the predator community has more options to eat than quail. It comes down to predator behavior and how supplemental feed influences the overall prey base, and therefore the risk of predation to quail.

This year on Tall Timbers, our quail production was outstanding! On our fed sites, cotton rat numbers were nearly 15 rats per acre in August, versus only nine per acre on our unfed sites. Productivity was amazing on our fed sites but only modest on the unfed site; the difference was the number of nests reaching incubation stage and nesting success. This difference in productivity will surely be noticed in our fall density surveys this year. In years when rat numbers are regionally low, like 2008, our fed site had only six rats per acre, but our unfed site had fewer than one rat per acre (in August when rat populations peak!).

From a biomass standpoint, there is no comparison. On the really good years, when cotton rats are king, they outnumber quail at least 10-fold in biomass on the landscape. In bad years, they sum to about the same amount of biomass as quail. From a predation standpoint, this is huge. When a rat snake is more likely to find a rat than a quail nest, the likelihood that a quail nest hatches goes up. When a red-tailed hawk is hunting rats, he is indirectly influencing the utility of the open woods to the Cooper's hawk hunting the same landscape for quail. When a bobcat is feeding on cotton rats, then they are not foraging on quail or their nests. Each of these small changes in the predator-prey dynamics of the system was influenced by the supplemental feed that was spread across the hilltops.

Taken collectively, our research shows that supplemental feeding, when done in a way designed for bobwhites, increases quail survival, productivity, and populations on managed quail lands in the piney woods of the Southeast. There are several unique aspects to our studies compared to previous research.

First and probably most important was how the feed was distributed. Unlike studies with feeders at densities of one per 25 acres, our program was designed to fit within the habitat scheme of managed quail land.

Second, our work is long-term and our field studies collect a breadth of data, from thousands of banded and radio-tagged bobwhites, to video-monitoring nest predation, to capturing each brood and estimating chick survival, to monitoring predator and prey abundances. Understanding all the demographics helps us understand many of the mechanisms that influence bobwhite numbers. This is key because we have found how supplemental feeding influences quail varies, but it is almost always linked to the complex predator-prey web. Only through long-term research is it possible for patterns to emerge, and this is especially true with bobwhites, which exhibit tremendous annual variation.

Today, we recommend supplemental feeding on areas managing for wild bobwhites. This recommendation does not come from a literature review or our opinion, but from a deep understanding of how bobwhite populations operate in the Red Hills and Albany area plantations. Remember that on these landscapes, habitat is managed to the ultimate degree, such that we are able to measure the effects of how supplemental feeding works.

Finally, while some may consider feeding an expensive proposition, consider that for landscapes managed for bobwhites, it is pennies on the dollar – and for a 50 percent increase in density, it may well be, next to thinning and burning, one of the most important management practices for sustaining high-density bobwhites.