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DEPARTMENTS

William Cousins~*VP/GM Whitetail Institute*

THE QUIET WORK BEHIND EVERY BREAKTHROUGH

At Whitetail Institute, we take pride in the products that make it to your fields — the ones that deliver the results you count on. But behind every success story is a long trail of research, trial work and experimentation that most folks never see. And the truth is, most of those trials don't lead to a new product.

That's not failure. That's research.

Recently, our team evaluated a new herbicide that initially showed real promise for controlling broadleaf weeds in our legume food plot mixes. I'll admit, I was optimistic. If it worked, it could have become a valuable tool for land managers who battle these weeds year after year.

But two weeks after treatment, across every replication of the trial, the early signs were disappointing. Not catastrophic, not unusable — just not good enough. And not good enough is a line we don't cross.

This is the part of R and D that rarely gets talked about. The hours spent preparing plots. The meticulous application work. The data collection. The waiting. The re-checking. The hope. And sometimes, the letdown.

But this is also where the learning happens.

Every trial — even the ones that don't produce a new product — teaches us something. It sharpens our understanding of plant response. It reveals how variables interact. It shows us what doesn't work so we can focus on what might. That's the engine of innovation.

And none of it happens without rigorous, widely accepted field research techniques; the kind that require patience, precision and a willingness to follow the data wherever it leads. It's tedious work. It's necessary work. And it's the reason our products perform the way they do.

We remain committed to this process, no matter how many times we hit a dead end. Because every once in a while, a trial succeeds. A new idea becomes a breakthrough. A breakthrough becomes a product. And that product becomes part of your success story.

Those moments make every setback worth it.

Thank you for trusting us, for believing in the work we do and for holding us to the high standard we set for ourselves. We'll keep pushing, keep testing, and keep learning, because that's what it takes to stay the leader in this industry.

— William Cousins

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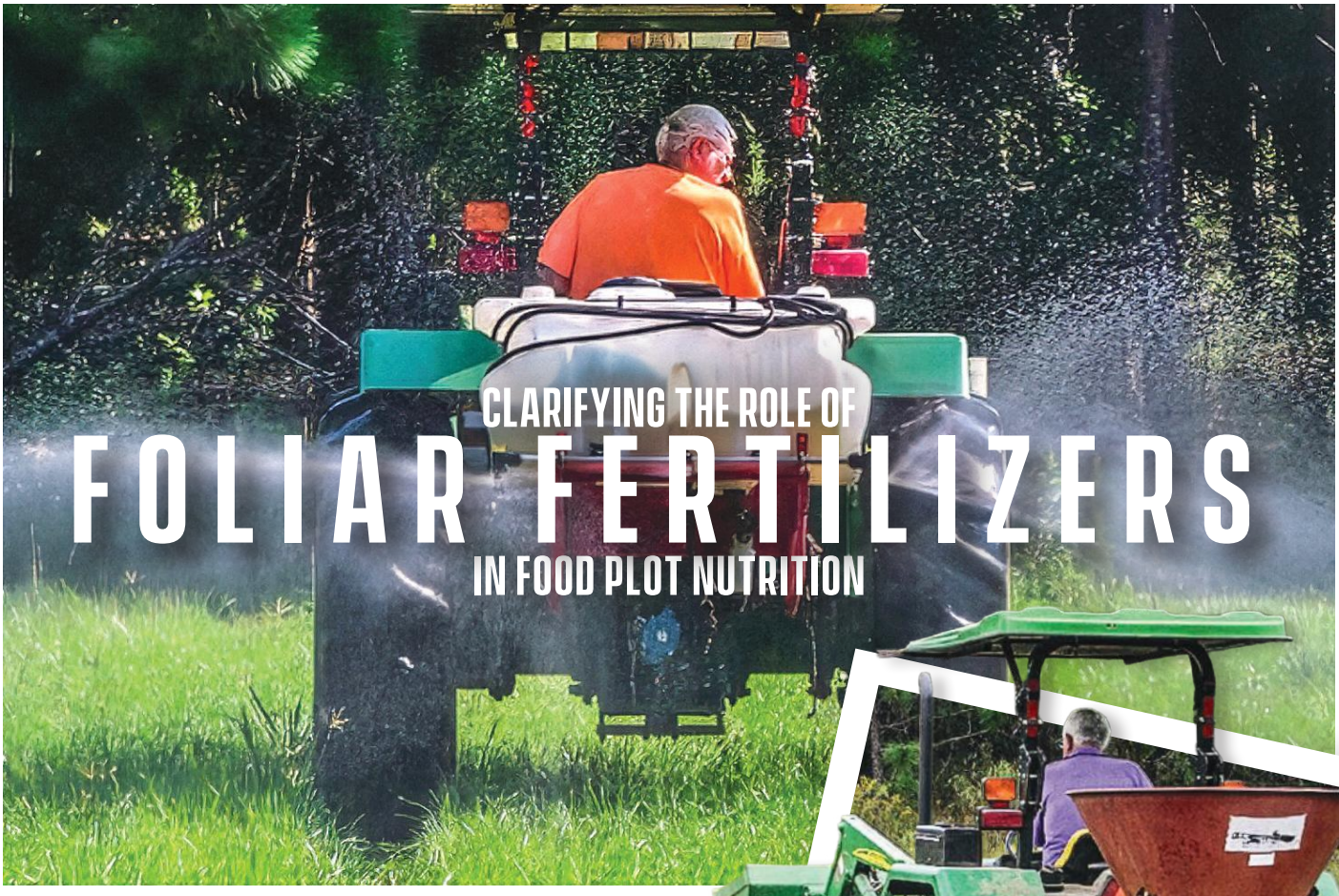
by *W. Carroll Johnson III, Ph.D.* – *Agronomist and Weed Scientist*

CLARIFYING THE ROLE OF FOLIAR FERTILIZERS IN FOOD PLOT NUTRITION



Foliar fertilizers are useful, but managers need to use them correctly and with a full understanding of their limitations.

One of the persistent challenges of managing food plots is the lack of tools. Conventional agriculture has a deep toolbox because there is significantly more research and development to serve conventional agriculture compared to food plot management. By tools, I'm not necessarily referring to hardware, implements or anything mechanical. Rather, I mean expendable supplies used to actually grow the forage crops in a food plot: fertilizers, liming materials, herbicides, insecticides and others. Many of the tools in conventional agriculture have a niche in food plot management, but the role and practicality of those tools in food plot management needs to be fleshed out.

Foliar fertilizers are one of the newer tools available for use on food plots. In conventional agriculture, foliar fertilizers have been available for decades. The role of foliar fertilizers in conventional agriculture is sharply defined; almost a specialized niche but still useful. Clues in conventional agriculture clearly point in a direction for how to use foliar fertilizers in food plots.

Which is best for you — spreading a dry fertilizer or spraying a foliar fertilizer? Both will work, and both have pros and cons. Think about what is best for your food plot management plan and logistical limitations.

FIRST, THE BOTANY

Plants contain two vascular systems. The xylem is a system of channels that connect the roots to the above-ground portions of a plant. Water enters plants through the roots and moves upward to the leaves through the xylem. Xylem transport is driven solely by the flow of water from the roots to the leaves to compensate for the amount of water lost through the leaves — transpiration. Plant nutrients hitch a ride with water by entering through the roots and are transported with water upward to the rest of the plant, where growth occurs. Root up-

take followed by xylem transport is the primary way by which nutrients enter and are transported in plants.

Photosynthesis occurs in plant leaves. The products of photosynthesis are necessary for plant growth and are actively transported throughout the plant in a different vascular system: the phloem. Phloem transport is how nutrients in foliar fertilizers are transported from leaves to elsewhere in the plant.

FERTILIZER FORMS

For simplicity, I will limit this discussion to dry granular fertilizers and foliar fertilizer sprays. Dry granular fertilizers can be applied before planting and then mixed with the soil or spread over the top of established crops. Dry granular fertilizers are dissolved by moisture, and their minerals enter plants through the roots along with water. Water and dissolved nutrients move upward in plants through the xylem, terminating in the leaves and above-ground growing points. Of all possible fertilizer types, dry granular fertilizers are the most commonly used in commercial agriculture and food plots.

Foliar fertilizers are mixed with water and sprayed on crop leaves. Sprayed foliar fertilizers enter plants primarily through the leaves, although some spray droplets reach the soil and from that point chemically perform like soil-applied granular fertilizer. When fertilizer spray droplets are intercepted by the leaves, the foliar fertilizers enter through the stomata or penetrate the cuticle through micropores. After they're inside the leaves, dissolved minerals are transported elsewhere in the plant through the phloem. Some nutrients readily move in the phloem, and some are immobile, which affects foliar fertilizer performance. It's worth noting that homeowners commonly fertilize potted plants using a fertilizer mixed with water poured directly onto the potting mix. This example is technically different from spraying a foliar fertilizer.

Research from the 1950s showed highly efficient nutrient uptake from foliar-applied fertilizer applications, and this research is often cited as an advantage of foliar fertilizers. However, understand that there is a big difference between uptake efficiency and providing enough nutrition for optimized plant growth. Macronutrients (nitrogen, phosphorous, potassium) are required in very large amounts for optimized plant growth. Despite the efficient uptake of nutrients using fertilizer sprays, the amounts of the macronutrients required for optimized plant growth cannot be provided by one or even two foliar sprays. Increasing the concentration of foliar fertilizer in water to provide more nutrients per application can result in severe foliar burn. Of course, many fertilizer sprays at regular intervals throughout the season can technically provide adequate plant nutrition, but that's where practicality enters the discussion. Doing so means a program of frequent foliar fertilizer sprays. Do you want that type of commitment to a food plot that might be hundreds of miles away? That limitation is why foliar fertilizers are considered to be supplemental to granular fertilizers in conventional agriculture and food plot management. I studied agricultural scientific literature in preparation for this article, and the supplemental role of foliar fertilizers was a resounding message.

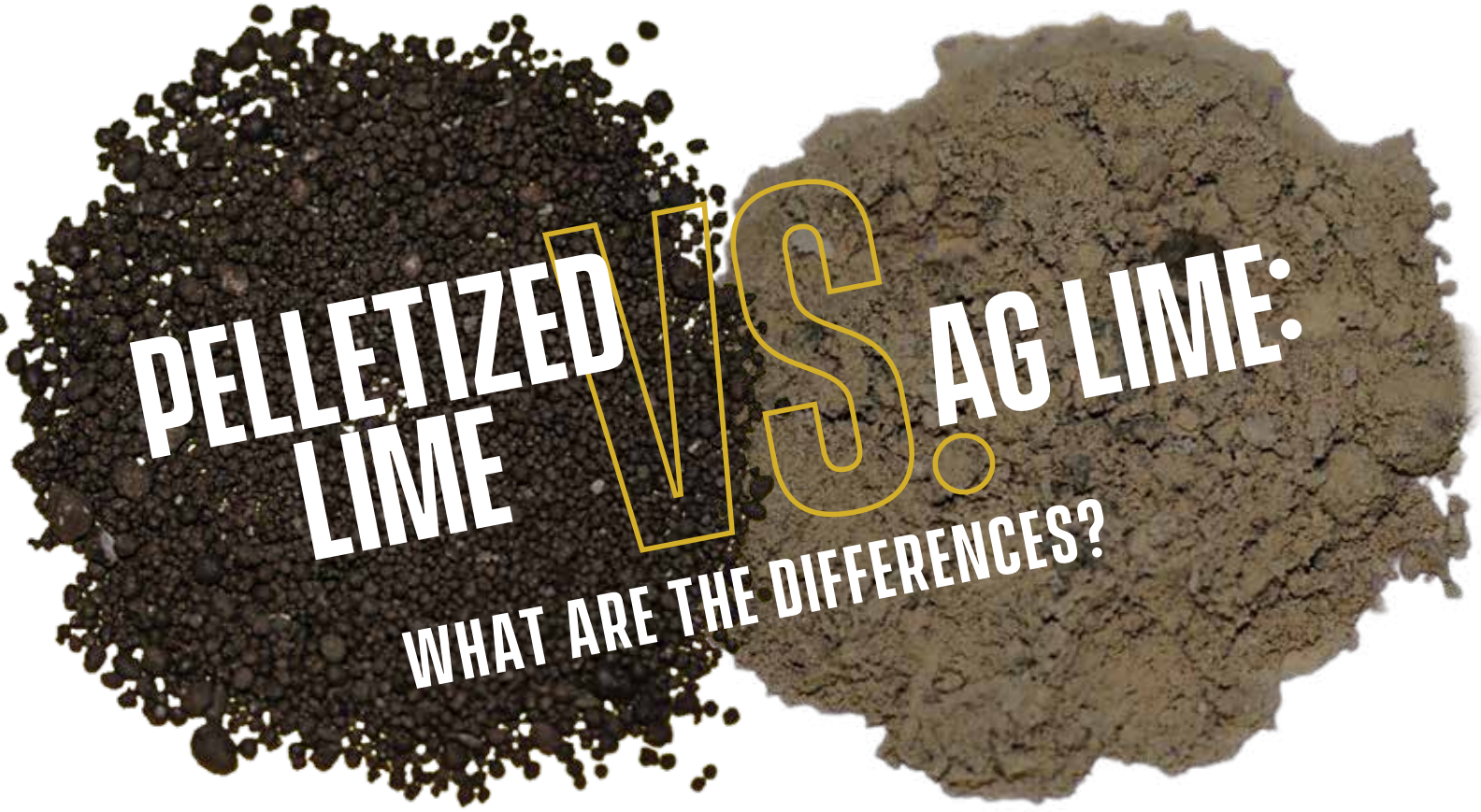
Modern foliar fertilizers have a specialized niche in commercial agriculture, and there are many examples. Urea is a nitrogen fertilizer that can be sprayed in dilute concentrations to provide supplemental nitrogen to certain crops. This is informally called spoon feeding nitrogen. When I started my research career in the mid-1980s, Georgia cotton growers used a program by which they spoon-fed nitrogen to cotton using foliar sprays of urea. Frequency and timing of urea sprays were based on leaf tissue samples that were analyzed by the state's soil testing laboratory using an expedited process. In recent years, one of my daughters was part of a research team in Alabama that evaluated foliar sprays of potassium to cotton. In both cases, these foliar sprays were not haphazard. They were part of a comprehensive nutrient program for well-managed cotton and required a high level of managerial focus to be cost-effective.

Micronutrient (manganese, boron, iron, zinc) deficiencies can be quickly corrected with a foliar fertilizer spray, and these foliar sprays are quite common in commercial agriculture. This is an established practice since those micronutrients are, by definition, needed by plants in small amounts, and therapeutic treatments are well within the ability of foliar sprays to provide. For example, in peanut production, boron is a micronutrient that directly affects quality of the kernels. Nationwide, it's a standard production practice for peanut farmers to spray boron fertilizer in early June. Another example is the use of sprays of calcium fertilizer to prevent blossom end rot of tomatoes. Blossom end rot is a symptom of a calcium deficiency in the developing tomato fruit. Technically, calcium is not a micronutrient, but foliar sprays of calcium directed onto developing tomato fruits is the standard practice to prevent blossom end rot.

USING FOLIAR FERTILIZERS IN FOOD PLOTS

Foliar fertilizers are a useful tool, but one that needs to be used correctly with a full understanding of the limitations. As explained, foliar fertilizers are not a stand-alone tool to provide complete plant nutrition in food plots with one application. They offer limited utility to correct in-season soil fertility deficiencies that can be caused by excessive rainfall that leached soil-applied granular fertilizers, or from dry weather that limited uptake of nutrients from the soil through roots. In those cases, foliar fertilizers can help with the overall appearance of the food plot and stimulate the production of fresh forage growth. Technically, multiple foliar fertilizer applications can be used to provide complete plant nutrition in a food plot. However, this strategy will be more costly and time-consuming compared to a program built around granular fertilizer. Finally, just as with any aspect of soil fertility management, foliar fertilizer use needs to be based on a soil test and analysis by a soil testing laboratory.

by *Joyce Allison Tredaway, Ph.D.* – *Agronomist and Weed Scientist*



PELLETIZED LIME VS. AG LIME: WHAT ARE THE DIFFERENCES?

Both of these products can boost soil pH and improve food plot productivity. Several factors might determine which is best for your land.

As mentioned in the companion article Dr. Carroll Johnson wrote in this issue, managing soil pH is fundamental in establishing productive food plots. Acidic soils limit nutrient uptake, reduce microbial activity and weaken plant vigor through aluminum toxicity. Soil acidity is corrected primarily by limestone, based on results of a soil test.

Soil amendments that correct soil acidity are grouped into four chemical categories; carbonates, oxides, hydroxides and silicates. These chemical categories are responsible for chemically neutralizing soil acidity. A lingering mistaken notion holds that calcium and magnesium are responsible for neutralizing soil acidity. Despite being present in carbonates and other materials used to correct soil acidity, calcium, magnesium and other cations (positively charged ions) do not directly affect soil acidity. Carbonates, oxides, hydroxides and silicates are the compounds that chemically react to neutralize soil acidity. Of those, carbonates are the most commonly used in agriculture and are the topic of this article.

THE CHEMICAL REACTION

Limestone neutralizes soil acidity by releasing basic compounds (such as carbonate) that react with and chemically neutralize the acidic hydrogen (H+) in the soil, converting them into water (H2O) and carbon dioxide (CO2) while replacing them on soil particles, thus raising the soil's pH. It acts like a sponge, soaking up excess acid and making nutrients more available to plants.

Limestone can be calcium carbonate (calcitic limestone), magnesium carbonate (dolomitic limestone) or a blend of both. As mentioned, the carbonate portion of limestone is what chemically treats soil acidity. Whether the limestone purchased is calcitic or dolomitic depends on the geological nature of the quarry. Both are acceptable sources of carbonate to treat soil acidity.

PELLETIZED LIMESTONE VERSUS AG LIME

Limestone can be purchased in two forms: pelleted limestone, which is usually sold in bags at common retail outlets, and ag lime, sold in bulk at agricultural suppliers.

Although the products serve the same fundamental purpose to neutralize soil acidity, the physical form, degree of refinement, application methods, speed of action and cost differ significantly. Both will work in food plots and have a useful role in food plot management. Understanding the differences can help you make the right decisions on how to use one or both in your food plot.

Pelletized limestone is formulated as small, compact pellets made from finely ground limestone. This pelletized form makes it easy to spread using commonly available rotary fertilizer spreaders, offering convenience for small equipment applications or in isolated areas. In contrast, ag lime is simply crushed limestone of varying particle sizes, which is bulkier and requires specialized equipment for spreading. This makes ag lime more suitable for large-scale food plots where heavy machinery or custom application is available.

Because pelleted limestone consists of finely ground limestone particles, an important advantage of the product is its rapid dissolution and chemical availability. Because the pellets dissolve quickly in the presence of moisture, they adjust soil pH faster than ag lime. This makes pelletized lime ideal for situations where immediate pH correction is needed. However, in this case, quick acting also means short-term benefit. Ag lime, with variable limestone particles of fine and coarse sizes, reacts slower than pelleted limestone, but its effects are sustained for a longer period because of the coarse particles. In commercial agricultural regions where ag lime is used exclusively, well-managed fields need liming only every three years because of the extended benefit.

■ This shows agricultural limestone in piles and close up, displaying crushed limestone of variable particle sizes.

RATE COMPARISON

Pelletized lime is typically applied at lower rates per application, making it a good choice for spot treatments or minor pH adjustments. Ag lime requires higher application rates to achieve full soil correction, which is why it's used for comprehensive soil acidity management across larger fields. It's worth noting that soil test reports recommend limestone based on an assumed use of ag lime. To convert ag lime recommendations to pelleted limestone rates, multiply ag lime recommendations by 0.80.

COST CONSIDERATIONS

Cost is another major factor in choosing between these products. Pelletized lime is more expensive to use, at about $300 per ton, because of its processing and convenience. However, for smaller inaccessible areas or quick fixes, the added cost might be justified. Ag lime, being less processed, is significantly cheaper, at $80 to $100 per ton, making it the economical choice for large-scale applications where cost efficiency is critical. The costs presented are for comparison only. Costs vary by location and demand, and proximity to a limestone quarry strongly affects the cost of limestone. The frequency of application is a major cost consideration. Pelleted limestone usually requires yearly applications because of the short-term benefit. In contrast, you might only need to apply ag lime every three years or so.

APPLICATION STRATEGIES FOR FOOD PLOTS

The standard recommendation is to apply ag lime several months before planting to allow time for pH adjustment. Mixing ag lime with the soil using a disk harrow accelerates the chemical reaction. Pelletized lime is ideal for small, remote plots where equipment access is limited. Another situation in which pelleted limestone is beneficial is where a food plot site becomes available on short notice and a quick reacting product is needed to plant a plot with a short deadline.

SUMMARY

A carbonate material, whether ag lime or pelleted limestone, is the tool of choice to treat acidic soils. Use the report from a soil testing laboratory as a guide as to whether the soil is acidic and how much limestone is needed. Remember, limestone does not cost. Rather, it pays by improving food plot productivity.

SIDEBAR: HOW DOES IT WORK?

This formula illustrates how adding limestone (calcium carbonate, in this example) increases the soil pH.

Ag lime (CaCO3 or MgCO3) + Soil acidity (H+) → Calcium (Ca2+) + Water (H2O) + Carbon dioxide (CO2).

The reaction removes acidity (H+) and replaces it with basic calcium, raising the soil's pH and improving nutrient availability for plants.

The effects of soil acidity are insidious, but that does not lessen their overall impact. Managing soil acidity must be a high priority.

by *W. Carroll Johnson III, Ph.D.*
– *Agronomist and Weed Scientist*

I have been a technical specialist for Whitetail Institute for 27 years, initially as a consultant and now as an employee. From Day 1, soil acidity has been a common problem that limited food plot success. But first, why is a weed scientist talking about managing soil acidity? I was trained to be an agronomist first and a weed scientist second. Real-world experiences in my previous research career conditioned me to think that way. If a food plot has poor growth because of acidic soil, weeds are often the secondary consequence, and there is no denying the correlation.

WHAT IS SOIL ACIDITY?

The chemical definition of soil acidity is the quantity of hydrogen ions in the soil. The universal indicator of acidity is pH, which ranges from 0 (strongly acid) to 14 (strongly basic). The pH value is essentially an index that is mathematically a negative logarithm (an exponent, a power of 10). This means that a soil with pH 5.0 is 100 times more acidic than soil with a pH of 7.0. Soil acidity is a common issue for anybody that has food plots. I help our wildlife biologist Jody Holdbrooks with his clients for Next Level Consulting, a division of Whitetail Institute he oversees. More times than not, the soil testing reports I review have an acidic soil that needs to be neutralized to improve forage growth. An acidic soil equals poor food plot productivity regardless of the crop planting intentions. In my book, that makes correcting soil acidity fundamental for food plot success.

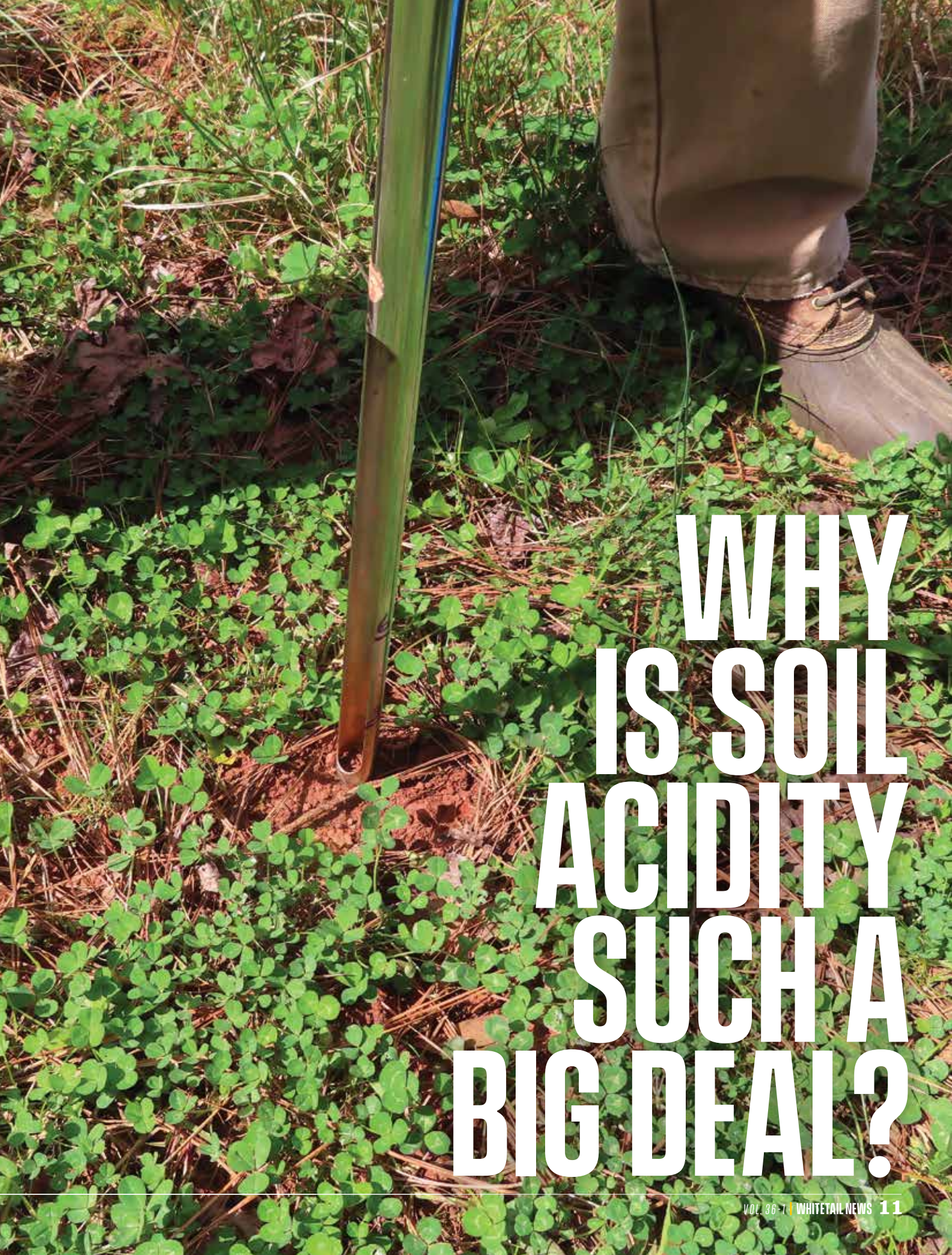
Acidic soils are the result of soil mineral structure, a humid environment and land-use patterns. In a natural setting, soils in the humid eastern and central United States tend to be acidic and constantly drift towards an acidic state. Soil disturbance (that is, tillage) removes much of the soil's limited buffering capacity, which results in rapid changes in soil pH. Although acidic soils might quickly respond to liming to neutralize acidity, those soils quickly revert back to an acidic state. Therefore, managed agricultural fields are typically limed every two to three years to maintain a desirable pH, and that needs to be factored into management plans for farms and food plots.

EFFECTS OF SOIL ACIDITY ON CROP GROWTH

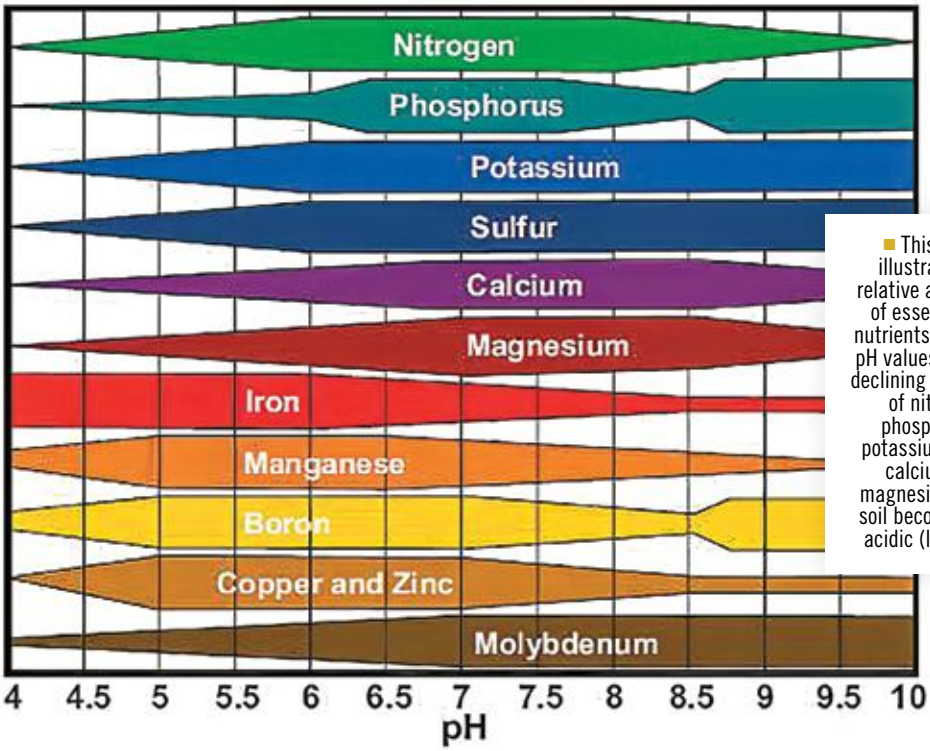
The effect of soil acidity on crop yield is old news, with most of the discovery research conducted in the mid-1900s. Refer to the table of forage crop yield data from various experiments. In one case, alfalfa yield was reduced by 97 percent from a soil pH of 4.9. That single cherry-picked piece of data clearly illustrates the effects of soil acidity on forage crop yield.

Specific nutrients are essential for plant growth, and chemical availability varies according to soil pH. The graph illustrates this phenomenon. Essential elements for plant growth are nitrogen, phosphorous, potassium, sulfur, calcium and magnesium. Notice how little of these essential plant elements are available to plants in acidic soils with pH 5.0. It is chemically impossible for plants to adequately use those nutrients in acidic soils. I call this acid induced nutrient starvation. The opposite occurs in acidic soils with aluminum. Aluminum is a common mineral in soil structure, and acidic soils increase aluminum availability such that the element becomes present at toxic levels for plants. So we have a situation in which forage crops are simultaneously starved for essential elements and poisoned by aluminum toxicity because of acidic soils.

In one of my soil fertility classes in graduate school, somebody asked which factor of soil acidity causes more crop loss — nutrient starvation or aluminum toxicity? The professor did not blink an eye: poisoning from aluminum toxicity. Some managers of food plots mistakenly believe that the overall effects of acidic soils can be compensated by applying extra fertilizer. That strategy will not work because the poisoning effects of aluminum toxicity are ignored.



WHY IS SOIL ACIDITY SUCH A BIG DEAL?



This graph illustrates the relative availability of essential soil nutrients at varying pH values. Note the declining availability of nitrogen, phosphorous, potassium, sulfur, calcium and magnesium as the soil becomes more acidic (lower pH).

Roots of legume crops such as clover, alfalfa and soybean have a symbiotic relationship with Rhizobium bacteria in the soil. This allows legume plants to capture atmospheric nitrogen from the air spaces in the soil and convert the nitrogen into a form suitable for plant growth. This is called nitrogen fixation, and it's one of the miracles of nature. Acidic soils inhibit the ability of the Rhizobium bacteria to function in that role, which, in turn, leads to reduced legume crop growth from inadequate nitrogen.

Whether losses from soil acidity are caused by aluminum toxicity, nutrient starvation or inhibition of nitrogen fixation on legume roots, the result is stunted crop growth and reduced overall food plot productivity. Often, the forage crops are not outright killed by the acidic soil, but there is simply no vitality of the crops growing in the food plot. You could say that soil acidity effects are insidious — sneaky and gradual. But that does not lessen the overall impact. Managing soil acidity must be a high priority.

THE MONUMENTAL CHALLENGE OF TREATING ACIDIC SOILS

It should be crystal clear that managing soil acidity is fundamental to successful food plots. Yet neutralizing acidic soils remains a monumental obstacle. Why? I be-

SUMMARY OF RESEARCH DATA SHOWING EFFECTS OF SOIL ACIDITY AND LIMING ON FORAGE CROP YIELD

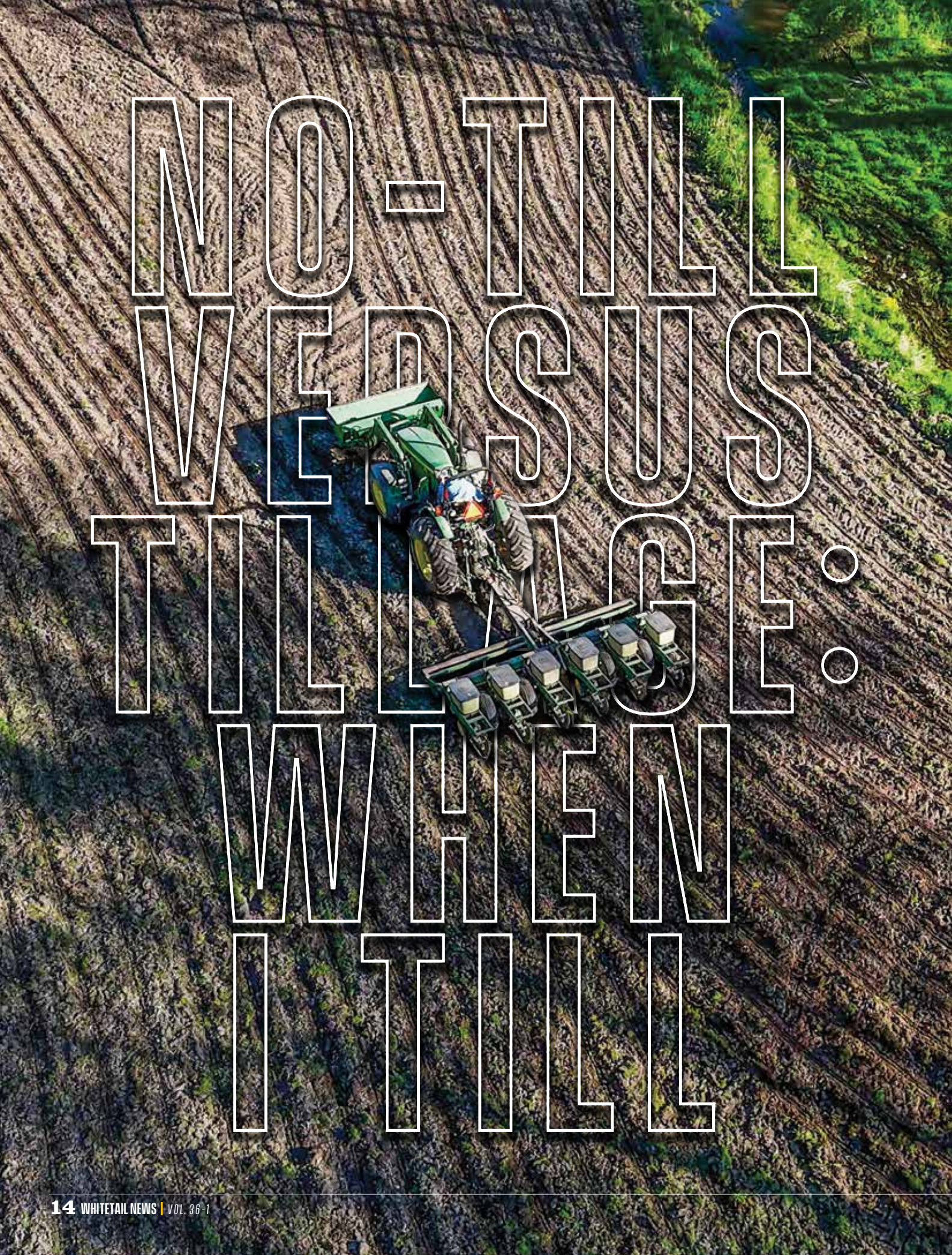
STATE	FORAGE CROP	PH OF NON-LIMED SOIL	FORAGE YIELD (LBS./A)		INCREASE BECAUSE OF LIMING
			NON-LIMED SOIL	LIMED SOIL	
Alabama	alfalfa	5.1	402	6,598	1541%
Georgia	alfalfa	5.5	598	6,134	926%
Virginia	alfalfa	4.9	179	5,214	2813%
Rhode Island	alfalfa	5.2	2,000	3,643	82%
Florida	white clover	4.3	3,321	11,893	258%
Mississippi	white clover	5.2	2,357	3,384	44%
Alabama	crimson clover	5.1	1,098	1,696	54%
Georgia	crimson clover	4.9	2,286	2,839	24%

This summarized data was published in the American Society of Agronomy monograph titled "Soil Acidity and Liming," which compiled the information from several articles originally published in scientific journals.

lieve the answer is the sheer volume (tons per acre) of limestone needed to neutralize soil acidity. Additionally, not all hunting properties are located near commercial agricultural suppliers, making availability of liming materials a limiting factor.

A personal observation makes this point. I'm a member of a long-standing (100 years in 2025) University of Georgia College of Agriculture faculty/staff hunting club that hunts three days a year at a dairy in northeastern Georgia. The dairy produces its own bermudagrass hay and has fescue-clover pastures for grazing. Several years ago, I was lounging around camp midday when a gravel truck appeared and dumped an enormous pile of calcitic limestone. One of the dairymen came by and told me he hired a local truck driver to bring a load of calcitic limestone from a quarry nearly 75 miles away on a "deadhead" run back home. That quarry was the closest source of bulk limestone, because that region of Georgia has only a small remnant of commercial agriculture. Then it dawned on me: Neighboring food plotters had the same problem — no local supply of bulk limestone. The dairymen were creative, and food plotters need to be equally creative.

This article was written about soil acidity and why managing soil acidity is a crucial part of food plot management. I skipped the various liming materials and explanations of how they work chemically. On Page 8 in this issue of *Whitetail News*, Dr. Joyce Tredaway has a companion article on limestone and other materials to neutralize acidic soils. I encourage you to continue your self-education on managing soil acidity by reading her article.



NO-TILL VERSUS TILLAGE: WHEN I TILL

Both methods have a place in a well-constructed food plot program. Knowing the benefits of each can help you make the best choice.

Text and Photos by Bill Winke

I grew up on a small 80-acre dairy farm in rural northeastern Iowa. I don't know if there was a bottom to the topsoil in that area. It might have been 6 feet deep for all I know. We never saw anything but black dirt when farming that place. I didn't know there was even clay in the Iowa ground until I moved to the southern part of the state many years later. So nobody in the part of the state where I grew up worried about creating or building topsoil. Everybody tilled the soil before planting — no matter what they were planting.

Because of my boyhood experience, I came into no-till farming late in the game. It wasn't until 1995, when I started planting food plots on the southern Iowa farms that I eventually owned, that I began to engage in no-till planting. My background led me to think that tillage was the only way to make seed grow. So, I was naturally inclined toward that method. But when I started using no-till practices, I found several advantages to that planting method. I will get to those later.

First, I want to talk about when I till and why. Even with a lot more experience with many farming and planting practices, I still till anything that requires nitrogen fertilizer, and I till some of my clover and brassica plots. If I'm planting corn or sorghum, for example, I still like to incorporate nitrogen (and other nutrients, such as phosphorus, potassium, sometimes sulfur and pelletized lime) into the ground before I plant. My plots are too small to knife in the required nitrogen in the form of anhydrous ammonia, so I'm always spreading dry nitrogen. Unfortunately, nitrogen wants to be a gas, so it is, by nature, unstable.

Even when the dry pellets are sprayed with a stabilizing agent before you spread them, volatilization can still be a problem. If dry nitrogen sits on top of the ground for too long on hot days, it's going to start to evaporate. Some of it will go up into the atmosphere, and you will lose that part. You need nitrogen in the ground where it can attach to the soil, either via rain taking it in or by incorporating it through tillage. Given that reality, I like to spread any fertilizer containing nitrogen and disk it in as soon as possible. So with corn and sorghum, I till before I plant.

I have produced OK stands of corn and sorghum using 100 percent no-till methods, but the result is generally not as predictable — especially if I hit a dry spell after spreading the fertilizer. Plus, the tilled soil warms up much faster than areas without tillage, encouraging quicker germination and growth from the small plants. These are reasons why I like to till my corn and sorghum into the ground.

TILLAGE TRADEOFFS WHEN PLANTING CLOVER

I've had very good success through the years when planting clover into tilled ground by broadcasting the seed on top of the seedbed and then cultipacking it in (ideally), lightly dragging it in or just letting rain beat it in.

I don't generally disk the ground when preparing a clover plot because the final seed bed is usually too rough. The ideal setup when you're planting clover is to spray the weeds and existing grass with glyphosate and then wait a couple of weeks for everything to die. Then spread your fertilizer and lime, if needed, and use a small tiller to work the top three inches of soil into a smooth seedbed. Usually, this is best performed with a small power-takeoff-mounted three-point hitch tiller for your tractor. Or if the plot is small enough, you can even use a garden tiller.

This method works best for a couple of reasons. In addition to creating a porous seed bed that quickly and fully accepts the small clover seeds into a shallow setting, you also gain the advantage of incorporating the fertilizer and lime, making these nutrients more readily available to the growing plants.

The seed will easily mix with the top quarter-inch of soil to create the much-needed shallow seed-to-soil contact that helps clover germinate and grow well. And because the ground is loose from the tillage, the clover seed can put down a full root system and start to thrive with the first rain. That is the perfect world for clover germination and peak early plant growth.

I've had some success no-tilling clover into ground using a drill where the weed and grass competition has been killed by first spraying the area with herbicides. The upside is that you can often drill the seed in before the soil is dry enough to till, possibly gaining you some planting advantage in spring. And no-till planting is especially good at preserving sub-soil moisture that would be lost when tilling.

It's very common in spring to have extended periods of moisture followed directly by extended periods of dry conditions. If you wait until the ground is dry enough to till up nicely, you might miss the perfect planting window and find yourself with a nice crop of clover that starts to grow just as the dreaded late-spring dry spell shuts everything down.

The result is often a stand of clover that simply dies for lack of a developed root system combined with low moisture. Timing obviously makes a difference in the success of a clover stand, so don't get caught tilling toward the end of the normal spring rain cycle. It's much better to use no-till methods and get the seeds into the ground, taking advantage of existing moisture and getting the crop growing well before you hit a dry spell.

■ The author still tills anything that requires nitrogen fertilizer, and he tills some clover and brassica plots.

If you have sufficiently dry conditions early in spring, or if you're planting your clover in late summer, tillage is for sure the ideal method to establish a great stand.

You might be tempted to frost-seed (or simply broadcast) clover to create a new plot. I have done this many times, creating what I call "poor man's plots." This can be a good option when you do it at the correct time and during the right conditions. I have established dozens of really good clover plots through the years by simply broadcasting clover seed onto areas of bare dirt in late winter or early spring. You don't really need frost to make the seeds grow, but frost tends to naturally work the seed into a shallow bed in the topsoil, where it stays put until the conditions are right for germination.

Normal spring rainfall will also get clover seeds embedded in the topsoil as long as the precipitation amount isn't heavy enough to float the seed off the plot or carry it and then deposit it haphazardly. Given a choice, it's always better to put the seed into the ground at the right depth and right distribution than to hope nature does that part correctly.

TILLAGE TRADEOFFS WHEN PLANTING BRASSICAS

Normally, I plant my brassicas (I have had very good success with the Winter-Greens blend) in one of two ways. My small-plot rotation revolves around clover and brassicas. I might start the new plot with either of the two options. When the plot is in clover, I maintain it as well as possible until it starts to thin out (usually about three to four years after planting), and then I will spray it in mid-July, wait a couple of weeks, fertilize and then till it under. I then broadcast the Winter-Greens (or another of Whitetail Institute's good brassica blends) into the tilled plot.

This strategy has two benefits. First, tillage produces the great seedbed that the small brassica seeds can fit into perfectly, and it incorporates the fertilizer and clover residue. The clover will generally contribute about half of the nitrogen requirement for the brassicas that you're planting.

The second method I use for adding brassicas to the farm requires no-till equipment. Surprisingly, I've done well by no-tilling Winter-Greens directly into my PowerPlant food plots in the areas where they have thinned out because of browse pressure from deer or dry summer conditions.

I use a PH Outdoors no-till drill with 7-½-inch rows and have been surprised by how well that planting setup works to maximize food plot tonnage going into deer season. I can drill right into a thin stand of soybeans or blends such as PowerPlant and Summer Slam with that setup and quickly see Winter-Greens filling in all the open areas.

That's where no-till really shines. Planting mid- to late summer when maintaining soil moisture can sometimes be the biggest challenge to success. No-till benefits from the soil moisture that's already there. You don't have to dry things out with tillage. When you till the ground, everything dries out, and then you have to get rain to get germination. Again, if you

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no-till, you're putting the seed into (hopefully) some subsoil moisture. So right away, you get the start of germination and growth. Because Winter-Greens germinates quickly, you get a really nice stand even without a lot of rain at planting time. If you till in those conditions, the seed often hasn't even germinated by the time the no-till plot is several inches tall. That's another great mark for no-till planting.

WHEN NO-TILL IS BETTER

In my experience, tillage is a disadvantage when planting soybeans or other seed blends with larger seeds, such as peas. I know many farmers continue to lightly till their bean fields before planting to break up the corn stalks from the previous year's crop. That works because they use planters instead of drills. This allows them to control seed depth better with more predictable results.

When I'm drilling beans (again, using a drill and not a planter), or seed blends such as PowerPlant, I like a firm seed bed. I don't want my seed to go in too deep or to easily cover with additional soil when the seed row washes in later. Generally, my seed ends up too deep when using a no-till drill on soft tilled soil. Then, when the rain comes, you end up with seed rows that wash in and a crust on top of the ground the seed must fight up through.

Sometimes, the young plant is successful, but if hot sun follows on the heels of a nice rain, the crust might be as much as a half-inch thick or more, and very hard. So, if I till and then drill into the tilled ground, I'm sometimes forced to go back and break up the crust by lightly planting the same plot again.

Corn is different. Corn seeds push up a little spike when the new plant is breaking up through the hard ground. It does just fine during these conditions. But with beans and peas, the root is trying to push the whole soybean or pea up through the ground. Both cotyledons are coming up at the same time. The growing point of those young plants is above ground. If the ground is crusted, you're going to lose a sizable amount of your stand unless you go back over it and break the crust. So tillage only works with beans and peas if you have a planter designed for that soil structure.

The best success I've had with beans and peas is sticking with straight no-till. I don't have any problems with topsoil crust. The seed gets in at the optimum shallow depth, and with a little rain, it takes right off.

CONCLUSION

Tillage works great for most clover plantings, for starting brassica plots from scratch (not drilling them into existing stands) and for incorporating nitrogen into plots that need it. No-till works great when planting most blends — specifically those with beans and peas. It also gains great value when drilling brassicas into struggling plots in midsummer to increase tonnage in those plots. In conclusion, I believe there is a place for tillage and no-till methods in a well-constructed food plot strategy.

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by Gordy Krahn

A SLICE OF HEAVEN ON EARTH

By pairing long-term vision with expert consulting and year-round work, these Tennessee landowners prove that thoughtful management is the key to unlocking a property's true potential.

The name says it all — God's Place. It's the moniker Jeff Zierenberg and his wife, Nancy, gave the 132-acre slice of heaven on earth in southeastern Tennessee where they put down deep hunting roots, and for good reason. Although the region isn't traditionally viewed as a giant-buck factory, such as Iowa, Illinois or Ohio, it consistently produces big, mature whitetails. Heavy-bodied bucks in the 130- to 150-inch class are common, with the occasional deer pushing beyond that mark when age, genetics and nutrition align. The property offers a classic Appalachian mix of mountain hardwoods and pine, rolling ridges, creek bottoms and agricultural edges that support strong deer numbers and an increasing population of mature bucks. Public land hunting pressure can be moderate to heavy, but private ground managed with timber thinning, food plots and selective harvest can produce and hold exceptional deer. Land managers who focus on age structure, habitat improvement and disciplined harvest regularly see impressive deer that rival those from more notable locations.

The Zierenbergs understand that land ownership and stewardship carry the responsibility of caring for the habitat and the wildlife it supports — an obligation that goes far beyond simply improving hunting opportunities.

"We have two adult sons, Thomas and William," Jeff said, "and all of us enjoy hunting and fishing. After many professional relocations, we've lived in this area for nearly 18 years. Before purchasing the property, I leased this land and adjoining acreage for hunting, and we knew the whitetail and turkey potential was exceptional based on our experiences. Both of us are fully involved in shaping the vision, planning and hands-on implementation of our land management goals."

At its core, land stewardship is about balance and restraint. It requires disciplined management choices such as selective harvest instead of overuse, habitat improvement over short-term gain, and conservation over convenience. Whether the goal is wildlife habitat, agriculture, recreation or all three, effective stewardship prioritizes sustainability and respect for the land's potential — and limitations. When practiced well, land stewardship leaves the property healthier, more diverse and more productive than it was found — ensuring future generations can experience the same opportunities and abundance. Stewardship-minded landowners think long term, understanding that decisions made today will shape the productivity and resilience of the land for decades to come.

For Jeff, those principles were never abstract. Long before he owned land of his own, stewardship was instilled through experience — learned firsthand in the field, passed down through family and reinforced season after season. His account of his introduction to the outdoors is as old as hunting itself — the passing of tradition from one generation to the next. It began in Missouri, where his father introduced him to hunting and fishing at a young age.

"It was mostly wild quail back in the day and pheasant hunting trips to Iowa," he said. "I started hunting whitetails when I was 16 in Georgia with my father. I harvested my first whitetail with a rifle and my second the following year with a recurve bow. I was forever hooked and have been chasing whitetails ever since, in every state I've lived in. My best bucks were taken with a bow in Ohio."

When Jeff retired on Dec. 31, 2025, he finally had the time and resources to take his passion for land management and hunting to the next level. No longer limited to evenings and weekends, he now looks forward to working the property with far more freedom and flexibility. But Jeff also realized that for his and Nancy's vision for the land to reach its potential, they would need expert help.

"Nancy and I wanted to manage our property to maximize its full potential — to improve the health of the whitetail herd and turkey population, while focusing on the selective harvest of mature animals and birds," Jeff said. "There is so much information out there. We started by working with a forestry professional to outline our initial land-management goals and develop our Greenbelt Program plan for the state of Tennessee. As I researched food plots and product options, I kept coming back to the Whitetail Institute website, where I learned about its Next Level Consulting program. It described exactly the resources we needed for our property — a true one-stop shop. So, I made the phone call."

Whitetail Institute's Next Level Consulting is a valuable resource for land managers and hunters who are serious about turning their property into a whitetail haven while also benefiting other game and nongame wildlife species. It's much more than just planting a few food plots and hoping for the best. The NLC team of biologists, agronomists and wildlife experts evaluates each property through soil testing, habitat assessments and deer movement analysis, and then delivers a comprehensive blueprint to maximize its performance.

Next Level Consulting doesn't just advise landowners on what to plant. It provides guidance on where to plant, when to plant and how to feed the soil so it produces food the deer want with

the nutrition they need. Timber stand improvements, natural browse, bedding cover and even hunting strategies — Next Level Consulting covers it all. And the team stays involved, checking progress and adjusting the plan so it continues to work year after year. This program isn't fluff. It's grounded in science, experience and measurable results. Whether the goal is bigger bucks, longer deer residency or smarter land management, Next Level Consulting moves landowners from guessing to knowing with practical, field-tested solutions.

We recently caught up with Jeff and picked his brain about his land management goals and his experience working with Jody Holdbrooks and the team at Whitetail Institute Next Level Consulting. Here's what he had to say.

■ Next Level Consulting has helped the Zierenbergs manage their Tennessee property to improve habitat and wildlife.

JEFF'S EXPERIENCE

Whitetail Institute: Can you tell us about the land you manage and hunt?

Zierenberg: "The property is in southeastern Tennessee, in Meigs County. We purchased it in December 2021 and immediately began a structured planning process. We named our property God's Place. The tract encompasses 132 acres, primarily pine, with significant elevation changes throughout. Approximately 8 acres are hardwoods, and the property contains eight food plots ranging in size from 0.25 to 2.5 acres, supported by an internal road system that allows multiple access routes based on wind direction to ladder stands and elevated enclosed blinds. We also added a .75-acre pond that is currently filling, and the deer are consistently watering there. Twelve trail cameras operate year-round to monitor deer and turkey movement. A unique feature of the property is the designation of two 1-acre Christmas tree plots, with the first planting scheduled for October of this year."

WI: Talk about some of your management practices for this property.

Zierenberg: "Our first action was initiating a logging plan with our forestry professional. In 2023, we logged approximately 9,200 tons of pine, selecting areas for thinning to a 25 basal result [the area remaining or removed after a harvest], while intentionally leaving certain sections untouched to serve as sanctuary bedding and travel corridors. During this time, our food plots were clear-cut, and all the stumps were cleared and burned. The first food plot seeding of clover occurred in Spring 2024 after consulting with Jody Holdbrooks of Whitetail Institute's Next Level Consulting. Soil sampling was the initial step, and while we expected acidic conditions, the extent of remediation required was eye-opening. That fall, we applied roughly 60 tons of agricultural lime across the plots, knowing early plantings would be challenging. Although Whitetail Institute products performed well, soil limitations prevented them from reaching their full potential. The soil analysis documentation and ongoing support from Jody and the Whitetail Institute team were exceptional and continued into 2025 with additional sampling and analysis. As pH levels improved — varying by plot — we applied another 50 tons of lime going into September prior to planting. The Whitetail Institute products performed better as the soil improved, and the deer certainly liked the results. Two of our biggest plots are planted in Whitetail Institute clover. One additional action we took was to plant a mix of 75 hybrid chestnut trees, and pear and apple trees, in multiple food plots across the property. We also have multiple mineral sites using Whitetail Imperial 30-06 mineral/vitamin supplement. One practice Jody consistently emphasized was prescribed fire, recommending rotational burns on a three- to four-year cycle. Our first prescribed burn covered approximately 30 acres in October 2025 in partnership with the Tennessee Forestry Division. As a novice to burning, watching fire move through the pines was admittedly nerve-racking, but deer movement returned within a week. I'm eager to see the results this spring, with the next burn planned for early season conditions."

WI: What role do food plots play in your property management? Talk about some of the Whitetail Institute products you use.

Zierenberg: "Our food plot planning is the key driver in attracting and holding deer and turkeys on our property, not just throughout the [hunting] season, but also to provide critical nutrition during winter and to provide nutrition for fawn production and antler development for the deer. I can't say enough about the performance and success we've had using Whitetail Institute products. In '24, we were only able to plant five plots in the fall due to land-prep timing. In '25, for various reasons, we were unable to do any spring planting, yet the clover plots remained extremely healthy. The Whitetail Institute products we used in '25 included Imperial Clover, Beets & Greens, Chic Magnet, Tall Tine Tubers, Destination, No-Plow, Pure At-

The Zierenbergs emphasize prescribed fire, conducting rotational burns on a three- to four-year cycle.

traction, Ravish Radish and Fusion. I'm looking forward to planting this spring, with Power Plant and Summer Slam playing key roles. In the fall, I always add oats as a cover crop to ease grazing pressure on new plantings. I also mix and blend plantings to increase dietary variation, planting multiple products in different plots to diversify offerings across the property. This strategy has proven effective based on trail camera photos and observed deer movement while hunting. After the season, deer completely consumed every turnip and plant in a 2-acre field during the winter. In one early evening trail camera photo, I counted 32 deer across those two acres."

WI: Explain how the Next Level Consulting Program has worked for you.

Zierenberg: "I cannot say enough about Jody Holdbrooks. He is incredibly professional, knowledgeable in all aspects of property management, and most important, he makes himself readily available for any questions I have or information I need. After contacting NLC, Jody reached out immediately. We set a meeting date and spent the entire morning walking the property together. He offered thoughtful insights as I asked questions, and it was clear he had my best interests in mind as I shared our vision for the property. Within days, I received a complete report with a thorough analysis and clear recommendations to put into action. Since that initial meeting, Jody has continued to support me with product questions and ideas, always offering valuable feedback. I view Jody as a true partner in both our current and future property management decisions."

WI: What effect has this had on your property, the deer herd and your hunting?

Zierenberg: "Since working with Jody — implementing the necessary soil interventions, carefully selecting and planning plantings and seeing measurable improvements in just two years — it's clear it was the right decision. The deer herd we observe is healthy, and we're seeing certain bucks remain on the property, with improved body weights and rack development. I'm also fortunate to have a neighbor who actively manages his land and harvest, which only strengthens the overall results. It's a rare day when someone sitting in one of our stands doesn't see deer, but yes, it does happen. If you're a food plot enthusiast, save yourself the frustration, angst and expense of failed food plots. NLC is a smart call to make."

WI: What about your future goals for the property?

Zierenberg: "As for our future goals, we will continue to utilize a diversified mix of Whitetail Institute products for all our plantings, continue to maximize prescribed burning rotation and, most importantly, enjoy the fruits and blessings of our property management efforts for generations."

CONCLUSION

For information on Whitetail Institute Next Level Consulting and Whitetail Institute food plot products, visit www.whitetailinstitute.com

DEER CAMP

After 40-plus years in the deer woods, the author realizes that the best hunting memories have little to do with the size of a buck's rack.

by Bart Landsverk, *Whitetail News editor emeritus*

I was 11 years old when Dad finally let me sit next to him in his hand-made deer blind the opening day of Wisconsin's firearms deer season. Gun season was an annual big deal for most young boys in the 1970s and '80s, well before video games, computers, cable television or widespread youth sports. More than 600,000 orange-clad hunters headed to the woods in 1977 in a state with only 4.5 million residents. School districts in northern Wisconsin would close so teenagers could help provide services for hunters who traveled hours from Milwaukee, Green Bay, and, ugh, Chicago, at the bars, restaurants and grocery stores.

The hunting gang I was blessed to be part of had access to 400 acres of oaks, marsh and farm fields. It was a deer paradise. Every hunting stand was discussed by leaders of our gang, making sure that every entry and exit deer route was covered. The Cole Gang, named after our landowner, mentor and quiet leader, Art Cole, sometimes boasted 20 hunters, from adults to 12-year-olds on their first hunt. Each hunter was taught, reminded and reminded again of the rules and responsibilities of handling a 12-gauge shotgun. Our leaders didn't ask us to practice safe hunting. It was firmly demanded.

Opening day was always the Saturday before Thanksgiving, but the hunt really started the weekend before that. Dad and I ventured into our designated area in the hardwoods to scout and build our hunting stand. After locating several deer trails that intersected, our next step was to find a tree that let us build a ground stand that would give us the best chance to harvest a monster buck. This perfect tree wouldn't have a $400 two-man ladder stand thrown against it. Shooting mansions such as Redneck blinds hadn't been invented. Instead, Dad and I grabbed limbs, branches and two stumps to rest our rumps, and from that we built a fort around the tree to break up our human outline.

As a young boy, the annual site selection and stand construction was almost more enjoyable than the impending deer hunt. I loved using my 11-year-old logic to devise a master plan that would outwit the cagiest bruiser buck. After constructing the fortress that would hide my dad and me, we headed back to the cabin, where many of the Cole Gang had already gathered.

I would argue with my cousins of similar age that the stand Dad and I had just built would practically guarantee a wall mounter. And on top of that, the deer trails by our stand were as wide as interstate highways. My cousins countered my ironclad predictions with equally logical claims. While the youths were busy one-upping each other, the adults in the hunting cabin were popping open their second Blatz beer. The discussion about the upcoming deer season got a bit louder as the day wore on, and eventually the clock told our fathers that we'd best get home before our mothers and wives sent out search parties.

The week before deer season was a magical time. I'd watch the weather forecast every night, begging for it to be cold so big deer would get on their feet. I also wanted some snow on the ground so seeing and tracking deer would be easier. Finally, opening day arrived, and the crisp, cold mid-November morning saw an army of hunters tromping to their stands. That invasion caused whitetails to move for the first several hours of daylight. It was routine to see 25 deer the first hours after daybreak.

■ Deer season has always been a magical time for the author, left, and his family. And he's learned that chasing big bucks is never more important than lifelong relationships.

The family deer camp has always been full of smiles, stories and hugs — in other words, friendship.

Shots cracked near and far, keeping me on the edge of my stump, as I scanned the woodlot searching for a tail, an ear, or better, a tine or beam. This was an era long before quality deer management. Deer hunters of that generation liked shooting big bucks, but that wasn't the only measuring stick of a hunter's success. Instead, if you shot a buck of any kind, you smiled from ear to ear as you told your story at the cabin or the neighborhood bar. It's cliché, but it was a much simpler time. And in some respects, as I reflect, it was a more enjoyable time.

When the opening day of hunting was finished, our first stop was to peruse the deer shed, where successful hunters would stand next to their bucks, which hung from ropes tied to the steel shed's rafter. Beer tops would pop one after another until every detail of each hunt was overanalyzed. The largest buck was always the most admired, but no one ever measured it for a Boone and Crockett score. It was never said that a small buck should have been given another year. Instead, the shed was full of smiles, stories, hugs and beer — in other words, friendship.

Later, we'd cram too many hunters into an 800-square foot cabin to eat pickled eggs, continue telling deer stories, and, most important, started playing Sheepshead, a German card game that was as much a part of our deer camp culture as slugs, guns and orange-colored deer hats.

In my late 20s, I was blessed to get a job at Deer & Deer Hunting and Turkey & Turkey Hunting magazines, two juggernauts in the industry. That started me on a journey of working in the hunting industry for the next 30 years. I was fortunate to spend 25 of those years as editor of Whitetail News. The industry I was proud to work in harped that shooting big bucks was the only acceptable outcome of a deer hunt. I know, as I spent those 25 years editing this magazine, which was on the forefront of helping hunters learn how to grow larger racks by growing food plots and letting smaller bucks walk. But now, as I approach my 60th birthday, I realize that some of my best deer camp memories have little to do with the net score of the bucks shot.

Through the years of promoting the shooting of large-rack bucks, I've also witnessed that pursuit ruin relationships. I know of sons who have tossed their fathers out of deer camp because the buck shot didn't measure up to the son's camp rules. I know of cousins who no longer communicate because killing a record-book buck was more important than life-long relationships. I know that young hunters weren't allowed to enjoy shooting smaller bucks because of draconian camp rules. Common-sense deer management turned into a cult of hunters setting unrealistic rules and expectations.

The point is this: Planning, pursuing and eventually killing a monster whitetail is a noble task. But it doesn't trump letting young hunters shoot smaller deer. Chasing big bucks is never more important than lifelong relationships of friends and family. So put down the tape measure and put on a smile the next trip you make to deer camp.

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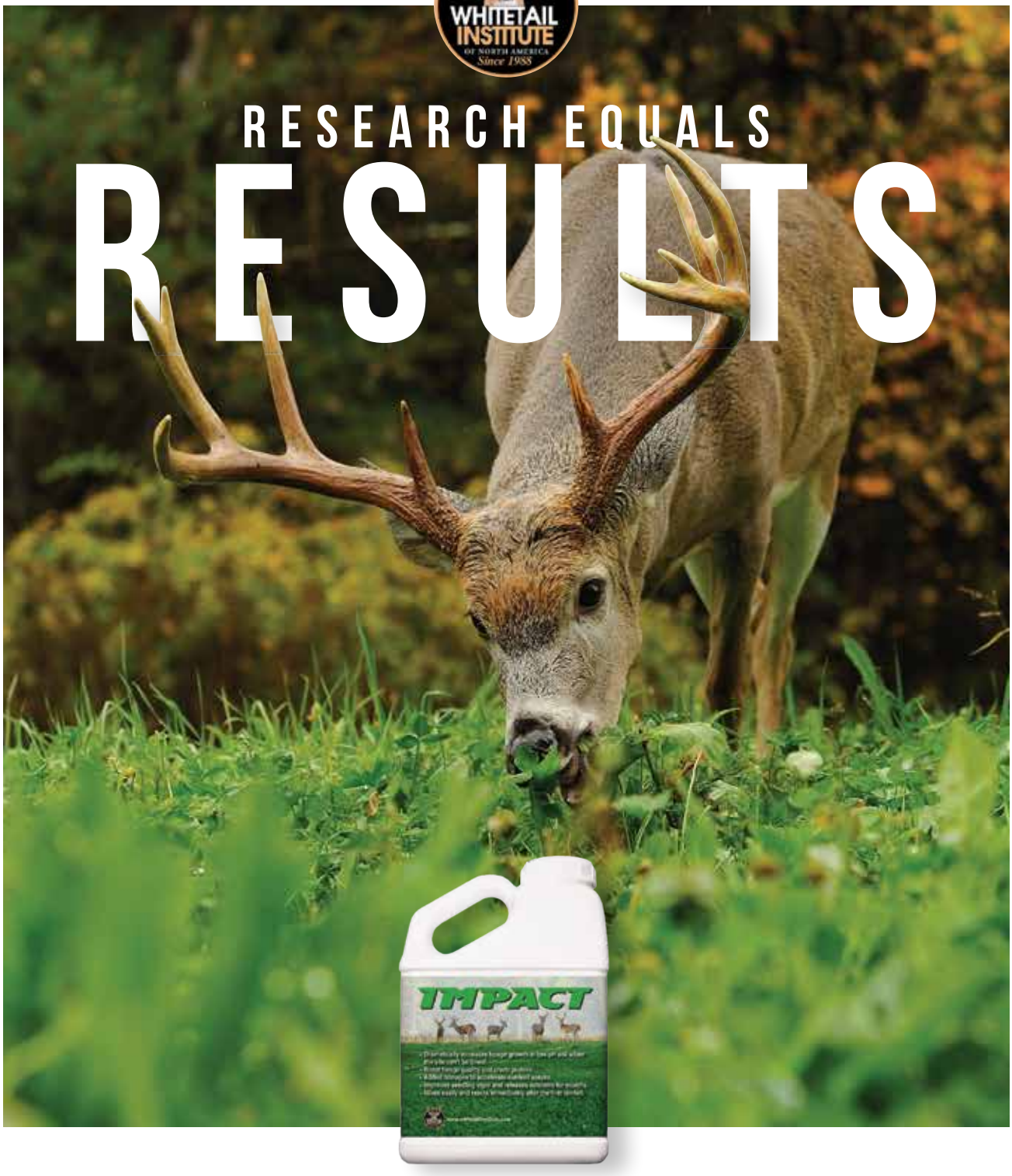

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Several factors can determine whether you're better off buying or leasing hunting property, or knocking on doors and hunting public land.

Text and Photos by Darron McDougal

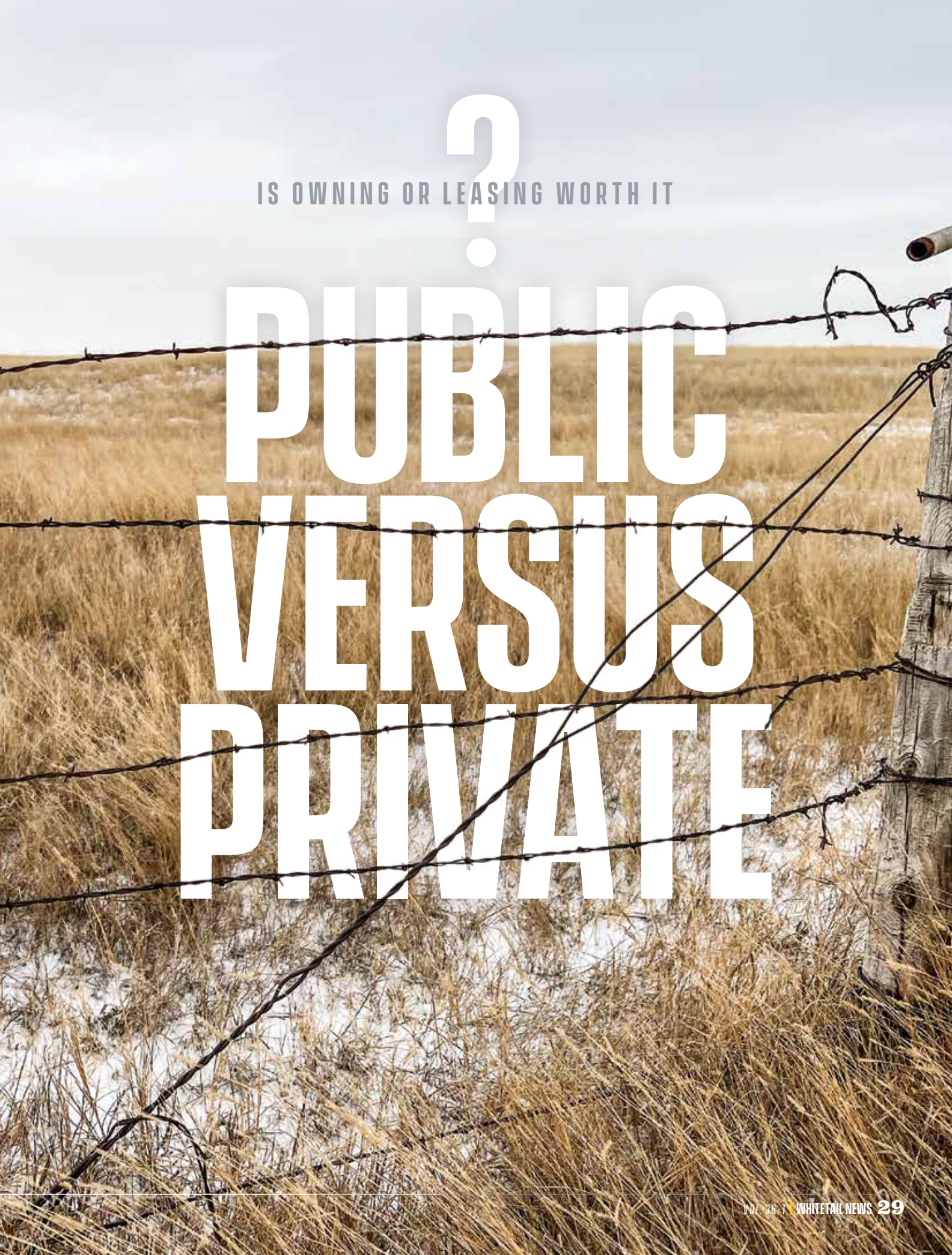
Public-land hunting had always been a negative thing for me. As I transitioned from a teenager to adulthood, all I had to hunt were public lands, and I always believed I'd be so much better off to own or lease property — that the grass was greener across the fence. Then, I'd surely kill more and bigger bucks, I thought.

One balmy November morning on the Great Plains, though, my mind was opened. I had put in a lot of effort, hiking and wading across a deep creek onto a piece of public soil, and I settled in and waited for the morning to come alive.

About an hour after daylight, I noticed a doe about 125 yards out, coming my way. Because it was Nov. 10, I stood and grabbed my bow. Moments later, a buck came out behind her, his body large and tines towering. As he followed the doe through the funnel I had set up, my arrow connected.

The bruiser buck smashed into a dense thicket, and five seconds later, all was silent. Unable to see the buck, I waited some time before slinking to the impact site. I eased into the thorny thicket and was relieved to see a horizontal white line. I knelt beside the outstanding buck, ecstatic that I had outfoxed such an impressive animal on public land. Never before had I felt such immense satisfaction in taking a deer.

I wondered if it would be decades before I'd take another big public-land buck like that one, but in the 12 years since that hunt, I have a pile of awesome public-land bucks under my belt. Let's just say that things began to click, and success became regular. In that time, I've also shot a few private-land bucks and even bought some land of my own.



IS OWNING OR LEASING WORTH IT

PUBLIC VERSUS PRIVATE

If the pros and cons of hunting on public land versus hunting on private land are on your mind, I believe I'm a good blue-collar resource to help you consider the ins and outs of both angles. Here are some criteria.

HUNTING PRESSURE

One of the major differences between hunting public land and hunting private land is pressure. On draw hunts out West, pressure is usually a little more controlled and predictable, but in over-the-counter areas or spots with minimal deer habitat, expect lots of pressure, especially the closer you are to population centers.

Unlike public land, in many cases, private land has minimal pressure — or none. If you're the property owner or lessee, you control the hunting pressure. The exception is permission ground. Some landowners allow more than one hunter on their property, and hunting pressure depends on how many people the owner told, "Yes."

In general, though, private lands see substantially less pressure, which means deer will more likely move better in daylight. They'll usually be more predictable, too

That doesn't make public-land hunting horrible. A good public-land hunter rises to the challenge, circumventing the pressure and sometimes even using it to his advantage. Some tremendous bucks come from very pressured public parcels, meaning you don't need private access to kill big deer.

AGE-CLASS EXPECTATIONS

Some areas of the country are very susceptible to young-buck harvest on private and public lands. In areas with larger private parcels and better management, buck age structure can be very strong on private land, as hunters let lots of young bucks pass.

The average public-land hunter is far less likely to pass up bucks, especially 2-1/2- and 3-1/2- year-olds. That means the buck age class tends to be weaker within public boundaries, especially in states such as Pennsylvania, Michigan and Wisconsin. Of course, hunting public ground adjacent to private ground with strict management opens the possibility of encountering a giant that wanders from private to public.

It's entirely possible to regularly encounter and harvest public-land bucks that are 4-1/2 years old or older, anywhere in the country. About 90 percent of my hunting occurs on public lands, and I've been running a great success rate on bucks in that age class. I work harder than ever to get my opportunities, but every year, I encounter and typically have opportunities to kill quality bucks such as those. It's well within reach for the detailed, driven hunter. Of course, you have to hunt where those bucks exist, but if you do that and become a student of the game, you can kill big bucks on public lands.

ACCESS AND OTHER THINGS

The beauty of public land is that you don't need to pay to hunt (a small number of public parcels require an inexpensive stamp or fee). You can simply arrive at the parcel and go hunting in most cases. There's a lot of freedom in not getting out your wallet or knocking on doors.

Contrastingly, buying hunting land can get expensive. Mortgage interest, insurance, property taxes and upkeep are just

■ It's entirely possible to regularly encounter and harvest public-land bucks that are 4-1/2 years old or older anywhere in the country.

the beginning. You'll also need equipment to manage the land, among other expenses. But you're building equity, so it's an investment. And you have the peace of mind knowing that no one will move in on your hotspots.

Then, there's leasing. There are no guarantees as to how long the hunting rights will be yours. Properties change hands. Leases expire. Finances change. A lot of things can pull the rug out from underneath you, and then you'll have to walk away from the hard work and sweat equity you've poured into the lease and look for other options.

Door knocking can yield free access, but expect to get turned down a bunch before gaining access. It's getting tighter. A persistent hunter can keep working the streets and eventually get lucky, but most hunters don't have the personality to keep knocking after being denied more than once. And as mentioned, it's up to the landowner whether you're the only hunter or one of several who get to hunt the property.

HUNTING VERSUS WAITING

Besides free access, public land allows you to be in the field more. On private land, you'll often be waiting for certain wind directions to hunt specific stands. In other words, expect to sit on the bench when you'd love to be in a stand.

Sprawling public lands have way more potential hunting locations and options for every wind direction. When I'm hunting public lands, I hunt every day because I can simply adjust how I enter the parcel and which area I hunt based on the given wind direction that day.

MANAGEMENT

Owning a property means you get to make management decisions, such as where to hang stands, what you plant and where you plant it, and how you navigate the parcel (putting in roads and using vehicles). As an owner of 35 acres that has up to 40 deer some evenings, it's pretty cool to be the one in charge of management.

On permission land, the landowner will likely put some stipulations on your use of the property. On public lands, access and management are controlled by the governing agency, giving you zero latitude to make any management decisions. Similarly, landlords of leases often have limitations within the lease agreement, essentially putting some handcuffs on your enthusiasm for deer management.

REWARD PERSPECTIVES

In my opinion, nothing satisfies like killing a mature deer on public land, where that animal dodged other hunters. If you outsmart a pressured buck and kill him, especially with a bow, you've done something.

I don't say this to minimize the accomplishment of killing a great buck on private land or with a firearm. Those aren't easy tasks, either. A lot of work and effort go into improving the land to create opportunities for great bucks. You just have to decide what floats your boat more.

MAKE THE CHOICE

There are probably a few more contrasting points between hunting on private lands versus public land, but the ones we've discussed are some of the most defining. Both angles have their ups and downs. Now, it's up to you, your finances and goals as to whether you hunt private land or get keys to the gate of your own hunting property.

HOW WILDLIFE OPENINGS SHAPED THE WEEKEND OF A LIFETIME

Two female hunters take unforgettable Illinois deer thanks to sound habitat management.

by Jody Holbrooks

Some places look ordinary on a map, but when you step onto them, everything changes. The wind moves differently. The timber opens just enough. Something deep down tells you the land has a story to tell.

As a wildlife biologist with the Whitetail Institute's Next Level Consulting, I've walked countless properties across the country. Each has potential, but only a few truly stand apart. One of those places sits in Schuyler County, Illinois.

That's where I first met Kolby and Lindsey Norris. Their property immediately showed promise, with a layout and soil profile that habitat managers appreciate. Just as important, Kolby and Lindsey had the right mindset. They were eager to learn, committed to improvement and fully invested in doing the hard work necessary to build something special.

Through time, that professional relationship grew into a true partnership and friendship. Together, we tested food plot strategies, refined habitat plans and put Whitetail Institute products through real-world conditions no university research station could replicate. Kolby played a hands-on role in the start-to-finish testing of Whitetail Institute Sorghum Select, a sorghum blend made of two hybrid varieties that mature at different times to provide late-winter food and attraction. From clover and brassicas to screening cover, the Norris farm became a proving ground built on trust, observation and patience.

Beyond the habitat work, Kolby and Lindsey consistently extended an invitation that meant more to them than they realized. They invited my daughter Maggie to experience a true Midwest whitetail hunt. This year, everything finally aligned.

By mid-November, anticipation had reached a fever pitch. Maggie has taken deer before, but Illinois carries a certain mythology: big timber, rich agriculture and the possibility of encountering the kind of giant whitetails hunters dream about. Sharing that experience with her on ground managed with intention made it even more special.

On Nov. 19, we packed the truck and headed north. We did not know exactly how the week would unfold, but we were confident the stage had been set.

Long before Kolby and Lindsey took over the farm, it had been owned and carefully managed by Kolby's aunt and uncle for more than 25 years. That foundation was evident the moment we stepped into the lodge. The walls were lined with mounts that told the story of seasons past. Thick beams and towering tines offered unmistakable proof that this was truly the land of giants. Maggie and I felt it immediately. Something memorable was about to unfold.

MAGGIE'S HUNT: LESSONS IN PATIENCE AND ILLINOIS MAGIC

Opening morning of rifle season found Maggie and me tucked into a stand long before daylight. The cold cut sharper than what we're used to back home, but excitement has a way of dulling discomfort. The timber around us slowly came alive as darkness faded to gray.

As shooting light approached, deer began filtering in and out of the field. They moved comfortably through Whitetail Institute Imperial Beets & Greens planted along the timber edge. Their relaxed behavior told us everything we needed to know. We had clean access, a perfect wind and zero pressure. The habitat was doing its job.

Several bucks gave us time to study them through binoculars. We judged racks, body size and behavior. Those quiet moments between opportunities are where real lessons happen, especially for a young hunter.

By midmorning, a weather front pushed through, and movement increased noticeably. When it came time to slip out for lunch, we exited without spooking any deer. That result came directly from thoughtful stand placement and Whitetail Institute Imperial Conceal, which provided critical screening for entry and exit routes.

That afternoon, returning to the same stand was an easy call. Deer began moving almost immediately. At one point, Maggie got set up on a solid buck and made the decision to pass. It was the right call — and one that would soon pay off.

About 20 minutes later, a heavy 12-point stepped into view. He was everything a hunter hopes to see, but he caught the slightest movement and vanished as quickly as he had arrived. Maggie was shaken and convinced her chance was gone. But Illinois has a way of surprising you.

After a stretch of quiet filled with equal parts regret and anticipation, another buck emerged: a mature main-frame 8-point, quartering toward the food source. This was her deer.

She steadied herself, took a breath and squeezed the trigger.

The buck ran into the timber, but everything about his reaction told us the shot was solid. Even with the threat of rain and night approaching, we waited for Kolby and Lindsey before tracking. Patience is not easy in moments such as that, but it matters.

■ Kolby and Lindsey Norris have formed a true partnership with Next Level Consulting, testing food plot strategies, refining habitat plans and putting Whitetail Institute products through real-world conditions.

After they arrived, we quickly located the blood trail and recovered the buck just 20 yards inside the timber. Relief gave way to celebration as Maggie laid hands on her Illinois whitetail. It was earned through preparation, discipline and a little Midwest magic.

LINDSEY'S HUNT: THE LONG GAME PAYS OFF

That same weekend, Kolby and Lindsey were focused on a specific target buck they called Snowball, a massive mainframe 6-by-6 named in tribute to a legendary deer from years past known as Snowman.

Snowball was not a coincidence. He was the product of years of disciplined management, careful pressure control and intentional habitat work. The first photo of him appeared in Spring 2024 on a Whitetail Institute clover plot. From that moment, he became a regular presence.

Despite opportunities, Kolby and Lindsey passed Snowball during the 2024 season. They chose patience over inches. When he survived the winter and reappeared the following spring, the plan took shape.

They overseeded plots he already favored and added new food sources in his winter range to ensure he had no reason to leave. Throughout fall, Snowball frequented Whitetail Institute PowerPlant and clover plots. Whitetail Institute Conceal helped maintain low-impact access. Every decision was deliberate. When to enter, where to walk and how often to check cameras were carefully considered.

Opening evening brought heartbreak when Snowball stepped out 20 yards in front of Lindsey just minutes after legal shooting light ended. What followed was a 50-day chess match filled with close calls but no clean shot opportunities.

As the season wore on, the idea of passing Snowball again entered the conversation. But when gun season arrived, Lindsey made her decision. If Snowball offered a shot, she would take it.

She slipped into a corridor Snowball favored and set up deep along his travel route. As the woods settled, soft footsteps approached from behind. Lindsey turned slowly. She knew instantly it was him.

Snowball stepped into view, and this time everything aligned. One perfect shot dropped him where he stood.

Snowball scored an unofficial 173-2/8, becoming Lindsey's second-largest buck. The number tells only part of the story. He represented years of patience, respect for the process and a commitment to letting the land and the deer reach their full potential.

PROPERTY, A PROCESS AND MEMORIES THAT LAST

From Maggie's first Illinois buck to Lindsey's long-awaited moment, this hunt was never just about antlers. It was about trust in the process, intentional habitat management and sharing time in the timber with people who value the same things.

On the Norris farm, the work shows. It shows in the deer it produces and the memories it creates. That's what keeps us coming back.

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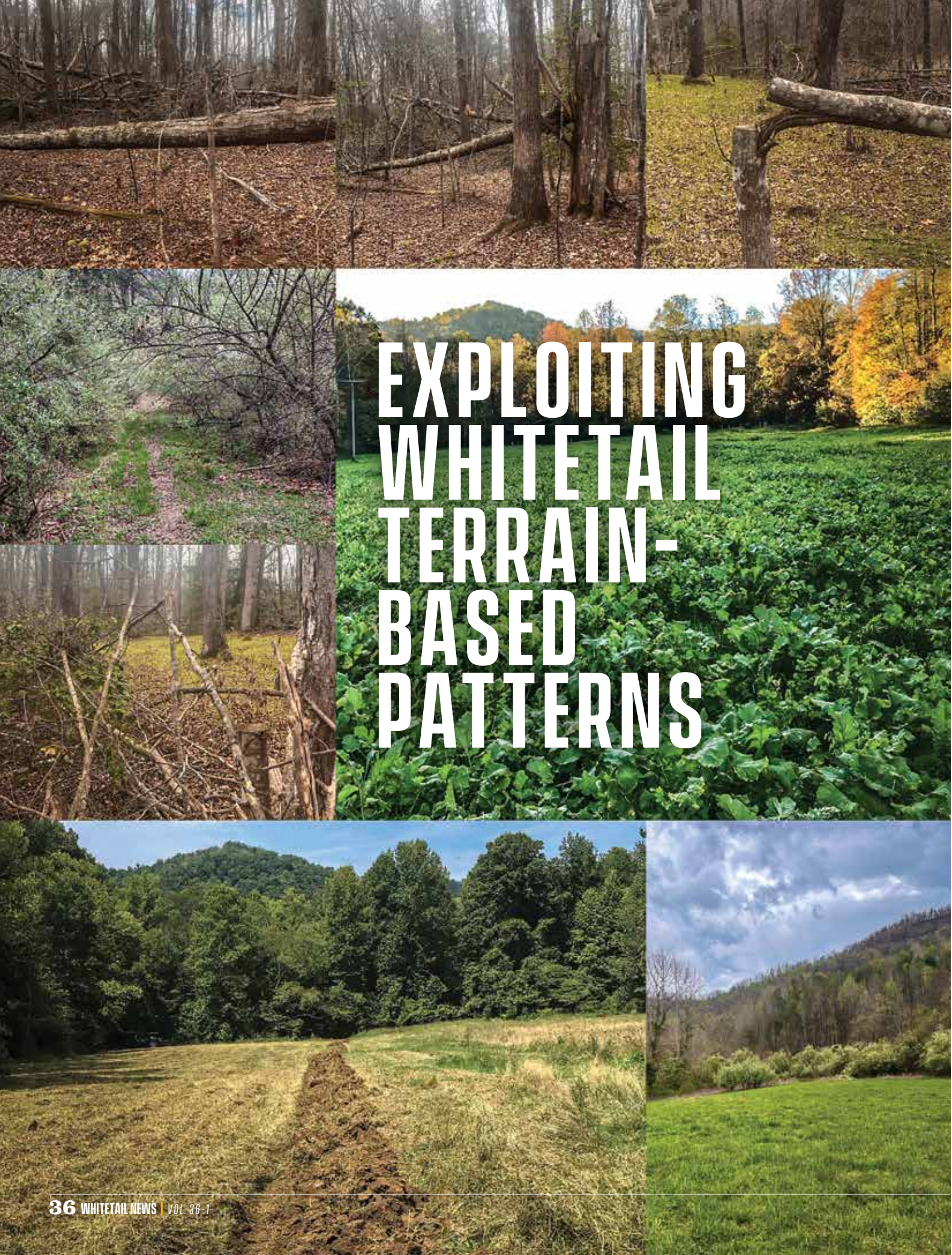


EXPLOITING WHITETAIL TERRAIN-BASED PATTERNS

Terrain features have a direct impact on whitetail activity, but there are some innovative ways you can influence their patterns to generate more shot opportunities.

Text and Photos by Travis Faulkner

Make no mistake: Regardless of where you hunt whitetails, the terrain will play a major role in how deer behave and interact with their surroundings every day. Their daily behavior, activity and patterns are geared toward survival. In fact, everything whitetails do gives them the best chance to survive, and they've mastered how to use the terrain to their advantage, which is why they can be so challenging and downright difficult to pattern and hunt. On the bright side, you can apply some cutting-edge techniques to flip the script on these terrain-based feeding to bedding patterns to give you the upper hand.

Let's take an in-depth look at a complete terrain-based hub and spoke system that will change the way you hunt.

IDENTIFY TERRAIN-BASED FEEDING AND BEDDING PATTERNS

When it comes to patterning whitetails, it's critical to understand the direct link between the surrounding terrain and how it affects feeding to bedding activity. That's true whether you hunt deer across the steep and rugged mountain country of the Appalachians, the flat agricultural farmland of the Midwest or the swampy bottomlands of the South. Your ability to identify terrain-based feeding to bedding patterns will often make the difference between consistent success and occasional luck. It's basically the foundation of scouting and patterning whitetails regardless of where you're hunting or during any transitional phase of the rut.

The early pre-rut, rut, secondary rut, post-rut and every point between is connected with terrain-based feeding to bedding patterns. I bet some of you are probably thinking, "Not during the actual breeding phases of the rut," but even then, mature bucks will often use the surrounding terrain to seek hot does in or near doe feeding and bedding areas, along with the travel corridors that connect those prime-time locations. Identifying how deer use the terrain during each transitional phase of the season to enter and exit staging points, feeding zones and bedding areas, and how they move throughout the day, is the key to solving the patterning puzzle.

CONFRONT THE X-FACTORS

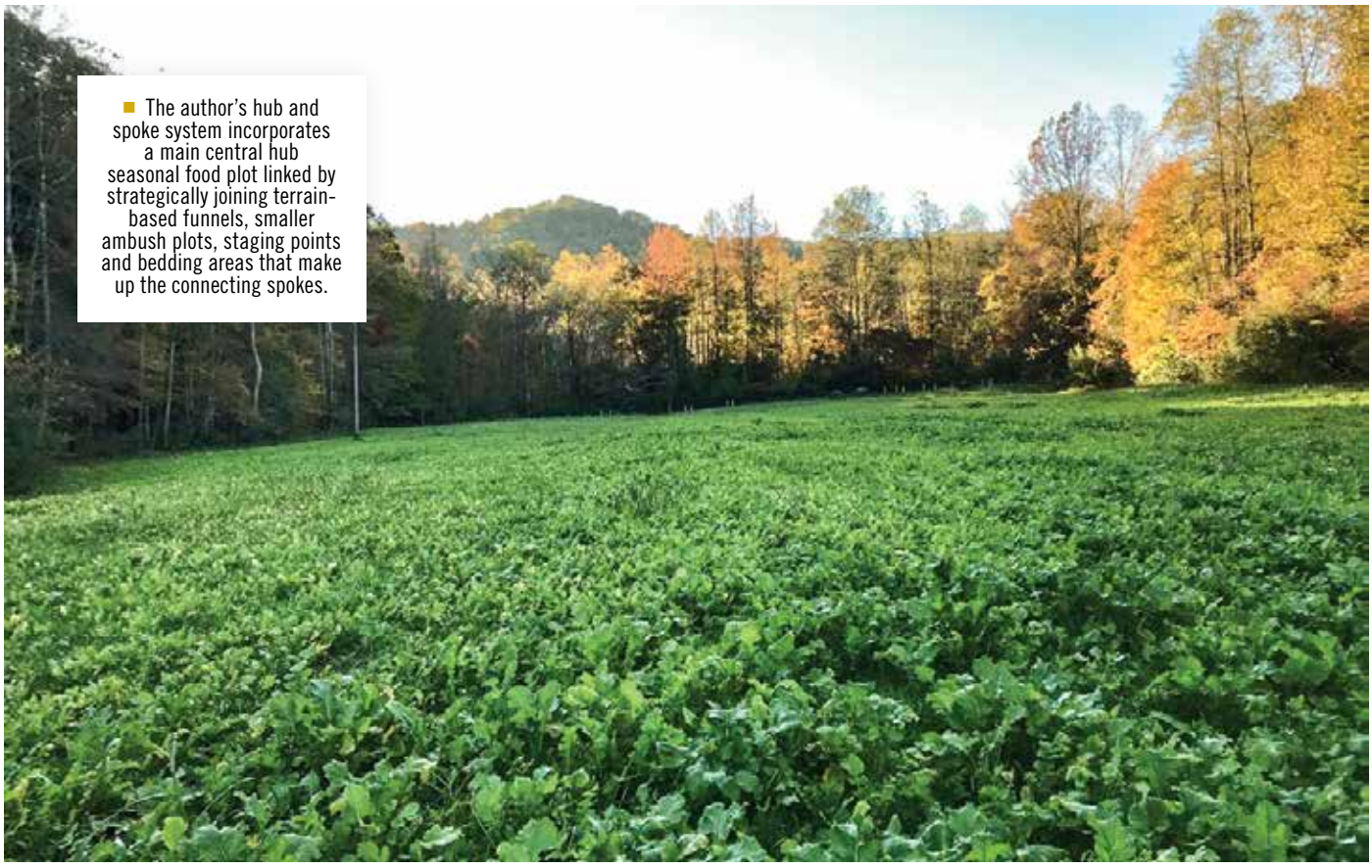
You still have lots of work to do even after you've scouted intensely and pinpointed possible bedding areas, current food sources, staging points and connecting primary travel routes. Focus on specific terrain features near those critical areas, and look for potential pinch points, bottlenecks and any other type of funnel that can help you get a shooter into close range. You're basically looking for terrain features that can influence or directly dictate how deer travel. Ridgelines, gaps, saddles, benches, shallow-shoal creek crossings, cliff-lines, high walls, thickets, aged clear-cuts, brush-choked ditches, deep sheltered hollows, isolated woodlots and low-lying swamps can affect daily movement, routines and patterns.

Also, you still have to evaluate and confront the fact that whitetail food sources are continuously changing throughout a typical season, and that will cause major pattern shifts. Piecing all of that together and staying on top of those inevitable changes is vital, and you must quickly adjust your terrain-based hunting strategies and setups accordingly. Plus, you also need to accurately calculate the prevailing wind direction and thermals, along with how you can quietly enter, hunt and exit your setups without spooking and educating deer. Hunters face those underlying variables daily, but we have little to no control over them, and that's the sum of the x-factors. All of those considerations are interconnected and generate a level of uncertainty, which can stack the deck heavily in favor of the deer. That's especially true when you're tangling with a top-heavy veteran buck that knows how to play and win the game, because he's been doing it for years.

APPLY A TERRAIN-BASED HUB AND SPOKE SYSTEM

After you've developed a pretty good handle on the terrain-based patterns and have pinpointed the critical land features within your hunting area, take some steps to counteract the X-factors and regain a little more control over your situation. During the past several years, my family and I have experienced a lot of success by adding large-scale seasonal food plots and smaller ambush plots within cover we construct to capitalize on terrain-based patterns. The past three seasons, we took that strategy to a new level, which has given us much more control over the X-factors, because this technique lets us directly influence and even dictate daily routines, habits and patterns.

Basically, it's a hub and spoke system that incorporates a main central hub seasonal food plot that's linked by strategically joining terrain-based funnels, smaller ambush plots, staging points and bedding areas that make up the connecting spokes. This cutting-edge system gives hunters more choices and control relating to X-factor variables, such as prevailing wind direction, thermals, changing seasonal food sources and deer travel routes, and it creates better overall setup options. It also has the potential to significantly increase the daytime activity of mature bucks while adding more predictability to their daily patterns. Here's how it works.



■ The author's hub and spoke system incorporates a main central hub seasonal food plot linked by strategically joining terrain-based funnels, smaller ambush plots, staging points and bedding areas that make up the connecting spokes.

If possible, try to place a larger central-hub food plot near the center of your hunting ground as the main draw. It's not a deal breaker if your main hub food plot must be planted at another section of the property. You can make the hub and spoke system work at other locations. It just seems to be a little more productive and easier to connect with the spokes when the main food plot draw is positioned near the heart or center of your land. The most important thing is to plant a variety of food plot mixes and blends that can be alternated between warmer-season plots geared toward spring and summer and cool-season plots that produce and stay hardy during fall and winter. We've seen the best results by dividing the larger plot in half and growing two blends or mixes.

For example, during spring and summer, we will plant Imperial Whitetail Alfa-Rack (alfalfa, Imperial Clover and chicory), PowerPlant (vining forage soybeans, peas and sunflowers), Summer Slam (forage peas and companion legumes, which are very drought- and heat tolerant) and Fusion (WINA-100 perennial forage chicory) mixed with Imperial Whitetail Clover from Whitetail Institute.

Then before fall hits, we will replant the central plot with two fall/winter mixes. You need to choose mixes that can withstand heavy grazing, provide a variety of food choices and will remain productive during the colder months, when most other food sources are in short supply. Selections such as Pure Attraction, Whitetail Oats Plus, Beets and Greens and Winter-Greens work extremely well throughout fall and winter. The keys are variety and consistent availability with the primary central hub plot, and those specially formulated blends really let you check all the boxes.

STRATEGICALLY CONNECT THE SPOKES

After you've established your main hub food plot, meticulously construct a series of mock deer trails that connect to staging points, smaller shade-tolerant ambush plots, terrain-based funnels and potential bedding areas. The mock trails can be made relatively easily with a weed trimmer or rake, and you can strategically lead these through critical terrain-based funnels, which can help maximize your hunting setups. Simply use the weed-trimmer or rake to clear out a narrow 2-foot-wide trail that goes where you need it to go to create optimal hunting conditions.

Again, be sure to consider prevailing wind direction, thermals and the best possible hunting access points that let you enter, hunt and exit your setups without bumping deer when implementing this system. The ambush plots are relatively easy to plant and consist of specially formulated no-plow seed blends that are shade tolerant and very low maintenance. These smaller plots can be grown almost anywhere with the right preparation, which makes them an invaluable part of the system. A productive food plot with excellent surrounding cover creates a false sense of security among skittish mature bucks, which typically shy away from open-field food sources during daylight.

The trick is to strategically place these ambush plots at varying distances between the larger primary hub food plot and potential bedding areas. Hand tools such as a weed-trimmer, rake, gardening hoe, tree pruners and saw are all you need to prep the site for planting. Cut overhang-

■ Construct a series of mock deer trails that connect to staging points, smaller shade-tolerant ambush plots, terrain-based funnels and potential bedding areas.

ing branches and sapling trees before using a weed-trimmer, and rake to remove leaves and ground clutter to reach the soil. Then plant a hardy no equipment needed mix such as No-Plow or Secret Spot from Whitetail Institute. No-Plow includes specially selected exclusive clovers, brassicas, WINA 412 radish and other forages. Consequently, it only requires three to four hours of broken to filtered sunlight per day and provides up to nine months of attraction and nutrition. Secret Spot is designed for smaller, remote food plots, too, and includes 11 whitetail forages and a soil pH booster to help it grow within slightly acidic soils.

Next, bring everything together by directly linking your mock deer trails from the primary hub plot to the ambush plots, staging points, terrain-based funnels and potential bedding areas, which comprise the connecting spokes. With this system, you can majorly influence how deer will travel, along with where they'll likely feed, stage and bed. It also eliminates a lot of issues dealing with seasonal food source shifts, because you're providing consistent feeding options throughout the year.

BEEF UP YOUR COVER

The final step to complete the hub and spoke system is to increase the surrounding cover along the connecting trails and around the ambush plots, staging points and bedding areas. Using a chainsaw to make hinge-cuts on both sides of the connecting mock deer trails and completely around the ambush plots, staging points and bedding areas can significantly increase the amount of daytime deer activity, especially among wary veteran bucks. You can also add brush piles, plant a good cover screen plot, and cut down non-mast producing trees with wide-spreading branches to enhance these critical areas.

In addition, you can enhance an established bedding area or create potential bedding cover on your own with those methods but on a larger scale. Simply plant a fast-growing cover screen plot such as Imperial Whitetail Conceal around and within the bedding area. It will quickly create tall, thick deer cover from top to bottom and grows 8 to 10 feet tall. Coupling this with lots of hinge-cuts, brush piles and sawing down multiple non-mast producing trees to leave behind an entangled mess of nasty cover can be all it takes to create a deer bedding sanctuary.

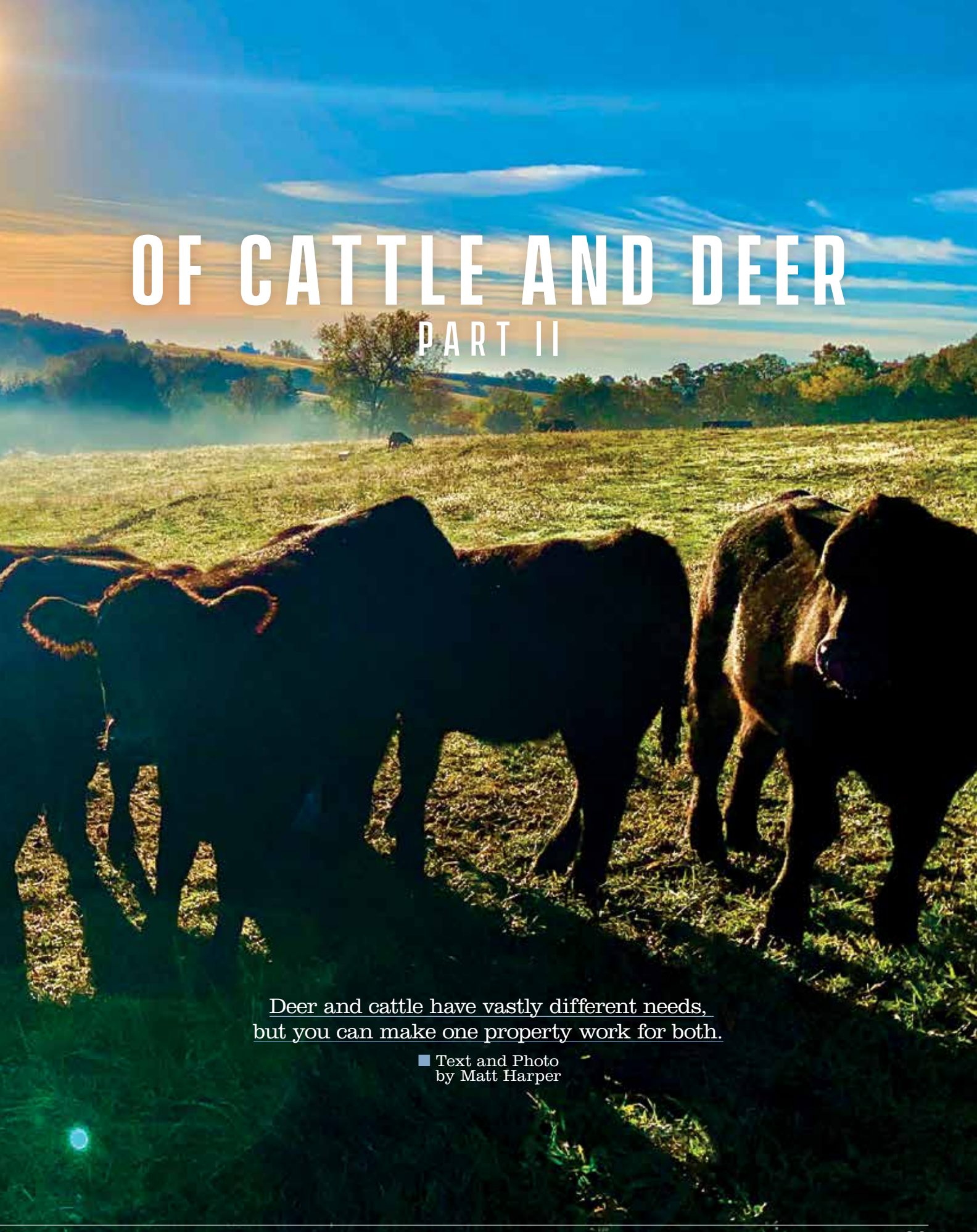
CONCLUSION

When it comes to deer hunting, you pretty much have two choices relating to how you'll pursue whitetails. You can allow the current hunting situation to control you, or you can take calculated steps to help control the situation. The terrain-based hub and spoke system puts you more in control and enables you to counteract many of the X-factors, transitional pattern shifts and other variables that typically work against you. It also gives you way more setup possibilities for every wind condition and ultimately increases overall daytime deer activity.

If you want to consistently fill your freezer with more meat and hang bigger racks on your wall, you need to give this cutting-edge system a try on your hunting property or lease.

OF CATTLE AND DEER

PART II



Deer and cattle have vastly different needs, but you can make one property work for both.

■ Text and Photo by Matt Harper

It's funny how interests change through time. Or maybe they evolve.

What once was an all-consuming passion might fade as other interests and responsibilities encroach on your free time. It's not that the passion goes away. But instead of needing a one-seater for your ride through life, you might require a Suburban to haul your interests around.

I've never had trouble finding things to occupy my time. In fact, I tend to constantly overcommit when it comes to the balance of time and activity. When I was young, it was all about sports: playing sports, watching sports, baseball, basketball, football and others. If it was an athletic competition, I was all in. I even went through a significant bowling stage. That gave way to fishing, hunting, writing, photography, woodworking and a host of smaller interests. Of those, hunting by far monopolized my time, and I had a seemingly unquenchable thirst that left me constantly searching for the next adventure. Then, several years ago, my family and I built a house and bought some land that was pretty much only good for a cattle pasture. So I bought a handful of cows, which started a budding interest in raising cattle, which has now grown far beyond a hobby. I still have a passion for hunting, but I now raise cattle on the land that I hunt, which can lead to a somewhat schizophrenic perspective on how best to manage the farm.

The title of this article might make you believe that it's the second such piece on this subject. That's true, but don't look too hard at previous issues of this magazine to find the first installment. Part I was written about 14 years ago, when I first put on my cattle rancher hat. I have learned a thing or two since then and believe it's time to revisit the topic. In the first article, I wrote primarily about the physiological differences between cattle and deer and how that effects the management of each. We'll hit that again, but only to set the stage for how you can manage a property to benefit both species and, in turn, scratch the itch of both interests.

THE GUTS

Deer and cattle belong to a very large group of animals called ruminants. The verb version of the word is ruminate, or to ruminate, which in this case doesn't mean to ponder a thought, although you'll see why the word is used as such. Ruminants consume forages and masticate them with their molars. They then swallow the material, which goes down the esophagus to a unique four-chambered stomach comprised of the reticulum, rumen, omasum and abomasum. The largest of those sections is the rumen, which is the home for millions of microorganisms that break down the ingested food and account for most of the digestion. That process takes time, referred to as rate of passage. Some components are digested quickly, but other ingested foodstuffs take longer. What's not immediately digested or passed along to the omasum and abomasum is regurgitated back up the esophagus in the form of a bolus, where it's again chewed on for further mastication and breakdown. This is commonly called chewing the cud. At first blush, that sounds unappealing, as all of us have experienced the acidic burn of regurgitation, but it's different for ruminants. Vomit in nonruminants comes from our simple single stomach, which has a very low pH (measure of acidity) needed to digest food. The rumen, however, has a relatively neutral pH and therefore lacks the biting acidic composition. That still sounds a bit disgusting, but it works extremely well for ruminants. They can consume food, retire to a sunny hillside or brushy creek bank, sit there and ruminate. I don't know if ruminants ponder life's conundrums while they chew their cud, but you can see why the word is used for that activity. According to Google, the term first described the act of rumination or chewing the cud, and the English language then borrowed the phrase to describe deep thinking.

The difference between a large ruminant (cattle) and a small ruminant (deer) is simply the size of the rumen. If you have field-dressed a whitetail, you've seen a rumen. It's often called the paunch and is the thing you desperately want to avoid nicking with your gutting knife. If you cut a bit too deep, you will hear a release of gas, followed by some greenish material that's accompanied by an unpleasant odor. As mentioned, microorganisms in the rumen digest foodstuffs through fermentation. That fermentation causes the odiferous gas, and the green material is food in the process of being digested. The rumen is the main power center of a ruminant's digestive system and is mostly responsible for turning the food an animal eats into nutrients their body uses. Lining the rumen wall are finger-like structures called papilla, which increase the surface area of the rumen. That's important because the larger the surface area, the more microorganisms can exist. Large and small ruminants have the same basic rumen structure, but a large ruminant has a far greater surface area, which means more microorganisms, which results in the ability to digest a wider range of forage types and, more important, forage quality. For example, a cow can digest thick stems of a mature grass and even corn stalks. Do they prefer better-quality forages? Sure, but mostly, they graze somewhat non-selectively and hence fall under the category of grazers, which are comprised primarily of large ruminants. With a smaller rumen, small ruminants such as deer don't have the ability to digest poorer quality forage to the same degree. Rather, they pick and choose what they eat, typically honing in on the forages or parts of forages that are more digestible to them. Thus they fall into the category of browsers. If you gave a bale of hay comprised of mature grass to a cow, she would survive. But if you gave that bale to deer, it's almost useless to them nutritionally, and they simply won't eat it. A bale of alfalfa hay, which has leaves and stems, will be completely consumed by cattle, but a deer will eat the leaves and leave a pile of stems. You might have seen cattle in fall working a field of picked corn. They're definitely cleaning up any kernels the combine left behind, but they are also eating stalks and husks. Deer might also use that field along the edges, but they are scouring through the stover looking only for the few precious kernels remaining beneath.

MANAGING LAND FOR DEER AND CATTLE

It's absolutely possible to manage a farm for deer and cattle. That goes without saying, because otherwise, this article would be pointless. I've been working with this concept for many years and can speak from experience that it can be done. However, you must begin with desire and the willingness to accept that you have to give a little from each perspective. If you raise cattle and care nothing about deer —

or even consider them a nuisance — you might as well stop reading, because you might think some of what follows is sacrilege. And if you're a deer hunter and care nothing about cattle, and don't have to deal with your property being used in some way for cattle production, you might disagree with a few of these statements. But if you raise cattle and also like to deer hunt, or you're a deer hunter who has to remember to shut gates so the cows don't get out, you might find this helpful.

HAY FIELDS

You will likely find hay fields on most cattle farms. The word hay, however, is rather broad because hay can consist of any dried forage wrapped into a bale. Hay can be comprised of alfalfa, clover, fescue, timothy, orchard grass, blue grass, meadow grass or others, alone or in combination with several of those or more. As mentioned, deer prefer the highly digestible forage or parts of forages. Legumes such as alfalfa and clover have leaves that are more easily digested than forages without leaves or with heavier stems. Not everyone can grow alfalfa or clover, but with the varieties available, you can usually find one that will work at your property. Cattle producers often prefer a mix of grass and legumes in their hay fields, which is fine, and that's what's on my farm. Deer will pick through these hay fields and eat the legumes, which provide a good food source, at least when the hay field is growing. A cattleman might say, "The damn deer are eating up all my hay," but that's only partly true in most cases. Deer are eating some of the hay, but unless you have a vast herd of deer at a very small hay field, the amount being lost is minuscule. I'll save you the mathematical nauseum, but trust me, I have done the math, and if deer are the reason why your income-to-debt ratio didn't work out this year, you likely have much bigger problems.

A LITTLE AROUND THE EDGES

A lot of cattle operations also raise grain crops such as soybeans or corn, whether for grain or silage. Farmers get pretty ticked off when they look at their crops and the first few yards of the field edge has been eaten slick. That's lost money, lost feed for their cattle or both. Deer spend a lot of time in edge habitat where cover and food meet. It makes sense that the most scavenged area of a crop field will be close to cover. A few years ago, I planted a strip of Imperial Clover around the edge of a corn field with the idea that deer would stop and eat there before moving to the corn, which theoretically would decrease the damage to the corn crop. It worked pretty well. I've suggested this practice to several other folks, and they've also seen a decrease in crop damage. This won't stop crop damage, and the degree of effectiveness can change, but in all cases, there was less overall damage.

GIVE THE CRAPPY GROUND TO THE DEER

The term crappy doesn't necessarily mean the soil is bad or there's something wrong with the area. Such spots are just too small to matter much for cattle production, don't provide much grazing quality or quantity, or for whatever reason are always a pain for a cattle operation.

Let's begin with areas for food sources. I have three to four fields I used at one time for hay production. They were small — no more than a couple of acres — and were hard to reach with equipment. I often cut them later than I should have because I focused on the bigger, more important hay fields. I finally decided that it really wasn't worth the effort and converted them to food plots. Although a 2- to 3-acre hay field might be small, cumbersome and a pain, those spots were hugely effective as food plots. I converted about half to spring and summer perennials and the other half to fall and winter plots, and the results have been outstanding. I'm actually more efficient with my hay production without spending time messing around with small hay fields, and in turn have shot some really good deer at what's now a substantial food plot. I've also taken some large fields with irregular shapes, or narrow protruding fingers or points that lead off the main field, and have squared them off, leaving a much more navigable hay or crop field. I then planted those spurs into productive food plots. Again, they were once a pain and probably a waste of time and diesel, but they're now significant food sources for deer.

Then there's the issue of cover and natural browse. I grew up thinking that if you had a pasture, you fenced the whole thing to let cows eat through the entirety. Even if some of the area was trees and brush, with little food for cows, the idea was you had to use all of it to get the most from the farm. I get that thinking, but the more I did the arithmetic, I concluded I'd be better off managing the open pasture and not worrying about the steep wooded slopes and brushy ravines for the cattle pasture. In fact, I hate those areas for cows, because fencing is a pain, checking cows in those areas is horrible and calving there can be a nightmare. So I decided to fence it off and keep the cows out. I have a 90-acre pasture with about 80 acres that's mostly clear, with terrain where I can drive equipment to control weeds and fertilize. The other 10 acres is a mix of hardwoods, deep cedar draws and poison ivy-infested ditches. Cows were not getting much off those 10 acres, and those spots occupied the biggest part of my time checking fences and cows, and also bloated my fence repair budget. But deer love that area, and I've seen a dramatic increase in the home range population since I converted. I left some trees on the 80 acres of pasture for summer shade for the cows, but otherwise managed it even more aggressively for grazing, and I've seen my cattle production numbers increase.

SUMMARY

Not everyone will agree with me on this topic. After all, cattle farmers make a living raising cattle, so that's obviously important. Deer hunters are passionate about deer management, and cattle often get in the way. But truthfully, the species live together in many of the places where deer hunting occurs, so you must look at it from both perspectives. I'm unique in that I raise cattle and take pride in doing a good job of that, but I'm also a passionate deer hunter. I've found that if you take an objective look at both, there are ways to make them work, and you can often make both better. Deer and cattle are not the same animal, which is why you can make one property work for both. You simply have to understand what's the most important for each and then match your property to best fit their individual needs.

Sometimes just knowing what's going in the ground around you is half the battle. With so many hunters planting food plots, pinpointing what's in — or out — of neighboring landowner rotations this planting season can help you steer clear of growing just another plot and instead turn your hunting grounds into something spectacular. Precision plots put you on the path to regularly filled tags.

FACING CHALLENGES HEAD-ON

2025 was a difficult year across much of the whitetail's range, especially for those of us across the northern tier of Pennsylvania. Our typical wet spring stretched into an unusually soaking summer. Rain seemed to fall every other day. In fact, I almost couldn't count the number of consecutive wet weekends we endured. That's a problem for recreational farmers like me. If you've followed any of my articles in this magazine or my family hunting camp's NCPA Outdoors videos on YouTube, you know our equipment isn't top of the line. Some of it's vying for induction in the century-mark hall of fame. And it breaks. A lot.

Equipment challenges aside, Mother Nature's sense of humor can be interesting. We fought relentless rain for months, struggling through countless wet weekends, replacing the roof on our hunting camp one section at a time. We also travelled across Pennsylvania and New York, attending almost a dozen traditional archery events in 2025. No surprise, it rained at every one of those, too. That's not much of a problem for people towing campers or sleeping in synthetic tents. However, you can only laugh as you wake up in a canvas wall tent to an unexpected downpour at 7 a.m. Sunday, followed by clouds and no sun the rest of the day. Canvas tents are fantastic in the rain but dislike being put away wet. And we went away wet more times than not, only to set up the tents again in backyards at home and hope for enough sunshine before the next soaker.

PRECISION PLOTS

Turn your hunting ground into something of spectacular proportion. Precision plots put you on the path to regularly filled tags.

■ Text and Photo by Kristopher M. Klemick

"MAKE SMART SHORT-TERM DECISIONS THAT ALIGN WITH YOUR LONG-TERM GOALS. AND DON'T CUT CORNERS."

CLEARING THE HURDLES

We were bearing down on the final days of the fall planting season, and like a light switch, the weather switched to oppressive heat, driving wind and no rain for weeks. When the ground finally dried out enough to get our equipment in the fields, my family and I had sewn numerous food plots of Imperial Winter Greens, Beets & Greens, Whitetail Oats, Pure Attraction and more ahead of a forecasted two-week, almost daily streak of rain. Mother Nature, though, shut down every thunderstorm on the horizon.

From the woods, I admired my farming neighbor with his knee-high corn as far as I could see. During harvesting, he always lets several rows stand for the local deer to feed on through winter. But with this year's weather, he was several weeks behind schedule, and I wondered if the corn would produce ears, let alone make it to maturity. Fortunately, with his larger equipment, he was able to get in the field and sow seeds in time, and I was thankful.

PRECISION IS PURPOSEFUL PLANNING

You've likely heard across TV shows, YouTube videos or in magazines how people constantly strive to outdo their neighbors. "You want to do everything you can to ensure those deer never have a reason to leave your property," or, "If you do X, Y or Z, it'll help you pull deer off neighboring properties." This in-your-face type of one-upping-the-neighbor nonsense has always bothered me, and honestly, should have no place in our hunting, land management and herd management mindset. Here's why I feel so strongly about this.

We value our time and money, but most important, we appreciate and respect the land and animals that live there. At least we should. Otherwise, we're missing the broader picture. The land we manage isn't merely purchased or passed down from someone else. It's entrusted to us by way of the blessings we borrow from our children and others. Today, through our collective efforts, we can ensure the landscape and wildlife are cared for and have the best chance to thrive so future generations can enjoy the same opportunities we do. Precision plots are not drawn to fit solely within property lines. Their purpose is not to pull deer from neighboring properties. They're not always big, nor do they need to be small. We should never wage the nonsensical battle for food plot hunting scenario supremacy. The ultimate goal should be working together across property lines and with neighbors to ensure palatable, nutritious, high-protein food sources are available year-round.

KNOWING WHERE TO MAKE YOUR MARK

Precision plots don't just involve talking with your neighboring landowners, but also your neighbor's neighbors. Understanding the contributions and level of impact to the overall herd is imperative. With that type of mindset, we can focus on what is lacking or absent from the landscape. In that sense, precision is a for-the-greater-good call. It involves recounting the past, measuring the present and calculating for the best possible future. It's recognizing deficiencies and refining plans even when that means the picture isn't exactly what we initially envisioned.

Countless acres of corn or soybean fields around you? Imperial Whitetail brassica blends such as Winter-Greens, Beets & Greens, Ravish Radish or Tall Tine Tubers will sustain deer through the challenging winter months, when those ag fields are often reduced to stubble.

One property owner after the next planting the same food plot seeds you had hoped to plant? What if neighbors live off the property, are hard to connect with, or, worse, aren't willing to socialize their efforts? No problem. Google Earth can provide a basic understanding of what sort of supplemental feeding or land management activities might be underway when knocking on a door isn't possible. Changes across the landscape can be backtracked through historical Google Earth imagery to better understand the ground's state of succession. Actively worked soil is likely food plot-related, and although it's difficult to pinpoint what might be going in the ground, it isn't necessarily a show stopper. The more acreage being planted for wildlife, the better long-term benefits.

In deep-woods scenarios where food plots are sparse, woody browse and hard mast crops are likely the only game. Locating openings in the forest — or carving your own — can be perfect places for a precision plot. Whitetail Institute products such as No Plow, Secret Spot and Bow-Stand offer highly nutritious forages to which deer would otherwise never have access. These products are also ideal because they require minimal soil preparation and thrive in less-than-stellar soil conditions. Provided the ground receives a few hours of broken or filtered sunlight per day, your plot will thrive, and deer will find the new food source extremely attractive.

In situations where you've determined a fair balance of highly nutritious, year-round food sources exist across the landscape, precision plots can focus more specifically on what you'd prefer to see on your hunting property. Perhaps free time is scarce, and a perennial plot such as Imperial Whitetail Clover would better serve your allotment of pre-season hours. Maybe you're interested in playing with annual forages and screening products such as Conceal to assist with bedding, cover or tree stand entry and exit routes? The landscape is a canvas, and the ability to experiment with various products is another reason why food plotting is such a rewarding endeavor.

GOING PRECISION

Ultimately, precision plots will produce as much as you're willing to put in. Make smart short-term decisions that align with your long-term goals. Don't cut corners. Test your soil. Prepare a proper seedbed. Lime and fertilize as required. And never lose sight of the broader picture. The work might be challenging, and hours can run long, but if you do right by the land and its wildlife, the other pieces will fall into place. Unlike those relentless raindrops when you least need them.

SO, YOU WANT TO BE A FARMER?

Farming can involve lots of work, expense and headaches, but the ultimate reward of being a caretaker of the land is more than worthwhile.

by Matt Harper

During my formative years, I had an endless parade of possibilities about what I could be when I grew up.

Somewhere around 5 or 6, I set my sights on being a cowboy and part-time six-gun-wielding gunfighter of the white-hat variety. Lit up on the console TV, my heroes rode horses named Trigger and Silver, always had the winning hand at poker, and could out-punch, out-draw and out-ride the nastiest desperados. A couple of years later, Babe Winkelman and Al Linder inspired my new career in professional fishing, and I attacked the local farm ponds, giving my own commentary to an invisible cameraman who broadcast my adventures to the world. Then came sports and the undeniable reality that I would end up playing in front of thousands of cheering fans. The specific sport depended on the season; football in fall, basketball in winter and baseball in summer. Turns out, genetics and natural ability play a huge part in the fruition of such a dream. As my teenage years waned and college approached, I began to think a bit more realistically, but even then, I bounced around dozens of possible professions and didn't end up in any of them. I guess many of us go through life with an ever-changing curiosity about what the next chapter might unveil.

I grew up on a farm in southern Iowa, and although I enjoyed it, most of the time it involved very hard work. At least that was all I could see at the time. I never thought farming would be in my future. That's not because I thought there was something wrong with it. Likely that's because it was how I grew up, and I figured I was supposed to move beyond my adolescent life. But I never realized the pull that life would have on me, and only four years out of college, I was back on the farm.

THE PULL

There's something about farming that transcends the decades of urban drift. I would even call it romantic in an agrarian-minded perspective. You must work in partnership with the land, ever dancing with nature and what it might throw at you. It's hard work, and the sweat and toll required to grow something only adds the wholesomeness of the experience. I'll be honest, I still tear up a little when I hear Paul Harvey's "So God Created a Farmer." If you have never heard it, crawl out from whatever concrete jungle you have been hiding under and listen. As Harvey recites the poetic lines, I vividly see my dad and grandfathers, because the words are the reality of what they did and how they lived their lives. But even if you didn't grow up on a farm and don't know who Paul Harvey was, there is a curious phenomenon that happens to more of the population than you might expect. At some point, many people feel attracted to growing things. I believe that's because of a deep-rooted connection to nature that's buried deep within our DNA, put there by our Creator because a part of our soul is nurtured when working with His creation. Even if you don't believe in that sort of thing, it's undeniable that there's something inside of many — maybe most — of us that finds fulfillment in growing things. For example, look at the explosion of backyard chicken flocks, which now number in the millions. Some say they do it to save money or raise their own food, or because the chickens are pets. Those might be true (other than saving money), but I think it's because people get a small taste of what it's like to be a farmer.

Hunting and farming, although not synonymous, often find common ground. Back in the day, almost all farmers hunted, sometimes to get extra meat for the table or to protect their livestock and crops, or simply because they enjoyed it. Even today, many farmers are also hunters to some degree. Both practices occur in the outdoors and often on the same piece of real estate. Both also involve a harvest that puts food on the table for their families. So when you see a hunter decide to take up farming, it's not altogether shocking. Most of the time, hunters-turned-farmers do so to better their habitat and ultimately their hunting. Plant some food plots that deer and other critters like and use, and the next thing you know, you have a hunter's proverbial Garden of Eden. It's really that simple, right? Most find that although it might seem simple on the surface, the actual practice of farming is far more complex than they initially anticipated. Many considerations can be learned from a book, but when implemented in the natural world, the results are far from a forgone conclusion. There is simply more to it.

THE INVESTMENT

Farming is not cheap — least not when done correctly. First, there is the land you will be farming. If you lease hunting ground and can do some food plots on that land, the first investment is the lease fee. Hunting lease prices have done nothing but grow through the years. What you paid $5 to $10 per acre for a few years ago has likely doubled, if you're lucky. A quick Internet search reveals that good hunting ground in Kansas will set you back $30 per acre or more, and in Illinois, you can pay $50 per acre, which might be on the low side. And just so you don't think I'm picking out Midwest states, Virgina is about $20 per acre, Kentucky is $30 per acre, and Georgia is $10 to $30, depending on the quality of the hunting. So if you're leasing 100 acres, regardless of where you're hunting, you are staring a four-figure check in the face.

If you plan to buy a little piece of heaven, hopefully you have saved up and have an above-average relationship with your banker. In Iowa, for example, pasture land ranges from $5,000 to $7,000 per acre or more, and if that scares you, don't even ask what good tillable ground is going for. Quick math tells us that if you want to buy that 80-acre "hunting paradise" (as advertised by the realtor), you're looking at about a half-million dollars. Land prices vary depending on the state, but regardless, buying land — at least for most of us — is not a matter of sacrificing eating out one night a week to make room in the budget for a land payment. That said, land is also an asset on your net worth and has consistently grown in value through recent years. Thirty years ago, I could have bought 660 acres that bordered our family farm for $600 per acre. At the time, that seemed outrageous, but five years ago, that land sold again for $6,000 per acre — not a bad investment. But like my mom would always say when Dad told her he bought a gun because it was an investment, "You actually have to sell it to realize the benefit of that investment." Unfortunately, I'm kind of the same way with land.

When you have your land situation figured out, hopefully you've saved enough money for the tools of the trade. There are some circumstances and products where minimal tillage — and thus mini-

HUNTING AND FARMING, ALTHOUGH NOT SYNONYMOUS, OFTEN FIND COMMON GROUND. BOTH PRACTICES OCCUR IN THE OUTDOORS AND OFTEN ON THE SAME PIECE OF REAL ESTATE.

mal equipment — is needed to get a small but good food plot growing. But if your true ambition is to try farming, you'll want to smell the dirt turning, which will require ground-working equipment. At a minimum, you will need some small implements that can be powered via a four-wheeler or side-by-side. To really fit into a farmer's boots, however, you might need to step up to a horsepower level that starts you perusing ads for the machine that powers a farm. Tractors come in all colors and sizes, but none are necessarily cheap. Then you need the implements to break ground; smooth the ground; plant, sow or drill the seed; and mow the weeds or, if that doesn't work, spray them. Even if you go on the cheap, you will still have a decent investment, and I can tell you from experience that you normally get what you pay for. Of course, you can rent, but that's still not free. And you can always hire someone to plant the plots for you, which is also not free. And then, you really aren't assuming the role of the farmer.

THE ELEMENTS

If you spend time around a group of farmers, you will always hear a conversation about the weather. Most of the time, they are not happy with the current conditions or forecast. There's not enough rain or too much rain, or it's too hot or too cold, and the crazy thing is that can change daily. Before you put on your farmer pants, you might think that folks who make their living from the land are just chronic complainers, but that will change when you're the one trying to grow something. Weather plays a major role in your success and overall outcome. You can buy land and equipment, and spend days doing everything right to get seed in the soil, but then have the heavenly water spicket turn off, leaving you staring at dirt and praying for rain. Then when the rain comes, it doesn't stop, and before you know it, your plot is under water. Not to mention that most food plotters have a tight schedule with limited time for field work. You watch the forecast to decide what days to take off work to get the plots in, and then a front blows in and rains on your parade. The most frustrating part is you can't do a thing about it. You will notice yourself glued to your weather app, and not because of an upcoming fishing trip or golf outing. Your friends at work will say thing like, "Looks like another dry, sunny weekend," and they are happy about it. But the whole time, you're thinking, "I want it to pour down rain, and who gives a rip about Fred's golf tournament?" Welcome to farming.

THE BREAKDOWNS

There are not too many things that really make me mad, but one is breakdowns and the resulting mechanic work that ensues. Imagine that dawn breaks sunny with a light breeze and perfect temperatures. You're on your way to the hunting property, where a brand-new tractor sits in the new shed you just built. Traffic is nonexistent, people are smiling and waving a friendly good morning and even your coffee seems better than normal. Birds are singing in the trees as you open the shed door and gaze at the shining new piece of power that will be your partner in producing beautiful food plots. A satisfying rumble belches from the exhaust when you turn the key and back up to the disk you just bought at a farm auction. You drop the disk into the ground and make your first pass, watching the soil turn perfect and mellow. Then on the second pass, you hear a snap, and immediately you know something is wrong. Turning in your seat, you see the disk sitting motionless while the tractor moves slowly away. "What the … ?" goes through your head. Then you notice the tongue of the disk is snapped, half with the disk and the other being dragged by the tractor's draw bar. Unless you own a mobile welder and have the parts and knowhow to fix the break, you are likely out of luck for several days. Unfortunately, that's the reality when you're farming. Things break. As my grandpa would say, "If you have equipment, it's going to break on you."

YOU STILL WANT TO BE A FARMER?

Suffice to say, I have not painted a rosy picture of the farming life and possibly have talked several people out of the idea. But if you're still determined to try farming, it means your desire outweighs the negatives, and your stick-to-it-ness is strong. That's a good thing, because you will need all you can get. But if you stay the course, buckle down and fight your way through the hard and frustrating times, the reward will be sweet. And actually, the greater the challenge, the more fulfilling success will be. There's simply nothing like growing something; taking a few handfuls of small seed and creating a beautiful green field where there was once only dirt. In life, we too often consume but don't create. But when you're farming, it's all about creating, building and growing. When you drive to check a field just as the sun is popping over the trees with a warm breeze ruffling through the clover leaves, you realize all the hard work is worth it. Never mind that you saw a doe with her two fawns slip out of the field edge into the trees, having earlier enjoyed the bounty you provided. And the hen turkey with her young poults that snuck away through undergrowth, having just finished a bug hunting expedition. It wasn't a big buck, at least not yet, but you care little, because you've collaborated with the land and nature and have given back, making it better for all that call the farm home.

It might seem simple, but I can assure you it's far more than I can describe in words. It fills the soul — or maybe more accurately nourishes the soul — as you are not just a visitor or interloper in the natural world but now a part of the system. You're a caretaker whose role is not to reap without sowing but instead provide without the guarantee of getting something in return. That's what really makes it worthwhile being a farmer. Of course, it's also pretty sweet when you shoot a bruiser buck off of your creation.

OATS PLUS GETS IT DONE

STACEY GEIK | MICHIGAN

■ We have two farms in southern Michigan. Whitetail Institute products help grow and hold lots of deer, including bigger bucks than before. Deer get pressured heavily in Michigan, but they come from other properties and stay on ours. Oats Plus is an annual staple on many acres of our food plots for fall tonnage well into the snow and cold. Other oat seed brands simply will not hold up to the high deer numbers or the cold weather. Tall Tine Tubers and Winter Greens: The deer love the different brassica varieties from early season to late winter. The farm with heavier dirt grows them best. Imperial Whitetail Clover: Both farms have clover plots to attract and feed deer from first green-up well into the peak of the rut. The two attached photos are from the past two seasons — my best two Michigan bucks to date, thanks to Whitetail Institute. One is a 150-inch deer from the 2023 bow season. The other is a 159-inch buck from the 2024 rifle season, with my son. Both bucks were routine visitors to the Oats Plus plots on camera.

JEFF WHITTEN | MAINE

■ Great results in Maine. Deer love all of these products.

TOM CRAVENS | INDIANA

■ The 10 years we have used Whitetail Institute products have been a game changer on our 65-acre farm. Before, we would see a shooter buck every three to four years. Now we have multiple shooters calling our farm home. Best of all is the success my daughter has had, harvesting three bucks in the past six seasons.

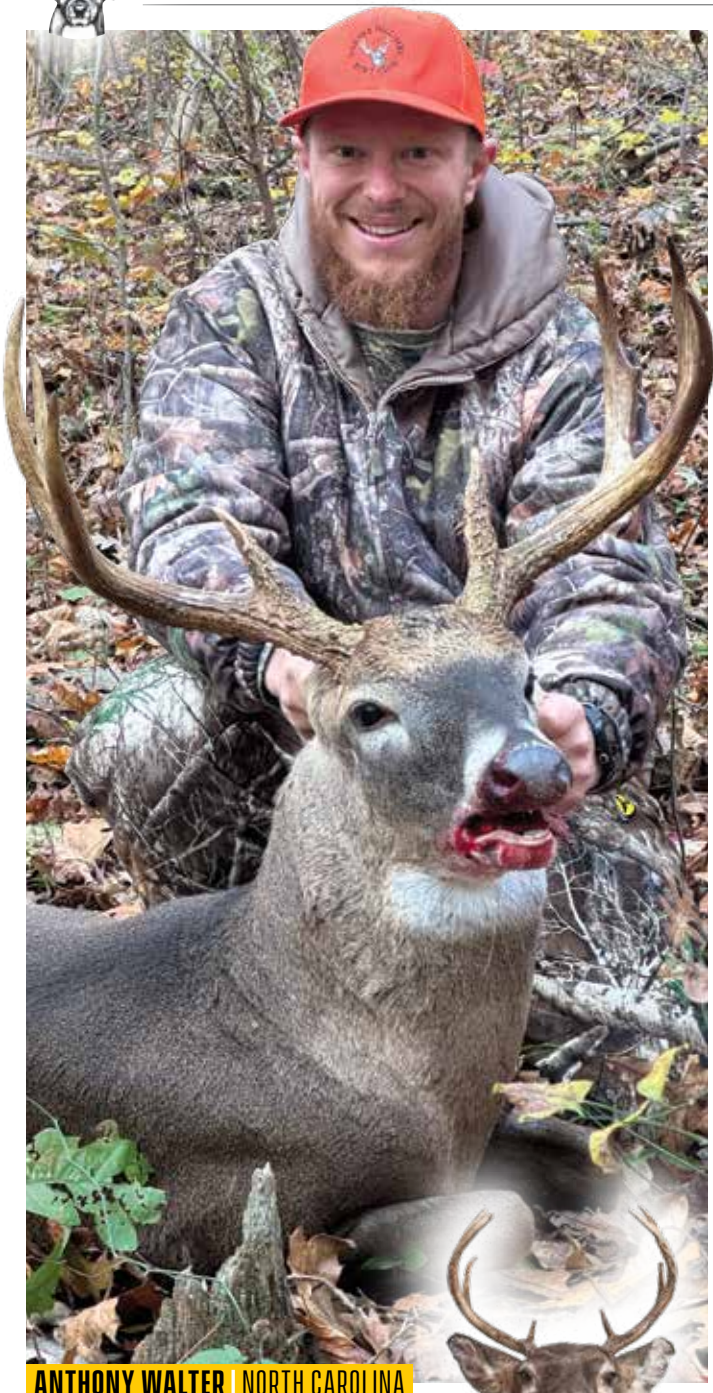
CODY SHAY | PENNSYLVANIA

■ Honestly, on a 100-acre farm, my family and I pull in more deer with these products. My 8-year-old shot a heck of a buck standing in a Tall Tine Tubers food plot.

CRAIG FINLEY | NEW YORK

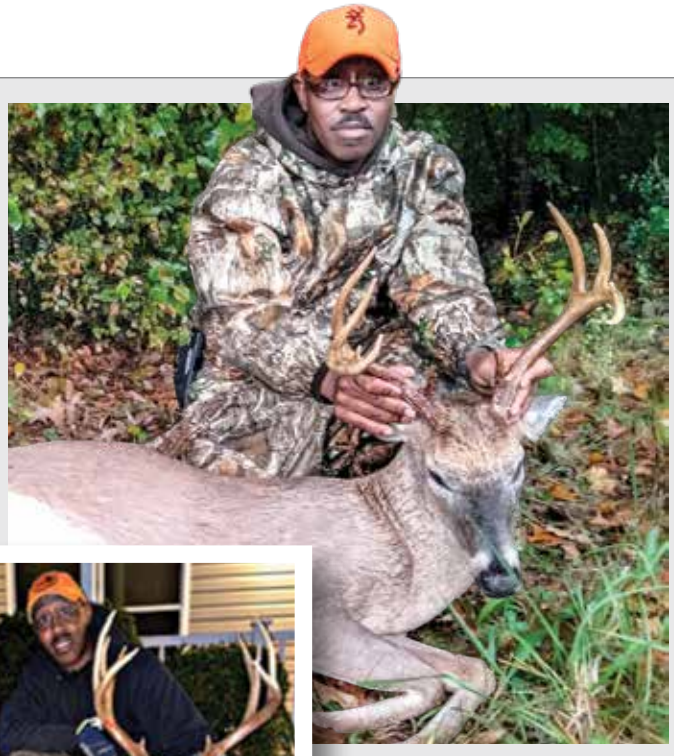
■ I wanted to reach out and say thank you for the best hunting season I've ever had. I own a small piece of property I've been hunting for about 10 seasons. During the previous five seasons, I hadn't shot a buck that I considered worthy.

This past year, I met an older gentleman who recommended that I plant your Whitetail Clover product. I decided to give it a try, and the results were incredible. During bow season, I saw and captured more photos of shooter bucks than ever before on my property. On opening day of gun season, everything finally came together. A buck stepped out broadside at 35 yards from my stand, and I harvested the biggest buck I have ever seen or taken. He green-scored 152.25. I truly believe planting your clover made a huge difference in attracting and holding deer on my property. Thank you for producing such a great product and helping make this season one I'll never forget.



ANTHONY WALTER | NORTH CAROLINA

■ When I started using Whitetail Institute products, we had very few deer on the property and only a few small bucks. Now I rarely sit in a stand without seeing deer. The deer are digging holes everywhere I have put the minerals. This year, I killed a 120-inch 8-pointer, which is a really nice buck in the area of North Carolina where we live. I hunt a lot of agricultural land, so it's hard to plant food plots because of the crops, but I love the minerals. The small buck on my wall was the biggest deer I had on camera before using Whitetail Institute. The other attached photos are deer from this year.



THOMAS KING | VIRGINIA

■ Imperial Whitetail Clover works very well to allow me and my son, Ethan King, to harvest these nice bucks. I've been using it for six years and I have harvested multiple bucks from it. I want to testify and say it was the best pick and want to think the personnel at Whitetail Institute for answering my questions and always taking the time out to help and make good suggestions, and making it easy to use with the instructions they give us. We would not have been successful if I didn't use this product. I will give this product five stars.

BRETT BRANDSTROM | MINNESOTA

■ I saw more bucks with better racks.

BILL RIMMEL | PENNSYLVANIA

■ I live on a small 50-acre farm in northwestern Pennsylvania. The farm had been stripped back in the 1950s. The soil isn't the best. And we have extremely high hunting pressure in western Pennsylvania in general, so I wanted to figure out a way to bring deer to my farm. I started a simple route and went with clover and started putting up mineral licks. I'm a diehard believer in 30-06 products. Twenty years ago, our average buck was a 16-inch-wide 8-pointer. Now, it's at 18 to 20 inches, with 10, 11 or 12 points.

MASEN SMITH | OHIO

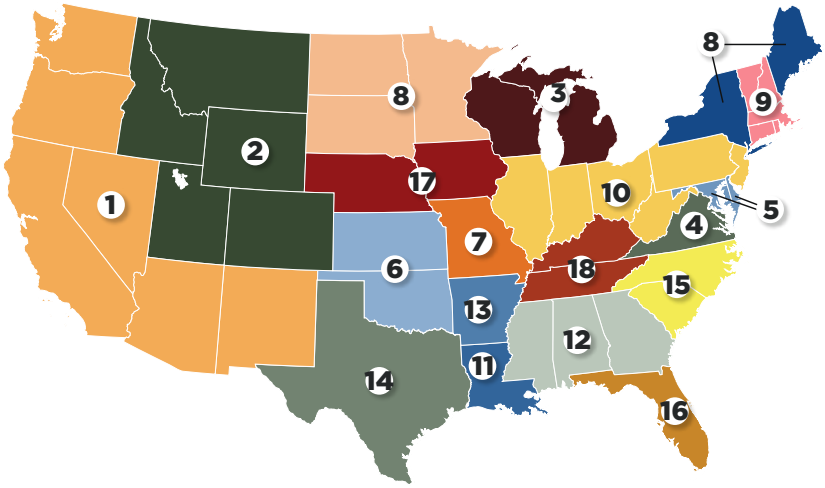
■ On Dec. 6, 15-year-old Masen Smith was getting ready to shoot one of several does that had fed through his family's Destination food plot, which they plant every year, when his father heard him say, "Dad there is a buck. It's a big boy." His dad told him to take the scope off the doe and get it on the buck, and wait till it stops. The buck came right into the food plot at 35 yards and stopped to take a bite of Destination, and Masen put an awesome shot on him. The deer, which is his second buck, dropped 40 yards away.

ALL SMILES

JEFF SPANGENBERG | WISCONSIN

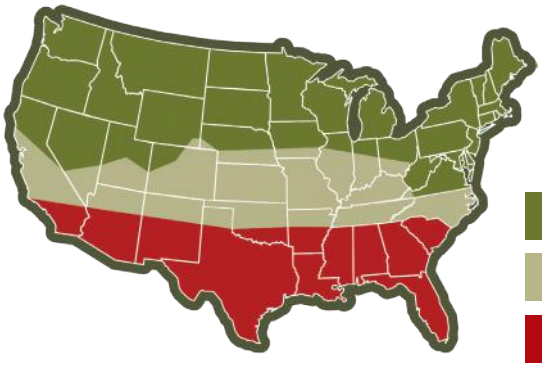
My 11-year-old grandson, Jayce, harvested his first deer during his first Wisconsin bow season in 2025. We were sitting in a ground blind together next to a stand of Whitetail Institute Winter-Greens in the valley behind my house. As three deer entered the plot from the south, he waited patiently for a broadside shot on the one he wanted, and then executed it perfectly. I'm sure he'd love seeing his picture in *Whitetail News*. We love your products. Always reliable.

FOOD PLOT PLANTING DATES...



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

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

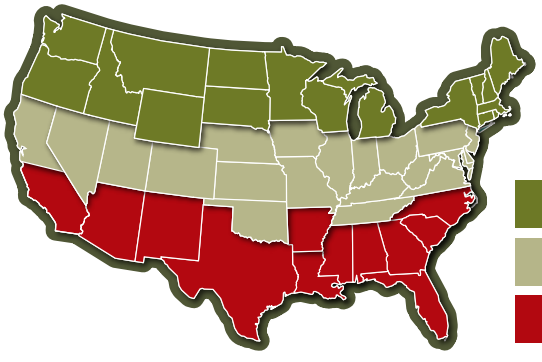


PLANTING DATES FOR WHITETAIL OATS PLUS

Use the map above 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 GRUNT N GOBBLE, VISION, PURE ATTRACTION, SECRET SPOT, WINTER PEAS, BOWSTAND, AND DESTINATION

1. **Call for planting dates**
2. **Call for planting dates**
3. Aug 1 - Sept 15
4. **Coastal:** Sept 1 - Oct 15
   Piedmont: Aug 15 - Oct 1
   Mountain Valleys:
   Aug 1 - Sept 15
5. Aug 1 - Sept 30
6. Aug 15 - Nov 1
7. **North:** Aug 1 - Sept 30
   South: Aug 15 - Oct 15
8. July 15 - Sept 5
9. Aug 1 - Sept 15
10. Aug 1 - Sept 15
11. Sept 15 - Nov 15
12. **North:** Sept 5 - Nov 15
    South: Sept 25 - Nov 15
13. Sept 1 - Oct 30
14. **North:** Sept 15 - Nov 15
    South: Sept 25 - Nov 15
15. **Coastal:** Sept 15 - Oct 15
    Piedmont: Sept 1 - Oct 5
    Mountain Valleys:
    Aug 25 - Oct 15
16. **North:** Sept 25 - Nov 25
    South: South: Oct 5 - Nov 30
17. Aug 1 - Sept 15
18. Aug 20 - Sept 30



PLANTING DATES FOR POWERPLANT, REVIVE, CONCEAL, SUNN HEMP, TURKEY SELECT, SORGHUM SELECT AND SUMMER SLAM

*Do not plant PowerPlant, Sunn Hemp or Conceal 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.

PLANTING DATES FOR WINTER-GREENS, TALL TINE TUBERS, BEETS & GREENS AND RAVISH RADISH

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

DISCOUNT COUPONS

ORDER TODAY!

SHIPPING INCLUDED IN PRICES

YOU SAVE $29.98

IMPERIAL WHITETAIL **CLOVER**

36 LBS.-4.5-ACRE PLANTING

$249.98 + tax
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___ (36 lb.) quantities of Imperial Whitetail Clover
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $42.98

IMPERIAL WHITETAIL **EXTREME**

33.6 LBS.-1.5-ACRE PLANTING

$198.96 + tax
Suggested Retail $241.94
___ (33.6 lb.) quantities of Imperial Whitetail EXTREME
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $20.03

IMPERIAL WHITETAIL **CONCEAL**

SOLD OUT!
Call 1-800-688-3030 opt1 to pre-book for 2027

28 LBS.-1-ACRE PLANTING

of Imperial Whitetail Conceal
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $43.00

IMPERIAL WHITETAIL **FUSION**

27.75 LBS.-4.5-ACRE PLANTING

$246.96 + tax
Suggested Retail $289.96
___ (27.75 lb.) quantities of Imperial Whitetail Fusion
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $5.02

IMPERIAL WHITETAIL **POWERPLANT**

SOLD OUT!
Call 1-800-688-3030 opt1 to pre-book for 2027

50 LBS.-1.5-2-ACRE PLANTING

of Imperial Whitetail PowerPlant
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $30.00

IMPERIAL WHITETAIL **PURE ATTRACTION**

39 LBS.-.75-ACRE PLANTING

$89.97 + tax
Suggested Retail $119.97
___ (39 lb.) quantities of Imperial Whitetail Pure Attraction
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $29.98

IMPERIAL WHITETAIL **WINTER-GREENS**

24 LBS.-4-ACRE PLANTING

$189.98 + tax
Suggested Retail $219.96
___ (24 lb.) quantities of Imperial Whitetail Winter-Greens
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $39.95

IMPERIAL WHITETAIL **"CHIC" MAGNET**

9 LBS.-3-ACRE PLANTING

$99.99 + tax
Suggested Retail $139.94
___ (9 lb.) quantities of Imperial Whitetail "Chic" Magnet
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $34.98

IMPERIAL WHITETAIL **TALL TINE TUBERS**

24 LBS.-4-ACRE PLANTING

$164.98 + tax
Suggested Retail $199.96
___ (24 lb.) quantities of Imperial Whitetail Tall Tine Tubers
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $10.98

IMPERIAL WHITETAIL **OATS PLUS**

45 LBS.-1/2-ACRE PLANTING

$69.00 + tax
Suggested Retail $79.98
___ (45 lb.) quantities of Imperial Whitetail OATS Plus
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $42.98

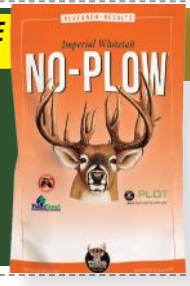
IMPERIAL WHITETAIL **ALFA-RACK PLUS**

33LBS.-2.5-ACRE PLANTING

$246.98 + tax
Suggested Retail $289.96
___ (33 lb.) quantities of Imperial Whitetail Alfa-Rack Plus
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $30.00

IMPERIAL WHITETAIL **NO-PLOW**



40 LBS.-2.25-ACRE PLANTING

$119.98 + tax
Suggested Retail $149.98
___ (40 lb.) quantities of Imperial Whitetail No-Plow
TOTAL *(Add 7% Sales Tax)*
$_____

YOU SAVE $40.00

IMPERIAL WHITETAIL SUMMER SLAM

SOLD OUT!
Call 1-800-688-3030 opt1 to pre-book for 2027

31.5 LBS.- .75 ACRE PLANTING

__ (__) quantities of Imperial Whitetail Summer Slam

TOTAL *(Add 7% Sales Tax)*

$_____

YOU SAVE UP TO $16.05

IMPERIAL WHITETAIL KRAZE

$42.96 *(4) pak*
Suggested Retail $52.99
$59.94 *(6) pak*
Suggested Retail $75.99
+ tax

__ (4) 5lb bags @ $42.96
__ (6) 5lb bags @ $59.94

TOTAL *(Add 7% Sales Tax)*

$_____

YOU SAVE $15.00

IMPERIAL WHITETAIL RAVISH RADISH

10 LBS.-1-ACRE PLANTING

$79.96 ***+ tax***
Suggested Retail $94.96

__ (10 lb.) quantities of Imperial Whitetail Ravish Radish

TOTAL *(Add 7% Sales Tax)*

$_____

YOU SAVE UP TO $6.03

IMPERIAL WHITETAIL APPLE OBSESSION

$49.96 *(4) pak*
Suggested Retail $52.99
$69.96 *(6) pak*
Suggested Retail $75.99
+ tax

__ (4) 5lb bags @ $49.96
__ (6) 5lb bags @ $69.96

TOTAL *(Add 7% Sales Tax)*

$_____

YOU SAVE $7.06

IMPERIAL WHITETAIL DESTINATION

36 LBS.-1-ACRE PLANTING

$129.96 ***+ tax***
Suggested Retail $137.02

__ (36 lb.) quantities of Imperial Whitetail Destination

TOTAL *(Add 7% Sales Tax)*

$_____

YOU SAVE UP TO $20.02

IMPERIAL WHITETAIL IMPACT SOIL AMENDMENT

• 8.5LBS - .5 ACRES
• 25.5LBS - 1.5 ACRES

$59.98 *(8.5lbs)*
Suggested Retail $80.00
$149.94 *(25.5lbs)*
Suggested Retail $169.95

__ (8.5lbs) of Impact $59.98
__ (25.5lbs) of Impact $149.94

TOTAL *(Add 7% Sales Tax)*

$_____

YOU SAVE $31.00

IMPERIAL WHITETAIL GRUNT N GOBBLE

40 LBS.-1-ACRE PLANTING

$114.96 ***+ tax***
Suggested Retail $145.96

__ (40 lb.) quantities of Imperial Whitetail Grunt N Gobble

TOTAL *(Add 7% Sales Tax)*

$_____

YOU SAVE UP TO $13.00

ARREST MAX HERBICIDE

• 1 PINT-1 ACRE
• 1/2 GALLON-4 ACRES

$56.99 *(1 pint)*
Suggested Retail $69.99
$159.96 *(1/2 gallon)*
Suggested Retail $169.00

__ pint(s) of Arrest Max Herbicide
__ 1/2 gallon(s) of Arrest Max Herbicide

TOTAL *(Add 7% Sales Tax)*

$_____

YOU SAVE UP TO $11.97

IMPERIAL WHITETAIL 30-06 BLOCK

$34.98 *(one block)*
Suggested Retail $39.95
$57.98 *(two blocks)*
Suggested Retail $69.95
+ tax

__ (2) -Pak blocks @ $57.98
__ (1) -Pak blocks @ $34.98

TOTAL *(Add 7% Sales Tax)*

$_____

YOU SAVE UP TO $39.02

SLAY HERBICIDE

• 4 OZ.-1 ACRE
• 1 PINT-4 ACRES

$57.98 *(4 oz.-1 acre)*
Suggested Retail $72.99
$129.98 *(1 pint-4 acres)*
Suggested Retail $169.00

__ 4 oz. of Slay Herbicide
__ pint(s) of Slay Herbicide

TOTAL *(Add 7% Sales Tax)*

$_____

SHIP TO: _____

Name: _____

Address: _____
(No PO Boxes, Cannot Ship to Canada)

City: _____ State: _____ ZIP: _____

Phone: _____ Email: _____

Payment: ❑ *Check or Money Order enclosed*

Charge to: ❑ *Visa* ❑ *Mastercard* ❑ *Discover* ❑ *AMEX*

Credit Card: _____ Exp._____

Date: _____ Sec.Code: _____

Signature: _____

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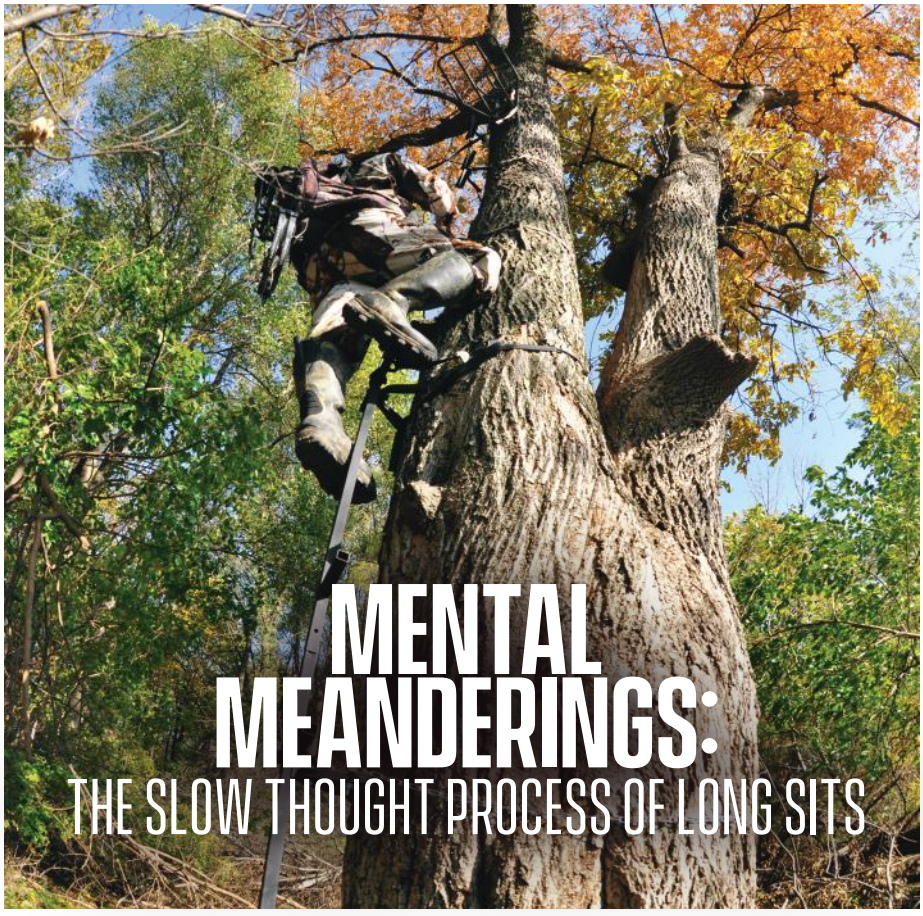
Brian Lovett~Whitetail News Senior Editor



MENTAL MEANDERINGS:
THE SLOW THOUGHT PROCESS OF LONG SITS

Your mind might wander quite a bit while you're on stand. That's not necessarily a bad thing.

An old joke describes an aging hunter explaining the secret to his great success through the years. "Sometimes, I sit and think. Mostly, I just sit."

It's funny, but every deer hunter knows that long sits during periods of inactivity typically involve lots of introspective thought. Often, it's a process that's as much a part of the ritual as putting on your boots or loading your gun.

Typically, it begins with obvious practical stuff. You run through a mental checklist while preparing for the sit, and remind yourself to be careful and go slowly during your ingress to the stand. At the stand site, safety becomes the No. 1 thought until you're securely in your seat and ready to hunt. And during those first moments or even hours, your mind might focus intensely on the surroundings, searching for the slightest sound or flicker of movement that might betray an approaching deer. Shoot, if you experience an action-packed sit, your thoughts might never drift away from that focus.

But during slower hunts — that is, most of them — that crisp mindset often begins to wander. Sometimes, you might fret or worry about life considerations. Hopefully, however, that mental drift just involves harmless daydreaming. You might think back to deer or turkeys from hunts of yesteryear. Heck, if you hunt long enough, you could even visualize almost every deer or turkey you ever tagged or missed. Some of those memories might remain as vivid as the day you experienced them, but others have likely faded a bit with time. Reliving those helps keep them sharper, though.

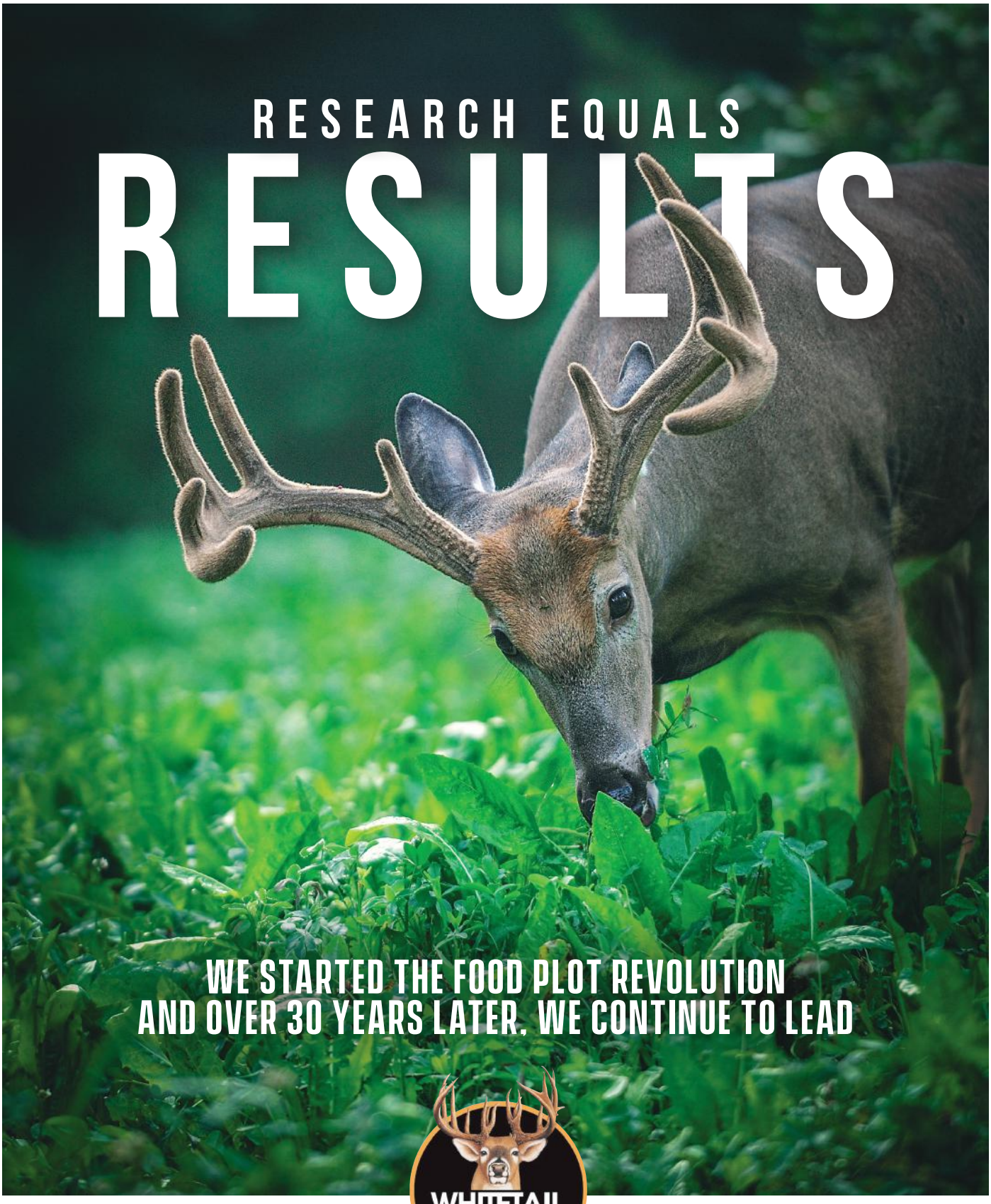
As a hunt wears on, it can be easy to take a mental look in the mirror, perhaps questioning hunting decisions or even your own judgment. "Why did I put this stand here in the first place?" "I wonder if there are even any deer close to me." "If I climb down now, I might be able to hunt the last hour at another stand."

After enough pointless mental meandering, your focus often returns — especially if the clock is ticking down to the last hour or so of daylight. Enough, you figure. Stay sharp. Look and listen. You don't want to be dozing off in some obscure memory when a buck finally slips into view.

Before you know it, your hunt is finished, whether it ends with an adrenaline-filled shot and recovery or simply lowering your weapon, climbing down and heading back toward camp. You'll probably put away the thinking cap for a while, preferring instead to discuss the hunt with campmates or grab supper. That drift of thought might not return until your next sit.

But it will return, and that's pretty important stuff. Folks talk a lot about mental discipline while hunting and being in predator mode, but for many of us, tree stand vigils also represent a rare opportunity to let your mind drift away from day-to-day concerns. Each sit becomes a miniature mental-health day, or at least a chance to be somewhat mentally carefree for a few hours. Without that opportunity, hunting probably wouldn't be the same. That doesn't mean anyone would turn down the chance to stay razor-sharp through a sit and experience quick success. Maybe it just recognizes that brief mental relaxation is a pretty nice ancillary benefit of hunting.

So I'll just admit it: Sometimes, it's nice to sit and think. Or just sit.



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