



| Claude Jenkins, AWF Land Stewardship Biologist

## RESOURCE STEWARDSHIP

# Quail Questions: Q & A with Mark Smith

I often receive questions from landowners about quail management and the decline of quail. As a result, I developed a list of the most commonly asked questions, and provided the list to Dr. Mark Smith, an Auburn University extension specialist and assistant professor in the School of Forestry and Wildlife Sciences. We hope that this article will lead to a better understanding of why quail have declined, and what's required to restore quail populations (if possible) on your property.

### 1. Where have all the quail gone?

Quail numbers have been declining for decades. For example, from 1966-2009 range-wide quail populations have been declining at approximately 3.8 percent per year. Although this may not seem like a lot, it adds up over time. Quail have historically been a by-product of land use practices such as small scale farming and prescribed burning of forests. No one really “managed” for quail back then. However, the way we used the land has changed dramatically over the past several decades. For example, fewer and fewer landowners are conducting prescribed burns in their pine stands which rejuvenated the plants on the ground floor (understory) that provided much needed grasses and forbs for quail. Nowadays, most pine forests in Alabama are closed canopy or have a substantial midstory of hardwoods which shade out this valuable understory plant community. As land use changed, the available habitat declined and quail eventually disappeared.

### 2. What's the best thing to plant for quail?

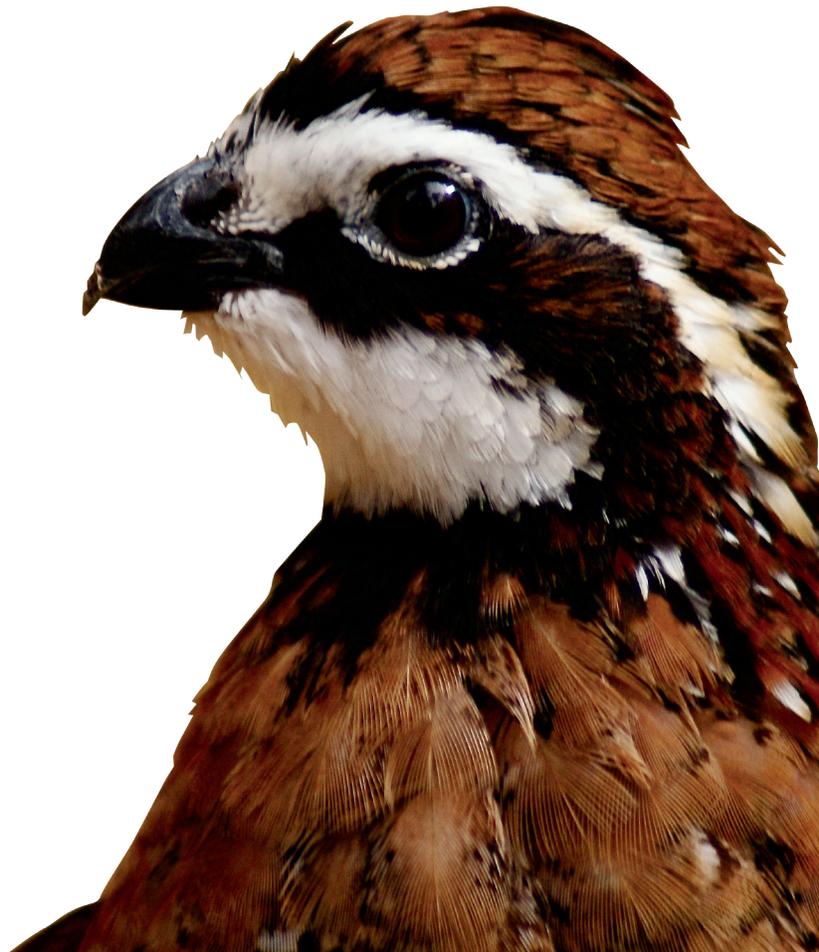
There isn't a “best” thing to plant for quail. Furthermore, food is very rarely a limiting factor for quail. Much of quail management rests on providing appropriate vegetation structure (e.g., height, density, types, etc) rather than food. Additionally, the best thing to plant for quail will depend upon what is lacking for quail on your property. If, for example, your property consists mainly of large row crop fields, planting of low-growing shrubby or brush plants in strips across each field will substantially increase the “usability” of these fields for quail. In a forested context, longleaf pine is a great species to plant for quail because it is well adapted to fire which allows greater flexibility in managing the grasses and forbs between the longleaf pine trees (e.g., using prescribed burning to manage the grass and forb communities to benefit quail without experiencing significant mortality on the longleaf trees).

### 3. Can pen-raised quail be used to restore wild quail populations?

There has been no scientific evidence demonstrating that pen-raised quail can effectively restore wild quail populations. And trust me, many have tried over the past half century! Pen-raised quail experience extremely high mortality either due to predation or exposure. Survival is only a few weeks to a few months. If pen-raised quail were capable of restoring wild populations, we wouldn't be writing this article!

### 4. I heard that fire ants are one of the leading causes for the decline of quail. Is this correct?

Although fire ants may occasionally cause a nest to fail (eat the eggs) or possibly kill recently hatched chicks, they are not a significant mortality agent. Even in areas of relatively high densities (several mounds per acre) fire ants haven't been found to have a significant impact on local, county, or regional quail populations in Alabama.



**5. I'm seeing and hearing more coyotes on my property than I've ever seen or heard before. Can they be the cause of the quail decline on my property?**

Likely not. Coyotes are opportunistic omnivores, meaning they will eat pretty much anything from small rodents, fruits, insects, hard mast, birds and bird eggs to deer fawns, newborn livestock, afterbirth, and cats and dogs. Quail, and their eggs, are just one of a multitude of items a coyote will eat. Sure, coyotes will consume some quail and quail eggs, but not enough to decimate a population. In fact, coyotes are likely a good animal to have around in that they are competitors with, and frequently displace, foxes which are thought to be a more efficient predator of quail.

**6. If it wasn't for those darn hawks we would have plenty of quail. Isn't that correct?**

Hawks, and to some extent owls, will indeed consume quail. Predation of quail (by any predator) is a natural, normally occurring event. It is supposed to happen. However, predation by hawks is tied closely with quail habitat quality more so than the abundance of hawks. If quality habitat is available for quail, predation by hawks is not an issue.

**7. How many acres does it take to have a huntable number of quail?**

This question really depends upon your definition of huntable, habitat quality of the property, and landscape context (whether or not the property is located in good or poor quail habitat areas). If your definition of huntable means the harvest of the limit every weekend throughout the season then you'll need a substantial amount of high quality quail habitat (e.g., 10,000 acres). However, if your idea of huntable is finding a few coveys each weekend for the dogs and only harvesting a few birds from each covey over the course of the season, then a much smaller area will suffice.

**8. I use to have a lot of quail, but I don't have any now. My property hasn't changed so why don't I have any quail?**

You'd be surprised just how much your property has changed over the past 20 years or more! This "change" can take on many forms. Remember the pine plantation you planted 15 years ago? I bet it's a young forest now! Dig up some old aerial photographs, say from the 1950s or 1960s, of your property and compare them to what you have on the ground today. Chances are that you have much more forest land (which isn't necessarily a bad thing depending on how it is managed), fewer open grassy areas, and larger row crop fields (i.e., fewer hedgerows) now than back when you were a kid. Additionally, are the open grassy areas on

your property Bermuda, bahaha, or fescue grass? They probably weren't 30 or 40 years ago.

**9. If quail are declining so much, why is there still a hunting season?**

It is not possible to "stock pile" quail. In other words, quail have a naturally high rate of mortality...with or without hunting. A significant portion of the birds not harvested by hunters will ultimately be consumed (harvested) by predators. However, local populations, those occurring on your property, can indeed be overharvested leading to an overall local population decline.

**10. I've provided habitat for quail on my property, but I still don't have any quail. Why?**

Your ability to have quail on your property will depend upon several factors: a) the amount of habitat provided on your property, b) the size of your property, and c) the quantity and quality of habitat on adjoining properties. Ideally you should strive to have 100 percent of your property in quail habitat to maximize chances of success. And the larger your property is the more habitat you are providing for a larger number of birds (i.e., population level management). However, if your property is situated in an area of extremely poor quail habitat (the landscape context in which your property is located), it will be more difficult to see a response in the quail population on your property.

**11. Do agricultural pesticides affect quail?**

Nowadays pesticides, and herbicides, are relatively safe and do not have a direct impact on quail when used at their recommended label rates. However, pesticides may have a slight, indirect, impact on quail in that pesticides reduce the number of insects available for quail chicks to eat.

**12. Can quail on my property benefit from supplemental feeding?**

Supplemental feeding can benefit quail; however, it doesn't work in all situations, is expensive, and in some instances may be detrimental. To work, supplemental feeding should only be considered as a management option when habitat is in place. No matter how much you feed a bird, if they don't have a home (i.e., habitat) they won't do well.

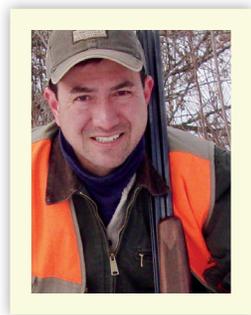
**13. I have a couple of wild coveys on my property, and I want to release some pen-raised quail to hunt. Will this have a negative effect on the wild quail?**

Releasing pen-reared quail may, in some cases, negatively impact wild quail. Disease transmission, displacement of wild quail, and increased mortality of wild quail due to increases in the number of predators attracted to the area to feed on the easily caught pen-

reared birds will negatively affect local wild quail. However, the impact of pen-reared quail on wild quail will depend on many factors including the number of pen-reared birds released, when they are released, and so forth. The occasional release of a few pen-reared quail immediately before they are to be harvested likely will not impact wild quail. However, large-scale releases (e.g., several hundreds to thousands of birds) throughout the year may do harm to wild quail populations on the property.

**14. I heard that turkeys and cattle egrets will eat quail chicks. Is this true?**

Never say never and never say always when it comes to wildlife! Turkeys and cattle egrets have at one time or another consumed a quail chick. Although quail chicks are not a preferred, or common, prey of either species, if it looks like food chances are they may try to eat it. Predation on quail chicks from turkeys or cattle egrets is a very rare event and is not something worthy of concern. 🐾



**ABOUT THE AUTHOR**  
Mark is well-qualified to address these questions as he earned his MS and PhD degrees conducting quail research at Mississippi State University.

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