

BOBWHITE QUAIL BIOLOGICAL FACTS YOU MAY NOT KNOW:

The bobwhite quail is the most important game bird in South Texas. Landowners, managers, and hunters spend more time and effort per acre to produce quail than any other game bird.

Distribution: The average annual home range of a bobwhite ranges from 10-80 acres; core areas (where bobwhites spend 75% of their time) average 22 acres.

Activities: Pairs begin to establish breeding territories during February-April; nest construction can begin as early as March; a majority of hatches are completed by July; hatches as late as November have been recorded when a “wet” fall follows an exceptionally “dry” spring and summer.

Rainfall: Quail population densities tend to vary greatly from year to year, even in the best quail producing regions of the state. The timing and amount of fall and winter rainfall are thought to be the most critical factors that determine quail breeding success and survivability during the next year. May through July rainfall appears to be most critical; less than four inches of rainfall results in less than three young per adult; greater than five inches of rainfall results in at least five young per adult; fall rains are important for producing cool-season forbs and for producing late bobwhite hatches following a dry summer; spring rains are important for producing warm-season forbs; mortality increases if rainfall during August/September falls below 6.5 inches.

Food: Chicks require 28% protein for maximum growth, adult females require 23% protein for egg-laying, and adults of both sexes require 11-12% protein for maintenance; the best sources for protein are insects and legumes (nitrogen-fixing plants); on an annual basis, seeds with hard coats are the primary diet item for bobwhites.

Reproduction: One egg is laid per day; clutch size varies from 12-15 eggs; incubation takes 23 days; all eggs hatch within 1-2 hours so chicks can leave the nest at the same time. The number of chicks produced may be directly related to insect abundance; 46% of chicks produced are the result of the female’s first nesting effort; 20% of chicks result from the second, third, or fourth nesting effort by the female if her earlier nest(s) is (are) destroyed; 6% of chicks result from a second nesting effort by females whose first nest also was successful (double clutch); 28% of chicks result from nests incubated by males; males raise 5-35% of broods; age ratios of 3-4 juveniles per adult in the fall harvest indicate good bobwhite production; age ratios of only 1-2 juveniles per adult indicate poor production.

Natural mortality: Average life expectancy is 8.5 months; 62% of chicks die before reaching twenty days old, but survival equals that of adults after 2-4 months; coyotes, raccoons, and feral hogs are the major nest predators and secondary predators include skunks, armadillos, and snakes.

Trapping and release: Releasing pen-raised birds is a very expensive and ineffective method of increasing quail densities; fifty percent of pen-raised birds die within eight days and 75-90% die after twenty to twenty five weeks; releasing pen-raised birds increases the danger of disease transmission.

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