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BOBWHITE QUAIL MANAGEMENT ON STATE CONTROLLED WILDLIFE AREAS

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Introduction

The public's use of bobwhite quail depends upon the presence of the birds and upon access to lands where they are found. Access to state fish and game lands is rarely a problem. However, providing desired quail populations is usually a challenge. The purpose of this report is to discuss what the state fish and game agencies are doing to produce bobwhites on lands they manage.

Techniques

All states known to have bobwhite populations were queried concerning: (1) numbers of acres under their control, (2) numbers of acres under their control inhabited by bobwhite quail, (3) percent of managed land receiving treatment beneficial to bobwhites, (4) kinds of quail management practices in use, (5) numbers of acres in each practice, (6) estimated effect on quail populations of each practice, and (7) plans for future quail management.

Findings and Conclusions

Twenty-five states answered the inquiry (Fig. 1). This included 9 states having so few bobwhite quail that management for this species did not exist or was of a token nature.

The responding states indicated that they controlled 16.9 million total acres of state fish and game lands (Fig. 2). One-third (5.6

million acres) of this was reported to be inhabited by bobwhite quail. Management practices designed to benefit quail were being employed on 2 million acres - 36% of the inhabited lands.

Seven management practices beneficial to quail were in common use (Fig. 3). Several states commented that management practices in use were designed to benefit several species including quail. In general, states in the heart of the quail range employed management directed principally to quail while peripheral states were mostly concerned with other species.



Fig. 1. Illustrative comparison of states responding and not responding to questionnaire

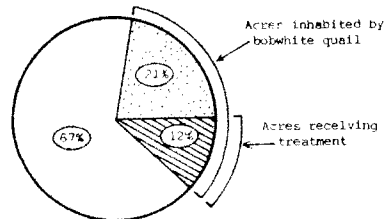


Fig. 2. Bobwhite quail management on state-controlled fish and game lands.

Management Practice	Percent of Acres Treated									
	1	20	30	40	50	60	70	80	90	100
Controlled Burning	[X] 51.5 [::] 19.2									
Herbaceous Planting	[X] 87.9 [::] 16.5									
Tree & Shrub Planting	[X] 63.6 [::] 47.4									
Plowing & Disking	[X] 39.4 [::] 0.6									
Timber Clearing & Thinning	[X] 42.4 [::] 2.9									
Brush Control (Mowing & Spraying)	[X] 33.3 [::] 1.4									
Prescribed Grazing	[X] 27.3 [::] 12.0									

[X] Percent of states using practice
 [::] Percent of total managed acres receiving treatment

Fig. 3. Extent of use of seven most popular quail management practices.

Herbaceous planting was the most common practice reported and is being used by 88% of the states. In most cases, herbaceous plantings involved agreements with cooperating farmers who planted prescribed crops and were permitted to harvest a portion of the grain or forage. Small food patches apparently were planted where sharecropping was not practical. One state noted that although food crops should be small irregular patches, their sharecroppers prefer large square fields. Herbaceous plantings ranked third in acreages treated, and were in common use throughout the bobwhite quail range.

Tree and shrub planting was the second most-used practice (Fig. 3). It was used most extensively by states on the north and west borders of the bobwhite quail range. Usually it was used to break up large fields. More than twice as many acres were treated with tree and shrub plantings than were treated with any other practice.

Controlled burning was employed by about 0.5 of the states reporting (Fig. 3). About 0.2 of all game and fish lands were so treated. Most of the states using fire to any appreciable extent were in the Southeast. None of the New England states reported using fire.

Timber clearing and thinning was used by 42% of the states on small portions of their lands (Fig. 3). The same can be said for mowing and spraying brush. In both cases, the practice was usually employed to break up dense extensive stands of woody cover and create more edge.

Prescribed grazing was used by 27% of the reporting states, usually for control of brush and grass. One state fenced covey headquarters areas to protect them from cattle trampling.

Plowing and discing were used by nearly 40% of the states, but on a very limited scale. They were employed to control grass and to generate natural quail foods.

Several other worthy practices were reported by a few states. Four states reported the use of brush piles - including "living" brush piles produced by cutting individual trees partly in 2 and then pushing them over.

The planting of a grass-legume mixture as nesting cover next to cropland was reported by one state. The clipping of vegetation to produce "bugging" areas for broods was mentioned. Also 1 state made bare dirt trails for travel lanes and dusting areas.

Herbicide use on timber and root plowing of brush were each under test in 1 state. "Quail food blocks" are also under study in 1 state.

The states were asked to classify the practices they were using as to good, questionable, or poor with respect to their value for increasing quail numbers. All practices except herbaceous plantings, tree and shrub plantings and prescribed grazing were considered good by all states employing them (Fig. 4).

According to this measure, controlled burning was the most useful tool employed (Fig. 4). Timber thinning or clearing was second. Brush control and plowing and discing were also favored practices.

Herbaceous plantings, although popular with most, were considered questionable by 26% of the respondents. Sixty-one % of the states using tree and shrub plantings considered this practice to be good, 31% considered it questionable and 8% felt it was poor. Prescribed grazing was considered poor by 60% of the states; 40% believed it was good.

Whether or not any of the practices are good or poor depends much on how they are used. A good example is grazing in Oklahoma. On state-owned lands where the Department can control when and how much grazing occurs, it is a useful low-cost tool. However, on Department-managed Corps of Engineer lands, it has been a poor practice because the Department has been unable to prevent frequent overgrazing.

The states were also asked to indicate their plans for future management. With one exception, no major changes in management seem likely (Fig. 5). The exception is that about 65% of the responding states intend to increase their use of controlled burning. There were indications of small increases in the use of grazing.

Several states indicated that they did not feel qualified to evaluate the practices they were using. They suggested a need for more research to do this. Six or more states are now engaged in such research. A look at the list of papers being presented at this symposium will indicate the nature and location of some of this research. Yet there are large regions where so little is known about the effects of practices in use that management is a hit-or-miss proposition. In these areas, research to develop productive management practices has first priority.

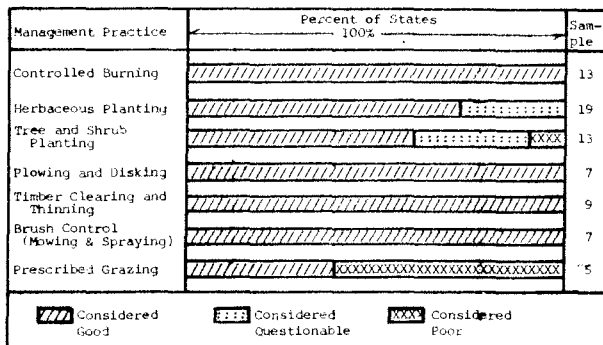


Fig. 4. Percent of states that considered individual management practices being used as "good", "questionable" or "poor".

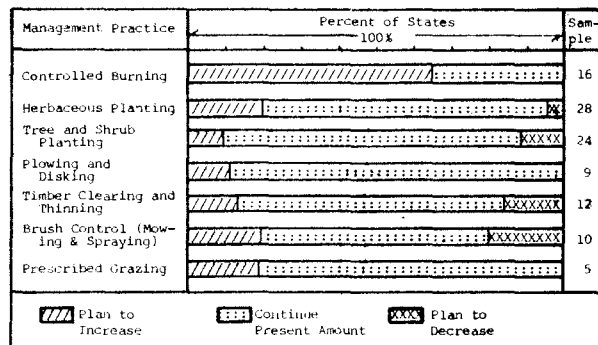


Fig. 5. Plans of states for future use of quail management practices now in use.