail Institute products.

**Specially selected sainfoin.** Sainfoin is a legume that produces high protein levels similar to those produced by high-quality alfalfas. The sainfoin variety included in Edge has been specifically selected for its outstanding deer preference compared to all other sainfoin varieties tested by the Whitetail Institute. It's also very cold tolerant and drought and heat resistant to withstand, hotter, dryer climates.

**Grazing alfalfas.** The browsing alfalfas in Edge are the same as those the Whitetail Institute includes in Alfa-Rack Plus. Whitetail Institute testing has shown these alfalfas to be superior to hay-type alfalfas when used as a forage for deer. The main reason is that they produce more leaf relative to stem than ordinary alfalfas.

**Persist forb.** Persist is the backbone perennial in another Whitetail Institute perennial, Imperial Whitetail Extreme. This exceptionally sweet plant is deeply rooted and highly drought resistant. Persist adapts well in lighter soils and good soils that drain well.

**WINA-100 Perennial Forage Chicory.** Edge's chicory component is the same perennial forage chicory the Whitetail Institute includes in Chic Magnet, Fusion, Alfa-Rack Plus and Extreme. Put simply, WINA-100 is the most attractive chicory variety the Whitetail Institute has ever tested. That's because its leaves stay tender as it matures, unlike other chicories, which can become stemmy and waxy.



opposing edges of the plot so that I can hunt the stand in a variety of wind conditions.

**When to Hunt the Plots:** All day. One of the real benefits of little kill-plots in stands of planted pines is that there often seems to be no discernable peak or lull in deer usage during daylight. Deer can show up at any time. I believe there are two reasons that's the case. One is that deer feel so safe using small, pine-stand plots that are set up and hunted correctly. The second is the close proximity of such plots to where deer are bedded. And that leads me to my final important tip.

### Second Most Important Understanding

I've already mentioned the first most important understanding, which concerns the safety of the landowner's trees: Never damage or kill any trees without the landowner's permission. The next most important understanding relates to your odds of success: At all stages of the process we've covered (from your initial site search to actually hunting your pine-stand kill-plots), everything that you do should be governed by the understanding that during hunting season, you'll be trying to do the unthinkable — kill deer in the middle of a likely bedding area. That's why it's so critical to make sure you have quiet, concealed travel access to each plot from multiple directions based on wind direction, remove as little natural cover as possible around the plot and along your travel routes and shooting lanes, and be obsessed about controlling human noise and scent.

Hopefully this article has provided you with information you can use to your advantage in finding spots for your own pine-stand kill-plots, planting and hunting them. They can be deadly food plot setups. 🦌

**Annual clover component.** In addition to its perennial components, Edge also contains a small amount of annual clover. These proprietary clovers, which are also included in other Whitetail Institute perennial and annual forage products, establish and grow rapidly, providing fast green-up and attraction after planting.

**Rainbond seed coating.** Edge also features Rainbond, the Whitetail Institute's high-tech seed coating, which pushes product quality and seedling survivability to the maximum. Rainbond contains polymers that absorb water from the soil (up to 200 times their weight in water), keep it next to the seed as it germinates and replenishes the water they hold from the soil as the plants use it. By retaining water that would otherwise be lost to evaporation or percolation, Rainbond helps maximize seedling survivability. The seed coatings in Edge also contain the precise inoculant needed by the various seeds in the blend so the customer doesn't have to inoculate the seed before planting. In short, Edge is ready to go right out of the bag.

Edge is designed for a well-prepared seedbed on good soils that are moderately well-drained. As with any alfalfa or product containing alfalfa, soil pH should be within neutral range (6.5 to 7.5) at the time of planting. Edge can be planted in spring in most areas or in fall. Planting dates and instructions for planting and maintaining Edge are provided on the back of the product bags, and they're also available online at [www.whitetailinstitute.com](http://www.whitetailinstitute.com). If you have additional questions about the new Edge, call the Whitetail Institute's in-house consultants at (800) 688-3030. The call and service are free. 🦌



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# Whitetail Institute **RECORD BOOK BUCKS...**

## **Danny Wahl – Missouri**



We use Imperial Whitetail Clover, Alfa-Rack Plus, PowerPlant, Winter-Greens and Tall Tine Tubers. The deer are really attracted to these and we see a lot more deer than dad said he used to before he started planting them over 15 years ago. The first year after planting Whitetail Institute products we saw more deer. After three years we saw bigger racks. After five years or so average racks went from 7 points to 10 points. In the last 10 years, I took a 164-inch 16-point with bow, found a 175-inch 17-point non-typical that EHD claimed, as well as a 150-inch 8-point. We took three 140s bucks, a 166-inch 11-point, a 158-inch 9-point and my son just took a 179-inch 10-point this week. (Picture enclosed) We also know of three other B&C size bucks and four Pope & Young bucks that call our place home. Thanks, Whitetail Institute.

## **Bill Boeschen – Illinois**

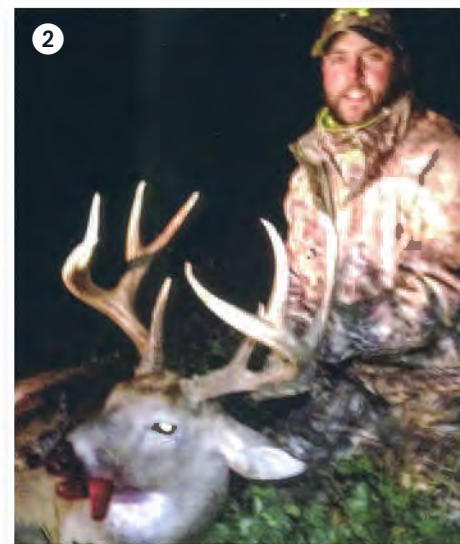


Thank you, Whitetail Institute, for the products you have developed. We have been planting only Whitetail Institute products on a farm here in southern Illinois the past few years. We have been blessed with good deer numbers in our immediate area, compared to other areas in the county. We feel that it is due to offering everything our deer herd needs. Limited pressure, good habitat, water and an abundance of food. Between Whitetail Institute products and the ag crop that we pay the farmer to let stand, our plots suck deer in from neighboring landowners.

When the buck in (Photo 1) came out of woods, on the field 250 yards away, he was heading right to the Imperial Whitetail Clover where does were feeding. I was lucky enough to shoot him at 30 yards, and he died in the field that he was heading to. Whitetail Institute plants are like drugs to the deer. They get addicted, become daily users and end up dying. It is great to go out and watch deer almost every day feed on our plots and wait for Mr. Big to show. Whitetail Institute products are like a magnet in the area for deer. It seems if they get close enough to the fields, it just sucks them right in.

On Nov. 1, my son, Joel, got in the stand early afternoon. The homemade 20-foot aluminum ladder stand he was hunting was tucked a few yards in the woods which overlooked 2-plus acres of Imperial Whitetail Clover bordering 40-plus acres of corn. He had the feeling it could be a great night. Immediately after getting strapped in, he had does feeding and small bucks sparring throughout his afternoon on the clover. Towards the end of the day, 2 additional does joined the others feeding on the field. As they fed past Joel within bow range, he noticed their nervousness. Constantly looking back from where they had came, Joel suddenly could hear what they were looking for. Then the shooter showed himself on the edge of the field 65 yards away, focusing on the does, and... he proceeded toward his goal. As he passed 17 yards away from Joel, the buck received an arrow behind the front shoulder and expired almost immediately. Mission accomplished!

Having the drug-like addicting Imperial Whitetail Clover for the deer to feed on, again paid dividends for our family. Joel's 150-class buck was taken off the same field that I harvested my buck.





## Mike Juhasz – West Virginia



we watched this 9-point (Photo 1) “own” several of the Chicory Plus plots. While not the largest antlered buck on the property, he was given a wide berth by other bucks. I can only assume that his attitude made up for his antlers.

On the morning of Nov. 5 I caught him just uphill from a plot of Chicory Plus. He followed a young buck and a group of doe out of the plot. I didn’t hesitate in sending an arrow his way. He weighed 204 pounds and was my first West Virginia deer over 200 pounds. In the first few years of ownership, while we were clearing plot areas and had little food plots in, buck weights were rarely over 150 pounds. In recent years we’ve taken one that weighed 265 pounds and one that weighed 235 pounds



during archery season. (Photos attached) Where we hunt in West Virginia this is not common and Whitetail Institute products have had a lot to do with that.

Although we might not always be successful in harvesting the big bucks, we have them to chase, and that’s all we can hope for. Thanks Whitetail Institute for all your efforts in producing great products.

## Kellen Binger – Wisconsin

We have been using Whitetail Institute products in our food plots for the last five years. We have had great results with germination of the products, and these plots lead to the deer staying on the property. Does are constantly feeding in the plots which brings the bucks. The proof is in the picture. This buck was in a plot of Winter-Greens when I shot him. He scored around 183 inches. Thanks again, Whitetail Institute.

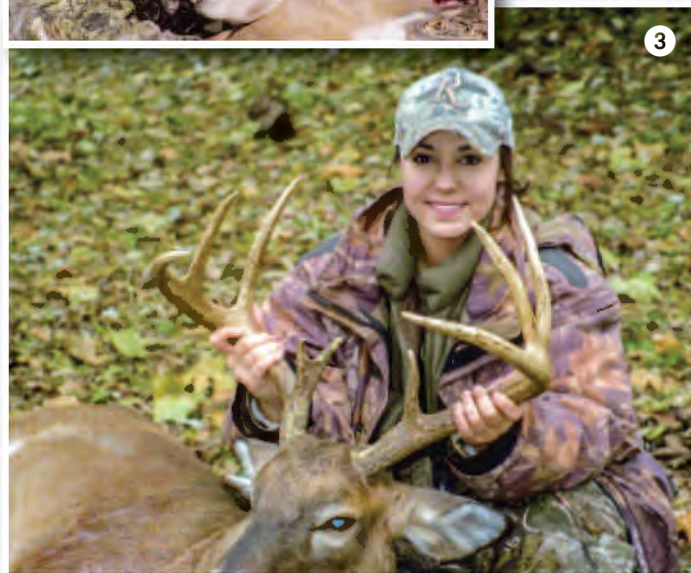


## Danny Scott – Kentucky

We like Imperial Whitetail Clover. I’ve had it planted side by side with co-op clover, and the deer will walk across co-op clover to get to the Imperial Whitetail Clover. For our fall annual plots we love No-Plow. We even use it in places we can get our equipment into simply because the deer love it. We have more deer on our place and bigger bucks than ever before. My non-typical buck in photo one scored 198 3/8 B&C gross. I killed him on the edge of an Imperial Whitetail Clover plot. My son in law, Mike Turner, killed the buck in Photo 2 on a trail leading to a No-Plow



plot. He scored 175 4/8 B&C gross. My granddaughter, Valerie, killed her buck in the middle of a No-Plow plot. He scored 128 B&C..



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# Why You Can't Afford NOT to Plant Food Plots

*Keep the does there with  
good food and cover and  
the bucks will come.*

By **Gerald Almy**

Photos by the Author

**T**o borrow lyrics from a well-known song, deer hunting “ain’t what she used to be.” Similarly, farming isn’t what it used to be, either, having changed in two significant ways. These themes intertwine to make it almost necessary that you plant food plots nowadays if you want to have a healthy deer herd and enjoy consistent, high-quality hunting.

We’ll delve deeper into how these changes affect you as a deer hunter and wildlife manager. First, let me tell you about a recent hunt.

It was a cold, gray November day. Virginia’s early muzzleloader season had just kicked in as I sat hunkered in an old-fashioned lumber-built tree stand. (Yes, a few of us old-timers still use them.)

I live in a strong agricultural area in western Virginia’s Shenandoah Valley. Vast fields of corn and soybeans blanket any habitat that’s not hilly or covered with limestone and shale outcroppings. During summer and early fall, the deer in our area, as in most farm regions, have a buffet of superb high-quality forage to choose from. My hope was, in addition to my high-protein food plots, that this bounty of professionally grown food helped nurture a heavy-racked buck that might saunter past my stand that morning.

And there were several reasons why I thought he might be on my small, scruffy tract of land instead of staying on the big, profitable commercial farms nearby, where he likely gorged himself and fattened



up during summer.

One reason was that my land has lots of shrubs, cedars, thick brush and fields of tall grasses I planted that are more common to the western prairies. Most farmers nearby have gotten rid of that kind of cover, which bucks need, because it cuts into efficiency and profits, and that's how they make a living. I make a living writing, with crops as a (pitifully small) side income, so I don't have to worry as much about efficiency.

When professional farmers have two or three small fields with overgrown fencerows between them, the modern trend is to convert them to one big field with no cover and no brushy corners. The reasons are clear: efficiency and profitability. Cedars are uprooted and brush cleared because they hold no economic value. This is a trend across the country during recent decades, as farmers increasingly use "clean" agricultural techniques that call for the removal of shrubs, briars, weedy pockets and small patches of young trees that offer deer security cover. That's the first of the aforementioned major changes in agriculture.

During summer, things are different for deer. Corn offers excellent cover, so deer can feed and bed there. When the stalks are gone, though, the cover and most of the food are gone. Even though deer might like to stay to gobble leftover corn kernels and ears, it's too dangerous to be exposed in the open too often. Similarly, the soybean leaves deer ate all summer have turned yellow by fall and are unpalatable. The beans have been or soon will be picked, leaving little spillage to hold deer.

That brings up a second major change in agriculture. Improved farm machinery and techniques used today are so efficient they leave little waste grain in fields. Not only is the cover removed with the harvest, but very little waste grain remains. To top it off, what's left is often disked into the ground almost immediately after harvest.

So although large agriculture farms can help grow big whitetails, many of those deer shift to places with more cover and available food as hunting seasons swing in. I'm convinced one contributing factor to the "October lull" many hunters dread is that deer often give up on big farm fields where you glassed them during late summer evenings and head to small, scruffier properties, such as mine, that are managed for deer and have abundant cover and high-quality food that hasn't suddenly been taken away with the

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harvest.

Looking at the big picture, it becomes clear that these changes in agriculture can actually help a small landowner in his efforts to attract deer — if you provide the food deer need when big ag fields are harvested, along with lots of security cover.

That's why I felt so confident that cold November morning. I had also grown a crop, but mine was planted in small parcels with lots of thick cover in between. And it hadn't been harvested. Five plots of Imperial Whitetail Clover were scattered throughout the low part of my land between thickets of cedars, sumac, honeysuckle, greenbrier and raspberry brambles. Another two plots offered Winter-Greens. And the field I was watching in a bottom held Whitetail Oats Plus.

That oat plot was especially attractive to older bucks because it sat next to a brushy creek where I'd hinge-cut several low-value trees. It also adjoined a field I'd planted with a mixture of native warm-season grasses, including bluestem, switch grass and Indian grass, which stood 6 to 8 feet tall.

It was out of those grasses the buck emerged that morning as I watched the frost-coated oat field and a cold wind chilled my face. The neighboring farmer's fields of corn and beans were gone, harvested and sold or stored in bins. The ground was disked clean.

It was no wonder the buck was holed up on my land or, when he chose to dine, that he joined the does he would soon be breeding in the succulent green Whitetail Oats Plus field in front of me.

His rack was unusual, sweeping forward with non-typical points. I could count at least eight or nine. But I was more focused on the mass of the rack and the body traits that identified him as an older buck — a slouching belly, legs that appeared short, loose skin around his face and a thick neck that blended smoothly into his chest low down.

Squeezing off on the .50-caliber rifle, I watched a plume of blue-gray smoke belch from the barrel and saw the buck lurch as the bullet struck home. He ran 40 yards and collapsed at the edge of the grasses.

That handsome 5-year-old deer illustrates why you can't afford to be without food plots if you want to see lots of deer and have a chance at a majestic animal. Lands devoted to agriculture offer plenty of food during late spring and summer as soybean leaves emerge and, later, as corn matures. But by early fall, when the crops are harvested, the party is largely over. The food is mostly gone, and the cover has vanished.

You might say that's the time to head to the woods and hunt acorns. To some extent, that's true. No one will deny there's often a brief window of opportunity for good woods hunting in late September or October.

But acorn crops are not consistently strong every year. The most palatable white oak mast crops vary notoriously, with bumper crops one year and often sparse crops for several years afterward. And even when they are plentiful, when the nuts fall, a heavy population of deer can mop up the mast quickly.

Because they are available all fall and winter when the right selection of seeds are planted, food plots offer a longer period of consistent hunting through bow, muzzleloader and rifle seasons. You need them for consistent hunting success. And the deer need them to help build body mass and fat that will sustain them through the rigors of mating season and winter.

After the food is gone in agricultural fields, you need deer to focus like a laser on your property. You must offer deer the cover they don't always find on large farm operations. You need to provide as many oak trees as you can for acorns. But most important, you need to offer



***Here's the author with a mature buck he took in one of his small Whitetail Oats Plus plots surrounded by cover. Deer gravitate to smaller plots with abundant forage and cover after big farm fields are harvested in early fall.***

them quality food plots, such as those grown with Whitetail Institute seeds.

Deer will gravitate toward food. And if you don't have quality food, you won't have as many deer. The 11-point buck described earlier proved that to me.

In the 25-plus years I've been planting these products, soon after Ray Scott offered his first Imperial Whitetail Clover blend, I've had



that lesson hammered home time and again. It's resulted in more deer and has produced healthier animals. Body weights are heavier than before I planted plots, and antlers consistently have higher average scores. That pattern has repeated itself for other hunters throughout the country who have turned to Whitetail Institute food plots to help deer health and their hunting.

And that brings up the second major reason you can't afford not to plant food plots: competition from other land managers. I was fortunate when I started growing plots to be competing almost exclusively with farm crops. Few other neighbors were planting food plots then.

Other than some alfalfa fields that occasionally attracted a few deer, most of the competing crops of beans and corn were gone by the time hunting seasons got going. Deer naturally gravitated to my land with its variety of food plots and good cover.

Maybe you had the same situation years ago if you were at the forefront of food plotting. But times have changed. As I said at the start of this article, deer hunting "ain't what she used to be."

Enhancing your deer hunting with food plots and habitat manipulation has become a nationwide mania. And rightfully so because high-quality food plots help attract, grow and hold more and better quality deer, and every year more and more hunters are figuring this out. If you don't have plots on your property and good cover, deer will leave and go where they can satisfy those crucial needs — probably right next door.

Sure, it's no fun to lose that competitive edge of being the only one in the neighborhood with food plots and attract most of the deer. But more plots are good for the overall health of your local deer herd. And like it or not, that's today's reality.

If you don't have food, you won't have as many deer. And the best way to have the food when it's scarce on neighboring farms is to plant high-quality food plots on your property. These crops won't be harvested when deer need them most, when the stress of the rut and the impending winter loom. You can plant brassicas such as Winter-Greens and Tall Tine Tubers for late-season food that lasts throughout winter, and Whitetail Oats Plus for early-fall and winter forage.

But don't overlook perennials as fall attractants, either. One of my most important crops for attracting deer to stands is Imperial White-tail Clover. I live just below the Mason-Dixon Line in northwestern Virginia, and during most years, deer feed on my clover through bow seasons and most of gun season. Only by mid to late December does the clover go dormant for a few months before emerging strong again in early March. Alfa-Rack Plus is another perennial that provides superb hunting well into gun seasons in most areas.

Sure, some local farmers also plant alfalfa, and it attracts some animals during hunting seasons in our area. But the kind of alfalfa they grow is for cattle and hay. It's not as tender as the varieties in Alfa-Rack Plus, so it's much less attractive.

Having this one-two punch of brassica/oats annuals and clover/alfalfa perennials, plus plenty of thick cover, will give you a property onto which deer will flood when the crops on big clean farms are picked and spillage is disked into the ground. And if you don't offer them such a tempting setup to turn to after the agricultural crops are gone, it's likely one of your neighbors will.

Deer hunting is something of a chess game today. To win you need to know how to play — and play well. Providing high-quality food plots and cover are how you play to win.

Simply put, you can't afford not to offer whitetails good cover and the best food plots possible. 🦌



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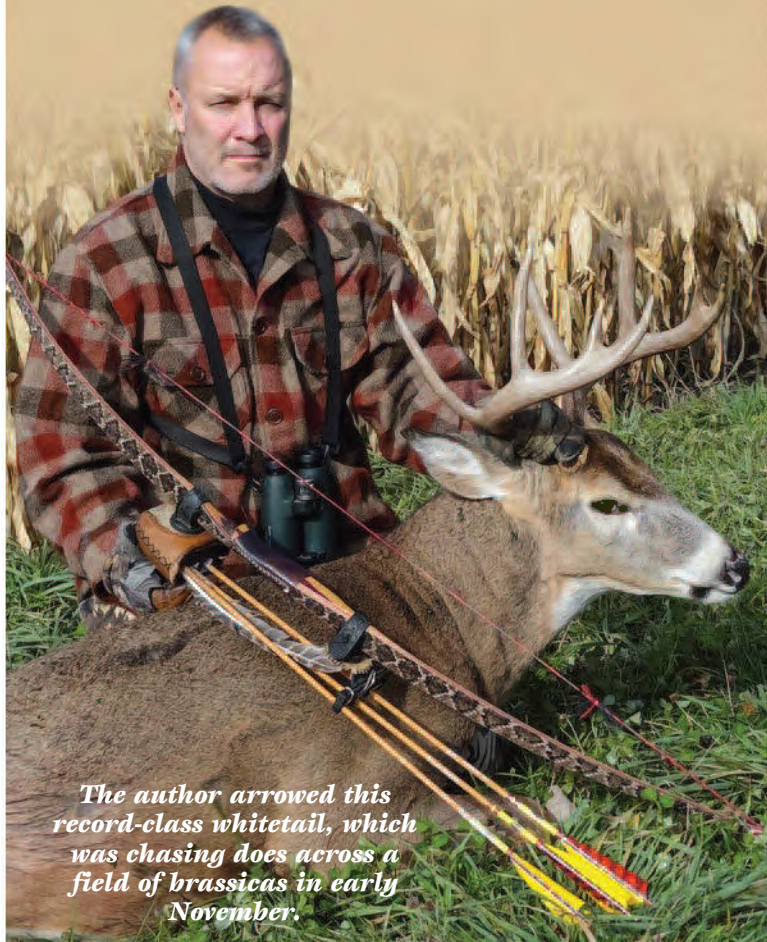


# Build a Better Food Plot

*Food plots are a critical ingredient to managing your deer herd and creating better hunting. Follow these steps to maximize your efforts.*

By Joe Blake

**T**he sun had already slipped behind the tree line to the west, yet nothing stirred in the deepening shadows surrounding my elevated perch. I was sitting along the edge of a field of Imperial Whitetail Winter-Greens that showed heavy browsing throughout, but nothing moved that cool September evening.



*The author arrowed this record-class whitetail, which was chasing does across a field of brassicas in early November.*

As darkness spread across the Minnesota countryside, I packed my gear and lowered my longbow to the ground. I still had a few minutes of legal shooting light, but it seemed unlikely I would get a shot before darkness settled in, so I quietly descended my ladder stand. When down, I shouldered my pack, picked up my bow and began moving quickly across the corner of the food plot toward the lights of my farmhouse in the distance. I didn't make it.

Halfway across the knee-high stand of brassicas, I caught movement along the edge of the trees at the far end of the small field and slowly sunk to the ground. Immediately, a wave of deer began streaming into the field and started wolfing down the succulent growth. Some animals began feeding as soon as they hit the food plot, but others trotted farther into the lush growth. I did my best to disappear into the leafy vegetation, but I was soon surrounded by deer, their ripping and chewing of the huge leaves echoing around me. I'm not sure how long I lay there in silence, but by the end of the encounter, more than two dozen deer fed calmly around me — some as close as 10 feet. I made out the white racks of several bucks scattered across the field, but darkness made it impossible to identify specific animals. Finally satisfied, the deer began to slowly drift away until I was alone in the field, and I wasted no time slipping away. I'm still not sure why the herd was late for the show, but one thing was clear: Proper food plot preparation brings results.

Many hunters and land managers plant food plots these days, and rightly so. Food plots improve your herd's health, increase the number of deer on a property, increase the size of bucks in the area and improve your hunting. Unfortunately, what I've found as a professional land manager while talking to other hunters and landowners is that many people don't put enough time and effort into their food plots to maximize results. Simply breaking ground and throwing out seed will create some results but not the kind you'll be proud of.

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## Testing 1, 2, 3

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The first step to building a successful food plot comes long before you spread seeds, and it's a step many people skip: getting your soil tested. A soil test is the simplest, easiest part of the food plot process, but it's one many land managers ignore. If you don't test your soil, you can't know whether the acidity is favorable for optimal plant growth. Getting your soil tested before you plant is paramount. Happily, it's also the easiest, least expensive step in the food plot process. Simply order the required number of test kits from the Whitetail Institute, follow the directions on the package, send them in to be tested and await the results. There's nothing to it. Maybe you'll find you're lucky to live in an area where the soil pH is already neutral, but you'll probably have to add some lime to improve your soil. A few years ago, I decided to add a small hunting plot to my land at the last minute, so I skipped a soil test and planted anyway. The resulting field was thin and weak and attracted very few deer. The next year, I did it right and found I needed to add quite a bit of lime to the spot, which I did. That season, I killed a good buck off that setup. Effort equals results.

Remember one point with soil testing: Don't just test once and figure your plots are good forever. Soil conditions can change through time because of fertilizer, what you plant and rain or lack thereof. I do a soil test on all my plots about every other year to make sure conditions are still optimal for food plots to excel. Think of it as an insurance policy for your plots. It's a small price to pay for success.

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## Maintenance is Critical

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After your seed is in the ground and growing, be vigilant, and make sure you keep competition to a minimum, especially when planting



in the spring. Grasses and weeds can take over a food plot if you're not careful, robbing precious nutrients, moisture and sunlight from desired plantings. Most land managers, including me, kill existing vegetation with a glyphosate such as Roundup before planting, but this measure only kills problem vegetation that's visible. There might be loads of weed and grass seed buried underground, waiting to come out and choke the life out of your food plot. The first year I tried food plots, I didn't have my own equipment, so I had a neighbor prepare and plant a two-acre field of Imperial Whitetail Clover on my farm. The clover took off beautifully but was overtaken by thistles and pig weed to the point where the weeds were taller than six feet and you couldn't see the clover. With no way to spray or mow, I was at the mercy of my neighbor's schedule, and he wasn't able to mow the plot until right before bow season. Within a couple of weeks of mowing, the Imperial Clover was again lush, green and growing — and attracting every deer in the area. I killed two does off that field and passed several up-and-coming bucks.

Obviously, it's important to keep up with maintenance throughout the year if you want to get the best from your plantings. As mentioned, mowing controls unwanted vegetation and will keep your perennial fields looking their best, but spraying a selective herbicide in the spring and/or summer might also be necessary. The Whitetail Institute offers a couple of excellent products to help control competition in food plots: Slay and Arrest Max. These products perform exceptionally well to help control grasses and broadleaf weeds in food plots. Don't wait till your fields are overrun to implement your maintenance program.

### You Get What You Pay For

Deer management and food plot usage have taken off incredibly in recent years, and it seems that everybody has the "best" seed on the market. You often see wild claims of huge deer being killed over this or that product, but beware of fly-by-night seed companies offering unbelievable results at cheap prices. As with anything, you get what you pay for with food plot seed and other management products. For my money, no company offers better seed and a wider variety of products than the Whitetail Institute. The company has been around for decades and its reputation is impeccable. That's not something you can expect from the many companies that sell products in seemingly every sporting goods store, hardware store and lumber yard nowadays. The Whitetail Institute relentlessly field-tests its products long before they hit the market, and those products are backed by a staff of researchers, biologists and land managers passionate about deer and management. Further, you can call the Whitetail Institute with questions and get expert advice from professionals. Try to get that type of service from products you bought at the local hardware store.

I've been planting food plots and managing deer herds and hunting properties for two decades, and I've managed more than 1,000 acres for other hunters professionally for years. You won't find another company with the dedicated individuals like those at the Whitetail Institute. I have used a variety of its products, but my favorites remain Imperial Whitetail Clover, Winter-Greens, Tall Tine Tubers and PowerPlant. I also use 30-06 and 30-06 Plus Protein extensively in my mineral pits. Combine quality products with quality advice, and throw in a little thought and hard work, and you can build a better food plot 🍂

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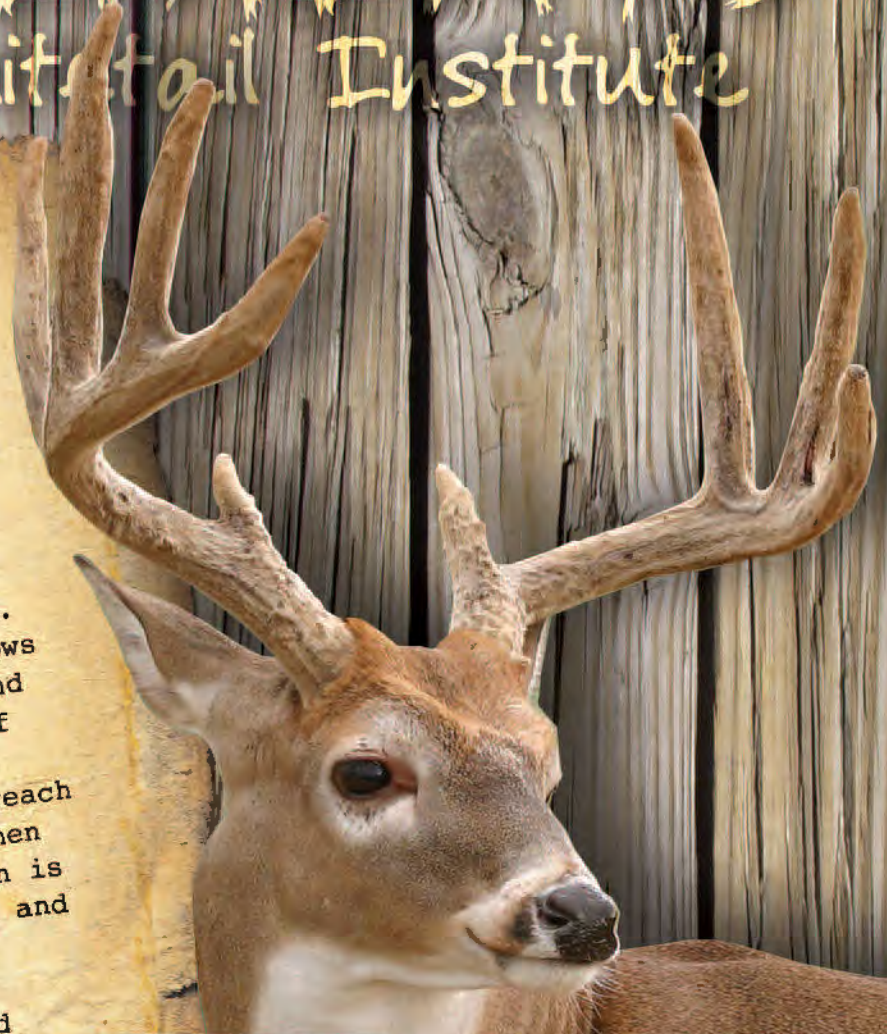
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# REAL HUNTERS DO THE TALKING

(Continued from page 27)



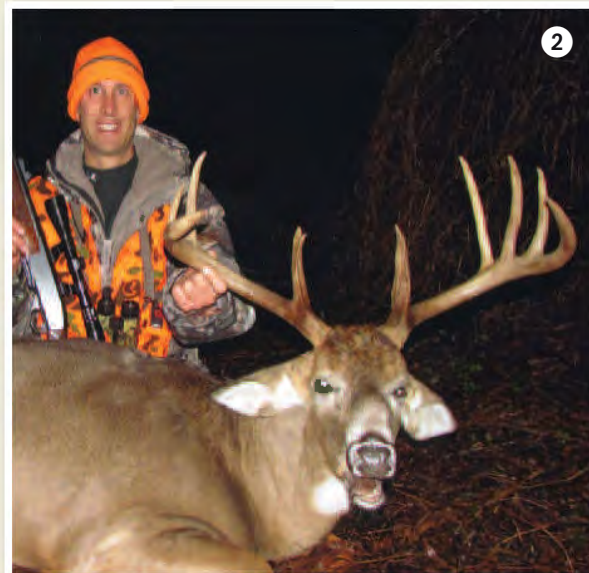
I've used Whitetail Institute products for over 15 years with excellent results in attracting more deer and seeing some bigger bucks. So when it was time to replant the farm in food plots, I gave the Whitetail Institute a call to see what seed blends would work best for my situation. With the later part of the season my targeted hunt period, they recommended Pure Attraction as my first choice. With success in planting several other Whitetail Institute products like Imperial Whitetail Clover and Alfa Rack in the past, I was excited to try these new seed blends.

One field I planted completely in Pure Attraction, and a larger field I split between No-Plow and Winter Peas Plus.

Cameras picked up lots of deer traffic and a lot of bucks going to and from the plots. In addition, we saw a ton of turkeys keying in on the food plots. I sat over the Pure Attraction plot one extremely warm afternoon on Nov. 3 and had this 9-point (photo 1) come cruising through the plot at 30 yards looking for does. During rifle season my brother, Steve, harvested his best buck ever, an old mature whitetail that was bedded with a doe between the two food plots. As the doe stood to walk into the upper food plot, Steve dropped the buck as he followed the doe towards the No-Plow and Winter Peas Plus. That buck scored 148 3/8 inches (photo 2).

We have used Whitetail Institute products for years and get excited every season with the attractiveness of these plots. These new products made for a very exciting and successful season for us here on a small parcel of land in Pennsylvania.

*Keith Miller -  
Pennsylvania*



I started planting Imperial Whitetail Clover two years ago. It has held deer and turkeys on the property much better than what we used to plant. The buck in the photo was killed by a friend of mine, Henry Ricotta he is a 14-point that weighed 205 pounds and scored 167. He was taken over a two year old Imperial Whitetail Clover plot.

*Doc Merideth - Mississippi*



This past year, we decided to try PowerPlant followed up by Pure Attraction. Here in Missouri, we had so much rainfall we couldn't get PowerPlant in the ground. It took a lot of work, but we finally got the Pure Attraction planted. We followed the directions to the T. I want to share the results. My deer scored 150 7/8 inches and is by far the best deer I've harvested to date. He came in to eat! Not to chase does. Thank you so much Whitetail Institute.

*James Shoemaker -  
Missouri*

## Send Us Your Photos!

Do you have photos and/or a story of a big buck, a small buck or a doe that you took with the help of Imperial products? Send it to us and you might find it in the Field Tester section of the next issue of *Whitetail News*. Email your digital photos and a 3 to 4 paragraph story telling how you harvested the deer and the role our products played to

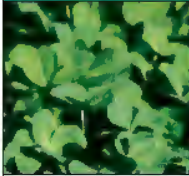
[info@whitetailinstitute.com](mailto:info@whitetailinstitute.com) or send them to:

**Whitetail News, Attn: Field Tester Response, 239 Whitetail Trail, Pintala, AL 36043**



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## IMPERIAL WHITETAIL® CLOVER YOU SAVE \$55.00



Suggested Retail: \$279.96 (36 lbs. - 4.5 Acre Planting)

**Price with coupon: \$224.96**

Please send \_\_\_\_\_ 36 lb. quantities of Imperial Whitetail® Brand Clover (With Insight).

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please add \$18.00 for shipping and handling for each 36 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



## IMPERIAL DOUBLE-CROSS™ YOU SAVE \$75.00



Suggested Retail: \$299.96 (36 lbs. - 4.5 Acre Planting)

**Price with coupon: \$224.96**

Please send \_\_\_\_\_ 36 lb. quantities of Imperial Double-Cross™.

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Please add \$18.00 for shipping and handling for each 36 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



## IMPERIAL NO-PLOW™ YOU SAVE \$40.00



Suggested Retail: \$149.96 (50 lbs. - 3 Acre Planting)

**Price with coupon: \$109.96**

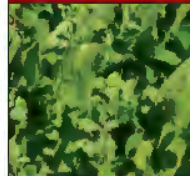
Please send \_\_\_\_\_ 50 lb. quantities of Imperial NO-PLOW™ Wildlife Seed Blend.

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Please add \$18.00 for shipping and handling for each 50 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



## IMPERIAL EXTREME™ YOU SAVE \$65.00



Sugg. Retail: \$289.96 (46 lbs. - 2 Acre Planting)

**Price with coupon: \$224.96**

Please send \_\_\_\_\_ 46 lb. quantities of Imperial EXTREME™ Seed Blend.

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Please add \$18.00 for shipping and handling for each 46 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



## IMPERIAL ALFA-RACK PLUS™ YOU SAVE \$65.00



Suggested Retail: \$289.96 (33 lbs. - 2.5 Acre Planting)

**Price with coupon: \$224.96**

Please send \_\_\_\_\_ 33 lb. quantities of Imperial Alfa-Rack PLUS™ Alfalfa-Clover Blend.

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please add \$18.00 for shipping and handling for each 33 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



## IMPERIAL FUSION™ YOU SAVE \$65.00



Suggested Retail: \$289.96 (27.75 lbs. - 4.5 Acre Planting)

**Price with coupon: \$224.94**

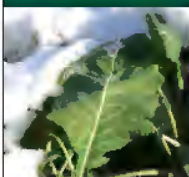
Please send \_\_\_\_\_ 27.75 lb. quantities of Imperial FUSION™.

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please add \$18.00 for shipping and handling for each 27.75 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



## IMPERIAL WINTER-GREENS™ YOU SAVE \$70.00



Suggested Retail: \$239.96 (24 lbs. - 4 Acre Planting)

**Price with coupon: \$169.96**

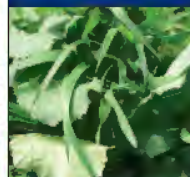
Please send \_\_\_\_\_ 24 lb. quantities of Imperial Winter-Greens™.

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please add \$12.00 for shipping and handling for each 24 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



## IMPERIAL PURE ATTRACTION™ YOU SAVE \$35.00



Suggested Retail: \$94.96 (52 lbs. - 1 Acre Planting)

**Price with coupon: \$59.96**

Please send \_\_\_\_\_ 52 lb. quantities of Imperial Pure Attraction™.

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please add \$18.00 for shipping and handling for each 52 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



## IMPERIAL TALL TINE TUBERS™ YOU SAVE \$65.00



Suggested Retail: \$199.96 (24 lbs. - 4 Acre Planting)

**Price with coupon: \$134.96**

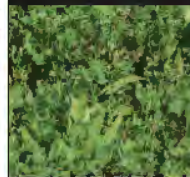
Please send \_\_\_\_\_ 24 lb. quantities of Imperial Tall Tine Tubers™.

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please add \$12.00 for shipping and handling for each 24 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



## IMPERIAL WHITETAIL EDGE™ YOU SAVE \$65.00



Suggested Retail: \$289.96 (52 lbs. - 2 Acre Planting)

**Price with coupon: \$224.96**

Please send \_\_\_\_\_ 52 lb. bags of Imperial Edge™.

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Please add \$18.00 for shipping and handling for each 52 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



## IMPERIAL TURKEY SELECT™ YOU SAVE \$40.00



Suggested Retail: \$149.99 (40 lbs. - 1 Acre Planting)

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Please send \_\_\_\_\_ 40 lb. quantities of Imperial Turkey Select™.

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Please add \$18.00 for shipping and handling for each 40 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



## IMPERIAL "CHIC" MAGNET™ YOU SAVE \$50.00



Suggested Retail: \$139.94 (9 lbs. - 3 Acre Planting)

**Price with coupon: \$89.94**

Please send \_\_\_\_\_ 9 lb. quantities of Imperial "Chic" Magnet™.

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Please add \$9.50 for shipping and handling for each 9 lbs. ordered. (Canadian residents call for shipping charges.) *Please enclose with shipping and payment information.*



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# DISCOUNT COUPONS - Order Today!

## IMPERIAL WHITETAIL OATS PLUS™ YOU SAVE \$13.00



Suggested Retail: \$49.95 (45 lbs. - 1/2 Acre Planting)

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Please send \_\_\_\_\_ 45 lb. bags of Imperial Forage Oats Plus™.

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please add \$18.00 for shipping and handling for each 45 lbs. ordered. (Not available in Canada.)  
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## IMPERIAL AMBUSH™ YOU SAVE \$20.00



Suggested Retail: \$120.00 (40 lbs. - 1-Acre Planting)

**Price with coupon: \$99.96**

Please send \_\_\_\_\_ 40 lb. quantities of Imperial Ambush.

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Please add \$18.00 for shipping and handling for each 40 lbs. ordered. (Canadian residents call for shipping charges.) Please enclose with shipping and payment information.



**NEW!**

## IMPERIAL 4-PLAY BLOCK™ YOU SAVE Up To \$25.00



Suggested Retail: \$59.96 and \$29.95

**Coupon Price: \$34.96 or \$19.95**

Please send \_\_\_\_\_ ☐ 2-Pak Blocks @ \$34.96

Please send \_\_\_\_\_ ☐ 1 Block @ \$19.95

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please add \$12.00 for shipping and handling for EACH Block or \$18.00 for EACH Double Pack. (Canadian residents call for shipping charges.) Please enclose with shipping and payment information.



## ARREST MAX™ HERBICIDE YOU SAVE \$10.00 to \$50.00

Suggested Retail: \$49.95 (1 Pint - 1 Acre); \$189.99 (1/2 Gal. - 4 Acres)

**Price with coupon: 1 Pint - \$39.95; 1/2 Gal. - \$138.96**

Please send \_\_\_\_\_ pint(s) of ARREST MAX™ Herbicide.

Please send \_\_\_\_\_ 1/2 gallon(s) of ARREST MAX™ Herbicide.

Call for larger quantities.

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please enclose with shipping and payment information.



## Apple OBSESSION "Super" Deer Attractant YOU SAVE \$15.00 - \$40.00



Suggested Retail: \$119.96 — 6-Pak, \$59.97 — 3-Pak

**Coupon Price: \$79.90 or \$44.97**

Please send \_\_\_\_\_ Apple OBSESSION 6-Paks @ \$79.90

Please send \_\_\_\_\_ Apple OBSESSION 3-Paks @ \$44.97

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No charge for shipping and handling. (Canadian residents call for shipping charges.)  
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## SLAY™ HERBICIDE YOU SAVE \$10.00 to \$21.00

Suggested Retail: \$59.95 (4 oz. - 1 Acre); \$159.95 (1 Pint - 4 Acres)

**Price with coupon: 4 oz. - \$49.98; 1 Pint - \$138.98**

Please send \_\_\_\_\_ 4 oz. Package(s) of SLAY™ Herbicide.

Please send \_\_\_\_\_ Pint(s) of SLAY™ Herbicide.

Call for larger quantities.

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please enclose with shipping and payment information.



## IMPERIAL 30-06™ BLOCK™ YOU SAVE Up To \$13.00



Suggested Retail: \$59.96 and \$29.95

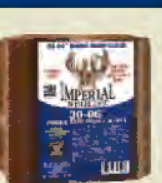
**Coupon Price: \$46.96 or \$24.95**

Please send \_\_\_\_\_ ☐ 2-Pak Blocks @ \$46.96

Please send \_\_\_\_\_ ☐ 1 Block @ \$24.95

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please add \$12.00 for shipping and handling for EACH Block or \$18.00 for EACH Double Pack. (Canadian residents call for shipping charges.) Please enclose with shipping and payment information.



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Suggested Retail: \$90.97 and \$99.97 (60 lbs.)

**Coupon Price: \$65.97 or \$74.97**

Please send \_\_\_\_\_ 60 lb. quantities of 30-06™

☐ Original 30-06™ @ \$65.97

☐ 30-06™ Plus Protein @ \$74.97

TOTAL Including shipping and handling \$ \_\_\_\_\_

Please add \$19.00 for shipping and handling for each 60 lbs. ordered. (Canadian residents call for shipping charges.) Please enclose with shipping and payment information.



## "KRAZE" Flavored Deer Attractant YOU SAVE \$40-\$65



Suggested Retail: \$119.99 — 6-Pak, \$69.96 — 3-Pak

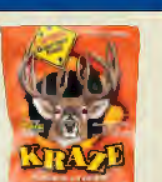
**Coupon Price: \$54.96 or \$29.99**

Please send \_\_\_\_\_ ☐ 6-Pak KRAZE @ \$54.96

Please send \_\_\_\_\_ ☐ 3-Pak KRAZE @ \$29.99

TOTAL \$ \_\_\_\_\_

No charge for shipping and handling. (Canadian residents call for shipping charges.)  
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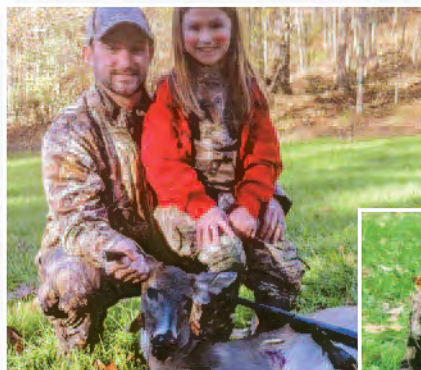


# FIRST DEER



*The future of our sport!*

## Dallas Skinner – Alabama



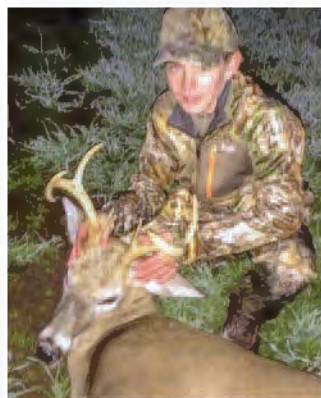
I love Whitetail Institute products and especially the results of my food plots and deer activity. I've really started to see an increase in not only my deer population but also

the size of bucks and does. This year my daughter, Taylor, took her first deer and my stepson, Tyler, has harvested two 8-pointers, and one is his best buck ever. All this before Thanksgiving on only a 40-acre property. Looking forward to the rest of the hunting season.



## Dr. Jeffery Wert – Pennsylvania

We planted Tall Tine Tubers, Extreme, Whitetail Oats Plus and Winter Peas Plus, and they all came up great. My son, Eric, shot his first deer in an Imperial Whitetail Clover plot. The deer ran off, but we found him lying in a plot of Whitetail Oats Plus. Enclosed is a photo of Eric and his deer and another photo of a huge-bodied buck in Tall Tine Tubers.




## Dan and Lindsey Iverson – North Dakota

The story starts in June two years ago, when Lindsey was able to apply for her youth buck tag through the North Dakota Game and Fish Department. She was lucky enough to be drawn for the youth hunt, and the preparation for the September hunt began, Lindsey knew she wanted to hunt around the Hoople, North Dakota area, and we were fortunate to have some great friends who opened their land up to Lindsey and her quest for her first whitetail. Through summer, we spent time helping plant food plots, building and fixing deer stands, tracking deer patterns with trail cameras and sighting in her hunting rifle.

Lindsey and I spent three nights pursuing her first whitetail buck, and the end result was well worth it. The first night out we saw several smaller bucks and many does. There was a nice buck that came in close to sunset, and Lindsey decided to pass on the shot due to the low light conditions. The second night was similar to the first, but we were able to see some very respectable bucks — just nothing Lindsey wanted to shoot. I kept reminding her that if she didn't fill her tag during the youth season, she could still hunt in the regular season.

The night of Sept. 25, was a great night for me and my daughter. We were in the stand about 5 p.m. and it was a beautiful night. We saw many deer, and Lindsey almost settled on a nice 4-by-4, but from our scouting during summer we knew there were better bucks in the area. About 25 minutes before sunset, the buck that would be Lindsey's first entered the field about 250 yards from our stand. We knew it was the one she wanted to shoot, and it was just a matter of time and patience before it presented a shot. Given Lindsey's comfort level with her Browning .243, I wanted to have a shot inside of 100 yards for her to be comfortable. After about 20 minutes, the buck presented a broadside shot at 82 yards and Lindsey made a perfect shot. The buck ran 40 yards and expired within sight of our stand.

A great night and a great experience for a father and daughter. A special thank you to Joel Olson and Loren Estad for allowing us to hunt on their property, the North Dakota Game and Fish for providing opportunities to our youth hunters and all the other people that helped.

My partner and I have been using Whitetail Institute products on this 443-acre tract of land in northeast North Dakota for the past eight years. We plant Imperial Whitetail Clover, Winter-Greens and Whitetail Oats Plus in several food plots with great results. We also use 30-06 Mineral Supplement blocks and 4-Play blocks. Thanks, Whitetail Institute for your fine products. 



Email your First Deer photos and story to [info@whitetailinstitute.com](mailto:info@whitetailinstitute.com) or send them to Whitetail Institute of North America, 239 Whitetail Trail, Pintlala 36043, Attn.: First Deer Dept.



# Draw 'Em In and Hold 'Em with **Whitetail Institute ATTRACTANTS**

Nobody knows deer nutrition and what attracts deer like the Whitetail Institute. That is why we developed our complete line of liquid, block, and granular attractants to appeal to a deer's sense of smell and taste. Whether it's the irresistible scent of apples or Devour, our proprietary taste and scent enhancer, our products have what it takes to drive deer crazy. These attractants work so well, they can pull deer to your property from long distances, and will also help hold deer once they have found the source of the attraction.

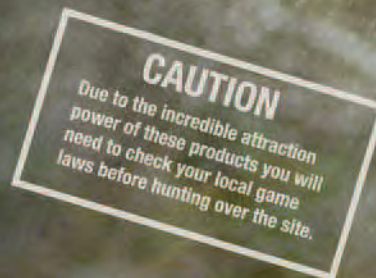
Use Whitetail Institute attractants to lure both, bucks, and does in front of your game cameras, as well as attract, and hold, hot does in your area when the time is right.

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Caps: \$9.95

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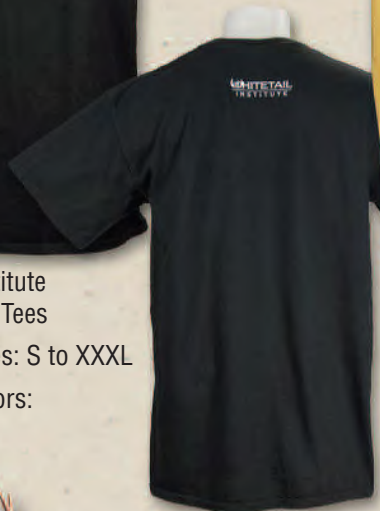
Short Sleeve Tees: S-2X: \$13.95, 3X: \$16.55 (Please add \$5.50 for shipping and handling.)



Front Chest Design



Front Chest Design



Upper Back Design

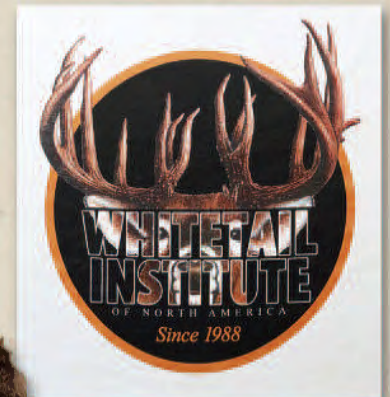


Upper Back Design

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Front Chest  
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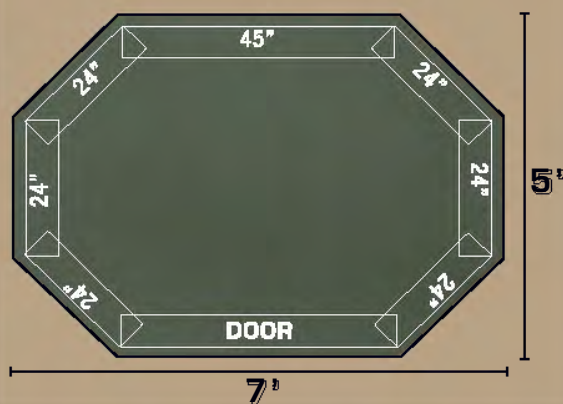


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