QDM Journey
The Ames Story

The hunting club members at the *University of Tennessee's Ames Plantation Research Center* have been the subjects of a scientific test of QDM success. Now into the second decade, they're happy to continue the research.

By Allan Houston and Craig Harper

In 2002, the University of Tennessee launched a study of Quality Deer Management (QDM) at its Ames Plantation Research & Education Center, and we first reported on early results in the February 2009 issue of *Quality Whitetails*. It was described then as a particularly challenging project. And, it has been exciting. The success has continued and is providing an excellent example of the benefits of QDM, even under challenging conditions – like when QDM is being pursued by a large and diverse group of hunters.

The goal of QDM is to promote a healthy deer population and maintain adequate habitat while increasing hunter satisfaction by providing extraordinary hunting experiences. All told, this seemed a daunting venture, even with 18,500 acres to work with. After all, what is an extraordinary experience in a deer stand? It must include much more than a kill. It seemed to us to include the reasonable expectation of a special experience, a realistic chance for a long-remembered surge of exhilaration. This meant having older bucks in the herd, a circumstance where simply being in the woods is a high-powered encounter.

Above: The rewards of hunting a herd with abundant mature bucks are much more than just a better chance of killing one, but this photo from the 2012 season at Ames Plantation captures the story of hunter satisfaction with QDM. Left to Right: Donnie Hanson (129 gross, 171 pounds, 4½ years), Rand Bouldin (167 gross, 140 pounds, 4½ years), and Layne Garth (132 gross, 152 pounds, 3½ years).

This was challenging and could not be accomplished with a pencil waved over the herd like a wand. It was going to take an ongoing educational effort to convert recreational sightseers into stewards charged

with guiding and maintaining the quality of the deer herd – and the experience.

Increasing the numbers of adult bucks in a deer herd allows it to express its natural behaviors, the interactions and huge rubs and warfare that occur among mature bucks. Hunters have what amounts to front-row balcony seats. And, these benefits are apparent whether older bucks carry small, medium or large antlers.

This was the herd and the experience we were trying to create.

Membership and Habitat

In the beginning, all of the information we could get our hands on indicated a maximum membership of 250 was entirely possible on 18,500 acres located in this western Tennessee landscape, consisting of hardwoods, pine, agriculture, and early successional cover. However, it quickly became apparent 250 hunters would be too many for the pristine, elbow-room experience we wanted to create. We stopped at 125 members, but after a couple of seasons even that was a bit too high. Over the past 11 years we have averaged 90 members annually, ranging from a low of 67 in 2010 to a high of 125 in 2006. About 110 members seems a good upper limit.

The hunting club does not plant food plots or conduct other habitat improvements. With its century-long history as the site of the National Bird Dog Championship, Ames Plantation is already managed carefully for wildlife. The result is high-quality habitat for whitetails. Prior to the program we analyzed natural forages and found them to be very high in quality and quantity. With the significant agricultural component along with timber management, a wide array of successional stages provide rich deer habitat.

Ames Plantation hunting club members gather at the check-in station, where food and fellowship, and usually a football game on TV, are found. With an average of 90 members over the course of the program, a core group of long-term members has formed. However, every year some portion of the membership turns over. Regular education and communication is key to the program's success, especially for new members who need to understand the history and expectations of this program.

Antlers, Aging and Angst

One of our first tasks was to determine the criteria necessary to protect yearling and 2½-year-old bucks. Short of looking in their mouth, body characteristics are the best technique. However, we suspected judging age on the hoof would not be practical for a generally inexperienced membership. In a QDM program like Ames, where a portion of the club membership turns over every year, expecting everyone to know and apply body characteristics is not realistic. Antlers were the default criteria.

Before initiating QDM, we allowed hunters the ability to kill any deer they desired. During 2002 and 2003, we compiled data from all harvested bucks. Based on the information provided by hunters, the average gross score for a 2½-year-old buck at Ames was 96, and for a 3½-year-old it was 123. During those two seasons, out of more than 200 bucks taken, only one 4½-year-old was killed, and there were no 5½-year-olds killed. The free-choice harvest clearly revealed how age structure was skewed toward younger animals.

Our data showed that a minimum gross score of 125 inches would protect more than 95 percent of 2½-year-olds, a 15-inch inside spread would protect just under 60 percent of them, and an 8-point rule would protect just over 30 percent. It looked like gross score was the way to go, but we decided to move incrementally to give members a chance to adjust to the Boone & Crockett system and also show results along the way. An initial start-up at 125 and several years with nothing old enough to shoot would have been an inauspicious beginning and would have shaken the faith in what was then among these hunters a new concept.

We began with 110 inches. Two years later, as the program matured, we increased the minimum score to 120 as a progressive move to 125 in 2010.

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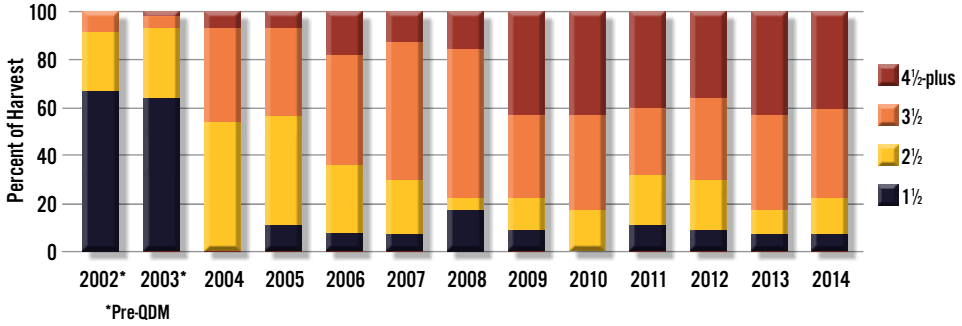
Shifting the Age Structure of the Buck Harvest at Ames Plantation Through QDM

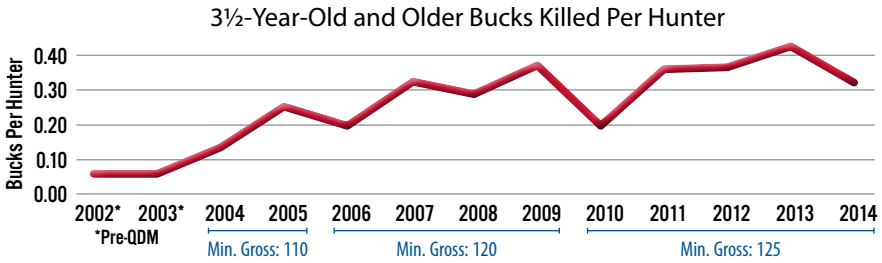


Since 2004, the goal at Ames has been to protect yearling and 2½-year-old bucks. The result is abundant mature bucks. For the last six seasons, around 40 percent of all bucks killed have been 4½ or older. Of the few yearlings that are killed, most are spikes mistaken for does.

Additionally, any buck 4½ or older is a shooter even if he is a unicorn.

After initial misgivings, the membership has become adept at judging antler scores. Some of the old hands, and youngsters who have grown up in the program, can estimate within a few inches every time.

We still promote using body characteristics to judge age. It remains a challenge, and members have been hesitant to do so for three reasons: burning a tag (we allow only two bucks per season per hunter), less buy-in to an older buck being a "trophy" based on age alone, and the severity of the fine. Recognition of older bucks as a genuine prize is rising, and in recent years we have begun to identify "hit list" bucks, usually with something identifiable about the antlers and suspected of being 4½ or older. There is no fine for killing these bucks regardless of score.



Hunting-club members enjoy very good odds of bringing home a mature buck, which keeps satisfaction high. Note: the dips in success rate in 2006 and 2010 coincided with increases in the minimum gross score for killing a 3½-year-old buck (older bucks are legal regardless of score).

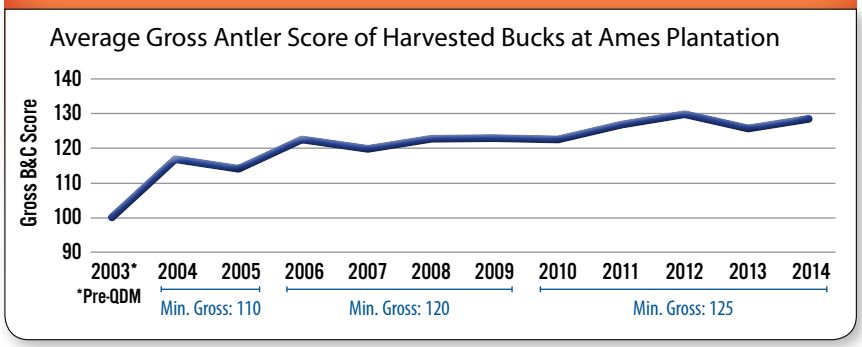
Harvest Data

In the first two years under QDM, the percentage of yearlings dropped nearly out of sight. Those taken are usually spikes mistaken for does. Over time, older bucks began to saturate the harvest: 4½-year-old bucks are now common and the occasional 5½-year-old is killed.

Having mature bucks running around is fine so long as they are coming under the gun, even if it is someone else's gun. A respectable success rate among the membership increases a personal sense of possibilities.

The graph on this page illustrates the probability of killing a mature buck. Certainly, the prospects for all hunters are not the same because some are better hunters than others, some spend more time in the woods, and some have become particularly apt students of the mature buck population. Note the dips in the years we jumped up a notch in minimum score (2006 and 2010). The lowered success was predicted ahead of time, and the members exhibited patience as the rewards were seen in the ensuing years. However, preceding and following each change there was enough resistance and fear to have derailed the program. These episodes clearly illustrate the need for locally adapted objectives, clear goals, data records and a reasonably stout allegiance to the plan even in the face of year-to-year worries and whims.

The membership has increased their selectivity over the years. Bucks that were



regularly killed early in the program are often given a free pass nowadays. They are beneficiaries of a membership more accustomed to seeing and killing older bucks.

There are other bumps and dips in the graph. Every year is an anomaly of some sort. Bumps and dips illustrate the complex variety in a natural setting, but with good data available, the membership has learned, mostly, to appreciate science-based management as opposed to knee-jerk management.

As the buck herd matured and we adjusted the minimum gross score upward, average antler score predictably increased. However, just as predictably, the average set of antlers, will and likely will always, hover just above the minimum score. The averages shown in the chart on this page include all shooters, including bucks 4½ and older that gross below 125.

Over the course of the program, the biggest change at Ames, and perhaps across the nation, has been the increasing reliance on trail-cameras. These add a sense of excitement because they provide a recreational facet by themselves and also provide proof of a mature buck's presence. However, their use also creates a more efficient predator, and most bucks have a hard time escaping.

A buck spends the bulk of his time in a reasonably defined home range. He will take excursions to visit all-girl colleges and the local Mardi Gras, but research supports him usually being found around his core range. Inevitably cameras are perched all along his routes. Many of the larger 3½-year-olds do not live to carry exceptional antlers to the next age class.

Antlers mesmerize us for some ancient, inborn reason and also because they have been successfully capitalized, sometimes lamentably so. They tend to distract from the basics of the QDM program, where larger antlers are simply a biological by-product of age. Hunters are usually too aware of relative antler size and less aware of age and its implications. Mr. 140-class 3½-year-old is very much aware when Mr. 120-class 5½-year-old steps on the field. Our eyes are locked on the 140-class buck, but his eyes are locked on the older deer.

Our members also discovered season-long preservation of large antlers in a mature herd is not a given. Improved age structure is accompanied by heavy-duty jousting. That sometimes means smaller scores result when antlers are snapped off. This is something not seen in a herd with only 1½- and 2½-year-old bucks, and the membership has learned to accept a few

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broken antlers in exchange for superior hunting experiences.

A few members have expressed concerns about genetic "high grading." Addressing this has been a large part of our educational package, and we remind them: 1) All bucks have a chance to breed at 1½ and 2½ years of age. Even with a balanced age structure, yearling and 2½-year-old bucks still participate in breeding, so the biggest bucks have genetic input while they are young and free to roam; and 2) cow-pasture mentality does not work with wild deer; Ames is not fenced. Gene flow is always swarming in from every direction.

Hunter Observation Data

We have collected hunter observation data from the beginning. Each member completes a form showing the number of deer sightings at the end of every day afield. Observation forms take about 30 seconds to fill out and, importantly, after completion are placed in a locked box.

We superimposed a 100-acre grid on the property and all observation and harvest data are recorded by grid, allowing a fantastic data set for habitat correlations with body size, antlers, and a host of other information. For example, bucks on the heavily wooded 7,000-acre western side tend to be smaller than the eastern side, which offers more agriculture and early successional cover.

As an example of the kind of data these observation forms can provide, a summary of the 2014-15 observations revealed a total of 9,892 hours afield. There were 144 shooter-buck sightings; 2,307 other bucks; 3,702 does; 1,117 fawns; 899 unidentified deer; 0.83 deer per hour; and an observed buck:doe ratio of 1:1.5. At the end of each season, every member gets a personalized sheet showing all observations, and an end-of-the-year newsletter summarizes observation data.

We have noticed an overall sighting rate above 0.75 deer per hour is something of a "happy index."

Ames Plantation member Larry Teague with a super Ames buck. It scored 151 gross, weighed 152 pounds and was aged at 4½ years. As numbers of mature bucks increased since QDM began, rubs and scrapes appear more commonly (and are larger), and rut behaviors are more commonly witnessed by hunters.

Members have free reign and, except for safety zones, can access any place on the Plantation. To prevent stands from becoming merely markers for territory, each member is limited to two stands. Simple, good sportsmanship is expected for dispersal, and it works just fine. Ames is divided into five units ranging from 2,500 to 5,550 acres. In two spots on the Plantation, sign-in boards are placed with cork boards representing each unit. Before a hunt, the member places their name on a 3x5 card and pins it to the board, removing it when they leave. That card gives us a receipt of presence and also a place to start should something go awry and the hunter needs to be found.

The Doe Goal

In the beginning, along with the idea of protecting young bucks, the need at Ames to take a certain number of does was tough for some members to accept.

We began a strong educational effort, bringing in some of the best deer management experts in the country at an annual pre-season supper. They explained science-based facts of deer biology and described other QDM programs across the country.

In the first few years, there was a lot of work to be done as we got the herd shaped up. We often took more than 200 does. Over the course of the program, we have taken well over 2,000. In 2002, when the free-choice harvest took place, 252 deer were killed but only 93 were does, representing about 37 percent of the harvest. In 2004, the first year of QDM, following an educational effort and a doe-goal of 180, the overall harvest did not change much with 242 deer killed, however 190 were does (79 percent of the harvest).

We conducted a late-summer camera survey for several years. Based on those observations and a general knowledge of herd and habitat, we began with a goal of one doe harvested for every 100 acres and have shifted it up or down depending on a number of factors. We have a three-doe club for members who harvest at least three, and there is a small gift like an Ames hat. All members are required to kill one doe before a second buck is harvested.

Except for one ill-weathered year, the membership has always achieved the doe goal, but it is a constant challenge to keep the membership motivated, especially as the doe population has become more

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adept at avoiding hunters. Usually by the middle of the season, does have become so wary that members fret about killing too many. This too serves as an example where a strong belief in an observational anecdote can replace a commitment to attaining biological imperatives. The monthly newsletter during the season keeps members updated and helps zero in on goals.

Buck fawns mistaken for does are killed each year. This is difficult to avoid without being so careful that an adequate doe harvest cannot be accomplished. We attempt to keep the female part of the antlerless harvest at or above 90 percent. The membership has done a good job at this.

Good, Bad and Ugly Boards

Every harvested deer is brought to our check-in station. Deer are aged based on toothwear, weighed and does checked for lactation. A picture is taken of every hunter and deer, and this includes the does. Buck pictures go on either the good, bad or ugly boards. The good board speaks for itself, decorated with bucks scoring above 125 inches or that are 4½-plus. All bucks are aged at the check-in station, and age estimates are "non-negotiable." Genuinely close calls, like a tie at first base in baseball, go to the hunter.

David Craig's 3½-year-old Ames buck grossed 144.

Those on the bad board are less than 4½ and miss the score by no more than 10 inches. The ugly board has bucks less than 4½ and missing the score by more than 10 inches. Having your picture on the bad and ugly boards has turned out to be about as good a deterrent as any fine.

The doe board serves to illustrate involvement, and it is surprising how many members take time to study it. We record all pertinent data on each picture, including score, weight and age. We do not publicly record or reveal the place any animal was taken.

Every member signs a contract containing all regulations before the season. Combined with the education program supporting every regulation, we start every season, literally, on the same page. The program is adaptive as we learn what does and does not work, but having a written document is important. Adapting it from year to year rather than mid-season works better here.

Unfortunately, a system of rules and consequences is required to make a QDM program work for most hunting clubs. The observation forms, a reasonable demand, are a case in point. When the program began, the membership asked that no penalty be imposed for failure to complete an observation form. That year we received a total of 18 forms. The next year we imposed a small fine and received 1,800.

Along with the bad and ugly boards, a system of fines are in place to aid trigger control. Fines are based on how far the score falls below 125, and there is an increased fine for second bucks. Members have input into the system and have endorsed the fines, knowing the buck they

passed needs an "assurance policy."

If a member kills an underage buck scoring less than 115 inches, the antlers stay at Ames for educational purposes or the hunter stays home. This rule alone has drastically reduced the number of bucks on the ugly board.

Mistakes happen. As the program has matured, members have learned not to overly chastise each other for a mistake. The reaction nowadays is more a wry commiseration because every member knows he may make a mistake too.

Youngsters hunt under the same regulations as adults. Otherwise, in a club this large, the goals could quickly be shot from under the program. A few members have questioned this, but we have found young people who grow up under the system are enthusiastic about the goals and rewards. They are a new generation and quickly attach themselves to the QDM experience and a philosophy of stewardship.

Challenges

We have been successful for 11 years, and there is considerable interest in the program. Although most of the membership is within a 60-minute drive, we have attracted members from as far away as Colorado and Florida. However, malaise can attach to success like barnacles to a ship. Success is not guaranteed. Some QDM programs dissolve because they lose focus when exceptions become rules, rules become optional, opinions trump realities, or expectations exceed reasonable QDM objectives. Sometimes visions of Trophy Deer Management get tangled around the more realistic and more widely accessible goals of QDM.

The experience here is different than might be desired elsewhere. It is a premeditated result of having a mature buck herd. For the hunter it demands a particularly, and sometimes a frustratingly, high degree of skill and dedication to consistently match up against its calculations. Hunting in the midst of older bucks comes with an increased possibility of simply getting skunked. Older bucks are harder to kill. Where younger age classes are protected, there is the compensation in seeing more bucks, even if they are not shooters.

Perhaps the best measure of satisfaction is found in the sense of exposure our members feel when hunting in the midst of a mature herd. Along with what they observe, they have seen the deer management science behind the result and know older bucks are indeed around them. There is also the satisfaction of it being a circumstance they have a hand in sustaining.

Once upon a time, a rub on a broomstick was exciting to see at Ames, and while any rub is good to see and know about, it is the stove-pipe rubs that make a member look twice. As with Leopold's description of a manager writing his name on the landscape, the Ames membership can point to such things as their name written on the herd. It is the result of QDM where goals are well defined, science-based, built on empirical evidence and have clear definition in the experience we want to create.

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