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ANALYSIS OF HUNTER CHARACTERISTICS AND ATTITUDES
RELATING TO UTAH SHOOTING PRESERVES

by

John T. Ratti

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Wildlife Biology

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John T. Ratti

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ABSTRACT

Analysis of Hunter Characteristics and Attitudes

Relating to Utah Shooting Preserves

by

John T. Ratti, Master of Science

Utah State University, 1973

Major Professor: Gar W. Workman

Department: Wildlife Science

This paper evaluates the present status of Utah shooting preserves with special reference to attitudes and characteristics of hunters using and not using the shooting preserves system. Data were gathered primarily by a mail questionnaire survey.

Compared to non-users, shooting preserve users were more frequently raised in a suburban or city area, better educated, and had higher yearly incomes. Shooting preserve users were commonly employed as professionals or proprietors, while non-users were often employed as craftsmen, proprietors, or operators.

Most shooting preserve hunters hunted after the state game bird season was closed, and were generally satisfied with Utah preserves. Most hunters not using shooting preserves were very critical of the system, and claimed they would never hunt on a preserve. However, most non-users knew little about shooting preserves and were interested in having information about preserves in Utah.

It was concluded that Utah shooting preserves should advertise their service, supply desired facilities, avoid crowding, keep grounds neat and clean, and stock only strong, healthy pheasants.

(77 pages)

INTRODUCTION

Kozicky and Madson (1966) defined shooting preserves as "an area owned or leased for the purpose of releasing pen-reared game birds over a period of three or more months under license of the state game department." Early development of shooting preserves was slow due to abundant game and small rural human populations. However, during the last 15 years there has been an increase in the use of shooting preserves for hunting in the United States.

In 1954, 22 states provided legislation which licensed 756 shooting preserves. By 1963, 2,121 preserves were established in 44 states. In 1965, 47 states licensed 2,500 shooting preserves with a harvest of over 2 million game birds (Kozicky and Madson, 1966).

Increased use of shooting preserves appears to be correlated with increased human population. In accommodating this population growth, much of this nation's land has been transformed from its natural state into sites for public buildings, homes and an expanding highway system. Consequently, hunting land is diminishing and the sport is threatened.

Most hunters would probably agree that abundant natural habitat, a limited number of hunters, and a sufficient amount of game would constitute an area offering "quality" hunting.

Shooting preserves are a potential source of quality hunting for the future. To assist this potential the following objectives were established to gather information useful to evaluating and suggesting improvements for the Utah shooting preserve system:

1. To evaluate the sociological and economic characteristics of hunters using the shooting preserve system.
2. To determine the same characteristics for hunters not using the shooting preserve system, and why they do not use it.
3. To determine some characteristics of Utah Shooting preserves and their management.
4. To correlate the results of objectives 1, 2 and 3, and draw conclusions that will evaluate the present status of the shooting preserve system in Utah.

By analyzing shooting preserves in Utah, its users and non-users, the results define some of the hunter's characteristics, likes, dislikes, and desires; and will provide methods for improving shooting preserves in Utah and elsewhere.

REVIEW OF LITERATURE

Most of the research done on shooting preserves has been designed to produce detailed information on proper management of specific game bird species as well as general management of the preserve (Gardy, 1957, Kozicky and Madson, 1966, Martin, 1959, Smith et al., 1968, and others). Information has been developed about the situations that should be avoided in order to make the hunting experience as natural as possible (Kozicky and Madson, 1966).

The Northeastern Regional Research Committee (1968) collected data on hunter characteristics from six northeastern states. They reported that approximately 3 percent of the questionnaire respondents used shooting preserves, otherwise shooting preserves were not included in the objectives or results. Peterle (1967) gave some rather detailed information on hunter characteristics in Ohio, but he did not concern himself with shooting preserves in any way. There are many articles written about the characteristics of hunters in the United States, especially from individual state surveys (Crossley, S-D Surveys, 1956, Garrett, 1970, and others), but there is little direct reference to shooting preserve hunter characteristics.

Bartel (1971) conducted a study to determine the factors contributing to the success or failure of commercial shooting preserves in Utah. Bartel's research studied aspects of shooting preserve management and those

practices which are most prevalent on successful preserves. Again, attitudes or characteristics of hunters were not part of the study.

Frey, Wingard and Runner (1960) and Greene (1970) established data on hunter characteristics relating to shooting preserves. Frey et al. determined that about 2 to 3 percent of Pennsylvania's hunters use shooting preserves; 20 percent of the preserve hunters were out-of-state hunters; and only 12 percent of the preserve hunters were from small towns or rural areas.

In the study by Greene, demographic characteristics of shooting preserve users and information regarding the amount, quality, and satisfaction of the hunting experience were gathered by questionnaire. This information was compared with the hunter characteristics established by the Northeastern Regional Research Committee (1968), Palmer (1967), and Peterle (1967). Details of Greene's study were quite extensive and his results will not be discussed here, although specific reference will be made to his findings in the sections to follow.

METHODS

Information was collected primarily by means of questionnaires distributed to Utah shooting preserve hunters and to a sample of Utah hunters not hunting on shooting preserves. Managers of Utah shooting preserves were also surveyed to determine their attitudes toward preserves as well as some preserve characteristics.

The shooting preserve hunter population included all those who registered at a Utah preserve during the 1971-72 season (between September 1, 1971 and March 31, 1972). Non-resident registrants were included.

Names and addresses of preserve hunters were obtained by recording the hunting license number required for shooting preserve hunter registration. The numbers were taken to the Utah Division of Wildlife Resources main office where license holders' names and addresses were filed by the hunting license number. There was an attempt to obtain a 100 percent sample of those hunters registered for the first questionnaire mailing. However, due to the unwillingness of a few preserve managers to disclose their records, it was difficult to estimate the percent of 1971-72 Utah shooting preserve hunters that were asked to participate in the study. A total of 1,226 preserve hunters were mailed questionnaires and there was a final return of 548 or 44.7 percent (Table 1).

A random sample of 1,500 upland game bird hunters was obtained through the computerized records of the Utah Division of Wildlife Resources.

Hunters were asked not to complete the questionnaire if they had hunted at a Utah shooting preserve anytime in the past. A return of 665 questionnaires yielded a response of 44.3 percent.

At the onset of the project, it was estimated that approximately 1,500 hunters registered at Utah shooting preserves during the 1971-72 season. For this reason, a sample size of 1,500 Utah hunters was determined in order to have comparable sample sizes between the two surveyed groups. The percent response to the survey by the two groups was almost exact, with a difference of only 0.4 percent.

Table 1. Sample size and response to a mail questionnaire survey of Utah hunters using and not using shooting preserves

Population	Sample Size Number	Response to Questionnaire (2 mailings)	
		Number	Percent
Shooting preserve hunters	1,226	548	44.7
Utah hunters not hunt- ing at preserves	<u>1,500</u>	<u>665</u>	<u>44.3</u>
Total	2,726	1,213	44.5

The survey mailing to preserve users, non-users and managers included a cover letter, the questionnaire, and a self-addressed business reply envelope (see Appendix). The cover letter explained the project and encouraged hunters to respond.

Since the questionnaire information was confidential, a system was devised to identify those who failed to respond to the survey request. A numbering system on the business reply envelopes allowed for a record of those who did and did not respond. Those requests which were not returned within 30 days of the mailing were sent a follow-up request. This included a new letter (see Appendix), a questionnaire, and a self-addressed business reply envelope. Those failing to respond to the second request were not contacted again.

Results of the questionnaire survey were analyzed at the Utah State University Computer Center with an IBM 360/44 and Burroughs 6700 computers using a statistical program designed for social science data. The data were analyzed by contingency table, chi-square tests.

RESULTS AND DISCUSSION

When discussing the results of a mail questionnaire survey, a possible bias must be recognized. It is only valid to consider the results of this study accurate when referring to those who responded to the survey. One could only consider these results representative of all hunters if it could be shown that there is no significant difference between survey respondents and the non-respondents as well as those not included in the survey sample. However, Martinson and Whitesell (1965), and Hayne (1964), have shown that such differences do occur, primarily when respondents are reporting their hunting activity and kill of game. Since this study does not include (to any extent) these types of responses, one can only speculate as to how a response/non-response bias affects these results.

Hunter Characteristics

Analysis of most of the demographic characteristics (age, sex, childhood area, education, employment income) revealed a significant difference between hunters using shooting preserves and those not using preserves (see Tables 3-7). Table 2 represents a compilation of demographic characteristics of Utah shooting preserve users and non-users. The values in this table indicate many of the similarities and differences between shooting preserve users and non-users, which will be discussed separately in sections to follow.

Table 2. Characteristics of Utah shooting preserve users and non-users

Characteristic	Shooting preserve hunters (percent)	Hunters not using preserves (percent)
Age	34 (mean)	32 (mean)
Male	96.5	94.3
Married	64.5	64.9
Rural background	52.0	71.8
City background	26.8	14.7
High school graduate	16.5	26.0
College graduate	34.3	19.9
Employment		
Proprietor	23.2	12.2
Professional	16.8	5.9
Craftsman	16.2	27.8
Income		
0-\$15,000	44.8	78.1
\$15,000 +	55.2	21.9
Home owner	74.8	61.2

Utah shooting preserve users averaged about 34 years of age, 49 percent of them being younger than 40 years (Table 3). Greene (1970) found Michigan shooting preserve users to average 45 years of age. Utah hunters not using shooting preserves averages 32 years of age, 57 percent of them younger than 40 years. Peterle (1967) found that Ohio hunters averaged 35 years of age, and the Northeastern Regional Research Committee (1968) found the average age of hunters to be 38 years. Consequently, both Utah shooting preserve users and non-users were younger than similar hunting groups surveyed in other states.

Most of those surveyed were male (97 percent for preserve users and 94 percent for non-users), and approximately 65 percent of both groups were married.

Table 3. Analysis of age between shooting preserve users and non-users in Utah

Age group	<u>Shooting preserve hunters</u>		<u>Hunters not using preserves</u>	
	Percent	Cumulative	Percent	Cumulative
12-15	4.4	4.4	0	0
16-19	7.6	12.0	7.4	7.4
20-29	14.0	26.0	25.4	32.8
30-39	23.2	49.3	24.1	56.9
40-49	25.3	74.5	20.2	77.0
50-59	15.5	90.0	15.2	92.3
60-69	8.3	98.3	6.4	98.7
70 +	1.7	100.0	1.3	100.0

Hunters using preserves differed greatly from those not using preserves regarding childhood background (Table 4). Chi-square analysis showed a significant difference at the 99 percent level (chi-square = 49.5; degrees of freedom = 3; n = 1114). Only 52 percent of preserve users were raised in a rural community, compared to 72 percent of those not using preserves. However, due to sampling bias, these figures do not represent the geographic distribution of Utah residents in general. Preserve users had a higher percentage with non-rural backgrounds (48 percent) than those not using preserves (28 percent). Greene (1970) found similar results with 71 percent of the Michigan shooting preserve hunters being from a city of over 5,000 population. Frey et al. (1960) found that 88 percent of the shooting preserve users in Pennsylvania were city residents.

Table 5. Analysis of education between shooting preserve users and non-users in Utah

Educational level	Shooting preserve hunters (percent)	Hunters not using preserves (percent)
1-8 years grade school	3.9	3.8
1-3 years high school	11.1	12.9
High school graduate	16.5	26.0
Attended technical school	5.2	5.1
Technical school graduate	4.4	7.1
1-3 years college	24.6	25.2
College graduate*	<u>34.3</u>	<u>19.9</u>
Total	100.0	100.0

*Education level showing a significant difference between shooting preserve users and non-users.

Table 6. Analysis of employment between shooting preserve users and non-users in Utah

Employment category	Shooting preserve hunters (percent)	Hunters not using preserves (percent)
Proprietor*	23.2	12.2
Clerical*	13.0	7.5
Professional*	16.8	5.9
Semi-professional	4.0	4.9
Craftsman*	16.2	27.8
Operatives*	4.8	10.3
Service	3.8	6.6
Farmer*	1.0	5.6
Teacher	3.8	4.6
Housewife	1.1	3.6
Student	9.0	5.9
Retired	3.0	4.9
Unemployed	<u>0.4</u>	<u>0.2</u>
Total	100	100

*Significant difference between shooting preserve users and non-users.

analysis showed a significant employment difference, at the 99 percent level, between shooting preserve users and non-users (chi-square = 120.8; degrees of freedom = 12; n = 1115). Shooting preserve users were most commonly employed as proprietors (23 percent) and professional workers (17 percent). The craftsman category was the most significant employment area for those not using preserves, with 28 percent. The proprietor category was second with 12 percent (see Appendix D for list of occupations).

Seventy-eight percent of Utah shooting preserve hunters had yearly incomes of over \$10,000, and 38 percent had incomes over \$20,000. Greene (1970) found very similar results from Michigan preserve hunters, with 80 percent over \$10,000 and 32 percent over \$25,000. Utah preserve hunters had considerably higher yearly incomes than those hunters not using preserves (Table 7). Non-users had 56 percent above the \$10,000 bracket, and only 8 percent above \$20,000. In addition, 75 percent of the preserve hunters owned a home, while only 61 percent of hunters not using preserves owned a home. Chi-square analysis of income showed a significant difference (99 percent) between shooting preserve users and non-users (chi-square = 162.8; degrees of freedom = 4; n = 1086).

The differences in education, employment, and income as demonstrated by the data (Table 8) clearly indicate that shooting preserve users were more affluent than those not using preserves. This conclusion coincides directly with that of Greene (1970).

Table 7. Analysis of income between shooting preserve users and non-users in Utah

Income level	Shooting preserve hunters (percent)	Hunters not using preserves (percent)
\$ 0- 4,999	6.9	11.7
\$ 5- 9,999	15.0	32.5
\$10-14,999	22.9	33.9
\$15-19,999*	17.8	14.0
\$20,000 + *	37.5	7.9
Total	100	100

*Significant difference between shooting preserve users and non-users.

Table 8. Characteristics of Utah hunters, those using and not using Utah shooting preserves

Characteristic	Shooting preserve hunter (percent)	Hunters not using preserves (percent)
CHILDHOOD AREA:		
Rural area	52.0	71.8
Non-rural area	48.1	28.2
EDUCATION:		
College Graduate	34.3	19.9
EMPLOYMENT:		
Professional/proprietor	40.0	18.1
INCOME:		
Under \$15,000	44.8	78.1
Over \$20,000	37.5	7.9

General considerations

The demographic results show that when comparing shooting preserve users with non-users there are obvious differences in childhood background (area), education, employment, and income. These differences could be explained by the following observations.

Someone raised in a rural community probably had little difficulty finding hunting land or game. He has likely grown to take unrestricted land and abundant game for granted. Consequently, the thought of paying money to harvest a game bird is difficult to accept. However, someone raised in an urban community is not accustomed to being able to hunt at will. Urban hunters recognize that locating suitable land and obtaining trespass permission is the first prerequisite to a successful hunt. These hunters might consider the expense of hunting on a shooting preserve more than a fair trade for the often frustrating task of locating open grounds with quality hunting.

Since education is closely related to one's employment, these two characteristics will be treated together. Well educated individuals are commonly employed as either professionals or proprietors. Due to the nature of their employment, this group is likely to live in an urban area. Thus, urban residency may create the following factors which influence greater utilization of shooting preserves:

1. They may have less time to locate suitable grounds that are open to public hunting.
2. They may be less able to keep and train a hunting dog; especially those living inside city limits.

Income is another area closely related to education and employment. Hunters who earn a high yearly income seem to be the most likely candidates for patronizing a shooting preserve. Certainly one of the most offensive concepts of the shooting preserve system is the fact that the hunter must pay

money to participate in a sport which has been free (and still is in most areas) since the time hunting became a sport. The more money a hunter has available for recreational expenses, the more willing he might be to hunt on a shooting preserve.

Shooting Preserve Hunter Data

Most of the shooting preserve hunters (65 percent) visited preserves one to five times each season. Nineteen percent hunted only once, while 14 percent visited preserves more than 10 times. These results were similar to those found by Greene (1970). However, the North American Game Breeders and Shooting Preserve Gazette (1972) presented data from Michigan shooting preserves indicating that 65 percent of the hunters visited preserves only once, which represents an increase from Greene's (1970) data gathered only two seasons prior. This may suggest that a growing number of Michigan preserve hunters are not satisfied with their hunt, thus not returning a second time.

Hunters were asked to check the services they thought a shooting preserve should offer. There were five services of major importance cited. General information was the most frequently checked service with 71 percent indicating that hunters desire to know more about preserves and their management. This service could be realized with little cost to the operator, and represents a significant opportunity for generating new and return business. Sixty-nine percent of the respondents checked "hunting dogs" as a desirable service. Many people are unable, or not willing, to keep and care for a dog

the year-round, but enjoy being able to hunt with a dog. Hunting dogs are expensive to maintain and need a great amount of care and training in order to produce a first-class hunting dog that will satisfy a diverse groups of hunters. Thus, dogs represent a considerable investment which may be a major influence contributing to the success of a preserve. Wash-up facilities are quite important to preserve hunters, for 66 percent desired such a service. Wash-up facilities represent a service which could be offered with little trouble to the operator, although this service was overlooked at some preserves. Bird processing and food were the fourth (54 percent) and fifth (49 percent) most wanted services of a shooting preserve. Both of these services represent problems to preserve operators. However, they should be considered as areas of potential improvement to any preserve not offering such services. Figure 1 gives the percentages for each service, including seven categories not discussed.

Hunters were asked to indicate their reasons for hunting at shooting preserves rather than other areas (Table 9). Three basic reasons were mentioned most frequently. First, hunters strongly disliked crowded hunting conditions and felt that preserves had no crowding, and consequently, offered "quality" hunting under natural conditions. Second, being open to hunting most of the fall and winter months is to the advantage of preserves. Most hunters felt that the regular state hunting season was too short and they enjoy the longer season of shooting preserves. In fact, 64 percent of the shooting preserve hunters hunted only after the regular state hunting season was closed.

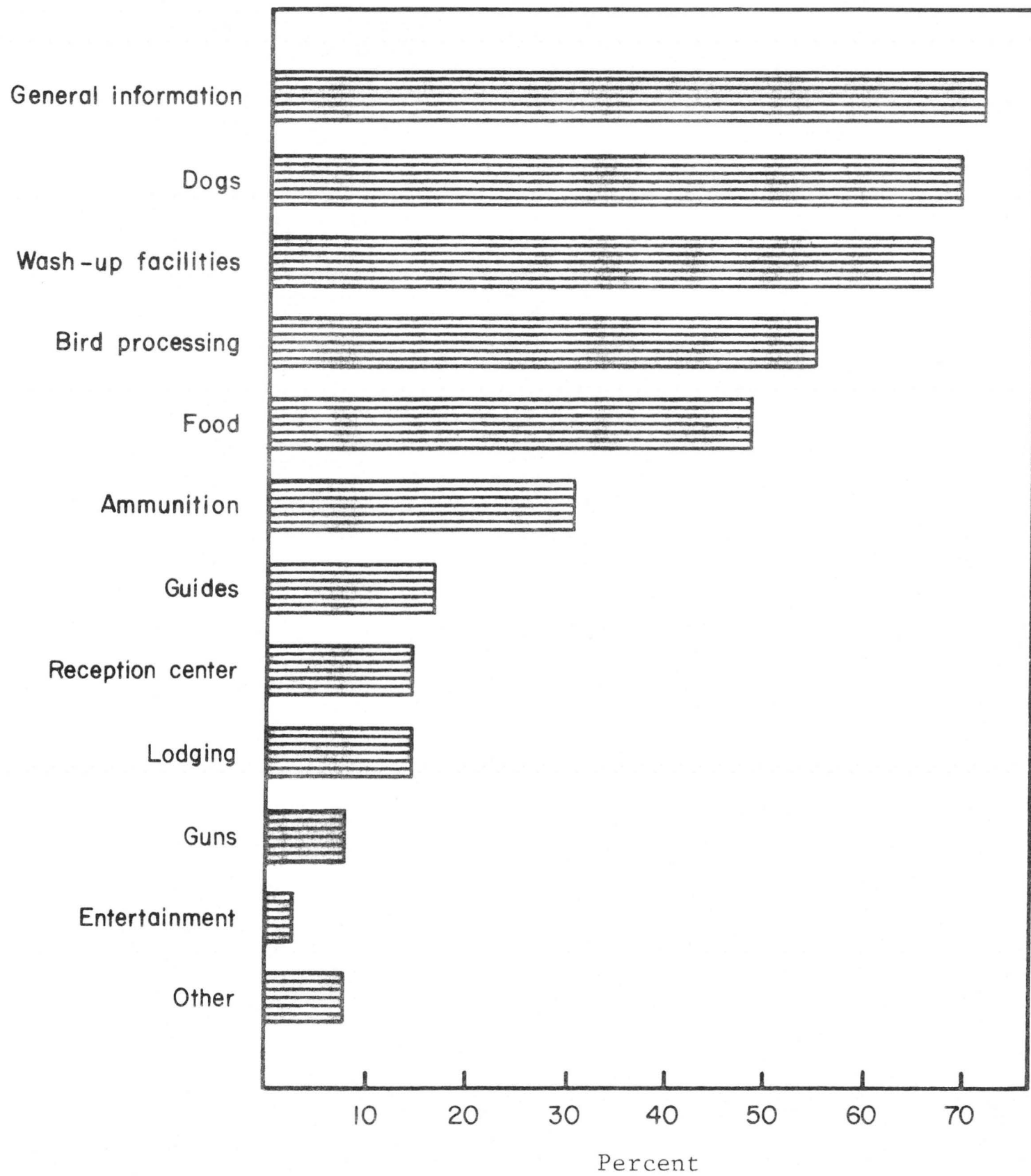


Figure 1. Response by Utah shooting preserve hunters when asked what services they thought shooting preserves should offer.

Third, preserve hunters indicated that they experienced low hunting success (game killed) on public grounds and farm land; shooting preserves generally guarantee hunting success (Figure 2).

Table 9. Responses of some questions asked of Utah shooting preserve hunters

Question	Yes (percent)	No (percent)
Did you hunt at shooting preserves while the regular state game bird season was open this past year?	36.2	63.8
Are you satisfied with the quality of hunting on shooting preserves?	74.1	25.9
Were you satisfied with the conditions (neat and clean, etc.) around the clubhouse or check-in area?	77.3	22.7
Considering what you know about shooting preserve management, do you feel the price you pay for birds is justified?	70.1	29.9
Would you be willing to pay increased prices in the future if such increases represented better quality shooting preserves?	39.3	60.7

Hunters were also asked to indicate which factors they disliked about shooting preserves. Considering that preserve hunters have the same expenses as non-preserve hunters, and they must forego an additional fee to hunt on preserves, it was understandable that 42 percent of the respondents voted "cost" the most disliked factor of shooting preserves. However, 70

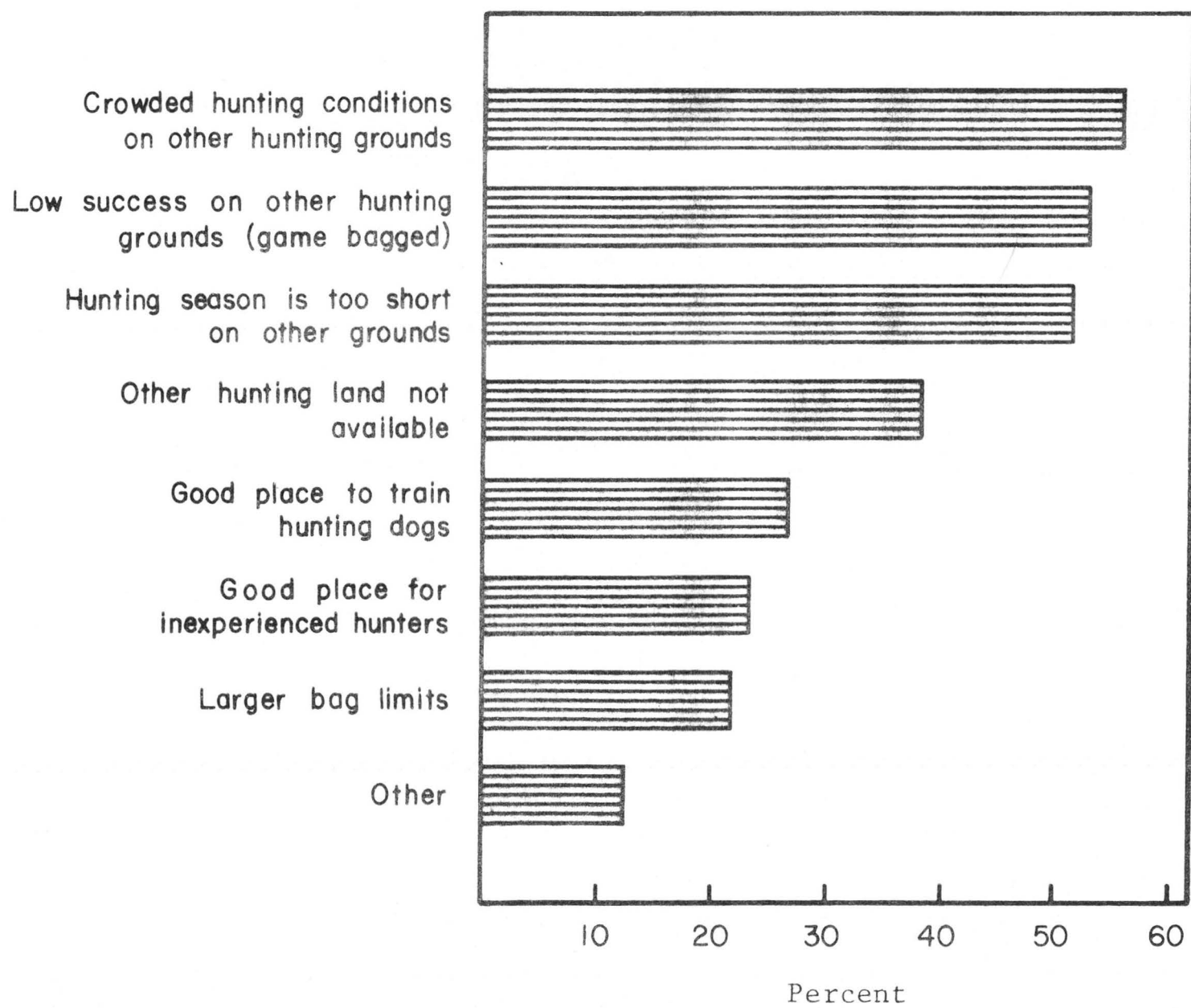


Figure 2. Factors influencing hunters to use shooting preserves rather than other hunting grounds in Utah.

percent of the preserve hunters felt the price they paid for birds was justifiable (Table 9). This indicates that although hunters did not like paying for the birds they shoot, they did not feel that preserves were receiving an unreasonable fee.

The second most disliked factor about preserves was that "birds do not fly well" (37 percent). Most people do not like spending money for a product, but they dislike it less when that product is obviously of good quality. It might be wise to be sure birds are in good condition and adjust the price for birds according to the added expense of raising healthy, strong flying birds (Greenburg, 1949). Figure 3 shows all the factors disliked about shooting preserves.

Seventy-four percent of the respondents said they were satisfied with the quality of hunting on shooting preserves. Similarly, 77 percent said they were satisfied with conditions (i. e. clean and neat) around the clubhouse or check-in area (Table 9). Although this indicates that most hunters were quite happy with Utah shooting preserves, preserve operators should be cautioned that this does not discount the importance of clean and neat conditions on their grounds. Statistical analysis of the above two questions revealed a significant relationship at the 99 percent level between the way they were answered (chi-square = 46.6; degrees of freedom = 1; n = 497). Fifty percent of those not satisfied with conditions around the clubhouse or check-in area said they were not satisfied with the quality of shooting preserves. There was also a significant difference at the 99 percent level between the number of days hunters

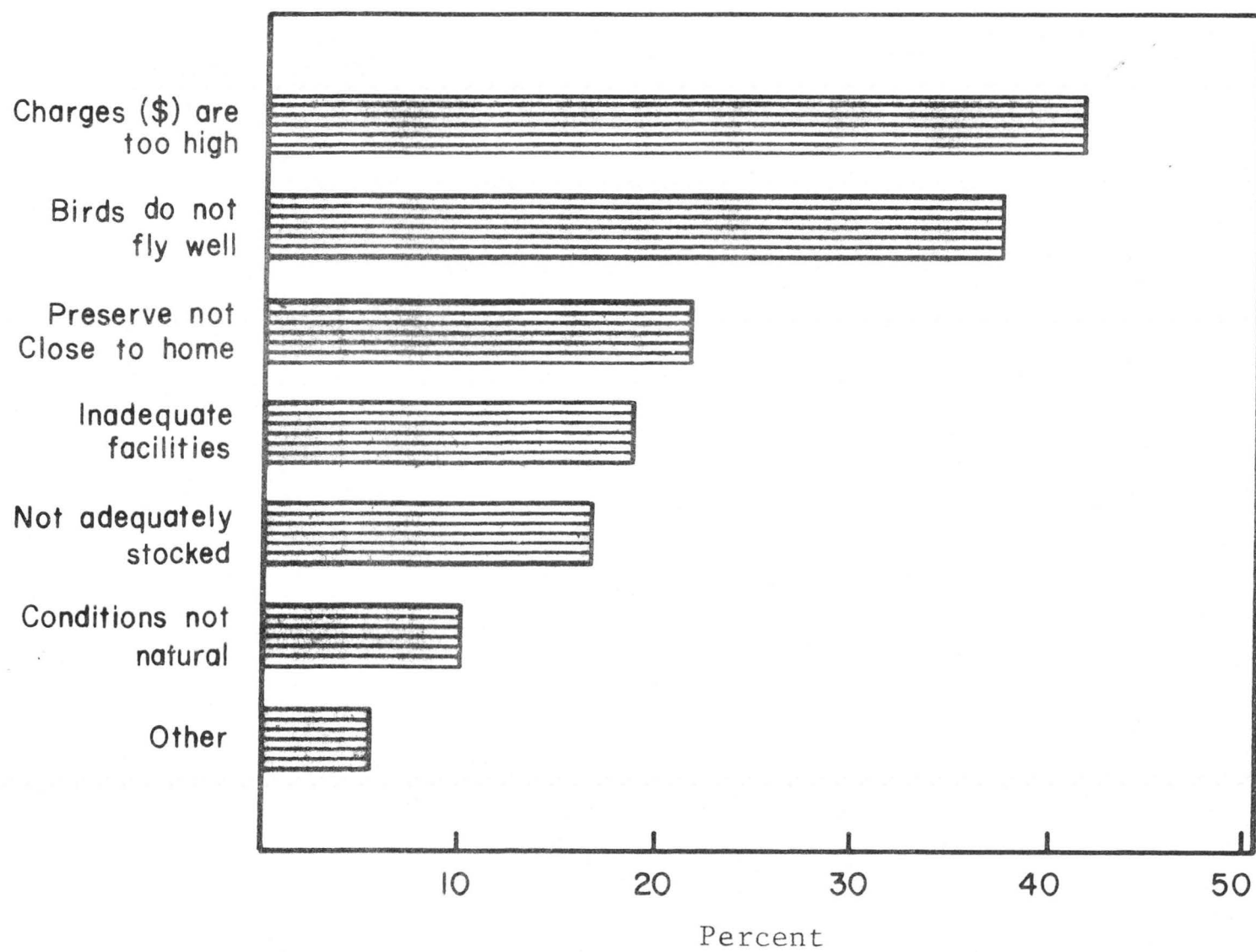


Figure 3. Factors which shooting preserve hunters dislike about Utah shooting preserves.

visited the preserve and their satisfaction with the quality of preserves (chi-square = 33.4; degrees of freedom = 7; n = 508). Only 59 percent of those hunting just one day at a preserve were satisfied with the preserve. By comparison, 85 percent of those hunting over five days and nearly 90 percent of those hunting over 10 days were satisfied with the quality of preserves. This implies that the first impression received upon arrival at a shooting preserve may influence one's final opinion of the preserve, and whether or not to return.

As previously mentioned, 70 percent of the shooting preserve respondents felt that the price they paid for birds was justifiable. Analysis of this response revealed a significant relationship at the 99 percent level to higher education (chi-square = 33; degrees of freedom = 6; n = 495), higher income (chi-square = 12; degrees of freedom = 2; n = 463), and a greater number of days hunting at the preserve (chi-square = 44; degrees of freedom = 7; n = 487). Education seems to be the most significant factor here, possibly for three related reasons:

1. People with higher educations might better understand the economic problems of shooting preserve management, and, for example, recognize the \$5.00 is not an unreasonable charge to be able to hunt and harvest a ringneck pheasant.
2. People with higher incomes have a greater willingness to accept the cost of services.

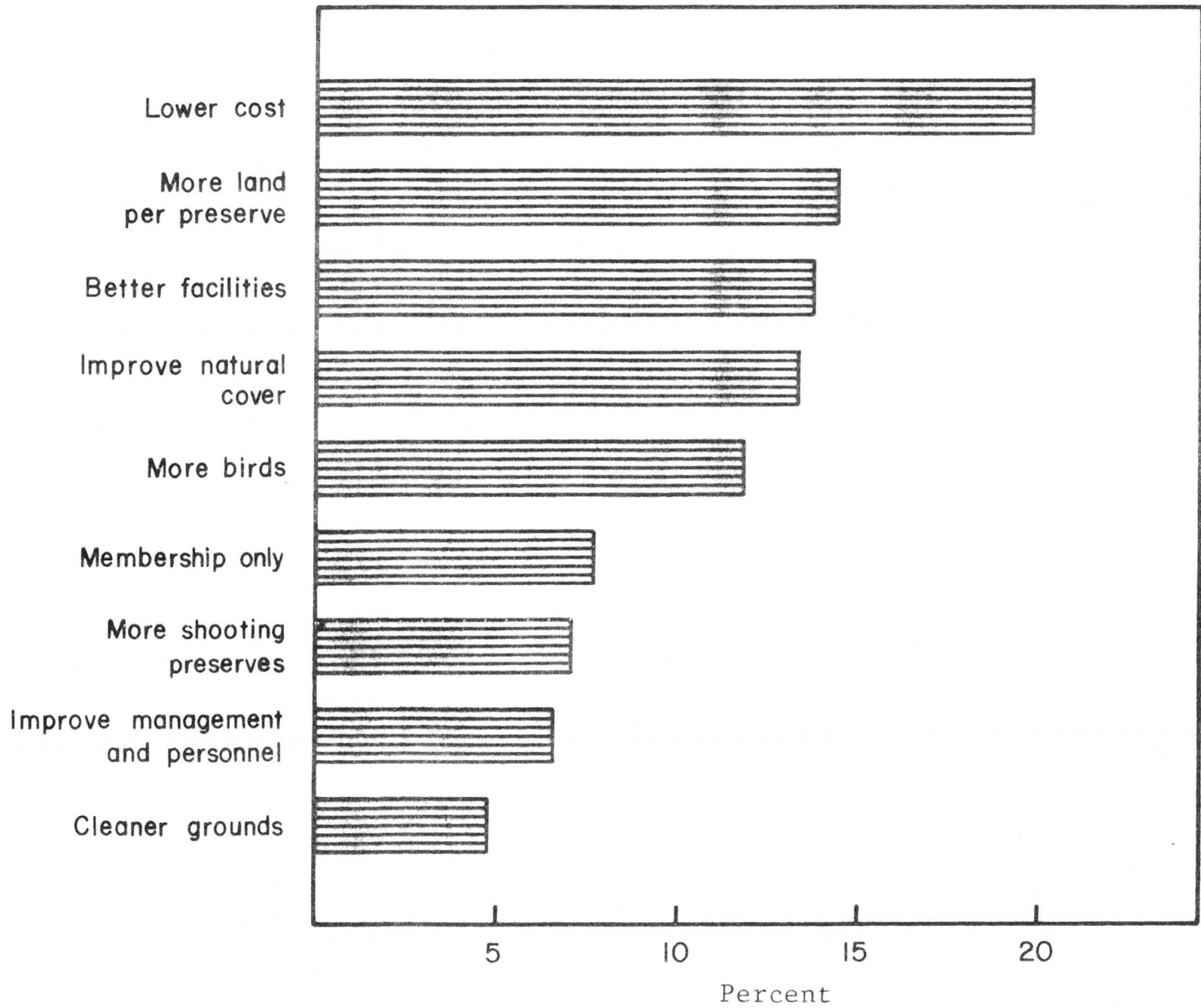


Figure 4. How shooting preserve hunters would change preserves in Utah to improve them.

Hunters Not Using Preserves

Although response to the study by shooting preserve hunters was of a cooperative nature, hunters not using preserves were quite different. In many cases they answered only some of the questions, especially those allowing for a negative response. The questionnaires were more often completed in a careless manner. Many of the questionnaires had unfriendly notes written on the cover, and the use of profanity was occasional. Approximately 35 hunters (5 percent of the respondents) took the trouble to return the questionnaire unanswered. These reactions led to the conclusion that shooting preserves are quite unpopular among some hunters in Utah (assuming the respondents have no reason to be hostile toward the University's Department of Wildlife Science).

Analysis of the data for this section (Table 10) indicates that much of the shooting preserve status in Utah could be improved by a professional marketing program. This conclusion is drawn from the following results:

1. Approximately 60 percent of Utah hunters know where at least one shooting preserve is located in the state. However, the remaining 40 percent of Utah hunters represents a potentially large market for shooting preserves. The chance of a hunter visiting a shooting preserve would be increased if he had knowledge of a preserve's location.
2. Nearly 52 percent of the respondents indicated they do not know how a shooting preserve operates. An unknown product will rarely sell.

Table 10. Responses of some questions asked of hunters not hunting shooting preserves in Utah

Question	Response (percent)	
	Yes	No
Do you know where a shooting preserve is located in Utah?	60.1	39.9
Do you expect to hunt at a shooting preserve some time in the future?	19.5	80.5
In general, is there anything you know about shooting preserves which has discouraged you from hunting at a preserve?	38.7	61.3
Would you be willing to pay money for a "quality" of "fun" game bird hunt?	37.8	62.2
Have you ever paid money to hunt on private land, such as a trespass fee for deer or pheasant hunting?	54.7	45.3
Do you have sufficient land available to you for enjoyable game bird hunting?	53.3	46.7
In general, are you familiar with how shooting preserves operate?	48.4	51.6
Have you ever been told by friends that shooting preserves were a good or poor place to hunt?	46.2	53.8
Would you be interested in information on shooting preserves?	57.9	42.1

3. Only 20 percent of the respondents said they expected to hunt a preserve some time in the future. However, statistical analysis of this question with responses to other questions revealed several significant relationships. Of those persons expressing

that they do not expect to hunt a preserve in the future, 48 percent wanted information on shooting preserves.

4. Although most of the shooting preserve hunters were satisfied with preserves, there is a significant amount of word-of-mouth influence which might be quite detrimental to preserves. About 68 percent of those claiming they do not expect to hunt at a preserve in the future have also been told by friends that shooting preserves were either a "poor" or both a "good and poor" place to hunt.
5. Fifty-four percent of those not expecting to hunt at a preserve in the future also said they were not familiar with how shooting preserves operate. This is quite understandable, and knowledge of shooting preserve management might change many hunter attitudes.

Advertising would help solve many of the problems described above, and would be especially important for at least one season. However, preserve operators should be cautioned that inaccurate or deceptive advertising could be more detrimental than no advertising at all and could result in legal ramifications.

A fairly large portion of the respondents (39 percent) said they had some knowledge about preserves which has discouraged them from a preserve hunt. Of those respondents, 64 percent claimed that "cost" of harvested birds was their reason for never visiting a preserve. The ironic point here is that

55 percent claimed they have paid a trespass fee for deer and/or pheasant hunting. The matter in principle is quite the same; however, the actual cost to the hunter might be different in each case. Another 22 percent felt that there would be "no challenge" or "no sport" and it would be "too easy" to hunt at a shooting preserve. The only obvious answer to this problem is to supply plenty of natural cover, stocked with healthy, strong-flying birds. Then it is just a matter of exposing the hunter to the situation which he thought did not exist.

Hunters were asked if they "would be willing to pay money for a 'quality' or 'fun' game bird hunt?" Approximately 38 percent responded "yes" however, again there was a significant relationship to education (chi-square = 13.5; degrees of freedom = 6; n = 557; significant at 95 percent) and income (chi-square = 11.24; degrees of freedom = 4; n = 530; significant at 95 percent). Of the high school graduates, 36 percent were willing to pay for a game bird hunt, while 43 percent of some college education expressed the same attitude. Income disclosed even greater differences. Only 36 percent of those earning under \$20,000 were willing to pay for a game bird hunt, compared to 62 percent of those earning over \$20,000.

When asked to explain "under what conditions would you hunt at a shooting preserve?", responses were placed in seven different categories (Table 11). Twenty-nine percent responded "none," indicating that under no circumstances would they patronize a shooting preserve. The second most prevalent response (25 percent) was "only if no other hunting land was available." Approximately 18 percent were willing to try shooting preserves if

there were "reasonable" or "low charges." The problem here is that actual values cannot be placed on such terms.

Table 11. Response to the question "under what conditions (if any) would you hunt at a shooting preserve?"

Condition	Percent
None	29.1
If no other hunting land was available	25.3
Lower costs (\$)	18.3
No charges; "free"	2.8
If I could afford the expense	1.5
If regular hunting season is closed	1.0
Other	21.3

Forty-seven percent of the respondents said they did not have sufficient land available to them for enjoyable game bird hunting. This problem is becoming more evident in more states each year, and consequently, will be the eventual force making quality shooting preserves a prosperous business.

Shooting Preserve Operators and Management

Sixteen shooting preserves were surveyed in Utah. Twelve responded, but only 10 actually completed the questionnaire.

Table 12 gives the services offered by 10 Utah shooting preserves. The two most common services offered by those preserves responding to the survey were hunting dogs and guides, respectively. Ironically, the service

most desired by shooting preserve hunters (general information) was the service offered least by Utah shooting preserves.

Table 12. Services offered by Utah shooting preserves (10 preserves surveyed)

Service	Number of preserves offering service
Dogs	8
Guides	7
Bird processing	6
Food	6
Wash-up facilities	6
Lodging	5
Ammunition	4
Guns	4
Entertainment	3
Reception center	3
General information	2
Other: Vehicle	1
Clubhouse	1
Horses	1

All of the responding preserves offered pheasant hunting, and two preserves offered quail hunting. Duck and chukar hunting were each offered at a single preserve. It is quite understandable that all the shooting preserves offer pheasant hunting. Not only are these game birds fairly easy to raise (compared to some other species), but of the 1,213 hunters surveyed in this study, over 80 percent chose pheasants as their first choice in game bird hunting. Consequently, preserves should concentrate on raising quality pheasants before directing their efforts to additional game bird species.

Shooting preserve operators suggested the following as ways for improving shooting preserves, however, no one suggestion was offered more than once: personal service, quality birds, improve business standards, more water for agriculture, better cover, more preserves, advertising, and release one pen-reared bird for each wild bird shot.

Although most of the above are valid ways to improve shooting preserve quality, preserve operators all express different ideas. This indicates that there is no single factor which preserve operators recognize as a tool for improvement of the shooting preserve system.

All of the respondents felt their clients were satisfied with their shooting preserve. However, this may be misleading due to customers frequently stating their complaints to friends and family rather than to the business itself. This study, though, does generally support the response to this question.

Preserve operators were asked to give some of the favorable and unfavorable comments clients have of shooting preserves. No two respondents gave the same answer, except for "cost" in the unfavorable category. The following favorable comments were given: quality birds, quality cover, grounds not crowded, location, friendly treatment, convenient hunting, preserve offers an area to hunt near high population center, preserves simulate natural conditions. Unfavorable comments include: too costly, and birds do not fly well. Again, the preserve operators gave answers which conform to the results of this study. However, with one exception, answers were not shared by two or more respondents.

Most preserve operators did not have any criticisms (negative or positive) of their clientele. One respondent felt that some hunters did not know how to hunt with dogs, and one felt people did not understand how shooting preserves operate. The only positive response was that preserve hunters were "enjoyable people."

In general, shooting preserve operators seemed skeptical about this project and were not enthusiastic in their response to the survey.

CONCLUSIONS

This study accomplished identification of three major factors relating to Utah shooting preserves. First, it clearly associated a major portion of the preserves' market with people living in or near city populations. These people were well educated, either having some college background or were college graduates. They were most frequently employed professionally or in the capacity of proprietors, and had higher than average annual incomes.

Second, there seemed to be a significant void in the business end of shooting preserves; specifically in advertising. Not only did shooting preserve hunters want more information about preserves, but a large portion of Utah hunters do not know how shooting preserves operate or even where one is located. In addition, there appear to be many skeptical attitudes toward shooting preserves which have caused considerable damage to the industry, primarily through word-of-mouth exchange among hunters. This may be overcome by advertising, encouraging new hunters to try preserves, and thus improving the status of so-called "grapevine" advertising. Although advertising would be wisely directed to the hunter market first described, there is also a large number in the general hunting public which would be good prospective customers for the future. In fact, 58 percent of the non-preserve hunters desired information on shooting preserves.

Third, shooting preserves should consider functioning in accordance with the following recommendations:

1. General information should be available in literature form-- something that can be taken home explaining management procedures of shooting preserves, season dates, cost, etc.
2. Clean wash-up facilities should be available to all clientele.
3. Hunting dogs are a desirable service, but only if well-trained and cared for.
4. A major reason why hunters patronize preserves is to avoid crowded hunting conditions. Preserve ground should not be allowed to become overcrowded.
5. Shooting preserves desiring additional clientele should advertise, especially during the period immediately after the state pheasant season is closed. Professional advertising is recommended, for it will properly utilize the market, media, and message that will produce the best results.
6. Birds must be healthy and raised in proper holding pens which will allow for exercise and, consequently, strong flying birds (Greenburg, 1947).
7. The check-in area where customers register, as well as the hunting grounds, must be kept clean and neat.
8. Most hunters prefer to hunt pheasants. This species should receive first priority in management of a preserve.

Utah preserve operators should realize that the results and conclusions of this study came from data which has been pooled. For example, if the data reveals that 75 percent of shooting preserve hunters are satisfied with the quality of Utah preserves, this does not mean that three out of four hunters are satisfied with every preserve in Utah. It is possible that most of the satisfied respondents visited only a select few of the Utah preserves. Consequently, a large portion of the unsatisfied hunters could be responding in reference to several other preserves. Therefore, preserve operators should not evaluate the status of their preserve according to the general results of this study, but by how their preserve actually lies within the boundaries of those positive and negative factors described in this paper.

SUMMARY

A mail questionnaire survey was conducted of 2,726 Utah hunters, including those using and not using Utah shooting preserves. Results and discussions were drawn from a return of 1,213 questionnaires, 44.5 percent of the sample.

Approximately 50 percent of shooting preserve hunters were raised in a suburban or city area, attended college, were employed as either professionals or proprietors, and had higher than average annual incomes. Approximately 64 percent did not hunt at a preserve until the state game bird season was closed. Services deemed most desirable by hunters using preserves were general information, availability of hunting dogs, and wash-up facilities. Crowded conditions, low success, and a short season on other hunting grounds were major reasons for hunting at shooting preserves. The most disliked factors regarding preserves (in order of preference) included the cost, birds not flying well, preserves not being close to home, and inadequate facilities. Almost 75 percent of shooting preserve hunters were satisfied with the quality of their hunt: 40 percent claimed they would pay increased prices for better quality shooting preserves.

Of those respondents never having hunted at a shooting preserve, nearly 72 percent were raised in a rural background. These hunters tended to be high school graduates or had only some college education, were

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APPENDIXES

Appendix A:

Cover Letter and Follow-up Request Letter Mailed to Hunters

Included in the Survey Sample



UTAH STATE UNIVERSITY · LOGAN, UTAH 84322

COLLEGE OF NATURAL RESOURCES

801-752-4100 Ext. 7928

DEPARTMENT OF
WILDLIFE SCIENCE

June 15, 1972

Dear Sportsman:

The attached questionnaire will provide information which is needed to complete a study on shooting preserves.

This study is designed to help improve the shooting preserve system, and to better understand hunter's attitudes. It is hoped that such information will lead to solutions for some of the hunter's problems as well as insure the future of hunting as a "quality" sport.

This information is confidential and will not be associated with you in any way.

We would greatly appreciate your taking a few minutes to complete the attached questionnaire and return it in the self-addressed, stamped envelope.

Thanks for your cooperation.

Sincerely,

William F. Sigler
Department Head

A handwritten signature in cursive script that reads "John T. Ratti".

John T. Ratti
Research Assistant



UTAH STATE UNIVERSITY · LOGAN, UTAH 84322

COLLEGE OF NATURAL RESOURCES

801-752-4100 Ext. 7928

DEPARTMENT OF
WILDLIFE SCIENCE

July 20, 1972

Dear Sportsman:

As our first letter explained, we are conducting a study at Utah State University to determine hunter's attitudes toward shooting preserves.

The principle aim of this research is to provide information which will help to maintain hunting as a quality sport in the United States. Your response is important to the success of this study.

Please take a few minutes to complete the enclosed questionnaire and return it in the self-addressed, stamped envelope.

All information is confidential and will not be associated with you in any way.

Thanks for your help!

Sincerely,

William F. Sigler
Department Head

A handwritten signature in cursive script that reads "John T. Ratti".

John T. Ratti
Research Assistant

P.S. If you have already completed and mailed your first questionnaire, please disregard this request.

Appendix B:

Questionnaire Mailed to Hunters Having Registered at a

Utah Shooting Preserve During the 1971-72 Season

*Analysis of Hunter
Attitudes
and
Characteristics
Relating to Utah Shooting
Preserves*

Sponsored by

*UTAH STATE UNIVERSITY
WILDLIFE EXTENSION SERVICE*

and

*UTAH STATE UNIVERSITY
DEPARTMENT OF WILDLIFE RESOURCES*

and

*UTAH STATE UNIVERSITY
ECOLOGY CENTER*

and

*UTAH COOPERATIVE WILDLIFE
RESEARCH UNIT*

and

*THE NATIONAL RIFLE ASSOCIATION
OF AMERICA*

ALL INFORMATION IN THIS QUESTIONNAIRE IS CONFIDENTIAL AND WILL NOT BE ASSOCIATED WITH YOU IN ANY WAY.

Please answer all questions.

1. **About** what percent of your game bird hunting is done on the following land?

Private shooting preserve

<u>41.5%</u> 0 - 25%	<u>27.0%</u> 76 - 100%
<u>16.3%</u> 26 - 50%	<u>1.1%</u> Don't know
<u>14.1%</u> 51 - 75%	

Other lands, such as private farm land, public land, etc.

<u>32.8%</u> 0 - 25%	<u>31.4%</u> 76 - 100%
<u>20.5%</u> 26 - 50%	<u>0.8%</u> Don't know
<u>14.6%</u> 51 - 75%	

2. A) Do you hunt with a dog while hunting on a preserve?

<u>89.3%</u> yes	<u>10.7%</u> no
------------------	-----------------

- B) If YES to No. 2, what breed of dog do you most prefer for hunting on a shooting preserve? _____

<u>GERMAN SHORTHAIR</u>	<u>42.5%</u>
<u>LABRADOR RETRIEVER</u>	<u>16.7%</u>

- C) Who owns the dog you hunt with (Please check)

<u>59.7%</u> My Personal Dog
<u>14.8%</u> A Friend's Dog
<u>25.3%</u> Shooting Preserve's Dog

3. What gauge shotgun and size shot do you use for hunting?

	Gauge	Shot size (chill)
Pheasant	_____	_____
Quail	_____	_____
Chukar Partridge	_____	_____

4. Approximately how many miles do you travel to a shooting preserve (one way)?

<u>22.2%</u> 0 - 15 miles
<u>23.3%</u> 16 - 30 miles
<u>9.3%</u> 31 - 50 miles
<u>15.0%</u> 51 - 100 miles
<u>30.3%</u> 100 or more miles

5. If you hunt on lands other than preserves, how far do you travel to hunt these other areas?

18.9% 0 - 15 miles
10.6% 16 - 30 miles
13.5% 31 - 50 miles
25.5% 51 - 100 miles
31.5% 100 or more miles

6. Approximately how many days did you hunt on a shooting preserve during this past season, between September 1 and March 31?

1- 19.0%
 1-5 65.0% _____ Days
 1-10 86.1%

7. Did you hunt at shooting preserves while the regular state game bird season was open this past year?

36.2% yes 63.8%no

8. Please indicate which game birds you most prefer to hunt on shooting preserves. (Indicate preference by 1, 2, 3).

1st 87.4% Pheasants _____ Chukar Partridge
 _____ Special varieties _____ Quail
 _____ of pheasants _____ Hungarian
 _____ Ducks Partridge

9. Please check the services you think a shooting preserve should offer:

71.4% General Information
48.2% Food
14.1% Lodging
2.6% Entertainment
66.2% Wash-Up Facilities
69.5% Dogs
16.8% Guides
54.7% Bird Processing
14.1% Reception center
7.7% Guns
30.1% Ammunition
7.7% Other (Specify) _____

10. Which of the following influence you to use a shooting preserve rather than other hunting grounds? (Check as many as needed)

21.2% Larger Bag Limits
26.5% Good place to train hunting dogs
55.8% Crowded hunting conditions on other hunting grounds
38.1% Other hunting land not available
52.9% Low success on other hunting grounds (game bagged)
51.5% Hunting season is too short on other grounds
23.0% Good place for inexperienced hunters
12.2% Other (Specify) _____

11. Please rank the following in order of their importance to you as reasons for hunting on shooting preserves (Mark 1 as most important, 2 next important, etc.)

_____ Preserve is close to home
22.6% Preserve insures hunting success
 1st 33.2% Preserve offers "quality" hunting (i.e. natural conditions, no crowding.)
 _____ Preserve offers facilities such as dogs, guides, lodging, etc.
33.0% Preserve is open longer than the regular hunting season
 _____ Other (Specify) _____

12. Are you satisfied with the quality of hunting on shooting preserves?

74.1%yes 25.9%no

13. Which of the following, if any, do you dislike about shooting preserves?(Check as many as needed)

16.6% Not adequately stocked with birds
18.6% Inadequate facilities
37.2% Birds do not fly well
21.7% Preserve not close to home
41.8% Charges (\$) are too high
10.0% Conditions are not natural
5.8% Other (Please specify) _____

14. Were you satisfied with conditions (neat and clean etc.) around the clubhouse or check-in area?

77.3% yes 22.7% no

15. How would you change shooting preserves to improve them? _____

See table

16. Considering what you know about shooting preserve management, do you feel the price you pay for birds is justifiable?

70.1% yes 29.9% no

17. How much did you pay (\$) for each bird?

\$5.00 Pheasant 37.5%

\$5.00 Chukar 31.0%

\$3.50 Quail 16.7%

\$ Other

18. Would you be willing to pay increased prices in the future if such increases represented better quality shooting preserves?

39.3% yes 60.7% no

19. Which days of the week do you usually hunt?

Sat. & Sun. 43.2%

Weekdays 22.8%

Both 34.1%

20. How many years have you been hunting?

13.3% 0- 5 yrs 15.5% 16-20 yrs

9.4% 6-10 yrs 52.2% More than 20 yrs

9.6% 11-15 yrs

The following personal information is needed to help determine some of the characteristics of hunters using the shooting preserve system. ALL INFORMATION IS CONFIDENTIAL AND WILL NOT BE ASSOCIATED WITH YOU IN ANY WAY.

1. Are you:

<u>96.5%</u>	Male	<u>64.5%</u>	Married
_____	Female	_____	Single
		_____	Divorced

2. What is your age?

<u>4.4%</u>	12-15	<u>8.3%</u>	60-69
<u>7.6%</u>	16-19	<u>1.5%</u>	70-79
<u>14.0%</u>	20-29	<u>0.2%</u>	80-89
<u>23.2%</u>	30-39	_____	90 or older
<u>25.3%</u>	40-49		
<u>15.5%</u>	50-59		

3. What type of an area did you live in during most of your childhood? (Up to 16 years)

<u>39.7%</u>	Rural farm area
<u>12.3%</u>	Rural non-farm area
<u>21.3%</u>	Suburban area
<u>26.8%</u>	City area

4. In your childhood (up to 16 years) how often did you hunt?

<u>26.1%</u>	0 - 5 days
<u>13.2%</u>	6 - 10 days
<u>7.5%</u>	11 - 15 days
<u>7.3%</u>	16 - 20 days
<u>45.9%</u>	More than 20 days

5. What is the highest grade in school that you completed?

<u>3.9%</u>	0 - 8 years of grade school
<u>11.1%</u>	1 - 3 years of high school
<u>16.5%</u>	Graduated from high school
<u>5.2%</u>	Attended technical school
<u>4.4%</u>	Graduated from technical school
<u>24.6%</u>	1 - 3 years of college
<u>34.3%</u>	Graduated from college

6. What kind of work do you do? _____

Proprietor	<u>23.2%</u>
Professional	<u>16.8%</u>
Craftsman	<u>16.2%</u>
Clerical	<u>13.0%</u>

See table

7. What is the technical name given to your job position? _____

8. In which category does your total yearly family income (before taxes) fall?

6.9% \$0 - 4,999
15.0% \$5 - 9,999
22.9% \$10 - 14,999
17.8% \$15 - 19,999
37.5% \$20,000 or more

9. Do you own (Check as many as needed)

A) 10.2% a snowmobile

40.4% a boat

34.6% a camper

89.8% a car

74.8% a home

26.5% a motorcycle

B) 35.3% a small lot ($\frac{1}{4}$ - $\frac{1}{2}$ acre)

22.5% a large lot ($\frac{1}{2}$ - 1 acre)

11.3% 1 - 10 acres

3.1% 11 - 40 acres

6.4% more than 40 acres

10. Do you belong to a

65.0% Hunting club

14.9% Conservation organization (National or state)

20.1% Both

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE.

Appendix C:

Questionnaire Mailed to a Random Sample of Hunters from the

State of Utah

*Analysis of Hunter
Attitudes
and
Characteristics
Relating to Utah Shooting
Preserves*

Sponsored by

*UTAH STATE UNIVERSITY
WILDLIFE EXTENSION SERVICE*

and

*UTAH STATE UNIVERSITY
DEPARTMENT OF WILDLIFE RESOURCES*

and

*UTAH STATE UNIVERSITY
ECOLOGY CENTER*

and

*UTAH COOPERATIVE WILDLIFE
RESEARCH UNIT*

and

*THE NATIONAL RIFLE ASSOCIATION
OF AMERICA*

The following questions refer to shooting preserves, which are hunting areas where pen-reared game birds are released and hunters pay a fee for the birds harvested. ALL INFORMATION IN THIS QUESTIONNAIRE IS CONFIDENTIAL AND WILL NOT BE ASSOCIATED WITH YOU IN ANY WAY.

Please answer all questions.

1. Have you ever hunted at a shooting preserve in the (Please check)

United States 10.0%yes 90.0%no

Other Country 1.6%yes 98.4%no

Please specify _____

2. Have you ever hunted at a shooting preserve in the state of Utah?

8.6% yes 90.0% no

If YES, go no further and please return the questionnaire with only questions No. 1 and No. 2 answered, if NO, please continue.

3. Do you know where a shooting preserve is located in Utah?

60.1% yes 39.9% no

4. Do you expect to hunt at a shooting preserve some time in the future?

19.5% yes 80.5% no

5. In general, is there anything you know about shooting preserves which has discouraged you from hunting at a preserve?

38.7% yes 61.3% no

If YES, please specify: _____

See text, page _____

6. Would you be willing to pay money for a "quality" or "fun" game bird hunt?

37.8% yes 62.2% no

If YES, how much money, per bird bagged
\$ _____

7. Have you ever paid money to hunt on private land, such as a trespass fee for deer or pheasant hunting?

54.7% yes 45.3% no

8. Do you have sufficient land available to you for enjoyable game bird hunting?

53.3% yes 46.7% no

9. Under what conditions (if any) would you hunt at a shooting preserve? _____

None 29.1%

No other land 25.3%

Low \$ 18.3%

10. Do you hunt with a dog?

50.1% yes 49.9% no

If YES, who owns the dog? (Please check)

73.9% My Personal Dog

20.9% A Friend's Dog

4.9% Other

11. Which game bird do you most prefer to hunt? (Please rank in order of preference by 1, 2, and 3)

1st	<u>77.5%</u> Pheasant	_____ Ducks
	_____ Grouse	_____ Snipe
	_____ Doves	_____ Quail
	_____ Chukar Partridge	_____ Huns
	_____ Other (Specify)	_____

12. Approximately, how many days do you hunt game birds each season?

49.1% 1 - 5 days

20.3% 6 - 10 days

10.2% 10 - 15 days

20.3% More than 15 days

13. In general, are you familiar with how shooting preserves operate?

48.4% yes 51.6% no

If YES, how are you familiar (Please check)

24.1% Literature (or Advertising)

30.5% Word-of-mouth

6.0% Visit

2.9% Other _____

14. Have you ever been told by friends that shooting preserves were a good or poor place to hunt?

46.2% yes 53.8% no

If YES, please specify:

37.0% Good place to hunt

12.6% Poor place to hunt

50.4% Both

15. How many years have you been hunting?

8.9% 0 - 5 yrs 16.6% 11 - 15 yrs

15.3% 6 - 10 yrs 14.4% 16 - 20 yrs

44.8% More than 20 years

16. Would you be interested in information on shooting preserves?

57.9% yes 42.1% no

Please continue to next page.

The following personal information is needed to help determine some of the characteristics of hunters using the shooting preserve system. ALL INFORMATION IS CONFIDENTIAL AND WILL NOT BE ASSOCIATED WITH YOU IN ANY WAY.

1. Are you:

<u>94.3%</u>	Male	<u>64.9%</u>	Married
_____	Female	_____	Single
		_____	Divorced

2. What is your age?

<u>0</u>	12-15	<u>6.4%</u>	60-69
<u>7.4%</u>	16-19	<u>1.3%</u>	70-79
<u>25.4%</u>	20-29	_____	80-89
<u>24.1%</u>	30-39	_____	90 or older
<u>20.2%</u>	40-49		
<u>15.2%</u>	50-59		

3. What type of an area did you live in during most of your childhood? (Up to 16 years)

<u>58.3%</u>	Rural farm area
<u>13.5%</u>	Rural non-farm area
<u>13.5%</u>	Suburban area
<u>14.7%</u>	City area

4. In your childhood (up to 16 years) how often did you hunt?

<u>25.9%</u>	0 - 5 days
<u>15.9%</u>	6 - 10 days
<u>9.3%</u>	11 - 15 days
<u>8.6%</u>	16 - 20 days
<u>40.2%</u>	More than 20 days

5. What is the highest grade in school that you completed?

<u>3.8%</u>	0 - 8 years of grade school
<u>12.9%</u>	1 - 3 years of high school
<u>26.0%</u>	Graduated from high school
<u>5.1%</u>	Attended technical school
<u>7.1%</u>	Graduated from technical school
<u>25.2%</u>	1 -3 years of college
<u>19.9%</u>	Graduated from college

6. What kind of work do you do? _____

<u>Craftsman</u>	<u>27.8%</u>
Proprietor	12.2%
Operatives	10.3%

See table

7. What is the technical name given to your job position? _____

8. In which category does your total yearly family income (before taxes) fall?

11.7% \$0 - 4,999

32.5% \$5 - 9,999

33.9% \$10 - 14,999

14.0% \$15 - 19,999

7.9% \$20,000 or more

9. Do you own (Check as many as needed)

A) 6.2% snowmobile

27.5% boat

36.1% camper

83.2% car

61.2% home

19.7% motorcycle

B) 30.7% small lot ($\frac{1}{4}$ - $\frac{1}{2}$ acre)

13.2% large lot ($\frac{1}{2}$ - 1 acre)

10.4% 1 - 10 acres

4.7% 11 - 40 acres

6.0% more than 40 acres

10. Do you belong to a

29.2% Hunting club

65.2% Conservation organization (National or state)

5.6 Both

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE.

Appendix D:

List of Occupations

List of Occupations^F

The following list of occupations was used as a guide in classifying responses to questions concerning occupation:

Proprietors, managers and officials

Advertising agents
 Inspectors, government
 Buyers and department heads, store
 Creditmen
 Officials, lodge, society, union, etc.
 Managers and superintendents, building

Conductors, railroad
 Public officials (n. e. c.)^f
 Floormen and floormanagers,
 store
 Purchasing agents and
 buyers (n. e. c.)
 Proprietors, managers and
 officials (n. e. c.)

Clerical, sales and kindred workers

"Clerks" in stores
 Attendants, physician and dentist
 offices
 Office machine operators
 Clerical and kindred (n. e. c.)
 Real estate agents and brokers
 Salesmen and saleswomen (n. e. c.)
 Stenographers, typists and
 secretaries

Bookkeepers, accountants,
 and cashiers
 Mail carriers
 Shipping and receiving
 clerks
 Insurance agents and brokers
 Traveling salesmen and
 sales agents
 Salesmen, finance, brokerage
 and commercial firms

Professional workers except teachers

Lawyers and Judges
 Dentists
 Clergymen
 Pharmacists
 Foresters
 Certified public accountants
 Bankers

Authors
 Chemists
 Engineers, technical
 Physicians and surgeons
 Registered nurses
 Architects
 Professional workers (n. e. c.)

^FThe classification of occupation used in this study is a modification of the one used by the Bureau of Business Research, University of Washington in their Alaska Recreation Survey, Part One, Volume Two, page 97.

^fn. e. c. --not elsewhere classified.

List of Occupations (cont.)

Semiprofessional workers (Technical workers)

Designers and draftsmen
 Photographers
 Technicians

Dancers, dancing teachers,
 chorus
 Semiprofessional workers
 (n. e. c.)

Craftsmen, foreman and kindred workers

Carpenters
 Foremen (n. e. c.)
 Jewelery, watchmakers, etc.
 Mechanics and repairmen
 Roofers and slaters
 Upholsterers
 Cement and concrete finishers
 Engravers
 Opticians, and lens grinders and
 polishers
 Rollers and roll hands, metal
 Stonecutters and stone carvers
 Pressmen and plate printers, printing

Brickmasons and stonemasons
 Electricians
 Inspectors (n. e. c.)
 Locomotive engineers,
 firemen
 Machinists, millwrights
 and tool makers
 Painters, construction
 and maintenance
 Sheet metal workers
 Cabinetmakers
 Furriers, glaziers
 Inspectors, scalers, graders
 (log and lumber)
 Boiler makers

Operatives and kindred workers

Chauffeurs and drivers, bus, taxi,
 truck and tractor
 Filers, grinders, buffers and
 polishers, metal
 Brakemen, railroad
 Meat cutters
 Asbestos and insulation workers
 Operatives
 (n. e. c.)
 Chrome platers
 Laquer dippers

Attendants, filling stations,
 parking, garage, airport
 Firemen, except locomotive
 and fire department
 Heaters, metal
 Linemen and servicemen,
 power, telegraph, telephone
 Mine operators and laborers
 Welders and flamecutters
 Chainmen, rodmen, etc.
 surveying
 Fruit and vegetable graders
 and packers

List of occupations (Cont.)

Service workers except domestic

Policemen and detectives
 Barbers, beauticians, manicurists
 Cooks, except private family
 Stewards and hostesses, except
 private family
 Translators

Attendants, hospital and
 other institutions
 Guards, watchmen, and door-
 keepers
 Military personnel
 Lifeguards
 Custodians

Farmers, ranchers, etc.

Teachers

Housewives

Full-time students

Retired

Unemployed

} Detailed breakdown not needed.

Appendix E:

Cover Letter, Follow-up Request Letter, and Questionnaire Mailed to

Operators of Utah Shooting Preserves



UTAH STATE UNIVERSITY · LOGAN, UTAH 84322

COLLEGE OF NATURAL RESOURCES
801-752-4100 Ext. 7928DEPARTMENT OF
WILDLIFE SCIENCE

October 11, 1972

John Doe Company
John Doe, Manager
531 Willow Street
Meadowcreek, Utah 88888

Dear Mr. Doe:

By now, you are probably aware of our study on Utah shooting preserves. Some preserves have expressed concern about the study, so I would like to assure you that this study can only benefit your operation; and the results will be available to you.

The first phase of the study involved questionnaires being sent to hunters, those using and not using Utah shooting preserves.

Now we would like to give you the opportunity to express your opinions about shooting preserves and offer some additional information needed to complete the study.

Please understand that all information is strictly confidential and will not be associated with your preserve in any way. The name of your preserve is on the questionnaire only to help us determine who did not respond, so that we may send a follow-up request.

Thank you.

Sincerely,

William F. Sigler
Department Head

A handwritten signature in cursive script that reads "John T. Ratti".

John T. Ratti
Research Assistant

If there are any questions, please write or call, 752-0149 or 752-4100, Extension 7928.



UTAH STATE UNIVERSITY · LOGAN, UTAH 84322

COLLEGE OF NATURAL RESOURCES
801-752-4100 Ext. 7928DEPARTMENT OF
WILDLIFE SCIENCE

November 28, 1972

John Doe Shooting Preserve
John Doe
RFD
Hoboken, Utah 88888

Dear Mr. Doe:

On approximately October 15, 1972 you received a request to complete the enclosed questionnaire.

Since we have not heard from you, we are sending another questionnaire and business reply envelope for your convenience.

We understand that this is a busy time for shooting preserve managers, but your participation is important to the accuracy of our study on Utah shooting preserves.

Please take a few minutes to complete the enclosed questionnaire and drop it in the mail.

Thanks very much.

Sincerely,

William F. Sigler
Department Head

A handwritten signature in cursive script that reads "John T. Ratti".

John T. Ratti
Research Assistant

Enclosure

PRESERVE _____

1. Please check any of the following facilities which you offer at your shooting preserve.

_____ Accommodations

_____ Daily

_____ Overnight

_____ Weekly

_____ General Information

_____ Food

_____ Lodging

_____ Entertainment

_____ Wash-up facilities

_____ Dogs

_____ Guides

_____ Bird Processing

_____ Reception Center

_____ Guns

_____ Ammunition

_____ Other (Specify) _____

2. How many acres of land do you have on your shooting preserve?

_____ Acres

3. What are the dates of your season? _____ to _____

4. What species and varieties of birds are available at your preserve?

5. How do you feel shooting preserves can be improved? _____

6. Do your clients seem to be satisfied with your preserve? _____ Yes
_____ No

7. Would you please explain some of the favorable comments clients have of shooting preserves? _____

8. Would you please explain some of the unfavorable comments clients have of shooting preserves? _____

9. Do you have any specific criticisms (negative or positive) of your clientele? _____

10. Would you like a copy of the results of this study? _____ Yes _____ No

11. Please feel free to add any additional comments.

VITA

John T. Ratti

Candidate for the Degree of

Master of Science

Thesis: Analysis of Hunter Characteristics and Attitudes Relating to Utah Shooting Preserves

Major Field: Wildlife Biology

Biographical Information:

Personal Data: Born at Newton, New Jersey, August 30, 1946, son of Louis P. and Rosemary M. Ratti; married Leslie J. Weiler on August 24, 1969.

Education: Attended elementary school in Newton, New Jersey; graduated from Oratory Preparatory School in 1965; received Bachelor of Science degree from Indiana State University in 1969, with a major in Business Management; completed requirements for Master of Science in Wildlife Biology from Utah State University in 1973.

Memberships: The Wildlife Society; the American Ornithologists Union; Sigma Phi Epsilon, Indiana Delta, Controller (salary position) 1968-69, awarded Outstanding Active 1969 and Outstanding Senior 1969; Xi Sigma Pi, Utah Lambda.

Experience: Research Assistant, Utah State University, 1971-73; Sixth grade teacher, Hopatcong Board of Education, Hopatcong, New Jersey, 1970-71; Field Inspector (Entomology Division), New Jersey Department of Agriculture, 1969.