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STATE AGENCY PROGRAMS FOR BOBWHITE QUAIL MANAGEMENT ON PRIVATE LANDS

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Abstract: State programs to protect and improve wildlife habitat on private lands have characteristically provided indirect incentives including plant materials, signs, technical advice, and trespass control. Bobwhite quail have, no doubt, benefited from these programs although Wisconsin had the only project which specifically featured the species. The high level of participation in the Wisconsin endeavor suggested that certain cohorts of the private sector are willing to work cooperatively with land managers to improve wildlife resources. An interagency, comprehensive land management approach is needed. Wildlife habitat can be benefited by the improved management of soil, water, plant, and animal resources. Specific programs for quail habitat management on private lands will likely work best under a user-pays concept involving hunting recreation.

The principal range of the bobwhite quail (*Colinus virginianus*) is about 750 million acres (Johnsgard 1973:Fig. 39); approximately 87 percent of this acreage is rural lands under private ownership. The key to improved bobwhite habitat and increased hunting opportunity is a balanced program of incentives and education directed at the private landowner. State fish and wildlife agencies within the bobwhite's range have applied a variety of programs to improve the management of wildlife resources on private lands (Table 1). This paper will briefly describe the array of state projects, then discuss the efforts underway in Wisconsin, and finally outline the implications of these endeavors for future programs.

Wildlife management programs for private lands focus on (1) wildlife habitat protection and enhancement, or (2) access for recreational use of wildlife resources, usually hunting. The Acres for Wildlife program adopted by several states is an example of a wildlife habitat improvement program, and Pennsylvania's Cooperative Farm Game Program and Wisconsin's Project Respect are examples of access programs. Many programs link "habitat development" and "access for recreation" as typified by North Carolina's Gamelands Permit or Nebraska's Habitat Stamp.

Private-lands wildlife management is applied in two basic ways. Programs can be "targeted" at specific wildlife species or at protecting or enhancing particular habitat types. South Dakota's Pheasant Restoration Program is an example of a targeted or featured species approach. Conversely, projects may be "non-targeted" such as the Acres for Wildlife

program, and the resultant habitat improvements or accessible lands are found in a shotgun-patterned distribution.

Programs to protect and improve wildlife habitat on private lands have been reviewed by Gottschalk (1977), McConnell (1977), Kuperberg (1978), Deknatel (1979), Madsen (1981) and Walton (1981). State programs characteristically provide indirect incentives--plant materials, signs, technical advice, and trespass control--to encourage the management of wildlife on private lands. Some form of aid for habitat development on private lands was provided by 44 states in 1979 (Deknatel 1979). Most state agencies within the bobwhite's range offer programs of potential benefit to quail, but only Wisconsin's pilot project appears to specifically feature the species.

STATE AGENCY PROGRAMS

Among the oldest and most successful state programs within the bobwhite's range are Pennsylvania's Cooperative Farm Game Program initiated in 1936 and North Carolina's habitat improvement project begun in 1946. Cooperators in Pennsylvania's program received personal property protection in return for public hunting rights for at least five years. Habitat improvement is encouraged, not required. By 1981, 18,967 landowners had enrolled nearly 2.3 million acres in the program (Horvath 1982). North Carolina's program provided 174,000 landowners with 870,000 units of plant materials from 1948-1976 (McConnell 1977). Periodic evaluations have shown good

Table 1. State fish and wildlife agency programs to improve the management of wildlife resources on private lands.^a

State	Program	Source
<u>Habitat Protection and Improvement^b</u>		
Arkansas	Acres for Wildlife	Ward and Pierce 1981
Georgia	Acres for Wildlife	Deknatel 1979
Illinois	Acres for Wildlife	Deknatel 1979
	Roadsides for Wildlife	Warner, in press
Indiana	Refuge Lease	Kirkpatrick 1977
	Classified Wildlife Habitat Act	Russell and Machan 1981
Iowa	Wildlife Habitat Stamp	George et al. 1981
Kansas	Acres for Wildlife	Deknatel 1979
	Wildlife Habitat Improvement	B. D. Hlavachick, KS FGC, pers. commun. ^c
Louisiana	Acres for Wildlife	Deknatel 1979
Minnesota	Property Tax Exemption	Peterson and Madsen 1981
	Operation Pheasant	Isley 1971
Missouri	Private Lands Program	Kirby et al. 1981
Nebraska	Acres for Wildlife	Cowgill 1971
	Habitat Stamp	Edwards 1981
North Carolina	RENEW	NC Wildl. Resour. Comm. 1977
Ohio	Habitat Planting Stock	Toepfer 1981
	Private Lands Wildl. Management	Toepfer 1981
Oklahoma	Acres for Wildlife	Deknatel 1979
South Carolina	Private Lands Wildlife Program	B. McTerr, SC, WMRD, pers. Commun. ^c
Tennessee	TWRA-TVA Cooperative Program	McConnell 1977
Texas	Tax Incentives	Walton 1981
Vermont	Wildlife Habitat Improvement	Sladyk and Regan 1981
West Virginia	Farm Game Program	R. L. Hall, WV, DNR, pers. commun. ^c
Wisconsin	Acres for Wildlife	Dumke and Frank 1982
	Quail Management Program	Dumke 1982
<u>Access for Hunting Recreation^b</u>		
Maryland	Cooperative Management Area	Pane 1980
Michigan	Public Access Stamp	J. Urbain, MI, DNR, pers. commun. ^c
New Jersey	Operation Good Neighbor	Pane 1980
New York	Fish and Wildl. Management Act	Brown 1977
North Carolina	Game-lands Permit	McConnell 1977
Pennsylvania	Cooperative Farm Game Program	Deknatel 1979
	Safety Zone	Gottschalk 1977
	Forest Wildlife Cooperator	McConnell 1979
Rhode Island	Landowner Cooperative Project	M. L. Lapisky, RI, DNR, pers. commun. ^c
Texas	Shooting Preserve Law	McConnell 1977
Wisconsin	Project Respect	Dumke and Frank 1982

^aAll state fish and wildlife agencies within the bobwhite's range provide some degree of technical assistance.

^bPrimary thrust of the programs although other objectives may be involved.

^cInformation gathered via questionnaires to state fish and wildlife agencies.

compliance in the use of the planting stock for wildlife habitat improvement.

The primary thrust of Pennsylvania's Cooperative Farm Game Program is public access for hunting. Similar programs are offered by Maryland, New Jersey, New York, and Wisconsin with Maryland's program unique in providing litter removal in addition to the usual landowner

services. More direct economic incentives for hunting access are provided by North Carolina's Game Lands Permit, which has opened 2 million acres to public hunting since 1971, and Michigan's Public Access Stamp.

Nebraska uses a portion of the revenue from a Habitat Stamp to protect and improve key habitats on private lands with a bonus if public hunting is

allowed. In the initial four years of this program, about 40,000 acres were enrolled under 1,800 contracts (Edwards 1981). The average payment for habitat improvement was about \$18/acre. Iowa uses about \$100,000/year from the sale of Wildlife Habitat Stamps to cost-share the establishment of switchgrass on private lands (George et al. 1981). This practice provides nesting cover for upland birds. Less direct economic assistance is offered under the Acres for Wildlife programs available in at least nine states within the bobwhite's range (Table 1). Typically, the state fish and wildlife agency provides coordination and technical assistance with co-sponsoring organizations and youth groups spearheading landowner enrollment. Participation usually requires protecting at least one acre for one year.

Ohio's ambitious Private Lands Wildlife Management Program was initiated in 1980 with a goal to acquire management control of 25 acres/mile² in 202 townships (Toepfer 1981). The Ohio Division of Wildlife's contribution to the interagency effort was \$1.5 million in FY 1981 and \$3 million was proposed for FY 1982. Six practices were available to provide nesting cover; cost-sharing for food patches was also offered.

States have also used leases, zoning, and tax incentives to preserve wildlife habitat and provide public hunting (Walton 1981). Indiana leased small plots (2-10 acres) as refuges for 10-year contracts during the period 1941-1959 and furnished plant materials for food and cover developments. Kirkpatrick (1977) discovered land use at 86 percent of the plots (n=43) favorable for wildlife production five years after the last lease had expired. Minnesota and Wisconsin use zoning to restrict development along waterways, and Wisconsin also employs a restrictive covenant to preserve agricultural and wildlife lands (Walton 1981). Forty-eight states have adopted farmland preservation measures, most employing preferential property-tax assessment (Council on Environmental Quality 1979), but the penalties for conversion have been questionably effective in preserving rural lands (Roe 1976). Minnesota and Indiana make property-tax exemption and credits available for the preservation of key habitat components. Texas offers tax incentives whereby agricultural and forest lands are taxed according to expected income and special exemptions are available to non-profit organizations holding wildlife lands (Walton 1981).

WISCONSIN PROGRAMS

Wisconsin is currently evaluating three wildlife management assistance programs for private lands with implications for bobwhite quail--Acres for Wildlife, Project Respect, and the Quail Management Program. The Acres for Wildlife program is an interagency effort involving the Department of Natural Resources (DNR), the Cooperative Extension Service, and the Department of Public Instruction. The primary objective of the program is to create

an awareness of the need to consider wildlife when making land use decisions.

Informational brochures, 4-H project manuals, and free shrub packets are the only habitat management aids currently provided by the cooperating agencies. Participation in the program, as gauged by requests for materials, is low in the quail range. Enrollees are dedicating primarily non-cropland tracts already important as wildlife habitat. Although Acres for Wildlife is applied in a non-targeted manner, the program could be promoted by youth groups in selected areas to enhance food and cover relationships for a featured wildlife species, e.g., bobwhite quail.

The Project Respect program is designed to foster a better relationship between private landowners and hunters. The DNR supplies hunting permission forms, arm bands, and signs. Within the quail range, 181 farms encompassing 42,787 acres were enrolled from 1977-1979 for the primary purpose of controlling trespass associated with deer hunting. Quail hunters may have been given access to these lands prior to enrollment had they asked permission. Technical assistance and free plant materials for wildlife habitat improvement are offered under the Project Respect agreement, but few landowners request either. The program could be targeted at opening blocks of habitat to quail hunting, and the link between "access" and "habitat enhancement" could be strengthened at these sites.

The Quail Management Program has two objectives: (1) to double premanagement quail densities and stabilize population fluctuations, and (2) to develop incentive programs for wildlife management on private lands. Habitat restoration was the primary management thrust, and the practices were applied on a 60 mile² area in the heart of Wisconsin's quail range. DNR personnel representing wildlife, forestry, and research functions prepared management prescriptions in consultation with USDA county officials.

Between 1975 and 1980, 117 landowners were contacted to solicit participation in habitat development activities and 100 landowners (85 percent) ultimately participated in the program (Dumke 1982). This high level of cooperation exceeded the expectations of local resource managers and reflected an adequate incentive program and an effective delivery system. The key elements in this program that contributed to its success were (1) personal contact, (2) early support by community leaders, (3) flexibility in cooperative arrangements, (4) an acceptable agreement, and (5) interagency cooperation.

Personal contact was perhaps the most important factor in attaining a high level of cooperation in habitat improvement activities. Newsletters were used to introduce the program and provide progress reports to management area landowners (317 ownerships). Typically, three to four visits (about five hours) with the landowner were required to further outline the project and

ultimately negotiate a satisfactory farm plan. These conversations were designed to gain an appreciation of the landowners' objectives for the property and the constraints that infringed on our cooperative management of the land.

A USDA report (U.S. Department of Agriculture 1976) emphasized the importance of interpersonal contacts in motivating farmers to adopt a particular management practice. Printed information promoted awareness in the predecision period, but adoption of a practice was enhanced by the presence of an information source that interfaced directly with the people involved. The report also indicated that the information source must be viewed as highly credible by the farmers. We found that biases caused by adverse press and previous experience can be overcome by restoring confidence through personal contact. Reinforcement of this confidence is accomplished by having a flexible working arrangement with potential cooperators and local support by community leaders and resource managers in other agencies.

Conversations between neighbors at social functions and at community gathering places were important in spreading the news of a "good" DNR project. We developed a good rapport with individuals whose opinions were viewed favorably in the community. The answers for questions regarding DNR's motives were available in the community, i.e., from neighbors and community leaders.

Flexibility was the key word in the approach used to solicit cooperators for habitat improvement activities. A signed agreement was the only common denominator; all arrangements were subject to negotiations. Our assumption was that a program that emphasizes flexibility may require more time during the negotiation process, but the level of cooperation will be greater and more sustained.

Habitat restoration activities of the Quail Management Program were designed to improve winter food and cover relationships for quail. Bobwhite quail were most abundant in Wisconsin during the mid-1800's when pioneering farming practices provided ample brushy cover and an abundance of waste grain for winter food (Kabat and Thompson 1963). The grazing of woodlands, more efficient harvesting of grains, and intensification of herbicide use resulted in the loss of critical food and cover components. The management strategy was to provide secure wintering sites connected by a network of continuous hedge.

Within the 60-section management area, 26 units of contiguous, physiographically similar habitat were identified. Traditional and potential wintering sites for quail were located and prescriptions written to improve food, cover, and dispersal features. The management units were prioritized for habitat development based on the potential for producing a continuous web of hedgerows encompassing at least three to four wintering sites. Within the high priority management units the landowners with key elements

in the plan were contacted first. If the property owner(s) demonstrated an interest in the program, his (their) ideas were solicited and incorporated into a tentative plan. Subsequent negotiations produced a final farm plan and a 10-year agreement outlining the cooperative arrangement. Most often the property owners' contribution was the land devoted to wildlife production and DNR's contribution was the labor and materials for habitat improvement.

Over 465,000 shrubs and conifers were planted to create about 32 miles of new or improved hedge, six miles of enhanced riparian corridor, 11 miles of improved woodland edge, and 191 plots. The plots totaled 196 acres and varied from a clump of spruce covering about 1,400 ft² to a 6.7-acre unit with conifers, shrubs, brush piles, nesting cover, and food patches of legumes and sorghums. Sorghum food patches were planted on 75 plots; 13 of these sites had legume patches as an auxiliary food source for early winter. Sorghum patches were about 1/4 acre in size. The DNR cost of installing habitat improvements on the typical property was \$1,600.

The target species for this program was the bobwhite quail; nonetheless, the promotional strategy featured the total wildlife benefits provided by the habitat improvements. Development costs could be charged to the production of the favored wildlife species, but the economic values are difficult to assign. The agreement developed for this pilot program does not require the cooperator to allow access for recreational use of the wildlife produced.

IMPLICATIONS

The high level of participation in the Quail Management Program suggests that certain cohorts of the private sector are willing to work cooperatively with land managers to improve our wildlife resources. The labor intensive approach used on the quail project was effective, but not practical for rangewide application. An interagency, comprehensive land management approach is needed. Wildlife habitat can be benefited by the improved management of soil, water, plant, and animal resources using a multi-purpose, integrated approach (Dumke et al. 1981:544, Karr 1981, McConnell 1981).

Federal programs, such as the SCS Small Watershed Program, provide the basic tools for better land management; what is needed is better leadership in all disciplines and at all levels (McConnell 1981). State fish and wildlife agencies should encourage interagency, multi-disciplinary work groups to explore improved private-lands management with wildlife values given equitable treatment. Wildlife resource advisory committees can provide the needed emphasis.

Specific programs for quail habitat management on private lands will likely work best under a user-pays concept involving hunting recreation.

State agencies should encourage landowner cooperatives or large corporate ownerships to practice habitat management for quail with benefits offered to hunter cooperatives or the hunting public on a fee basis.

The most successful programs will have provisions for dealing with important disincentives to program acceptance including control of access and hunter numbers, liability for injury, animal damage, and slow results from habitat developments. Economic incentives such as direct cash subsidies or tax exemptions and indirect benefits such as plant materials, birds for stocking, and technical advice will be required; personal and social incentives will also be present in the better programs (Svoboda 1980).

The impetus for new programs can originate from any sector and most often results from the persistent efforts of one individual. For example, the Minnesota property tax credits for wetland preservation resulted largely from the efforts of Carl Madsen with the U.S. Fish and Wildlife Service. State agency personnel (and other interested persons) must develop proposals and seek colleague and agency support, interagency endorsement, conservation organization interest, legislative action, and finally, public acceptance if we are to improve wildlife habitat on private lands.

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