



GAME SPECIES MANAGEMENT PROGRAM

The value of a ranch can be conceived of as the sum of the present values of all revenue streams that the land can support over time. Wildlife populations are important contributors to this value for South Texas ranches. Stewardship that sustains working ranchlands also sustains wildlife and helps maximize the long-term value of the ranch asset.

East Foundation's Science Program is designed to generate information that can guide management decisions to promote the stability and resilience of our resources, including wildlife populations. On working ranchlands where management decisions have real economic and ecological consequences, we study wildlife outcomes at scales and timeframes that matter for long-term viability. Because essentially all game species management decisions occur in the context of hunting, we include harvest pressure as a variable in our studies. We evaluate effects of harvest by comparing responses to unharvested populations

on our ranches. This case-control model is difficult for many to execute, either because scale limitations prevent having sufficient separation between harvested and unharvested sites, or because harvest is an embedded component of the system.


Bobwhite quail are a valued resource in South Texas. While weather exerts the most pronounced effects on quail populations, we also examine how controlled harvest, grazing management strategies, and range condition influence the population's ability to recover from shocks. While we can't control the weather, better predictability about these combined effects under different weather conditions allows our managers to be more proactive and ensure recovery from inevitable 'bust' years, so that bobwhite populations in South Texas are robust for generations to come.

Whitetail deer are another iconic game animal in Texas. Deer populations are typically more stable than



those of bobwhite quail, but recruitment rates (the number of new deer entering the population) can be highly variable due to low fawn production or high fawn losses during weather extremes. While the light, selective harvest typically practiced in South Texas is sustainable, other shocks to the population from pests or disease entering a deer herd can be devastating, and low recruitment rates make it difficult for populations to recover. We are exploring how different management strategies like nutritional supplementation or habitat improvement practices may help buffer these shocks by avoiding recruitment failure to allow rapid recovery or offsetting higher mortality in adult deer. Our current effort is to estimate how nutritional supplementation during stress periods alters population growth rate, whether similar results can be achieved through habitat improvement practices like brush control, and if combining these two strategies increases their effectiveness. Using controlled experiments and direct comparisons, we want to determine the return on investment to these practices in terms of population outcomes and enable managers to make their best decisions about the deployment of these strategies to achieve deer population management goals. Understanding these relationships will also give us insight into optimal recovery strategies if – or when – a significant threat to a local deer population like Chronic Wasting Disease or New World Screwworms emerges, so that we can better sustain this resource into the future.

Non-native wildlife are often viewed as ‘invaders,’ but the nilgai antelope in South Texas is viewed in a different light. Nilgai have long been viewed as a unique sporting opportunity; their popularity as a game animal continues to increase and demand for nilgai hunts has risen steadily. Because they are non-native, and have extraordinary meat quality, they are also increasingly desired in the commercial meat trade. However, as their population – and popularity – continue to grow, concern exists about resource competition between nilgai, livestock, and native wildlife. We are actively studying nilgai population dynamics, movement patterns, and life history, so that we can better inform decisions about population management when considering multiple uses of a shared rangeland resource base.

Our game species management work uses science on real working ranchlands to reveal outcomes only visible on landscapes where ranching, wildlife, and rangeland management functions operate together in a long-term context. Getting answers isn’t always about being ‘right’; instead, it is about being able to better predict the outcomes of management actions, so that as land stewards we can make decisions and take actions that help to achieve goals that maximize the long-term value of the ranch and its resources. 



200 Concord Plaza Drive
Suite 410
San Antonio, Texas 78216



eastfoundation.net

