

# Characteristics of Deer Hunting Lessees in South Carolina and Mississippi

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*Abstract:* Characteristics and activities of hunters leasing white-tailed deer (*Odocoileus virginianus*) hunting rights in South Carolina and Mississippi during 1984 were assessed by mail survey. Of 520 questionnaires delivered, 66% were returned. Safety (81%), fellowship (76%), and higher quality hunting (70%) were ranked as the most important reasons for leasing hunting rights by respondents in both states. The majority of hunters in both states felt that the right to post leased lands was very important, with about 50% indicating they would discontinue leasing if posting rights were taken away. Over 30% of the respondents in both states reported they would stop deer hunting if they could not lease hunting rights. In South Carolina, 41% of the hunters were primarily still hunters, and 59% hunted deer primarily with dogs; while in Mississippi 59% still hunted, and 41% hunted with dogs. Differences ( $P \leq 0.05$ ) in socioeconomic, attitudinal, and club-land utilization responses were detected by state and method of hunting.

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While information has been gathered on landowner and hunter attitudes towards wildlife and hunting, little work has been done on these subjects relative to leasing of hunting rights. Most studies concerning lease hunting have concentrated on lease fees. Pope et al. (1984) concluded that the value of wildlife is at least partly reflected in the hunt lease market, and further determined that wildlife may contribute as much as \$123.50 per ha to the mean value of deer range in Texas. Lassiter (1985) reported that mean hunt lease fees paid to forest landowners in 4 southeastern states ranged from \$3.06 to \$6.45 per ha per year. The variation in lease values may be due to differences in game populations, location, and types of hunters (McKee 1986).

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Wildlife biologists generally recognize that deer hunters, primarily using still-hunt and dog-drive methods, represent groups displaying differing characteristics and attitudes (Guynn et al. 1980). The objectives of this study were to determine characteristics and activities of hunt lessees in Mississippi and South Carolina and to determine the influence of location and deer hunting method on lease values.

## Methods

Characteristics and activities of deer hunting lessees were determined by mail-survey questionnaire. Two land-holding timber companies, one in Mississippi and one in South Carolina, supplied lists of hunt clubs leasing corporate lands. Of 400 clubs in South Carolina, 25% of the club presidents were surveyed, while all of the 169 Mississippi club presidents were questioned. A 25% sample of South Carolina Wildlife and Marine Resources Department's doe quota cooperators were also surveyed. The questionnaire was designed to determine: (1) current lease prices, (2) trends of lease prices, (3) primary hunting methods, (4) deer harvest objectives, and (5) socioeconomic characteristics of deer hunting lessees. Descriptive statistics were calculated, and responses were compared by state and method of hunting (dog drive or still hunting) using Chi-square contingency tests and Student's *t*-tests.

## Results and Discussion

Response rates were similar by state: of 169 surveys delivered to Mississippi club presidents, 73% were completed and returned; of 351 surveys delivered to South Carolina club presidents, 64% were completed and returned.

South Carolina clubs were more likely to dog-drive deer than were Mississippi clubs and less likely to still hunt (Table 1). Hunting methods allowed and primary hunting method used on leased lands were associated ( $P \leq 0.05$ ) with state.

Most (98.5%) respondents indicated they preferred leasing hunting rights to

**Table 1.** Deer hunting methods of lessees in South Carolina and Mississippi, 1984 (% of respondents).

Methods	South Carolina	Mississippi
Hunting methods allowed <sup>a</sup>		
Dog drive (%)	37.0	20.0
Still hunt (%)	30.4	42.5
Both (%)	32.6	37.5
Primary method of deer hunting <sup>b</sup>		
Dog drive (%)	59.3	40.8
Still hunt (%)	40.7	59.2

<sup>a</sup>Chi-square test used to test for differences in the distribution of frequencies of hunting methods by state ( $\chi^2 = 11.16$ , 4 df,  $P \leq 0.05$ ).

<sup>b</sup>Chi-square tests used to test for differences in the distribution of frequencies of primary method of deer hunting ( $\chi^2 = 6.48$ , 1 df,  $P \leq 0.05$ ).

hunting on lands open to the public. Respondents indicated that safety (81%), fellowship (76%), and higher quality hunting (70%) were important reasons for leasing. Less than half of all respondents reported that they leased for higher hunter success (37%) or because public lands were too far away (13%). Nearly one-third (30%) of all respondents reported that they would stop hunting if they could not lease lands on which to hunt.

Most (96%) respondents reported their lease agreement allowed control of non-member access to leased lands by posting boundaries and gating entrance roads. Most (85%) considered this an important privilege, with 50% indicating they would discontinue leasing if they could not post leased lands. No differences ( $P > 0.05$ ) were detected by state or method of hunting.

Almost three-fourths (70.5%) of lessee time spent on leased lands was spent hunting deer. The remaining time was spent hunting squirrels (*Sciurus spp.*) (10%), waterfowl (6.5%), wild turkeys (*Meleagris gallopavo silvestris*) (6.5%), cottontail rabbits (*Sylvilagus floridanus*) (4%), and northern bobwhites (*Colinus virginianus*) (2%). Still hunters spent fewer days afield per deer harvested (21.0) and harvested more deer (1.05 deer per 40.5 ha) than did dog-drive hunters (22.5 days and 0.98 deer per 40.5 ha). Clubs in South Carolina that primarily hunt deer with dogs had more ( $P \leq 0.05$ ) members than clubs that primarily still hunt (34 and 12, respectively). The same was true in Mississippi (43 and 24, respectively). Club membership was larger ( $P < 0.05$ ) in Mississippi than in South Carolina.

Most respondents (89%) reported their club practiced a defined deer harvesting strategy in 1984 (Table 2). About half of those having a strategy expressed a preference for harvesting maximum numbers of antlered bucks with an antlerless deer quota. Only 4% indicated that maximum trophy buck harvesting with no antlerless quota was their objective. Mississippi respondents were more likely ( $P \leq 0.05$ ) to prefer maximum buck harvest than South Carolina respondents, but less likely to prefer maximum buck harvest with an antlerless quota. Still hunters were less likely

**Table 2.** Deer harvest objectives of lessees in South Carolina and Mississippi, 1984 (% of respondents).

Harvest objective <sup>a</sup>	South Carolina		Mississippi	
	Still hunt	Dog drive	Still hunt	Dog drive
Maximum bucks <sup>b</sup>	9.6	27.2	26.2 <sup>c</sup>	53.4
Maximum deer	13.3	8.0	8.2	11.6
Max. trophy bucks	2.4	2.4	9.8	4.7
Max. bucks, antlerless quota <sup>d</sup>	55.4	56.0	44.3 <sup>e</sup>	23.3
Max. trophy, antlerless quota	19.3	6.4	11.5	7.0

<sup>a</sup>Chi-square tests were used to test for differences in the frequency distribution of harvest objectives by state and by hunting method.

<sup>b</sup> $\chi^2 = 10.81$ , 1 df,  $P \leq 0.05$  by state.

<sup>c</sup> $\chi^2 = 7.80$ , 1 df,  $P \leq 0.05$  by hunting method within Mississippi.

<sup>d</sup> $\chi^2 = 11.32$ ,  $P \leq 0.05$ , 1 df by state.

<sup>e</sup> $\chi^2 = 4.86$ ,  $P \leq 0.05$ , 1 df by hunting method within Mississippi.

**Table 3.** Age, sex, race, education, and annual income reported by presidents of hunt clubs in South Carolina and Mississippi, 1984.

Characteristic	South Carolina		Mississippi	
	Still hunt	Dog drive	Still hunt	Dog drive
Age <sup>a</sup> (years)	43.3 <sup>c</sup>	50.8	48.8	51.0
Sex (% male)	100.0	100.0	100.0	100.0
Race <sup>b</sup> (% white)	96.8	96.0	100.0	100.0
Education <sup>a</sup> (years)	14.4	12.2	14.8	15.5
Income <sup>b,d</sup> (\$ per year)	28,830	24,417	32,319	32,447

<sup>a</sup>*t*-tests were used to test for differences in mean age and years of education by method of hunting and by state.

<sup>b</sup>Chi-square tests were used to test for differences in the distribution of frequencies of race and income classes by method of hunting and by state.

<sup>c</sup>*t* = 4.64, 199 df, *P* ≤ 0.05 by hunting method within South Carolina.

<sup>d</sup> $\chi^2$  = 28.66, 12 df, *P* ≤ 0.05 by state.

(*P* < 0.05) to prefer maximum buck harvest than dog-drive hunters in Mississippi, and more likely to prefer maximum buck harvest with an antlerless quota.

Lease fees averaged \$3.58 per ha in South Carolina and \$6.38 in Mississippi during 1984. No differences (*P* ≤ 0.05) were detected between states or between hunting methods. Lease fees paid by respondents in South Carolina increased 93% during 1979 to 1984 and by 137% during the same period in Mississippi. Despite the increases observed during 1979–1984, a majority (59%) of South Carolina clubs expected lease fees to increase 36% by 1989, while 42% expected the fees to remain about the same. In Mississippi, 62% of the respondents expected a 49% increase in fees, while 38% expected fees to remain the same. Most respondents (81%) felt that current (1984) lease fees were fair.

Club presidents were predominantly white, male, and employed as wage earners, farmers, and businessmen earning more than \$20,000 per year. They were in their mid forties to early fifties, high school graduates with some college education, and from rural backgrounds. Dog-drive hunters were older (*P* < 0.05) and had lower incomes (*P* < 0.05) than still hunters in South Carolina (Table 3). Mississippi respondents reported higher incomes (*P* > 0.05) than South Carolina respondents. No differences (*P* > 0.05) in race or educational level of club presidents were detected between states or by method of hunting.

Most lands leased by Mississippi respondents were located in the Delta region of mid-western Mississippi, an area characteristically forested in bottomland hardwoods. Mississippi lessees expressed clear preferences for this forest type, while South Carolina lessees preferred stands of mixed pine hardwood and a diversity of types between stands (Table 4). Lessees from both states would apparently prefer to lease forest lands composed of less intensively managed forests rather than extensive pine plantations.

These survey results indicate there are differences among hunt lessees by location and method of deer hunting in the southern United States. Lessees in South Carolina and Mississippi differed in deer hunting methods, harvest objectives, and forest composition preferences. Mississippi lessees paid higher lease fees. Still

**Table 4.** Club president preference for forest composition on leased land in South Carolina and Mississippi, 1984 (% positive responses).

Forest composition	South Carolina		Mississippi	
	Still hunt	Dog drive	Still hunt	Dog drive
Pine plantation	0	0.8	1.4	0
Mixed pine-hardwood	23.1	30.4	9.9	10.9
Mixed stands	63.7	56.7	35.2	21.7
All hardwoods	7.7	7.8	45.0	65.2
No opinion	5.5	4.7	8.5	2.2

hunters in both states were more likely than dog-drive hunters to favor antlerless harvest and harvested more deer per unit hunting effort and area hunted. In South Carolina, still hunters were younger and had more income than dog-drive hunters.

Although these differences have certain management implications, the reasons for leasing expressed by respondents may dictate another message for managers. While the current management emphasis on public access land is desirable, concerns for safety, fellowship, and higher quality hunting experience can be more easily managed on leased lands due to better access control. Wildlife managers need to be concerned with wildlife management on private lands and the development of hunt lease mechanisms equitable to both the landowner and sportsmen.

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