Some Game Management Practices Suitable for Oklahoma[1]

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Game management practices suitable for Oklahoma have been reported in a number of publications. This paper is an attempt to bring together and summarize the available information on the ecology and management of the bobwhite quail and of waterfowl. It is believed that such a summary may encourage similar efforts for other important groups of wildlife. It would appear highly desirable to compile such information for all game species found in Oklahoma. No attempt has been made to present a complete account of the ecology and management methods which might be considered by biologists and landowners in the state. However, it is felt that the most important requirements and means of meeting them are discussed.

BOBWHITE

HABITAT RELATIONSHIPS

1. Satisfactory fall and winter covey ranges in North Central Oklahoma are limited to timbered or shrubby ravines and patches of oak woods bordered by grain fields or by idle or abandoned cropland grown up to seed-producing weeds (Baumgartner, 1945). Timbered ravines, brushy fence rows and thickets and stands of weeds are used regularly for cover and feeding sites. Quail are found much less commonly in the open grasslands throughout the year. Ungrazed tall grasses are important for nesting and this type of vegetation shows a high degree of use in the summer (DeArment, 1951).

2. Bobwhite eat a wide variety of foods in the fall and early winter but most of the coveys depend upon one or more of the following foods to provide their staple diet:

Ragweed seed (state-wide), sunflower seed (central and western), grain sorghums (state-wide), wild beans (eastern and central), acorns (state-wide), Korean and common lespedeza (eastern and central), panic grasses (state-wide), corn (eastern and central), Johnson grass (state-wide), crab and witch grass (eastern and central), spurges (central and western), dove weeds (western), begger ticks

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(eastern), wild grapes (eastern), Buckthorn (western) and marsh elder (western). Green plants and insects are also important (Baumgartner, 1946; Lee, 1948; Baumgartner, *et al.*, 1952). In all probability most of the fall quail ranges in Oklahoma include considerable amounts of one or more of these foods (Baumgartner *et al.*, 1952; Davison, 1942).

3. Bobwhite do not require free water for drinking but utilize it when available particularly during dry falls (Baumgartner, 1945; Davison, 1935).

4. Bobwhite winter populations are low in areas where there is no grazing and practically non-existent on farms where pastures and crop residues are severely overgrazed (Baumgartner, 1946; Duck and Fletcher, 1945).

5. Extensive fires eliminate winter covey ranges and may reduce the carrying capacity the following year (Baumgartner, 1945).

6. Predators do not seem seriously to reduce bobwhite populations where food and shelter are satisfactory (Baumgartner, 1945).

MANAGEMENT PRACTICES

1. Control of hunting does not reduce the population unless it removes more than 50% of the early fall population (Baumgartner, 1944). In most localities enough farms are closed to hunting to protect adequate breeding stock.

2. Refuges do not carry more birds through the winter than comparable areas open to hunting and apparently are not needed (Duck and Fletcher, 1945).

3. Game-farm bobwhite have a very low survival and do not contribute enough to the hunting or breeding season populations to justify the costs of production (Baumgartner, 1944; Buechner, 1950; Hanson, 1947).

4. Small feed patches of grains (½ - 3 acres) attract bobwhite coveys in the fall but fail to provide food during the winter (Baumgartner, 1945).

5. Extensive plantings of grain sorghums and legumes increase bobwhite populations (Steele, 1953-1955).

6. Board and pole shelters erected in open prairie areas were not used extensively for shelter by bobwhite (Baumgartner, 1945).

7. Extensive brush piles and tops of fallen trees provide adequate quail shelter (Baumgartner, 1945; Steele, 1953-1955).

WATERFOWL

HABITAT RELATIONSHIPS

1. Clear ponds and lakes are visited more frequently by waterfowl than are muddy bodies of water (Baumgartner, 1949; Hancock, 1953; Barstow, 1957).

MANAGEMENT

1. Ponds cleared by watershed control and the use of fertilizers provide the best production of duck food and the best hunting (Baumgartner, 1942, 1949; Barstow, 1957; Hancock, 1953).

2. Controlled hunting on public reservoirs is practical (Baumgartner, 1942).

3. Setting aside part of the larger reservoirs as refuges apparently improves waterfowl hunting (Baumgartner, 1942).

ANNOTATED BIBLIOGRAPHY

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Hanson, H. G. 1947. Missing — 56,340 Bobwhites! Okla. Game and Fish News 3: 20.
Low survival on game farm birds found in Oklahoma studies.

Lee, L. 1948. The Fall and Winter Food of the Bobwhite in Oklahoma. Okla. Game and Fish Dept.: 1-23.
Foods eaten by bobwhite based on 427 crops taken throughout the state.

Steele, John L. 1953-55. Reports on Habitat Improvement Project on the Canton Lake Public Hunting Ground. ms. Oklahoma Game and Fish Dept.
Extensive grain and legume plantings have resulted in increased populations. Providing cover has also been beneficial.

Wint, George B. 1951. Hunting Return on Pen-reared Bobwhites in Okfuskee County. Proc. Okla. Acad. of Sci. 30: 118-120.
Releases made during the summer provided more birds for the hunter than those made in the fall.