

# WILDLIFE TRENDS

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## Are You Really Protecting Your Bucks?

by *Dave Edwards*

Ok, so you've set up some buck harvest restrictions that will protect young bucks. You're on your way to producing mature, quality bucks right? Well, it depends on whether or not you've addressed harvesting an adequate number of does in your plan as well. In most cases, simply passing young bucks is not enough. In conjunction with protecting young bucks, you must harvest an enough does each year to maintain desirable habitat and herd conditions.

Quality deer management (QDM) has become common practice in nearly every part of the whitetail's range. The basic principles of QDM involve protecting young bucks from harvest while maintaining a desirable deer density and sex ratio through adequate doe harvest. Successful QDM programs result in a quality deer herd that has a relatively balanced sex ratio, increased fawn production, balanced buck age structure (many mature bucks), and a population level that is maintained at a desirable density in balance with the habitat. While most landowners and/or hunting clubs understand these principles, many fail to actually harvest enough does to effectively enhance the deer herd. Many folks implement rigid antler restrictions and go to great lengths to protect young bucks from harvest while neglecting to harvest an adequate number of does. This is not to say that they are not taking any does, just not enough. Doe harvest recommendations are prescribed by biologists for a reason. When a doctor prescribes a drug to make you feel better, do you only take half? So it is with doe harvest prescriptions. To be effective, and have a successful deer management program, adequate doe harvest is essential. Unfortunately, it is not until hunters notice that fewer and fewer mature bucks are being seen, and of those seen, antlers are of poorer quality and/or that they have "lost" the rut that they realize the importance of harvesting an adequate number of does. By this time, the deer population often has exceeded the property's carrying capacity resulting in poor nutrition and habitat damage, fawn production has decreased, the sex ratio has been heavily skewed towards females, and, even with protection, relatively few mature bucks exist. While protecting young bucks from harvest is important in a QDM program, harvesting an adequate number of does is essential if producing quality bucks is one of your management goals.

Why is doe harvest such an important ingredient to successful QDM programs? If you are protecting young bucks from harvest, but not seeing results, where are they? Why aren't you seeing more mature bucks? While there are many factors that may influence the answers to these questions, such as buck harvest restrictions on your neighbor's property, hunting strategies, poaching, size and shape of your property, etc., the answer is often found in how you are managing your own deer herd. Are you maintaining a desirable deer density in balance with the habitat? Have you balanced the adult sex ratio and making attempts to maintain it? Too many landowners believe they can manage a deer herd for mature, quality bucks by simply not harvesting young bucks. It makes sense, doesn't it? If you're not killing young bucks, they are surviving and will be in the herd at an older age. In some cases this is true. In a quality deer herd where the deer density and sex ratio is being managed through doe harvest, protecting young bucks normally results in a deer herd with more mature bucks. However, in deer herds that are over-populated with unbalanced sex ratios, protecting young bucks is often futile. Under

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these conditions, excessive numbers of does result in the dispersal of young bucks and older bucks leave in search of better habitat and herd conditions.

There is a dispersal phase in the life cycle of every species. Whitetails are no exception. Yearling bucks disperse at a higher rate (up to 90% in some populations) than any other age class of bucks or does. While it was once thought that dispersal of yearling bucks was influenced by dominance of mature bucks and competition for breeding rights, recent studies have found that antagonism from closely related does, particularly their mothers, may be the most important factor. In a study in Georgia, researchers radio-tracked fifteen male fawns orphaned shortly after weaning and nineteen that grew up with their mothers. By 2 years old, 87% of the bucks with surviving mothers had dispersed from their birth ranges, but only 9% of the orphans had left. It is also important to note that survival among the orphaned bucks was higher than in bucks with mothers. Thus, protecting young bucks without adequate doe harvest may not significantly increase recruitment of these young bucks into the older age classes on your property since many potential recruits may be lost through dispersal. Thus, harvesting more does, which will help achieve other deer management goals such as maintaining a desirable deer density and balanced sex ratio, will also enhance the probability of recruiting or keeping young bucks on your property.

Yearling buck dispersal generally occurs during or just before the breeding season. Have you ever noticed that the majority of the road-kill deer you see during this time is yearling bucks? These young bucks have been “kicked out” of the area they were born in and are venturing into unfamiliar areas. The timing of this dispersal plays an important role as to when you should concentrate your doe harvest efforts. Harvesting a doe early in the season decreases the chances of her fawn buck dispersing and increases the probability of him surviving to a mature age class. I am often asked which does to shoot, older ones or younger ones. I believe the best doe to shoot is the first adult doe you have a shot at. However, if you have a choice, shoot does with fawns. Not only will this reduce dispersal, but identifying adult does is much easier when fawns are present. Harvesting a doe that has fawns may

be hard to stomach for some folks, but it is accomplishing many good things for your deer herd. First and foremost, it is helping the overall deer herd by improving or maintaining a healthy deer density in balance with the habitat and enhancing the adult sex ratio (two of the primary goals in most QDM programs). Secondly, it is going to reduce yearling buck dispersal, which will improve the deer herd's buck age structure by keeping more bucks on your property. Don't worry about the fawns, much research has shown that fawns have high survival rates when orphaned at an early age.

Harvesting does not only helps reduce yearling buck dispersal, it also makes your property more attractive to bucks by creating good habitat and herd conditions. I've worked with landowners that were afraid to harvest does for fear that their bucks would leave their property during the rut in search of additional does. This just isn't so. If bucks are leaving, it's NOT to find more does. The truth is that these bucks are leaving in search of better quality habitat and herd conditions. Ideally, from a biological standpoint, you actually want the bucks to run out of estrous does to breed as early as possible. With a reduced breeding season, bucks don't lose as much weight and are able to “rebound” quicker from the energy drain caused by rutting behavior, which allows them to start devoting energy towards body growth sooner. Having a concise, intense breeding season is one of the benefits of maintaining a balanced sex ratio. This not only allows bucks to rebuild their body condition quicker, but also increases hunting opportunities for harvesting mature bucks. Maintaining a balanced sex ratio increases competition among bucks for breeding rights and “forces” mature bucks to actively seek does making them more vulnerable to harvest. In unbalanced herds, bucks are in rut for such a long period of time and lose so much weight that after the breeding season they may spend several months devoting their energy into body maintenance rather than growth, resulting in poorer quality antlers and reduced body weights during the next season.

In summary, producing a quality deer herd involves more than simply allowing bucks to mature. A quality deer herd is the result of a combination of protecting young bucks from harvest, harvesting an adequate number of does, and providing quality

habitat. Each of these management practices play a vital role in the success of a QDM program. If your goal is to produce and keep more bucks on your property (and who doesn't), you should strive to reduce yearling buck dispersal and to make your property as attractive to bucks as possible giving them no reason to want to leave. What makes an area attractive to bucks? Good quality habitat (bedding, escape and quality foraging habitat) and quality herd conditions (desirable density in balance with existing habitat, balanced adult sex ratio and buck age structure). How do you achieve these conditions? Harvesting an adequate number of does, protecting young bucks from harvest, and managing your property to promote quality deer habitat.

- Dave Edwards is consulting wildlife biologist with Westervelt Wildlife Services.

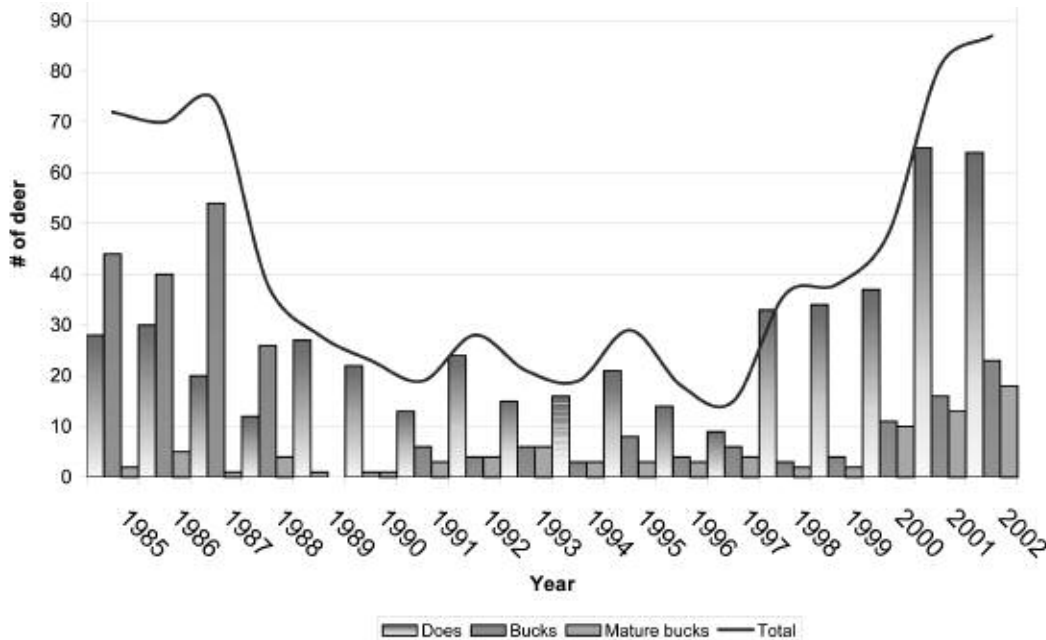
## Historical data from Soggy Bottom Farm (West/Central Alabama)

Data shown heavy deer harvest early (bucks & does). Mostly young bucks until 1990. Good bucks were harvested 1992-1994 as a result of previous heavy deer harvest, then allowing bucks to mature. Deer herd went downhill from there due to lack of deer harvest.

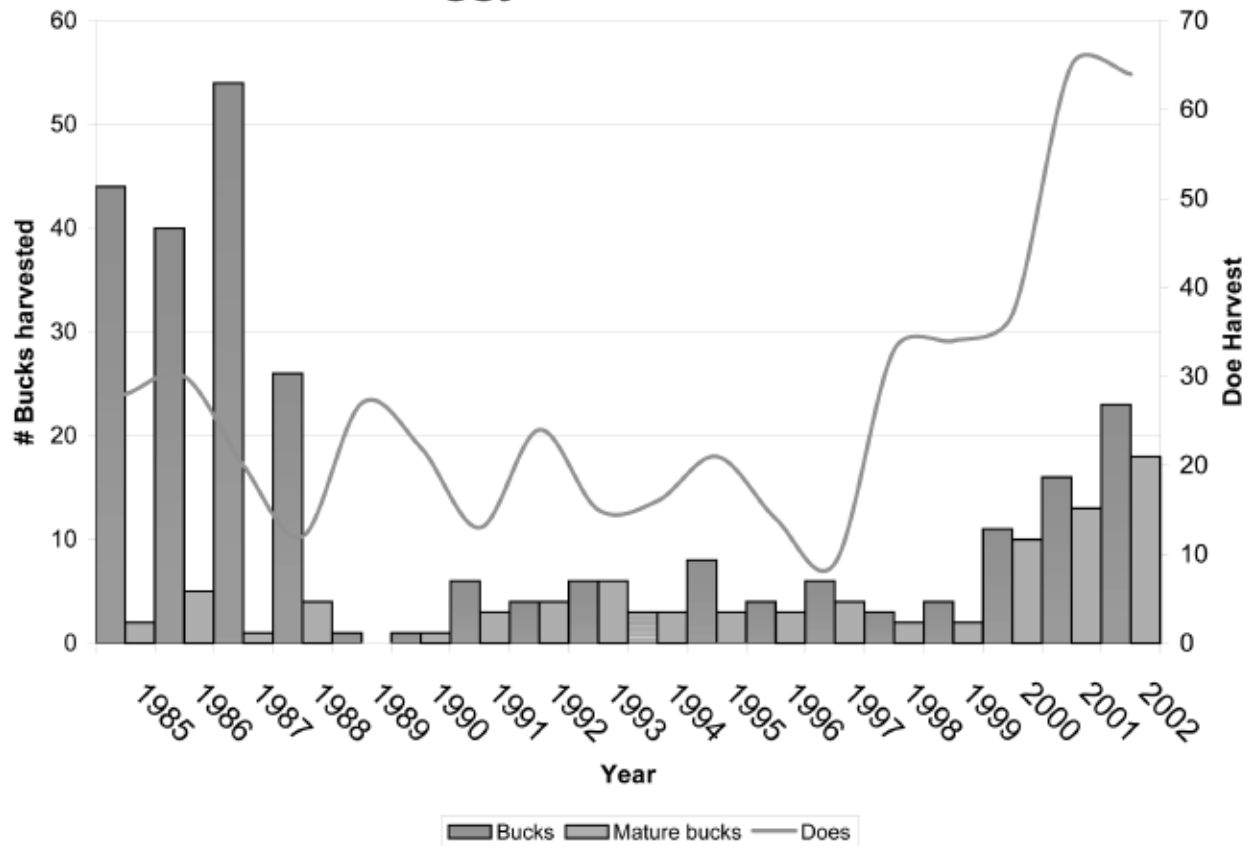
Although bucks were being passed, buck fawn recruitment was low and buck dispersal was high. After recent (1998-present) aggressive doe harvest, the heard is more vigorous, productive, and buck recruitment is high / dispersal is low. Many mature bucks are currently taken each year as a result of the adequate doe harvest.

\*\*\*Note: Lactation graph (on page 4) shows significant improvements in fawn recruitment...a result of adequate doe harvest.

| Year | Bucks | # Mature bucks | Does | Total |
|------|-------|----------------|------|-------|
| 1985 | 44    | 2              | 28   | 72    |
| 1986 | 40    | 5              | 30   | 70    |
| 1987 | 54    | 1              | 20   | 74    |
| 1988 | 26    | 4              | 12   | 38    |
| 1989 | 1     | 0              | 27   | 28    |
| 1990 | 1     | 1              | 22   | 23    |
| 1991 | 6     | 3              | 13   | 19    |
| 1992 | 4     | 4              | 24   | 28    |
| 1993 | 6     | 6              | 15   | 21    |
| 1994 | 3     | 3              | 16   | 19    |
| 1995 | 8     | 3              | 21   | 29    |
| 1996 | 4     | 3              | 14   | 18    |
| 1997 | 6     | 4              | 9    | 15    |
| 1998 | 3     | 2              | 33   | 36    |
| 1999 | 4     | 2              | 34   | 38    |
| 2000 | 11    | 10             | 37   | 48    |
| 2001 | 16    | 13             | 65   | 81    |
| 2002 | 23    | 18             | 64   | 87    |



## Historical Deer Harvest Soggy Bottom Farm



## Lactation Rate 2.5+ year old does

