Turkeys clustered around a feeder with a whitetail.

EASTERN WILD TURKEYS VS. RIO GRANDE TURKEYS

How Their Diets Differ

Article by **TAMRA BOLTON**

Wild turkeys of any sort are opportunistic, at least when it comes to their diet. Their menu varies according to time of year, location and the weather. In spring they enjoy tender grasses, while in the summer they feast on a wealth of insects, berries and fruit. And, the fall offers acorns, nuts and seeds. In the winter, they hunt for seeds and dormant insects. These seasonal conditions continually change, and all have an effect on the diet of wild turkeys.

DIET AND FEEDING HABITS

Turkeys have several methods of procuring their food: scratching, plucking or stripping, even jumping or flying to get to the forage they need. During the fall and winter, turkeys scratch through the litter of fallen debris to get seeds, tubers and insects. During the spring and summer, they strip plant tops, plucking seeds and berries and jumping up to pull a limb or weed down to eat the seed head. To get at tender buds, flowers or fruit, turkeys have been known to fly into a tree and perch there while they feast. Turkeys tend to swallow food whole.

A turkey's diet is also driven by its sex. A gobbler is much more likely than a hen to ingest larger food items such as lizards, frogs or snakes, but a hen and her poults are going to consume more insects at certain times of the year such as nesting and the weeks following hatching. A hen will also consume a large portion of succulent plant matter like grasses during breeding season because grasses provide essential vitamins for successful egg production.

Think of the turkey's diet as akin to a local chef taking advantage of what's in season for his menu. Bradley Kubecka, AWB®, with the Caesar Kleberg Wildlife Research Institute, put

it this way: "I think we should use caution in the use of the word 'preference' when we are describing diets. A true preference suggests that animals select foods in greater proportion to alternatives that are also available to them."

Wild turkeys may prefer to eat insects, but since they are not always available, turkeys must eat what they can find. They are rarely still, and their keen eyesight helps them to spot small food items, like insects and seeds.

"Wild turkeys are generalists," said Craig A. Harper, a professor of Wildlife Management and the Extension Wildlife Specialist at the University of Tennessee. "That is, they can exploit many different vegetation types and use a broad array of food items."

Jason Hardin, Texas Parks and Wildlife Department Upland Bird Specialist, said, "Turkey diets are mainly driven by the landscape where the bird is found, rather than by the subspecies of turkey. Eastern turkeys may eat crawfish because they are available in creek bottoms where they live and not in creek bottoms where the Rios lives."

Of the three turkey subspecies we have in Texas, the Eastern, Rio Grande and Merriam's, the Rio Grande occupies the largest territory. Even with the changing vegetation over this huge range, the Rios diet shows that they take advantage of a wide array of forage. For instance, the Rios located on the South Brush Country have only about eight species of plant food items in common with the Rios located in the Rolling Plains and Edwards Plateau, according to one food study conducted by TPWD.

This difference in diet doesn't seem to affect the turkeys in an adverse way but simply shows that the turkeys have adapted to the differences in vegetation within their specific habitat. This would seem to make our Texas subspecies more adaptable, but this doesn't explain the lackluster growth in the Eastern Wild Turkey population in the Pineywoods. Even though the Eastern turkey shares about seven plant species in common with the Rios, in addition to a seemingly more hospitable environment, this has not had a positive impact on their stability.

Photo courtesy of Gary "Scraps" Thomas

Eastern Wild Turkey hen and poults in grass looking for insects.

While the Rios are growing and thriving in spite of the differences in the habitat where they range, the Eastern subspecies continues to struggle to maintain its numbers. Which brings us to the next area of concern—supplemental feeding.

SUPPLEMENTAL FEEDING—BENEFICIAL OR HARMFUL?

Most wildlife managers have plans in place to supplement wildlife with some type of feeding system which usually includes corn feeding stations located in strategic spots within the property. Although this is a common practice for white-tailed deer producers, these feeders also serve other wildlife including turkeys. It is the impact on the wild turkey population that has some wildlife experts concerned. Feeding corn in this method has grown dramatically in the last seven years with millions of pounds of "deer corn" sold in Texas.

Wildlife biologists and others are concerned because mycotoxins, mainly aflatoxin, are present in much of the corn being fed to wildlife. Aflatoxin is a naturally occurring toxin produced by a fungus that grows on corn and other grains. Aflatoxin can cause liver damage, cancer and birth defects, weaken the immune system, and cause long term problems in wildlife populations, especially birds.

The USDA tests for these toxins in feed for dairy cattle, beef cattle and other livestock used for food or for human food products. However, no such tests are required on corn sold as wildlife feed; therefore, many bags are not labeled to let buyers know the level of aflatoxin in the corn.

The wildlife industry, at present, is doing better when it comes to testing and labeling, by not allowing corn tested 100 ppb or higher to be sold for wildlife feed, but caution is the best preventative when buying deer corn. Even if it is labeled "safe," corn is only tested when it is bagged and may sit for weeks or months in a warehouse or in front of a convenience store before it is purchased and placed into a feeder. While originally containing a "safe level" according to the tag, it may now have higher levels of aflatoxin because the corn may have gotten damp, gone through "heat" or stored improperly. Look for signs of moisture or mold before buying and using corn.

Also, managers and hunters don't tend to clean their feeders on a regular basis. If a feeder sits for a long period of time without being cleaned, especially in humid East Texas, aflatoxin will most certainly be present. To kill the offending spores, you need "at least a 14 percent bleach solution" according to the Caesar Kleberg Wildlife Research Institute.


Photo by Jimmy Stafford

Contents of Eastern Wild Turkey crop.

I spoke with several wildlife biologists about aflatoxin, and they agreed that the problem is a dilemma with no easy solution I even proffered the theory that "deer corn" may be contributing to the Eastern Wild Turkey's slow growth.

"It is something worth investigating," one turkey specialist said. Not only can the turkeys be affected by the presence of aflatoxin, but the birds tend to thickly congregate around feeders, making it easier to transmit disease and parasites than if they were following their normal movement/behavior patterns. With the incredibly high number of deer feeders concentrated in the East Texas area, it makes sense to think that aflatoxin may have a detrimental effect on the Eastern Wild Turkeys, as well as other birds and wildlife.

When considering whether or not to include any type of supplemental feeding for wildlife, you will need to weigh the pros and cons of your approach. One recommendation is to switch from corn to dried black-eyed peas. They work in the same feeders used for corn, are available in bulk for about the same cost or less in some areas , provide high quality protein and are less susceptible to the growth of aflatoxin. Deer, quail and other wildlife love them too.

Food plots are another means of supplemental feeding, but should be "used with caution to prevent dependence and moved frequently to avoid a build-up of feces and to reduce the chances of disease and parasite transmission."

DISPELLING THE MYTH—DO WILD TURKEYS EAT QUAIL?

The myth has long circulated that wild turkeys eat quail and/or quail eggs. While it has never been documented, Gene T. Miller, CWB®, District Biologist for the West Texas and Oklahoma National Wild Turkey Federation, said, "That is not to say that a wild turkey has never or would never eat a quail egg or a very small quail chick…I have learned to never say 'never' early in my career...but we think that most biologists working in wild turkey range, including researchers, would agree that if it ever happened or has happened, it would not be considered limiting to quail populations. Habitat quality and weather are the main causative agents of change in quail populations in Texas and elsewhere."

Other wildlife experts agree. Kubecka conducted a study of Rios, specifically looking for evidence of quail ingestion, but found none. According to the Kansas Department of Wildlife and Parks, "wildlife biologists have been studying both quail and turkeys intensely for more than 75 years and have never documented a single occurrence of a turkey eating a quail."

Dr. Bill Palmer in Florida monitored 400 quail nests with micro-video cameras, not once did the researchers record a turkey destroying a quail nest or eating a chick; in spite of the large (30 to 60 wild turkeys per square mile) population."

So, it seems that the "turkey destroying the quail population" myth is, just that, a myth. What then explains the precipitous decline of the quail population as the wild turkey population surges in the same area? It is not a matter of depredation as some might believe, but rather the altering of the habitat. The landscape has changed, not only here in Texas, but across the South and the Midwest. Where row farming and natural grassland were once common, these areas are now covered with monoculture hay meadows and tree farms.

In addition, changes in farming practices such as increased mowing and overuse of herbicides and insecticides have negatively impacted the landscape. Urban creep has also destroyed a significant amount of valuable wildlife habitat. All of these factors have contributed to the tiny quail's decline. Wild turkeys are not the culprits and should not be blamed; they are just taking advantage of the changes which are molding the landscape into more suitable habitat for them.

CONCLUSION

Since the biggest concern about the diets of the Eastern and Rio Grande turkeys is not what's available in the habitat, but how people affect that habitat, what actions do you need to take? Changing some practices can encourage the health and growth of the wild turkeys on your property and that of your neighbors, such as supplemental feeding and range management. You can consider alternatives to corn, better feeder maintenance, changing the layout of your food plots and even cutting back on some spraying if it affects the insect population, especially during crucial brooding times. The future of wild turkeys in Texas depends on you. By adopting sound management practices yourself and by educating others, you can guarantee that our landscape will long echo with the spirited call of this noble bird.