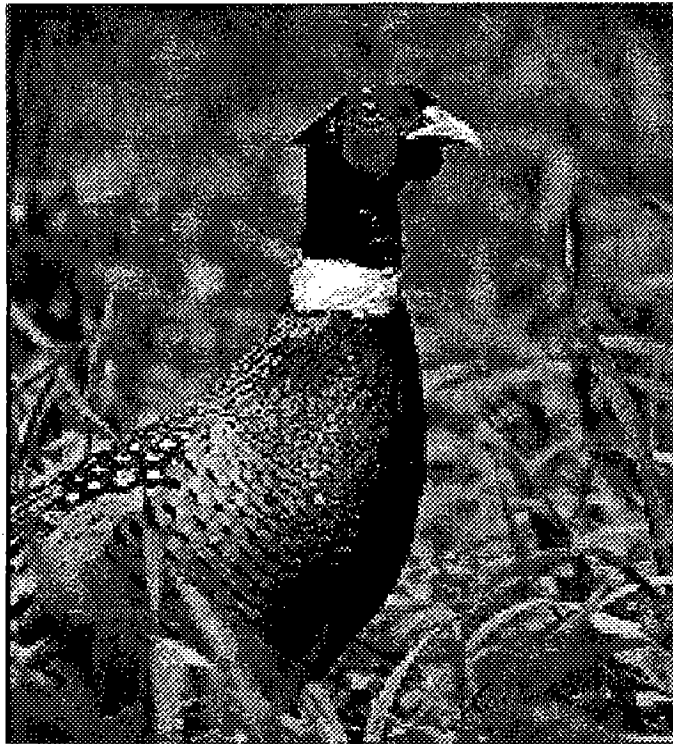


# UTAH UPLAND GAME ANNUAL REPORT 1996



UTAH DIVISION OF WILDLIFE RESOURCES  
DEPARTMENT OF NATURAL RESOURCES  
PUBLICATION NO. 97-1

**UTAH**  
**UPLAND GAME**

**Annual Report**

**1996**

Prepared by:

**Dean L. Mitchell**

Upland Game Program Coordinator

and

**Linda Rawley**

Wildlife Resources Specialist

**Greg Evans**

Wildlife Section Biometrician

PUBLICATION NO. 97-1

Annual Performance Report for Federal Aid Project W-65-R-44 Job A-4

Utah Department of Natural Resources

DIVISION OF WILDLIFE RESOURCES

An Equal Opportunity Employer

**John Kimball**

Director

**"FINDING OUT HOW MANY THERE ARE LEFT IS  
THE LEAST OF THE PURPOSES OF GAME CENSUS.**

**MEASURING THE RESPONSE OF GAME POPULATIONS  
TO CHANGES - DELIBERATE OR ACCIDENTAL -  
IN THEIR ENVIRONMENT IS THE BIG PURPOSE.**

**CONTINUOUS CENSUS IS THE YARDSTICK OF  
SUCCESS OR FAILURE IN CONSERVATION."**

**ALDO LEOPOLD 1932**

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ANNUAL PERFORMANCE REPORT

RESEARCH PROJECT SEGMENT  
(Inventory)

State: UTAH

Project Title: Statewide Wildlife  
Management, Investigations  
and Surveys

Project No.: W-65-R

Segment No.: 44

Job Title: Statewide Upland Game Inventory and Management

Job No.: A-4

Period Covered: October 1, 1995 to September 30, 1996

**Abstract:** This report identifies progress and accomplishments of Segment No. 44 objectives, 1995-96. Results of annual inventory and harvest surveys and long-term trends of population indices derived by each method are included in the Utah Upland Game Annual Report 1995. Data obtained in 1995 are compared to 1994 and long-term averages.

**Project Statement Objectives:**

1. To conduct efficient annual breeding and production surveys.
2. To determine annual harvest, hunters, and hunter-days and bag per hunter.
3. To describe and map all known sage and sharp-tailed grouse leks.
4. To describe and map all mourning dove, pheasant and cottontail survey routes.
5. To assess the impact of a federal migratory permit on small game license sales and mourning dove harvest estimates.
6. To evaluate Utah's upland game survey techniques in comparison to most recent research and develop the most cost effective and efficient survey methods.
7. To evaluate the feasibility of confidence intervals for Utah's small game harvest estimates.
8. Study the feasibility of combing Nongame rabbit surveys with Game Management surveys.
9. Evaluate the value of adding more dove call routes.
10. Explore the benefits of telephone survey to assess upland game hunter success.

**Progress Statement and Summary of Work Completed During The Segment For Each Objective:**

**1. To conduct efficient annual breeding and production surveys.**

**Ongoing Objective.** Annual inventory procedures for ring-necked pheasants included winter sex ratio counts and summer roadside counts. The winter sex ratio counts were conducted from December 15, 1995 through February 10, 1996, as snow cover conditions allowed. Indices derived include hen-cock ratios and pheasants observed per 100 hours. Annual summer roadside counts (three or more per route) were conducted from July 22-August 22 on permanently established routes. Indices derived include pheasants per mile, young per mile, young per hen, mean brood and percent of hens with young.

Mourning dove breeding population trend was determined via the annual call count survey. This survey is part of a nationwide survey administered by the U. S. Fish and Wildlife Service. Call counts are conducted over 15 permanent, 20-mile routes. One count was made on each route between May 20-30, 1996.

Random brood counts were conducted on chukar and Hungarian partridge, forest grouse (ruffed and blue), sage grouse, sharp-tailed grouse, wild turkey and quail from June 15-August 22. Indices derived for each species include mean brood size, young per 100 adults and birds observed per 100 hours of effort.

Sage grouse strutting ground counts and sharp-tailed grouse dancing ground counts were conducted from March 15-May 15. Total cocks counted, average cocks per ground and percent change from 1993 for comparable grounds were determined on a county basis.

The Gambel's quail long period waterhole counts were completed in July and August. Limited valley quail random brood counts were made in several counties.

Cottontail rabbit roadside counts were conducted over pre-established routes between July 15 and August 22. Indices derived include rabbits per mile and young per 100 adults.

**2. To determine annual harvest, hunters, and hunter-days and bag per hunter.**

**Ongoing Objective.** Harvest questionnaires were mailed to determine the harvest of upland game birds, cottontail rabbit, and snowshoe hare. A sample of eligible licensees from the current year's (1995) resident small game license file and 1995 combination license file was used. The modified computerized pull-apart mailer was again used to obtain harvest data. Separate questionnaires were mailed to all ptarmigan, band-tailed pigeon and wild turkey permittees. Indices derived include total hunters, hunter-days, total harvest and hunter success per day, plus success for each season.

The upland game questionnaires were processed by the Division of Wildlife Resources Public Services Section. Wild turkey, band-tailed pigeon and ptarmigan questionnaires were analyzed separately by Wildlife Section personnel.

Upland game hunters were checked at checking stations, and random field checks were made during each hunting season. Indices derived include bag per hunter (per day), bag per 100 hours, average hours per hunter-day and average hours per bird bagged. Additional sex and age composition data were compiled for some species using wing samples collected at checking stations.

**3. To describe and map all known sage and sharp-tailed grouse leks.**

**Completed Objective.** Described and mapped all known sage grouse and sharp-tailed grouse leks and dancing grounds.

**4. To describe and map all mourning dove, pheasant and cottontail survey routes.**

**Completed Objective.** Described and mapped all mourning dove, pheasant and cottontail routes.

**5. To assess the impact of a federal migratory permit on small game license sales and mourning dove harvest estimates.**

**Completed Objective.** Reviewed implementation strategies used by other states who have already implemented the federal migratory bird permit program. Waterfowl Program Coordinator and Division's Information Systems Analyst attended training sponsored by the U.S. Fish and Wildlife Service pertaining to implementation of the federal migratory bird permit. Objective #5 has been completed to the extent possible until implementation of the federal migratory permit in Utah in 1998.

**6. To evaluate Utah's upland game survey techniques in comparison to most recent research and develop the most cost effective and efficient survey methods.**

**Completed Objective.** A survey of other states upland game inventory and survey techniques has been completed. Based on survey results, Utah collects more inventory and survey data on upland game than most surrounding western states. Formal recommendations for adding new surveys and deleting less valuable surveys for Utah's upland game will be provided as part of Grant Proposal renewal in 1996.

**7. To evaluate the feasibility of confidence intervals for Utah's small game harvest estimates.**

**Completed Objective.** The biometrician in DWR's Wildlife Section researched and applied statistically sound techniques to derive 90 percent confidence intervals for upland game harvest estimates. Results have been published in the 1995 Utah Upland Game Annual

Report.

**8. Study the feasibility of combing Nongame rabbit surveys with Game Management surveys.**

Completed Objective. We have visited with the furbearer biologist about combining the surveys. They have determined to drop their fall rabbit spotlight count because of a lack of correlation with bobcat recruitment and trap success. Therefore, we cannot combine the surveys and will continue to survey our summer roadside counts for cottontail recruitment and fall hunter success using current methodology.

**9. Evaluate the value of adding more dove call routes.**

Completed Objective. Discussion has been made with Dave Dolton of the U.S. Fish and Wildlife Service concerning this indicating only moderate improvement in precision by adding 5 routes to our present 15. Rather than adding new routes, significant time was spent during Segment No. 43 in relocating existing routes into more representative habitat areas for doves. We will continue to "fine tune" dove routes in Utah into the future to ensure that routes capture a true picture of mourning dove breeding populations throughout the state.

**10. Explore the benefits of telephone survey to assess upland game hunter success.**

Completed Objective. Based on implications to Utah when the federal migratory bird harvest permit is implemented in 1998, we will hold off on a telephone survey to assess upland game harvest. Between now and 1998, we will consult closely with the Wildlife Section biometrician to determine the feasibility and cost of a telephone survey versus the pull-apart mail questionnaire currently in use.

**Location of Work Performed:** Statewide.

**Costs Incurred:**

**Recommendations:** This project should be continued for the purpose of determining trends of upland game population and harvest statistics in Utah.



# INTRODUCTION



The objective of Utah's upland game management program is to provide recreational hunting opportunity for sportsmen within the limits of the annual harvestable surplus for each species. It is based on the knowledge that populations of upland game experience relatively high rates of annual turnover. High reproductive rates are naturally compensated for by high death rates, whether hunting is allowed or not. Annual surveys are conducted to measure the production, trend and harvest of each upland game population.

This is the twenty-sixth edition of this Annual Upland Game Report. It is an annual performance report of information compiled during inventory and harvest surveys conducted under Federal Aid Project W-65-R, Job A-4. Information contained herein was compiled by conservation officers, biologists, wildlife managers and the upland game management staff of the Utah Division of Wildlife Resources.

This report serves as a handbook of inventory and harvest data. It is designed primarily for the use of those concerned with the management of upland game. A separate section is devoted to each species of upland game in Utah. Data are presented primarily in tabular form with limited narrative comment. The first page of each section provides a brief summary of population status and trend as indicated by inventory and harvest data.

During 1996, a total of 57,401 Utah sportsmen spent 447,435 days afield in pursuit of various upland game species (Table 1). The harvest of upland game totaled 491,977 animals. The proportion of the total upland game hunters which pursued each species is shown in Table 2 and the percentage failing to bag at least one bird (from general mail questionnaire) of each species in Table 3.

In 1996, Utah upland game hunters were required to purchase a new document called a Habitat Authorization in order to pursue any of the upland game species. Funds derived from the Habitat Authorization will be used to purchase, develop and protect critical upland game habitat throughout Utah.

The regulations for 1996 upland game hunting seasons are shown in Appendix D.

## GENERAL HARVEST QUESTIONNAIRE

Harvest statistics were obtained from a random sample of licensed hunters by their response to a hunter harvest questionnaire. The combined upland game bird and rabbit-hare mail harvest questionnaire was again used.

A total of 14,088 upland game questionnaires, a 15.05 percent sample of Utah's potential resident upland game hunters, were mailed. Of the total, 669 (4.75%) questionnaires were undeliverable. Of the 13,419 questionnaires delivered, 4,028 (30.01%) useable upland game questionnaires were returned. Of those, 1,481 purchased a license but did not hunt upland game. By dividing the total of 93,577 eligible licensees by the usable returns (4,028), a projection factor of 23.231628 derived.

The 1996 hunter questionnaire sample size was greater than 10 percent of the total hunter population, so a follow-up questionnaire was not sent to those who failed to return the first one. A high rate of return is desirable in order to obtain an adequate sample of harvest estimates in counties where hunting pressure and harvest are limited. Extremely small samples from these counties tend to over-estimate the harvest and thus bias the results. Although harvest, number of hunters and days-afield may be over-estimated where small samples are obtained, harvest per hunter-day should be relatively precise.

Stand deviations and 90 percent confidence intervals for each species included on the general harvest questionnaire are derived from the average number of each species harvested per day.

**Table 1. Summary of harvest statistics from the general mail questionnaire for 1996.**

Species	Hunters		Total Harvest	Hunter-Days		Bag Per Hunter-Day	Bag Per Hunter For Season
	Afield			Afield			
Pheasant	41,854	83,987	157,755	0.53	2.01		
Mourning Dove	23,180	200,167	85,613	2.34	8.64		
Band-Tailed Pigeon	37	92	125	0.74	2.49		
Chukar Partridge	10,197	26,594	37,116	0.72	2.61		
Sage Grouse	5,574	9,220	13,215	0.70	1.65		
Forest Grouse	15,492	59,738	56,347	1.06	3.86		
Quail	4,622	16,351	15,863	1.03	3.54		
Hungarian Partridge	2,299	7,455	7,409	1.01	3.24		
Wild Turkey							
Merriam's	320	84	1,151	0.07	0.26		
Rio Grande	166	107	776	0.14	0.64		
Sharp-Tailed Grouse	--	--	--	--	--		
White-Tailed Ptarmigan	12	14	16	0.88	1.17		
Cottontail Rabbit	14,470	82,803	63,943	1.29	5.72		
Snowshoe Hare	2,276	5,365	8,106	0.66	2.36		
<b>Total</b>	<b>--</b>	<b>491,977</b>	<b>447,435</b>	<b>--</b>	<b>--</b>		
<b>Total hunters afield for all species of upland game =</b>						<b>57,401</b>	

Table 2. Number and percent of total upland game hunters afield who reported hunting each species during 1989-96.

Species	Number of Hunters																	Percent of Total																
	1989	1990	1991	1992	1993	1994	1995	1996	1989	1990	1991	1992	1993	1994	1995	1996	1989	1990	1991	1992	1993	1994	1995	1996										
Pheasant	50,382	47,025	42,813	41,640	39,640	36,705	38,391	41,854	75.20	72.50	69.14	71.27	66.52	74.12	69.60	72.92	75.20	72.50	69.14	71.27	66.52	74.12	69.60	72.92										
Mourning Dove	21,696	22,700	22,632	18,021	19,725	20,743	20,896	23,180	16.30	17.30	16.30	17.30	16.30	17.30	16.30	17.30	16.30	17.30	16.30	17.30	16.30	17.30	16.30	17.30										
Band-Tailed Pigeon*	23	9	15	18	8	13	59	37	0.03	0.01	0.02	0.03	0.01	0.03	0.11	0.06	0.03	0.01	0.02	0.03	0.01	0.03	0.11	0.06										
Chukar	10,910	11,195	10,577	11,125	10,128	8,455	9,097	10,197	32.40	35.00	17.08	19.04	17.00	17.07	16.49	17.76	32.40	35.00	17.08	19.04	17.00	17.07	16.49	17.76										
Sage Grouse	9,002	9,014	8,018	7,393	6,594	5,133	5,987	5,574	13.40	13.90	12.95	12.65	11.07	10.37	10.85	9.71	13.40	13.90	12.95	12.65	11.07	10.37	10.85	9.71										
Forest Grouse	16,988	14,591	14,421	15,000	12,029	9,827	10,088	15,492	25.40	22.50	23.29	25.67	20.19	19.85	18.29	26.99	25.40	22.50	23.29	25.67	20.19	19.85	18.29	26.99										
Quail	3,111	2,614	2,644	2,861	3,649	2,936	4,374	4,622	4.60	4.00	4.27	4.90	6.12	5.93	7.93	8.05	4.60	4.00	4.27	4.90	6.12	5.93	7.93	8.05										
Hungarian Partridge	2,136	2,305	2,662	3,198	2,090	1,899	2,294	2,299	3.20	3.60	4.30	5.47	3.51	3.83	4.16	4.01	3.20	3.60	4.30	5.47	3.51	3.83	4.16	4.01										
Wild Turkey*																																		
Merriam's	477	531	532	484	466	285	296	320	0.70	0.80	0.86	0.83	0.78	0.58	0.54	0.56	0.70	0.80	0.86	0.83	0.78	0.58	0.54	0.56										
Rio Grande			18	20	41	105	123	166			0.03	0.03	0.07	0.21	0.22	0.29			0.03	0.03	0.07	0.21	0.22	0.29										
Sharp-Tailed Grouse*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--										
White-Tailed Ptarmigan	3	11	13	11	9	4	20	12	0.01	0.02	0.02	0.02	0.02	0.01	0.04	0.02	0.01	0.02	0.02	0.02	0.01	0.04	0.02											
Cottontail Rabbit	22,878	23,079	21,137	20,509	17,578	12,709	13,840	14,470	34.20	35.60	34.13	35.10	29.50	25.67	25.09	25.21	34.20	35.60	34.13	35.10	29.50	25.67	25.09	25.21										
Snowshoe Hare	4,895	4,095	3,427	3,732	2,755	1,565	1,983	2,276	7.30	6.30	5.53	6.39	4.62	3.16	3.60	3.97	7.30	6.30	5.53	6.39	4.62	3.16	3.60	3.97										
Total Hunters**	67,017	64,868	61,922	58,423	59,590	49,518	55,159	57,401																										

\*Although wild turkey, sharp-tailed grouse, band-tailed pigeon and white-tailed ptarmigan harvest was determined by separate questionnaires, it is assumed that these hunters are derived from the same group of hunters who reported hunting other upland game bird species.

\*\*This is not the total of the columns because many upland game hunters hunted more than one species.

Table 3. Percent of hunter trips resulting in failure to bag at least one bird, 1961-96.

Year	Pheasant			Mourning Dove			Chukar			Sage Grouse			Forest Grouse			Quail			Hungarian Partridge																					
	No. Bag	Hunting Trips	%	No. Bag	Hunting Trips	%	No. Bag	Hunting Trips	%	No. Bag	Hunting Trips	%	No. Bag	Hunting Trips	%	No. Bag	Hunting Trips	%	No. Bag	Hunting Trips	%																			
1961	714	3,204	22	51	583	9	318	539	59	--	--	--	--	109	383	28	72	123	59																					
1962	500	2,685	19	39	456	9	147	362	41	--	--	--	--	62	201	31	36	108	33																					
1963	795	3,317	24	53	691	8	248	550	45	220	468	47	220	468	47	188	281	67	71	305	177																			
1964	911	3,115	29	60	681	9	266	568	47	45	154	29	144	229	316	30	62	150	41																					
1965	1,165	4,009	29	--	--	--	486	851	57	82	168	49	225	311	371	34	93	233	40																					
1966	1,242	4,297	29	136	1,067	13	523	881	48	54	131	41	133	331	315	34	63	219	29																					
1967	1,353	4,833	28	153	1,319	12	477	915	52	138	266	52	194	475	424	38	116	315	37																					
1968	1,422	5,223	27	236	1,312	18	495	1,095	45	185	449	41	177	665	457	39	132	347	28																					
1969	1,897	5,335	36	214	1,568	14	647	1,250	62	241	648	37	273	656	465	39	148	292	51																					
1970	1,546	4,686	33	193	1,274	15	466	962	48	257	603	43	209	666	314	40	101	210	48																					
1971	1,783	5,049	35	210	1,333	16	464	934	50	234	625	37	223	673	385	42	87	210	41																					
1972	1,743	4,617	38	270	1,421	19	457	827	55	259	593	44	271	794	339	45	120	224	54																					
1973	1,659	4,699	35	209	1,596	13	414	824	50	226	553	41	329	1,019	311	41	97	196	49																					
1974	2,347	5,323	44	323	1,951	17	511	955	54	292	668	44	388	1,259	333	47	108	227	48																					
1975	2,472	5,604	44	329	2,554	13	607	1,105	55	374	901	42	535	1,354	406	44	121	220	55																					
1976	1,739	4,294	40	273	1,709	16	408	781	52	259	783	33	371	1,131	266	39	87	184	47																					
1977	1,874	5,175	36	295	1,967	15	511	943	54	394	972	41	528	1,388	299	42	106	247	43																					
1978	1,507	4,858	31	279	1,986	14	343	882	39	301	853	35	419	1,419	306	34	85	246	35																					
1979	2,222	7,024	32	343	2,671	13	528	1,150	46	400	1,215	33	585	1,691	403	32	119	243	49																					
1980	1,684	5,867	29	258	2,145	12	458	1,008	45	392	944	42	501	1,283	254	34	75	206	36																					
1981	1,305	4,637	28	239	1,558	15	302	669	45	184	493	37	297	741	241	40	57	172	33																					
1982	1,768	6,725	26	363	2,338	16	406	824	49	269	620	43	325	919	292	44	89	176	51																					
1983	1,645	7,153	23	348	2,381	15	362	880	41	294	729	40	300	1,118	310	44	82	225	36																					
1984	1,245	4,643	27	274	1,711	16	287	548	52	202	435	46	270	640	189	44	51	76	67																					
1985	1,207	4,017	30	221	1,500	15	208	426	49	161	376	43	228	656	148	41	35	54	65																					
1986	1,211	3,615	33	224	1,476	15	237	537	44	139	368	38	221	667	125	46	36	61	59																					
1987	863	2,837	30	140	1,047	13	194	537	36	90	307	29	143	671	111	41	34	94	35																					
1988	1,372	3,953	35	244	1,525	16	308	77	40	187	557	34	224	1,184	171	37	73	154	47																					
1989	1,126	2,985	38	184	1,184	16	263	614	43	183	468	39	257	961	160	43	53	108	49																					
1990	988	2,745	36	161	1,234	13	282	632	45	162	483	34	233	810	132	41	46	117	39																					
1991	1,062	2,461	43	205	1,301	16	309	608	51	198	461	43	262	829	152	45	67	153	44																					
1992	905	2,760	33	156	1,150	14	298	701	43	169	432	39	208	969	168	40	67	186	36																					
1993	1,035	2,086	50	194	1,038	19	354	533	66	191	347	55	346	633	192	44	75	110	68																					
1994	889	2,088	43	230	1,180	19	278	481	58	148	292	51	243	559	167	38	78	108	72																					
1995	919	2,452	37	224	1,286	17	259	554	47	169	347	49	277	790	241	39	54	123	44																					
1996	742	2,259	33	173	1,164	15	225	526	43	119	255	47	187	775	215	38	38	103	37																					
AVERAGES																					33	14	49	39	35	39	35	39	35	39	35	39	35	39	35	39	35	39	35	39
(1961-95)																																								

The upland game questionnaire is designed to monitor statewide harvest trend from year to year. The more extensively a species is hunted, the more accurately the questionnaire measures the trend data. In an effort to improve the accuracy of indices for species which receive very little hunting pressure and harvest, and which have low densities and limited distribution, a unique questionnaire for that species is mailed to the permit holder. This method has been used for band-tailed pigeon, wild turkey, sharp-tailed grouse and white-tailed ptarmigan.

The annual harvest report is sometimes criticized for being inaccurate and without value. However, report users must recognize that the accuracy of the questionnaire is based on some basic assumptions. These assumptions are: (1) the returned useable sample is a completely random sample, (2) respondents recorded data correctly, i.e., they clearly understood the questionnaire, (3) respondents recorded data accurately, did not guess or lie, and (4) respondents correctly identified species hunted. If these assumptions are not met, projections of harvest by county may be over-estimated due to nonrespondent or memory biases. Extreme caution should be used in the interpretation of estimated harvest and hunters for specific species in specific counties. Rather, the long-term trend in these indices should be used in managing the populations.

Presently, the Upland Game Annual Report contains the best data available and therefore constitutes the basic facts of upland game management. Although this report has its limitations, the trend data is valuable in making professional judgments regarding upland game populations and harvest.

The annual report is used in wildlife planning. It can be used to establish relative importance among species and for developing new resources through transplants or habitat developments. It points out areas of needed research by indicating problems and possible causes. It documents population trends and it combines all this inventory information into one easily accessible publication. Thus it is used extensively by federal land management agencies in environmental impact statements and management plans. It will become increasingly more important in developing management plans and assessing impacts on wildlife habitat.

# **RING-NECKED PHEASANT**

## **SUMMARY**





The 1995-96 winter was fairly mild. Temperatures were above normal in November through March, while precipitation was below normal in November and December.

Weather conditions during the nesting season, however, were questionable in 1996. Statewide monthly average temperatures were above normal (April-August). Average precipitation was above normal. Pheasants observed on roadside routes was above 1995, but hens appeared to have less young.

Harvest statistics compiled from the questionnaire indicated a slight increase in success compared to 1995. Harvest increased 18 percent from 1995, but remained 58 percent below the long-term average. Opening weekend success was up compared to the previous year based upon field bag check data.

The pheasant hunt is the second most popular hunt in Utah. Mule deer hunting ranks first. Despite its popularity among Utah sportsmen, Utah's pheasant population continues to decline steadily. Primary reasons for population declines are due to outright losses of critical habitat and degradation of remaining habitat.

The Conservation Reserve Program (CRP), begun in 1985, has done little for Utah pheasant populations. Most CRP lands in Utah are in dryland farming areas. Pheasants prefer irrigated agricultural areas.

## Winter Sex Ratio Counts

Winter sex ratio counts provide an index as to how harvest of roosters only is affecting pheasant populations. In Utah, one rooster for every two, three or four hens is most common. One rooster for every ten hens is biologically acceptable in that one rooster can easily service ten hens in the wild. Based on this biological concept, hunting of rooster pheasants only does not appear to be affecting the populations.

Results of the survey for the winter of 1995-96 and long-term trends are shown in Tables 1, 2 and Figure 1 of this section. Statewide comparisons to the winter of 1994-95 and the 10-year (1986-95) average are as follows:

	<u>Winter of</u> <u>1995-96</u>	<b>Percent change from</b> <u>1994-95</u>	<b>Percent change from</b> <u>Average</u>
Total pheasants counted (roadside)	--	--	--
Hens per cock	--	--	--
Pheasants observed per 100 hours	--	--	--
Total hours effort (roadside)	--	--	--

Winter sex ratio data was not collected in Utah in the winter of 1995-96.

## Roadside Counts

A summary of summer roadside pheasant counts for 1996 is shown in Table 3. Long-term trends of pheasants per mile, young per mile, young per hen, percent of hens with young and mean brood size are found in Tables 4-8 and Figure 2. Summer 1996 survey results compared to 1995 and the 10-year (1986-95) average follow:

	<u>1996</u>	<b>Percent change from</b> <u>1995</u>	<b>Percent change from</b> <u>Average</u>
Total pheasants observed	404	+65	-66
Total miles driven	874.4	+6	-45
Pheasants per mile	0.46	+55	-34
Average brood size	4.90	-11	-12
Young per hen	3.08	-36	-18
Percent of hens with young	68	-9	-12

Total pheasants observed increased 65 percent and pheasants per mile increased 55 percent. Percent of hens with young decreased 9 percent while average brood size decreased 11 percent.

More pheasants were observed on roadside counts in 1996 than in 1995. However, reproductive success per adult hen was down from the previous year. Lower than normal precipitation during the nesting season (March-August) may have been responsible for decreased chick survival.

# Harvest

## Hunter Questionnaire

Results of the hunter questionnaire for 1996 are shown in Table 9. Long-term trends of pheasants bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 10-12, and total statewide harvest statistics in Table 13. A comparison of 1996 harvest statistics to 1995 and the previous 48-year average follow:

	<u>1996</u>	<u>Percent change from 1995</u>	<u>Percent change from Average</u>
Pheasant hunters	41,854	+9	-44
Pheasants harvested	83,987	+18	-58
Hunter-days afield <sup>1</sup>	157,755	+11	-25
Pheasants per hunter-day	0.53	+6	-41
Pheasants per hunter	2.01	+9	-22

Ninety percent confidence interval for overall pheasant harvest is +/- 4,841 Standard deviation is 0.877836.

Total hunters increased 9 percent from 1995 and remained 44 percent below the long-term average. Total harvest increased 18 percent from 1995. Hunter success (pheasants per hunter-day) increased 6 percent from 1995. Pheasants per hunter increased 9 percent and remains 22 percent below the long-term average.

Long-term trends (1948-96) of total hunters, hunter-days, harvest and hunter success are shown in Figures 3 and 4. Generally, the recent trend is toward less hunter-days with declines in total pheasants harvested and hunter success. We believe this is the result of the accumulated effects of loss of quantity and quality of habitat due to urbanization, flooding, modern agricultural practices, and habitat fragmentation resulting in increased predation.

Utah County accounted for 16.92 percent of the entire pheasant harvest, while Box Elder County accounted for 17.81 percent and Cache County for 13.47 percent.

FIGURE 1. PHEASANT WINTER SEX RATIO INDICES, 1965-96.

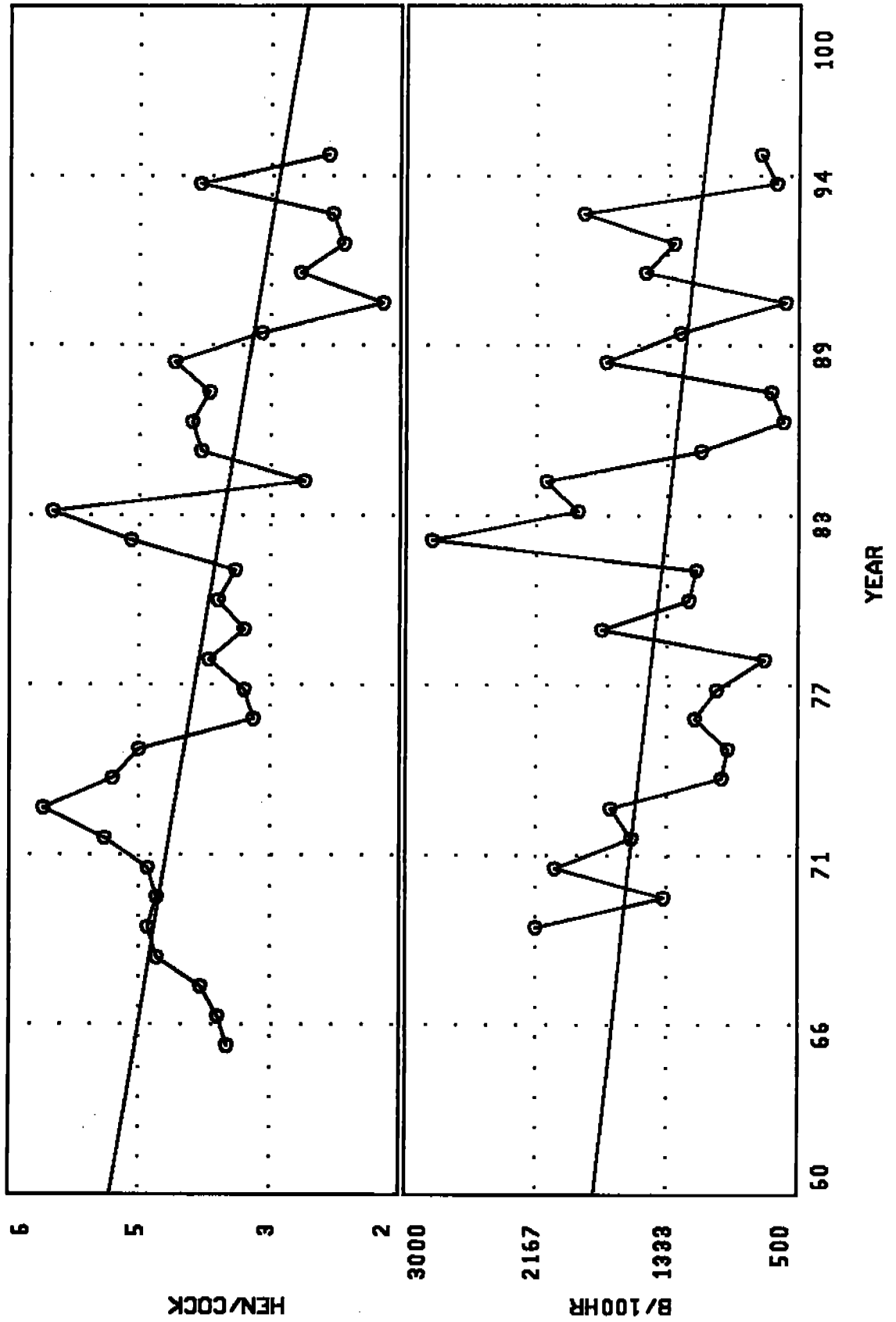
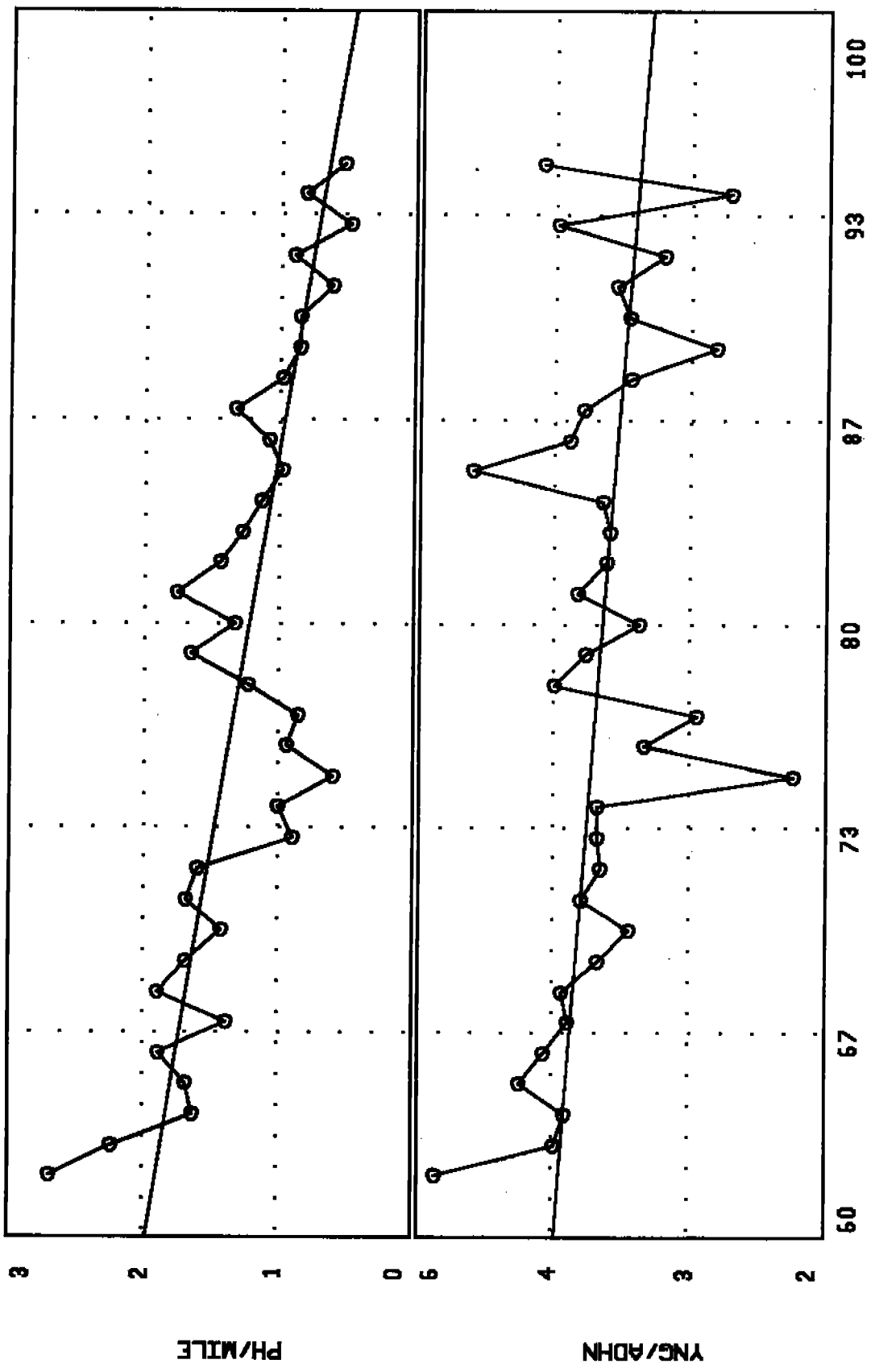


FIGURE 2. PHEASANT PRODUCTION INDICES, 1962-96.



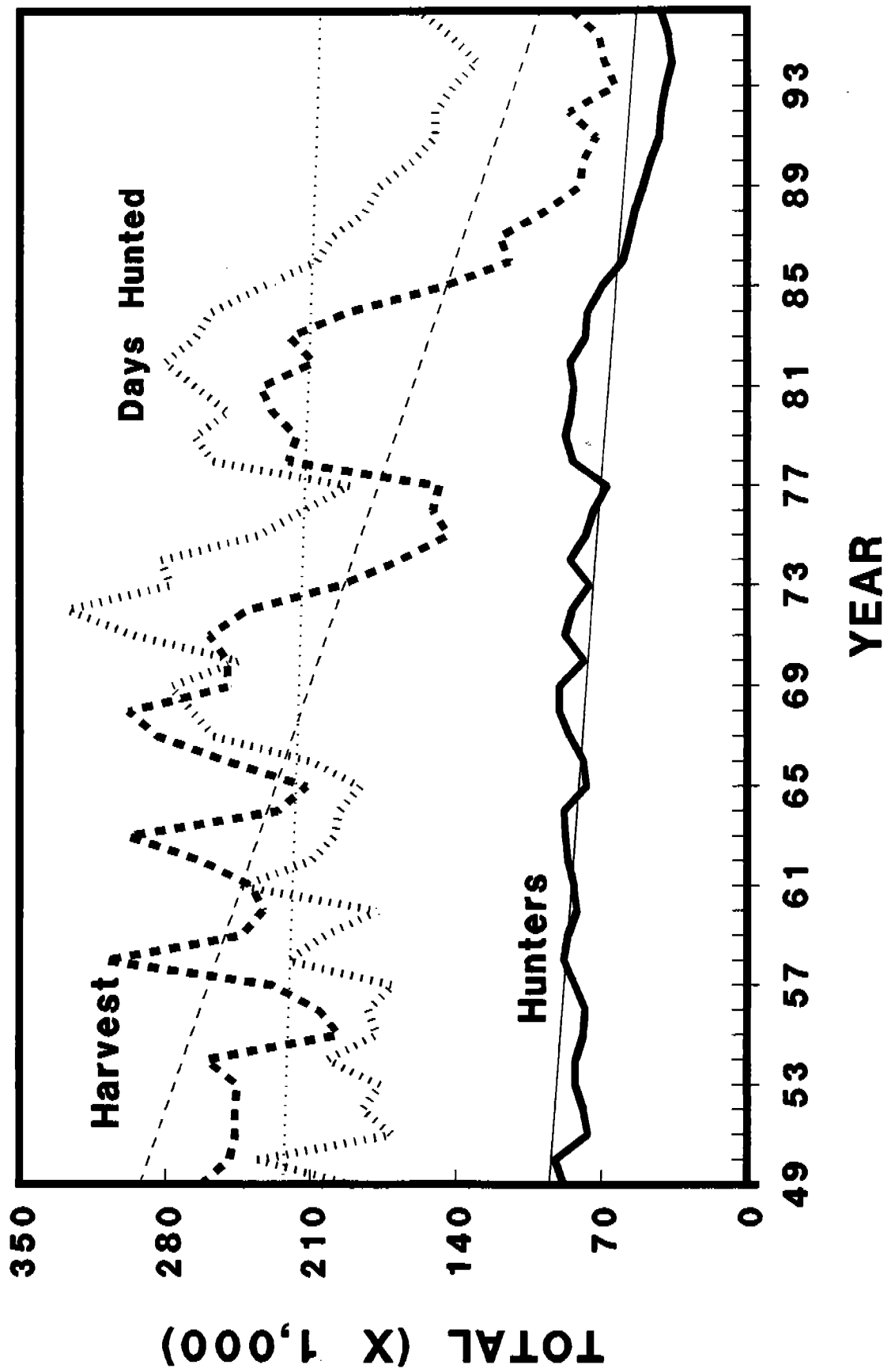
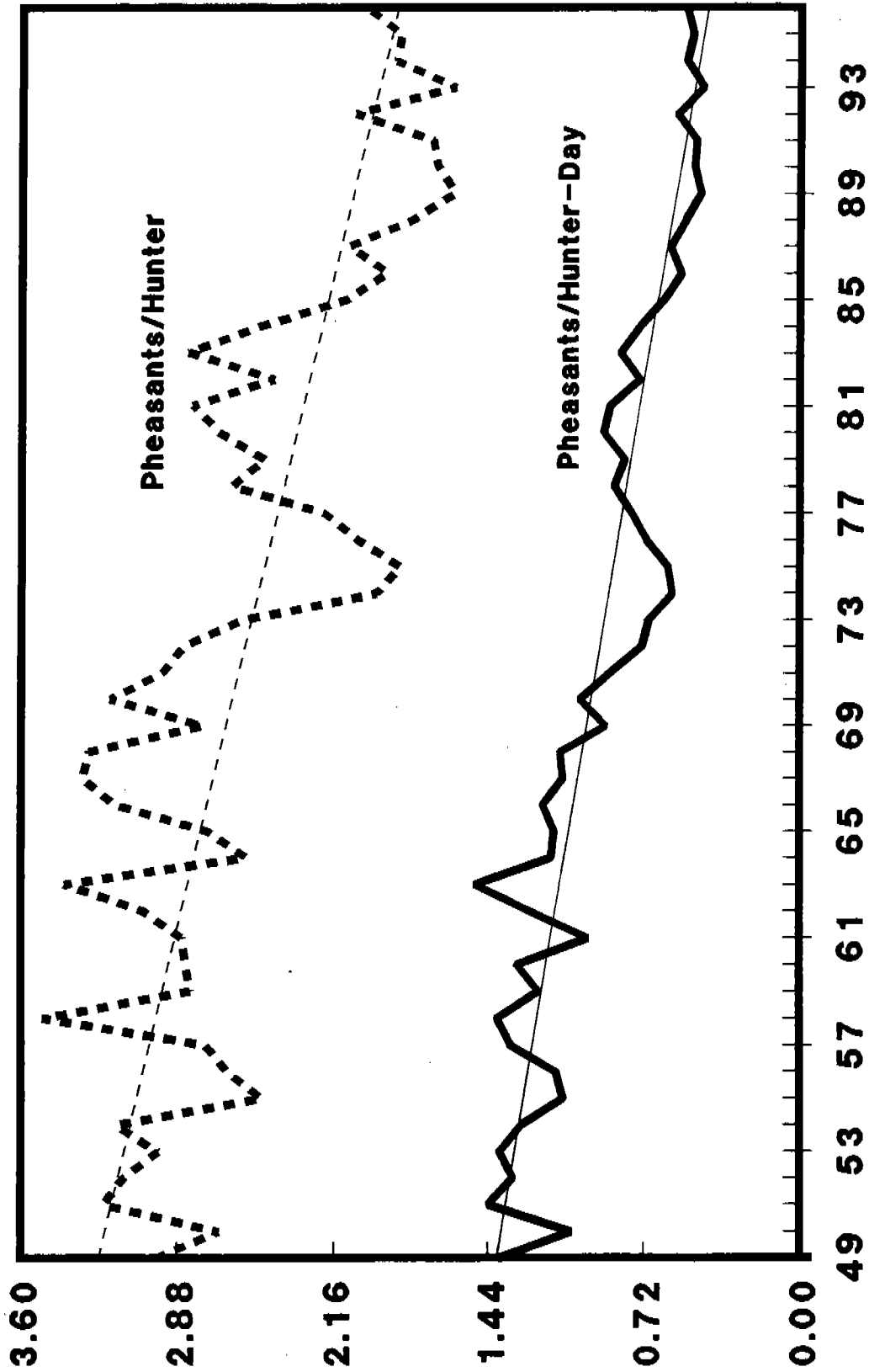


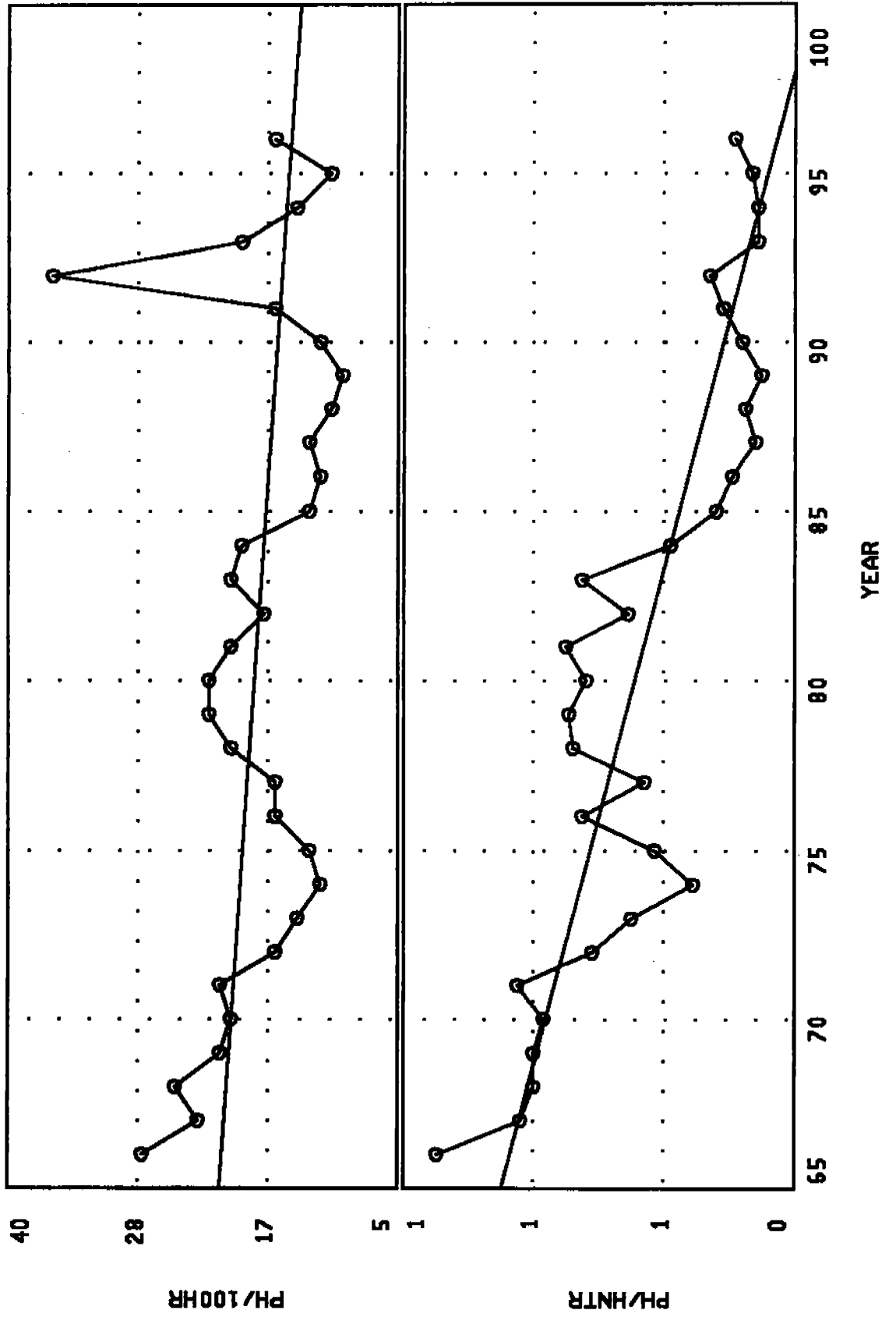
Figure 3. Statewide trends of pheasant harvest statistics, 1949-96.

**PHEASANTS PER HUNTER AND PER DAY**



**Figure 4. Statewide trends of pheasant hunter success rates, 1949-96.**

FIGURE 5. PHEASANT FIELD BAG CHECK INDICES, 1966-96.





## Field Bag Checks

Field bag checks provide an index of opening day or weekend hunter harvest success rates.

A summary of pheasant field bag check data for 1996 is shown in Table 14. The hunter success trend determined via bag checks since 1991 is found in Table 15 and Figure 5. A comparison of 1996 data, on a statewide basis, to 1995 and the 10-year (1986-95) average follow:

	<u>1996</u>	<b>Percent change from <u>1995</u></b>	<b>Percent change from <u>Average</u></b>
Total hunters checked	114	-82	-92
Total hours hunted	262	-86	-93
Pheasants per hunter (complete hunts)	0.38	+15	+7
Pheasants bagged per 100 hours	16	+45	+4
Average hours per hunter-day (complete hunts)	2.30	-23	-11
Hours hunted per pheasant bagged (complete hunts)	1.24	-86	-83

In 1996, hunters spent 23 percent less time afield on an average day during the opening weekend. Hours hunted per pheasant bagged decreased 86 percent.

Table 1. Summary of pheasant winter sex ratio counts, 1995-96.

Region and County	Roadside Observations			Flushing Observations			Effort Expended			Pheas. Obs./ 100 Hours of Road. Obs.			
	Cocks	Hens	Total	Hens/ Cocks/ 100 Hen	Cocks/ 100 Hen	Total	Hens	Cocks	100 Hen	Vehicle Miles	Hours of Effort	Walk	Total
<b>Northern Region</b>													
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Central Region</b>													
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Southern Region</b>													
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Northeastern Region</b>													
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Southeastern Region</b>													
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>STATE TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2. Trend of pheasant winter sex ratio counts, 1990-96.

Region and County	1990-91		1991-92		1992-93		1993-94		1994-95		1995-96		Average	
	Hens/ Cock	Birds/ 100 Hr	Hens/ Cock	Birds/ 100 Hr	Hens/ Cock	Birds/ 100 Hr	Hens/ Cock	Birds/ 100 Hr	Hens/ Cock	Birds/ 100 Hr	Hens/ Cock	Birds/ 100 Hr	Average 1990-1995	Average 1990-1995
<b>Northern Region</b>														
Box Elder	2.47													
Cache	3.43													
Davis	6.90	1,317	1.38	317										
Morgan														
Rich														
Summit														
Weber	3.11		4.52	1,055	2.33	333								
<b>REGIONAL TOTALS</b>	<b>3.48</b>	<b>4,183</b>	<b>3.66</b>	<b>794</b>	<b>2.33</b>	<b>333</b>							<b>3.16</b>	<b>1,770</b>
<b>Central Region</b>														
Juab	3.56	2,050												
Salt Lake	1.73	600	0.25	500	1.40	686								
Sanpete			4.82	640			0.50	19						
Tooele			2.50	2,100	3.30									
Utah	4.96	1,787	1.99	2,329	1.82		3.91	974	2.33	737				
Wasatch														
<b>REGIONAL TOTALS</b>	<b>4.22</b>	<b>1,541</b>	<b>2.27</b>	<b>1,706</b>	<b>2.24</b>	<b>18,857</b>	<b>3.81</b>	<b>641</b>	<b>2.33</b>	<b>737</b>			<b>2.97</b>	<b>4,696</b>
<b>Southern Region</b>														
Beaver														
Iron														
Kane														
Millard	2.21	2,033			2.87	800								
Piute														
Sevier														
Washington														
Wayne														
<b>REGIONAL TOTALS</b>	<b>2.21</b>	<b>2,033</b>			<b>2.87</b>	<b>800</b>							<b>2.64</b>	<b>1,417</b>
<b>Northeastern Region</b>														
Daggett														
Duchesne	1.75	200	1.21	525	0.89	1,700								
Uintah	1.03	1,600	1.41	1,382	2.00	1,600								
<b>REGIONAL TOTALS</b>	<b>1.12</b>	<b>728</b>	<b>1.37</b>	<b>1,021</b>	<b>1.29</b>	<b>1,600</b>							<b>1.26</b>	<b>1,116</b>
<b>Southeastern Region</b>														
Carbon														
Emery														
Grand														
San Juan														
<b>REGIONAL TOTALS</b>														
<b>STATE TOTALS</b>	<b>2.65</b>	<b>1,468</b>	<b>2.15</b>	<b>1,293</b>	<b>2.28</b>	<b>1,864</b>	<b>3.81</b>	<b>641</b>	<b>2.33</b>	<b>737</b>			<b>2.64</b>	<b>1,201</b>

Table 3. Pheasant summer inventory, 1996.

Region and County	No. Routes	Total Miles	Distinct Broods		Young	Mixed Obser.		Young	Adults w/o Young		Total Young Cocks	Total Hens	Total Young Cocks	Total Pheas./Mile	Young/Mile	Mean Brood Ad.	Young/Hen w/Young	%Hens
			Hens	Young		Hens	Young		Cocks	Hens								
<b>Northern Region</b>																		
Box Elder	2	141	2	2	8	6	23	4	1	9	31	4	44	0.31	0.22	4.00	3.44	89
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>2</b>	<b>141</b>	<b>2</b>	<b>2</b>	<b>8</b>	<b>6</b>	<b>23</b>	<b>4</b>	<b>1</b>	<b>9</b>	<b>31</b>	<b>4</b>	<b>44</b>	<b>0.31</b>	<b>0.22</b>	<b>4.00</b>	<b>3.44</b>	<b>89</b>
<b>Central Region</b>																		
Juab	1	33.9	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	3	169.5	13	13	60	7	24	10	8	28	84	10	122	0.72	0.50	4.62	3.00	71
Tooele	1	60	1	1	2	0	0	1	0	1	2	1	4	0.07	0.03	2.00	2.00	100
Utah	3	208.2	18	18	85	12	63	9	18	48	148	9	205	0.98	0.71	4.72	3.08	63
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>8</b>	<b>471.6</b>	<b>32</b>	<b>32</b>	<b>147</b>	<b>19</b>	<b>87</b>	<b>20</b>	<b>26</b>	<b>77</b>	<b>234</b>	<b>20</b>	<b>331</b>	<b>0.70</b>	<b>0.50</b>	<b>4.59</b>	<b>3.04</b>	<b>66</b>
<b>Southern Region</b>																		
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Northeastern Region</b>																		
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	2	161.7	4	4	18	0	0	4	1	5	18	4	27	0.17	0.11	3.00	3.60	80
Utah	2	100.1	0	0	0	0	0	1	1	1	0	1	2	0.02	0.00	--	--	0
<b>REGIONAL TOTALS</b>	<b>4</b>	<b>261.8</b>	<b>4</b>	<b>4</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>6</b>	<b>18</b>	<b>5</b>	<b>29</b>	<b>0.11</b>	<b>0.07</b>	<b>3.00</b>	<b>3.00</b>	<b>67</b>
<b>Southeastern Region</b>																		
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>STATE TOTALS</b>	<b>14</b>	<b>874.4</b>	<b>40</b>	<b>38</b>	<b>173</b>	<b>25</b>	<b>110</b>	<b>29</b>	<b>29</b>	<b>92</b>	<b>263</b>	<b>29</b>	<b>404</b>	<b>0.46</b>	<b>0.32</b>	<b>4.33</b>	<b>3.08</b>	<b>68</b>

Table 4. Trend of pheasants observed per mile during summer roadside pheasant counts, 1986-96.

Region and County	Year										Average 1986-95	
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995		1996
<b>Northern Region</b>												
Box Elder	0.44	0.81	0.63	0.19	0.32	0.21	0.56	0.34	0.72	0.23	0.31	
Cache	0.01	0.29	0.13	0.23	0.09	0.41	0.59	1.09				
Davis	1.04	1.3	0.7	0.41	0.48	0.39	0.15	0.01				
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	0.86	--	--	0.52	1.26	0.48	1.05	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>0.43</b>	<b>0.71</b>	<b>0.4</b>	<b>0.3</b>	<b>0.42</b>	<b>0.35</b>	<b>0.58</b>	<b>0.24</b>	<b>0.72</b>	<b>0.23</b>	<b>0.31</b>	<b>0.44</b>
<b>Central Region</b>												
Juab	0.71	--	0.38	0.5	0.14	--	0.77	0.16	0.14	0.15	0.00	
Salt Lake	2.1	1.08	--	--	1.26	1.24	--	0.31	--	--	--	
Sanpete	1.15	1.63	1.18	1.7	1.23	0.85	0.67	0.35	0.53	0.38	0.72	
Tooele	0.2	0.08	0.15	--	0.17	0.55	0.14	--	0.27	0.00	0.07	
Utah	2.13	2.35	2	1	1.45	0.58	2.56	0.93	1.58	0.96	0.98	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>1.61</b>	<b>1.79</b>	<b>1.42</b>	<b>1.5</b>	<b>1.09</b>	<b>0.73</b>	<b>1.79</b>	<b>0.48</b>	<b>0.92</b>	<b>0.61</b>	<b>0.70</b>	<b>1.19</b>
<b>Southern Region</b>												
Beaver	0.23	0.08	0.17	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	0.01	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	0.98	0.67	0.67	--	0.34	0.38	--	1.38	--	--	--	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	1.82	1.95	1.3	--	--	--	--	--	--	--	--	
Washington	1.3	0.47	0.22	0.06	--	--	--	--	--	--	--	
Wayne	0.38	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>1.07</b>	<b>1.44</b>	<b>0.78</b>	<b>0.06</b>	<b>0.34</b>	<b>0.38</b>	--	<b>1.38</b>	--	--	--	<b>0.58</b>
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.44	0.38	0.58	0.39	0.93	0.59	0.22	0.14	0.22	0.23	0.17	
Uintah	0.46	0.55	0.45	0.24	0.52	0.29	0.18	0.18	0.36	0.34	0.02	
<b>REGIONAL TOTALS</b>	<b>0.45</b>	<b>0.45</b>	<b>0.54</b>	<b>0.32</b>	<b>0.71</b>	<b>0.51</b>	<b>0.17</b>	<b>0.16</b>	<b>0.28</b>	<b>0.28</b>	<b>0.11</b>	<b>0.39</b>
<b>Southeastern Region</b>												
Carbon	0.26	--	--	--	--	--	--	--	--	--	--	
Emery	0.73	0.72	1.06	1	0.61	0.28	0.56	0.39	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>0.61</b>	<b>0.72</b>	<b>1.06</b>	<b>1</b>	<b>0.61</b>	<b>0.28</b>	<b>0.56</b>	<b>0.39</b>	--	--	--	<b>0.65</b>
<b>STATE TOTALS</b>	<b>0.8</b>	<b>1.1</b>	<b>0.81</b>	<b>0.71</b>	<b>0.71</b>	<b>0.51</b>	<b>0.75</b>	<b>0.40</b>	<b>0.68</b>	<b>0.44</b>	<b>0.46</b>	<b>0.69</b>

Table 5. Trend of young observed per mile during summer roadside pheasant counts, 1986-96.

Region and County	Year										Average 1986-95	
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995		1996
<b>Northern Region</b>												
Box Elder	0.29	0.62	0.39	0.16	0.27	0.14	0.41	0.28	0.52	0.15	0.22	
Cache	0.00	0.25	0.09	0.14	0.06	0.23	0.42	0.94	--	--	--	
Davis	0.85	0.98	0.52	0.22	0.31	0.26	0.04	--	--	--	--	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	0.76	--	--	0.39	0.97	0.30	0.77	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>0.32</b>	<b>0.55</b>	<b>0.28</b>	<b>0.20</b>	<b>0.32</b>	<b>0.21</b>	<b>0.41</b>	<b>0.19</b>	<b>0.52</b>	<b>0.15</b>	<b>0.22</b>	<b>0.32</b>
<b>Central Region</b>												
Juab	0.57	--	0.17	0.08	0.09	--	0.62	0.08	0.08	0.12	0.00	
Salt Lake	1.62	0.79	--	--	0.97	0.93	--	0.24	--	--	--	
Sanpete	0.90	1.23	0.96	1.30	0.91	0.67	0.53	0.28	0.34	0.32	0.50	
Tooele	0.08	0.07	0.07	--	0.10	0.53	0.11	--	0.10	--	0.03	
Utah	1.68	1.81	1.57	1.00	1.15	0.49	1.97	0.69	1.12	0.72	0.71	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>1.26</b>	<b>1.37</b>	<b>1.11</b>	<b>1.10</b>	<b>0.87</b>	<b>0.59</b>	<b>1.38</b>	<b>0.37</b>	<b>0.63</b>	<b>0.47</b>	<b>0.50</b>	<b>0.91</b>
<b>Southern Region</b>												
Beaver	0.14	0.07	0.10	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	0.00	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	0.76	1.55	0.50	--	0.31	0.28	--	1.18	--	--	--	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	1.48	1.54	0.95	--	--	--	--	--	--	--	--	
Washington	0.86	0.22	0.16	--	--	--	--	--	--	--	--	
Wayne	0.19	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>0.84</b>	<b>1.12</b>	<b>0.57</b>	<b>--</b>	<b>0.31</b>	<b>0.28</b>	<b>--</b>	<b>1.18</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.72</b>
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.29	0.25	0.32	0.20	0.58	0.42	0.08	0.02	0.10	0.15	0.11	
Uintah	0.33	0.40	0.30	0.14	0.35	0.21	0.10	0.13	0.25	0.25	0.00	
<b>REGIONAL TOTALS</b>	<b>0.30</b>	<b>0.31</b>	<b>0.32</b>	<b>0.17</b>	<b>0.46</b>	<b>0.37</b>	<b>0.08</b>	<b>0.07</b>	<b>0.17</b>	<b>0.20</b>	<b>0.07</b>	<b>0.25</b>
<b>Southeastern Region</b>												
Carbon	0.15	--	--	--	--	--	--	--	--	--	--	
Emery	0.56	0.59	0.86	1.00	0.43	0.22	0.43	0.29	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>0.34</b>	<b>0.59</b>	<b>0.86</b>	<b>1.00</b>	<b>0.43</b>	<b>0.22</b>	<b>0.43</b>	<b>0.29</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.52</b>
<b>STATE TOTALS</b>	<b>0.61</b>	<b>0.79</b>	<b>0.63</b>	<b>0.62</b>	<b>0.48</b>	<b>0.38</b>	<b>0.55</b>	<b>0.30</b>	<b>0.46</b>	<b>0.33</b>	<b>0.32</b>	<b>0.52</b>

Table 6. Trend of young per adult hen ratios found during summer roadside pheasant counts, 1986-96.

Region and County	Year											Average 1986-95
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder	2.38	4.42	2.21	7.00	5.86	1.92	3.04	4.67	3.32	3.29	3.44	
Cache	--	7.17	2.33	2.60	5.50	1.57	3.38	6.00	--	--	--	
Davis	5.92	3.30	6.86	1.30	2.41	3.00	1.00	--	--	--	--	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	7.33	--	--	4.80	5.50	2.60	3.35	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>3.92</b>	<b>4.18</b>	<b>3.44</b>	<b>2.90</b>	<b>3.86</b>	<b>2.02</b>	<b>3.05</b>	<b>4.80</b>	<b>3.32</b>	<b>3.29</b>	<b>3.44</b>	<b>3.48</b>
<b>Central Region</b>												
Juab	4.00	--	2.00	0.23	4.00	--	8.00	1.00	1.50	4.00	0.00	
Salt Lake	5.10	3.88	--	--	3.80	4.22	--	10.00	--	--	--	
Sanpete	3.98	3.25	4.48	3.20	3.34	4.17	4.60	4.77	2.15	9.00	3.00	
Tooele	1.50	4.00	2.00	--	2.00	--	3.00	--	0.60	--	2.00	
Utah	4.16	4.18	3.94	3.80	4.31	6.41	4.22	3.76	2.95	3.85	3.08	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>4.18</b>	<b>3.89</b>	<b>4.00</b>	<b>4.70</b>	<b>3.92</b>	<b>5.27</b>	<b>4.28</b>	<b>3.92</b>	<b>2.53</b>	<b>4.51</b>	<b>3.04</b>	<b>4.12</b>
<b>Southern Region</b>												
Beaver	2.60	6.00	1.80	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	4.04	3.99	3.64	--	15.00	4.86	--	7.23	--	--	--	
Plute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	5.22	5.14	3.77	--	--	--	--	--	--	--	--	
Washington	2.78	1.11	3.50	--	--	--	--	--	--	--	--	
Wayne	2.43	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>4.43</b>	<b>4.32</b>	<b>3.61</b>	<b>--</b>	<b>15.00</b>	<b>4.86</b>	<b>--</b>	<b>7.23</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>6.57</b>
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	3.73	3.40	2.36	1.68	2.60	3.81	0.86	1.00	3.40	3.67	3.60	
Uintah	4.13	3.65	3.67	2.33	3.30	3.33	1.70	3.33	6.60	6.00	--	
<b>REGIONAL TOTALS</b>	<b>3.88</b>	<b>3.52</b>	<b>2.64</b>	<b>2.01</b>	<b>2.82</b>	<b>3.73</b>	<b>1.02</b>	<b>2.40</b>	<b>5.00</b>	<b>4.83</b>	<b>3.00</b>	<b>3.19</b>
<b>Southeastern Region</b>												
Carbon	3.00	--	--	--	--	--	--	--	--	--	--	
Emery	5.15	6.63	6.42	3.60	3.50	5.00	6.50	3.71	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>4.04</b>	<b>6.63</b>	<b>6.42</b>	<b>3.60</b>	<b>3.50</b>	<b>5.00</b>	<b>6.50</b>	<b>3.71</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.93</b>
<b>STATE TOTALS</b>	<b>4.20</b>	<b>4.08</b>	<b>3.68</b>	<b>2.95</b>	<b>3.70</b>	<b>3.81</b>	<b>3.40</b>	<b>4.31</b>	<b>2.84</b>	<b>4.44</b>	<b>3.08</b>	<b>3.74</b>

Table 7. Trend of the percent of hens observed with broods during summer roadside pheasant counts, 1986-96.

Region and County	Year											Average	
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1986-96	1986-95
<b>Northern Region</b>													
Box Elder	48	75	64	100	100	83	74	89	68	57	89		
Cache	--	83	50	56	67	70	38	100	--	--	--		
Davis	85	89	86	47	50	50	0	--	--	--	--		
Morgan	--	--	--	--	--	--	--	--	--	--	--		
Rich	--	--	--	--	--	--	--	--	--	--	--		
Summit	--	--	--	--	--	--	--	--	--	--	--		
Weber	100	--	--	100	80	60	85	--	--	--	--		
<b>REGIONAL TOTALS</b>	<b>62</b>	<b>82</b>	<b>67</b>	<b>76</b>	<b>74</b>	<b>69</b>	<b>67</b>	<b>90</b>	<b>68</b>	<b>57</b>	<b>89</b>	<b>71</b>	<b>71</b>
<b>Central Region</b>													
Juab	100	--	50	6	100	--	--	100	50	100	0		
Salt Lake	90	88	--	--	67	89	--	100	--	--	--		
Sanpete	76	85	88	81	78	83	90	85	59	100	71		
Tooele	50	100	50	--	--	--	--	--	40	--	100		
Utah	86	94	81	66	89	76	86	94	75	78	63		
Wasatch	--	--	--	--	--	--	--	--	--	--	--		
<b>REGIONAL TOTALS</b>	<b>84</b>	<b>91</b>	<b>82</b>	<b>51</b>	<b>81</b>	<b>80</b>	<b>87</b>	<b>92</b>	<b>68</b>	<b>81</b>	<b>66</b>	<b>80</b>	<b>80</b>
<b>Southern Region</b>													
Beaver	80	100	40	--	--	--	--	--	--	--	--		
Garfield	--	--	--	--	--	--	--	--	--	--	--		
Iron	--	--	--	--	--	--	--	--	--	--	--		
Kane	--	--	--	--	--	--	--	--	--	--	--		
Millard	98	86	86	--	100	100	--	85	--	--	--		
Plute	--	--	--	--	--	--	--	--	--	--	--		
Sevier	87	86	69	--	--	--	--	--	--	--	--		
Washington	64	22	50	--	--	--	--	--	--	--	--		
Wayne	100	--	--	--	--	--	--	--	--	--	--		
<b>REGIONAL TOTALS</b>	<b>88</b>	<b>82</b>	<b>74</b>	<b>--</b>	<b>100</b>	<b>100</b>	<b>--</b>	<b>85</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>88</b>	<b>88</b>
<b>Northeastern Region</b>													
Daggett	--	--	--	--	--	--	--	--	--	--	--		
Duchesne	73	96	39	61	60	84	--	50	60	33	80		
Uintah	73	91	75	56	79	100	--	67	100	100	0		
<b>REGIONAL TOTALS</b>	<b>73</b>	<b>94</b>	<b>46</b>	<b>59</b>	<b>67</b>	<b>86</b>	<b>--</b>	<b>60</b>	<b>80</b>	<b>67</b>	<b>67</b>	<b>70</b>	<b>70</b>
<b>Southeastern Region</b>													
Carbon	66	--	--	--	--	--	--	--	--	--	--		
Emery	92	100	100	64	64	100	83	57	--	--	--		
Grand	--	--	--	--	--	--	--	--	--	--	--		
San Juan	--	--	--	--	--	--	--	--	--	--	--		
<b>REGIONAL TOTALS</b>	<b>91</b>	<b>100</b>	<b>100</b>	<b>64</b>	<b>64</b>	<b>100</b>	<b>83</b>	<b>57</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>82</b>	<b>82</b>
<b>STATE TOTALS</b>	<b>83</b>	<b>87</b>	<b>72</b>	<b>64</b>	<b>76</b>	<b>79</b>	<b>85</b>	<b>85</b>	<b>69</b>	<b>76</b>	<b>68</b>	<b>78</b>	<b>78</b>



Table 8. Trend of average brood size for pheasants, 1986-96.

Region and County	Year										Average		
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1986-95	1986-96
<b>Northern Region</b>													
Box Elder	5.33	6.00	4.80	8.00	5.40	3.20	4.00	5.40	6.78	6.67	4.00		
Cache	--	4.80	4.00	4.00	4.50	5.20	4.67	6.00	--	--	--		
Davis	5.12	4.40	6.60	4.50	4.20	6.00	--	--	--	--	--		
Morgan	--	--	--	--	--	--	--	--	--	--	--		
Rich	--	--	--	--	--	--	--	--	--	--	--		
Summit	--	--	--	--	--	--	--	--	--	--	--		
Weber	--	--	5.50	4.30	--	4.33	3.94	--	--	--	--		
<b>REGIONAL TOTALS</b>	<b>5.41</b>	<b>5.10</b>	<b>5.40</b>	<b>5.40</b>	<b>5.00</b>	<b>4.53</b>	<b>4.03</b>	<b>5.50</b>	<b>6.78</b>	<b>6.67</b>	<b>4.00</b>	<b>5.38</b>	
<b>Central Region</b>													
Juab	4.67	--	4.00	4.00	4.00	--	8.00	2.00	3.00	4.00	0.00		
Salt Lake	5.70	3.80	3.80	--	5.00	4.25	--	7.00	--	--	--		
Sanpete	5.10	4.80	5.80	4.20	4.40	5.00	4.00	5.89	4.18	5.83	4.62		
Tooele	3.00	4.00	4.00	--	3.00	--	--	--	1.00	--	2.00		
Utah	4.75	4.90	4.80	5.10	5.00	5.13	5.44	3.78	4.13	4.89	4.72		
Wasatch	--	--	--	--	--	--	--	--	--	--	--		
<b>REGIONAL TOTALS</b>	<b>4.89</b>	<b>4.80</b>	<b>5.00</b>	<b>4.40</b>	<b>4.70</b>	<b>4.92</b>	<b>5.35</b>	<b>4.32</b>	<b>4.06</b>	<b>5.03</b>	<b>4.59</b>	<b>4.75</b>	
<b>Southern Region</b>													
Beaver	3.25	6.00	4.50	--	--	--	--	--	--	--	--		
Garfield	--	--	--	--	--	--	--	--	--	--	--		
Iron	--	--	--	--	--	--	--	--	--	--	--		
Kane	--	--	--	--	--	--	--	--	--	--	--		
Millard	3.72	5.30	4.90	--	3.80	5.40	--	--	--	--	--		
Plute	--	--	--	--	--	--	--	--	--	--	--		
Sevier	5.69	5.80	5.60	--	--	--	--	--	--	--	--		
Washington	4.14	5.00	7.00	--	--	--	--	--	--	--	--		
Wayne	2.25	--	--	--	--	--	--	--	--	--	--		
<b>REGIONAL TOTALS</b>	<b>4.70</b>	<b>5.60</b>	<b>5.30</b>	<b>--</b>	<b>3.80</b>	<b>5.40</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.96</b>	
<b>Northeastern Region</b>													
Daggett	--	--	--	--	--	--	--	--	--	--	--		
Duchesne	5.75	3.90	5.30	2.70	5.30	4.50	0.68	2.00	5.67	--	3.00		
Uintah	5.71	4.40	5.30	4.20	4.90	3.33	3.00	4.75	6.60	6.00	--		
<b>REGIONAL TOTALS</b>	<b>5.74</b>	<b>4.10</b>	<b>5.30</b>	<b>3.50</b>	<b>5.10</b>	<b>4.18</b>	<b>0.80</b>	<b>3.83</b>	<b>6.25</b>	<b>6.00</b>	<b>3.00</b>	<b>4.48</b>	
<b>Southeastern Region</b>													
Carbon	--	--	--	--	--	--	--	--	--	--	--		
Emery	6.89	5.00	7.10	5.70	5.60	4.50	7.00	6.50	--	--	--		
Grand	--	--	--	--	--	--	--	--	--	--	--		
San Juan	--	--	--	--	--	--	--	--	--	--	--		
<b>REGIONAL TOTALS</b>	<b>5.46</b>	<b>5.00</b>	<b>7.10</b>	<b>5.70</b>	<b>5.60</b>	<b>4.50</b>	<b>7.00</b>	<b>6.50</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>5.86</b>	
<b>STATE TOTALS</b>	<b>4.94</b>	<b>5.10</b>	<b>5.30</b>	<b>4.60</b>	<b>4.80</b>	<b>4.61</b>	<b>3.93</b>	<b>5.81</b>	<b>4.68</b>	<b>5.24</b>	<b>4.33</b>	<b>4.90</b>	

Table 9. Summary of pheasant hunter success and distribution of harvest and hunting pressure by region and county, 1996.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	321	22,413	14,957	0.67	14.21	17.81
CACHE	227	16,955	11,311	0.67	10.75	13.47
DAVIS	139	11,659	2,810	0.24	7.39	3.35
MORGAN	5	185	92	0.50	0.12	0.11
RICH	3	46	0	0.00	0.03	0.00
SUMMIT	1	0	0	0.00	0.00	0.00
WEBER	227	17,838	5,667	0.32	11.31	6.75
<b>REGIONAL TOTALS</b>	<b>923</b>	<b>69,099</b>	<b>34,839</b>	<b>0.50</b>	<b>43.80</b>	<b>41.48</b>
<b>CENTRAL REGION</b>						
JUAB	83	3,693	2,345	0.64	2.34	2.79
SALT LAKE	50	2,740	1,788	0.65	1.74	2.13
SANPETE	116	6,573	3,646	0.55	4.17	4.34
TOOELE	56	4,273	1,323	0.31	2.71	1.58
UTAH	413	27,430	14,214	0.52	17.39	16.92
WASATCH	6	441	232	0.53	0.28	0.28
<b>REGIONAL TOTALS</b>	<b>724</b>	<b>45,152</b>	<b>23,551</b>	<b>0.52</b>	<b>28.62</b>	<b>28.04</b>
<b>SOUTHERN REGION</b>						
BEAVER	6	394	69	0.18	0.25	0.08
GARFIELD	2	162	0	0.00	0.10	0.00
IRON	16	1,021	255	0.25	0.65	0.30
KANE	1	23	46	2.00	0.01	0.06
MILLARD	157	9,406	5,295	0.56	5.96	6.31
PIUTE	7	255	232	0.91	0.16	0.28
SEVIER	92	6,967	2,717	0.39	4.42	3.24
WASHINGTON	26	1,811	441	0.24	1.15	0.53
WAYNE	3	116	23	0.20	0.07	0.03
<b>REGIONAL TOTALS</b>	<b>310</b>	<b>20,160</b>	<b>9,081</b>	<b>0.45</b>	<b>12.78</b>	<b>10.81</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT	4	255	46	0.18	0.16	0.06
DUCHESNE	95	6,828	5,876	0.86	4.33	7.00
UINTAH	68	5,411	3,530	0.65	3.43	4.20
<b>REGIONAL TOTALS</b>	<b>167</b>	<b>12,495</b>	<b>9,453</b>	<b>0.76</b>	<b>7.92</b>	<b>11.26</b>
<b>SOUTHEASTERN REGION</b>						
CARBON	45	3,065	1,811	0.59	1.94	2.16
EMERY	69	5,992	3,623	0.60	3.80	4.31
GRAND	8	1,347	673	0.50	0.85	0.80
SAN JUAN	6	325	209	0.64	0.21	0.25
<b>REGIONAL TOTALS</b>	<b>128</b>	<b>10,730</b>	<b>6,317</b>	<b>0.59</b>	<b>6.80</b>	<b>7.52</b>
<b>Unknown</b>	<b>7</b>	<b>116</b>	<b>743</b>	<b>6.40</b>	<b>0.07</b>	<b>0.88</b>
<b>STATE TOTALS</b>	<b>2,259</b>	<b>157,755</b>	<b>83,987</b>	<b>0.53</b>	<b>100.00</b>	<b>100.00</b>

\*Total hunter trips from questionnaire returns.

Table 10. Summary of pheasants bagged per hunter-day by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	0.40	0.58	0.53	0.64	0.44	0.55	0.57	0.67
Cache	0.32	0.46	0.51	0.59	0.48	0.60	0.54	0.67
Davis	0.28	0.26	0.34	0.29	0.21	0.34	0.24	0.24
Morgan	0.40	(0.67)	(0.15)	(0.00)	0.00	1.06	0.14	0.50
Rich	(0.17)	0.00	0.00	(0.00)	0.33	1.00	0.50	0.00
Summit	(0.67)	0.00	(0.05)	(0.00)	0.00	0.00	0.75	0.00
Weber	0.29	0.34	0.37	0.39	0.20	0.29	0.45	0.32
<b>REGIONAL TOTALS</b>	<b>0.32</b>	<b>0.42</b>	<b>0.44</b>	<b>0.50</b>	<b>0.33</b>	<b>0.46</b>	<b>0.47</b>	<b>0.50</b>
<b>Central Region</b>								
Juab	0.38	0.39	0.57	0.66	0.40	0.49	0.71	0.64
Salt Lake	0.32	0.51	0.32	0.39	0.53	0.55	0.30	0.65
Sanpete	0.65	0.57	0.59	0.60	0.44	0.59	0.34	0.55
Tooele	0.29	0.36	0.44	0.24	0.15	0.33	0.50	0.31
Utah	0.58	0.53	0.55	0.65	0.48	0.58	0.55	0.52
Wasatch	(1.33)	0.00	0.68	(0.30)	0.50	2.00	1.50	0.53
<b>REGIONAL TOTALS</b>	<b>0.54</b>	<b>0.51</b>	<b>0.53</b>	<b>0.59</b>	<b>0.45</b>	<b>0.56</b>	<b>0.53</b>	<b>0.52</b>
<b>Southern Region</b>								
Beaver	0.39	0.68	0.55	0.38	0.28	0.39	0.24	0.18
Garfield	0.71	0.00	0.00	(0.00)	0.00	1.00	0.50	0.00
Iron	0.34	0.34	0.29	0.26	0.29	0.44	0.25	0.25
Kane	0.00	0.00	0.00	(0.00)	0.00	0.00	0.00	2.00
Millard	0.66	0.74	0.59	0.76	0.58	0.62	0.58	0.56
Piute	1.12	(0.50)	(0.10)	(1.00)	0.25	0.63	0.50	0.91
Sevier	0.45	0.42	0.36	0.49	0.32	0.41	0.27	0.39
Washington	0.33	0.38	0.21	0.61	0.93	0.56	0.45	0.24
Wayne	(0.46)	0.00	(0.50)	(1.14)	0.29	0.57	0.50	0.20
<b>REGIONAL TOTALS</b>	<b>0.52</b>	<b>0.56</b>	<b>0.45</b>	<b>0.62</b>	<b>0.47</b>	<b>0.52</b>	<b>0.42</b>	<b>0.45</b>
<b>Northeastern Region</b>								
Daggett	0.00	0.00	0.00	(0.00)	1.20	0.00	0.00	0.18
Duchesne	0.62	0.78	0.66	0.79	0.77	0.85	0.90	0.86
Uintah	0.42	0.57	0.47	0.68	0.44	0.80	0.49	0.65
<b>REGIONAL TOTALS</b>	<b>0.53</b>	<b>0.69</b>	<b>0.58</b>	<b>0.74</b>	<b>0.67</b>	<b>0.83</b>	<b>0.74</b>	<b>0.76</b>
<b>Southeastern Region</b>								
Carbon	0.39	0.30	0.22	0.48	0.57	0.30	0.35	0.59
Emery	0.44	0.44	0.50	0.53	0.52	0.62	0.41	0.60
Grand	(0.33)	(0.33)	(0.48)	(1.40)	0.57	0.61	0.00	0.50
San Juan	(2.00)	0.00	(0.36)	(1.00)	0.00	0.00	0.00	0.64
<b>REGIONAL TOTALS</b>	<b>30.43</b>	<b>0.39</b>	<b>0.39</b>	<b>0.53</b>	<b>0.53</b>	<b>0.00</b>	<b>0.38</b>	<b>0.59</b>
<b>Unknown Counties</b>	<b>0.60</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.45</b>	<b>0.53</b>	<b>0.30</b>	<b>6.40</b>
<b>STATE TOTALS</b>	<b>0.46</b>	<b>0.49</b>	<b>0.48</b>	<b>0.57</b>	<b>0.45</b>	<b>0.67</b>	<b>0.50</b>	<b>0.5</b>

( )Data may be biased because small sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

Table 11. Percentage distribution of pheasant harvest by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	7.65	12.70	11.67	12.59	9.93	12.03	14.74	14.21
Cache	4.01	7.53	9.68	9.76	8.04	11.72	11.55	10.75
Davis	4.80	3.96	4.38	2.92	2.82	3.89	3.30	7.39
Morgan	0.15	(0.21)	(0.07)	(0.00)	0.00	0.44	0.03	0.12
Rich	(0.03)	0.00	0.00	(0.00)	0.06	0.05	0.05	0.03
Summit	(0.05)	0.00	0.02	(0.00)	0.00	0.00	0.08	0.00
Weber	27.40	8.39	(8.03)	6.59	5.13	5.55	9.91	11.31
<b>REGIONAL TOTALS</b>	<b>24.09</b>	<b>32.79</b>	<b>33.85</b>	<b>31.86</b>	<b>25.98</b>	<b>33.67</b>	<b>39.67</b>	<b>43.80</b>
<b>Central Region</b>								
Juab	1.69	2.09	2.47	3.21	2.16	3.05	3.74	2.34
Salt Lake	2.67	4.30	2.23	2.51	2.76	2.00	1.53	1.74
Sanpete	10.76	7.92	5.94	5.70	4.32	5.81	2.32	4.17
Tooele	2.03	2.19	1.72	1.24	0.93	1.10	1.67	2.71
Utah	27.35	23.44	27.43	28.75	24.51	25.18	25.42	17.39
Wasatch	(0.51)	0.00	0.50	(0.06)	0.06	0.05	0.74	0.28
<b>REGIONAL TOTALS</b>	<b>45.02</b>	<b>39.94</b>	<b>40.30</b>	<b>41.47</b>	<b>34.74</b>	<b>37.18</b>	<b>35.41</b>	<b>28.62</b>
<b>Southern Region</b>								
Beaver	0.36	0.73	0.69	0.31	0.48	0.74	0.41	0.25
Garfield	0.13	0.00	0.00	(0.00)	0.00	0.03	0.05	0.10
Iron	0.62	0.50	0.55	0.21	0.39	0.72	0.38	0.65
Kane	0.00	0.00	0.00	(0.00)	0.00	0.00	0.00	0.01
Millard	7.99	8.71	7.62	8.04	7.71	7.72	6.03	5.96
Piute	0.74	(0.08)	(0.02)	(0.19)	0.06	0.13	0.05	0.16
Sevier	5.75	3.94	3.62	3.83	4.53	3.79	2.10	4.42
Washington	1.05	0.78	0.43	0.46	2.52	1.64	1.09	1.15
Wayne	(0.15)	0.00	(0.02)	(0.17)	0.06	0.20	0.11	0.07
<b>REGIONAL TOTALS</b>	<b>16.80</b>	<b>14.73</b>	<b>12.96</b>	<b>13.19</b>	<b>15.75</b>	<b>14.99</b>	<b>10.24</b>	<b>12.78</b>
<b>Northeastern Region</b>								
Daggett	0.00	0.00	0.00	(0.00)	0.18	0.00	0.00	0.16
Duchesne	5.86	5.71	5.73	5.97	8.49	4.40	8.11	4.33
Uintah	3.16	3.15	3.07	3.58	2.40	3.38	3.00	3.43
<b>REGIONAL TOTALS</b>	<b>9.01</b>	<b>8.86</b>	<b>8.79</b>	<b>9.55</b>	<b>11.07</b>	<b>7.78</b>	<b>11.11</b>	<b>7.92</b>
<b>Southeastern Region</b>								
Carbon	1.90	0.76	0.84	1.28	2.19	1.00	1.06	1.94
Emery	2.88	2.76	2.92	2.44	5.10	4.96	2.13	3.80
Grand	(0.08)	(0.16)	(0.24)	(0.14)	0.12	0.36	0.00	0.85
San Juan	(0.15)	0.00	(0.10)	0.06)	0.00	0.00	0.00	0.21
<b>REGIONAL TOTALS</b>	<b>5.01</b>	<b>3.68</b>	<b>4.10</b>	<b>3.94</b>	<b>7.41</b>	<b>6.32</b>	<b>3.19</b>	<b>6.80</b>
<b>Unknown Counties</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.04</b>	<b>0.05</b>	<b>0.38</b>	<b>0.07</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

( ) Data may be biased because small sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

Table 12. Percentage distribution of pheasant hunting pressure by county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	8.77	10.67	10.66	11.21	10.00	11.49	12.92	17.81
Cache	5.68	7.98	9.18	9.40	7.55	10.33	10.74	13.47
Davis	7.85	7.32	6.31	5.78	6.01	6.06	6.97	3.35
Morgan	0.18	(0.15)	(0.23)	(0.07)	0.15	0.22	0.10	0.11
Rich	(0.07)	(0.01)	(0.02)	(0.00)	0.08	0.03	0.05	0.00
Summit	(0.04)	(0.01)	(0.23)	(0.00)	0.01	0.01	0.05	0.00
Weber	11.59	12.13	10.47	9.64	11.34	10.23	11.06	6.75
<b>REGIONAL TOTALS</b>	<b>34.17</b>	<b>38.29</b>	<b>37.10</b>	<b>36.11</b>	<b>35.14</b>	<b>38.37</b>	<b>41.90</b>	<b>41.48</b>
<b>Central Region</b>								
Juab	2.02	2.61	2.11	2.79	2.41	3.26	2.64	2.79
Salt Lake	3.84	4.11	3.41	3.71	2.35	1.91	2.55	2.13
Sanpete	7.55	6.81	4.87	5.44	4.41	5.24	3.40	4.34
Tooele	3.17	2.95	1.91	2.99	2.71	1.75	1.65	1.58
Utah	21.39	21.57	24.00	25.12	22.66	22.98	23.13	16.92
Wasatch	(0.18)	0.00	0.36	(0.12)	0.05	0.01	0.25	0.28
<b>REGIONAL TOTALS</b>	<b>38.15</b>	<b>38.06</b>	<b>36.66</b>	<b>40.18</b>	<b>34.59</b>	<b>35.15</b>	<b>33.62</b>	<b>28.04</b>
<b>Southern Region</b>								
Beaver	0.42	0.52	0.61	0.47	0.78	1.02	0.86	0.08
Garfield	0.08	(0.08)	0.01	(0.00)	0.00	0.01	0.05	0.00
Iron	0.83	0.71	0.92	0.45	0.60	0.85	0.75	0.30
Kane	(0.01)	0.00	0.00	(0.02)	0.00	0.00	0.00	0.06
Millard	5.52	5.74	6.27	6.06	5.97	6.58	5.17	6.31
Piute	0.30	(0.08)	(0.12)	(0.11)	0.11	0.11	0.05	0.28
Sevier	5.79	4.58	4.86	4.48	6.25	4.89	3.89	3.24
Washington	1.47	1.02	1.01	0.43	1.21	1.56	1.20	0.53
Wayne	(0.15)	(0.06)	(0.02)	(0.08)	0.09	0.19	0.11	0.03
<b>REGIONAL TOTALS</b>	<b>14.58</b>	<b>12.80</b>	<b>13.82</b>	<b>12.10</b>	<b>15.01</b>	<b>15.20</b>	<b>12.09</b>	<b>10.81</b>
<b>Northeastern Region</b>								
Daggett	(0.01)	(0.01)	0.00	(0.00)	0.07	0.00	0.00	0.06
Duchesne	4.27	3.55	4.22	4.33	4.95	2.73	4.48	7.00
Uintah	3.41	2.71	3.16	2.99	2.43	2.23	3.05	4.20
<b>REGIONAL TOTALS</b>	<b>7.70</b>	<b>6.28</b>	<b>7.38</b>	<b>7.32</b>	<b>7.45</b>	<b>4.97</b>	<b>7.53</b>	<b>11.26</b>
<b>Southeastern Region</b>								
Carbon	1.76	1.54	2.21	1.51	1.73	1.75	1.50	2.16
Emery	3.05	2.99	2.80	2.63	4.37	4.21	2.60	4.31
Grand	0.04	(0.11)	(0.24)	(0.06)	0.09	0.31	0.12	0.80
San Juan	(0.04)	(0.01)	(0.13)	(0.04)	0.05	0.00	0.01	0.25
<b>REGIONAL TOTALS</b>	<b>5.34</b>	<b>4.57</b>	<b>5.04</b>	<b>4.23</b>	<b>6.25</b>	<b>6.27</b>	<b>4.23</b>	<b>7.52</b>
<b>Unknown Counties</b>	<b>0.74</b>	<b>0.06</b>	<b>0.00</b>	<b>0.05</b>	<b>1.56</b>	<b>0.04</b>	<b>0.63</b>	<b>0.88</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

( ) Data may be biased because sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

**Table 13. Statewide summary of pheasant harvest statistics, 1948-96.**

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Pheasants Per Hunter-Day	Pheasants Per Hunter
1948	96,534	280,914	—	—	2.91
1949	88,369	263,340	189,453	1.39	2.98
1950	92,724	249,428	235,309	1.06	2.69
1951	76,576	246,575	171,233	1.44	3.22
1952	78,773	246,559	185,383	1.33	3.13
1953	82,595	245,307	176,480	1.39	2.97
1954	82,370	260,289	201,774	1.29	3.16
1955	78,793	196,195	178,359	1.10	2.49
1956	77,826	206,239	182,512	1.13	2.65
1957	83,025	228,319	170,387	1.34	2.75
1958	88,290	309,015	220,725	1.40	3.50
1959	86,268	243,276	202,730	1.21	2.82
1960	81,976	232,812	177,719	1.31	2.84
1961	83,493	238,439	243,305	0.98	2.86
1962	86,336	262,448	209,921	1.25	3.04
1963	87,647	297,873	198,582	1.50	3.40
1964	88,242	225,775	196,314	1.15	2.56
1965	77,409	211,876	186,215	1.14	2.74
1966	78,721	249,814	209,082	1.19	3.17
1967	85,664	284,000	257,033	1.10	3.32
1968	90,453	297,752	267,788	1.11	3.29
1969	90,573	250,241	277,887	0.90	2.76
1970	78,585	250,503	244,958	1.02	3.19
1971	87,878	259,189	294,618	0.88	2.95
1972	84,311	240,573	327,669	0.73	2.85
1973	75,968	196,012	278,033	0.70	2.58
1974	85,252	167,408	282,294	0.59	1.96
1975	77,566	143,783	234,615	0.61	1.85
1976	74,029	151,476	214,023	0.71	2.05
1977	67,195	148,168	191,142	0.78	2.21
1978	83,800	220,398	257,305	0.86	2.63
1979	87,462	216,700	266,245	0.81	2.48
1980	84,868	228,442	249,770	0.91	2.69
1981	83,408	234,217	265,381	0.88	2.81
1982	85,368	208,437	280,624	0.74	2.44
1983	77,847	220,074	265,731	0.83	2.83
1984	76,840	192,190	258,169	0.74	2.50
1985	69,889	146,807	233,328	0.63	2.10
1986	59,987	114,389	207,346	0.55	1.91
1987	57,118	119,236	199,470	0.60	2.09
1988	54,514	97,658	184,180	0.53	1.79
1989	50,382	80,769	177,364	0.46	1.60
1990	47,025	78,944	161,634	0.49	1.68
1991	42,813	72,612	150,096	0.48	1.70
1992	41,640	85,803	150,244	0.57	2.06
1993	39,640	63,336	141,399	0.45	1.60
1994	36,705	68,698	129,872	0.53	1.87
1995	38,391	71,202	142,755	0.50	1.85
1996	41,854	83,987	157,755	0.53	2.01
<b>Totals</b>					
(1948-96)	3,652,992	9,687,497	10,284,211	—	—
<b>Averages</b>					
(1948-95)	75,232	200,073	210,968	0.90	2.57

Table 14. Pheasant field bag check summary, 1996.

Region and County	All Hunts				Complete Hunts			
	Total Parties	Total Hunters	Total Hours	Total Birds/ 100 Hr	Complete Hunts	Total Hunters	Total Hours	Total Birds/ 100 Hr
<b>Northern Region</b>								
Box Elder	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--
<b>Central Region</b>								
Juab	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--
Utah	16	45	54	7	1	1	2	0
Wasatch	--	--	--	--	--	--	--	0.00
<b>REGIONAL TOTALS</b>	16	45	54	7	1	1	2	0.00
<b>Southern Region</b>								
Beaver	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--
Plute	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--
<b>Northeastern Region</b>								
Daggett	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--
<b>Southeastern Region</b>								
Carbon	--	--	--	--	--	--	--	--
Emery	73	164	382	15	49	113	260	17
Grand	--	--	--	--	--	--	--	0.38
San Juan	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	73	164	382	15	49	113	260	17
<b>STATE TOTALS</b>	89	209	436	14	50	114	262	16

Table 15. Pheasant hunter success trend as determined by field check, 1991-96.

Region and County	1991		1992		1993		1994		1995		1996	
	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter
<b>Northern Region</b>												
Box Elder	100	1.00	--	0.30	--	0.23	--	--	--	--	--	--
Cache	40	0.57	--	--	12	0.63	--	--	8	0.27	--	--
Davis	--	0.00	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	27	1.00	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>24</b>	<b>0.30</b>	<b>--</b>	<b>0.30</b>	<b>60</b>	<b>0.26</b>	<b>--</b>	<b>--</b>	<b>8</b>	<b>0.27</b>	<b>--</b>	<b>--</b>
<b>Central Region</b>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sarpete	17	1.05	13	0.52	12	0.50	--	--	--	--	--	--
Tooele	--	--	--	--	14	0.63	13	0.29	--	--	--	--
Utah	13	0.34	26	0.76	12	0.36	--	--	10	0.32	0	0.00
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>14</b>	<b>0.47</b>	<b>22</b>	<b>0.70</b>	<b>12</b>	<b>0.39</b>	<b>13</b>	<b>0.29</b>	<b>10</b>	<b>0.32</b>	<b>0</b>	<b>0.00</b>
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Plute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	7	0.38	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>7</b>	<b>0.38</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	13	0.50	16	1.13	--	--	--	--	6	0.20	--	--
Uintah	--	--	50	0.50	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>13</b>	<b>0.48</b>	<b>18</b>	<b>0.92</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>6</b>	<b>0.20</b>	<b>--</b>	<b>--</b>
<b>Southeastern Region</b>												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	22	0.36	34	0.51	22	0.29	15	0.33	28	0.55	17	0.38
Grand	--	--	--	--	42	0.40	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>22</b>	<b>0.36</b>	<b>34</b>	<b>0.51</b>	<b>24</b>	<b>0.31</b>	<b>15</b>	<b>0.33</b>	<b>28</b>	<b>0.55</b>	<b>17</b>	<b>0.38</b>
<b>STATE TOTALS</b>	<b>16</b>	<b>0.42</b>	<b>36</b>	<b>0.46</b>	<b>19</b>	<b>0.31</b>	<b>14</b>	<b>0.31</b>	<b>11</b>	<b>0.33</b>	<b>16</b>	<b>0.38</b>

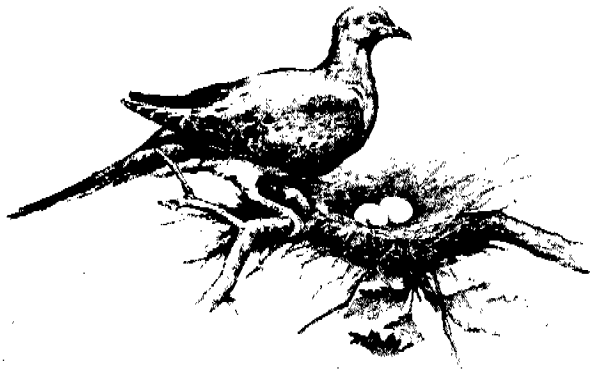


Table 16. Trends of spring pheasant breeding territory counts, 1993-96.

Region and County	Territorial Males per Square Mile				Average 1993-95
	1993	1994	1995	1996	
<b>Northern Region</b>					
Spring Creek-1	2	6	8	8	5
Spring Creek-2		7	13	13	10
BudPhelps WMA	0	5	10	10	5
Mendon	3	3	4	4	3
Pertersboro	0	0	2	2	1
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>21</b>	<b>37</b>	<b>37</b>	<b>21</b>
<b>Central Region</b>					
North Utah County (Sections 26,27,30,31)			8	12	10
Central Utah County (Sections 4,18)			14	18	16
South Utah County (Sections 11,25)			2	0	1
<b>REGIONAL TOTALS</b>			<b>24</b>	<b>30</b>	<b>27</b>
<b>Southern Region</b>					
Clear Lake WMA (Entire WMA)			7	16	12
Pahvant WMA (Entire WMA)			3	9	6
<b>REGIONAL TOTALS</b>			<b>10</b>	<b>25</b>	<b>18</b>
<b>Northeastern Region</b>					
Daggett					
Duchesne					
Uintah					
<b>REGIONAL TOTALS</b>					
<b>Southeastern Region</b>					
Carbon					
Emery					
Grand					
San Juan					
<b>REGIONAL TOTALS</b>					
<b>STATE TOTALS</b>	<b>5</b>	<b>21</b>	<b>34</b>	<b>92</b>	<b>39</b>

# MIGRATORY UPLAND GAME BIRDS

## SUMMARY



### **Mourning Doves**

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### **Band-tailed Pigeons**



The breeding density index increased 41 percent in 1996, and was 2 percent above average.

Aging of wings indicated the juvenile per 100 adult ratio increased to 116 compared to 96 in 1995. Juvenile per 100 adult ratio was 3 percent above the long-term average.

Harvest statistics derived from the questionnaire indicated an increase in number of hunters and harvest compared to 1995.

Field bag checks indicated a decrease in hunter success on opening day. Hunters who participated hunted more hours per day than the previous year, and spent more time afield per dove harvested.

A free band-tailed pigeon hunting permit was required in 1996 to obtain mailing addresses for a questionnaire. Sixty eight hunters obtained permits and 37 went afield. Ninety two pigeons were harvested. The majority of the harvest occurred in Washington County.

# MOURNING DOVE

## Call Count Survey

Results of the 1996 call count survey are found in Table 1 of this section. The long-term trend of the state's breeding density index (average doves heard per route) is shown in Table 2. Indices shown in each of these tables are unweighted and consequently differ from those published in the annual Mourning Dove Status Report compiled by the U.S. Fish and Wildlife Service. However, indicated trends are similar (Figure 1). The following is a comparison of the results of the 1996 survey compared to 1995 and the 10-year (1986-85) average:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Average doves heard per route	9.87	+41	+2
Average doves seen per route	8.53	+124	-20

Coo count data (doves heard per route) indicated increased breeding activity in late May compared to 1995, and was 2 percent above the long-term average of doves heard per route.

## Harvest

### Hunter Questionnaire

Information obtained from the hunter questionnaire for 1996 is summarized in Table 3. Long-term trends of mourning doves bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 4-6 and total statewide harvest statistics in Table 7 and Figures 2 and 3. The following is a comparison of the harvest statistics for 1996 compared to 1995 and the previous 45-year average:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Mourning dove hunters	23,180	+11	+5
Mourning doves harvested	200,167	+7	-2
Hunter-days afield	85,613	+6	+24
Mourning doves per hunter-day	2.34	+1	-28
Mourning doves per hunter	8.6492	-3	-4

Ninety percent confidence interval for overall dove harvest is +/- 12,056. Standard deviation is 2.920900.

Hunter success increased slightly from 1995. Total harvest increased 7 percent compared to 1995. Numbers of dove hunters increased 11 percent and hunter-days afield increased 6 percent. Doves per hunter decreased 3 percent from 1995.

Long-term harvest trends are depicted in Figure 2.

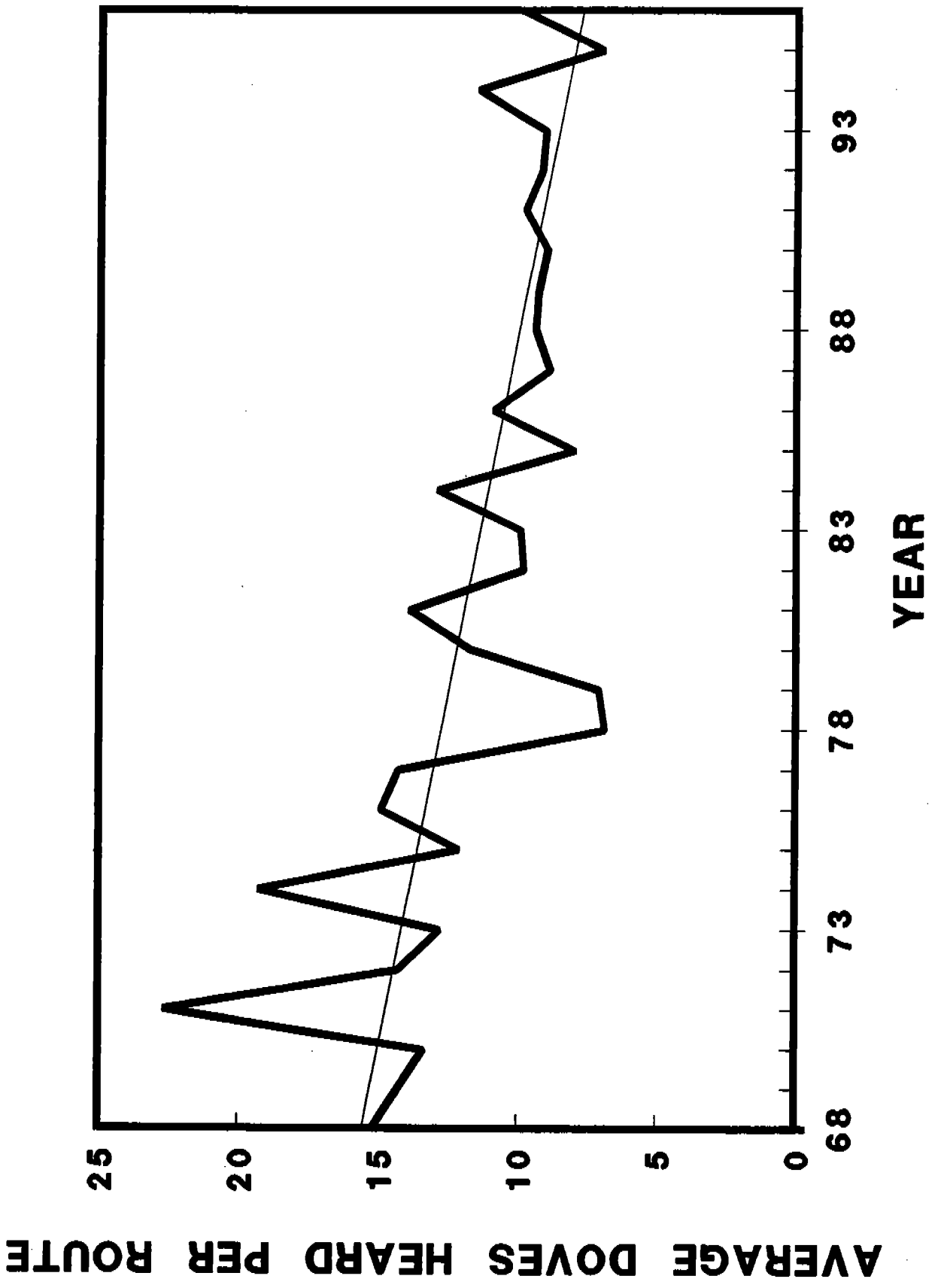


Figure 1. Mourning dove breeding density index trend, 1968-96.

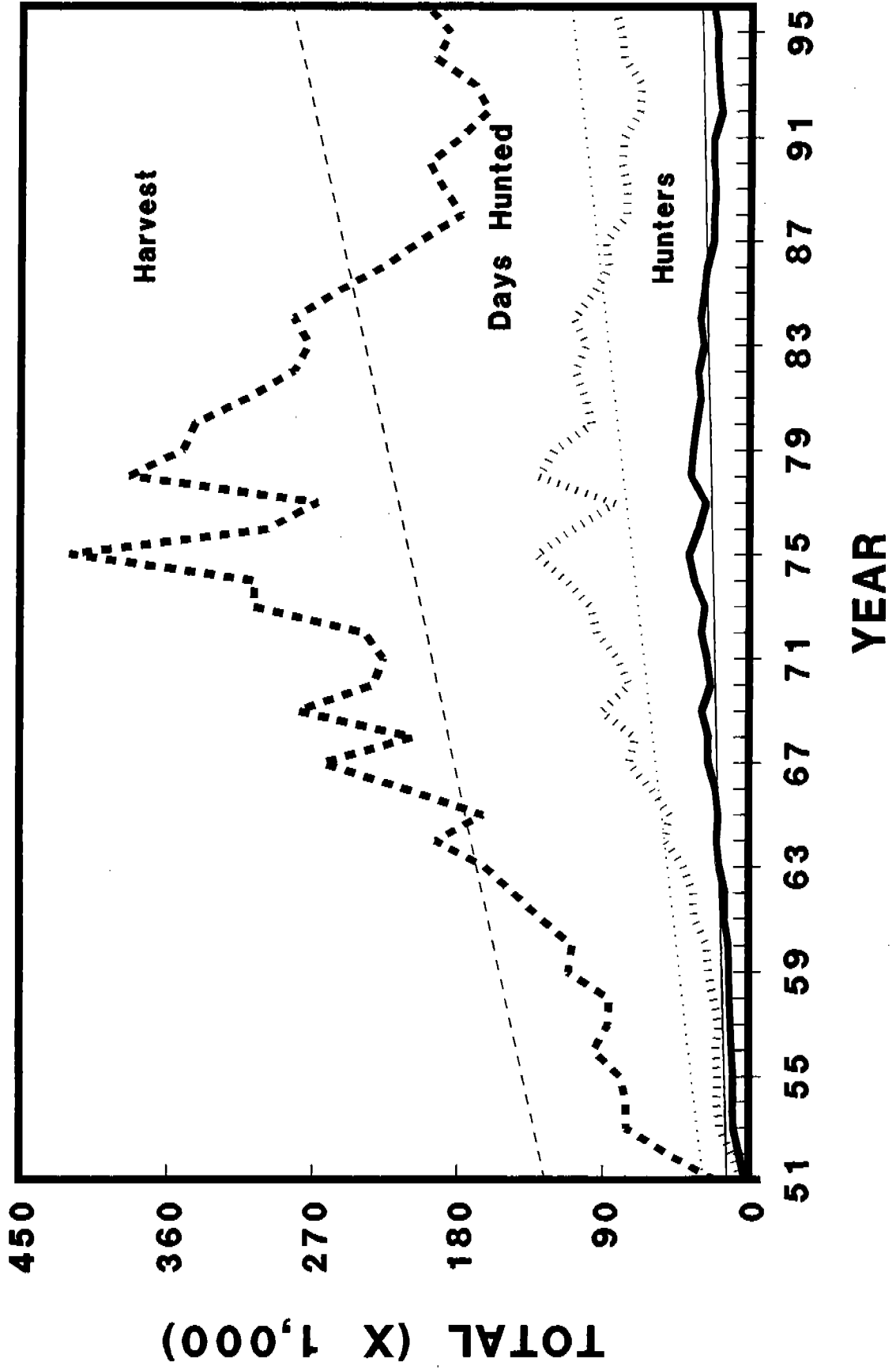


Figure 2. Statewide trends of mourning dove harvest statistics, 1951-96.

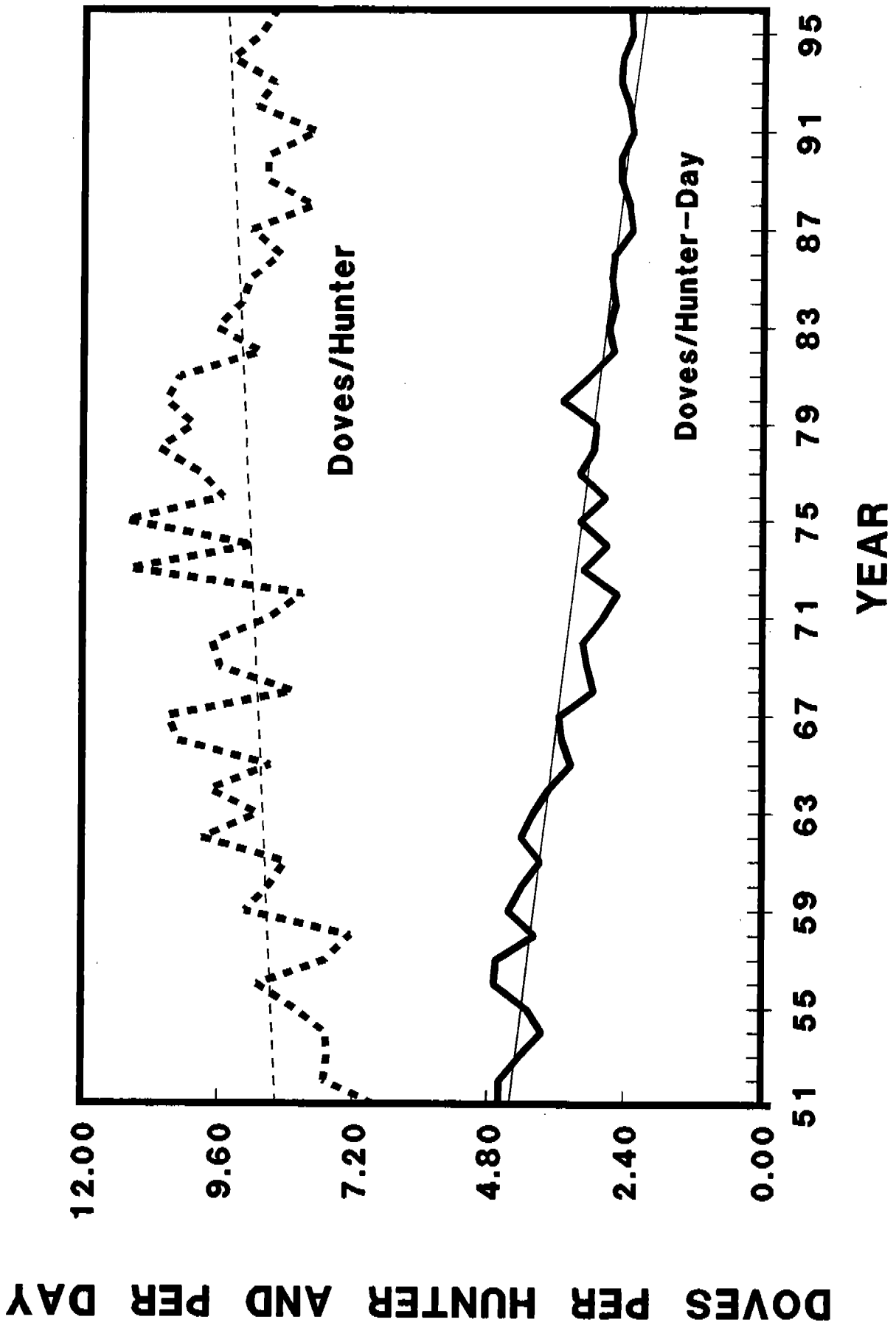
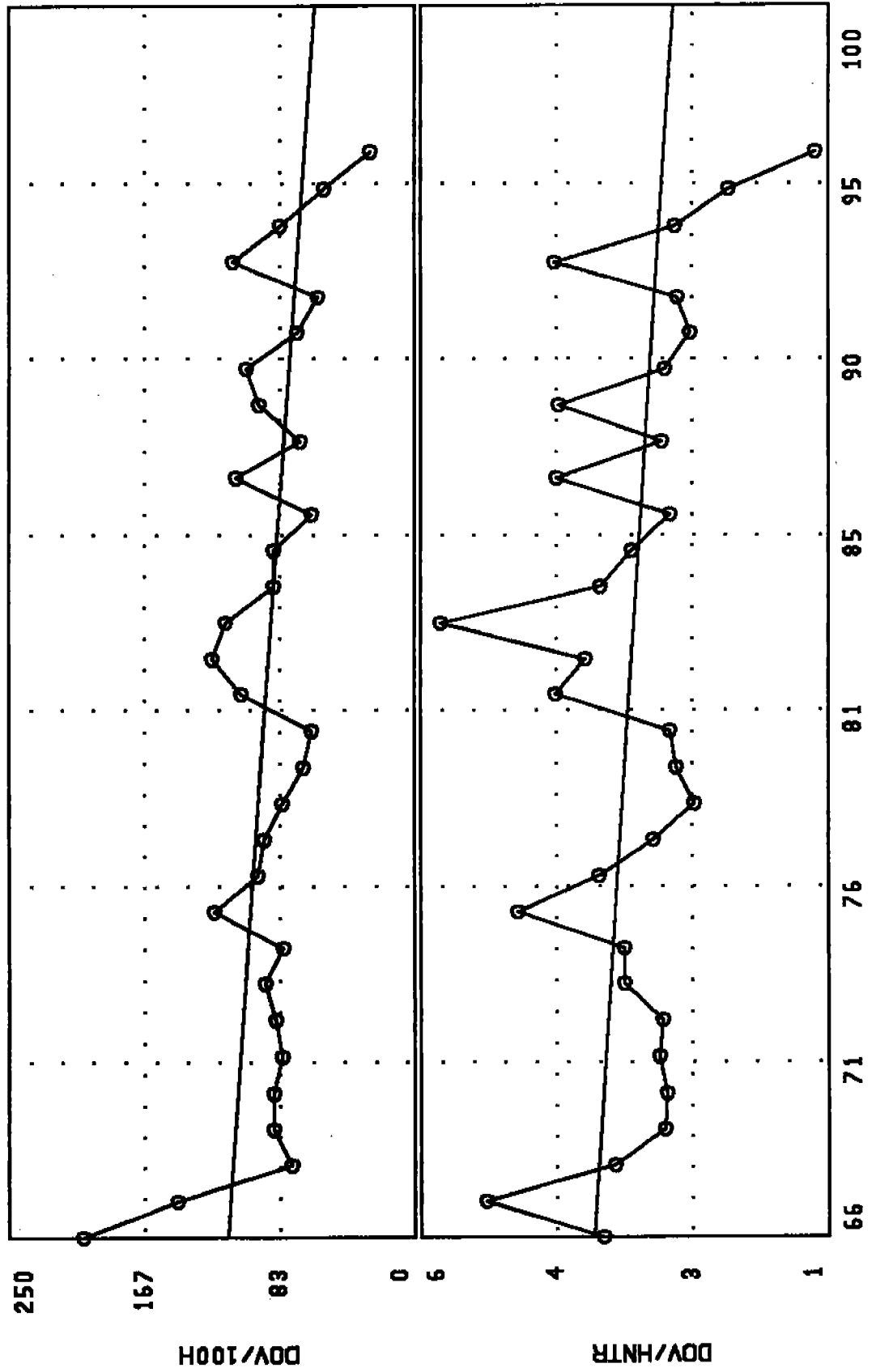


Figure 3. Statewide trends of mourning dove hunter success rates, 1951-96.

FIGURE 4. MOURNING DOVE FIELD BAG CHECK INDICES, 1966-96.





## Field Bag Checks

A summary of field bag check data for 1996 is shown in Table 8. Hunter success trends determined via this method are shown in Table 9. Results of the 1996 survey compared to 1995 and the 10-year average (1986-95) follow:

	<u>1996</u>	<u>Percent change from 1995</u>	<u>Percent change from Average</u>
Total hunters checked	739	+42	-33
Total hours hunted	3,073	+49	-26
Doves per hunter (complete hunts)	1.16	-48	-65
Doves bagged per 100 hours (complete hunts)	28		
Average hours per hunter-day (complete hunts)	4.16	+6	+7
Hours hunted per dove bagged (complete hunts)	3.59	+102	+240

Field bag checks indicated an opening day decrease in hunter success. The total number of hunters checked was up 42 percent from 1995. Dove hunters spent more time afield per hunter-day than in 1995, and more time was spent per dove bagged.

## Age Composition of the Harvest

A summary of the age composition of harvested mourning doves from 1986 through 1996 is contained in Table 10. Hatching dates for immature doves harvested in Utah since 1987 are shown in Table 11.

Following is a comparison of data collected in 1996 compared to 1995 and the 10-year average (1986-95):

	<u>1996</u>	<u>Percent change from 1995</u>	<u>Percent change from Average</u>
Sample size	1,564	-16	-47
Immatures/100 adults	116	+21	+3
Percent hatched August 3+	--	--	--
Percent hatched July 25+	--	--	--
Percent hatched before July 25	--	--	--

Sample size decreased 16 percent in 1996. The 116 immatures per 100 adults in the harvest was up 21 percent from the previous year and is 3 percent above the long-term average.

**Table 1. Summary of the mourning dove call-count survey for 1996.**

<b>Region and County</b>	<b>Route Number</b>	<b>Total Doves Heard / Route</b>	<b>Total Doves Seen / Route</b>
<b>Northern Region</b>			
Box Elder	R1500	0	10
Summit	R1020	1	0
<b>REGIONAL TOTALS</b>		<b>1</b>	<b>10</b>
<b>Central Region</b>			
Juab	R2830	41	51
<b>REGIONAL TOTALS</b>		<b>41</b>	<b>51</b>
<b>Southern Region</b>			
Beaver	R3820	1	3
Garfield	R1090	0	0
Iron	R4001	4	4
Millard	R3640	16	2
Sevier-Sanpete	R0370	5	14
Washington	R4311	1	0
Wayne-Sevier	R0660	15	5
<b>REGIONAL TOTALS</b>		<b>42</b>	<b>28</b>
<b>Northeastern Region</b>			
Duchesne	R0080	6	5
Uintah	R0220	6	6
<b>REGIONAL TOTALS</b>		<b>12</b>	<b>11</b>
<b>Southeastern Region</b>			
Emery	R0540	7	1
San Juan	R1171	43	27
San Juan	R1451	2	0
<b>REGIONAL TOTALS</b>		<b>52</b>	<b>28</b>
<b>STATE TOTALS</b>		<b>148</b>	<b>128</b>
<b>STATE AVERAGES</b>		<b>9.87</b>	<b>8.53</b>
<b>PERCENT CHANGE (from previous year)</b>		<b>41</b>	<b>125</b>

Table 2. Regional and county summary of mourning dove breeding population trend as indicated by the number of doves heard per route during random call count surveys, 1980-96.

Region and County	Route Number	Number of Doves Heard Per Route																
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>																		
Box Elder	R1500	4	8	--	1	0	0	1	2	0	0	1	1	4	5	7	4	0
Summit	R1020	5	4	5	--	1	4	5	3	5	3	3	3	4	4	4	1	1
<b>REGIONAL TOTALS</b>		9	12	5	1	1	4	6	5	5	3	4	4	8	9	11	5	1
<b>Central Region</b>																		
Juab	R2830	31	22	9	25	19	20	19	16	23	13	36	38	15	42	41	23	41
<b>REGIONAL TOTALS</b>		31	22	9	25	19	20	19	16	23	13	36	38	15	42	41	23	41
<b>Southern Region</b>																		
Beaver	R3820	9	7	13	3	6	6	4	17	13	14	9	--	3	1	16	5	1
Garfield	R1090	0	9	2	3	15	3	1	1	0	16	0	0	3	2	0	0	0
Iron	R4001	40	36	21	19	31	41	26	23	20	10	12	15	26	49	40	9	4
Millard	R3640	2	10	9	5	14	2	2	3	5	4	5	8	7	7	10	5	16
Sevier-Sanpete	R0370	3	0	0	3	5	4	4	3	3	2	6	2	5	2	6	3	5
Washington	R4311	3	6	0	14	1	0	6	7	1	6	12	14	12	16	20	14	1
Wayne-Sevier	R0660	5	14	4	--	17	3	2	0	3	7	5	0	3	6	0	4	15
<b>REGIONAL TOTALS</b>		62	82	49	47	89	59	45	54	45	59	49	39	59	83	92	40	42
<b>Northeastern Region</b>																		
Duchesne	R0080	1	13	7	0	1	8	3	4	8	13	11	7	3	2	--	2	6
Uintah	R0220	49	19	1	9	10	5	20	12	6	0	2	3	2	3	7	5	6
<b>REGIONAL TOTALS</b>		50	32	8	9	11	13	23	16	14	13	13	10	5	5	7	7	12
<b>Southeastern Region</b>																		
Emery	R0540	7	22	7	11	10	3	10	11	15	8	2	5	8	14	13	18	7
San Juan	R1474	14	38	26	30	57	25	60	31	37	43	31	38	34	21	8	12	43
San Juan	R1451	3	0	24	5	7	2	0	1	2	1	0	3	9	1	0	0	2
<b>REGIONAL TOTALS</b>		24	60	57	46	74	30	70	43	54	52	33	46	51	36	21	30	52
<b>STATE TOTALS</b>		176	208	128	128	194	126	163	134	141	140	135	137	138	175	172	105	148
<b>STATE AVERAGES</b>		11.73	13.87	8.53	8.53	12.93	8.40	10.87	8.93	9.40	9.33	9.00	9.79	9.20	11.67	11.47	7.00	9.87
<b>PERCENT CHANGE</b> (from previous year)		78	18	-38	0	52	-35	29	-18	5	-1	-4	1	-8	27	-2	-39	41

Table 3. Summary of mourning dove hunter success and distribution of harvest and Hunting pressure by region and county, 1996.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	150	10,242	27,523	2.69	11.96	13.75
CACHE	59	3,878	7,525	1.94	4.53	3.76
DAVIS	23	2,183	2,996	1.37	2.55	1.50
MORGAN	14	1,021	2,508	2.45	1.19	1.25
RICH	8	301	464	1.54	0.35	0.23
SUMMIT	3	46	92	2.00	0.05	0.05
WEBER	81	7,664	13,332	1.74	8.95	6.66
<b>REGIONAL TOTALS</b>	<b>338</b>	<b>25,340</b>	<b>54,443</b>	<b>2.15</b>	<b>29.60</b>	<b>27.20</b>
<b>CENTRAL REGION</b>						
JUAB	100	4,157	14,656	3.53	4.86	7.32
SALT LAKE	38	3,623	8,547	2.36	4.23	4.27
SANPETE	39	2,833	7,595	2.68	3.31	3.79
TOOELE	113	7,409	18,395	2.48	8.65	9.19
UTAH	215	16,862	32,726	1.94	19.70	16.35
WASATCH	10	1,091	1,858	1.70	1.28	0.93
<b>REGIONAL TOTALS</b>	<b>515</b>	<b>35,978</b>	<b>83,778</b>	<b>2.33</b>	<b>42.02</b>	<b>41.85</b>
<b>SOUTHERN REGION</b>						
BEAVER	9	1,091	3,530	3.23	1.28	1.76
GARFIELD	1	92	92	1.00	0.11	0.05
IRON	33	2,531	8,106	3.20	2.96	4.05
KANE	4	348	998	2.87	0.41	0.50
MILLARD	91	5,179	16,839	3.25	6.05	8.41
PIUTE	4	232	766	3.30	0.27	0.38
SEVIER	42	4,761	8,384	1.76	5.56	4.19
WASHINGTON	29	1,695	5,783	3.41	1.98	2.89
WAYNE	1	116	232	2.00	0.14	0.12
<b>REGIONAL TOTALS</b>	<b>214</b>	<b>16,049</b>	<b>44,734</b>	<b>2.79</b>	<b>18.75</b>	<b>22.35</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT	2	185	185	1.00	0.22	0.09
DUCHESNE	20	1,695	4,087	2.41	1.98	2.04
UINTAH	19	1,161	2,276	1.96	1.36	1.14
<b>REGIONAL TOTALS</b>	<b>41</b>	<b>3,042</b>	<b>6,549</b>	<b>2.15</b>	<b>3.55</b>	<b>3.27</b>
<b>SOUTHEASTERN REGION</b>						
CARBON	20	1,904	3,669	1.93	2.22	1.83
EMERY	21	2,415	5,086	2.11	2.82	2.54
GRAND	5	301	627	2.08	0.35	0.31
SAN JUAN	3	139	580	4.17	0.16	0.29
<b>REGIONAL TOTALS</b>	<b>49</b>	<b>4,761</b>	<b>9,964</b>	<b>2.09</b>	<b>5.56</b>	<b>4.98</b>
Unknown	7	441	696	1.58	0.52	0.35
<b>STATE TOTALS</b>	<b>1,164</b>	<b>85,613</b>	<b>200,167</b>	<b>2.34</b>	<b>100.00</b>	<b>100.00</b>

\* Total hunter trips from questionnaire returns.

Table 4. Summary of mourning doves bagged per hunter-day by region and county, 1989-96

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	2.83	2.73	2.27	2.56	2.49	2.63	2.91	2.69
Cache	2.24	1.67	1.97	2.16	1.88	2.54	1.78	1.94
Davis	1.31	1.53	1.77	1.19	1.39	1.26	2.09	1.37
Morgan	1.03	1.73	2.31	2.47	0.88	2.93	3.65	2.45
Rich	1.26	1.95	3.45	2.27	1.18	1.67	0.83	1.54
Summit	1.61	7.00	1.78	3.25	0.25	2.61	5.00	2.00
Weber	1.88	1.48	1.30	1.79	1.50	1.57	2.07	1.74
<b>REGIONAL TOTALS</b>	<b>2.20</b>	<b>2.20</b>	<b>2.02</b>	<b>1.99</b>	<b>2.16</b>	<b>2.36</b>	<b>2.36</b>	<b>2.15</b>
<b>Central Region</b>								
Juab	4.45	3.70	3.33	3.34	4.25	2.72	3.35	3.53
Salt Lake	2.18	2.37	2.02	2.14	1.88	2.79	1.95	2.36
Sanpete	2.40	3.06	2.69	2.06	3.21	1.78	2.27	2.68
Tooele	2.88	1.90	2.29	2.14	2.06	2.45	2.02	2.48
Utah	2.08	2.05	1.89	1.77	2.12	2.43	1.72	1.94
Wasatch	1.22	2.42	2.11	2.37	1.83	2.15	2.21	1.70
<b>REGIONAL TOTALS</b>	<b>2.55</b>	<b>2.41</b>	<b>2.25</b>	<b>2.10</b>	<b>2.51</b>	<b>2.43</b>	<b>2.07</b>	<b>2.33</b>
<b>Southern Region</b>								
Beaver	4.35	1.71	3.32	3.41	1.52	3.72	2.73	3.23
Garfield	2.27	2.34	2.40	1.67	3.50	1.47	3.18	1.00
Iron	2.91	4.38	2.80	3.96	2.42	3.60	3.91	3.20
Kane	3.11	1.00	3.03	4.05	4.09	3.00	10.00	2.87
Millard	3.54	4.42	3.13	3.30	4.40	3.20	3.44	3.25
Piute	0.00	1.45	2.50	1.33	2.83	4.50	2.59	3.30
Sevier	2.70	2.18	2.09	2.42	2.10	2.36	1.21	1.76
Washington	2.12	2.81	3.63	2.54	2.74	2.28	3.06	3.41
Wayne	3.53	0.61	0.75	2.86	1.00	2.11	1.44	2.00
<b>REGIONAL TOTALS</b>	<b>3.01</b>	<b>3.20</b>	<b>2.87</b>	<b>3.09</b>	<b>2.98</b>	<b>2.94</b>	<b>2.84</b>	<b>2.79</b>
<b>Northeastern Region</b>								
Daggett	0.25	2.00	1.00	3.25	7.00	0.00	0.00	1.00
Duchesne	1.42	1.85	2.21	2.24	2.52	3.06	2.62	2.41
Uintah	2.33	3.17	1.06	2.06	2.12	3.35	2.01	1.96
<b>REGIONAL TOTAL</b>	<b>1.82</b>	<b>2.46</b>	<b>1.64</b>	<b>2.15</b>	<b>2.32</b>	<b>3.25</b>	<b>2.08</b>	<b>2.15</b>
<b>Southeastern Region</b>								
Carbon	0.75	1.18	0.25	2.15	1.51	2.82	0.96	1.93
Emery	1.77	2.04	1.68	3.10	3.73	2.06	2.10	2.11
Grand	2.18	4.04	1.13	0.00	2.21	1.50	0.47	2.08
San Juan	4.22	1.69	3.56	2.61	3.46	4.42	4.48	4.17
<b>REGIONAL TOTALS</b>	<b>1.85</b>	<b>2.07</b>	<b>2.14</b>	<b>2.46</b>	<b>3.27</b>	<b>2.19</b>	<b>2.15</b>	<b>2.09</b>
<b>Unknown counties</b>	<b>2.86</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.40</b>	<b>1.50</b>	<b>2.28</b>	<b>1.58</b>
<b>STATE TOTALS</b>	<b>2.49</b>	<b>2.49</b>	<b>2.28</b>	<b>2.35</b>	<b>2.51</b>	<b>2.48</b>	<b>2.31</b>	<b>2.34</b>

Table 5. Percentage distribution of mourning dove harvest by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	12.06	9.95	9.60	9.09	11.18	12.10	13.61	11.96
Cache	4.87	3.34	5.54	7.20	4.85	5.07	5.40	4.53
Davis	2.01	2.57	2.39	1.15	0.79	1.41	2.40	2.55
Morgan	0.44	0.59	0.65	0.81	0.17	1.14	0.76	1.19
Rich	0.26	0.38	0.97	0.65	0.22	0.36	0.05	0.35
Summit	0.32	0.51	0.16	0.86	0.02	0.42	0.47	0.05
Weber	3.54	3.54	2.39	4.59	3.14	4.42	6.80	8.95
<b>REGIONAL TOTALS</b>	<b>23.50</b>	<b>20.88</b>	<b>21.71</b>	<b>24.35</b>	<b>20.37</b>	<b>24.93</b>	<b>29.50</b>	<b>29.60</b>
<b>Central Region</b>								
Juab	9.79	9.45	8.78	6.74	11.16	5.76	7.70	4.86
Salt Lake	3.56	5.71	5.00	5.15	2.59	5.24	2.34	4.23
Sanpete	4.34	3.23	4.84	3.57	4.10	3.41	3.11	3.31
Tooele	8.58	6.37	8.56	6.66	8.02	8.90	7.34	8.65
Utah	16.27	12.83	16.37	15.16	13.26	16.32	14.76	19.70
Wasatch	0.54	1.08	0.94	0.99	1.22	0.93	1.11	1.28
<b>REGIONAL TOTALS</b>	<b>43.08</b>	<b>38.67</b>	<b>44.50</b>	<b>38.27</b>	<b>40.36</b>	<b>40.64</b>	<b>36.36</b>	<b>42.02</b>
<b>Southern Region</b>								
Beaver	2.28	1.29	1.94	2.10	1.81	4.02	2.73	1.28
Garfield	1.09	0.92	0.35	0.05	0.39	0.25	0.73	0.11
Iron	3.07	6.20	3.07	5.57	2.37	2.79	5.83	2.96
Kane	0.64	0.07	0.91	0.98	1.00	0.08	0.21	0.41
Millard	9.92	13.35	9.29	11.80	13.31	40.87	8.25	6.05
Piute	0.00	0.57	0.68	0.31	0.38	0.41	0.46	0.27
Sevier	6.11	4.05	4.80	5.66	3.72	4.60	2.38	5.56
Washington	2.62	4.99	5.16	1.50	5.54	2.83	3.35	1.98
Wayne	0.73	0.11	0.03	0.22	0.16	0.34	0.14	0.14
<b>REGIONAL TOTALS</b>	<b>26.46</b>	<b>31.57</b>	<b>26.22</b>	<b>28.19</b>	<b>28.68</b>	<b>26.19</b>	<b>24.08</b>	<b>18.75</b>
<b>Northeastern Region</b>								
Daggett	0.02	0.06	0.01	0.14	0.08	0.00	0.00	0.22
Duchesne	0.85	1.62	2.61	1.21	1.74	0.94	1.59	1.98
Uintah	1.70	2.46	1.21	2.01	1.96	1.87	3.66	1.36
<b>REGIONAL TOTALS</b>	<b>2.57</b>	<b>4.15</b>	<b>3.82</b>	<b>3.36</b>	<b>3.77</b>	<b>2.81</b>	<b>5.25</b>	<b>3.55</b>
<b>Southeastern Region</b>								
Carbon	0.44	0.41	1.24	1.16	1.07	0.59	1.24	2.22
Emery	2.23	2.85	1.16	3.64	2.28	2.80	1.55	2.82
Grand	0.26	0.96	0.18	0.00	0.34	0.08	0.09	0.35
San Juan	1.24	0.51	1.18	1.03	0.92	1.91	1.17	0.16
<b>REGIONAL TOTALS</b>	<b>4.17</b>	<b>4.74</b>	<b>3.74</b>	<b>5.84</b>	<b>4.62</b>	<b>5.38</b>	<b>4.06</b>	<b>5.56</b>
<b>Unknown counties</b>	<b>0.22</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.21</b>	<b>0.05</b>	<b>0.76</b>	<b>0.52</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Table 6. Percentage distribution of mourning dove hunting pressure by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	10.62	9.07	9.63	8.33	11.24	11.41	10.82	11.96
Cache	5.43	4.96	6.43	7.84	6.47	4.97	7.01	4.53
Davis	3.80	4.19	3.08	2.27	1.42	2.80	2.65	2.55
Morgan	1.06	0.85	0.64	0.77	0.47	0.96	0.48	1.19
Rich	0.52	0.49	0.64	0.67	0.47	0.54	0.14	0.35
Summit	0.49	0.18	0.20	0.62	0.22	0.40	0.22	0.05
Weber	4.70	5.94	4.19	6.03	5.24	6.98	7.59	8.95
<b>REGIONAL TOTALS</b>	<b>26.62</b>	<b>25.67</b>	<b>24.83</b>	<b>26.53</b>	<b>25.54</b>	<b>28.05</b>	<b>28.91</b>	<b>29.60</b>
<b>Central Region</b>								
Juab	5.49	6.35	6.01	4.74	6.58	5.26	5.30	4.86
Salt Lake	4.07	5.99	5.64	5.65	3.46	4.65	2.77	4.23
Sanpete	4.51	2.62	4.10	4.07	3.21	4.74	3.16	3.31
Tooele	7.41	8.33	8.54	7.32	9.76	9.13	8.41	8.65
Utah	19.53	15.52	19.75	20.08	15.70	16.69	19.78	19.70
Wasatch	1.11	1.11	1.02	0.98	1.67	1.07	1.16	1.28
<b>REGIONAL TOTALS</b>	<b>42.12</b>	<b>39.91</b>	<b>45.06</b>	<b>42.85</b>	<b>40.38</b>	<b>41.53</b>	<b>40.57</b>	<b>42.02</b>
<b>Southern Region</b>								
Beaver	1.30	1.88	1.33	1.44	2.98	2.68	2.31	1.28
Garfield	1.20	0.98	0.33	0.08	0.28	0.42	0.53	0.11
Iron	2.63	3.52	2.51	3.30	2.45	1.92	3.44	2.96
Kane	0.52	0.18	0.69	0.57	0.61	0.07	0.05	0.41
Millard	6.98	7.50	6.77	8.40	7.59	8.43	5.54	6.05
Piute	0.05	0.98	0.62	0.54	0.33	0.22	0.41	0.27
Sevier	5.65	4.63	5.24	5.49	4.43	4.83	4.53	5.56
Washington	3.07	4.42	3.24	1.39	5.08	3.09	2.53	1.98
Wayne	0.52	0.46	0.09	0.18	0.39	0.40	0.22	0.14
<b>REGIONAL TOTAL</b>	<b>21.92</b>	<b>24.54</b>	<b>20.81</b>	<b>21.40</b>	<b>24.15</b>	<b>22.08</b>	<b>19.56</b>	<b>18.75</b>
<b>Northeastern Region</b>								
Daggett	0.22	0.08	0.02	0.10	0.03	0.00	0.22	0.22
Duchesne	1.49	2.18	2.68	1.26	1.73	0.76	1.40	1.98
Uintah	1.82	1.93	2.60	2.29	2.31	1.39	4.22	1.36
<b>REGIONAL TOTALS</b>	<b>3.53</b>	<b>4.19</b>	<b>5.30</b>	<b>3.66</b>	<b>4.07</b>	<b>2.15</b>	<b>5.83</b>	<b>3.55</b>
<b>Southeastern Region</b>								
Carbon	1.44	0.87	1.31	1.80	0.95	1.52	1.59	2.22
Emery	3.15	3.47	1.58	2.76	1.53	3.38	1.71	2.82
Grand	0.30	0.59	0.36	0.08	0.39	0.13	0.46	0.35
San Juan	0.73	0.75	0.75	0.93	0.67	1.07	0.60	0.16
<b>REGIONAL TOTALS</b>	<b>5.62</b>	<b>5.68</b>	<b>3.99</b>	<b>5.57</b>	<b>3.54</b>	<b>6.11</b>	<b>4.36</b>	<b>5.56</b>
<b>Unknown counties</b>	<b>0.19</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.31</b>	<b>0.09</b>	<b>0.77</b>	<b>0.52</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>



Table 7. Statewide summary of mourning dove harvest statistics, 1951-96.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Doves Per Hunter-Day	Doves Per Hunter
1951	3,007	20,448	4,455	4.59	6.80
1952	6,420	49,498	10,784	4.59	7.71
1953	9,887	75,636	17,797	4.25	7.65
1954	9,901	75,941	19,724	3.85	7.67
1955	9,653	79,444	19,282	4.12	8.23
1956	10,744	95,729	20,411	4.69	8.91
1957*	11,298	86,769	18,620	4.66	7.68
1958	11,853	85,934	21,591	3.98	7.25
1959	12,142	110,856	24,911	4.45	9.13
1960	12,440	108,477	25,766	4.21	8.72
1961	15,192	128,001	33,434	3.89	8.42
1962	14,663	144,826	34,281	4.23	9.89
1963	18,258	162,769	40,490	4.02	8.91
1964	19,829	193,538	51,671	3.75	9.76
1965	18,710	164,087	48,835	3.36	8.69
1966	20,594	212,696	60,608	3.51	10.33
1967	25,161	263,949	74,171	3.56	10.49
1968	25,105	207,922	70,186	2.96	8.28
1969	29,131	279,311	90,965	3.07	9.59
1970	23,908	232,469	73,984	3.14	9.72
1971	26,064	226,645	81,271	2.79	8.70
1972	29,341	238,354	94,046	2.53	8.12
1973	27,435	307,062	97,788	3.14	11.19
1974	34,021	306,076	112,967	2.71	9.00
1975	37,378	420,308	131,312	3.20	11.24
1976	31,293	298,505	108,780	2.74	9.54
1977	26,905	267,487	83,218	3.21	9.94
1978	35,985	383,696	130,173	2.95	10.66
1979	34,903	351,161	120,459	2.92	10.06
1980	32,627	343,851	97,644	3.52	10.54
1981	30,060	310,068	101,728	3.05	10.31
1982**	31,756	282,188	107,728	2.62	8.89
1983	28,258	272,979	100,568	2.71	9.66
1984	30,573	282,307	108,793	2.59	9.23
1985	28,183	256,045	96,507	2.65	9.09
1986	26,583	226,985	87,084	2.61	8.54
1987***	22,553	204,030	89,378	2.28	9.05
1988	22,457	178,469	76,219	2.34	7.95
1989	21,696	190,328	76,372	2.49	8.77
1990	22,700	199,007	80,076	2.49	8.77
1991	22,632	178,853	78,405	2.28	7.90
1992	18,021	161,902	68,937	2.35	8.98
1993	19,725	170,834	68,143	2.51	8.66
1994	20,743	195,089	78,594	2.48	9.41
1995	20,896	186,336	80,688	2.31	8.92
1996	23,180	200,167	85,613	2.34	8.64
<b>Totals</b>					
(1951-96)	1,013,864	9,417,032	3,204,457	--	--
<b>Averages</b>					
(1951-95)	22,015	204,819	69,308	3.25	9.04

\* Estimated.

\*\*Bag limit increased to 15.

\*\*\*Bag limit reduced to 10.



Table 9. Mourning dove hunter success trend as determined by field bag checks, 1991-96.

Region and County	1991		1992		1993		1994		1995		1996	
	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter	Birds/ 100 Hr Hunter
<b>Northern Region</b>												
Box Elder	200	2.27	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	158	1.88	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	73	1.00	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>147</b>	<b>1.79</b>	--	--	--	--	--	--	--	--	--	--
<b>Central Region</b>												
Juab	64	2.49	--	--	110	5.26	--	--	--	--	--	--
Salt Lake	14	0.50	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	76	2.86	--	--	117	4.42	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>70</b>	<b>2.69</b>	--	--	<b>115</b>	<b>4.64</b>	--	--	--	--	--	--
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Plute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--
<b>Southeastern Region</b>												
Carbon	--	--	219	7.08	280	7.00	--	--	--	--	--	--
Emery	300	7.50	265	4.07	198	7.92	327	6.13	121	2.71	--	--
Grand	--	--	--	--	200	1.00	--	--	--	--	--	--
San Juan	250	5.00	--	--	--	--	154	4.05	144	2.57	--	--
<b>REGIONAL TOTALS</b>	<b>294</b>	<b>7.14</b>	<b>235</b>	<b>5.46</b>	<b>202</b>	<b>6.93</b>	<b>193</b>	<b>4.64</b>	<b>127</b>	<b>2.67</b>	--	--
<b>LEHI CHECK STATION</b>	<b>76</b>	<b>2.86</b>	<b>50</b>	<b>2.73</b>	<b>130</b>	<b>4.43</b>	<b>88</b>	<b>3.09</b>	<b>40</b>	<b>1.58</b>	<b>30</b>	<b>1.19</b>
<b>NEPHI CHECK STATION</b>	<b>64</b>	<b>2.49</b>	<b>84</b>	<b>4.01</b>	<b>110</b>	<b>5.26</b>	<b>127</b>	<b>3.79</b>	<b>114</b>	<b>4.13</b>	<b>66</b>	<b>2.48</b>
<b>THIOL CHECK STATION</b>	--	--	<b>127</b>	<b>3.84</b>	<b>141</b>	<b>5.21</b>	--	--	<b>95</b>	<b>4.66</b>	<b>56</b>	<b>2.70</b>
<b>STATE TOTALS</b>	<b>73</b>	<b>2.70</b>	<b>60</b>	<b>2.85</b>	<b>112</b>	<b>4.36</b>	<b>83</b>	<b>2.88</b>	<b>56</b>	<b>2.22</b>	<b>28</b>	<b>1.16</b>

Table 10. Age composition (immatures/100 Adults) of Mourning Doves Harvested, 1986-96.

Region and County	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1986-95 Average
	/ 100A(n)	/ 100A(n)	/ 100A(n)	/ 100A(n)	/ 100A(n)	/ 100A(n)	/ 100A(n)	/ 100A(n)	/ 100A(n)	/ 100A(n)	/ 100A(n)	/ 100A(n)
<b>Northern Region</b>												
Box Elder	131	1,086	128	770	82	435	239	487				
Cache			325	17								
Davis												
Morgan												
Rich												
Summit												
Weber												
<b>REGIONAL TOTALS</b>	131	1,086	132	787	82	435	239	487				69
<b>Central Region</b>												
Juab												
Salt Lake												
Sanpete												
Tooele										83	11	
Utah												
Wasatch												
<b>REGIONAL TOTALS</b>										83	11	83
<b>Southern Region</b>												
Beaver												
Garfield												
Iron												
Kane												
Millard										141	41	
Plute												
Sevier												
Washington												
Wayne												
<b>REGIONAL TOTALS</b>										141	41	141
<b>Northeastern Region</b>												
Daggett												
Duchesne												
Uintah												
<b>REGIONAL TOTALS</b>												
<b>Southeastern Region</b>												
Carbon					128	73		68	84	64	18	
Emery	52	67	80	187	85	37	78	143	81	96	169	70
Grand					50	10					104	
San Juan	53	227	63	275	31	42	56	39	93	137	36	30
<b>REGIONAL TOTALS</b>	53	294	63	462	61	229	56	86	93	353	68	122
<b>LEHI CHECK STATION</b>	137	1,396	130	1,283	114	741	92	878	116	144	109	587
<b>NEPHI CHECK STATION</b>	140	1,137	180	1,004	1,047	671	64	955	134	829	126	372
<b>THIHKOL CHECK STATION</b>												
<b>STATE TOTALS</b>	127	3,913	137	3,536	100	1,641	77	2,454	127	1,813	114	1,855
									86	2,047	73	1,635
										96	1,855	116
											1,564	106
												2,222

Table 11. Percent of harvest by hatching date of immature mourning doves in Utah, 1987-98.

Date Hatched	Age (Days)	P	PERCENT OF HARVEST BY HATCH DATE										SAMPLE SIZE									
			1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Aug 3	29	none	34.8	--	41.3	52.2	--	37.8	--	53.7	56.1	--	155	--	81	254	--	118	--	22	37	--
Jul 31	32	1	21.8	--	30.1	26.7	--	32.1	--	19.5	21.2	--	97	--	59	130	--	100	--	8	14	--
Jul 25	38	2	17.5	--	18.4	13.1	--	10.9	--	9.8	10.6	--	78	--	36	64	--	34	--	4	7	--
Jul 18	45	3	10.6	--	6.6	4.3	--	9.3	--	7.3	6.1	--	47	--	13	21	--	29	--	3	4	--
Jul 9	54	4	5.7	--	2.6	2.3	--	4.5	--	7.3	4.5	--	25	--	5	11	--	14	--	3	3	--
Jun 30	63	5	4.3	--	0.5	0.6	--	4.2	--	0.0	1.5	--	19	--	1	3	--	13	--	0	1	--
Jun 21	72	6	3.8	--	0.0	0.4	--	1.0	--	2.4	0.0	--	17	--	0	2	--	3	--	1	0	--
Jun 8	85	7	1.1	--	0.5	--	--	0.3	--	0.0	0.0	--	5	--	1	--	--	1	--	0	0	--
May 22	102	8	0.2	--	0.0	--	--	--	--	0.0	0.0	--	1	--	0	--	--	--	--	0	0	--
Apr 27	127	9	0.2	--	0.0	0.4	--	--	--	0.0	0.0	--	1	--	0	2	--	--	--	0	0	--
Apr 21	133	10	0.0	--	0.0	0.0	--	--	--	0.0	0.0	--	0	--	0	--	--	--	--	0	0	--
			100	--	100	100	--	100	--	100	100.0	--	445	--	196	467	--	312	--	41	66	--

P = Last primary molted.

# BAND-TAILED PIGEON

## Banding

Between 1969 and 1978, 2,649 total pigeons were banded in Utah and 975 recaptured. Results of banding efforts through 1972 indicated a direct recovery rate of 1.4 percent. If expanded, using an assumed 30 percent band reporting rate, an estimated harvest rate of less than 5 percent of the state's pigeon population is indicated. Addition of an estimated 16 percent crippling loss would result in a total kill rate of from 5-10 percent, well within the harvestable surplus.

## Harvest

Results of the 1996 band-tailed pigeon harvest is in Table 13. Free hunting permits were required in 1996 and a questionnaire was sent to participants. Only 68 hunters obtained the band-tailed pigeon permit in 1996. Harvest trends since 1970 are shown in Figures 4 & 5 and Table 14.

	<u>1996</u>	<u>Percent change from 1995</u>	<u>Percent change from Average</u>
Band-tailed pigeon hunters afield	37	-37	-14
Band-tailed pigeon harvest	92	-24	-21
Hunter-days afield	125	-27	+10
Pigeons per hunter-day	0.53	-25	-47
Pigeons per hunter	2.49	-21	-9

Band-tailed pigeon hunters afield decreased from 1995, and was 14 percent below the long-term average.

Ninety-two pigeons were reported harvested in 1996.

Table 13. Band-tailed pigeon harvest statistics, 1996.

Area Hunted	Hunters		Hunter-Days		Harvest	Pigeons/ Hunter-Day	Percent Pressure*	Percent		Pigeons	
	Afield		Afield					Harvest	Crippled	Observed	
Beaver County	2		2		0	0.00	2	0.00	0	0	0
Blue Mountain-Elk Ridge	8		25		6	0.24	20	6.52	5	85	85
Iron County	6		13		4	0.31	10	4.35	0	47	47
LaSal Mountain	4		11		15	1.36	9	16.30	2	83	83
Washington County	8		59		59	1.00	47	64.13	4	115	115
Other	9		15		8	0.53	12	8.70	0	35	35
<b>Totals</b>	<b>37</b>		<b>125</b>		<b>92</b>	<b>0.74</b>	<b>100</b>	<b>100</b>	<b>11</b>	<b>365</b>	<b>365</b>

\*Based on hunter-days.

Projection Factor = 1.8888888889

68 PERMITS SOLD

36 QUESTIONNAIRES RETURNED

53 QUESTIONNAIRE RETURN RATE (PERCENT)

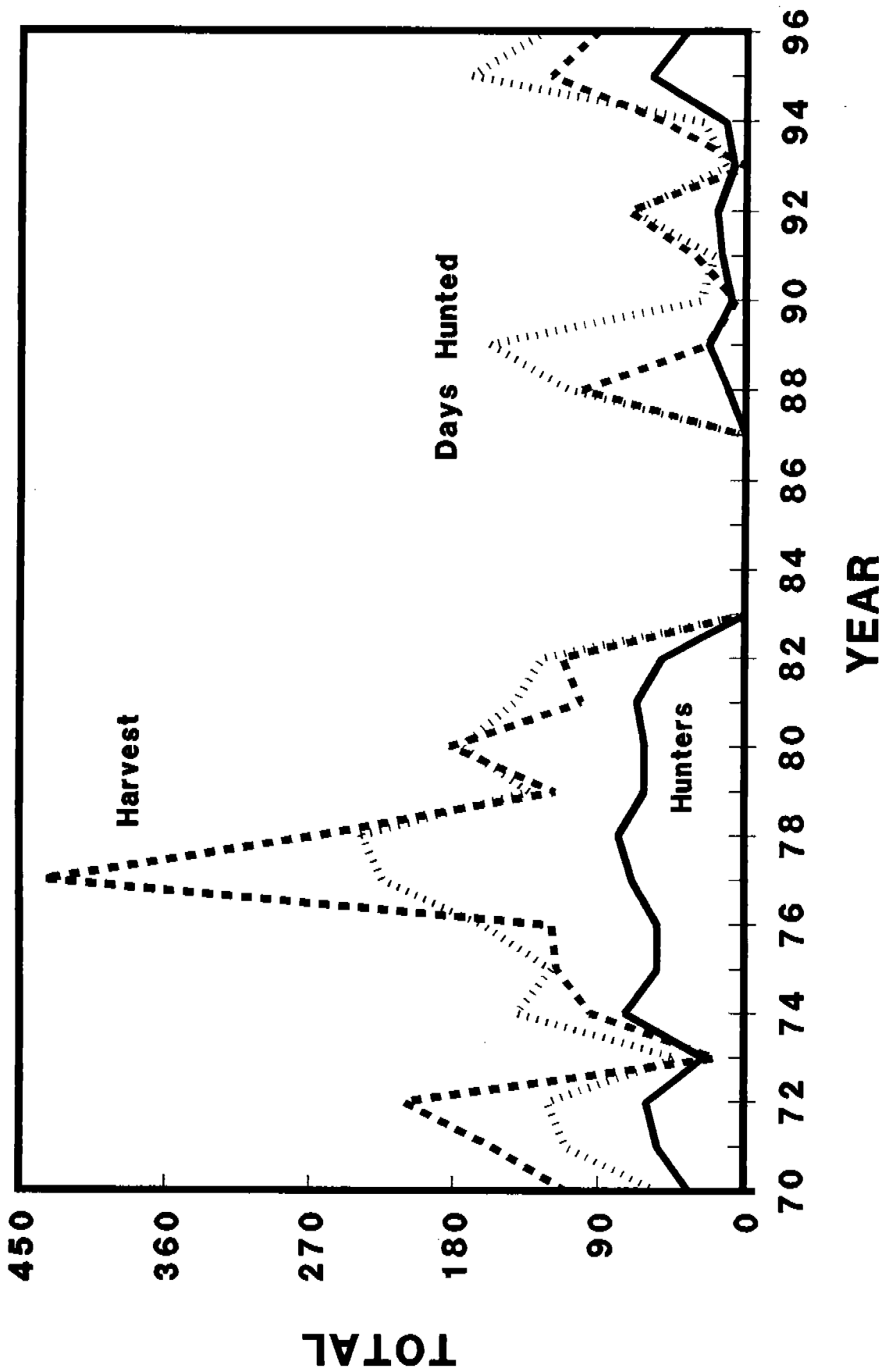


Figure 4. Statewide trends of band-tailed pigeon harvest statistics, 1970-96.



PIGEONS PER HUNTER AND PER DAY

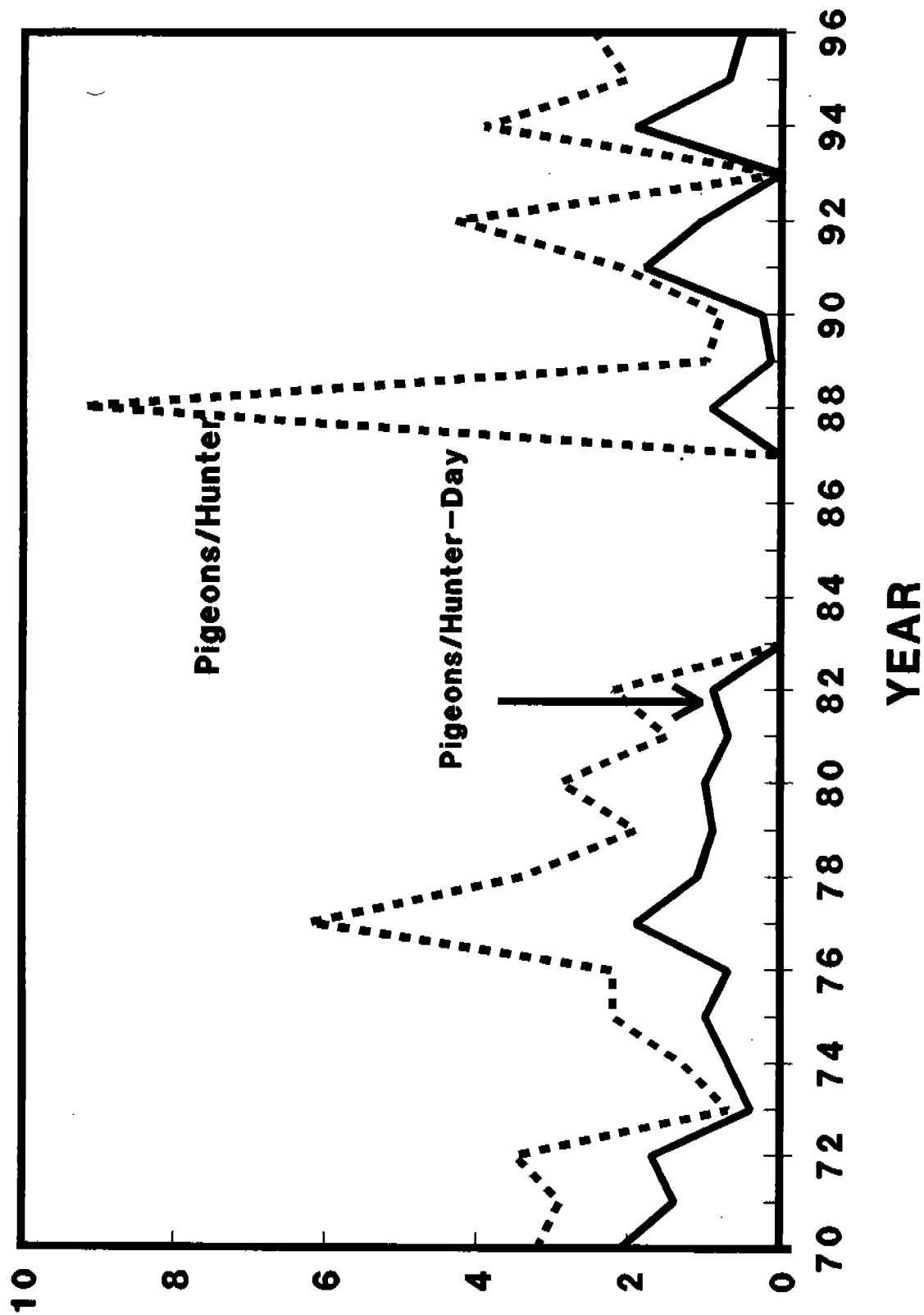


Figure 5. Statewide trends of band-tailed pigeon hunter success rates, 1970-96.

**Table 14. Statewide summary of band-tailed pigeon harvest statistics, 1970-96.**

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Pigeons/Hunter-Day	Pigeons/Hunter
1970	34	109	53	2.10	3.20
1971	54	156	110	1.40	2.90
1972	61	211	122	1.70	3.50
1973	25	18	42	0.40	0.70
1974	74	95	141	0.70	1.30
1975	54	116	119	1.00	2.20
1976	54	119	162	0.70	2.20
1977	70	435	225	1.90	6.20
1978	78	264	238	1.10	3.40
1979	62	117	133	0.90	1.90
1980	62	182	175	1.00	2.90
1981	67	101	142	0.70	1.50
1982	51	113	125	0.90	2.20
1983	--	--	--	--	--
1984	--	--	--	--	--
1985	--	--	--	--	--
1986	--	--	--	--	--
1987	--	--	--	--	--
1988	11	101	109	0.93	9.20
1989	23	24	159	0.15	1.00
1990	9	7	28	0.26	0.80
1991	15	31	20	1.50	2.10
1992	18	73	70	1.05	4.06
1993	8	0	13	--	--
1994	13	51	27	1.92	3.92
1995	59	121	171	0.71	2.05
1996	37	92	125	0.53	2.49
<b>Totals</b> <b>(1970-96)</b>	<b>939</b>	<b>2,536</b>	<b>2,509</b>	<b>--</b>	<b>--</b>
<b>Averages</b> <b>(1970-95)</b>	<b>43</b>	<b>116</b>	<b>114</b>	<b>1.00</b>	<b>2.73</b>

# CHUKAR PARTRIDGE

## SUMMARY



Late winter and early spring precipitation, critical to successful chukar production, was slightly above normal.

Results of the brood survey indicated that brood production was slightly below average. However, sample sizes were extremely small and probably represent localized conditions.

Harvest statistics from the general mail questionnaire reflected an increased harvest by 12 percent more hunters than in 1995. Hunter success (chukars per hunter-day) increased 7 percent from 1995 while time afield increased 19 percent.

In 1993, the Springville Game Farm was closed. Prior to 1993, operations at the farm provided approximately 4,000 chukars annually that were released into various areas of Utah to supplement and establish populations.

Also in 1993, the "Day-Old Chukar Chick Program" was eliminated. In addition to birds raised at the Springville Game Farm, this program provided another 1,000-2,000 birds annually for release into the wild.

## Brood Counts

Results of the annual random brood survey for 1996 are shown in Table 1 of this section. Long-term trends of young per adult ratios, mean brood size and chukars observed per 100 hours are found in Tables 2-4 and Figure 1. Following are the survey results for 1996 compared to 1995 and the 10-year (1986-95) average:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Total chukars observed	243	+54	-45
Young per 100 adults	286	0	-29
Mean brood size	5.18	--	-22
Chukars observed per 100 hours	1,473	--	-62
Total hours effort	16.5	--	-78

Brood count sample sizes were extremely small or nonexistent for most regions. Brood count data was reported only in the Northern Region. Because of extremely small sample sizes, this data can only represent localized population trends.

## Harvest

### Hunter Questionnaire

Results of the hunter questionnaire survey for 1996 are shown in Table 5. Long-term trends of chukars bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 6-8 and total statewide harvest statistics in Table 9 and Figures 2 and 3. Following is a comparison of 1996 harvest statistics to 1995 and the previous 38-year average:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Chukar hunters	10,197	+12	-25
Chukars harvested	26,594	+27	-29
Hunter-days afield	37,116	+19	-10
Chukars per hunter-day	0.72	+7	-18
Chukars per hunter	2.61	+13	-2

Ninety percent confidence interval for overall chukar harvest is +/- 3,355. Standard deviation is 1.208183.

Chukar hunters and hunter effort increased from 1995. Chukars per hunter-day increased slightly from 1995, but remains 18 percent below the long-term average. Total harvest increased 27 percent in 1996.

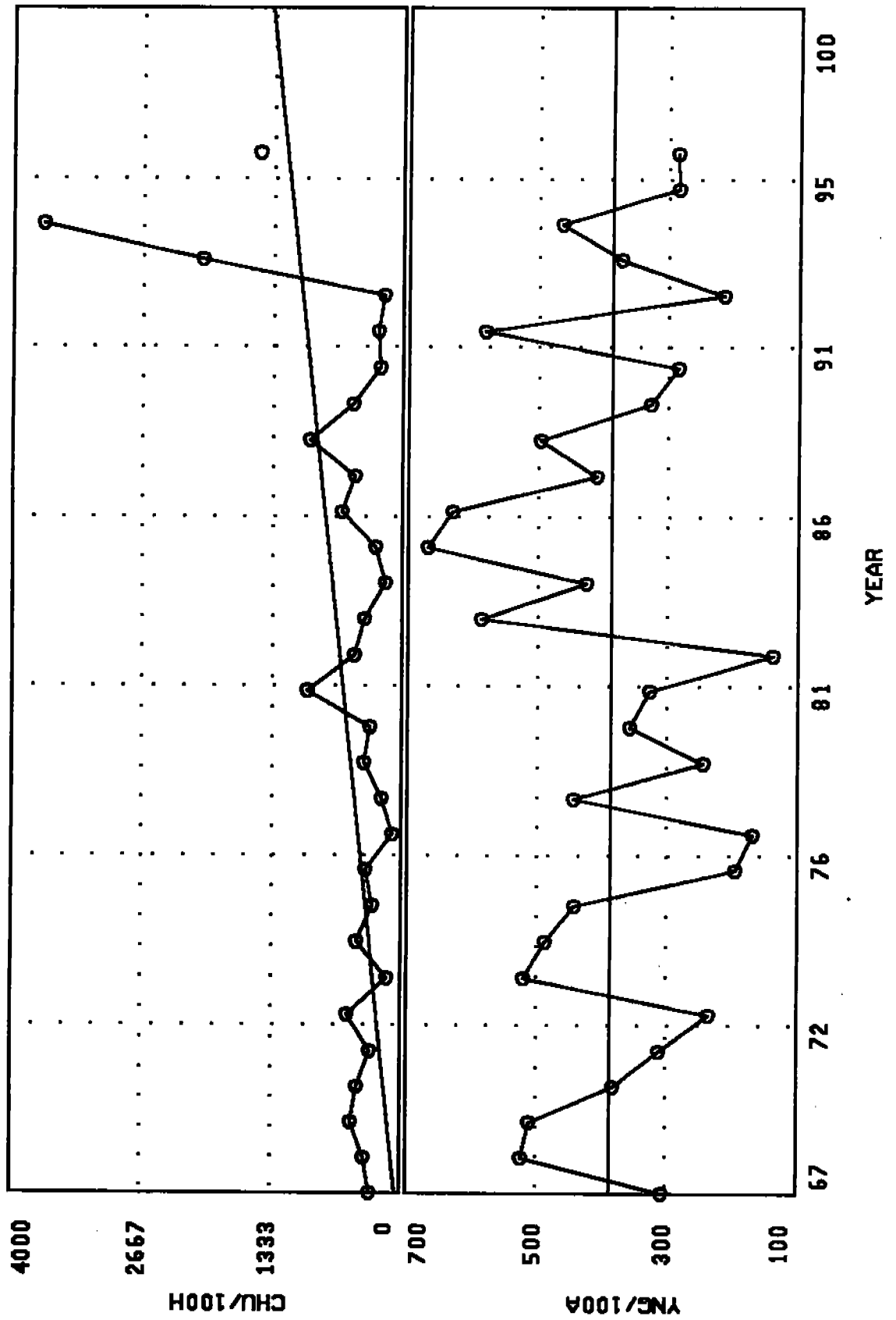
## Field Bag Checks

A summary of field bag check data for 1996 is shown in Table 10. The hunter success trend determined via this method are shown in Table 11 and Figure 5. Data for the 1996 season compared to 1995 and the 10-year (1986-95) average follow:

	<u>1996</u>	<u>Percent change from 1995</u>	<u>Percent change from Average</u>
Total hunters checked	--	--	--
Total hours hunted	--	--	--
Chukars per hunter (complete hunts)	--	--	--
Chukars bagged per 100 hours (complete hunts)	--	--	--
Average hours per hunter-day (complete hunts)	--	--	--
Hours hunted per chukar bagged (complete hunts)	--	--	--

No field bag check data was collected in 1996.

FIGURE 1. CHUKAR PRODUCTION INDICES, 1967-96.



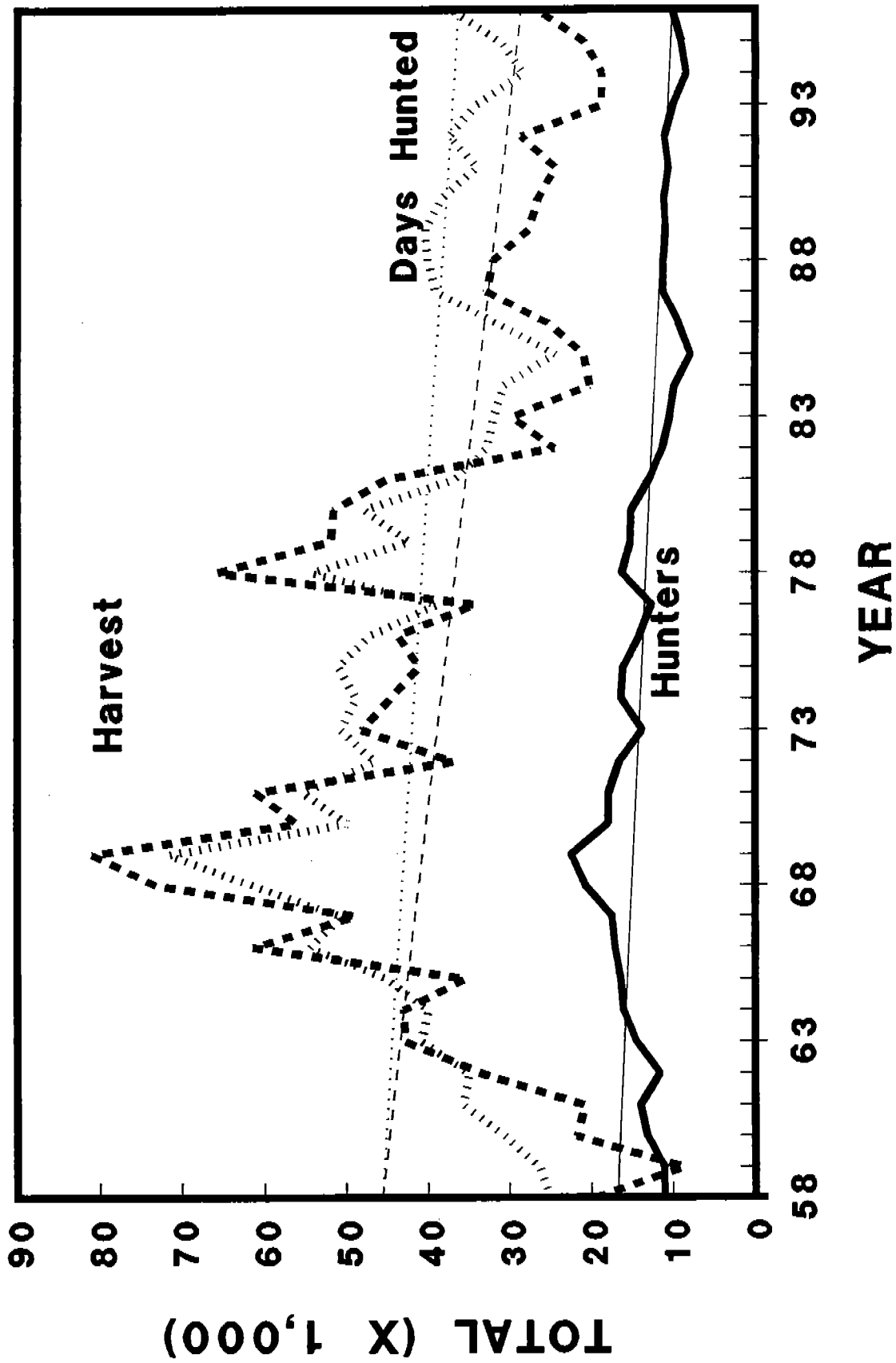


Figure 2. Statewide trends of chukar partridge harvest statistics, 1958-96.



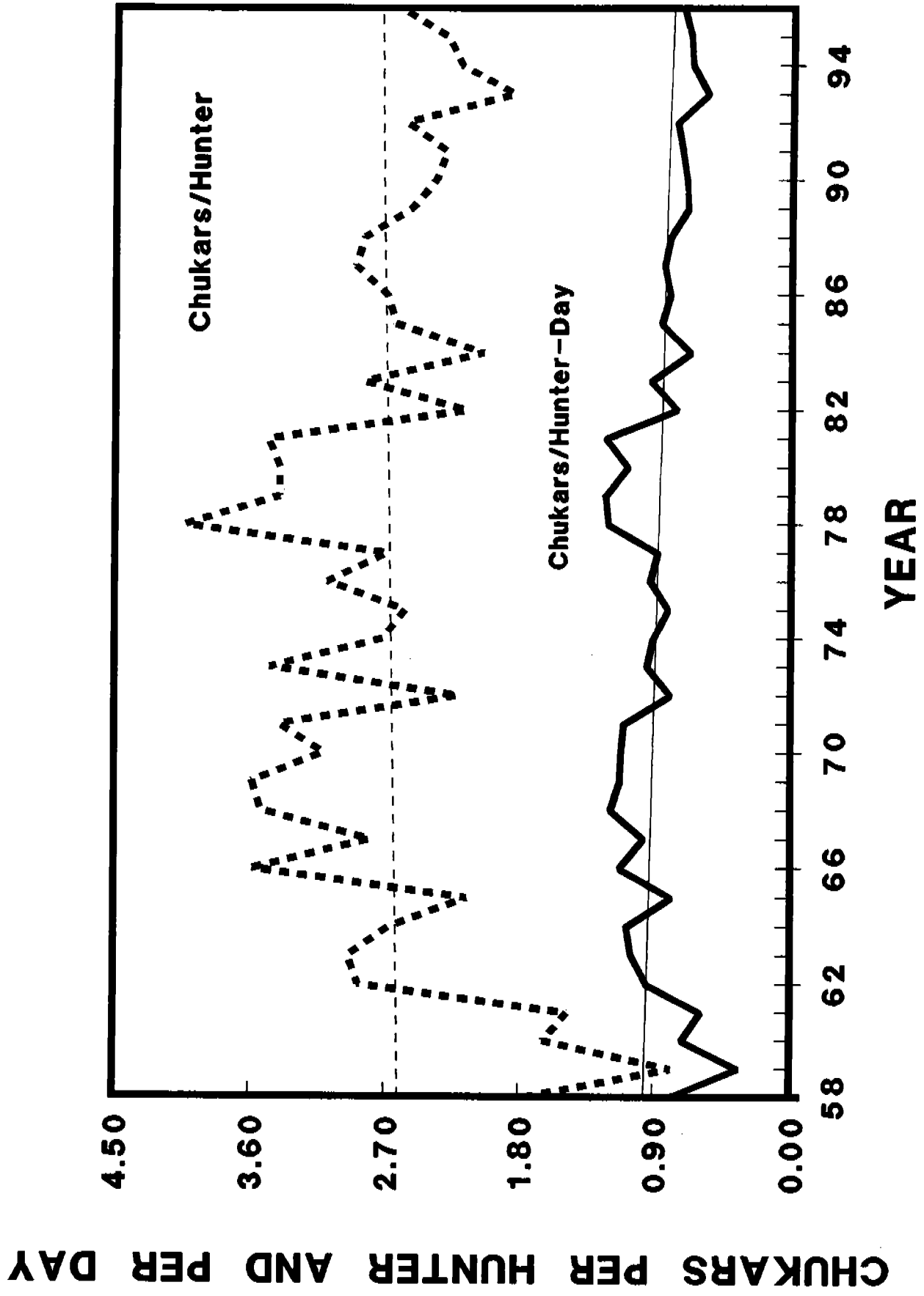
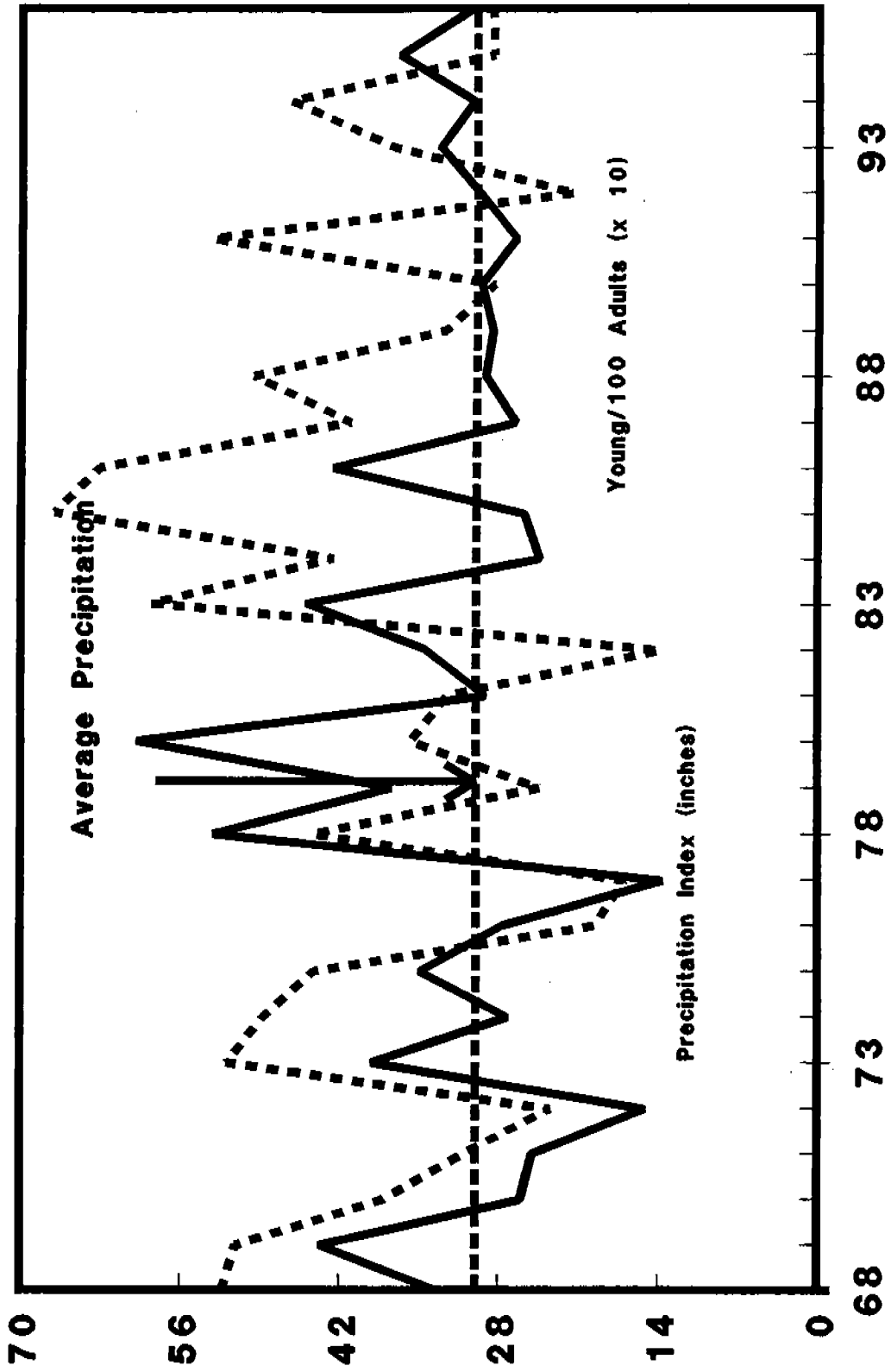


Figure 3. Statewide trends of chukar hunter success rates, 1958-96.

**YOUNG/100 ADULTS & PRECIP. INDEX**



**YEAR**

**Figure 4. Relationship between late winter and early spring (Jan.-April) precipitation and chukar production, 1968-96.**

FIGURE 5. CHUKAR FIELD BAG CHECK INDICES, 1966-96.

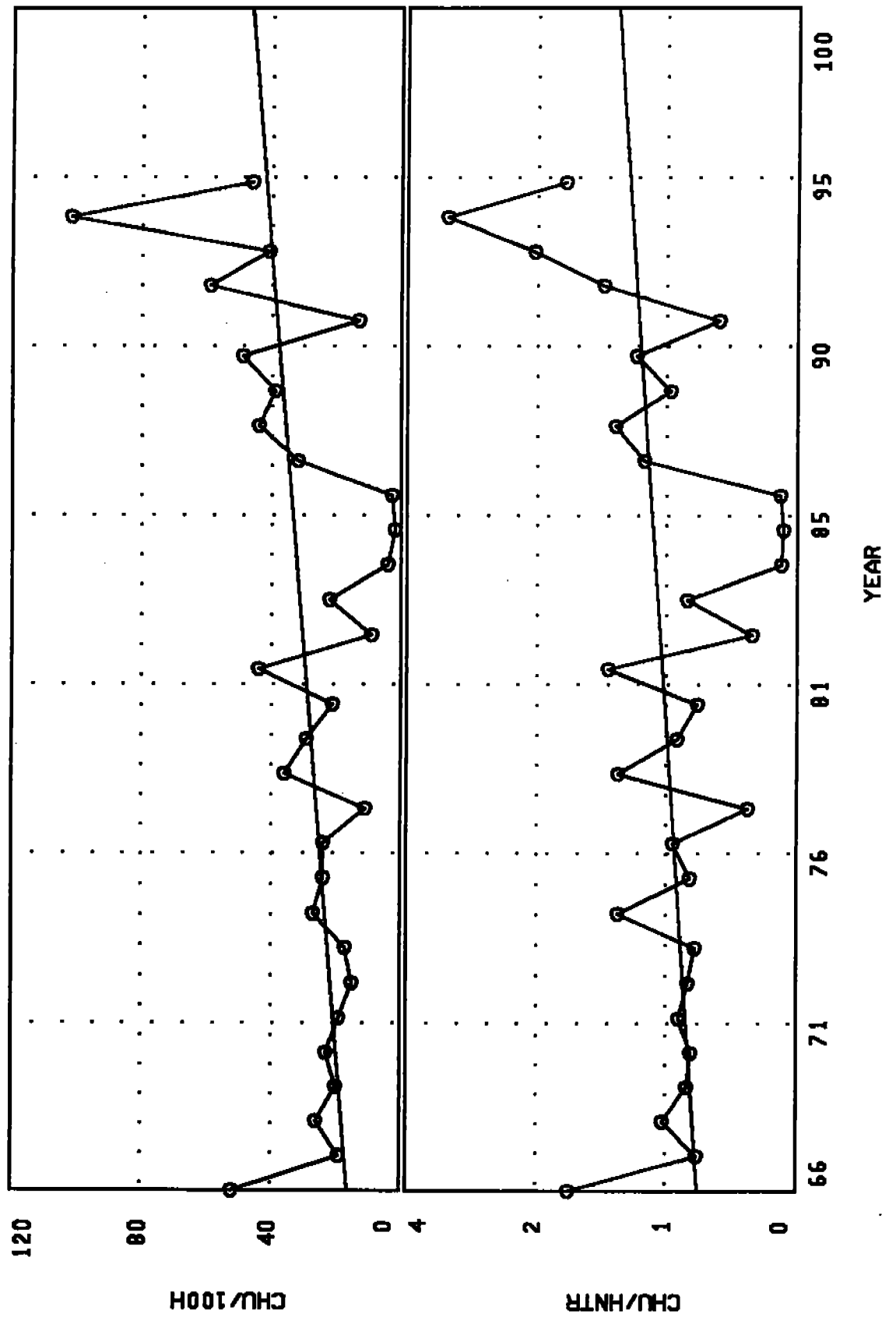


Table 1. Chukar summer inventory, 1996.

Region and County	Distinct Broods		Mean Brood	Mixed Young & Adults		Total Adults w/o Young	Total Young	Total Chukars	Young/100 Adults	Hours of Effort		Birds/100 Hr
	# Adults	Young		Adults	Young					Vehicle Miles	Horse	
<b>Northern Region</b>												
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	11	17	5.18	46	123	0	63	180	243	286	54	16.5
Morgan	--	--	--	--	--	--	--	--	--	--	--	1,473
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>11</b>	<b>17</b>	<b>5.18</b>	<b>46</b>	<b>123</b>	<b>0</b>	<b>63</b>	<b>180</b>	<b>243</b>	<b>286</b>	<b>54</b>	<b>16.5</b>
<b>Central Region</b>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southeastern Region</b>												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>STATE TOTALS</b>	<b>11</b>	<b>17</b>	<b>5.18</b>	<b>46</b>	<b>123</b>	<b>0</b>	<b>63</b>	<b>180</b>	<b>243</b>	<b>286</b>	<b>54</b>	<b>16.5</b>
												<b>1,473</b>

Table 2. Trend of chukar young per 100 adults, 1986-96.

Region and County	Year										Average		
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1986-96	1986-96
<b>Northern Region</b>													
Box Elder	700	283	136	--	--	--	--	--	--	--	--	--	--
Cache	--	860	300	--	848	--	--	--	--	--	--	--	--
Davis	--	24	--	--	400	--	300	--	--	--	--	286	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>560</b>	<b>125</b>	<b>117</b>	<b>--</b>	<b>675</b>	<b>--</b>	<b>46</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>286</b>	<b>306</b>
<b>Central Region</b>													
Juab	738	600	462	120	587	367	1,000	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	1,000	767	--	--	--	--	--	--	--
Tooele	566	535	484	263	157	443	300	--	--	--	--	--	--
Utah	--	875	--	472	--	1,200	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>642</b>	<b>591</b>	<b>468</b>	<b>240</b>	<b>266</b>	<b>533</b>	<b>650</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>484</b>
<b>Southern Region</b>													
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	125	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	550	927	--	--	--	--	--	--	--	--	--
Piute	--	370	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>125</b>	<b>370</b>	<b>550</b>	<b>927</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>493</b>
<b>Northeastern Region</b>													
Daggett	--	0	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	0	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	267	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>267</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>267</b>
<b>Southeastern Region</b>													
Carbon	1,300	1,014	600	--	--	--	--	--	--	--	--	--	--
Emery	--	600	--	--	243	--	166	633	--	--	--	--	--
Grand	730	573	621	64	0	--	200	368	464	285	--	--	--
San Juan	--	--	--	200	--	--	900	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>287</b>	<b>631</b>	<b>620</b>	<b>93</b>	<b>131</b>	<b>--</b>	<b>195</b>	<b>373</b>	<b>464</b>	<b>285</b>	<b>--</b>	<b>342</b>	<b>402</b>
<b>STATE TOTALS</b>	<b>631</b>	<b>411</b>	<b>498</b>	<b>327</b>	<b>285</b>	<b>533</b>	<b>215</b>	<b>373</b>	<b>464</b>	<b>285</b>	<b>286</b>	<b>286</b>	<b>402</b>

Table 3. Trend of average brood size for chukars, 1986-96.

Region and County	Year											Average 1986-96
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder	--	8.50	7.50	--	--	--	--	--	--	--	--	--
Cache	--	--	6.00	--	13.50	--	--	--	--	--	--	--
Davis	--	--	--	14.00	12.00	--	3.00	--	--	--	5.18	--
Morgan	--	--	--	7.00	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	8.50	7.00	10.50	13.00	--	3.00	--	--	--	5.18	8.40
<b>Central Region</b>												
Juab	7.45	8.00	6.75	5.50	4.30	--	10.00	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	10.00	--	--	--	--	--	--
Tooele	7.86	8.00	7.43	6.40	3.40	5.50	--	--	--	--	--	--
Utah	--	10.50	--	3.00	--	12.00	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	7.89	8.23	7.07	5.00	3.60	7.33	10.00	--	--	--	--	6.99
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	2.00	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	7.75	7.50	--	--	--	--	--	--	--	--
Piute	--	5.00	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	5.00	7.75	7.50	--	--	--	--	--	--	--	6.75
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	10.00	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	10.00	--	--	--	--	--	--	--	--	--	10.00
<b>Southeastern Region</b>												
Carbon	12.50	9.67	6.00	--	--	--	--	--	--	--	--	--
Emery	--	5.00	--	--	8.50	--	18.00	3.33	--	--	--	--
Grand	--	8.57	9.11	1.00	--	--	4.00	8.00	10.67	--	--	--
San Juan	--	--	--	4.00	--	--	9.00	--	--	--	--	--
<b>REGIONAL TOTALS</b>	10.40	8.25	8.95	2.50	8.50	--	10.33	5.67	10.67	--	--	8.16
<b>STATE TOTALS</b>	8.13	7.93	8.00	5.65	5.50	7.33	7.83	5.67	10.67	--	5.18	7.41

Table 4. Trend of chukars observed per 100 hours, 1986-96.

Region and County	Year											Average 1986-96
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder	168	40	236	--	--	--	30	--	--	--	--	--
Cache	--	83	35	--	294	--	67	--	--	--	--	--
Davis	22	313	500	250	333	--	160	--	--	--	1,473	--
Morgan	--	--	--	500	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>102</b>	<b>91</b>	<b>111</b>	<b>135</b>	<b>295</b>	<b>70</b>	<b>70</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>1,473</b>	<b>134</b>
<b>Central Region</b>												
Juab	2,611	850	913	500	229	200	122	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	733	2,600	--	--	--	--	--
Tooele	1,046	1,123	653	314	365	475	400	--	--	--	--	--
Utah	--	1,950	--	2,100	--	1,300	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>1,424</b>	<b>844</b>	<b>822</b>	<b>623</b>	<b>281</b>	<b>434</b>	<b>375</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>686</b>
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	1,486	1,596	--	--	--	--	--	--	--	--
Plute	--	1,567	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>1,567</b>	<b>1,486</b>	<b>1,596</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>1,550</b>
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	0	866	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>241</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>315</b>
<b>Southeastern Region</b>												
Carbon	--	7,900	350	--	--	--	--	--	--	--	--	--
Emery	--	771	--	--	480	--	511	158	--	--	--	--
Grand	2,076	1,167	3,983	240	67	--	100	4,350	3,691	--	--	--
San Juan	--	--	--	225	--	--	200	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>2,076</b>	<b>1,335</b>	<b>3,293</b>	<b>225</b>	<b>150</b>	<b>--</b>	<b>258</b>	<b>2,064</b>	<b>3,691</b>	<b>--</b>	<b>--</b>	<b>1,636</b>
<b>STATE TOTALS</b>	<b>633</b>	<b>486</b>	<b>959</b>	<b>522</b>	<b>244</b>	<b>267</b>	<b>200</b>	<b>2,064</b>	<b>3,691</b>	<b>--</b>	<b>1,473</b>	<b>1,008</b>

Table 5. Summary of chukar hunter success and distribution of harvest and hunting pressure by region and county, 1996.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	114	7,386	6,503	0.88	19.90	24.45
CACHE	19	1,602	905	0.57	4.32	3.41
DAVIS	6	278	441	1.58	0.75	1.66
MORGAN	9	464	1,300	2.80	1.25	4.89
RICH	4	139	185	1.33	0.38	0.70
SUMMIT	2	46	46	1.00	0.13	0.17
WEBER	8	534	232	0.43	1.44	0.87
<b>REGIONAL TOTALS</b>	<b>162</b>	<b>10,451</b>	<b>9,615</b>	<b>0.92</b>	<b>28.16</b>	<b>36.16</b>
<b>CENTRAL REGION</b>						
JUAB	23	1,207	650	0.54	3.25	2.45
SALT LAKE	10	789	766	0.97	2.13	2.88
SANPETE	13	1,021	209	0.20	2.75	0.79
TOOELE	78	5,225	4,343	0.83	14.08	16.33
UTAH	72	4,924	3,135	0.64	13.27	11.79
WASATCH	2	952	23	0.02	2.57	0.09
<b>REGIONAL TOTALS</b>	<b>198</b>	<b>14,121</b>	<b>9,128</b>	<b>0.65</b>	<b>38.05</b>	<b>34.32</b>
<b>SOUTHERN REGION</b>						
BEAVER	2	23	46	2.00	0.06	0.17
GARFIELD	1	23	0	0.00	0.06	0.00
IRON	2	185	0	0.00	0.50	0.00
KANE	0	0	0	0.00	0.00	0.00
MILLARD	22	1,509	1,602	1.06	4.07	6.03
PIUTE	10	766	603	0.79	2.07	2.27
SEVIER	28	3,483	1,765	0.51	9.39	6.64
WASHINGTON	2	185	0	0.00	0.50	0.00
WAYNE	2	116	69	0.60	0.31	0.26
<b>REGIONAL TOTALS</b>	<b>69</b>	<b>6,294</b>	<b>4,087</b>	<b>0.65</b>	<b>16.96</b>	<b>15.37</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT	1	23	46	2.00	0.06	0.17
DUCHESNE	17	1,184	1,370	1.16	3.19	5.15
UINTAH	13	557	464	0.83	1.50	1.75
<b>REGIONAL TOTALS</b>	<b>31</b>	<b>1,765</b>	<b>1,881</b>	<b>1.07</b>	<b>4.76</b>	<b>7.07</b>
<b>SOUTHEASTERN REGION</b>						
CARBON	13	696	557	0.80	1.88	2.10
EMERY	30	2,183	789	0.36	5.88	2.97
GRAND	19	1,393	418	0.30	3.75	1.57
SAN JUAN	2	23	0	0.00	0.06	0.00
<b>REGIONAL TOTALS</b>	<b>64</b>	<b>4,296</b>	<b>1,765</b>	<b>0.41</b>	<b>11.58</b>	<b>6.64</b>
<b>Unknown</b>	<b>2</b>	<b>185</b>	<b>116</b>	<b>0.63</b>	<b>0.50</b>	<b>0.44</b>
<b>STATE TOTALS</b>	<b>526</b>	<b>37,116</b>	<b>26,594</b>	<b>0.72</b>	<b>100.00</b>	<b>100.00</b>

\*Total hunter trips from questionnaire returns.



Table 6. Summary of chukars bagged per hunter-day by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	0.54	0.89	0.78	0.86	0.37	0.72	1.12	0.88
Cache	0.73	0.51	0.37	0.89	0.28	0.03	0.26	0.57
Davis	0.42	0.79	0.76	0.38	0.25	0.21	0.17	1.58
Morgan	0.56	0.71	0.54	0.41	0.20	1.19	0.00	2.80
Rich	0.70	1.67	0.32	0.33	0.17	0.00	0.00	1.33
Summit	0.20	2.14	0.14	0.33	0.36	0.67	0.00	1.00
Weber	1.07	0.73	0.84	0.66	0.62	0.14	0.48	0.43
<b>REGIONAL TOTALS</b>	<b>0.58</b>	<b>0.82</b>	<b>0.69</b>	<b>0.76</b>	<b>0.36</b>	<b>0.61</b>	<b>0.89</b>	<b>0.92</b>
<b>Central Region</b>								
Juab	0.66	0.73	0.87	0.77	0.50	0.94	0.58	0.54
Salt Lake	1.05	1.16	1.68	1.08	1.30	0.58	0.79	0.97
Sanpete	1.06	1.35	0.83	0.77	0.76	0.58	0.30	0.20
Tooele	0.69	0.77	0.70	0.76	0.41	0.65	0.58	0.83
Utah	0.78	0.67	0.79	0.65	0.53	0.84	0.62	0.64
Wasatch	0.60	0.67	0.50	0.32	1.64	0.43	0.33	0.02
<b>REGIONAL TOTALS</b>	<b>0.78</b>	<b>0.81</b>	<b>0.79</b>	<b>0.73</b>	<b>0.54</b>	<b>0.72</b>	<b>0.55</b>	<b>0.65</b>
<b>Southern Region</b>								
Beaver	0.50	0.42	0.67	0.28	0.48	0.04	0.33	2.00
Garfield	0.63	0.00	2.50	0.00	1.33	1.78	0.00	0.00
Iron	0.00	0.25	0.18	0.44	0.00	0.80	0.50	0.00
Kane	0.00	0.00	1.50	0.00	0.29	0.00	0.33	0.00
Millard	0.57	0.62	0.55	1.35	0.51	0.55	0.71	1.06
Piute	0.54	0.29	1.00	0.18	0.39	0.20	0.45	0.79
Sevier	0.47	0.51	0.72	0.67	0.48	0.38	0.27	0.51
Washington	0.00	0.00	0.00	0.00	1.82	0.00	1.00	0.00
Wayne	0.27	0.00	1.80	0.20	0.27	2.33	0.15	0.60
<b>REGIONAL TOTALS</b>	<b>0.50</b>	<b>0.45</b>	<b>0.68</b>	<b>0.73</b>	<b>0.53</b>	<b>0.43</b>	<b>0.36</b>	<b>0.65</b>
<b>Northeastern Region</b>								
Daggett	0.00	0.00	0.00	0.00	1.00	0.00	0.00	2.00
Duchesne	0.73	0.27	0.19	1.86	0.51	0.74	1.39	1.16
Uintah	2.14	0.09	0.79	0.75	0.38	0.00	1.47	0.83
<b>REGIONAL TOTAL</b>	<b>1.81</b>	<b>0.17</b>	<b>0.38</b>	<b>0.95</b>	<b>0.52</b>	<b>0.43</b>	<b>1.43</b>	<b>1.07</b>
<b>Southeastern Region</b>								
Carbon	0.42	0.16	0.46	1.25	0.56	0.80	0.71	0.80
Emery	0.29	0.50	0.43	0.88	0.41	0.63	0.96	0.36
Grand	0.92	0.56	0.38	3.40	1.61	1.83	1.29	0.00
San Juan	0.00	0.00	0.50	0.00	0.00	0.20	4.00	0.00
<b>REGIONAL TOTALS</b>	<b>0.50</b>	<b>0.39</b>	<b>0.44</b>	<b>1.24</b>	<b>1.14</b>	<b>0.97</b>	<b>1.07</b>	<b>0.41</b>
<b>Unknown counties</b>	<b>1.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.20</b>	<b>1.06</b>	<b>0.00</b>	<b>0.87</b>	<b>0.63</b>
<b>STATE TOTALS</b>	<b>0.68</b>	<b>0.69</b>	<b>0.72</b>	<b>0.76</b>	<b>0.55</b>	<b>0.66</b>	<b>0.67</b>	<b>0.72</b>

Table 7. Percentage distribution of chukar harvest by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	13.21	18.42	23.43	17.49	8.00	15.59	28.66	24.45
Cache	4.05	4.43	1.93	4.73	2.23	0.09	1.48	3.41
Davis	0.83	0.85	1.57	1.56	0.20	0.47	0.09	1.66
Morgan	1.43	0.93	1.36	0.93	0.61	2.35	0.00	4.89
Rich	0.53	1.17	0.64	0.19	0.10	0.00	0.00	0.70
Summit	0.08	1.17	0.14	0.06	0.91	0.19	0.00	0.17
Weber	1.13	1.48	1.93	1.31	2.63	0.19	1.11	0.87
<b>REGIONAL TOTALS</b>	<b>21.25</b>	<b>28.44</b>	<b>31.00</b>	<b>26.26</b>	<b>14.68</b>	<b>18.87</b>	<b>31.36</b>	<b>36.16</b>
<b>Central Region</b>								
Juab	5.33	5.13	8.57	6.97	5.57	4.41	5.47	2.45
Salt Lake	3.15	2.87	3.00	5.10	3.04	1.31	1.02	2.88
Sanpete	9.83	8.08	6.07	4.73	7.19	5.63	2.32	0.79
Tooele	19.67	28.21	15.29	17.67	14.17	17.28	11.78	16.33
Utah	15.09	10.26	16.86	15.99	10.93	20.09	9.83	11.79
Wasatch	0.23	0.16	0.93	0.37	2.33	0.28	0.19	0.09
<b>REGIONAL TOTALS</b>	<b>53.30</b>	<b>54.70</b>	<b>50.71</b>	<b>50.84</b>	<b>43.22</b>	<b>49.02</b>	<b>30.61</b>	<b>34.32</b>
<b>Southern Region</b>								
Beaver	1.05	2.18	3.00	0.44	1.11	0.09	1.86	0.17
Garfield	0.75	0.00	0.36	0.00	1.62	1.50	0.00	0.00
Iron	0.00	0.31	0.14	0.25	0.00	0.38	0.09	0.00
Kane	0.00	0.00	0.21	0.00	0.40	0.00	0.19	0.00
Millard	4.65	3.11	3.21	5.48	4.96	3.47	5.10	6.03
Piute	1.13	0.85	1.00	0.19	0.91	0.75	0.93	2.27
Sevier	5.26	4.74	5.79	7.47	9.31	6.95	5.19	6.64
Washington	0.00	0.00	0.00	0.00	2.02	0.00	0.09	0.00
Wayne	0.30	0.00	0.64	0.06	0.30	0.66	0.19	0.26
<b>REGIONAL TOTALS</b>	<b>13.14</b>	<b>11.19</b>	<b>14.36</b>	<b>13.88</b>	<b>20.65</b>	<b>13.80</b>	<b>13.64</b>	<b>15.37</b>
<b>Northeastern Region</b>								
Daggett	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.17
Duchesne	0.60	0.78	0.43	0.81	2.23	1.30	5.29	5.15
Uintah	5.78	0.16	0.79	1.49	0.30	0.00	5.19	1.75
<b>REGIONAL TOTALS</b>	<b>6.38</b>	<b>0.93</b>	<b>1.21</b>	<b>2.30</b>	<b>2.83</b>	<b>1.31</b>	<b>10.48</b>	<b>7.07</b>
<b>Southeastern Region</b>								
Carbon	1.13	0.62	0.86	1.87	0.91	3.38	0.93	2.10
Emery	1.35	3.73	1.14	2.68	1.52	5.26	6.86	2.97
Grand	2.70	0.39	0.36	2.12	12.55	8.26	4.17	1.57
San Juan	0.00	0.00	0.36	0.00	0.00	0.09	0.74	0.00
<b>REGIONAL TOTALS</b>	<b>5.18</b>	<b>4.74</b>	<b>2.70</b>	<b>6.66</b>	<b>14.98</b>	<b>17.00</b>	<b>12.71</b>	<b>6.64</b>
<b>Unknown counties</b>	<b>0.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.06</b>	<b>3.64</b>	<b>0.00</b>	<b>1.21</b>	<b>0.44</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Table 8. Percentage distribution of chukar hunting pressure by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	16.59	14.18	21.53	15.42	12.02	14.18	17.29	19.90
Cache	3.80	5.94	3.73	4.03	4.40	1.80	3.81	4.32
Davis	1.34	0.75	1.48	3.13	0.45	1.49	0.37	0.75
Morgan	1.75	0.91	1.79	1.76	1.67	1.30	0.37	1.25
Rich	0.51	0.48	1.43	0.43	0.33	0.74	0.06	0.38
Summit	0.26	0.37	0.72	0.14	1.39	0.19	0.19	0.13
Weber	0.72	1.39	1.64	1.52	2.34	0.87	1.56	1.44
<b>REGIONAL TOTALS</b>	<b>24.96</b>	<b>24.02</b>	<b>32.33</b>	<b>26.4</b>	<b>22.59</b>	<b>20.56</b>	<b>23.66</b>	<b>28.16</b>
<b>Central Region</b>								
Juab	5.55	4.87	7.06	6.93	6.18	3.10	6.30	3.25
Salt Lake	2.05	1.71	1.28	3.61	1.28	1.49	0.87	2.13
Sanpete	6.37	4.12	5.27	4.70	5.18	6.44	5.24	2.75
Tooele	19.62	25.25	15.70	17.84	19.20	17.52	13.73	14.08
Utah	13.20	10.59	15.24	18.88	11.41	15.73	10.61	13.27
Wasatch	0.26	0.16	1.33	0.90	0.78	0.43	0.37	2.57
<b>REGIONAL TOTALS</b>	<b>47.05</b>	<b>46.71</b>	<b>45.88</b>	<b>52.85</b>	<b>44.02</b>	<b>44.71</b>	<b>37.14</b>	<b>38.05</b>
<b>Southern Region</b>								
Beaver	1.44	3.53	3.22	1.19	1.28	4.12	3.75	0.06
Garfield	0.82	0.59	0.10	0.28	0.67	0.56	1.00	0.06
Iron	0.36	0.86	0.56	0.43	0.11	0.31	0.12	0.50
Kane	0.00	0.05	0.10	0.00	0.78	0.06	0.37	0.00
Millard	5.60	3.48	4.19	3.08	5.34	4.15	4.81	4.07
Piute	1.44	2.03	0.72	0.81	1.28	2.48	1.37	2.07
Sevier	7.60	6.37	5.73	8.49	10.57	12.20	13.05	9.39
Washington	0.00	0.27	0.20	0.05	0.61	0.00	0.06	0.50
Wayne	0.77	0.05	0.26	0.24	0.61	0.19	0.81	0.31
<b>REGIONAL TOTALS</b>	<b>18.03</b>	<b>17.23</b>	<b>15.09</b>	<b>14.56</b>	<b>21.26</b>	<b>21.36</b>	<b>25.34</b>	<b>16.96</b>
<b>Northeastern Region</b>								
Daggett	0.00	0.59	0.00	0.00	0.17	0.00	0.00	0.06
Duchesne	0.56	1.98	1.59	0.33	2.39	1.18	2.56	3.19
Uintah	1.85	1.18	0.72	1.52	0.45	0.62	2.37	1.50
<b>REGIONAL TOTALS</b>	<b>2.41</b>	<b>3.75</b>	<b>2.30</b>	<b>1.85</b>	<b>3.01</b>	<b>1.80</b>	<b>4.93</b>	<b>4.76</b>
<b>Southeastern Region</b>								
Carbon	1.85	2.68	1.33	1.14	0.89	2.79	0.87	1.88
Emery	3.18	5.14	1.89	2.32	2.06	5.51	4.81	5.88
Grand	2.00	0.48	0.66	0.47	4.29	2.97	2.18	3.75
San Juan	0.00	0.00	0.51	0.14	0.00	0.31	0.12	0.06
<b>REGIONAL TOTALS</b>	<b>7.04</b>	<b>8.29</b>	<b>4.40</b>	<b>4.08</b>	<b>7.23</b>	<b>11.58</b>	<b>7.99</b>	<b>11.58</b>
<b>Unknown counties</b>	<b>0.51</b>	<b>0.00</b>	<b>0.00</b>	<b>0.24</b>	<b>1.89</b>	<b>0.00</b>	<b>0.94</b>	<b>0.50</b>

**Table 9. Statewide summary of chukar partridge harvest statistics, 1958-96**

Year	Total Hunters	Total Harvest	Hunter-Day Afield	Chukars Pe Hunter-Day	Chukars Per Hunter
1958	11,124	19,578	25,100	0.78	1.76
1959	11,154	8,700	26,364	0.33	0.78
1960	13,252	21,733	30,610	0.71	1.64
1961	14,046	20,821	35,675	0.58	1.48
1962	11,638	33,500	35,010	0.95	2.88
1963	14,532	42,806	40,824	1.05	2.95
1964	16,090	42,974	39,971	1.08	2.67
1965	16,431	35,335	45,067	0.78	2.15
1966	17,133	61,370	54,448	1.13	3.58
1967	17,485	48,906	50,671	0.97	2.80
1968	20,744	73,218	61,402	1.19	3.53
1969	22,529	80,917	71,674	1.13	3.59
1970	18,013	56,053	49,911	1.12	3.11
1971	17,917	61,151	55,378	1.10	3.41
1972	16,685	36,925	46,502	0.79	2.21
1973	13,888	48,135	50,677	0.95	3.47
1974	16,412	44,658	48,856	0.91	2.72
1975	16,156	41,151	51,083	0.81	2.57
1976	14,171	43,726	47,143	0.93	3.09
1977	12,691	34,155	38,873	0.88	2.69
1978	16,291	65,747	54,239	1.21	4.04
1979	15,210	51,918	42,254	1.23	3.41
1980	15,100	51,511	47,778	1.08	3.41
1981	12,907	44,983	36,662	1.23	3.49
1982	11,326	24,460	32,691	0.75	2.16
1983	10,418	29,649	31,904	0.93	2.85
1984	9,846	20,179	30,715	0.66	2.05
1985	7,930	20,938	24,346	0.86	2.64
1986	9,397	25,346	31,672	0.80	2.70
1987	11,276	32,848	39,099	0.84	2.91
1988	11,237	32,057	40,088	0.80	2.85
1989	10,910	27,628	40,384	0.68	2.53
1990	11,195	26,486	38,463	0.69	2.37
1991	10,577	24,355	34,010	0.72	2.30
1992	11,125	28,599	37,463	0.76	2.57
1993	10,128	18,774	34,147	0.55	1.85
1994	8,455	18,721	28,389	0.66	2.21
1995	9,097	20,954	31,140	0.67	2.30
1996	10,197	26,594	37,116	0.72	2.61
<b>Totals (1958-96)</b>	<b>524,713</b>	<b>1,447,559</b>	<b>1,597,799</b>	<b>--</b>	<b>--</b>
<b>Averages (1958-95)</b>	<b>13,540</b>	<b>37,394</b>	<b>41,071</b>	<b>0.88</b>	<b>2.68</b>

Table 10. Chukar field bag check summary, 1996.

Region and County	All Hunts				Complete Hunts			
	Total Parties	Total Hunters	Total Hours	Total Birds/100 Hr	Total Hunters	Total Hours	Total Birds/100 Hr	Birds/ Hunter
<b>Northern Region</b>								
Box Elder	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--
<b>Central Region</b>								
Juab	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--
<b>Southern Region</b>								
Beaver	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--
<b>Northeastern Region</b>								
Daggett	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--
<b>Southeastern Region</b>								
Carbon	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--
<b>STATE TOTALS</b>	0	0	0	ERR	0	0	0	ERR

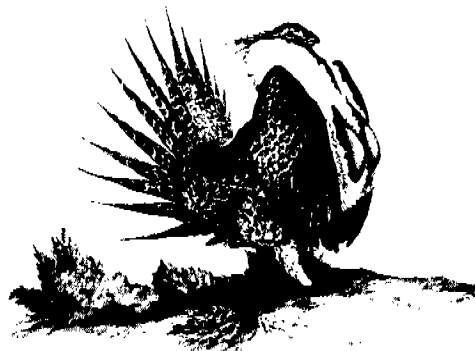
Table 11. Chukar hunter success trend as determined by field bag check, 1991-96.

Region and County	1991		1992		1993		1994		1995		1996	
	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter
<b>Northern Region</b>												
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--
<b>Central Region</b>												
Juab	67	2.00	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	53	1.25	--	--	--	--	--	--	--	--	--	--
Tooele	1	0.07	--	--	--	--	--	--	--	--	--	--
Utah	67	2.00	--	--	--	--	--	--	18	0.75	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	13	0.70	--	--	--	--	--	--	18	0.75	--	--
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--
<b>Southeastern Region</b>												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	69	1.74	--	--	--	--	--	66	2.73	--	--
Grand	--	--	--	41	2.36	102	3.14	33	1.79	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	69	1.74	41	2.36	102	3.14	62	2.38	--	--	--
<b>STATE TOTALS</b>	13	0.70	1.74	41	2.36	102	3.14	46	2.08	--	--	--

# **SAGE GROUSE**

## **SUMMARY**

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Strutting ground count surveys indicated an 11 percent increase in the average male grouse attendance from 1995.

Brood surveys showed increased production per 100 adults throughout the state. Birds observed per 100 hours increased 249 percent from 1995, and was 20 percent above average.

Harvest was 15 percent below the long-term average. Hunter numbers decreased 7 percent in 1996 and remained 24 percent below the long-term average.

Age ratios derived from wings indicated a 52 percent increase in young per 100 adults and a 21 percent increase in young per 100 adult hens.

Since 1959, numerous new strutting grounds have been discovered throughout Utah. However, average number of male grouse per ground has declined drastically. A decline in the average number of grouse per ground seems to be representative of Utah sage grouse populations.

Recent DNA and physiological studies indicate that two distinct species of sage grouse exist in Utah. The smaller species is located south and east of the Colorado River and is known as the Gunnison sage grouse.

Declines in sage grouse populations are attributed to loss and changes in sage brush habitats throughout the West. Spraying, urban and industrial development, burning and overgrazing by domestic livestock have altered critical sage grouse habitat.

Based on studies conducted in Utah in the early 1970s, estimated harvest of the sage grouse population was 20 percent (within the harvestable surplus). The amount of pressure on sage grouse populations was more than double what it is currently. Hunting pressure at current levels is not affecting populations.

There is much discussion about the status and future of sage grouse at the "Western States" level. Utah should place high priority on collecting as much annual biological data as possible on sage grouse populations in order to make the best management decisions possible.



## Strutting Ground Counts

The status of the sage grouse breeding population for 1996, as indicated by strutting ground counts, is shown in Table 1 and Figure 1 of this section. Results of this survey for 1996 compared to 1995 and the 1959-95 average follow:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Number of grounds counted	126	-4	+41
Total male grouse counted	1,321	+7	-19
Average male grouse per ground	10	+11	-51
Percent change from previous year (comparable grounds)			

Access for spring 1996 strutting ground counts was generally good in most regions of the state. The numbers of male grouse observed increased 7 percent statewide and average number of males per ground increased 11 percent.

## Brood Counts

Results of the summer inventory survey for 1996 are found in Table 2. Long-term trends of young per adult ratios, mean brood size and sage grouse observed per 100 hours are shown in Tables 3-5 and Figure 2. Indices for 1996 are compared to 1995 and the previous 10-year (1986-95) average as follows:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Total sage grouse counted	722	+539	-1
Young per 100 adults	196	+61	+27
Mean brood size	5.19	+17	+19
Sage grouse observed per 100 hours	356	+249	+20
Total hours effort	203	+83	-23

The effort devoted to sage grouse brood counts was 23 percent below average, and the total number of grouse counted was 1 percent below average.

Total sage grouse counted increased 539 percent in 1996, while production of young per 100 adults increased 61 percent. The average brood size was 19 percent above the 10-year average.

FIGURE 1. SAGE GROUSE STRUTTING  
GROUND COUNTS, 1959-96.

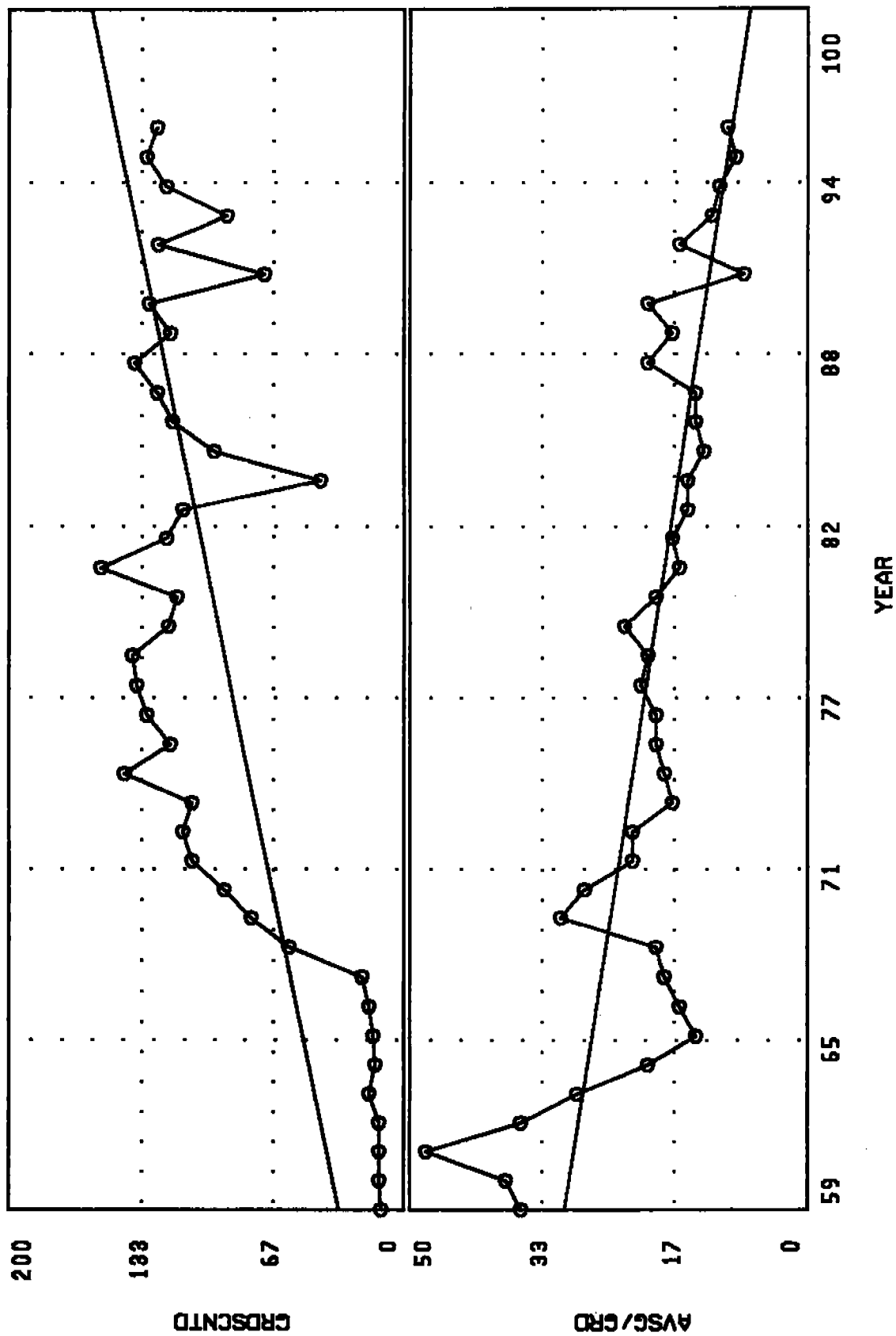
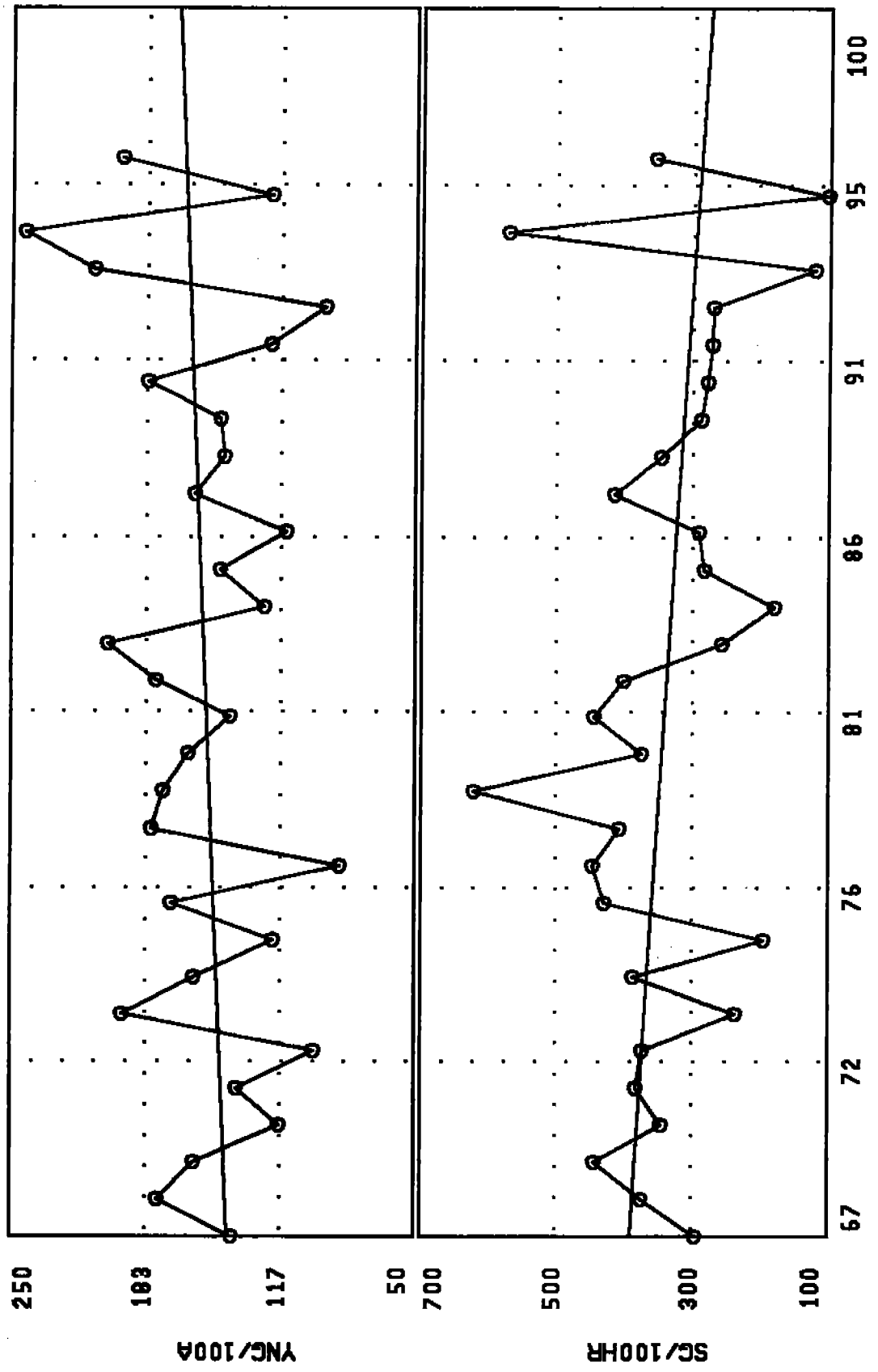


FIGURE 2. SAGE GROUSE PRODUCTION INDICES, 1967-96.



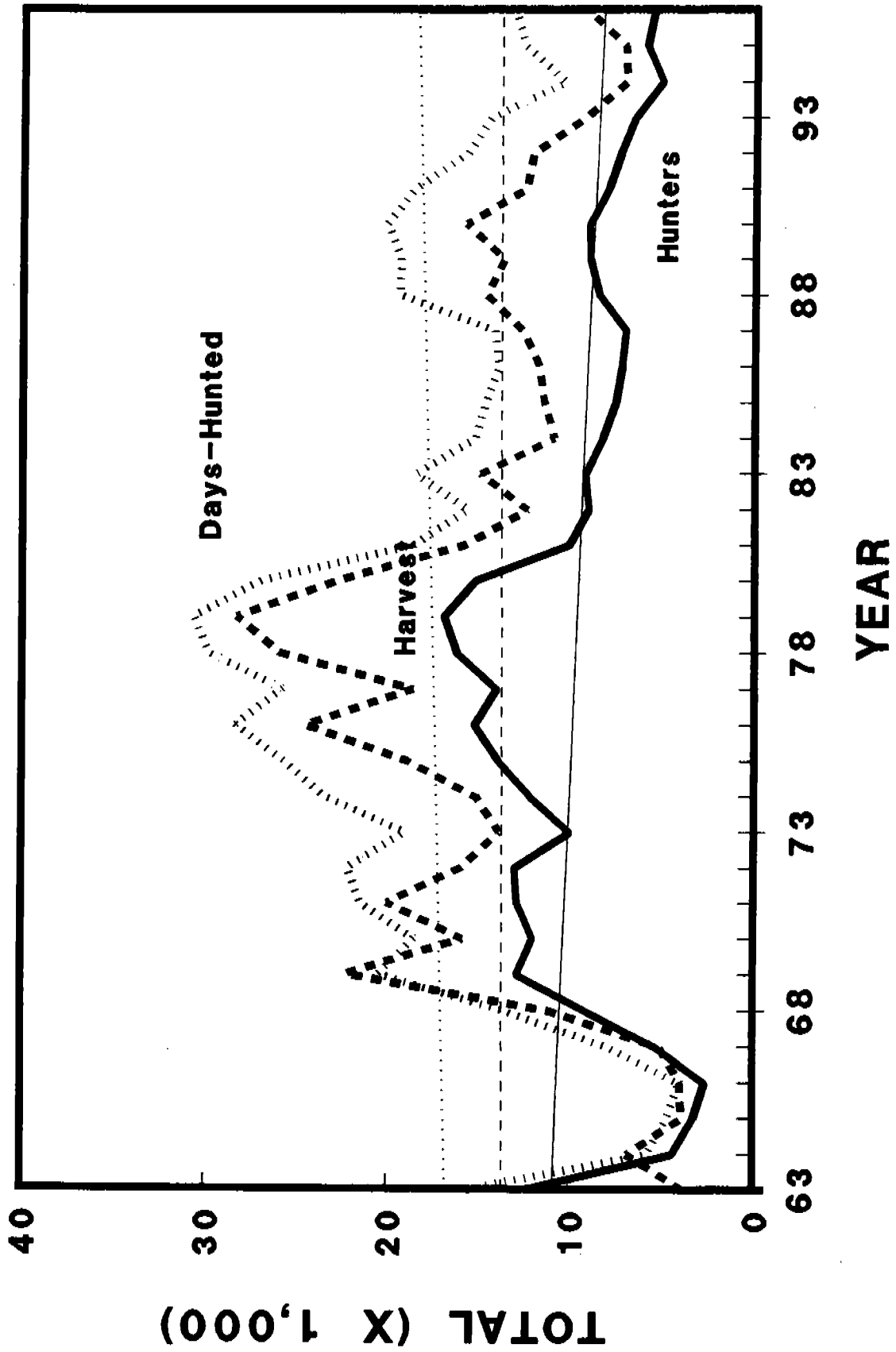


Figure 3. Statewide trends of sage grouse harvest statistics, 1963-96.

# SAGE GROUSE PER HUNTER AND PER DAY

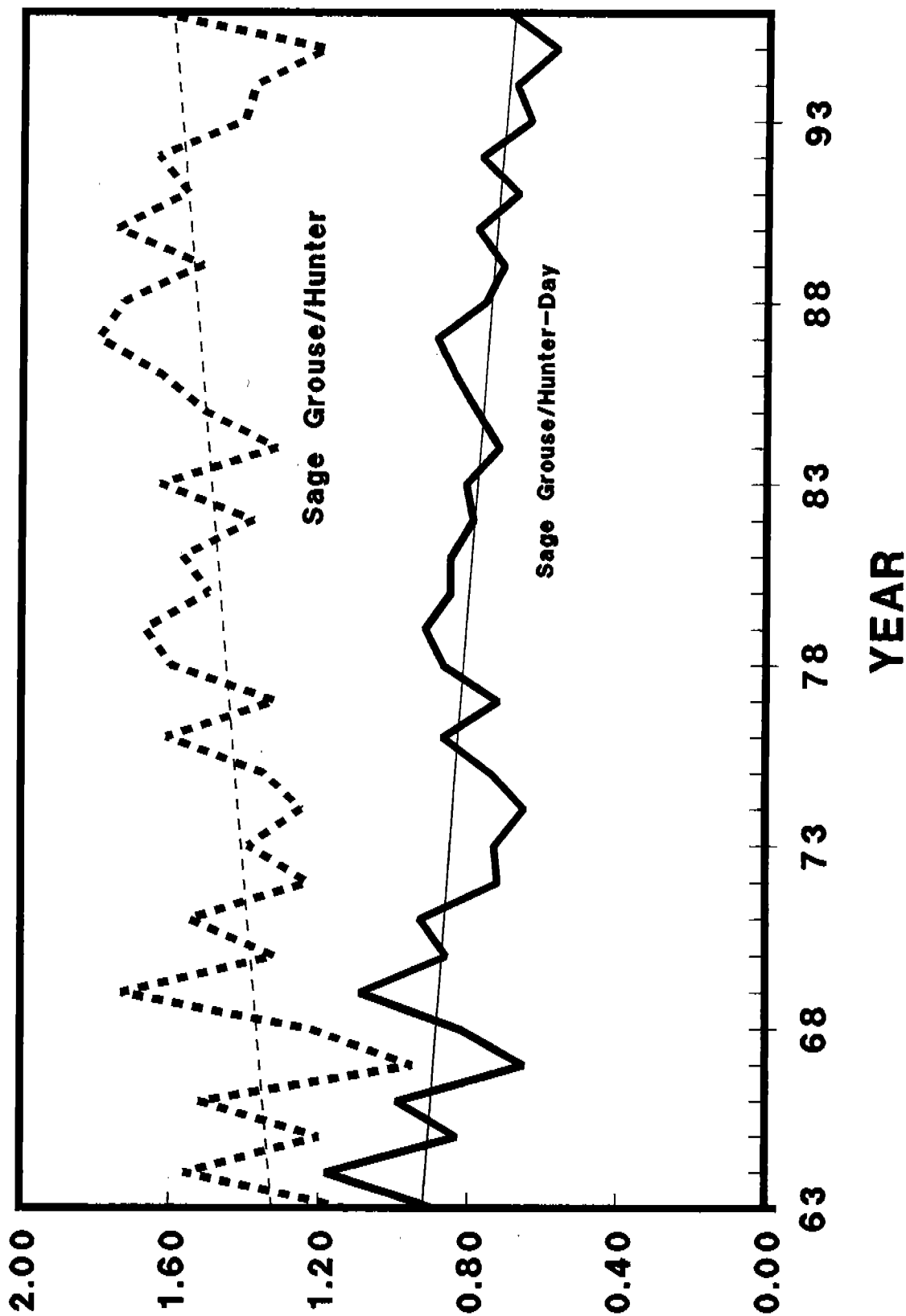
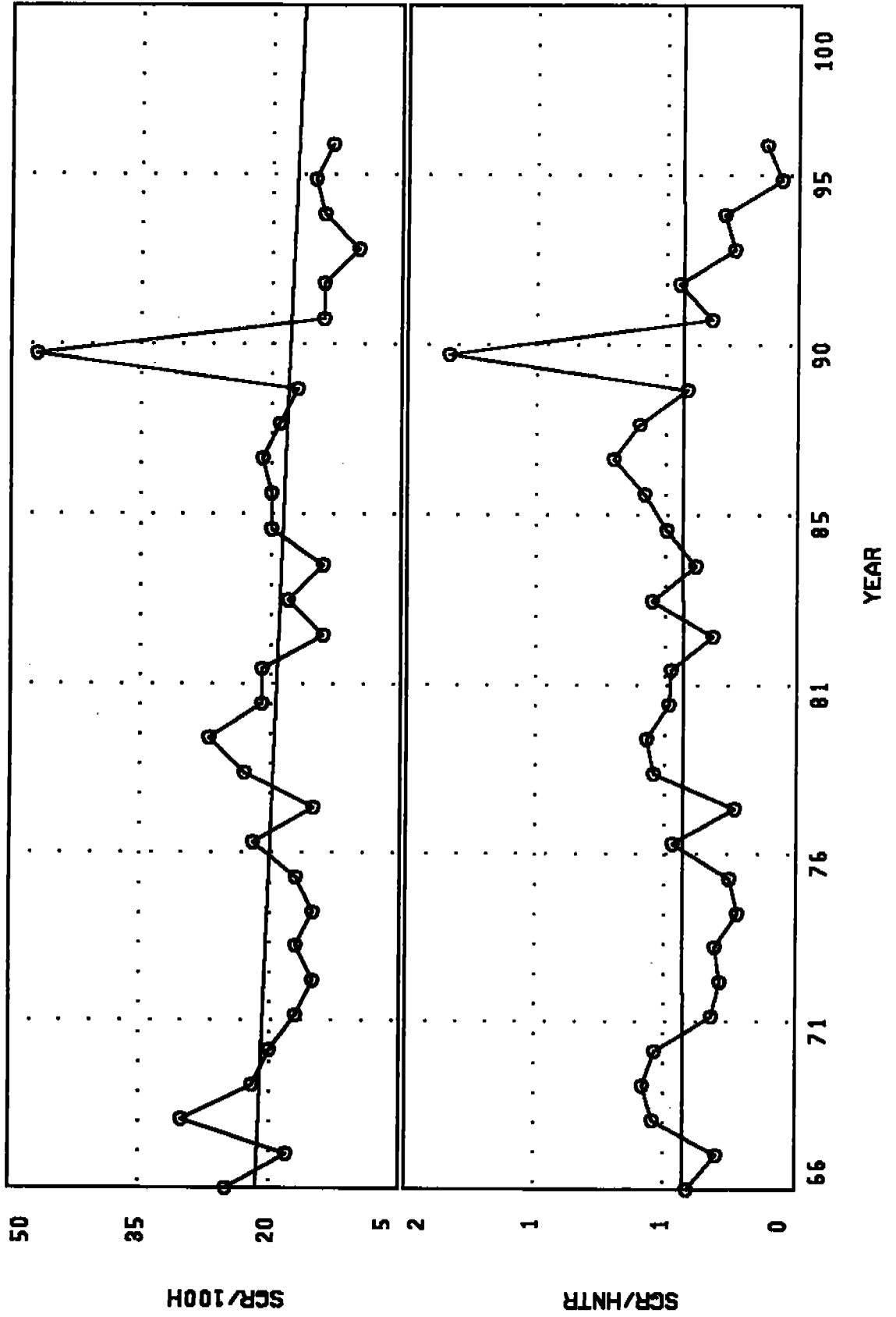


Figure 4. Statewide trends of sage grouse hunter success rates, 1963-96.

FIGURE 5. SAGE GROUSE FIELD BAG  
CHECK INDICES, 1966-96.



# Harvest

## Hunter Questionnaire

Results of the 1996 hunter questionnaire are shown in Table 6. Long-term trends of sage grouse bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 7-9 and total statewide harvest statistics in Table 10. The results of the 1996 hunting season compared to 1995 and the previous 46-year average follow:

	<u>1996</u>	<u>Percent change from 1995</u>	<u>Percent change from Average</u>
Sage grouse hunters	5,574	-7	-24
Sage grouse harvested	9,220	+29	-15
Hunter-days afield	13,215	+5	+1
Sage grouse per hunter-day	0.70	+23	+14
Sage grouse per hunter	1.65	+39	-9

Ninety percent confidence interval for overall sage grouse harvest is +/- 1,304. Standard deviation is 0.957818.

Sage grouse per hunter-day success rate increased 23 percent in 1996. Total statewide harvest increased 29 percent, and there was a 7 percent decrease in total sage grouse hunters.

Long-term sage grouse harvest trends are shown in Figures 3 and 4.

## Field Bag Checks

A summary of field bag check data for 1996 is shown in Table 11. Hunter success trends determined via this method are shown in Table 12 and Figure 5. Results of the 1996 survey compared to 1995 and the 10-year (1986-95) average follow:

	<u>1996</u>	<u>Percent change from 1995</u>	<u>Percent change from Average</u>
Total hunters checked	335	+34	-48
Total hours hunted	1,332	+122	-61
Sage grouse per hunter (complete hunts)	0.53	+10	-43
Sage grouse bagged per 100 hours	13	-35	-34
Average hours per hunter-day (complete hunts)	3.98	+66	-21
Hours hunted per grouse bagged (complete hunts)	7.57	+53	+27

Hunter success rates from field bag checks showed increased success on the opening weekend of 1996. Sage grouse bagged per 100 hours decreased 35 percent. Average hours per hunter day increased 66 percent from 1995. Average hours per grouse bagged increased 53 percent.

## Sex and Age Composition of the Harvest

A summary of the sex and age composition of harvested sage grouse in 1996 is found in Table 13 and the trend from 1992-96 in Table 14.

Following are data derived from wing surveys in 1996 compared to 1995 and the 10-year (1986-95) average:

	<u>1996</u>	<b>Percent change from <u>1995</u></b>	<b>Percent change from <u>Average</u></b>
Sample size	233	-57	-72
Percent males	37	-14	-6
Percent females	63	+11	+4
Young per 100 adults	181	+52	+30
Young per 100 hens (adult)	224	+21	+20

Analysis of wings collected at checking stations during the 1996 season indicates that statewide production was up 21 percent compared to 1995, and was 20 percent above the long-term average.



Table 1. Summary of sage grouse strutting ground counts by region and county, 1986-96.

Region and County	Year											
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder												
No. Strutting Grounds Counted	10	18	15	11	20	16	13	8	14	4	11	
Total Male Grouse Counted	288	314	419	343	327	--	307	250	220	134	209	
County Average (all strutting grounds)	29	18	28	31	23	21	24	17	16	34	19	
% Change From Previous Year - Comparable Grounds	17	-12	33	-3	-17	-11	8	-7	-23	-14	-24	
Cache												
No. Strutting Grounds Counted	2	1	1	2	--	--	3	--	2	2	2	
Total Male Grouse Counted	8	0	9	15	--	--	27	--	9	9	9	
County Average (all strutting grounds)	4	0	9	8	--	--	9	--	5	5	5	
% Change From Previous Year - Comparable Grounds	--	--	100	40	--	--	--	--	--	--	--	
Morgan												
No. Strutting Grounds Counted	3	2	1	--	--	--	1	--	--	1	1	
Total Male Grouse Counted	22	26	19	--	--	--	39	--	--	24	25	
County Average (all strutting grounds)	7	13	19	--	--	--	39	--	--	24	25	
% Change From Previous Year - Comparable Grounds	-33	18	-21	--	--	--	--	--	--	60	5	
Rich												
No. Strutting Grounds Counted	11	12	3	6	19	22	14	14	29	26	23	
Total Male Grouse Counted	296	431	319	281	863	710	372	314	325	273	278	
County Average (all strutting grounds)	27	36	53	47	41	32	27	19	11	11	12	
% Change From Previous Year - Comparable Grounds	-28	53	-10	5	-7	-18	-38	-51	-46	--	9	
Summit												
No. Strutting Grounds Counted	7	7	10	--	--	--	3	--	1	8	--	
Total Male Grouse Counted	23	25	17	--	--	--	0	--	15	--	--	
County Average (all strutting grounds)	3	4	2	--	--	--	--	--	15	--	--	
% Change From Previous Year - Comparable Grounds	--	-65	-32	--	--	--	--	--	-29	--	--	
<b>REGIONAL TOTALS</b>												
No. Strutting Grounds Counted	33	40	33	19	39	38	34	22	46	41	37	
Total Male Grouse Counted	637	806	783	639	1,190	710	745	564	569	440	521	
Average Grouse Per Ground (all strutting grounds)	19	20	24	34	31	27	26	18	14	18	15	
% Change From Previous Year - Comparable Grounds	-8	16	11	5	--	-15	-15	-29	-33	--	--	

Table 1 (continued)

Region and County	Year											
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Central Region</b>												
<b>Juab</b>												
No. Strutting Grounds Counted	--	1	1	1	1	1	3	3	1	1	1	--
Total Male Grouse Counted	--	9	14	11	4	15	5	0	0	1	1	--
County Average (all strutting grounds)	--	9	14	11	4	15	2	0	0	1	1	--
% Change From Previous Year - Comparable Grounds	--	0	56	-21	-63	--	-100	-100	0	100	--	--
<b>Sanpete</b>												
No. Strutting Grounds Counted	2	2	2	2	2	2	--	2	--	--	--	--
Total Male Grouse Counted	0	0	0	0	0	0	--	0	--	--	--	--
County Average (all strutting grounds)	--	--	0	0	0	--	--	0	--	--	--	--
% Change From Previous Year - Comparable Grounds	0	0	0	0	0	--	--	0	--	--	--	--
<b>Tooele</b>												
No. Strutting Grounds Counted	6	5	5	5	5	5	4	4	4	4	4	3
Total Male Grouse Counted	82	96	89	77	91	82	100	11	12	12	12	17
County Average (all strutting grounds)	16	19	18	15	18	16	25	5	3	3	3	6
% Change From Previous Year - Comparable Grounds	149	17	-5	-17	20	-15	32	-87	-40	-40	0	100
<b>Wasatch</b>												
No. Strutting Grounds Counted	2	2	2	2	2	2	2	2	2	2	2	2
Total Male Grouse Counted	117	54	52	44	51	11	49	45	24	24	24	34
County Average (all strutting grounds)	59	27	26	22	26	6	24	37	12	12	12	17
% Change From Previous Year - Comparable Grounds	205	-54	-4	-19	18	-75	300	-9	-12	0	42	--
<b>REGIONAL TOTALS</b>												
No. Strutting Grounds Counted	10	7	10	10	10	10	9	11	7	7	5	5
Total Male Grouse Counted	199	150	155	132	146	108	154	56	36	37	51	51
Average Grouse Per Ground (all strutting grounds)	18	17	16	13	15	12	17	14	5	5	8	8
% Change From Previous Year - Comparable Grounds	170	-25	-3	-16	11	-45	77	-65	16	--	--	--

Table 1 (continued)

Region and County	Year											
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Southern Region</b>												
<b>Beaver</b>												
No. Strutting Grounds Counted	4	4	3	5	2	--	3	1	4	7	7	
Total Male Grouse Counted	55	52	46	71	33	--	68	49	57	57	79	
County Average (all strutting grounds)	14	13	15	14	16	41	19	49	14	8	11	
% Change From Previous Year - Comparable Grounds	22	-5	--	-7	--	--	-54	47	--	-7	--	
<b>Garfield</b>												
No. Strutting Grounds Counted	8	9	8	8	10	--	9	6	11	11	11	
Total Male Grouse Counted	152	175	251	126	244	--	211	77	145	139	89	
County Average (all strutting grounds)	19	19	31	16	24	35	23	11	13	13	8	
% Change From Previous Year - Comparable Grounds	13	0	24	-50	--	--	-23	-50	78	0	--	
<b>Iron</b>												
No. Strutting Grounds Counted	6	4	6	6	3	--	2	1	3	2	3	
Total Male Grouse Counted	131	64	111	127	50	--	43	41	39	26	17	
County Average (all strutting grounds)	22	16	19	21	20	52	21	41	13	13	6	
% Change From Previous Year - Comparable Grounds	49	-11	-13	14	--	--	-36	24	0	-14	--	
<b>Kane</b>												
No. Strutting Grounds Counted	--	--	--	2	--	--	3	2	2	3	3	
Total Male Grouse Counted	--	--	--	41	--	--	30	11	1	2	0	
County Average (all strutting grounds)	--	--	--	21	--	14	10	6	1	1	0	
% Change From Previous Year - Comparable Grounds	--	--	--	--	--	--	-28	-61	0	0	--	
<b>Millard</b>												
No. Strutting Grounds Counted	1	--	--	--	--	--	--	--	--	--	--	
Total Male Grouse Counted	3	--	--	--	--	--	--	--	--	--	--	
County Average (all strutting grounds)	3	--	--	--	--	--	--	--	--	--	--	
% Change From Previous Year - Comparable Grounds	33	--	--	--	--	--	--	--	--	--	--	
<b>Piute</b>												
No. Strutting Grounds Counted	--	--	--	--	--	--	--	--	--	--	1	
Total Male Grouse Counted	--	--	--	--	--	--	--	--	--	--	29	
County Average (all strutting grounds)	--	--	--	--	--	--	--	--	--	--	29	
% Change From Previous Year - Comparable Grounds	--	--	--	--	--	--	--	--	--	--	--	
<b>Sevier</b>												
No. Strutting Grounds Counted	2	--	2	--	--	1	3	--	1	1	2	
Total Male Grouse Counted	0	--	0	--	--	20	22	--	11	12	34	
County Average (all strutting grounds)	--	--	--	--	--	20	7	--	11	12	17	
% Change From Previous Year - Comparable Grounds	--	--	--	--	--	--	--	--	1,100	9	--	
<b>Wayne</b>												
No. Strutting Grounds Counted	13	13	13	13	10	16	12	--	8	11	9	
Total Male Grouse Counted	120	182	326	268	259	367	289	--	163	206	193	
County Average (all strutting grounds)	9	14	25	21	26	23	22	--	20	19	21	
% Change From Previous Year - Comparable Grounds	-15	79	-18	--	--	--	--	--	-8	11	--	
<b>REGIONAL TOTALS</b>												
No. Strutting Grounds Counted	34	30	32	34	25	17	32	10	29	35	36	
Total Male Grouse Counted	461	473	734	633	596	387	663	178	416	442	441	
Average Grouse Per Ground (all strutting grounds)	14	16	23	19	24	31	17	18	12	11	12	
% Change From Previous Year - Comparable Grounds	12	13	48	-18	--	--	-35	-10	234	--	--	

Table 1 (continued)

Region and County	Year											
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northeastern Region</b>												
<b>Daggett</b>												
No. Strutting Grounds Counted	6	6	6	7	6	--	6	3	3	5	6	6
Total Male Grouse Counted	22	26	46	25	42	--	17	14	11	25	32	32
County Average (all strutting grounds)	3	4	8	4	7	--	3	5	4	5	5	5
% Change From Previous Year - Comparable Grounds	--	16	77	-24	24	--	--	-7	-21	-18	28	28
<b>Duchesne</b>												
No. Strutting Grounds Counted	14	14	7	11	15	--	16	15	9	5	5	5
Total Male Grouse Counted	117	104	9	76	173	--	129	87	37	40	22	22
County Average (all strutting grounds)	8	7	1	7	12	--	8	6	4	8	4	4
% Change From Previous Year - Comparable Grounds	--	-12	-83	167	22	--	--	-10	-51	14	-27	-27
<b>Grand</b>												
No. Strutting Grounds Counted	--	--	2	--	--	--	--	--	1	--	--	--
Total Male Grouse Counted	--	--	5	--	--	--	--	--	0	--	--	--
County Average (all strutting grounds)	--	--	3	--	--	--	--	--	--	--	--	--
% Change From Previous Year - Comparable Grounds	--	--	0	--	--	--	--	--	--	--	--	--
<b>Uintah</b>												
No. Strutting Grounds Counted	14	14	22	20	20	--	22	22	18	29	24	24
Total Male Grouse Counted	216	159	468	266	321	--	287	173	208	197	268	268
County Average (all strutting grounds)	15	11	21	13	16	--	13	8	12	7	11	11
% Change From Previous Year - Comparable Grounds	--	-26	66	-45	0	--	--	-34	-4	-30	32	32
<b>Wasatch</b>												
No. Strutting Grounds Counted	--	--	2	2	--	--	--	--	2	3	1	1
Total Male Grouse Counted	--	--	22	22	--	--	--	--	8	9	5	5
County Average (all strutting grounds)	--	--	11	11	--	--	--	--	4	3	5	5
% Change From Previous Year - Comparable Grounds	--	--	120	0	--	--	--	--	-11	13	-44	-44
<b>REGIONAL TOTALS</b>												
No. Strutting Grounds Counted	34	34	37	40	41	--	44	40	33	42	42	42
Total Male Grouse Counted	339	289	550	389	536	--	433	274	264	271	271	271
Average Grouse Per Ground (all strutting grounds)	10	9	15	10	13	--	5	6	6	7	6	6
% Change From Previous Year - Comparable Grounds	--	-18	37	-37	9	--	--	-27	-18	-22	22	22

Table 1 (continued)

Region and County	Year											
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Southeastern Region</b>												
Carbon												
No. Strutting Grounds Counted	2	7	10	10	9	8	8	3	7	--	8	
Total Male Grouse Counted	32	55	196	181	146	103	40	14	3	--	26	
County Average (all strutting grounds)	16	8	20	18	16	13	5	5	0	--	3	
% Change From Previous Year - Comparable Grounds	--	-27	142	-8	-38	-11	-61	-46	-79	--	--	
Emery												
No. Strutting Grounds Counted	1	2	2	2	2	2	2	3	2	2	2	
Total Male Grouse Counted	11	10	12	28	5	7	7	3	5	0	0	
County Average (all strutting grounds)	11	5	6	14	3	4	4	1	3	0	0	
% Change From Previous Year - Comparable Grounds	-8	-18	20	167	-82	40	0	-57	67	-250	0	
San Juan												
No. Strutting Grounds Counted	4	4	4	4	4	4	4	4	4	4	4	
Total Male Grouse Counted	29	35	32	39	41	32	40	44	41	40	29	
County Average (all strutting grounds)	7	9	8	10	10	8	10	11	10	10	7	
% Change From Previous Year - Comparable Grounds	-26	28	-9	22	5	-22	25	10	-7	-2	-27	
<b>REGIONAL TOTALS</b>												
No. Strutting Grounds Counted	7	13	16	16	15	6	6	7	6	6	6	
Total Male Grouse Counted	72	100	240	248	192	47	55	50	53	40	37	
Average Grouse Per Ground (all strutting grounds)	10	8	15	16	13	8	9	7	9	7	6	
% Change From Previous Year - Comparable Grounds	-26	0	74	3	-35	2	-12	-31	-6	--	--	
<b>STATE TOTALS</b>												
No. Strutting Grounds Counted	118	126	137	119	130	71	125	90	121	131	126	
Total Male Grouse Counted	1,708	1,818	2,734	2,041	2,660	1,252	2,050	1,122	1,338	1,230	1,321	
Average Grouse Per Ground (all strutting grounds)	14	14	20	17	20	18	16	12	11	9	10	
% Change From Previous Year - Comparable Grounds	5	2	51	14	-2	-11	3	-32	39	--	--	

Table 2. Sage grouse summer inventory, 1996.

Region and County	Distinct Broods		Mean Brood	Mixed Young & Adults		Adults w/o Young		Total Young	Total Adults	Total Grouse	Total Young	Total Adults	Hours of Effort		Vehicle Miles	Young/100 Adults	Birds/100 Hr	
	#	Adults		Young	Adults	Young	Adults						Young	Adults				Horse
<b>Northern Region</b>																		
Box Elder	2	2	12	6.00	0	0	23	25	12	37	48							
Cache																		
Davis																		
Morgan																		
Rich	21	21	109	5.19	12	42	35	68	151	219	222	41				46	474	
Summit																		
Weber																		
<b>REGIONAL TOTALS</b>	<b>23</b>	<b>23</b>	<b>121</b>	<b>5.26</b>	<b>12</b>	<b>42</b>	<b>58</b>	<b>93</b>	<b>163</b>	<b>256</b>	<b>175</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>554</b>
<b>Central Region</b>																		
Juab																		
Salt Lake																		
Sanpete																		
Tooele																		
Utah																		
Wasatch																		
<b>REGIONAL TOTALS</b>																		
<b>Southern Region</b>																		
Beaver																		
Garfield																		
Iron																		
Kane																		
Millard																		
Plute																		
Sevier																		
Washington																		
Wayne																		
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>5</b>	<b>24</b>	<b>4.80</b>	<b>28</b>	<b>95</b>	<b>59</b>	<b>92</b>	<b>119</b>	<b>211</b>	<b>129</b>	<b>475</b>	<b>45</b>	<b>36</b>	<b>9</b>	<b>90</b>	<b>234</b>	
<b>Northeastern Region</b>																		
Daggett	6	6	22	3.67	0	0	3	9	22	31	244	10	1	9		10	326	
Duchesne																		
Uintah	14	14	82	5.86	39	92	5	58	174	232	300	654	31	57	16	104	224	
<b>REGIONAL TOTALS</b>	<b>20</b>	<b>20</b>	<b>104</b>	<b>5.20</b>	<b>39</b>	<b>92</b>	<b>8</b>	<b>59</b>	<b>196</b>	<b>255</b>	<b>332</b>	<b>664</b>	<b>31</b>	<b>66</b>	<b>16</b>	<b>113</b>	<b>226</b>	
<b>Southeastern Region</b>																		
Carbon																		
Emery																		
Grand																		
San Juan																		
<b>REGIONAL TOTALS</b>																		
<b>STATE TOTALS</b>	<b>48</b>	<b>48</b>	<b>249</b>	<b>5.19</b>	<b>79</b>	<b>229</b>	<b>117</b>	<b>244</b>	<b>478</b>	<b>722</b>	<b>196</b>	<b>1,180</b>	<b>76</b>	<b>102</b>	<b>25</b>	<b>203</b>	<b>356</b>	

Table 3. Trend of sage grouse young per 100 adults, 1986-96.

Region and County	Year										Average		
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1986-95	1986-96
<b>Northern Region</b>													
Box Elder	178	94	108	167	267	161	143	92	94	--	--	48	--
Cache	--	--	--	--	500	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	500	--	117	--	--	--	--	--	--	--	--	--
Rich	91	116	153	--	100	67	125	217	433	41	222	--	--
Summit	167	50	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>103</b>	<b>115</b>	<b>135</b>	<b>156</b>	<b>235</b>	<b>93</b>	<b>132</b>	<b>133</b>	<b>145</b>	<b>40</b>	<b>175</b>	<b>129</b>	<b>129</b>
<b>Central Region</b>													
Juab	--	--	380	250	196	--	450	450	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	106	207	100	194	110	287	300	300	156	--	--	--	--
Utah	--	--	150	--	--	1,200	--	--	--	--	--	--	--
Wasatch	200	209	300	--	667	--	129	350	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>120</b>	<b>209</b>	<b>135</b>	<b>177</b>	<b>166</b>	<b>344</b>	<b>148</b>	<b>357</b>	<b>156</b>	<b>--</b>	<b>--</b>	<b>201</b>	<b>201</b>
<b>Southern Region</b>													
Beaver	--	35	--	--	--	--	--	--	--	--	--	--	--
Garfield	125	144	144	40	91	129	--	--	--	--	--	--	--
Iron	250	198	146	155	264	100	--	--	--	--	--	--	--
Kane	--	400	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	38	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	525	--	500	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	44	455	86	--	168	478	43	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>105</b>	<b>216</b>	<b>127</b>	<b>135</b>	<b>154</b>	<b>128</b>	<b>40</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>129</b>	<b>129</b>	<b>129</b>
<b>Northeastern Region</b>													
Daggett	100	124	181	433	533	650	190	--	600	263	244	--	--
Duchesne	180	137	288	217	600	160	--	260	--	--	--	--	--
Uintah	127	192	164	148	352	114	278	500	263	192	300	--	--
<b>REGIONAL TOTALS</b>	<b>131</b>	<b>159</b>	<b>172</b>	<b>155</b>	<b>374</b>	<b>161</b>	<b>246</b>	<b>380</b>	<b>532</b>	<b>418</b>	<b>332</b>	<b>273</b>	<b>273</b>
<b>Southeastern Region</b>													
Carbon	133	150	--	56	33	200	33	200	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	31	--	50	--	--	--	--
San Juan	60	--	200	50	50	200	50	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>81</b>	<b>150</b>	<b>200</b>	<b>55</b>	<b>88</b>	<b>160</b>	<b>34</b>	<b>200</b>	<b>50</b>	<b>--</b>	<b>--</b>	<b>113</b>	<b>113</b>
<b>STATE TOTALS</b>	<b>114</b>	<b>160</b>	<b>145</b>	<b>147</b>	<b>183</b>	<b>122</b>	<b>95</b>	<b>209</b>	<b>244</b>	<b>122</b>	<b>196</b>	<b>154</b>	<b>154</b>

Table 4. Trend of average brood size for sage grouse, 1986-96.

Region and County	Year											Average 1986-95		
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996			
<b>Northern Region</b>														
Box Elder	3.57	3.88	33.80	3.80	4.25	3.71	4.17	3.67	5.00	--	6.00			
Cache	--	--	--	--	5.00	--	--	--	--	--	--			
Davis	--	--	--	--	--	--	--	--	--	--	--			
Morgan	--	5.00	--	7.00	--	--	--	--	--	--	--			
Rich	5.08	5.00	4.27	--	2.00	3.00	4.54	2.40	4.33	5.33	5.19			
Summit	4.00	5.00	4.00	--	--	--	--	--	--	--	--			
Weber	--	--	--	--	--	--	--	--	--	--	--			
<b>REGIONAL TOTALS</b>	<b>4.74</b>	<b>4.82</b>	<b>4.17</b>	<b>4.30</b>	<b>3.67</b>	<b>3.36</b>	<b>4.36</b>	<b>3.09</b>	<b>4.50</b>	<b>5.33</b>	<b>5.26</b>			<b>4.23</b>
<b>Central Region</b>														
Juab	--	--	6.33	4.00	4.75	--	--	--	--	--	--			
Salt Lake	--	--	--	--	--	--	--	--	--	--	--			
Sanpete	--	--	--	--	--	--	--	--	--	--	--			
Tooele	3.25	3.60	3.50	3.00	3.13	3.83	3.00	3.00	4.00	--	--			
Utah	--	--	--	--	--	12.00	--	--	--	--	--			
Wasatch	5.00	6.94	6.00	--	6.67	--	5.50	7.00	--	--	--			
<b>REGIONAL TOTALS</b>	<b>3.60</b>	<b>5.42</b>	<b>4.29</b>	<b>3.40</b>	<b>4.27</b>	<b>5.00</b>	<b>4.67</b>	<b>4.00</b>	<b>4.00</b>	<b>4.00</b>	<b>4.00</b>			<b>4.29</b>
<b>Southern Region</b>														
Beaver	--	5.00	--	--	--	--	--	--	--	--	--			
Garfield	2.00	4.00	4.60	--	4.00	6.00	--	--	--	--	--			
Iron	4.00	4.64	3.67	4.66	6.00	5.00	--	--	--	--	--			
Kane	--	4.00	--	--	--	--	--	--	--	--	--			
Millard	--	--	--	--	--	--	--	--	--	--	--			
Piute	--	--	--	--	--	--	--	--	--	--	--			
Sevier	--	--	7.00	--	--	--	--	--	--	--	--			
Washington	--	--	--	--	--	--	--	--	--	--	--			
Wayne	6.00	6.14	6.29	--	4.30	5.00	3.82	--	--	--	--			
<b>REGIONAL TOTALS</b>	<b>4.29</b>	<b>4.89</b>	<b>4.89</b>	<b>4.66</b>	<b>4.82</b>	<b>5.60</b>	<b>3.82</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.80</b>			<b>4.71</b>
<b>Northeastern Region</b>														
Daggett	1.00	4.00	4.45	4.30	6.00	2.00	6.00	--	6.00	4.20	3.67			
Duchesne	4.29	3.54	3.60	2.17	6.00	4.00	--	2.00	--	--	--			
Uintah	5.44	5.55	4.05	5.15	5.60	2.00	4.75	5.00	5.25	4.17	5.86			
<b>REGIONAL TOTALS</b>	<b>4.94</b>	<b>4.59</b>	<b>4.09</b>	<b>4.58</b>	<b>5.63</b>	<b>2.57</b>	<b>4.89</b>	<b>4.50</b>	<b>5.32</b>	<b>4.18</b>	<b>5.20</b>			<b>4.53</b>
<b>Southeastern Region</b>														
Carbon	4.00	1.50	--	4.50	--	6.00	2.67	4.00	--	--	--			
Emery	--	--	--	--	--	--	--	--	--	--	--			
Grand	--	--	--	--	--	--	4.00	--	2.00	--	--			
San Juan	3.00	--	--	2.00	--	2.00	2.00	--	--	--	--			
<b>REGIONAL TOTALS</b>	<b>3.40</b>	<b>1.50</b>	<b>--</b>	<b>3.67</b>	<b>--</b>	<b>4.00</b>	<b>2.80</b>	<b>4.00</b>	<b>2.00</b>	<b>2.00</b>	<b>--</b>			<b>4.17</b>
<b>STATE TOTALS</b>	<b>4.53</b>	<b>4.86</b>	<b>4.29</b>	<b>4.37</b>	<b>4.71</b>	<b>3.70</b>	<b>4.21</b>	<b>3.68</b>	<b>4.86</b>	<b>4.43</b>	<b>5.19</b>			<b>4.36</b>



Table 5. Trend of sage grouse observed per 100 hours, 1986-96.

Region and County	Year											Average	
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1986-95	1986-95
<b>Northern Region</b>													
Box Elder	304	475	694	431	303	102	146	118	413	4	--	--	--
Cache	--	0	3	--	126	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	19	--	100	--	--	--	--	--	--	--	--	--
Rich	282	364	287	--	41	304	261	89	--	73	474	--	--
Summit	21	480	300	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>198</b>	<b>251</b>	<b>271</b>	<b>64</b>	<b>78</b>	<b>155</b>	<b>197</b>	<b>103</b>	<b>613</b>	<b>57</b>	<b>554</b>	<b>199</b>	<b>199</b>
<b>Central Region</b>													
Juab	--	--	150	311	323	--	367	367	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	746	742	150	252	150	414	100	133	263	--	--	--	--
Utah	--	--	125	--	1,300	--	--	--	--	--	--	--	--
Wasatch	92	792	27	19	209	--	254	45	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>310</b>	<b>776</b>	<b>118</b>	<b>154</b>	<b>200</b>	<b>338</b>	<b>248</b>	<b>100</b>	<b>263</b>	<b>--</b>	<b>--</b>	<b>279</b>	<b>279</b>
<b>Southern Region</b>													
Beaver	--	575	--	--	--	--	--	--	--	--	--	--	--
Garfield	225	275	452	207	661	320	--	--	--	--	--	--	--
Iron	466	1,331	1,517	1,000	589	400	--	--	--	--	--	--	--
Kane	--	500	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--
Plute	316	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	417	--	--	150	829	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	344	793	542	--	900	511	411	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>300</b>	<b>732</b>	<b>574</b>	<b>705</b>	<b>781</b>	<b>314</b>	<b>402</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>234</b>	<b>544</b>	<b>544</b>
<b>Northeastern Region</b>													
Daggett	114	492	474	168	585	1,000	580	--	1,400	829	326	--	--
Duchesne	165	382	141	123	350	81	--	900	--	--	--	--	--
Uintah	813	642	830	1,191	566	1,500	523	3,000	636	388	224	--	--
<b>REGIONAL TOTALS</b>	<b>474</b>	<b>509</b>	<b>589</b>	<b>741</b>	<b>533</b>	<b>356</b>	<b>539</b>	<b>1,600</b>	<b>1,463</b>	<b>429</b>	<b>226</b>	<b>723</b>	<b>723</b>
<b>Southeastern Region</b>													
Carbon	200	28	--	125	685	90	377	377	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	567	--	240	--	--	--	--
San Juan	400	--	--	150	120	100	300	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>271</b>	<b>28</b>	<b>--</b>	<b>129</b>	<b>386</b>	<b>100</b>	<b>239</b>	<b>26</b>	<b>80</b>	<b>--</b>	<b>--</b>	<b>207</b>	<b>207</b>
<b>STATE TOTALS</b>	<b>291</b>	<b>415</b>	<b>347</b>	<b>288</b>	<b>279</b>	<b>273</b>	<b>272</b>	<b>122</b>	<b>572</b>	<b>102</b>	<b>356</b>	<b>296</b>	<b>296</b>

Table 6. Summary of sage grouse hunter success and distribution of harvest and hunter pressure by region and county, 1996.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	39	1,881	1,068	0.57	14.24	11.59
CACHE **	22	1,184	673	0.57	8.96	7.31
DAVIS **	2	69	162	2.33	0.53	1.76
MORGAN **	5	557	1,068	1.92	4.22	11.59
RICH	26	1,207	673	0.56	9.14	7.31
SUMMIT **	8	232	185	0.80	1.76	2.02
WEBER **	18	1,091	1,393	1.28	8.26	15.11
<b>REGIONAL TOTALS</b>	<b>120</b>	<b>6,224</b>	<b>5,225</b>	<b>0.84</b>	<b>47.10</b>	<b>56.68</b>
<b>CENTRAL REGION</b>						
JUAB **	2	69	278	4.00	0.53	3.02
SALT LAKE **	0	0	0	0.00	0.00	0.00
SANPETE **	6	301	209	0.69	2.28	2.27
TOOELE **	5	185	92	0.50	1.41	1.01
UTAH **	17	812	627	0.77	6.15	6.80
WASATCH **	7	255	162	0.64	1.93	1.76
<b>REGIONAL TOTALS</b>	<b>37</b>	<b>1,625</b>	<b>1,370</b>	<b>0.84</b>	<b>12.30</b>	<b>14.86</b>
<b>SOUTHERN REGION</b>						
BEAVER	2	69	0	0.00	0.53	0.00
GARFIELD	7	232	116	0.50	1.76	1.26
IRON	5	325	0	0.00	2.46	0.00
KANE **	1	46	46	1.00	0.35	0.50
MILLARD **	3	92	116	1.25	0.70	1.26
PIUTE	1	92	46	0.50	0.70	0.50
SEVIER	12	348	325	0.93	2.64	3.53
WASHINGTON **	1	69	139	2.00	0.53	1.51
WAYNE	15	812	371	0.46	6.15	4.03
<b>REGIONAL TOTALS</b>	<b>47</b>	<b>2,090</b>	<b>1,161</b>	<b>0.56</b>	<b>15.82</b>	<b>12.60</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT	4	162	69	0.43	1.23	0.76
DUCHESNE	6	487	116	0.24	3.69	1.26
UINTAH	34	1,695	1,045	0.62	12.83	11.34
<b>REGIONAL TOTALS</b>	<b>44</b>	<b>2,345</b>	<b>1,231</b>	<b>0.52</b>	<b>17.75</b>	<b>13.35</b>
<b>SOUTHEASTERN REGION</b>						
CARBON **	2	92	46	0.50	0.70	0.50
EMERY **	2	46	69	1.50	0.35	0.76
GRAND **	1	696	23	0.03	5.27	0.25
SAN JUAN **	1	92	92	1.00	0.70	1.01
<b>REGIONAL TOTALS</b>	<b>6</b>	<b>929</b>	<b>232</b>	<b>0.25</b>	<b>7.03</b>	<b>2.52</b>
Unknown	1	0	0	0.00	0.00	0.00
<b>STATE TOTALS</b>	<b>255</b>	<b>13,215</b>	<b>9,220</b>	<b>0.70</b>	<b>100.00</b>	<b>100.00</b>

Table 6. Summary of sage grouse hunter success and distribution of harvest and hunter pressure by region and county, 1996.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	39	1,881	1,068	0.57	14.24	11.59
CACHE **	22	1,184	673	0.57	8.96	7.31
DAVIS **	2	69	162	2.33	0.53	1.76
MORGAN **	5	557	1,068	1.92	4.22	11.59
RICH	26	1,207	673	0.56	9.14	7.31
SUMMIT **	8	232	185	0.80	1.76	2.02
WEBER **	18	1,091	1,393	1.28	8.26	15.11
<b>REGIONAL TOTALS</b>	<b>120</b>	<b>6,224</b>	<b>5,225</b>	<b>0.84</b>	<b>47.10</b>	<b>56.68</b>
<b>CENTRAL REGION</b>						
JUAB **	2	69	278	4.00	0.53	3.02
SALT LAKE **	0	0	0	0.00	0.00	0.00
SANPETE **	6	301	209	0.69	2.28	2.27
TOOELE **	5	185	92	0.50	1.41	1.01
UTAH **	17	812	627	0.77	6.15	6.80
WASATCH **	7	255	162	0.64	1.93	1.76
<b>REGIONAL TOTALS</b>	<b>37</b>	<b>1,625</b>	<b>1,370</b>	<b>0.84</b>	<b>12.30</b>	<b>14.86</b>
<b>SOUTHERN REGION</b>						
BEAVER	2	69	0	0.00	0.53	0.00
GARFIELD	7	232	116	0.50	1.76	1.26
IRON	5	325	0	0.00	2.46	0.00
KANE **	1	46	46	1.00	0.35	0.50
MILLARD **	3	92	116	1.25	0.70	1.26
PIUTE	1	92	46	0.50	0.70	0.50
SEVIER	12	348	325	0.93	2.64	3.53
WASHINGTON **	1	69	139	2.00	0.53	1.51
WAYNE	15	812	371	0.46	6.15	4.03
<b>REGIONAL TOTALS</b>	<b>47</b>	<b>2,090</b>	<b>1,161</b>	<b>0.56</b>	<b>15.82</b>	<b>12.60</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT	4	162	69	0.43	1.23	0.76
DUCHESNE	6	487	116	0.24	3.69	1.26
UINTAH	34	1,695	1,045	0.62	12.83	11.34
<b>REGIONAL TOTALS</b>	<b>44</b>	<b>2,345</b>	<b>1,231</b>	<b>0.52</b>	<b>17.75</b>	<b>13.35</b>
<b>SOUTHEASTERN REGION</b>						
CARBON **	2	92	46	0.50	0.70	0.50
EMERY **	2	46	69	1.50	0.35	0.76
GRAND **	1	696	23	0.03	5.27	0.25
SAN JUAN **	1	92	92	1.00	0.70	1.01
<b>REGIONAL TOTALS</b>	<b>6</b>	<b>929</b>	<b>232</b>	<b>0.25</b>	<b>7.03</b>	<b>2.52</b>
Unknown	1	0	0	0.00	0.00	0.00
<b>STATE TOTALS</b>	<b>255</b>	<b>13,215</b>	<b>9,220</b>	<b>0.70</b>	<b>100.00</b>	<b>100.00</b>

\* Total hunter-trips from questionnaire returns.

\*\*Closed to sage grouse hunting in 1996

Table 7. Summary of sage grouse bagged per hunter-day by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	0.94	0.92	0.55	0.96	0.79	0.79	0.40	0.57
Cache	0.45*	0.58	0.32*	0.55*	0.21*	0.50*	0.27*	0.57*
Davis	0.72*	0.25*	0.18*	0.60*	0.08*	0.00*	0.59*	2.33*
Morgan	0.50*	0.33*	0.93*	0.71*	0.00*	0.19*	0.00*	1.92*
Rich	0.63	0.85	1.01	0.82	0.79	0.53	0.47	0.56
Summit	0.71*	0.77*	0.67*	1.38*	0.56*	0.44*	0.13*	0.80*
Weber	0.27*	0.43*	0.34*	0.55*	0.50*	0.08*	0.15*	1.28*
<b>REGIONAL TOTALS</b>	<b>0.69</b>	<b>0.75</b>	<b>0.66</b>	<b>0.80</b>	<b>0.59</b>	<b>0.54</b>	<b>0.37</b>	<b>0.84</b>
<b>Central Region</b>								
Juab	0.22*	0.20*	0.54*	0.17*	0.22*	2.71*	1.89*	4.00*
Salt Lake	0.30*	0.00*	0.70*	0.00*	0.20*	0.00*	0.00*	0.00*
Sanpete	0.61*	1.00*	0.44*	0.22*	0.33*	0.45*	0.20*	0.69*
Tooele	0.41*	1.15*	0.35*	0.65*	1.07*	1.83*	1.00*	0.50*
Utah	0.33	0.39	0.86*	0.96*	0.27*	0.56*	0.73*	0.77*
Wasatch	1.50*	0.55*	0.47*	0.70*	0.46*	0.80*	0.57*	0.64*
<b>REGIONAL TOTALS</b>	<b>0.42</b>	<b>0.52</b>	<b>0.53</b>	<b>0.68</b>	<b>0.59</b>	<b>1.16</b>	<b>0.69</b>	<b>0.84</b>
<b>Southern Region</b>								
Beaver	0.42	0.38	0.29	0.83	1.00	0.47	1.13	0.00
Garfield	1.14	0.74	0.52	0.96	0.90	1.11	0.36	0.50
Iron	0.62	0.58	0.93	0.64	0.53	1.29	0.30	0.00
Kane	0.75	0.54	0.67	0.71	0.00	1.25	1.00*	1.00*
Millard	0.09*	3.14*	1.27*	0.80*	4.00*	0.67*	1.58*	1.25*
Piute	1.87	0.50	1.00	1.71	1.13	0.78	0.14	0.50
Sevier	0.39	1.08	0.39	0.49	0.36	0.54	0.04	0.93
Washington	0.00*	1.63*	2.00*	1.00*	0.00*	0.00*	0.00*	2.00*
Wayne	1.05	1.04	1.03	0.92	0.66	0.79	0.76	0.46
<b>REGIONAL TOTALS</b>	<b>0.86</b>	<b>0.92</b>	<b>0.78</b>	<b>0.79</b>	<b>0.70</b>	<b>0.81</b>	<b>0.56</b>	<b>0.56</b>
<b>Northeastern Region</b>								
Daggett	0.33*	0.73	0.48	0.60	0.67	0.25	0.94	0.43
Duchesne	1.14	1.19	0.67	0.36	1.29	0.00	0.75	0.24
Uintah	0.98	0.87	0.71	0.87	0.73	0.83	0.85	0.62
<b>REGIONAL TOTALS</b>	<b>0.93</b>	<b>0.89</b>	<b>0.68</b>	<b>0.76</b>	<b>0.79</b>	<b>0.72</b>	<b>0.86</b>	<b>0.52</b>
<b>Southeastern Region</b>								
Carbon	0.44	0.29	0.50	0.64	0.36	0.00*	1.71*	0.50*
Emery	0.95	0.20*	0.88*	0.60*	1.00*	0.80*	0.00*	1.50*
Grand	1.50	1.11	0.00	1.33	4.00	1.00*	0.60*	0.03*
San Juan	0.00*	0.00*	0.57*	0.00*	0.00*	0.00*	0.00*	1.00*
<b>REGIONAL TOTALS</b>	<b>0.63</b>	<b>0.47</b>	<b>0.59</b>	<b>0.77</b>	<b>0.71</b>	<b>0.50</b>	<b>0.56</b>	<b>0.25</b>
<b>Unknown counties</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.47</b>	<b>0.00</b>	<b>1.00</b>	<b>0.00</b>
<b>STATE TOTALS</b>	<b>0.71</b>	<b>0.78</b>	<b>0.67</b>	<b>0.77</b>	<b>0.64</b>	<b>0.68</b>	<b>0.57</b>	<b>0.70</b>

\*Closed season.

() Percent of bag per hunter-day in closed areas.

Table 8. Percentage distribution of sage grouse harvest by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	22.39	17.21	12.34	15.50	11.22	20.10	9.81	11.59
Cache	2.72*	5.22	2.64*	5.12*	2.45*	3.23*	3.00*	7.31*
Davis	2.72*	0.26*	0.28*	1.75*	0.20*	0.00*	3.54*	1.76*
Morgan	1.06*	0.78*	1.80*	1.75*	0.00*	0.74*	0.00*	11.59*
Rich	11.65*	14.99	24.55	15.79	18.57	13.15	8.99	7.31
Summit	0.76*	1.30*	2.22*	1.61*	4.08*	1.99*	0.27*	2.02*
Weber	2.12*	2.48*	2.91*	1.75*	2.24*	0.50*	0.82*	15.11*
<b>REGIONAL TOTAL</b>	<b>43.42</b>	<b>42.24</b>	<b>46.74</b>	<b>43.27</b>	<b>38.78</b>	<b>39.70</b>	<b>26.43</b>	<b>56.68</b>
<b>Central Region</b>								
Juab	0.30*	0.39*	0.97*	0.15*	0.41*	4.71*	4.63*	3.02*
Salt Lake	0.45*	0.00*	0.97*	0.00*	0.20*	0.00*	0.00*	0.00*
Sanpete	2.57*	1.17*	0.97*	0.73*	0.61*	1.24*	1.36*	2.27*
Tooele	2.27	1.96*	0.97*	1.90*	5.92*	5.46*	2.73*	1.01*
Utah	3.18	2.09	1.66*	7.75*	0.61*	2.23*	5.18*	6.80*
Wasatch	0.91	0.78*	1.25*	1.02*	1.22*	0.99*	2.18*	1.76*
<b>REGIONAL TOTALS</b>	<b>9.68*</b>	<b>6.39</b>	<b>6.80</b>	<b>11.55</b>	<b>8.98</b>	<b>14.64</b>	<b>16.08</b>	<b>14.86</b>
<b>Southern Region</b>								
Beaver	0.76	0.65	0.28	2.19	2.24	2.23	4.63	0.00
Garfield	8.62	7.17	2.36	3.51	3.88	5.21	2.18	1.26
Iron	2.42	1.43	1.94	3.65	4.29	5.46	2.18	0.00
Kane	0.45	0.91	0.28	0.73	0.00	1.24	0.55*	0.50*
Millard	0.15*	2.87*	2.64*	0.58*	4.08*	1.99*	5.18*	1.26*
Piute	4.24	0.65	2.77	1.75	1.84	3.47	0.27	0.50
Sevier	1.97	6.78	3.05	2.92	4.08	3.23	0.27	3.35
Washington	0.00*	1.69*	0.55*	0.29*	0.00*	0.00*	0.00*	1.51*
Wayne	6.51	6.39	10.13	7.02	6.33	4.71	6.00	4.03
<b>REGIONAL TOTALS</b>	<b>25.11</b>	<b>28.55</b>	<b>24.00</b>	<b>22.66</b>	<b>26.74</b>	<b>27.54</b>	<b>21.26</b>	<b>12.60</b>
<b>Northeastern Region</b>								
Daggett	0.76*	3.78	1.39	1.32	1.63	0.50	4.36	0.76
Duchesne	3.63	4.82	2.77	1.46	3.67	0.00	1.64	1.26
Uintah	12.41	11.80	14.98	16.37	13.67	14.64	22.35	11.34
<b>REGIONAL TOTALS</b>	<b>16.79</b>	<b>20.47</b>	<b>19.14</b>	<b>19.15</b>	<b>18.98</b>	<b>15.14</b>	<b>28.34</b>	<b>13.35</b>
<b>Southeastern Region</b>								
Carbon	1.66	0.91	1.80	1.32	0.82	0.00*	3.27*	0.50*
Emery	2.87	0.13*	0.97*	0.88*	0.41*	1.99*	0.00*	0.76*
Grand	0.45	1.30	0.00	1.17	0.82	0.99*	1.64*	0.25*
San Juan	0.00*	0.00*	0.55*	0.00*	0.00*	0.00*	0.00*	1.01*
<b>REGIONAL TOTALS</b>	<b>4.99</b>	<b>2.35</b>	<b>3.33</b>	<b>3.36</b>	<b>2.04</b>	<b>2.98</b>	<b>4.91</b>	<b>2.52</b>
Unknown counties	0.00	0.00	0.00	0.00	4.49	0.00	3.00	0.00
Closed areas	(14.52)	(13.81)	(21.36)	(25.28)	(22.43)	(26.07)	(34.35)	
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

\*Closed season

( )Percent of total harvest in closed areas.

Table 9. Percentage distribution of sage grouse hunting pressure by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	16.81	14.71	15.16	12.39	9.19	17.40	14.02	14.24
Cache	4.28*	7.05	5.61*	7.21*	7.35*	4.39*	6.32*	8.96
Davis	2.68*	0.82*	1.03*	2.25*	1.71*	1.01*	3.39*	0.53
Morgan	1.50*	1.84*	1.31*	1.91*	1.18*	2.70*	1.23*	4.22
Rich	13.17	13.89	16.46	14.75	15.09	16.89	10.79	9.14
Summit	0.75*	1.33*	2.25*	0.90*	4.72*	3.04*	1.23*	1.76
Weber	5.57	4.49*	5.80*	2.48*	2.89*	4.39*	3.08*	8.26
<b>REGIONAL TOTALS</b>	<b>44.75</b>	<b>44.13</b>	<b>47.62</b>	<b>41.89</b>	<b>42.13</b>	<b>49.83</b>	<b>40.06</b>	<b>47.10</b>
<b>Central Region</b>								
Juab	0.96*	1.53*	1.22*	0.68*	1.18*	1.18*	1.39*	0.53
Salt Lake	1.07*	0.51*	0.94*	0.34*	0.66*	0.00*	0.15*	0.00
Sanpete	3.00*	0.92*	1.50*	2.59*	1.18*	1.86*	3.85*	2.28
Tooele	3.96	1.33*	1.87*	2.25*	3.54*	2.03*	1.54*	1.41
Utah	6.85	4.19	1.31*	6.19*	1.44*	2.70*	4.01*	6.15
Wasatch	0.43*	1.12*	1.78*	1.13*	1.71*	0.84*	2.16*	1.93
<b>REGIONAL TOTALS</b>	<b>16.27</b>	<b>9.60</b>	<b>8.61</b>	<b>13.18</b>	<b>9.71</b>	<b>8.62</b>	<b>13.10</b>	<b>12.30</b>
<b>Southern Region</b>								
Beaver	1.28	1.33	0.65	2.03	1.44	3.21	2.31	0.53
Garfield	5.35	7.56	3.09	2.82	2.76	3.21	3.39	1.76
Iron	2.78	1.94	1.40	4.39	5.25	2.87	4.16	2.46
Kane	0.43	1.33	0.28	0.79	0.00	0.68	0.31*	0.35
Millard	1.18*	0.72*	1.40*	0.56*	0.66*	2.03*	1.85*	0.70
Piute	1.61	1.02	1.87	0.79	1.05	3.04	1.08	0.70
Sevier	3.53	4.90	5.33	4.62	7.35	4.05	4.01	2.64
Washington	0.00*	0.82*	0.19*	0.23*	0.00*	0.00*	0.00*	0.53
Wayne	4.39	4.80	6.64	5.86	6.17	4.05	4.47	6.15
<b>REGIONAL TOTALS</b>	<b>20.56</b>	<b>24.41</b>	<b>20.86</b>	<b>22.07</b>	<b>24.67</b>	<b>23.14</b>	<b>21.57</b>	<b>15.82</b>
<b>Northeastern Region</b>								
Daggett	1.61*	4.09	1.96	1.69	1.57	1.35	2.62	1.23
Duchesne	2.25	3.17	2.81	3.15	1.84	1.01	1.23	3.69
Uintah	8.99	10.73	14.31	14.53	12.07	1.99	14.79	12.83
<b>REGIONAL TOTALS</b>	<b>12.85</b>	<b>17.98</b>	<b>19.08</b>	<b>19.37</b>	<b>15.49</b>	<b>14.36</b>	<b>18.64</b>	<b>17.75</b>
<b>Southeastern Region</b>								
Carbon	2.68	2.45	2.43	1.58	1.44	1.69	1.08*	0.70
Emery	2.14	0.51*	0.75*	1.13*	0.26*	1.69*	0.31*	0.35
Grand	0.21	0.92	0.00	0.68	0.13	0.68	1.54*	5.27
San Juan	0.54*	0.00*	0.65*	0.00*	0.00*	0.00*	2.00*	0.70
<b>REGIONAL TOTALS</b>	<b>5.57</b>	<b>3.88</b>	<b>3.84</b>	<b>3.38</b>	<b>1.84</b>	<b>4.05</b>	<b>4.93</b>	<b>7.03</b>
<b>Unknown counties</b>	0.00	0.00	0.00	0.11	6.17	0.00	1.69	0.00
<b>Closed areas</b>	(23.57)	(15.94)	(26.29)	(29.85)	(28.48)	(25.16)	(35.44)	
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

\*Closed season

( ) Percent of total pressure in closed areas.

Table 10. Statewide summary of sage grouse harvest statistics, 1951-96.

Year	Total Hunters*	Total Harvest*	Hunter-Days Afield	Sage Grouse Per Hunter-Day	Sage Grouse Per Hunter
1951	840	2,458	--	--	2.93
1952	678	2,230	--	--	3.29
1953	895	2,581	--	--	2.88
1954	802	2,510	--	--	3.13
1955	579	1,742	--	--	3.01
1956	495	1,375	--	--	2.97
1957	470	1,303	--	--	2.77
1958	567	1,797	--	--	3.17
1959	699	1,875	--	--	2.68
1960	861	2,246	--	--	2.61
1961**	1,078	1,918	--	--	1.78
1962***	2,382	5,352	5,097	1.05	1.89
1963	12,366	3,793	15,564	0.89	1.12
1964	4,362	6,827	5,807	1.18	1.56
1965	3,243	3,881	4,673	0.83	1.20
1966	2,612	3,962	4,006	0.99	1.52
1967	5,336	5,089	7,860	0.65	0.95
1968	9,115	11,109	13,601	0.82	1.22
1969	12,894	22,282	20,466	1.09	1.73
1970	12,036	15,877	18,506	0.86	1.32
1971	12,893	20,013	21,509	0.93	1.55
1972	13,040	15,983	22,232	0.72	1.23
1973	10,017	13,926	19,049	0.73	1.39
1974	12,214	15,215	23,516	0.65	1.25
1975	13,996	18,916	25,720	0.74	1.35
1976	15,283	24,541	28,342	0.87	1.61
1977	14,078	18,615	25,759	0.72	1.32
1978	16,231	25,938	29,861	0.87	1.60
1979	16,927	28,280	30,682	0.92	1.67
1980	15,219	22,770	26,893	0.85	1.50
1981	10,083	15,857	18,617	0.85	1.57
1982	8,997	12,383	15,663	0.79	1.38
1983	9,201	14,949	18,467	0.81	1.63
1984	8,283	10,921	15,266	0.72	1.32
1985	7,586	11,466	14,702	0.78	1.51
1986	7,233	11,766	13,992	0.84	1.63
1987	7,060	12,673	14,242	0.89	1.80
1988	8,499	14,692	19,418	0.76	1.73
1989	9,002	13,710	19,373	0.71	1.52
1990	9,014	15,784	20,147	0.78	1.75
1991	8,018	12,542	18,596	0.67	1.56
1992	7,393	12,156	15,781	0.77	1.64
1993	6,594	9,311	14,480	0.64	1.41
1994	5,133	7,084	10,406	0.68	1.38
1995	5,987	7,133	12,615	0.57	1.19
1996	5,574	9,220	13,215	0.70	1.65
<b>Totals</b>					
(1951-96)	335,865	496,051	604,123	--	--
<b>Average</b>					
(1951-95)	7,340	10,818	13,131	0.61	1.80

\* The number of sage grouse hunters and consequently harvest was limited by permits available from 1951 through 1962.

\*\* Estimated.

\*\*\* Totals and indices based on indiscrete data.

Table 11. Sage grouse field bag check summary, 1996.

Region and County	All Hunts				Complete Hunts			
	Total Parties	Total Hunters	Total Hours	Total Birds/100 Hr	Complete Hunts	Total Hunters	Total Hours	Total Birds/100 Hr
<b>Northern Region</b>								
Box Elder	43	98	451	14	43	98	451	14
Cache	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--
Rich	--	174	600	14	--	174	600	14
Summit	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>43</b>	<b>272</b>	<b>1,051</b>	<b>14</b>	<b>43</b>	<b>272</b>	<b>1,051</b>	<b>14</b>
<b>Central Region</b>								
Juab	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southern Region</b>								
Beaver	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--
Wayne	--	63	281	11	--	63	281	11
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>63</b>	<b>281</b>	<b>11</b>	<b>--</b>	<b>63</b>	<b>281</b>	<b>11</b>
<b>Northeastern Region</b>								
Daggett	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southeastern Region</b>								
Carbon	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>STATE TOTALS</b>	<b>43</b>	<b>335</b>	<b>1,332</b>	<b>13</b>	<b>43</b>	<b>335</b>	<b>1,332</b>	<b>13</b>
								<b>0.53</b>



Table 12. Sage grouse hunter success trend as determined by field bag check, 1991-96.

Region and County	1991		1992		1993		1994		1995		1996	
	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter
<b>Northern Region</b>												
Box Elder	11	0.83	19	1.43	18	0.99	21	0.98	23	0.58	14	0.63
Cache	100	2.00	--	--	--	--	--	--	--	--	--	--
Davis	--	0.00	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	9	0.37	9	0.52	3	0.28	8	0.51	17	0.33	14	0.48
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>10</b>	<b>0.62</b>	<b>15</b>	<b>0.99</b>	<b>10</b>	<b>0.73</b>	<b>15</b>	<b>0.80</b>	<b>21</b>	<b>0.48</b>	<b>14</b>	<b>0.53</b>
<b>Central Region</b>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	21	1.02	7	0.44	7	0.43	7	0.30	6	0.42	11	0.49
<b>REGIONAL TOTALS</b>	<b>21</b>	<b>1.02</b>	<b>7</b>	<b>0.44</b>	<b>7</b>	<b>0.43</b>	<b>7</b>	<b>0.30</b>	<b>6</b>	<b>0.42</b>	<b>11</b>	<b>0.49</b>
<b>Northeastern Region</b>												
Daggett	35	1.04	--	--	--	--	--	--	0	0.00	--	--
Duchesne	13	0.50	--	--	--	--	--	--	--	--	--	--
Uintah	40	1.11	26	0.81	50	0.50	23	0.78	27	0.94	--	--
<b>REGIONAL TOTALS</b>	<b>34</b>	<b>1.01</b>	<b>26</b>	<b>0.81</b>	<b>50</b>	<b>0.50</b>	<b>23</b>	<b>0.78</b>	<b>16</b>	<b>0.50</b>	<b>--</b>	<b>--</b>
<b>Southeastern Region</b>												
Carbon	--	--	36	1.43	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	30	2.40	17	0.43	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>32</b>	<b>1.83</b>	<b>17</b>	<b>0.43</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>STATE TOTALS</b>	<b>14</b>	<b>0.75</b>	<b>14</b>	<b>0.88</b>	<b>10</b>	<b>0.66</b>	<b>14</b>	<b>0.70</b>	<b>15</b>	<b>0.47</b>	<b>13</b>	<b>0.53</b>

Table 13. Sex and age composition of harvested sage grouse, 1996.

Region and County	Adults		Yearlings		Immatures		Sample Size	Young/100 Hens	Young/100 Adults	
	M	F	Total	M	F	Total				
<b>Northern Region</b>										
Box Elder	3	11	14	0	7	14	28	49	156	133
Cache	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	0	12	12	4	7	25	52	75	235	226
Summit	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>3</b>	<b>23</b>	<b>26</b>	<b>4</b>	<b>14</b>	<b>39</b>	<b>80</b>	<b>124</b>	<b>216</b>	<b>182</b>
<b>Central Region</b>										
Juab	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southern Region</b>										
Beaver	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--
Wayne	8	18	26	1	12	32	70	109	233	179
<b>REGIONAL TOTALS</b>	<b>8</b>	<b>18</b>	<b>26</b>	<b>1</b>	<b>12</b>	<b>32</b>	<b>70</b>	<b>109</b>	<b>233</b>	<b>179</b>
<b>Northeastern Region</b>										
Daggett	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southeastern Region</b>										
Carbon	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>STATE TOTALS</b>	<b>11</b>	<b>41</b>	<b>52</b>	<b>5</b>	<b>26</b>	<b>71</b>	<b>150</b>	<b>233</b>	<b>224</b>	<b>181</b>

Table 14. Sex and age composition of harvested sage grouse from 1982-86.

Region and County	1992						1993						1994						1995						1996					
	Sex Ratio %		Young/100H		Sex Ratio %		Young/100A		Sex Ratio %		Young/100H		Sex Ratio %		Young/100A		Sex Ratio %		Young/100H		Sex Ratio %		Young/100A		Sex Ratio %		Young/100H			
	M	F	n	n	M	F	n	n	M	F	n	n	M	F	n	n	M	F	n	n	M	F	n	n	M	F	n	n		
<b>Northern Region</b>																														
Box Elder	47	53	167	87	174	39	61	150	100	183	45	55	282	135	62	52	48	167	68	49	35	65	156	133						
Cache	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Davis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Rich	34	66	220	129	195	-	-	235	178	310	38	62	235	163	310	38	62	235	163	75	39	61	235	226						
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Weber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>REGIONAL TOTALS</b>	40	60	192	106	369	39	61	150	100	493	41	59	243	152	372	40	60	215	140	124	37	63	216	182						
<b>Central Region</b>																														
Juab	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Tooele	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>REGIONAL TOTALS</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Southern Region</b>																														
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron	-	-	-	-	59	29	71	189	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Millard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Piute	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sevier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wayne	35	65	138	103	179	34	66	155	124	161	32	68	156	115	101	50	50	141	80	109	38	62	233	179						
<b>REGIONAL TOTALS</b>	35	65	138	103	238	32	68	163	131	161	32	68	156	115	101	50	50	141	80	109	38	62	233	179						
<b>Northeastern Region</b>																														
Daggett	57	43	233	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Duchesne	40	60	100	67	2	0	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Uintah	56	44	226	138	2	0	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>REGIONAL TOTALS</b>	121	77	559	346	4	0	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Southeastern Region</b>																														
Carbon	36	64	76	82	11	27	73	100	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Emery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>REGIONAL TOTALS</b>	36	64	76	82	11	27	73	100	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>STATE TOTALS</b>	930	41	59	169	107	620	35	65	155	116	654	38	62	216	141	545	43	57	195	119	233	37	63	224	181					

# FOREST GROUSE

## SUMMARY

FOREST GROUSE



Brood count data for forest grouse provided small sample sizes. Efforts to collect brood count data have dwindled over the past few years. No meaningful information could be derived for ruffed grouse. Total blue grouse and blue grouse observed per 100 hours increased from 1995.

Total harvest increased from 29,312 in 1995 to 60,922 in 1996, a 108 percent increase. Total hunters and days afield also increased. Ruffed grouse comprised 48.53 percent of the harvest while blue grouse comprised 51.47 percent.

## Brood Counts

### Ruffed Grouse

Results of the annual random brood survey for 1996 are shown in Table 1 of this section. Long-term trends of young per adult ratios, mean brood size and ruffed grouse observed per 100 hours are found in Tables 2-4. A summary of effort expended on ruffed and blue grouse brood counts combined is shown in Table 9. Survey results for 1996 compared to 1995 and the previous 10-year average (1986-1995) follow:

	<u>1996</u>	<b>Percent change from <u>1995</u></b>	<b>Percent change from <u>Average</u></b>
Total ruffed grouse observed	50	--	-17
Young per 100 adults	285	--	+2
Mean brood size	3.00	--	-16
Ruffed grouse observed per 100 hours	2,500	--	+7907
Total hours effort	2	--	-99

Very little effort was expended to collect brood count data in 1996.

### Blue Grouse

Results of the annual random brood survey for 1996 are shown in Table 5 of this section. Long-term trends of young per adult ratios, mean brood size and blue grouse observed per 100 hours are found in Tables 6-8. Survey results for 1996 compared to 1995 and the 10-year average (1986-95) follow:

	<u>1996</u>	<b>Percent change from <u>1995</u></b>	<b>Percent change from <u>Average</u></b>
Total blue grouse observed	48	+336	-82
Young per 100 adults	336	+26	+39
Mean brood size	4.13	+55	+14
Blue grouse observed per 100 hours	1,200	+664	+712
Total hours effort (forest grouse)	4	-43	-98

The 1996 summer surveys on blue grouse indicated that production increased 26 percent from 1995 and was 39 percent above average. Efforts to collect blue grouse brood information decreased 43 percent in 1996.

# Harvest

## Hunter Questionnaire

Results of the 1996 blue grouse, ruffed grouse and combined hunter questionnaire are shown in Table 10, 11 and 12 respectively. Long-term trends of forest grouse bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 13-15 and total statewide harvest statistics in Table 16 and Figures 1 and 2. Forest grouse season length, bag limits and harvest statistics, 1963-1996 are listed in Table 17. Harvest statistics for 1996 compared to 1995 and the 33-year average follow:

	<u>1996</u>	<u>Percent change from 1995</u>	<u>Percent change from Average</u>
Forest grouse hunters	14,702	+46	+3
Forest grouse harvested	60,922	+108	+76
Hunter-days afield	62,711	+76	+71
Forest grouse per hunter-day	0.97	+18	+3
Forest grouse per hunter	4.14	+42	+80
Percent ruffed grouse	48.53	+8	+25
Percent blue grouse	51.47	-7	-8
Percent unidentified	--	--	--

Ninety percent interval for overall forest grouse harvest is +/- 3,496. Standard deviation is 1.057851.

Total harvest increased 108 percent from 1995 and was 76 percent below average. Overall, hunter success (grouse per hunter-day) increased 18 percent in 1996, and remains 3 percent above average. The number of grouse harvested per hunter was 80 percent above average.

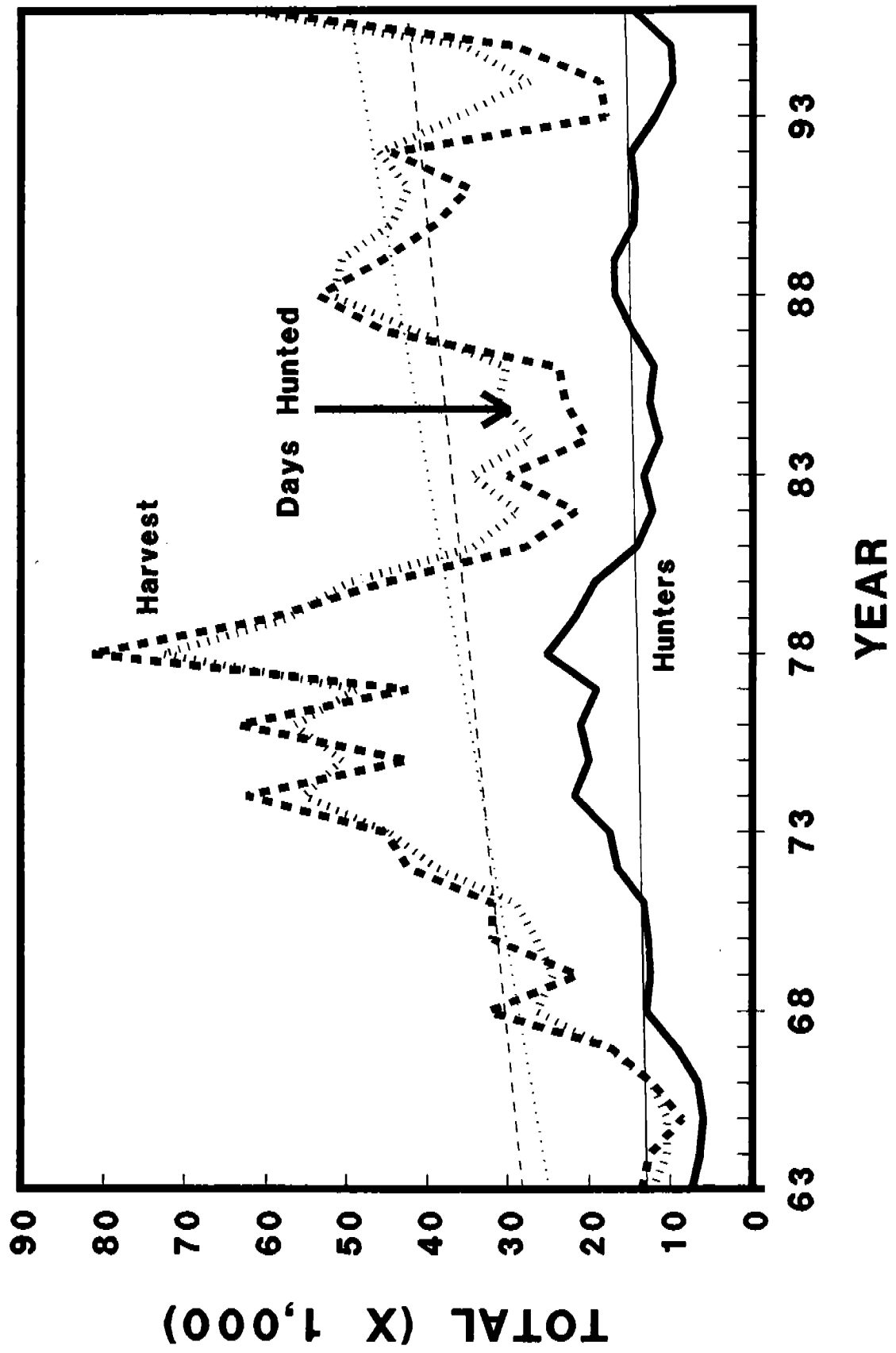


Figure 1. Statewide trends of forest grouse harvest statistics, 1963-96.



# FOREST GROUSE PER HUNTER AND PER DAY

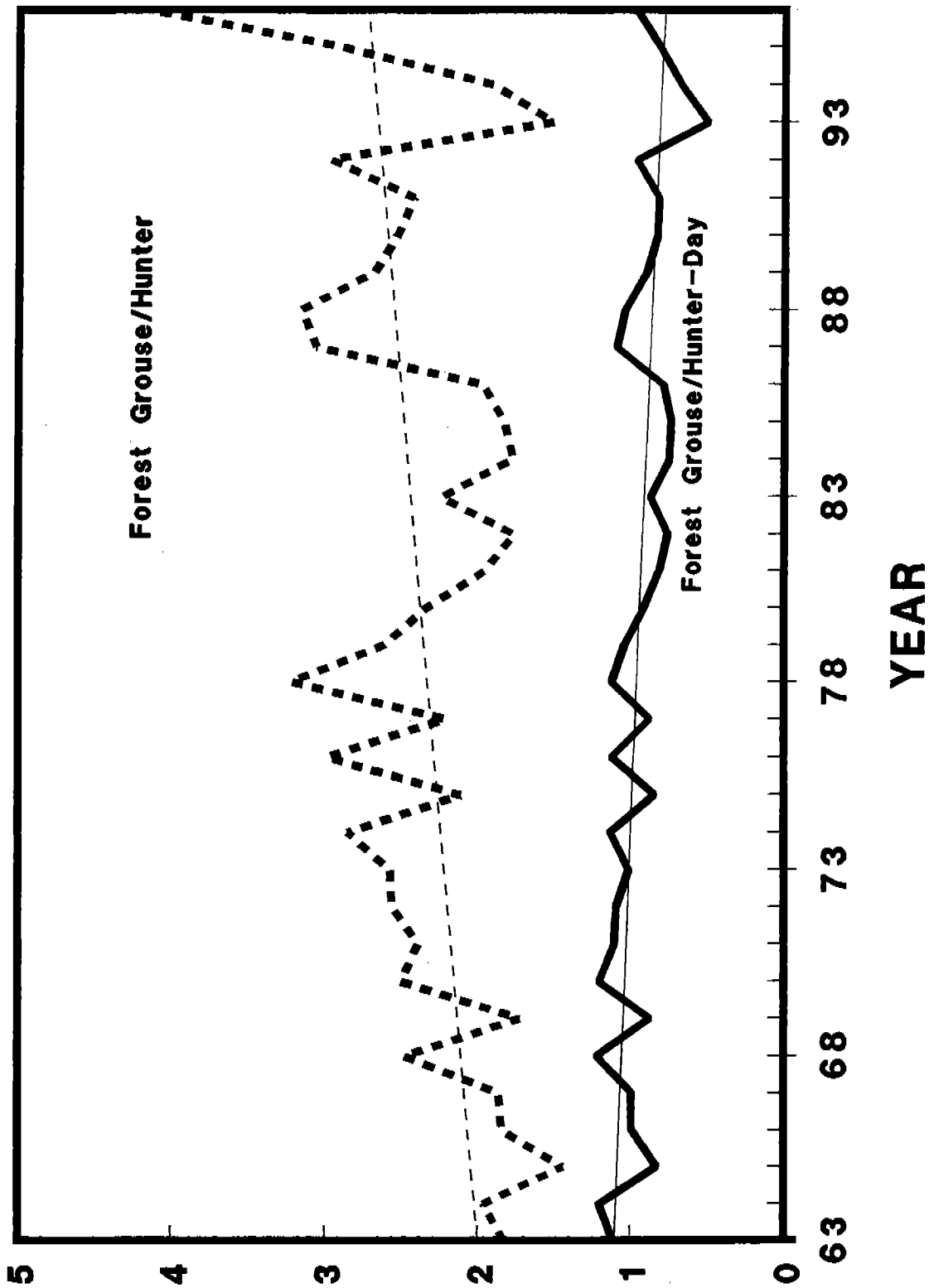


Figure 2. Statewide trends of forest grouse hunter success rates, 1963-96.

## Field Bag Checks

A summary of field bag check data for 1996 is shown in Table 18. Hunter success trends determined via this method are shown in Table 19.

Results of the 1996 survey compared to 1995 and the 10-year (1986-95) average follow:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Total hunters checked	311	+4	-43
Total hours hunted	1,213	-2	-38
Forest grouse per hunter (complete hunts)	1.19	+183	+73
Forest grouse bagged per 100 hours	31	+210	+16
Average hours per hunter-day (complete hunts)	3.90	-6	+17
Hours hunted per grouse bagged (complete hunts)	3.27	-67	-35

## Sex and Age Composition of the Harvest

Sex and age composition of the harvest as determined from wings is shown in Table 20 and 21.

Following are data derived from blue grouse wing surveys in 1996 compared to 1995:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Sample Size	417	+479	--
Percent Males	41	+24	--
Percent Females	59	-11	--
Young per 100 adults	263	-12	--
Young per 100 hens (adult)	487	-10	--

Following are data derived from ruffed grouse wing surveys in 1996 compared to 1995:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Sample Size	444	+477	--
Percent Males	--	--	--
Percent Females	--	--	--
Young per 100 adults	234	-12	--
Young per 100 hens (adult)	--	--	--

Table 1. Ruffed grouse summer inventory, 1986.

Region and County	Distinct Broods		Mean Brood		Mixed Young & Adults		Adults w/o Young		Total Young	Total Adults	Young/100 Adults	Hours of Effort		Birds/100 Hr
	#	Adults	Young	Brood	Adults	Young	Young	Adults				Vehicle Miles	Horse	
<b>Northern Region</b>														
Box Elder	6	6	14	2.33	2	7	1	9	21	233	0	0	0	ERR
Cache														
Davis														
Morgan														
Rich														
Summit														
Weber														
<b>REGIONAL TOTALS</b>	<b>6</b>	<b>6</b>	<b>14</b>	<b>2.33</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>9</b>	<b>21</b>	<b>233</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Central Region</b>														
Juab														
Salt Lake														
Sanpete														
Tooele														
Utah														
Wasatch	4	4	16	4.00	0	0	0	4	16	400	30	2	2	1,000
<b>REGIONAL TOTALS</b>	<b>4</b>	<b>4</b>	<b>16</b>	<b>4.00</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>16</b>	<b>400</b>	<b>30</b>	<b>2</b>	<b>2</b>	<b>1,000</b>
<b>Southern Region</b>														
Beaver														
Garfield														
Iron														
Kane														
Millard														
Plute														
Sevier														
Washington														
Wayne														
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Northeastern Region</b>														
Daggett														
Duchesne														
Uintah														
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Southeastern Region</b>														
Carbon														
Emery														
Grand														
San Juan														
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>STATE TOTALS</b>	<b>10</b>	<b>10</b>	<b>30</b>	<b>3.00</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>13</b>	<b>37</b>	<b>286</b>	<b>30</b>	<b>2</b>	<b>0</b>	<b>2,500</b>

Table 2. Trend of ruffed grouse young per 100 adults, 1986-96.

Region and County	Year										Average 1986-96
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
<b>Northern Region</b>											
Box Elder	433	150	50	--	300	250	400	--	--	--	--
Cache	100	300	267	300	150	225	167	--	--	--	233
Davis	--	--	136	--	--	--	217	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	200	--	267	--	--	--	--	--	--	--	--
Summit	400	500	--	300	450	400	--	--	--	--	--
Weber	--	380	220	--	700	467	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>300</b>	<b>337</b>	<b>141</b>	<b>300</b>	<b>300</b>	<b>355</b>	<b>277</b>	<b>--</b>	<b>--</b>	<b>233</b>	<b>287</b>
<b>Central Region</b>											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	150	0	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	300	400	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--
Utah	460	320	300	300	--	100	100	--	--	--	--
Wasatch	--	--	--	--	280	--	--	--	--	--	400
<b>REGIONAL TOTALS</b>	<b>322</b>	<b>320</b>	<b>300</b>	<b>300</b>	<b>280</b>	<b>300</b>	<b>250</b>	<b>100</b>	<b>--</b>	<b>400</b>	<b>272</b>
<b>Southern Region</b>											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--
Plute	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	450	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	333	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>450</b>	<b>--</b>	<b>333</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>392</b>
<b>Northeastern Region</b>											
Daggett	--	--	--	150	--	--	--	400	--	--	--
Duchesne	--	--	--	400	600	--	--	--	--	--	--
Uintah	--	400	--	267	600	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>400</b>	<b>--</b>	<b>250</b>	<b>600</b>	<b>--</b>	<b>--</b>	<b>400</b>	<b>--</b>	<b>--</b>	<b>413</b>
<b>Southeastern Region</b>											
Carbon	--	--	--	--	--	--	--	--	--	--	--
Emery	--	300	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>300</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>300</b>
<b>STATE TOTALS</b>	<b>312</b>	<b>306</b>	<b>160</b>	<b>277</b>	<b>356</b>	<b>360</b>	<b>273</b>	<b>100</b>	<b>400</b>	<b>--</b>	<b>285</b>
											<b>282</b>

Table 3. Trend of average brood size for ruffed grouse, 1986-96.

Region and County	Year											Average 1986-95
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder	2.00	3.00	3.00	--	3.00	5.00	4.00	--	--	--	--	--
Cache	1.00	3.14	4.00	3.00	3.00	3.00	5.00	--	--	--	2.33	--
Davis	--	--	4.00	--	--	--	4.33	--	--	--	--	--
Morgan	--	--	--	--	--	3.33	--	--	--	--	--	--
Rich	3.00	--	--	3.00	--	--	--	--	--	--	--	--
Summit	4.00	5.00	--	3.00	4.50	4.00	--	--	--	--	--	--
Weber	--	4.75	3.67	--	--	7.00	4.67	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>2.60</b>	<b>3.93</b>	<b>3.64</b>	<b>3.00</b>	<b>3.75</b>	<b>4.13</b>	<b>4.50</b>	--	--	--	<b>2.33</b>	<b>3.65</b>
<b>Central Region</b>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	3.00	4.00	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	4.60	3.20	3.00	3.00	--	--	1.00	1.00	--	--	--	--
Wasatch	--	--	--	--	4.70	--	--	--	--	--	4.00	--
<b>REGIONAL TOTALS</b>	<b>4.60</b>	<b>3.20</b>	<b>3.00</b>	<b>3.00</b>	<b>4.70</b>	<b>3.00</b>	<b>2.50</b>	<b>1.00</b>	--	--	<b>4.00</b>	<b>3.13</b>
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	4.60	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	5.00	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>4.60</b>	<b>--</b>	<b>5.00</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.76</b>
<b>Northeastern Region</b>												
Daggett	--	--	--	3.00	--	--	--	--	4.00	--	--	--
Duchesne	--	--	--	4.00	6.00	--	--	--	--	--	--	--
Uintah	--	4.00	--	4.00	6.00	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>4.00</b>	<b>--</b>	<b>3.75</b>	<b>6.00</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.00</b>	<b>--</b>	<b>--</b>	<b>4.44</b>
<b>Southeastern Region</b>												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	3.00	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>3.00</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>3.00</b>
<b>STATE TOTALS</b>	<b>3.60</b>	<b>3.76</b>	<b>3.71</b>	<b>3.30</b>	<b>4.76</b>	<b>4.00</b>	<b>4.10</b>	<b>1.00</b>	<b>4.00</b>	<b>--</b>	<b>3.00</b>	<b>3.68</b>

Table 4. Trend of ruffed grouse observed per 100 hours, 1986-96.

Region and County	Year												Average	
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1986-96	1986-96	
<b>Northern Region</b>														
Box Elder	80	31	100	--	64	29	45	--	--	--	--	--	--	
Cache	20	58	17	46	5	76	40	--	--	--	--	--	--	
Davis	--	--	114	--	--	--	76	--	--	--	--	--	--	
Morgan	--	--	--	--	--	50	--	--	--	--	--	--	--	
Rich	53	--	50	--	--	--	--	--	--	--	--	--	--	
Summit	36	900	--	9	40	20	--	--	--	--	--	--	--	
Weber	--	267	178	--	--	26	170	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	30	56	62	22	13	32	47	--	--	--	--	--	37	
<b>Central Region</b>														
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	167	--	--	--	--	12	38	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	
Utah	400	50	133	133	--	--	13	14	--	--	--	--	--	
Wasatch	--	25	--	--	46	--	--	--	--	--	--	1,000	--	
<b>REGIONAL TOTALS</b>	88	30	133	133	28	6	13	7	--	--	--	1,000	55	
<b>Southern Region</b>														
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	
Plute	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	138	--	--	--	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	--	--	138	--	433	--	--	--	--	--	--	--	286	
<b>Northeastern Region</b>														
Daggett	--	--	--	109	--	--	--	--	50	--	--	--	--	
Duchesne	--	4	--	33	175	--	--	--	--	--	--	--	--	
Uintah	--	68	--	28	180	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	--	28	--	28	105	--	--	--	50	--	--	--	53	
<b>Southeastern Region</b>														
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	
Emery	--	400	--	--	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	--	400	--	--	--	--	--	--	--	--	--	--	400	
<b>STATE TOTALS</b>	47	45	46	26	30	23	31	2	31	--	--	2,500	31	

Table 5. Blue grouse summer inventory, 1996.

Region and County	Distinct Broods		Mean Brood		Mixed Young & Adults		Adults w/o Young		Total Young	Total Adults	Young/100 Adults	Vehicle Miles	Vehicle	Hours of Effort		Walk	Total	Birds/100 Hr
	# Adults	Young	Young	Brood	Adults	Young	Young	Young						Horse	0			
<b>Northern Region</b>																		
Box Elder	1	1	4	4.00	0	0	0	0	4	1	400	--	--	--	--	--	--	ERR
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>4.00</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>ERR</b>
<b>Central Region</b>																		
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southern Region</b>																		
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Plute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Northeastern Region</b>																		
Daggett	2	2	9	4.50	0	0	0	0	9	2	450	0	0	3	0	3	367	
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	5	5	20	4.00	2	4	1	8	24	8	300	20	1	0	0	1	3,200	
<b>REGIONAL TOTALS</b>	<b>7</b>	<b>7</b>	<b>29</b>	<b>4.14</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>10</b>	<b>33</b>	<b>10</b>	<b>330</b>	<b>20</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>1,076</b>	
<b>Southeastern Region</b>																		
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>STATE TOTALS</b>	<b>8</b>	<b>8</b>	<b>33</b>	<b>4.13</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>11</b>	<b>37</b>	<b>11</b>	<b>336</b>	<b>20</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>1,200</b>	

Table 6. Trend of blue grouse young per 100 adults, 1986-96.

Region and County	Year												Average	
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1986-95	1986-95	
<b>Northern Region</b>														
Box Elder	100	--	--	700	144	400	200	--	173	--	--	--	--	
Cache	--	300	363	257	300	600	80	--	--	--	400	--	--	
Davis	150	222	248	200	480	260	180	--	--	--	--	--	--	
Morgan	--	433	--	--	--	--	--	--	--	--	--	--	--	
Rich	350	--	--	--	600	400	--	--	--	--	--	--	--	
Summit	--	500	--	200	178	155	--	--	--	--	--	--	--	
Weber	--	380	400	--	186	100	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>222</b>	<b>300</b>	<b>279</b>	<b>244</b>	<b>292</b>	<b>277</b>	<b>207</b>	<b>--</b>	<b>173</b>	<b>--</b>	<b>400</b>	<b>400</b>	<b>249</b>	
<b>Central Region</b>														
Juab	180	--	--	--	700	--	--	--	140	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	600	--	80	--	--	--	--	--	--	--	--	--	
Tooele	167	218	650	650	276	231	300	--	40	--	--	--	--	
Utah	--	256	267	267	286	170	--	--	75	--	--	--	--	
Wasatch	--	--	--	--	--	100	100	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>169</b>	<b>273</b>	<b>486</b>	<b>317</b>	<b>286</b>	<b>194</b>	<b>80</b>	<b>60</b>	<b>75</b>	<b>--</b>	<b>--</b>	<b>216</b>	<b>--</b>	
<b>Southern Region</b>														
Beaver	267	133	109	--	--	--	--	--	--	--	--	--	--	
Garfield	245	160	--	23	--	--	--	--	--	--	--	--	--	
Iron	--	300	--	--	--	--	--	--	--	--	--	--	--	
Kane	500	475	250	--	--	--	--	--	--	--	--	--	--	
Millard	200	425	60	--	--	--	--	--	--	--	--	--	--	
Piute	300	--	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	150	90	--	--	--	--	--	--	--	--	--	--	
Washington	233	533	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	350	375	--	246	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>279</b>	<b>230</b>	<b>118</b>	<b>23</b>	<b>--</b>	<b>246</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>179</b>	<b>--</b>	
<b>Northeastern Region</b>														
Daggett	282	331	318	364	233	--	600	--	--	100	450	--	--	
Duchesne	228	129	190	--	600	--	800	200	--	--	--	--	--	
Uintah	140	500	233	138	60	--	600	--	--	350	300	--	--	
<b>REGIONAL TOTALS</b>	<b>236</b>	<b>306</b>	<b>254</b>	<b>268</b>	<b>223</b>	<b>--</b>	<b>400</b>	<b>--</b>	<b>--</b>	<b>267</b>	<b>330</b>	<b>244</b>	<b>--</b>	
<b>Southeastern Region</b>														
Carbon	500	--	--	--	--	--	500	--	--	--	--	--	--	
Emery	--	400	100	--	--	--	--	--	--	--	--	--	--	
Grand	260	--	227	300	--	200	286	289	200	--	--	--	--	
San Juan	--	300	213	300	--	500	233	167	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>300</b>	<b>140</b>	<b>200</b>	<b>75</b>	<b>--</b>	<b>350</b>	<b>284</b>	<b>240</b>	<b>200</b>	<b>--</b>	<b>--</b>	<b>224</b>	<b>--</b>	
<b>STATE TOTALS</b>	<b>225</b>	<b>268</b>	<b>207</b>	<b>225</b>	<b>274</b>	<b>238</b>	<b>243</b>	<b>291</b>	<b>167</b>	<b>267</b>	<b>336</b>	<b>240</b>	<b>240</b>	



Table 7. Trend of average brood size for blue grouse, 1986-96.

Region and County	Year											Average 1986-96
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder	2.00	--	--	7.00	3.20	4.00	5.00	--	3.80	--	--	--
Cache	--	3.67	3.63	3.60	3.70	4.50	4.00	--	--	--	4.00	--
Davis	3.00	2.83	4.00	4.50	6.50	4.33	3.00	--	--	--	--	--
Morgan	--	4.33	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	6.00	6.00	--	--	--	--	--
Summit	--	5.00	--	3.00	4.00	3.40	--	--	--	--	--	--
Weber	4.00	4.76	4.00	--	--	3.25	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>3.25</b>	<b>3.88</b>	<b>3.84</b>	<b>3.86</b>	<b>4.30</b>	<b>4.06</b>	<b>4.31</b>	<b>--</b>	<b>3.80</b>	<b>--</b>	<b>4.00</b>	<b>3.91</b>
<b>Central Region</b>												
Juab	--	--	--	--	7.00	--	--	--	3.60	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	6.00	--	2.00	--	--	--	--	--	--	--	--
Tooele	3.20	3.43	6.00	6.00	3.13	3.60	3.00	--	2.00	--	--	--
Utah	--	3.45	5.00	5.00	5.00	3.22	--	--	3.00	--	--	--
Wasatch	--	--	--	--	--	1.00	3.00	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>3.20</b>	<b>3.62</b>	<b>4.67</b>	<b>4.20</b>	<b>4.00</b>	<b>3.36</b>	<b>2.00</b>	<b>3.00</b>	<b>3.00</b>	<b>--</b>	<b>--</b>	<b>3.45</b>
<b>Southern Region</b>												
Beaver	2.67	4.00	4.00	--	--	--	--	--	--	--	--	--
Garfield	4.50	3.29	--	--	--	--	--	--	--	--	--	--
Iron	--	3.50	--	--	--	--	--	--	--	--	--	--
Kane	1.00	4.75	4.00	--	--	--	--	--	--	--	--	--
Millard	4.00	4.25	1.50	--	3.00	--	--	--	--	--	--	--
Piute	3.00	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	4.67	2.33	--	--	--	--	--	--	--	--	--
Washington	3.50	6.33	--	--	--	--	--	--	--	--	--	--
Wayne	--	3.50	3.75	--	--	4.57	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>3.53</b>	<b>4.12</b>	<b>2.71</b>	<b>--</b>	<b>3.00</b>	<b>4.57</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>3.59</b>
<b>Northeastern Region</b>												
Daggett	3.75	4.71	3.20	3.89	3.60	--	6.00	--	--	1.00	4.50	--
Duchesne	3.25	2.50	2.50	--	6.00	--	8.00	2.00	--	--	--	--
Uintah	4.00	5.00	3.50	2.20	--	--	--	6.00	--	3.50	4.00	--
<b>REGIONAL TOTALS</b>	<b>3.56</b>	<b>4.52</b>	<b>3.00</b>	<b>3.29</b>	<b>4.33</b>	<b>--</b>	<b>6.67</b>	<b>4.00</b>	<b>--</b>	<b>2.67</b>	<b>4.14</b>	<b>4.00</b>
<b>Southeastern Region</b>												
Carbon	6.00	--	--	--	--	--	5.00	--	--	--	--	--
Emery	--	4.00	4.00	--	--	--	--	--	--	--	--	--
Grand	3.25	--	2.78	3.00	--	2.00	4.38	3.17	4.00	--	--	--
San Juan	--	3.00	3.00	3.00	--	5.00	3.50	2.50	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>3.60</b>	<b>3.50</b>	<b>2.93</b>	<b>3.00</b>	<b>--</b>	<b>3.50</b>	<b>4.13</b>	<b>2.90</b>	<b>4.00</b>	<b>--</b>	<b>--</b>	<b>3.44</b>
<b>STATE TOTALS</b>	<b>3.44</b>	<b>4.00</b>	<b>3.22</b>	<b>3.61</b>	<b>4.19</b>	<b>3.88</b>	<b>4.29</b>	<b>2.91</b>	<b>3.69</b>	<b>2.67</b>	<b>4.13</b>	<b>3.59</b>

Table 8. Trend of blue grouse observed per 100 hours, 1986-96.

Region and County	Year											Average 1986-95
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder	20	0	--	--	200	24	136	--	750	--	--	--
Cache	--	71	56	114	108	165	45	--	--	--	--	--
Davis	50	232	300	120	426	86	112	--	--	--	--	--
Morgan	4	59	--	17	--	--	--	--	--	--	--	--
Rich	53	0	0	--	--	175	79	--	--	--	--	--
Summit	--	900	--	21	100	55	--	--	--	--	--	--
Weber	100	267	56	--	--	65	40	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>27</b>	<b>109</b>	<b>90</b>	<b>79</b>	<b>133</b>	<b>63</b>	<b>83</b>	<b>--</b>	<b>750</b>	<b>--</b>	<b>--</b>	<b>167</b>
<b>Central Region</b>												
Juab	156	0	--	--	800	--	--	--	600	--	--	--
Salt Lake	--	400	--	--	--	--	--	--	--	--	--	--
Sanpete	--	1,400	--	14	4	--	23	25	--	--	--	--
Tooele	444	206	1,000	1,000	233	--	200	--	350	--	--	--
Utah	--	229	367	367	113	318	--	--	350	--	--	--
Wasatch	--	0	--	--	--	--	9	150	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>254</b>	<b>194</b>	<b>683</b>	<b>72</b>	<b>75</b>	<b>180</b>	<b>24</b>	<b>29</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>189</b>
<b>Southern Region</b>												
Beaver	137	175	164	--	--	--	--	--	--	--	--	--
Garfield	141	195	--	--	100	--	--	--	--	--	--	--
Iron	--	1,200	--	--	--	--	--	--	--	--	--	--
Kane	257	383	127	--	--	--	--	--	--	--	--	--
Millard	200	525	100	--	--	--	--	--	--	--	--	--
Piute	266	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	275	738	--	--	--	--	--	--	--	--	--
Washington	333	960	--	--	--	--	--	--	--	--	--	--
Wayne	--	450	475	--	--	2,250	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>178</b>	<b>309</b>	<b>247</b>	<b>--</b>	<b>200</b>	<b>2,250</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>637</b>
<b>Northeastern Region</b>												
Daggett	300	1,255	230	265	286	--	1,400	--	--	200	248	--
Duchesne	51	64	121	--	176	--	225	120	--	--	--	--
Uintah	600	55	37	48	320	--	--	3,500	50	150	57	--
<b>REGIONAL TOTALS</b>	<b>126</b>	<b>286</b>	<b>120</b>	<b>95</b>	<b>46</b>	<b>--</b>	<b>500</b>	<b>370</b>	<b>8</b>	<b>157</b>	<b>137</b>	<b>190</b>
<b>Southeastern Region</b>												
Carbon	60	--	--	--	--	--	240	--	--	--	--	--
Emery	--	500	--	--	--	--	--	--	--	--	--	--
Grand	120	300	--	89	--	300	540	875	457	--	--	--
San Juan	--	400	--	400	--	600	600	457	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>96</b>	<b>400</b>	<b>--</b>	<b>85</b>	<b>--</b>	<b>450</b>	<b>480</b>	<b>113</b>	<b>467</b>	<b>--</b>	<b>--</b>	<b>299</b>
<b>STATE TOTALS</b>	<b>110</b>	<b>197</b>	<b>166</b>	<b>81</b>	<b>93</b>	<b>112</b>	<b>130</b>	<b>48</b>	<b>384</b>	<b>157</b>	<b>157</b>	<b>148</b>

**Table 9. Summary of effort expended on forest grouse brood counts, 1996.**

Region and County	Vehicle Miles	Hours of Effort			Total
		Vehicle	Horse	Walk	
<b>Northern Region</b>					
Box Elder	--	--	--	--	--
Cache	--	--	--	--	--
Davis	--	--	--	--	--
Morgan	--	--	--	--	--
Rich	--	--	--	--	--
Summit	--	--	--	--	--
Weber	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--
<b>Central Region</b>					
Juab	--	--	--	--	--
Salt Lake	--	--	--	--	--
Sanpete	--	--	--	--	--
Tooele	--	--	--	--	--
Utah	--	--	--	--	--
Wasatch	30	2	0	0	2
<b>REGIONAL TOTALS</b>	30	2	0	0	2
<b>Southern Region</b>					
Beaver	--	--	--	--	--
Garfield	--	--	--	--	--
Iron	--	--	--	--	--
Kane	--	--	--	--	--
Millard	--	--	--	--	--
Piute	--	--	--	--	--
Sevier	--	--	--	--	--
Washington	--	--	--	--	--
Wayne	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--
<b>Northeastern Region</b>					
Daggett	0	0	3	0	3
Duchesne	--	--	--	--	--
Uintah	20	1	0	0	1
<b>REGIONAL TOTALS</b>	20	1	3	0	4
<b>Southeastern Region</b>					
Carbon	--	--	--	--	--
Emery	--	--	--	--	--
Grand	--	--	--	--	--
San Juan	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--
<b>STATE TOTALS</b>	50	3	3	0	6

Table 10. Summary of blue grouse hunter success and distribution of harvest and hunting pressure by region and county, 1996.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	13	720	859	1.19	2.23	2.74
CACHE	70	6,944	6,735	0.97	21.53	21.48
DAVIS	15	1,416	2,183	1.54	4.39	6.96
MORGAN	16	1,741	998	0.57	5.40	3.19
RICH	10	952	1,114	1.17	2.95	3.56
SUMMIT	19	1,741	1,532	0.88	5.40	4.89
WEBER	33	3,669	4,366	1.19	11.38	13.93
<b>REGIONAL TOTALS</b>	<b>176</b>	<b>17,187</b>	<b>17,791</b>	<b>1.04</b>	<b>53.28</b>	<b>56.74</b>
<b>CENTRAL REGION</b>						
JUAB	2	139	92	0.67	0.43	0.30
SALT LAKE	2	371	185	0.50	1.15	0.59
SANPETE	11	720	789	1.10	2.23	2.52
TOOELE	12	812	975	1.20	2.52	3.11
UTAH	29	2,601	1,811	0.70	8.06	5.78
WASATCH	18	1,997	1,579	0.79	6.19	5.04
<b>REGIONAL TOTALS</b>	<b>74</b>	<b>6,642</b>	<b>5,435</b>	<b>0.82</b>	<b>20.59</b>	<b>17.33</b>
<b>SOUTHERN REGION</b>						
BEAVER	7	580	464	0.80	1.80	1.48
GARFIELD	5	301	301	1.00	0.94	0.96
IRON	6	487	394	0.81	1.51	1.26
KANE	2	116	69	0.60	0.36	0.22
MILLARD	4	371	301	0.81	1.15	0.96
PIUTE	5	603	975	1.62	1.87	3.11
SEVIER	29	2,601	2,252	0.87	8.06	7.19
WASHINGTON	2	255	92	0.36	0.79	0.30
WAYNE	1	116	23	0.20	0.36	0.07
<b>REGIONAL TOTALS</b>	<b>61</b>	<b>5,435</b>	<b>4,877</b>	<b>0.90</b>	<b>16.85</b>	<b>15.56</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT	10	464	836	1.80	1.44	2.67
DUCHESNE	7	603	510	0.85	1.87	1.63
UINTAH	18	1,323	1,509	1.14	4.10	4.81
<b>REGIONAL TOTALS</b>	<b>35</b>	<b>2,392</b>	<b>2,856</b>	<b>1.19</b>	<b>7.42</b>	<b>9.11</b>
<b>SOUTHEASTERN REGION</b>						
CARBON	0	0	0	0.00	0.00	0.00
EMERY	2	116	46	0.40	0.36	0.15
GRAND	4	325	232	0.71	1.01	0.74
SAN JUAN	3	162	92	0.57	0.50	0.30
<b>REGIONAL TOTALS</b>	<b>9</b>	<b>603</b>	<b>371</b>	<b>0.62</b>	<b>1.87</b>	<b>1.19</b>
Unknown	1	0	23	0.00	0.00	0.07
<b>STATE TOTALS</b>	<b>356</b>	<b>32,261</b>	<b>31,355</b>	<b>0.97</b>	<b>100.00</b>	<b>100.00</b>

\*Total hunter trips from questionnaire returns

Table 11. Summary of ruffed grouse hunter success and distribution of harvest and hunting pressure by region and county, 1996

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	12	696	650	0.93	2.29	2.20
CACHE	84	8,129	9,011	1.11	26.70	30.48
DAVIS	9	1,138	627	0.55	3.74	2.12
MORGAN	19	2,136	3,994	1.87	7.02	13.51
RICH	19	1,347	1,741	1.29	4.42	5.89
SUMMIT	29	2,160	2,276	1.05	7.09	7.70
WEBER	36	3,971	3,739	0.94	13.04	12.65
<b>REGIONAL TOTALS</b>	<b>208</b>	<b>19,580</b>	<b>22,042</b>	<b>1.13</b>	<b>64.30</b>	<b>74.55</b>
<b>CENTRAL REGION</b>						
JUAB	1	23	23	1.00	0.08	0.08
SALT LAKE	4	301	348	1.15	0.99	1.18
SANPETE	8	418	278	0.67	1.37	0.94
TOOELE	4	232	232	1.00	0.76	0.79
UTAH	28	2,787	2,136	0.77	9.15	7.23
WASATCH	25	1,579	1,556	0.99	5.19	5.26
<b>REGIONAL TOTALS</b>	<b>70</b>	<b>5,342</b>	<b>4,575</b>	<b>0.86</b>	<b>17.54</b>	<b>15.48</b>
<b>SOUTHERN REGION</b>						
BEAVER	1	23	23	1.00	0.08	0.08
GARFIELD	3	116	92	0.80	0.38	0.31
IRON	2	116	46	0.40	0.38	0.16
KANE	0	0	0	0.00	0.00	0.00
MILLARD	1	139	46	0.33	0.46	0.16
PIUTE	2	69	69	1.00	0.23	0.24
SEVIER	14	2,020	1,068	0.53	6.64	3.61
WASHINGTON	0	0	0	0.00	0.00	0.00
WAYNE	0	0	0	0.00	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>23</b>	<b>2,485</b>	<b>1,347</b>	<b>0.54</b>	<b>8.16</b>	<b>4.56</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT	4	255	278	1.09	0.84	0.94
DUCHESNE	4	418	185	0.44	1.37	0.63
UINTAH	14	1,254	650	0.52	4.12	2.20
<b>REGIONAL TOTALS</b>	<b>22</b>	<b>1,927</b>	<b>1,114</b>	<b>0.58</b>	<b>6.33</b>	<b>3.77</b>
<b>SOUTHEASTERN REGION</b>						
CARBON	3	209	116	0.56	0.69	0.39
EMERY	3	232	116	0.50	0.76	0.39
GRAND	2	510	116	0.23	1.68	0.39
SAN JUAN	2	162	139	0.86	0.53	0.47
<b>REGIONAL TOTALS</b>	<b>10</b>	<b>1,114</b>	<b>487</b>	<b>0.44</b>	<b>3.66</b>	<b>1.65</b>
Unknown	0	0	0	0.00	0.00	0.00
<b>STATE TOTALS</b>	<b>333</b>	<b>30,450</b>	<b>29,567</b>	<b>0.97</b>	<b>100.00</b>	<b>100.00</b>

\*Total hunter trips from questionnaire returns.

Table 12. Summary of blue and ruffed grouse hunter success and distribution of harvest and hunting pressure by region and county, 1996.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	29	1,463	1,509	1.03	2.60	2.53
CACHE	153	11,404	15,747	1.38	20.24	26.36
DAVIS	26	1,858	2,810	1.51	3.30	4.70
MORGAN	37	3,042	5,040	1.66	5.40	8.44
RICH	30	2,160	2,369	1.10	3.83	3.97
SUMMIT	43	2,717	3,274	1.21	4.82	5.48
WEBER	72	5,876	7,246	1.23	10.43	12.13
<b>REGIONAL TOTALS</b>	<b>390</b>	<b>28,522</b>	<b>37,998</b>	<b>1.33</b>	<b>50.62</b>	<b>63.61</b>
<b>CENTRAL REGION</b>						
JUAB	6	510	116	0.23	0.91	0.19
SALT LAKE	12	1,114	534	0.48	1.98	0.89
SANPETE	28	1,532	1,021	0.67	2.72	1.71
TOOELE	23	1,207	1,207	1.00	2.14	2.02
UTAH	67	5,551	4,087	0.74	9.85	6.84
WASATCH	49	3,530	3,228	0.91	6.27	5.40
<b>REGIONAL TOTALS</b>	<b>185</b>	<b>13,448</b>	<b>10,196</b>	<b>0.76</b>	<b>23.67</b>	<b>17.07</b>
<b>SOUTHERN REGION</b>						
BEAVER	10	650	510	0.79	1.15	0.86
GARFIELD	11	534	441	0.83	0.95	0.74
IRON	16	1,277	487	0.38	2.27	0.82
KANE	4	139	69	0.50	0.25	0.12
MILLARD	8	464	348	0.75	0.82	0.58
PIUTE	9	720	1,091	1.52	1.28	1.83
SEVIER	50	4,111	3,344	0.81	7.30	5.60
WASHINGTON	3	278	92	0.33	0.49	0.16
WAYNE	2	185	23	0.13	0.33	0.04
<b>REGIONAL TOTALS</b>	<b>113</b>	<b>8,361</b>	<b>6,410</b>	<b>0.77</b>	<b>14.84</b>	<b>10.73</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT	15	743	1,161	1.56	1.32	1.94
DUCHESNE	20	1,347	1,207	0.90	2.39	2.02
UINTAH	26	1,811	1,834	1.01	3.22	3.07
<b>REGIONAL TOTALS</b>	<b>61</b>	<b>3,902</b>	<b>4,204</b>	<b>1.08</b>	<b>6.93</b>	<b>7.04</b>
<b>SOUTHEASTERN REGION</b>						
CARBON	4	301	116	0.38	0.54	0.19
EMERY	6	348	162	0.47	0.62	0.27
GRAND	9	1,045	325	0.31	1.85	0.54
SAN JUAN	5	325	232	0.71	0.58	0.39
<b>REGIONAL TOTALS</b>	<b>24</b>	<b>2,020</b>	<b>836</b>	<b>0.41</b>	<b>3.59</b>	<b>1.40</b>
UNKNOWN	2	92	92	1.00	0.16	0.16
<b>STATE TOTALS</b>	<b>775</b>	<b>56,347</b>	<b>59,738</b>	<b>1.06</b>	<b>100.00</b>	<b>100.00</b>

\*Total hunter trips from questionnaire returns.

Table 13. Summary of forest grouse bagged per hunter-day by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	0.99	0.97	0.69	1.15	0.18	0.80	0.92	1.03
Cache	0.84	0.75	0.92	0.94	0.41	0.88	0.71	1.38
Davis	0.78	1.02	0.84	0.59	0.18	0.45	0.64	1.51
Morgan	1.23	0.94	0.94	1.06	0.16	0.66	1.14	1.66
Rich	0.42	0.52	0.62	0.76	0.34	0.59	0.62	1.10
Summit	0.89	0.49	0.72	0.77	0.40	0.82	0.97	1.21
Weber	1.00	0.73	0.51	1.01	0.51	0.51	0.83	1.23
<b>REGIONAL TOTALS</b>	<b>0.88</b>	<b>0.74</b>	<b>0.76</b>	<b>0.92</b>	<b>0.37</b>	<b>0.72</b>	<b>0.80</b>	<b>1.33</b>
<b>Central Region</b>								
Juab	0.71	0.88	0.65	0.79	0.84	0.56	0.78	0.23
Salt Lake	0.77	0.81	0.55	1.00	0.41	0.87	0.52	0.48
Sanpete	0.65	0.82	0.98	0.78	0.65	0.86	0.48	0.67
Tooele	1.75	1.03	1.03	1.19	0.37	1.02	0.96	1.00
Utah	0.99	0.91	0.97	0.84	0.77	0.59	0.45	0.74
Wasatch	0.78	0.83	0.76	1.25	0.26	0.52	0.74	0.91
<b>REGIONAL TOTALS</b>	<b>0.90</b>	<b>0.90</b>	<b>0.89</b>	<b>0.92</b>	<b>0.52</b>	<b>0.70</b>	<b>0.61</b>	<b>0.76</b>
<b>Southern Region</b>								
Beaver	0.86	0.85	0.95	1.44	1.17	0.64	0.60	0.79
Garfield	1.27	0.74	0.83	0.48	0.27	0.29	0.40	0.83
Iron	0.79	0.69	0.57	0.78	0.93	0.78	0.78	0.38
Kane	1.25	0.81	0.61	1.45	1.25	0.80	1.75	0.50
Millard	1.26	1.49	0.98	1.59	0.86	0.77	0.60	0.75
Piute	1.00	1.25	1.00	0.75	1.32	0.20	0.80	1.52
Sevier	1.23	1.02	0.94	1.30	0.49	0.71	0.49	0.81
Washington	0.00	0.00	1.83	2.00	0.00	0.60	1.25	0.33
Wayne	0.76	0.86	0.59	1.29	0.71	0.45	0.50	0.13
<b>REGIONAL TOTALS</b>	<b>1.13</b>	<b>0.99</b>	<b>0.87</b>	<b>1.19</b>	<b>0.71</b>	<b>0.64</b>	<b>0.62</b>	<b>0.77</b>
<b>Northeastern Region</b>								
Daggett	0.42	0.81	0.97	1.03	0.85	0.58	0.56	1.56
Duchesne	0.92	0.69	0.78	0.68	0.31	0.57	0.86	0.90
Uintah	0.67	1.09	1.00	1.01	0.66	0.53	1.30	1.01
<b>REGIONAL TOTALS</b>	<b>0.69</b>	<b>0.93</b>	<b>0.93</b>	<b>0.94</b>	<b>0.59</b>	<b>0.55</b>	<b>1.00</b>	<b>1.08</b>
<b>Southeastern Region</b>								
Carbon	0.37	0.47	0.64	0.83	0.73	0.78	1.60	0.38
Emery	0.60	0.81	0.78	0.88	0.18	0.48	0.17	0.47
Grand	1.14	1.12	2.14	0.52	1.12	0.00	0.50	0.31
San Juan	1.00	0.83	0.45	1.57	1.50	1.20	0.43	0.71
<b>REGIONAL TOTALS</b>	<b>0.57</b>	<b>0.69</b>	<b>0.77</b>	<b>0.79</b>	<b>0.54</b>	<b>0.67</b>	<b>0.56</b>	<b>0.41</b>
Unknown counties	0.76	0.00	0.00	0.00	0.44	0.00	0.41	1.00
<b>STATE TOTALS</b>	<b>0.90</b>	<b>0.83</b>	<b>0.82</b>	<b>0.96</b>	<b>0.50</b>	<b>0.69</b>	<b>0.73</b>	<b>1.06</b>

Table 14. Percentage distribution of forest grouse harvest by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	5.02	6.51	5.53	4.83	1.99	6.15	4.84	2.53
Cache	15.18	15.47	17.45	17.65	12.36	19.01	20.69	26.36
Davis	1.96	3.28	2.89	2.48	0.63	1.68	2.82	4.70
Morgan	6.93	3.28	3.29	2.75	0.84	2.52	3.76	8.44
Rich	2.60	2.89	3.74	3.19	2.72	2.70	2.42	3.97
Summit	4.61	3.45	6.83	3.83	3.77	8.67	8.40	5.48
Weber	10.35	8.07	5.03	9.82	9.11	7.18	9.94	12.13
<b>REGIONAL TOTALS</b>	<b>46.65</b>	<b>42.96</b>	<b>44.77</b>	<b>44.55</b>	<b>31.41</b>	<b>47.90</b>	<b>52.86</b>	<b>63.61</b>
<b>Central Region</b>								
Juab	1.32	0.78	0.75	1.48	1.68	0.47	1.41	0.19
Salt Lake	1.50	0.72	0.80	2.12	0.94	1.86	1.14	0.89
Sanpete	4.56	5.40	4.34	3.31	4.19	5.69	2.69	1.71
Tooele	5.02	6.68	4.04	2.52	3.98	4.94	3.02	2.02
Utah	7.62	8.74	7.48	10.38	10.47	6.90	4.63	6.84
Wasatch	5.47	2.89	4.44	4.59	3.14	4.19	6.85	5.40
<b>REGIONAL TOTALS</b>	<b>25.49</b>	<b>25.21</b>	<b>21.83</b>	<b>24.39</b>	<b>24.40</b>	<b>24.04</b>	<b>19.75</b>	<b>17.07</b>
<b>Southern Region</b>								
Beaver	0.82	1.61	2.59	2.08	2.20	1.68	1.75	0.86
Garfield	1.73	1.45	1.00	0.84	1.36	0.37	0.67	0.74
Iron	1.41	1.39	1.94	1.56	7.96	1.68	2.55	0.82
Kane	0.23	0.72	0.95	1.28	1.57	0.37	1.41	0.12
Millard	3.51	2.89	2.24	3.23	3.35	2.14	0.60	0.58
Piute	0.96	3.34	2.04	0.84	3.46	0.37	1.07	1.83
Sevier	9.90	7.90	10.27	10.70	6.39	8.20	4.97	5.60
Washington	0.00	0.00	0.55	0.48	0.00	0.56	0.34	0.16
Wayne	0.73	1.00	0.65	0.72	1.78	0.47	0.20	0.04
<b>REGIONAL TOTALS</b>	<b>19.92</b>	<b>20.31</b>	<b>22.23</b>	<b>21.72</b>	<b>28.06</b>	<b>15.84</b>	<b>13.57</b>	<b>10.73</b>
<b>Northeastern Region</b>								
Daggett	0.46	1.39	1.65	1.28	1.78	2.70	1.68	1.94
Duchesne	1.60	1.39	2.24	1.20	1.36	1.58	2.48	2.02
Uintah	4.33	4.90	4.99	4.67	7.12	3.91	7.52	3.07
<b>REGIONAL TOTALS</b>	<b>6.38</b>	<b>7.68</b>	<b>8.87</b>	<b>7.15</b>	<b>10.26</b>	<b>8.20</b>	<b>11.69</b>	<b>7.04</b>
<b>Southeastern Region</b>								
Carbon	0.50	1.34	0.70	0.20	1.15	1.68	0.54	0.19
Emery	0.41	1.17	0.35	0.92	0.73	1.21	0.07	0.27
Grand	0.36	1.06	0.75	0.64	1.99	0.00	0.54	0.54
San Juan	0.18	0.28	0.50	0.44	0.31	1.12	0.40	0.39
<b>REGIONAL TOTALS</b>	<b>1.46</b>	<b>3.84</b>	<b>2.29</b>	<b>2.20</b>	<b>4.19</b>	<b>4.01</b>	<b>1.54</b>	<b>1.40</b>
<b>Unknown counties</b>	<b>0.73</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.68</b>	<b>0.00</b>	<b>0.60</b>	<b>0.16</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>



Table 15. Percentage distribution of forest grouse hunting pressure by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	4.55	5.60	6.59	4.04	5.48	5.30	3.84	2.60
Cache	16.22	17.22	15.55	18.07	14.88	14.76	21.23	20.24
Davis	2.25	2.69	2.82	4.04	1.78	2.56	3.25	3.30
Morgan	5.08	2.92	2.86	2.50	2.66	2.62	2.41	5.40
Rich	5.53	4.63	4.95	4.04	3.97	3.13	2.86	3.83
Summit	4.63	5.83	7.73	4.78	4.75	7.28	6.35	4.82
Weber	9.34	9.21	8.10	9.36	8.93	9.71	8.77	10.43
<b>REGIONAL TOTALS</b>	<b>7.60</b>	<b>48.10</b>	<b>48.61</b>	<b>46.84</b>	<b>42.45</b>	<b>45.37</b>	<b>48.72</b>	<b>50.62</b>
<b>Central Region</b>								
Juab	1.68	0.74	0.94	1.81	0.99	0.58	1.33	0.91
Salt Lake	1.76	0.74	1.19	2.04	1.15	1.47	1.63	1.98
Sanpete	6.31	5.51	3.64	4.08	3.24	4.54	4.09	2.72
Tooele	2.58	5.42	3.23	2.04	5.33	3.32	2.32	2.14
Utah	6.88	8.01	6.34	11.98	6.79	8.05	7.54	9.85
Wasatch	6.31	2.92	4.79	3.54	6.11	5.50	6.75	6.27
<b>REGIONAL TOTALS</b>	<b>25.52</b>	<b>23.33</b>	<b>20.13</b>	<b>25.50</b>	<b>23.60</b>	<b>23.45</b>	<b>23.65</b>	<b>23.87</b>
<b>Southern Region</b>								
Beaver	0.86	1.57	2.25	1.39	0.94	1.79	2.12	1.15
Garfield	1.23	1.62	0.98	1.69	2.56	0.89	1.23	0.95
Iron	1.60	1.67	2.82	1.93	4.28	1.47	2.41	2.27
Kane	0.16	0.74	1.27	0.85	0.63	0.32	0.59	0.25
Millard	2.50	1.62	1.88	1.96	1.93	1.92	0.74	0.82
Piute	0.86	2.22	1.68	1.08	1.31	1.28	0.99	1.28
Sevier	7.21	6.44	8.92	7.94	6.53	7.92	7.39	7.30
Washington	0.08	0.23	0.25	0.23	0.16	0.64	0.20	0.49
Wayne	0.86	0.97	0.90	0.54	1.25	0.70	0.30	0.33
<b>REGIONAL TOTALS</b>	<b>15.36</b>	<b>17.08</b>	<b>20.95</b>	<b>17.60</b>	<b>19.58</b>	<b>16.93</b>	<b>15.96</b>	<b>14.84</b>
<b>Northeastern Region</b>								
Daggett	0.98	1.44	1.39	1.19	1.04	3.19	2.22	1.32
Duchesne	1.56	1.67	2.37	1.69	2.19	1.92	2.12	2.39
Uintah	5.82	3.75	4.09	4.47	5.38	5.05	4.24	3.22
<b>REGIONAL TOTALS</b>	<b>8.36</b>	<b>6.85</b>	<b>7.85</b>	<b>7.36</b>	<b>8.62</b>	<b>10.16</b>	<b>8.57</b>	<b>6.93</b>
<b>Southeastern Region</b>								
Carbon	1.23	2.36	0.90	0.23	0.78	1.47	0.25	0.54
Emery	0.61	1.20	0.37	1.00	2.09	1.73	0.30	0.62
Grand	0.29	0.79	0.29	1.19	0.89	0.26	0.79	1.85
San Juan	0.16	0.28	0.90	0.27	0.10	0.64	0.69	0.58
<b>REGIONAL TOTALS</b>	<b>2.29</b>	<b>4.63</b>	<b>2.45</b>	<b>2.70</b>	<b>3.86</b>	<b>4.09</b>	<b>2.02</b>	<b>3.59</b>
<b>Unknown counties</b>	<b>0.86</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.88</b>	<b>0.00</b>	<b>1.08</b>	<b>0.16</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Table 16. Statewide summary of forest grouse harvest statistics, 1963-96.

Year	Total Hunters			Total Harvest			Hunter-Days			Grouse/Hunter-Day			Grouse/Hunter		
	Hunters	Ruffed	Percent	Blue	Percent	Unknown	Percent	Total	Afield	Ruffed	Blue	Total	Ruffed	Blue	Total
1963	7,425	5,470	40.20	7,372	54.17	766	5.63	13,608	12,313	0.44	0.66	1.11	0.74	0.99	1.83
1964	6,487	5,354	42.19	6,685	52.68	652	5.14	12,691	10,566	0.51	0.63	1.20	0.82	1.03	1.96
1965	6,005	3,225	37.20	4,924	56.80	520	6.00	8,669	10,504	0.31	0.47	0.83	0.54	0.82	1.44
1966	6,683	6,966	56.54	4,659	37.81	696	5.65	12,321	12,387	0.56	0.38	0.99	1.04	0.68	1.84
1967	9,420	8,476	48.36	6,773	38.65	2,277	12.99	17,526	17,773	0.48	0.38	0.99	0.87	0.69	1.86
1968	13,061	17,048	52.59	12,604	38.88	2,762	8.52	32,414	26,537	0.64	0.47	1.22	1.30	0.96	2.48
1969	12,523	9,490	44.14	10,419	48.46	1,589	7.39	21,498	24,572	0.38	0.42	0.87	0.76	0.83	1.72
1970	12,775	15,590	48.87	13,515	42.37	2,793	8.76	31,898	26,619	0.59	0.51	1.20	1.22	1.06	2.50
1971	13,363	15,759	49.40	13,749	43.10	2,393	7.50	31,901	29,100	0.54	0.47	1.10	1.18	1.03	2.39
1972	16,640	20,648	48.56	19,221	45.21	2,649	6.23	42,518	38,940	0.53	0.49	1.09	1.24	1.16	2.56
1973	17,588	7,153	15.81	36,846	81.46	1,233	2.73	45,232	44,738	0.16	0.82	1.01	0.41	2.09	2.57
1974	21,920	24,561	39.34	32,236	51.63	5,642	9.04	62,439	55,258	0.44	0.58	1.13	1.12	1.47	2.85
1975	20,102	15,750	37.09	23,138	54.49	3,573	8.41	42,461	50,579	0.31	0.45	0.84	0.78	1.15	2.11
1976	21,186	23,551	37.13	35,660	56.21	4,225	6.66	63,436	56,422	0.42	0.63	1.12	1.11	1.68	2.99
1977	19,188	15,766	37.12	23,455	55.22	3,256	7.67	42,477	48,746	0.37	0.48	0.87	0.82	1.22	2.21
1978	25,318	30,340	37.20	46,651	57.20	4,567	5.60	81,558	72,732	0.42	0.64	1.12	1.20	1.84	3.22
1979	21,993	23,156	38.69	33,070	55.25	3,625	6.06	59,851	57,404	0.40	0.58	1.04	1.05	1.50	2.61
1980	19,511	15,457	33.96	27,588	60.60	2,477	5.44	45,522	49,899	0.31	0.55	0.91	0.79	1.41	2.33
1981	14,329	8,567	30.68	17,852	64.00	1,485	5.32	27,894	34,305	0.25	0.52	0.81	0.60	1.25	1.95
1982	12,384	7,509	34.48	12,138	55.74	2,131	9.79	21,778	28,767	0.26	0.42	0.76	0.60	0.98	1.76
1983	13,414	11,366	37.78	16,955	56.35	1,767	5.87	30,088	34,530	0.33	0.49	0.87	0.84	1.26	2.24
1984	11,511	6,780	33.24	12,647	62.01	969	4.75	20,396	27,244	0.25	0.46	0.75	0.59	1.10	1.77
1985	12,646	8,701	37.67	13,416	58.09	980	4.24	23,097	31,290	0.28	0.43	0.74	0.59	1.06	1.83
1986	12,117	8,819	36.95	14,156	59.31	894	3.75	23,869	30,312	0.29	0.47	0.79	0.73	1.17	1.97
1987	14,831	15,811	34.88	28,088	61.92	1,447	3.19	45,326	41,428	0.38	0.68	1.09	1.07	1.89	3.06
1988	16,947	19,100	35.66	31,556	58.91	2,906	5.43	53,562	51,726	0.37	0.61	1.04	1.13	1.86	3.16
1989	16,987	16,323	35.88	27,794	61.10	1,370	3.01	45,487	50,631	0.32	0.55	0.90	0.96	1.64	2.68
1990	14,591	11,010	28.29	26,115	67.10	1,797	4.62	38,922	44,452	0.25	0.59	0.83	0.75	1.79	2.53
1991	14,421	12,073	34.60	21,310	61.07	1,514	4.34	34,897	42,517	0.36	0.50	0.82	0.84	1.48	2.42
1992	15,000	15,017	33.73	29,146	65.47	355	0.80	44,518	46,136	0.33	0.63	0.96	1.00	1.94	2.97
1993	12,029	6,650	36.65	11,040	60.84	457	2.52	18,147	36,390	0.18	0.30	0.50	0.55	0.92	1.51
1994	9,827	6,908	36.62	11,865	62.90	89	0.47	18,862	27,510	0.25	0.43	0.68	0.70	1.21	1.91
1995	10,088	13,140	44.83	16,172	55.17	0*	0.00	29,312	35,591	0.77	0.87	0.82	2.79	3.00	2.91
1996	14,702	29,567	48.53	31,355	51.47	0*	0.00	60,922	62,711	0.97	0.97	0.97	4.16	4.13	4.14
Totals	487,012	461,091	--	680,150	--	63,856	--	1,205,097	1,270,629	--	--	--	--	--	--
Averages	14,312	13,076	38.68	19,660	55.76	1,935	5.73	34,672	36,604	0.38	0.53	0.94	0.93	1.34	2.31

\*Not Calculated

Table 17. Blue and ruffed grouse harvest statistics and hunt regulations, 1963-1996.

Year	Total			Total			Total			Total			Total		
	Ruffed Grouse Harvest	Blue Grouse Harvest	Forest Grouse Harvest	Total Hunters Afield	Total Hunter Days	Open	Close	Days	Daily Possession	Aggregate Bag Limits Daily	Daily Possession				
1963	5,470	7,372	13,608	7,425	12,313	?	?	?	4	8					
1964	5,354	6,686	12,691	6,487	10,566	9/26	10/16	21	4	8					
1965	3,225	4,924	8,669	6,005	105,074	9/25	10/22	28	4	8					
1966	6,966	4,659	12,321	6,683	12,387	9/24	10/21	28	4	8					
1967	8,476	6,773	17,526	9,420	17,773	9/23	10/31	39	4	8					
1968	17,048	12,604	32,414	13,061	26,537	9/28	10/29	32	4	8					
1969	9,490	10,419	21,498	12,523	24,572	9/27	11/02	37	4	8					
1970	15,590	13,515	31,898	12,775	26,619	9/26	11/06	42	4	8					
1971	15,759	13,749	31,901	13,363	29,100	9/25	11/30	67	4	8					
1972	20,648	19,221	42,518	16,640	38,940	9/23	11/30	69	4	8					
1973	7,153	36,846	45,232	17,588	44,738	9/22	11/30	70	4	8					
1974	24,561	32,236	62,439	21,920	55,258	9/28	11/30	64	4	8					
1975	15,750	23,138	42,461	20,102	50,579	9/20	11/30	72	4	8					
1976	23,551	35,660	63,436	21,186	56,422	9/18	11/30	74	4	8					
1977	15,766	23,455	42,477	19,188	48,746	9/17	11/30	75	4	8					
1978	30,340	46,651	81,558	25,318	72,732	9/16	11/30	76	4	8					
1979	23,156	33,070	59,851	21,993	57,404	9/15	11/30	77	4	8					
1980	15,457	27,588	45,522	19,511	49,899	9/20	11/30	72	4	8					
1981	8,557	17,852	27,894	14,329	34,305	9/19	11/30	73	4	8					
1982	7,509	12,138	21,778	12,384	28,767	9/18	11/30	74	4	8					
1983	11,366	16,955	30,088	13,414	34,530	9/17	11/30	75	4	8					
1984	6,780	12,647	20,396	11,511	27,244	9/15	11/30	77	4	8					
1985	8,701	13,416	23,097	12,646	31,290	9/14*	11/30	78	4	8					
1986	8,819	14,156	23,069	12,117	30,312	9/13	11/30	79	4	8					
1987	15,811	28,068	45,326	14,831	41,428	9/12	11/30	80	4	8					
1988	19,100	31,556	53,562	16,947	51,726	9/11	11/30	82	4	8					
1989	16,323	27,794	45,487	16,987	50,631	9/09	11/30	82	4	8					
1990	11,010	26,115	38,922	14,691	44,452	9/08	11/30	82	4	8					
1991	12,073	21,340	34,897	14,421	42,517	9/14	11/30	77	4	8					
1992	15,017	29,146	44,518	15,000	46,136	9/12	11/30	79	4	8					
1993	6,650	11,040	18,147	12,029	36,390	9/11	11/30	82	4	8					
1994	6,908	11,865	18,862	9,827	27,510	9/10	11/30	81	4	8					
1995	13,140	16,172	29,312	10,088	35,591	9/9	11/30	82	4	8					
1996	29,567	31,355	60,922	14,702	62,711	9/7	11/30	84	4	8					

\* Season opener changed to the second Saturday in September from the third Saturday in September.

\*\* From 1960 to 1963 a grouse stamp was required to hunt any grouse. In 1964, the entire state was opened to hunting without a stamp.

Table 18. Forest grouse field bag check summary, 1996.

Region and County	ALL HUNTS				COMPLETE HUNTS				
	Total Parties	Total Hunters	Total Hours	Total Birds/100 Hr	Complete Hunts	Total Hunters	Total Hours	Total Birds/ Hunter	Birds/ Hunter 100 Hr
<b>Northern Region</b>									
Box Elder	43	18	83	3	4	4	83	3	0.17
Cache	74	144	533	185	35	144	533	185	1.28
Davis	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--
Weber	104	149	597	183	31	149	597	183	1.23
<b>REGIONAL TOTALS</b>	<b>221</b>	<b>311</b>	<b>1,213</b>	<b>371</b>	<b>31</b>	<b>311</b>	<b>1,213</b>	<b>371</b>	<b>1.19</b>
<b>Central Region</b>									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southern Region</b>									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Northeastern Region</b>									
Daggett	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southeastern Region</b>									
Carbon	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>STATE TOTALS</b>	<b>221</b>	<b>311</b>	<b>1,213</b>	<b>371</b>	<b>31</b>	<b>311</b>	<b>1,213</b>	<b>371</b>	<b>1.19</b>
<b>STATE TOTALS</b>	<b>221</b>	<b>311</b>	<b>1,213</b>	<b>371</b>	<b>31</b>	<b>311</b>	<b>1,213</b>	<b>371</b>	<b>1.19</b>

Table 19. Forest grouse hunter success trend as determined by field bag checks, 1991-96.

Region and County	1991		1992		1993		1994		1995		1996	
	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr	Birds/ Hunter	Birds/ 100 Hr
<b>Northern Region</b>												
Box Elder	1.43	30	--	--	--	--	--	--	0.27	4	0.17	4
Cache	0.23	--	0.68	--	--	--	0.59	14	0.43	8	1.28	35
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	0.77	--	--	--	0.59	15	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	0.32	--	--	--	--	--	--	--	--	--	1.23	31
<b>REGIONAL TOTALS</b>	<b>0.47</b>	<b>55</b>	<b>0.70</b>	<b>--</b>	<b>--</b>	<b>0.59</b>	<b>14</b>	<b>0.42</b>	<b>8</b>	<b>1.19</b>	<b>31</b>	<b>31</b>
<b>Central Region</b>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	0.22	8	--	--	--	--	--	--	--	--	--	--
Utah	0.41	11	0.82	18	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>0.36</b>	<b>11</b>	<b>0.82</b>	<b>18</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Northeastern Region</b>												
Daggett	2.22	43	1.17	50	--	--	--	--	0.13	5	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	3.33	111	1.50	100	--	--	0.25	7	0.00	0	--	--
<b>REGIONAL TOTALS</b>	<b>2.50</b>	<b>55</b>	<b>1.25</b>	<b>59</b>	<b>--</b>	<b>--</b>	<b>0.25</b>	<b>7</b>	<b>0.12</b>	<b>4</b>	<b>--</b>	<b>--</b>
<b>Southeastern Region</b>												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>STATE TOTALS</b>	<b>0.50</b>	<b>32</b>	<b>0.74</b>	<b>87</b>	<b>--</b>	<b>--</b>	<b>0.53</b>	<b>13</b>	<b>0.40</b>	<b>8</b>	<b>1.19</b>	<b>31</b>

Table 20. Sex and age composition of harvested blue grouse, 1996.

Region and County	Sample Size	Adults			Young			Young/ 100 Adults	Young/ 100 Hens
		M	F	Total	M	F	Total		
<b>Northern Region</b>									
Box Elder	--	--	--	--	--	--	--	--	--
Cache	312	37	45	82	92	138	230	280	511
Davis	24	6	2	8	5	11	16	200	800
Morgan	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--
Summit	45	5	7	12	14	19	33	275	471
Weber	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>336</b>	<b>43</b>	<b>47</b>	<b>90</b>	<b>97</b>	<b>149</b>	<b>246</b>	<b>273</b>	<b>523</b>
<b>Central Region</b>									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	12	2	1	3	2	7	9	300	900
Sanpete	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	69	8	14	22	17	30	47	214	336
Wasatch	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>81</b>	<b>10</b>	<b>15</b>	<b>25</b>	<b>19</b>	<b>37</b>	<b>56</b>	<b>224</b>	<b>373</b>
<b>Southern Region</b>									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Northeastern Region</b>									
Daggett	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southeastern Region</b>									
Carbon	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>STATE TOTALS</b>	<b>417</b>	<b>53</b>	<b>62</b>	<b>115</b>	<b>116</b>	<b>186</b>	<b>302</b>	<b>263</b>	<b>487</b>

Table 21. Sex and age composition of harvested ruffed grouse, 1996.

Region and County	Sample Size	Adults			Young			Young/ 100 Adults	Young/ 100 Hens
		M	F	Total	M	F	Total		
<b>Northern Region</b>									
Box Elder	--	--	--	--	--	--	--	--	--
Cache	212	--	--	59	--	--	153	259	--
Davis	2	--	--	1	--	--	1	100	--
Morgan	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--
Summit	111	--	--	19	--	--	92	484	--
Weber	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>325</b>	<b>--</b>	<b>--</b>	<b>79</b>	<b>--</b>	<b>--</b>	<b>246</b>	<b>311</b>	<b>--</b>
<b>Central Region</b>									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	35	--	--	10	--	--	25	250	--
Sanpete	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	84	--	--	44	--	--	40	91	--
Wasatch	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>119</b>	<b>--</b>	<b>--</b>	<b>54</b>	<b>--</b>	<b>--</b>	<b>65</b>	<b>120</b>	<b>--</b>
<b>Southern Region</b>									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Northeastern Region</b>									
Daggett	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Southeastern Region</b>									
Carbon	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>STATE TOTALS</b>	<b>444</b>	<b>--</b>	<b>--</b>	<b>133</b>	<b>--</b>	<b>--</b>	<b>311</b>	<b>234</b>	<b>--</b>

# QUAIL

## SUMMARY

QUAIL

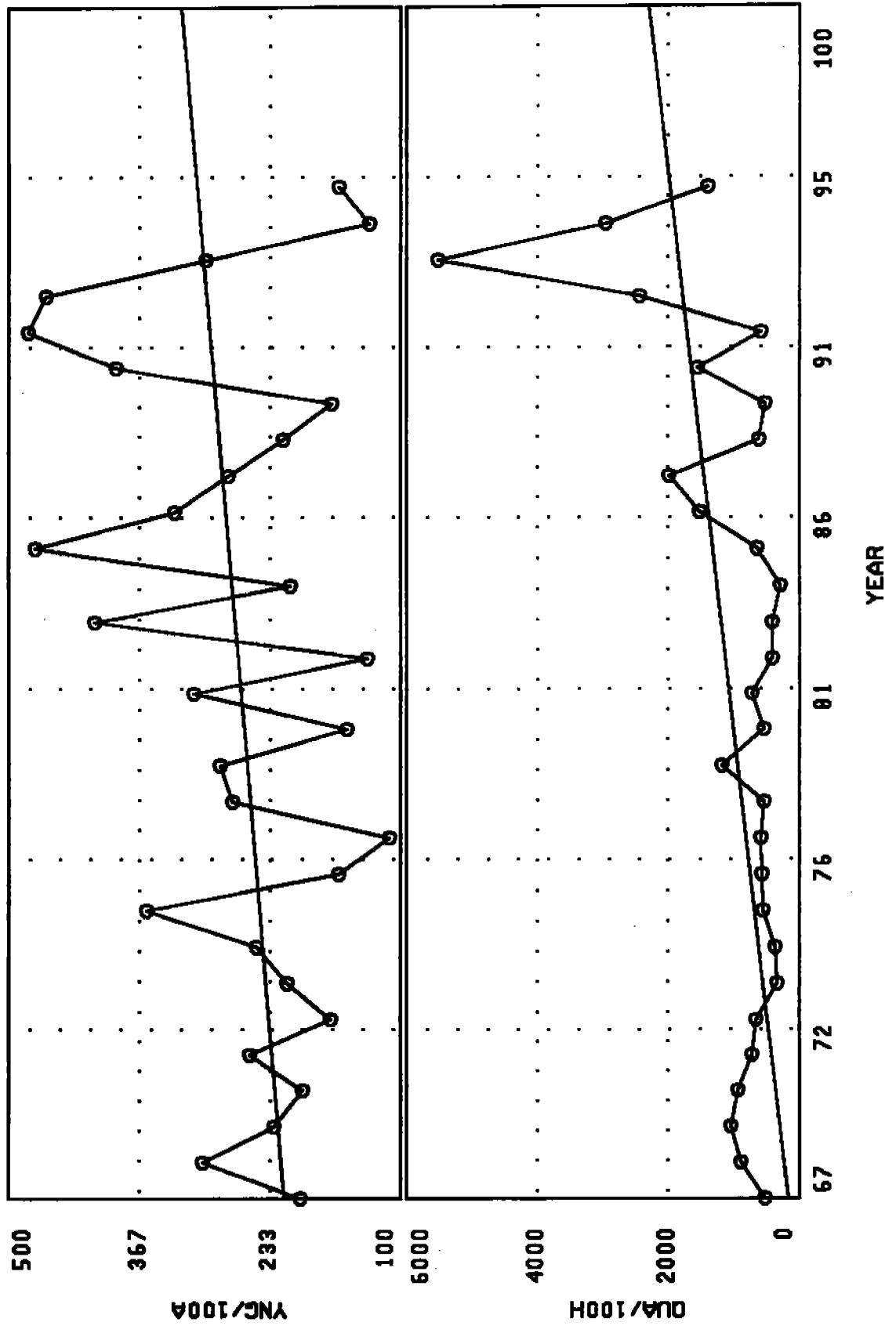




Statewide harvest statistics, when compared to 1995, showed an increase in total hunters and in total harvest. Hunter success (birds per hunter-day) increased 1 percent and remained below average statewide. Hunter-days afield increased 25 percent from 1995.

California quail are found primarily in urban areas of Utah. Hunter access to these birds is limited.

FIGURE 1. QUAIL PRODUCTION INDICES, 1967-96.



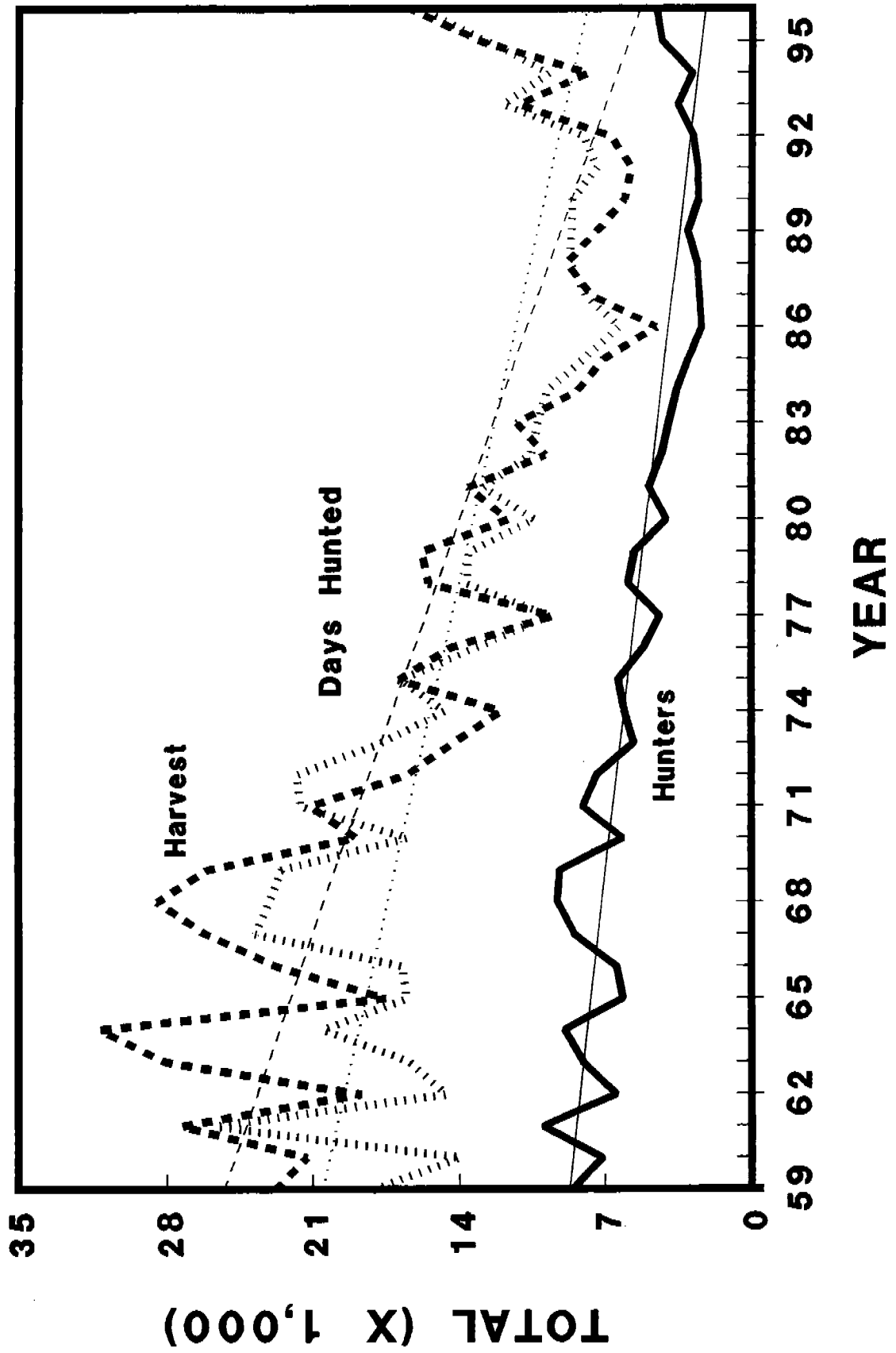


Figure 2. Statewide trends of quail harvest statistics, 1959-96.

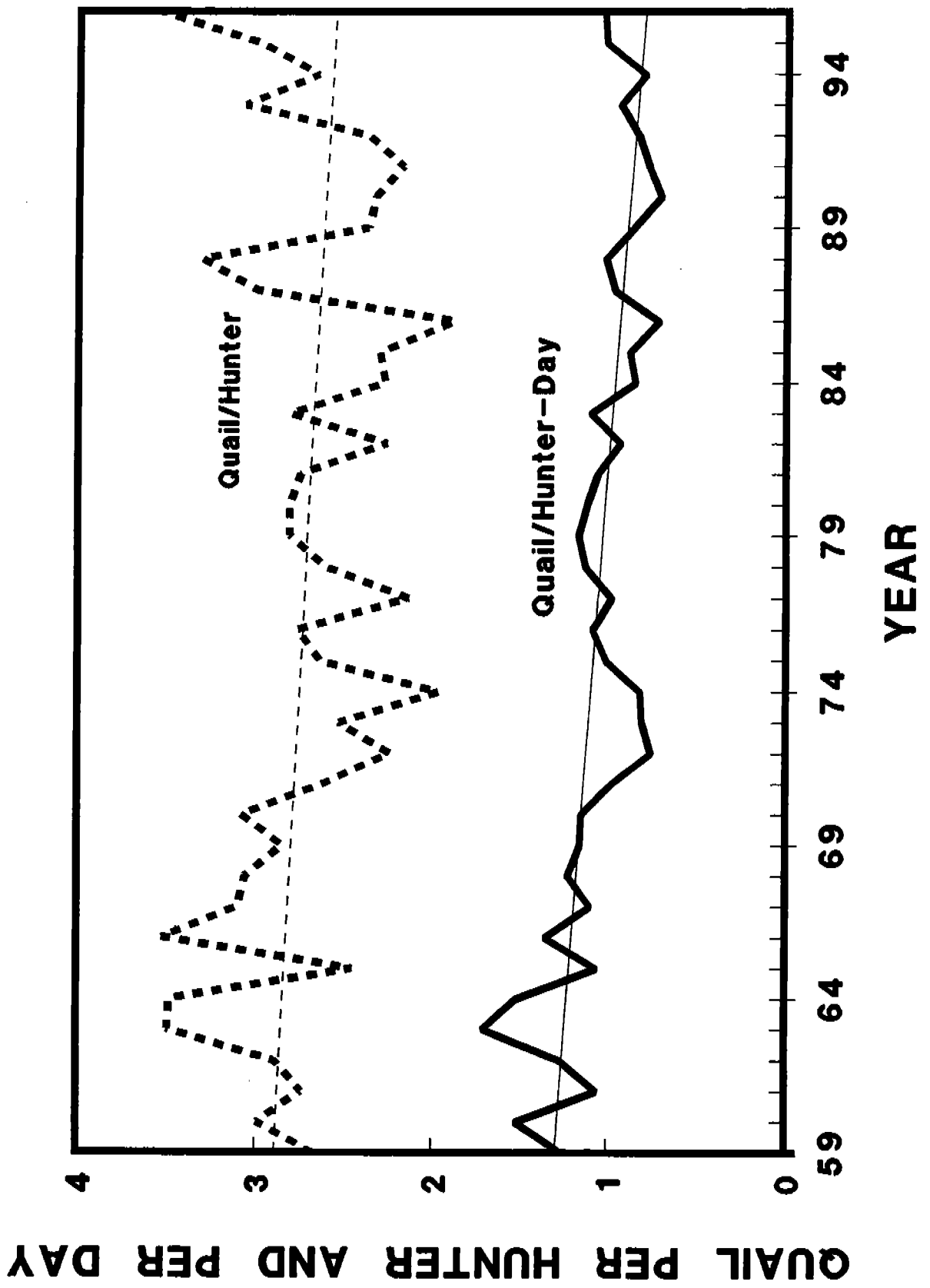


Figure 3. Statewide trends of quail hunter success rates, 1959-96.

## Brood Counts

Results of the annual random brood counts for quail for 1996 are shown in Table 1 of this section. Long-term trends of young per adult ratios, mean brood size and quail observed per 100 hours are shown in Tables 2-4 and Figure 1. Gambel's quail long period waterhole count trends are shown in Table 10. Survey results for 1996 compared to 1995 and the 10-year (1986-95) average follow:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Total quail observed	--	--	--
Young per 100 adults	--	--	--
Mean brood size	--	--	--
Quail observed per 100 hours	--	--	--
Total hours effort	--	--	--

No brood count data was collected in 1996.

## Harvest

Results of the annual hunter questionnaire for 1996 are shown in Table 5. Long-term trends of quail bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 6-8, and total statewide harvest statistics in Table 9.

Comparison of the 1996 season to 1995 and the 37-year average follow:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Quail hunters	4,622	+6	-13
Quail harvested	16,351	+26	+13
Hunter-days afield	15,862	+25	+18
Quail per hunter-day	1.03	+1	-2
Quail per hunter	3.54	+19	+34

Ninety percent confident interval for overall quail harvest is +/- 2,956. Standard deviation is 1.661081.

Quail hunters increased 6 percent from 1995, but remain 13 percent below the long-term average. Quail harvest increased 26 percent from 1995.

Long-term quail harvest statistics are shown in Figures 2 and 3.

## Field Bag Checks

A summary of field bag check data for 1996 is shown in Table 11.

Table 1. Quail summer inventory, 1996.

Region and County	Distinct Broods		Mixed Young & Adults		Mean Brood	Young		Adults w/o Young		Total Adults	Total Young	Young/100 Adults	Vehicle Miles		Hours of Effort		Birds/100 Hr			
	#	Adults	Young	Adults		Young	Young	Adults	Vehicle				Horse	Walk	Total	Total	Total	Total		
<b>Northern Region</b>																				
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>																				
<b>Central Region</b>																				
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sarpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>																				
<b>Southern Region</b>																				
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Kane*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Washington*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Wayne*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>																				
<b>Northeastern Region</b>																				
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Uintah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>																				
<b>Southeastern Region</b>																				
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>																				
<b>STATE TOTALS</b>																				
0	0	0	0	ERR	0	0	0	0	0	0	0	ERR	0	0	0	0	0	0	0	ERR

\*Washington, Kane and Wayne Counties, Gambel's quail; all others, California quail.

Table 2. Trend of quail young per 100 adults, 1986-96.

Region and County	Year											Average 1986-1995
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	1,400	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	1,400	224	--	656	--	--	--	--	--	--	760
<b>Central Region</b>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	700	220	--	--	--	900	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	700	220	--	--	900	--	--	--	--	--	--	607
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane*	--	--	--	--	--	--	--	--	--	--	--	--
Millard	44	545	790	--	179	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington*	412	250	126	194	367	--	294	132	194	--	--	--
Wayne*	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	456	272	242	194	252	--	294	132	194	--	--	255
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	300	--	--	375	--	400	--	--	--	--	--
Uintah	--	126	420	667	--	370	333	--	145	--	--	--
<b>REGIONAL TOTALS</b>	--	177	420	667	375	370	336	--	145	--	--	356
<b>Southeastern Region</b>												
Carbon	--	--	--	--	--	--	767	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	767	--	--	--	--	767
<b>STATE TOTALS</b>	473	331	276	220	391	480	462	299	132	163	--	323

\*Washington, Kane and Wayne Counties, Gambel's quail; all others, California quail.

Table 3. Trend of average brood size for quail, 1986-96.

Region and County	Year											Average 1986-96
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	6.33	--	11.80	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	14.00	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	14.00	5.33	--	11.80	--	--	--	--	--	--	10.38
<b>Central Region</b>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	9.00	--	--	--	--	--	--
Utah	7.50	11.00	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	7.50	11.00	--	--	9.00	--	--	--	--	--	--	9.17
<b>Southern Region</b>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane*	--	--	--	--	--	--	--	--	--	--	--	--
Millard	1.80	12.00	11.28	--	12.50	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington*	7.85	5.59	4.64	--	11.00	--	8.05	8.00	6.80	--	--	--
Wayne*	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	6.64	6.16	7.22	--	11.00	--	6.05	6.00	6.80	--	--	7.10
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	4.00	--	--	--	--
Duchesne	--	9.00	--	--	--	--	7.40	7.00	--	7.50	--	--
Uintah	--	8.50	4.50	6.70	--	7.40	6.25	--	7.50	--	--	6.75
<b>REGIONAL TOTALS</b>	--	8.15	4.50	6.70	--	7.40	6.25	--	7.50	--	--	6.75
<b>Southeastern Region</b>												
Carbon	--	--	--	--	--	7.67	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	7.67	--	--	--	--	--	7.67
<b>STATE TOTALS</b>	6.70	6.62	7.25	4.50	10.45	9.00	7.50	6.07	6.00	6.86	--	7.09

\*Washington, Kane and Wayne Counties, Gambel's quail; all others, California quail.



Table 4. Trend of quail observed per 100 hours, 1986-96.

Region and County	Year											Average	
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1986-96	1986-96
<b>Northern Region</b>													
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	1,100	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	1,600	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	1,600	1,100	--	--	--	--	--	--	--	--	--	--	1,300
<b>Central Region</b>													
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	2,000	1,600	--	--	1,000	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	2,000	1,600	--	--	1,000	--	--	--	--	--	--	--	1,533
<b>Southern Region</b>													
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane*	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	867	1,303	1,271	--	975	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington*	1,604	2,029	530	53	1,050	--	7,788	2,963	1,260	--	--	--	--
Wayne*	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	1,484	1,968	627	53	1,013	--	7,788	2,963	1,260	--	--	--	2,129
<b>Northeastern Region</b>													
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	366	--	--	475	--	250	--	--	--	--	--
Uintah	--	--	1,800	371	767	--	4,700	3,033	--	1,520	--	--	--
<b>REGIONAL TOTALS</b>	--	--	717	371	767	475	4,700	1,920	--	1,520	--	--	1,496
<b>Southeastern Region</b>													
Carbon	--	--	--	--	--	--	1,300	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	1,300	--	--	--	--	--	1,300
<b>STATE TOTALS</b>	1,519	1,984	622	524	1,564	580	2,433	5,531	2,963	1,400	--	--	1,912

\*Washington, Kane and Wayne Counties, Gambel's quail; all others, California quail.

Table 5. Summary of quail hunter success and distribution of harvest and hunting pressure by region and county, 1996.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	7	789	929	1.18	4.98	5.68
CACHE*	5	255	255	1.00	1.61	1.56
DAVIS	4	209	162	0.78	1.32	0.99
MORGAN*	1	23	0	0.00	0.15	0.00
RICH*	1	0	0	0.00	0.00	0.00
SUMMIT*	0	0	0	0.00	0.00	0.00
WEBER	12	650	418	0.64	4.10	2.56
<b>REGIONAL TOTALS</b>	<b>30</b>	<b>1,927</b>	<b>1,765</b>	<b>0.92</b>	<b>12.15</b>	<b>10.80</b>
<b>CENTRAL REGION</b>						
JUAB	1	23	23	1.00	0.15	0.14
SALT LAKE	2	69	209	3.00	0.44	1.28
SANPETE*	2	69	116	1.67	0.44	0.71
TOOELE	2	23	0	0.00	0.15	0.00
UTAH	33	2,043	1,509	0.74	12.88	9.23
WASATCH*	2	418	139	0.33	2.64	0.85
<b>REGIONAL TOTALS</b>	<b>42</b>	<b>2,647</b>	<b>1,997</b>	<b>0.75</b>	<b>16.69</b>	<b>12.22</b>
<b>SOUTHERN REGION</b>						
BEAVER*	0	0	0	0.00	0.00	0.00
GARFIELD*	0	0	0	0.00	0.00	0.00
IRON*	4	720	696	0.97	4.54	4.26
KANE	0	0	0	0.00	0.00	0.00
MILLARD	11	510	371	0.73	3.22	2.27
PIUTE	0	0	0	0.00	0.00	0.00
SEVIER	5	394	510	1.29	2.49	3.13
WASHINGTON	30	1,416	1,625	1.15	8.93	9.94
WAYNE*	1	23	69	3.00	0.15	0.43
<b>REGIONAL TOTALS</b>	<b>51</b>	<b>3,065</b>	<b>3,274</b>	<b>1.07</b>	<b>19.33</b>	<b>20.03</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT	1	0	139	0.00	0.00	0.85
DUCHESNE	36	3,553	4,343	1.22	22.40	26.56
UINTAH	33	2,833	3,994	1.41	17.86	24.43
<b>REGIONAL TOTALS</b>	<b>70</b>	<b>6,387</b>	<b>8,477</b>	<b>1.33</b>	<b>40.27</b>	<b>51.85</b>
<b>SOUTHEASTERN REGION</b>						
CARBON	0	0	0	0.00	0.00	0.00
EMERY	17	1,532	441	0.29	9.66	2.70
GRAND	3	301	255	0.85	1.90	1.56
SAN JUAN	0	0	0	0.00	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>20</b>	<b>1,834</b>	<b>696</b>	<b>0.38</b>	<b>11.57</b>	<b>4.26</b>
Unknown	2	0	139	0.00	0.00	0.85
<b>STATE TOTALS</b>	<b>215</b>	<b>15,863</b>	<b>16,351</b>	<b>1.03</b>	<b>100.00</b>	<b>100.00</b>

\*Total hunter-trips from questionnaire returns.

\*\*Closed to quail hunting in 1996.

Table 6. Summary of quail bagged per hunter-day by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	0.90	0.71	0.38	1.21	0.36	0.75	1.21	1.18
Cache	0.20*	0.10*	0.00*	1.00*	0.00*	1.86*	0.25*	1.00*
Davis	0.67	0.15	0.83	0.60	1.25	0.64	0.33	0.78
Morgan	0.00*	2.00*	0.00*	0.00*	0.14*	0.00*	0.00*	0.00*
Rich	0.00*	0.00*	0.00*	0.00*	0.00*	4.00*	0.00*	0.00*
Summit	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Weber	0.21	0.50*	0.54	0.56	0.73	0.22	1.43	0.64
<b>REGIONAL TOTALS</b>	<b>0.38</b>	<b>0.39</b>	<b>0.41</b>	<b>0.63</b>	<b>0.55</b>	<b>0.57</b>	<b>0.72</b>	<b>0.92</b>
<b>Central Region</b>								
Juab	0.00	0.19	7.25	0.00	1.50	1.67	0.00	1.00
Salt Lake	0.50	0.42	2.17	1.89	0.00	1.40	0.00	3.00
Sanpete	0.25*	0.00*	0.00*	0.00*	1.00*	1.00*	0.00*	1.67*
Tooele	3.25*	0.60*	0.29*	0.00*	0.00*	1.43*	0.00	0.00
Utah	0.84	0.75	0.61	0.54	0.48	0.63	1.18	0.74
Wasatch	0.00	0.00*	0.00*	0.00*	0.00*	2.00*	1.63*	0.33*
<b>REGIONAL TOTALS</b>	<b>0.87</b>	<b>0.55</b>	<b>0.88</b>	<b>0.61</b>	<b>0.47</b>	<b>0.85</b>	<b>1.15</b>	<b>0.75</b>
<b>Southern Region</b>								
Beaver	0.00	0.00	0.00	0.00	0.00	0.40*	0.00*	0.00*
Garfield	0.00	0.00	0.00	0.00	0.00	0.00*	0.00*	0.00*
Iron	1.67	0.00	0.00	0.00	1.63	1.00*	0.67*	0.97*
Kane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Millard	0.90	1.06	0.08	1.50	0.58	0.73	0.75	0.73
Piute	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sevier	0.00	0.00	1.80	0.47	0.43	0.50	0.15	1.29
Washington	1.26	0.60	0.84	1.04	1.57	0.93	1.08	1.15
Wayne	0.80	0.00	0.00	0.00	0.00	5.00*	0.00*	3.00*
<b>REGIONAL TOTALS</b>	<b>1.19</b>	<b>0.66</b>	<b>0.71</b>	<b>1.01</b>	<b>1.25</b>	<b>0.90</b>	<b>1.00</b>	<b>1.07</b>
<b>Northeastern Region</b>								
Daggett	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Duchesne	0.62	0.91	1.16	1.01	1.04	1.10	1.27	1.22
Uintah	0.73	0.98	0.47	0.90	0.63	0.76	0.75	1.41
<b>REGIONAL TOTALS</b>	<b>0.68</b>	<b>0.95</b>	<b>0.65</b>	<b>0.95</b>	<b>0.82</b>	<b>0.88</b>	<b>1.00</b>	<b>1.33</b>
<b>Southeastern Region</b>								
Carbon	5.00	1.11	4.50	1.12	1.33	0.00	3.67	0.00
Emery	0.50	1.86	2.11	0.97	0.92	0.57	1.19	0.29
Grand	0.00	2.00	0.00	0.00	0.00	0.00	2.80	0.85
San Juan	8.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00
<b>REGIONAL TOTALS</b>	<b>2.00</b>	<b>1.68</b>	<b>2.85</b>	<b>1.02</b>	<b>0.91</b>	<b>0.49</b>	<b>1.57</b>	<b>0.38</b>
<b>Unknown counties</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.50</b>	<b>0.00</b>	<b>6.00</b>	<b>0.00</b>
<b>STATE TOTALS</b>	<b>0.86</b>	<b>0.71</b>	<b>0.78</b>	<b>0.84</b>	<b>0.94</b>	<b>0.80</b>	<b>1.02</b>	<b>1.03</b>

\*Closed Season

Table 7. Percentage distribution of quail harvest by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	2.53	4.05	1.51	4.45	0.68	1.35	2.54	5.68
Cache	0.28*	0.34*	0.00*	1.31*	0.00*	2.92*	0.45*	1.56*
Davis	1.69	1.35	1.51	2.36	1.70	1.57	2.24	0.99
Morgan	0.00*	0.68*	0.00*	0.00*	0.17*	0.00*	0.00*	0.00*
Rich	0.00*	0.00*	0.00*	0.00*	0.00*	0.90*	0.00*	0.00*
Summit	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Weber	1.97	5.41	2.11	3.67	3.74	1.80	4.93	2.56
<b>REGIONAL TOTALS</b>	<b>6.46</b>	<b>11.83</b>	<b>5.12</b>	<b>11.78</b>	<b>6.28</b>	<b>8.54</b>	<b>10.15</b>	<b>10.80</b>
<b>Central Region</b>								
Juab	0.00	1.69	8.74	0.00	0.51	1.12	0.00	0.14
Salt Lake	0.84	2.70	3.92	4.45	0.00	3.15	0.00	1.28
Sanpete	0.56*	0.00*	0.00*	0.00*	0.17*	0.22*	0.00*	1.71*
Tooele	3.65*	1.01*	0.60*	0.00*	0.00*	2.25	0.00	0.00
Utah	21.35	16.89	17.17	12.31	8.49	10.56	11.79	9.23
Wasatch	0.00*	0.00*	0.00	0.00*	0.00*	1.80*	3.88*	0.85*
<b>REGIONAL TOTALS</b>	<b>26.41</b>	<b>22.30</b>	<b>30.43</b>	<b>16.76</b>	<b>9.17</b>	<b>19.10</b>	<b>15.67</b>	<b>12.22</b>
<b>Southern Region</b>								
Beaver	0.00	0.00	0.00	0.00	0.00	0.90*	0.00*	0.00*
Garfield	0.00	0.00	0.00	0.00	0.00	0.00*	0.00*	0.00*
Iron	1.40	0.00	0.00	0.00	2.21	2.70*	1.19*	4.26*
Kane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Millard	5.34	5.74	0.90	6.28	4.41	4.94	0.45	2.27
Piute	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sevier	0.00	0.00	2.71	1.83	2.55	0.22	0.30	3.13
Washington	32.30	17.57	34.64	13.88	48.05	39.33	28.81	9.94
Wayne	1.12	0.00	0.00	0.00	0.00	1.12*	0.00*	0.43*
<b>REGIONAL TOTALS</b>	<b>40.17</b>	<b>23.31</b>	<b>38.26</b>	<b>21.99</b>	<b>57.22</b>	<b>49.22</b>	<b>30.75</b>	<b>20.03</b>
<b>Northeastern Region</b>								
Daggett	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.85
Duchesne	9.55	7.10	6.63	18.33	9.00	7.64	19.85	26.56
Uintah	2.92	13.85	8.13	18.85	6.11	9.44	12.84	24.43
<b>REGIONAL TOTALS</b>	<b>22.47</b>	<b>20.95</b>	<b>15.06</b>	<b>37.18</b>	<b>15.11</b>	<b>17.08</b>	<b>32.69</b>	<b>51.85</b>
<b>Southeastern Region</b>								
Carbon	1.40	3.38	5.42	4.97	0.68	0.00	1.64	0.00
Emery	0.84	17.57	5.72	7.33	7.98	6.07	5.67	2.70
Grand	0.00	0.68	0.00	0.00	0.00	0.00	2.09	1.56
San Juan	2.25	0.00	0.00	0.00	0.00	0.00	0.45	0.00
<b>REGIONAL TOTALS</b>	<b>4.49</b>	<b>21.62</b>	<b>11.15</b>	<b>12.31</b>	<b>8.66</b>	<b>6.07</b>	<b>9.85</b>	<b>4.26</b>
Unknown counties	0.00	0.00	0.00	0.00	3.57	0.00	0.90	0.85
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

\*Closed Season

Table 8. Percentage distribution of quail hunting pressure by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	2.41	4.09	3.06	3.08	1.75	1.45	2.14	4.98
Cache	1.20*	2.40*	1.41*	1.10*	1.75*	1.27*	1.83*	1.61*
Davis	2.17	6.25	1.41	3.30	1.27	1.99	6.88	1.32
Morgan	0.96*	.24*	0.00*	2.64*	1.11*	0.72*	0.00*	0.15*
Rich	0.00*	0.00*	0.00*	0.00*	0.00*	0.18*	0.00*	0.00*
Summit	0.00*	0.72*	0.71*	0.00*	0.00*	0.00*	0.00*	0.00*
Weber	7.95	7.69	3.06	5.51	4.77	6.51	3.52	4.10
<b>REGIONAL TOTALS</b>	<b>14.70</b>	<b>21.39</b>	<b>9.65</b>	<b>15.64</b>	<b>10.65</b>	<b>12.12</b>	<b>14.37</b>	<b>12.15</b>
<b>Central Region</b>								
Juab	0.00	6.49	0.94	0.22	0.32	0.54	0.31	0.15
Salt Lake	1.45	4.57	1.41	1.98	0.64	1.81	0.00	0.44
Sanpete	1.93*	0.24*	0.94*	0.00*	0.16*	0.18*	0.61*	0.44*
Tooele	0.96*	1.20	1.65*	1.54*	0.48*	1.27*	0.31	0.15
Utah	21.69	16.11	22.12	19.16	16.54	13.56	10.25	12.88
Wasatch	0.00*	0.24*	0.00*	0.22*	0.00*	0.72*	2.45*	2.64*
<b>REGIONAL TOTALS</b>	<b>26.03</b>	<b>28.85</b>	<b>27.06</b>	<b>23.13</b>	<b>18.13</b>	<b>18.08</b>	<b>13.92</b>	<b>16.69</b>
<b>Southern Region</b>								
Beaver	0.00	0.00	0.00	0.00	0.16	1.81	0.00*	0.00*
Garfield	0.00	0.00	0.00	0.00	0.00	0.00	0.00*	0.00*
Iron	0.72	0.00	0.00	0.22	1.27	2.17	1.83*	4.54*
Kane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Millard	5.06	3.85	8.47	3.52	7.15	5.43	0.61	3.22
Piute	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
Sevier	0.00	0.00	1.18	3.30	5.56	0.36	1.99	2.49
Washington	21.93	20.91	34.24	11.23	28.62	34.18	27.22	8.93
Wayne	1.20	0.00	0.00	0.00	0.16	0.18	0.00*	0.15*
<b>REGIONAL TOTALS</b>	<b>28.92</b>	<b>25.00</b>	<b>41.89</b>	<b>18.28</b>	<b>42.93</b>	<b>44.12</b>	<b>31.65</b>	<b>19.33</b>
<b>Northeastern Region</b>								
Daggett	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00
Duchesne	13.25	5.53	4.47	15.20	8.11	5.61	16.06	22.40
Uintah	15.18	10.10	13.41	17.62	9.06	9.95	17.43	17.86
<b>REGIONAL TOTALS</b>	<b>28.44</b>	<b>15.63</b>	<b>18.12</b>	<b>32.82</b>	<b>17.17</b>	<b>15.55</b>	<b>33.49</b>	<b>40.27</b>
<b>Southeastern Region</b>								
Carbon	0.24	2.16	0.94	3.74	0.48	0.54	0.46	0.00
Emery	1.45	6.73	2.12	6.39	8.11	8.50	4.89	9.66
Grand	0.00	0.24	0.00	0.00	0.32	0.90	0.76	1.90
San Juan	0.24	0.00	0.00	0.00	0.00	0.00	0.31	0.00
<b>REGIONAL TOTALS</b>	<b>1.93</b>	<b>9.13</b>	<b>3.06</b>	<b>10.13</b>	<b>8.90</b>	<b>9.95</b>	<b>6.42</b>	<b>11.57</b>
<b>Unknown counties</b>	<b>0.00</b>	<b>0.00</b>	<b>0.24</b>	<b>0.00</b>	<b>2.23</b>	<b>0.18</b>	<b>0.15</b>	<b>0.00</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

\*Closed Season

Table 9. Statewide summary of quail harvest statistics, 1951-96.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Quail Per Hunter-Day	Quail Per Hunter
1951	3,856	6,362	7,069	0.90	1.65
1952	2,694	6,105	5,500	1.11	2.27
1953	2,676	5,753	4,494	1.28	2.15
1954	3,855	7,479	8,696	0.86	1.94
1955	--	--	--	0.17	2.10
1956	--	--	--	--	2.26
1957	--	--	--	--	1.85
1958	--	--	--	--	3.73
1959	8,554	22,854	18,174	1.26	2.67
1960	7,117	21,272	13,971	1.52	2.99
1961	9,980	27,362	25,746	1.06	2.74
1962	6,462	18,710	14,660	1.27	2.89
1963	8,059	28,088	16,383	1.71	3.49
1964	8,951	31,189	20,510	1.52	3.48
1965	6,163	17,532	16,528	1.06	2.45
1966	6,465	22,771	16,720	1.36	3.52
1967	8,455	26,187	23,806	1.10	3.10
1968	9,302	28,469	23,132	1.23	3.06
1969	9,160	26,119	22,529	1.16	2.85
1970	6,141	18,896	16,452	1.15	3.08
1971	8,039	21,082	21,595	0.98	2.62
1972	7,380	16,504	21,779	0.76	2.24
1973	5,654	14,324	17,777	0.81	2.53
1974	6,097	12,005	14,702	0.82	1.97
1975	6,397	16,903	16,805	1.01	2.64
1976	5,215	14,454	13,261	1.09	2.77
1977	4,446	9,496	9,646	0.98	2.14
1978	5,924	15,491	13,649	1.13	2.61
1979	5,632	15,821	13,550	1.17	2.81
1980	4,156	11,690	10,400	1.12	2.81
1981	4,946	13,586	12,843	1.06	2.75
1982	4,368	9,870	10,575	0.93	2.26
1983	4,012	11,248	10,232	1.10	2.81
1984	3,654	8,303	9,805	0.85	2.27
1985	3,065	7,051	7,994	0.88	2.30
1986	2,432	4,574	6,326	0.72	1.88
1987	2,549	7,648	7,918	0.97	3.00
1988	2,671	8,849	8,682	1.02	3.31
1989	3,111	7,384	8,607	0.86	2.37
1990	2,614	6,091	8,561	0.71	2.33
1991	2,644	5,775	7,393	0.78	2.18
1992	2,861	6,788	8,068	0.84	2.37
1993	3,649	11,192	11,952	0.94	3.07
1994	2,936	7,822	9,721	0.80	2.66
1995	4,374	13,023	12,712	1.02	2.98
1996	4,622	16,351	15,862	1.03	3.54
<b>Totals</b> <b>(1951-96)</b>	<b>221,338</b>	<b>608,473</b>	<b>564,785</b>	<b>--</b>	<b>--</b>
<b>Averages</b> <b>(1951-95)</b>	<b>5,286</b>	<b>14,442</b>	<b>13,388</b>	<b>1.05</b>	<b>2.63</b>

Table 10. Gambel's quail long period waterhole count trend on the west slope of the Beaver Dam Mountains, Washington County, 1978-96. These counts have been conducted since 1962.

Index	Year																	Average		
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1978-95
Total Young	67	263	72	37	86	114	166	47	163	348	59	35	33	208	415	465	135	33	--	152
Total Adults	29	77	52	25	33	14	86	11	48	139	47	18	9	36	128	158	102	17	--	57
Total Quail	86	330	124	62	118	128	252	58	211	487	106	53	42	243	543	623	237	50	--	209
Young per 100 Adults	363	329	138	148	268	814	193	427	340	250	126	194	367	694	324	294	132	194	--	304

Table 11. Quail field bag check summary, 1996.

Region and County	ALL HUNTS				COMPLETE HUNTS			
	Total Partles	Total Hunters	Total Hours	Total Birds/100 Hr	Complete Hunts	Total Hunters	Total Hours	Total Birds/100 Hr
Northern Region								
Box Elder	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--
Central Region								
Juab	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--
Southern Region								
Beaver	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--
Plute	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--
Northeastern Region								
Daggett	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--
Southeastern Region								
Carbon	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--
STATE TOTALS	0	0	0	0	0	0	0	ERR ERR



# HUNGARIAN PARTRIDGE

## SUMMARY



The 1996 hunt data indicated increased hunting pressure on Huns when compared to 1995. The number of Huns harvested increased 25 percent in 1996. Hunters afield remained the same. Total hunters and days afield remain below the long-term average.

We expected continued improvement in Hungarian partridge populations in Box Elder County due to the large quantity of agricultural land set aside in the Conservation Reserve Program. We believe that increases in hunter success since 1985 reflect increased partridge populations as a direct result of CRP. Exceptions (declines) in 1988 and 1989 were probably due to drought. In 1993, the dramatic decrease in number of Huns harvested probably resulted because of poor over-winter survival during 1992-93.

## Brood Counts

Results of the annual random brood counts for 1996 are shown in Table 1 of this section. Long-term trends of young per adult ratios, mean brood size and Huns observed per 100 hours are shown in Tables 2-4. Results of the survey for 1996 compared to 1995 and the 10-year (1986-95) average follow:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Total Huns observed	--	--	--
Young per 100 adults	--	--	--
Mean brood size	--	--	--
Huns observed per 100 hours	--	--	--
Total hours effort	--	--	--

No brood count data was collected in 1996.

## Harvest

### Hunter Questionnaire

Results of the annual hunter questionnaire for 1996 are shown in Table 5. Long-term trends of Huns bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 6-8 and total statewide harvest statistics in Table 9. The 1996 season compared to 1995 and the previous 37-year average follow:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Hungarian partridge hunters	2,299	0	-33
Hungarian partridge harvest	7,455	+25	+2
Hunter-days afield	7,409	+27	-13
Huns per hunter-day	1.01	-2	+25
Huns per hunter	3.24	+25	+60

Ninety percent confidence interval for overall hun harvest is +/- 1,484. Standard deviation is 1.236140.

Hungarian partridge hunters and hunting pressure increased in 1996. Overall success increased 25 percent from 1995. Harvest was 2 percent below the long-term average.

Long-term Hun harvest statistics are shown in Figures 1 and 2.

Hun harvest trends increased in 1985 with the implementation of the federal Conservation Reserve Program (CRP) and continued until the severe winter of 1992-93.

## Field Bag Checks

Hungarian partridge field bag check data collected in 1996 is shown in Table 10. Hunter success trends determined via this method are shown in Table 11. No data was collected in 1996.

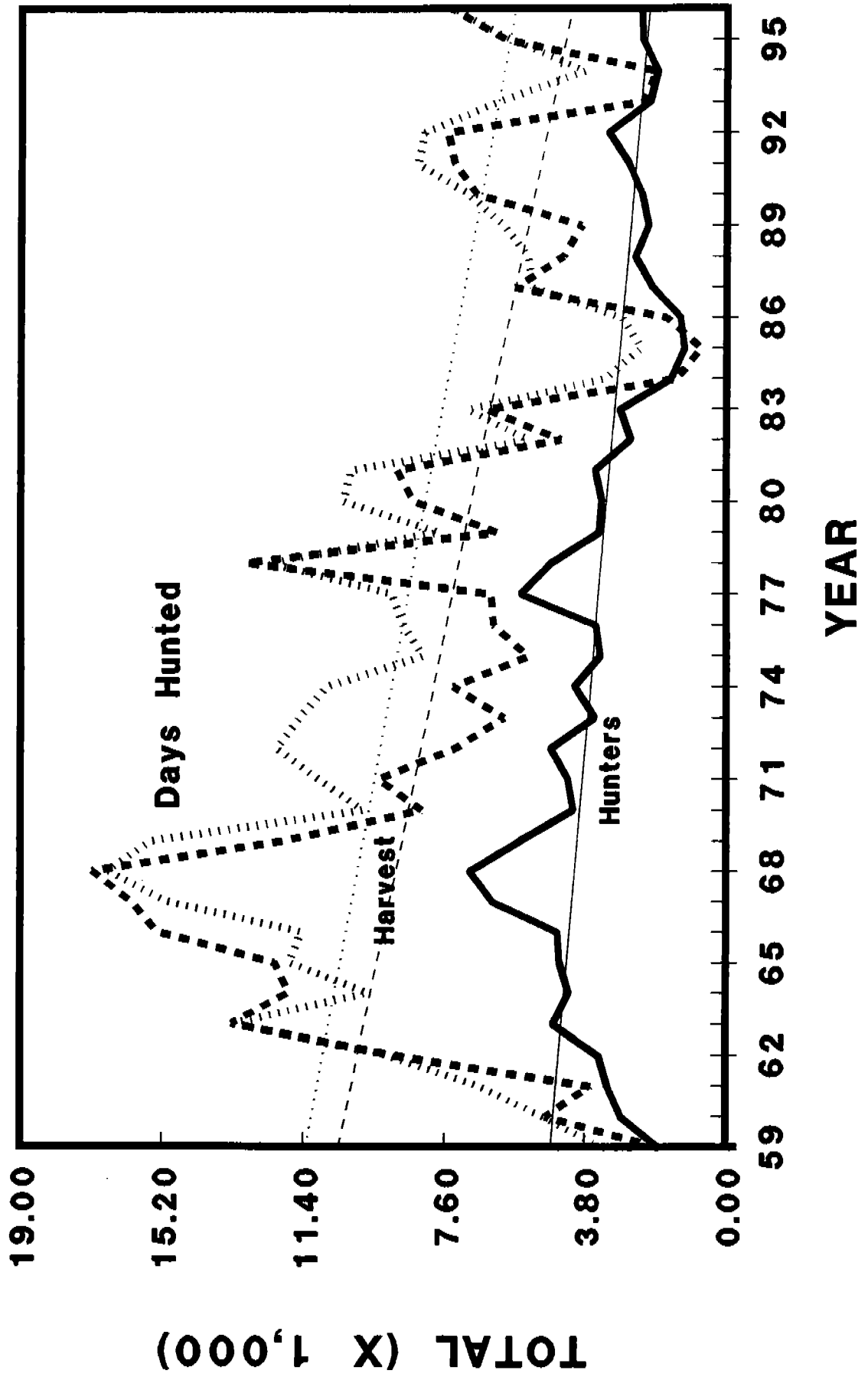


Figure 1. Statewide trends of Hungarian partridge harvest statistics, 1959-96.

HUNGARIAN PARTRIDGE PER HUNTER & PER DAY

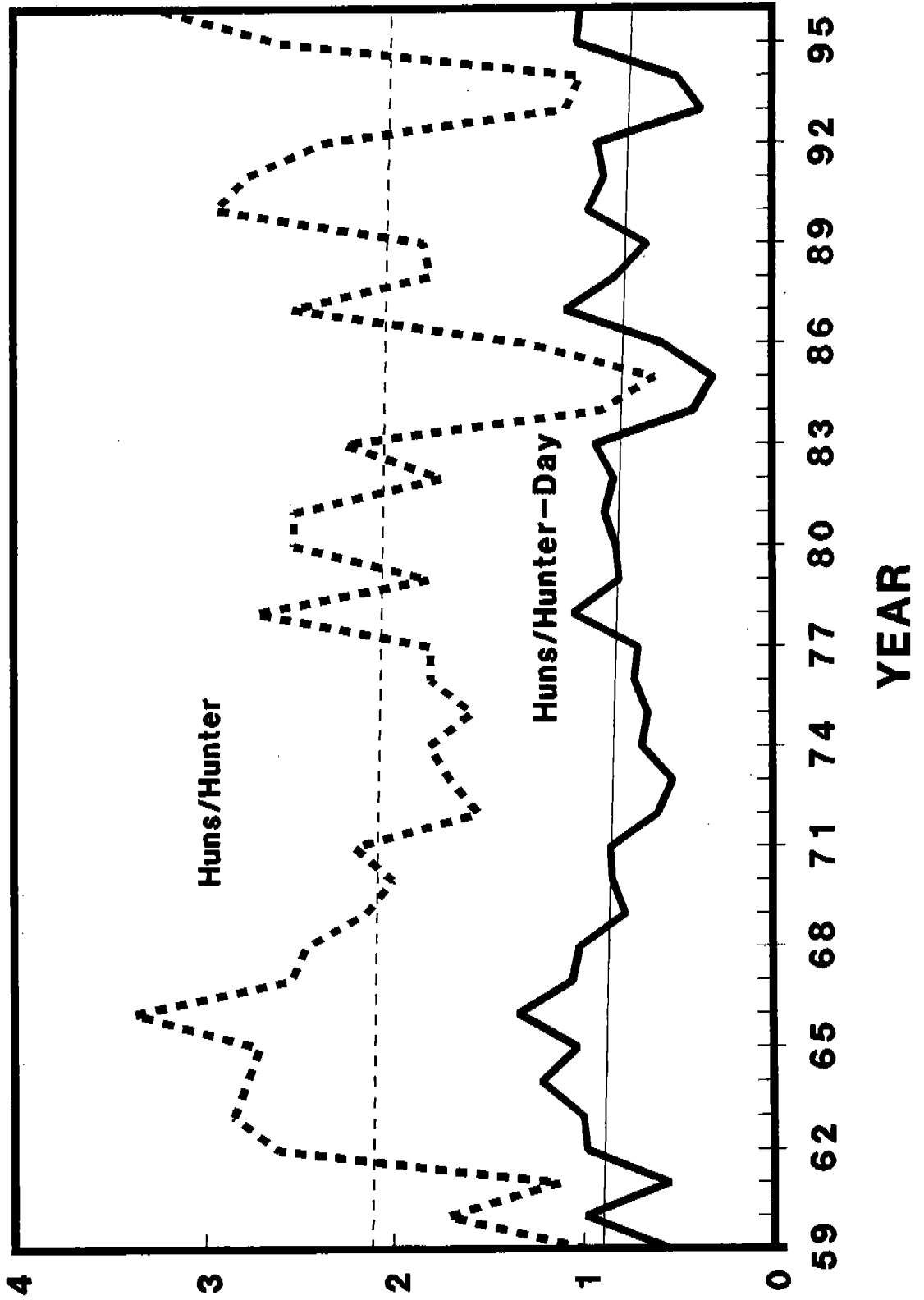


Figure 2. Statewide trends of Hungarian partridge hunter success rates, 1959-96.

Table 1. Hungarian partridge summer inventory, 1996.

Region and County	Distinct Broods		Mean Brood	Mixed Young & Adults		Total Young	Total Adults	Total Young	Young/100 Adult	Hours of Effort		Birds/100 Hr
	#	Adults		Young	Adults					Young	Vehicle Miles	
<b>Northern Region</b>												
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTAL</b>	--	--	--	--	--	--	--	--	--	--	--	--
<b>Central Region</b>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTAL</b>	--	--	--	--	--	--	--	--	--	--	--	--
<b>Southern Region</b>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
<b>REGIONAL TOTALS</b>												
<b>Northeastern Region</b>												
Daggett												
Duchesne												
Uintah												
<b>REGIONAL TOTALS</b>												
<b>Southeastern Region</b>												
Carbon												
Emery												
Grand												
San Juan												
<b>REGIONAL TOTALS</b>												
<b>STATE TOTALS</b>	0	0	0	ERR	0	0	0	0	ERR	--	0	ERR

Table 2. Trend of Hungarian partridge young per 100 adults, 1986-96.

Region and County	Year											Average 1986-95
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder	450	569	307	--	396	793	711	--	--	2,000	--	--
Cache	--	--	400	--	433	--	260	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>450</b>	<b>569</b>	<b>324</b>	<b>425</b>	<b>400</b>	<b>793</b>	<b>550</b>	--	--	<b>2,000</b>	--	<b>689</b>
<b>Central Region</b>												
Juab	--	--	--	--	--	--	800	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	400	--	400	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>400</b>	--	<b>400</b>	--	--	--	<b>800</b>	--	--	--	--	<b>533</b>
<b>Southern Region</b>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
<b>REGIONAL TOTALS</b>												
<b>Northeastern Region</b>												
Daggett												
Duchesne												
Uintah												
<b>REGIONAL TOTALS</b>												<b>750</b>
<b>Southeastern Region</b>												
Carbon												
Emery												
Grand												
San Juan												
<b>REGIONAL TOTALS</b>												
<b>STATE TOTALS</b>	<b>440</b>	<b>569</b>	<b>328</b>	<b>425</b>	<b>400</b>	<b>793</b>	<b>567</b>	<b>750</b>	--	<b>2,000</b>	--	<b>697</b>

Table 3. Trend of average brood size for Hungarian partridge, 1986-96.

Region and County	Year											Average	
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1986-96	1986-96
<b>Northern Region</b>													
Box Elder	18.00	11.88	8.60	8.60	8.25	12.50	9.00	--	--	20.00	--	--	--
Cache	--	--	--	--	6.00	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>18.00</b>	<b>11.88</b>	<b>8.60</b>	<b>8.60</b>	<b>8.90</b>	<b>12.50</b>	<b>9.00</b>	<b>--</b>	<b>--</b>	<b>20.00</b>	<b>--</b>	<b>--</b>	<b>12.17</b>
<b>Central Region</b>													
Juab	--	--	--	--	--	--	8.00	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	4.00	--	4.00	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>4.00</b>	<b>--</b>	<b>4.00</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>8.00</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>5.33</b>
<b>Southern Region</b>													
Beaver													
Garfield													
Iron													
Kane													
Millard													
Plute													
Sevier													
Washington													
Wayne													
<b>REGIONAL TOTALS</b>													
<b>Northeastern Region</b>													
Daggett													
Duchesne													
Uintah													
<b>REGIONAL TOTALS</b>													
<b>Southeastern Region</b>													
Carbon													
Emery													
Grand													
San Juan													
<b>REGIONAL TOTALS</b>													
<b>STATE TOTALS</b>	<b>11.00</b>	<b>11.88</b>	<b>7.83</b>	<b>8.60</b>	<b>8.90</b>	<b>12.50</b>	<b>8.83</b>	<b>15.00</b>	<b>--</b>	<b>20.00</b>	<b>--</b>	<b>--</b>	<b>11.60</b>



Table 4. Trend of Hungarian partridge observed per 100 hours, 1986-96.

Region and County	Year										Average 1986-95	
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995		1996
<b>Northern Region</b>												
Box Elder	96	561	438	--	529	327	96	--	--	175	--	
Cache	--	--	--	88	538	--	267	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>50</b>	<b>435</b>	<b>240</b>	<b>88</b>	<b>517</b>	<b>327</b>	<b>110</b>	<b>--</b>	<b>--</b>	<b>175</b>	<b>--</b>	<b>243</b>
<b>Central Region</b>												
Juab	--	--	--	--	--	--	450	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	500	--	500	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>500</b>	<b>--</b>	<b>500</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>450</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>483</b>
<b>Southern Region</b>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Plute												
Sevier												
Washington												
Wayne												
<b>REGIONAL TOTALS</b>												
<b>Northeastern Region</b>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	--	--	--	--	--	--	--	--	--	--	--	
Uintah	--	--	--	--	--	--	8,500	--	--	--	--	
<b>REGIONAL TOTALS</b>							<b>8,500</b>					<b>8,500</b>
<b>Southeastern Region</b>												
Carbon												
Emery												
Grand												
San Juan												
<b>REGIONAL TOTALS</b>												
<b>STATE TOTALS</b>	<b>60</b>	<b>435</b>	<b>248</b>	<b>88</b>	<b>617</b>	<b>327</b>	<b>118</b>	<b>40</b>	<b>--</b>	<b>176</b>	<b>--</b>	<b>223</b>

Table 5. Summary of Hungarian partridge hunter success and distribution of harvest and hunting pressure by region and county, 1996.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	58	3,971	3,948	0.99	53.61	52.96
CACHE	28	2,578	2,973	1.15	34.80	39.88
DAVIS	0	0	0	0.00	0.00	0.00
MORGAN	1	23	46	2.00	0.31	0.62
RICH	1	0	0	0.00	0.00	0.00
SUMMIT	0	0	0	0.00	0.00	0.00
WEBER	2	92	23	0.25	1.25	0.31
<b>REGIONAL TOTALS</b>	<b>90</b>	<b>6,666</b>	<b>6,991</b>	<b>1.05</b>	<b>89.97</b>	<b>93.78</b>
<b>CENTRAL REGION</b>						
JUAB	0	0	0	0.00	0.00	0.00
SALT LAKE**	0	0	0	0.00	0.00	0.00
SANPETE**	2	46	46	1.00	0.63	0.62
TOOELE	0	0	0	0.00	0.00	0.00
UTAH**	2	92	23	0.25	1.25	0.31
WASATCH**	1	23	0	0.00	0.31	0.00
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>162</b>	<b>69</b>	<b>0.43</b>	<b>2.19</b>	<b>0.93</b>
<b>SOUTHERN REGION</b>						
BEAVER**	3	209	162	0.78	2.82	2.18
GARFIELD**	0	0	0	0.00	0.00	0.00
IRON**	0	0	0	0.00	0.00	0.00
KANE**	0	0	0	0.00	0.00	0.00
MILLARD**	1	23	0	0.00	0.31	0.00
PIUTE**	0	0	0	0.00	0.00	0.00
SEVIER**	0	0	0	0.00	0.00	0.00
WASHINGTON**	0	0	0	0.00	0.00	0.00
WAYNE**	0	0	0	0.00	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>4</b>	<b>232</b>	<b>162</b>	<b>0.70</b>	<b>3.13</b>	<b>2.18</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT**	0	0	0	0.00	0.00	0.00
DUCHESNE**	2	69	0	0.00	0.94	0.00
UINTAH**	0	0	0	0.00	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>2</b>	<b>69</b>	<b>0</b>	<b>0.00</b>	<b>0.94</b>	<b>0.00</b>
<b>SOUTHEASTERN REGION</b>						
CARBON**	0	0	0	0.00	0.00	0.00
EMERY**	0	0	0	0.00	0.00	0.00
GRAND**	0	0	0	0.00	0.00	0.00
SAN JUAN**	0	0	0	0.00	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Unknown	2	278	232	0.83	3.76	3.12
<b>STATE TOTALS</b>	<b>103</b>	<b>7,409</b>	<b>7,455</b>	<b>1.01</b>	<b>100.00</b>	<b>100.00</b>

\* Total hunter-trips from questionnaire returns.

\*\* Closed to Hungarian partridge hunting in 1996.

Table 6. Summary of Hungarian partridge bagged per hunter-day by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	0.62	1.11	1.02	1.00	0.24	0.47	1.26	0.99
Cache	0.94	0.86	0.86	1.07	0.56	0.80	0.95	1.15
Davis	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan	1.33	0.00	0.00	0.04	0.57	0.00	0.00	2.00
Rich	0.00	2.13	1.35	0.76	0.53	0.80	0.00	0.00
Summit	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
Weber	1.00	1.00	0.40	0.00	0.00	0.00	0.45	0.25
<b>REGIONAL TOTALS</b>	<b>0.67</b>	<b>1.02</b>	<b>0.97</b>	<b>0.95</b>	<b>0.35</b>	<b>0.52</b>	<b>1.11</b>	<b>1.05</b>
<b>Central Region</b>								
Juab	0.00*	0.00*	0.00*	2.00	0.00	0.00	0.00	0.00
Salt Lake	0.67*	0.00*	0.00*	1.00*	0.00*	0.00*	0.00*	0.00*
Sanpete	0.00*	0.00*	0.00*	0.00*	1.00*	0.00*	1.25*	1.00*
Tooele	0.47	0.46	0.02	0.25	0.50	1.50	0.00	0.00
Utah	0.00*	0.00*	0.00*	0.67*	0.13*	0.00*	0.00*	0.25*
Wasatch	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.50*	0.00*
<b>REGIONAL TOTALS</b>	<b>0.41</b>	<b>0.40</b>	<b>0.02</b>	<b>0.40</b>	<b>0.23</b>	<b>0.50</b>	<b>0.40</b>	<b>0.43</b>
<b>Southern Region</b>								
Beaver	0.00*	0.00*	0.00*	2.00*	0.00*	0.00*	0.00*	0.78*
Garfield	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Iron	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Kane	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Millard	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Piute	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Sevier	0.00*	3.00*	0.00*	1.67*	0.00*	0.00*	0.00*	0.00*
Washington	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Wasatch	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
<b>REGIONAL TOTALS</b>	<b>0.00</b>	<b>0.60</b>	<b>0.00</b>	<b>1.40</b>	<b>0.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.78</b>
<b>Northeastern Region</b>								
Daggett	0.00*	0.00*	1.25*	0.00*	0.00*	0.00*	0.00*	0.00*
Duchesne	0.00*	0.00*	1.00*	0.00*	0.00*	0.00*	0.17*	0.00*
Uintah	1.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
<b>REGIONAL TOTALS</b>	<b>0.00</b>	<b>0.00</b>	<b>1.20</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.13</b>	<b>0.00</b>
<b>Southeastern Region</b>								
Carbon	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Emery	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.17*	0.00*
Grand	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
San Juan	1.50*	0.00*	0.00*	0.00*	0.00*	0.00*	6.00*	0.00*
<b>REGIONAL TOTALS</b>	<b>1.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.00</b>	<b>0.00</b>	<b>1.00</b>	<b>0.00</b>
<b>Unknown counties</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.83</b>
<b>STATE TOTALS</b>	<b>0.65</b>	<b>0.97</b>	<b>0.88</b>	<b>0.92</b>	<b>0.37</b>	<b>0.50</b>	<b>1.03</b>	<b>1.01</b>

\*Closed Season

Table 7. Percentage distribution of Hungarian partridge harvest by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	76.20	60.80	73.82	61.41	33.34	55.97	62.87	52.96
Cache	8.47	31.01	16.75	30.59	37.51	33.95	29.97	39.88
Davis	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan	2.12	0.00	0.00	0.24	3.33	0.00	0.00	0.61
Rich	0.00	5.17	6.37	3.76	7.50	7.34	0.00	0.00
Summit	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00
Weber	2.12	0.30	1.42	0.00	0.00	0.00	1.63	0.31
<b>REGIONAL TOTALS</b>	<b>93.13</b>	<b>97.28</b>	<b>98.35</b>	<b>96.00</b>	<b>81.68</b>	<b>97.25</b>	<b>95.45</b>	<b>93.78</b>
<b>Central Region</b>								
Juab	0.00*	0.00*	0.00*	0.47	0.00	0.00	0.00	0.00
Salt Lake	1.06*	0.00*	0.00*	0.24*	0.00	0.00*	0.00*	0.00*
Sanpete	0.00*	0.00*	0.00*	0.00*	1.67	0.00*	1.63*	0.62*
Tooele	3.70	1.82	0.24	1.18	2.50	2.75	0.00	0.00
Utah	0.00*	0.00*	0.00*	0.47*	3.33	0.00*	0.00*	0.31*
Wasatch	0.00*	0.00*	0.00*	0.00*	0.00	0.00*	0.33*	0.00*
<b>REGIONAL TOTALS</b>	<b>4.15</b>	<b>4.76</b>	<b>1.82</b>	<b>0.24</b>	<b>2.35</b>	<b>7.50</b>	<b>2.75</b>	<b>0.93</b>
<b>Southern Region</b>								
Beaver	0.00*	0.00*	0.00*	0.47*	0.00	0.00*	0.00*	2.18*
Garfield	0.00*	0.00*	0.00*	0.00*	0.83	0.00*	0.00*	0.00*
Iron	0.00*	0.00*	0.00*	0.00*	0.00	0.00*	0.00*	0.00*
Kane	0.00*	0.00*	0.00*	0.00*	0.00	0.00*	0.00*	0.00*
Millard	0.00*	0.00*	0.00*	0.00*	0.00	0.00*	0.00*	0.00*
Piute	0.00*	0.00*	0.00*	0.00*	0.00	0.00*	0.00*	0.00*
Sevier	0.00*	0.91*	0.00*	1.18*	0.00	0.00*	0.00*	0.00*
Washington	0.00*	0.00*	0.00*	0.00*	0.00	0.00*	0.00*	0.00*
Wayne	0.00*	0.00*	0.00*	0.00	0.00	0.00*	0.00*	0.00*
<b>REGIONAL TOTALS</b>	<b>0.00*</b>	<b>0.91</b>	<b>0.00*</b>	<b>1.65*</b>	<b>0.83</b>	<b>0.00</b>	<b>0.00</b>	<b>2.18</b>
<b>Northeastern Region</b>								
Daggett	0.00*	0.00*	1.18*	0.00*	0.00	0.00*	0.00*	0.00*
Duchesne	0.00*	0.00*	0.24*	0.00*	0.00	0.00*	0.33*	0.00*
Uintah	0.53*	0.00*	0.00*	0.00*	0.00	0.00*	0.00*	0.00*
<b>REGIONAL TOTALS</b>	<b>0.53</b>	<b>0.00</b>	<b>0.00*</b>	<b>0.00*</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>
<b>Southeastern Region</b>								
Carbon	0.00*	0.00*	0.00*	0.00*	0.00	0.00*	0.00*	0.00*
Emery	0.00*	0.00*	0.00*	0.00*	1.67	0.00*	0.33*	0.00*
Grand	0.00*	0.00*	0.00*	0.00*	0.00	0.00*	0.00*	0.00*
San Juan	1.59*	0.00*	0.00*	0.00*	0.00	0.00*	1.95*	0.00*
<b>REGIONAL TOTALS</b>	<b>0.37</b>	<b>1.59</b>	<b>0.00</b>	<b>0.00*</b>	<b>0.00</b>	<b>1.67</b>	<b>0.00</b>	<b>0.00</b>
<b>Unknown counties</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.33</b>	<b>0.00</b>	<b>0.00</b>	<b>3.12</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

\*Closed Season

Table 8. Percentage distribution of Hungarian partridge hunting pressure by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	80.42	53.10	64.04	56.41	51.23	60.09	51.17	53.61
Cache	5.84	34.81	17.26	26.25	24.85	21.10	32.44	64.80
Davis	1.03	0.00	0.42	0.87	0.00	1.83	0.00	0.00
Morgan	1.03	2.36	0.42	5.21	2.15	1.83	0.00	0.31
Rich	0.69	2.36	4.16	4.56	5.22	4.59	0.00	0.00
Summit	0.00	0.00	0.00	0.00	0.92	0.92	1.00	0.00
Weber	1.37	0.30	3.12	0.00	2.15	2.29	3.68	1.25
<b>REGIONAL TOTALS</b>	<b>90.39</b>	<b>92.93</b>	<b>89.40</b>	<b>93.29</b>	<b>86.52</b>	<b>92.67</b>	<b>88.30</b>	<b>89.97</b>
<b>Central Region</b>								
Juab	0.00*	0.59*	0.00*	0.22	0.31	0.46	0.33	0.00
Salt Lake	1.03*	0.00*	0.00*	0.22*	0.31*	0.00*	0.00*	0.00*
Sanpete	0.00*	0.00*	0.00*	0.00*	0.61*	0.92*	1.34*	0.63*
Tooele	5.16	3.84	9.15*	4.34	1.84	0.92	0.67	0.00
Utah	0.34*	0.00*	0.21*	0.65*	9.20*	0.46*	2.01*	1.25*
Wasatch	1.03*	0.00*	0.00*	0.00*	0.00*	0.00*	0.67*	0.31*
<b>REGIONAL TOTALS</b>	<b>7.56</b>	<b>4.43</b>	<b>9.36</b>	<b>5.42</b>	<b>12.27</b>	<b>2.75</b>	<b>5.02</b>	<b>2.19</b>
<b>Southern Region</b>								
Beaver	0.00*	1.18*	0.21*	0.22*	0.00*	0.46*	0.33*	2.82*
Garfield	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Iron	0.00*	0.00*	0.00*	0.22*	0.00*	0.00*	0.00*	0.00*
Kane	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Millard	0.00*	0.00*	0.00*	0.00*	0.61*	0.00*	0.00*	0.31*
Piute	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Sevier	0.69*	0.30*	0.00*	0.65*	0.00*	0.46*	0.00*	0.00*
Washington	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Wayne	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
<b>REGIONAL TOTALS</b>	<b>0.69</b>	<b>1.48</b>	<b>0.21</b>	<b>1.08</b>	<b>0.61</b>	<b>0.92</b>	<b>0.33</b>	<b>3.13</b>
<b>Northeastern Region</b>								
Daggett	0.00*	0.00*	0.83*	0.00*	0.00*	0.00*	0.00*	0.00*
Duchesne	0.00*	0.00*	0.21*	0.00*	0.00*	1.38*	2.01*	0.94*
Uintah	0.34*	0.00*	0.00*	0.22*	0.00*	1.46*	0.67*	0.00*
<b>REGIONAL TOTALS</b>	<b>0.34</b>	<b>0.00*</b>	<b>1.04</b>	<b>0.22</b>	<b>0.00</b>	<b>1.83*</b>	<b>2.68*</b>	<b>0.94</b>
<b>Southeastern Region</b>								
Carbon	0.34*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Emery	0.00*	1.18*	0.00*	0.00*	0.00*	1.83*	2.01*	0.00*
Grand	0.00*	0.00*	0.00*	0.00*	0.31*	0.00*	0.00*	0.00*
San Juan	0.69*	0.00	0.00*	0.00*	0.00*	0.00*	0.33*	0.00*
<b>REGIONAL TOTALS</b>	<b>1.03</b>	<b>1.18</b>	<b>0.00</b>	<b>0.00</b>	<b>0.31</b>	<b>1.83</b>	<b>2.34</b>	<b>0.00</b>
<b>Unknown counties</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.31</b>	<b>0.00</b>	<b>1.34</b>	<b>3.76</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

\*Closed Season

**Table 9. Statewide summary of Hungarian partridge harvest statistics, 1955-96.**

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Huns Per Hunter-Day	Huns Per Hunter
1955	--	--	--	--	0.39
1956	--	--	--	--	0.89
1957	--	--	--	--	0.45
1958	--	--	--	--	1.34
1959	1,846	1,820	3,354	0.54	0.99
1960	2,847	4,877	4,929	0.99	1.71
1961	3,205	3,648	6,645	0.54	1.13
1962	3,440	8,970	9,153	0.98	2.61
1963	4,676	13,343	13,291	1.00	2.85
1964	4,249	11,812	9,688	1.22	2.78
1965	4,498	12,183	11,798	1.03	2.71
1966	4,549	15,348	11,473	1.34	3.37
1967	6,321	16,049	15,105	1.06	2.54
1968	6,935	17,089	16,674	1.02	2.46
1969	5,591	11,966	15,515	0.77	2.14
1970	4,128	8,236	9,818	0.84	2.00
1971	4,276	9,407	11,011	0.85	2.20
1972	4,754	7,335	12,135	0.60	1.54
1973	3,566	6,014	11,516	0.52	1.69
1974	4,103	7,389	10,789	0.68	1.80
1975	3,409	5,358	8,216	0.65	1.57
1976	3,517	6,287	8,753	0.72	1.79
1977	5,557	6,360	9,058	0.70	1.79
1978	4,743	12,969	12,328	1.05	2.73
1979	3,435	6,200	7,787	0.80	1.80
1980	3,359	8,466	10,366	0.82	2.52
1981	3,545	8,916	10,147	0.88	2.52
1982	2,590	4,475	5,379	0.83	1.73
1983	2,889	6,506	6,998	0.93	2.25
1984	1,523	1,360	3,309	0.41	0.89
1985	1,157	707	2,314	0.31	0.61
1986	1,257	1,627	2,843	0.57	1.30
1987	2,010	5,711	5,246	1.09	2.53
1988	2,471	4,424	5,392	0.82	1.79
1989	2,136	3,920	6,035	0.65	1.83
1990	2,305	6,770	6,976	0.97	2.94
1991	2,662	7,376	8,367	0.88	2.77
1992	3,198	7,553	8,192	0.92	2.36
1993	2,090	2,280	6,194	0.37	1.09
1994	1,899	1,916	3,832	0.50	1.01
1995	2,294	5,967	5,812	1.03	2.60
1996	2,299	7,455	7,409	1.01	3.24
<b>Totals (1959-96)</b>	<b>129,329</b>	<b>278,089</b>	<b>323,847</b>	<b>--</b>	<b>--</b>
<b>Averages (1959-95)</b>	<b>3,433</b>	<b>7,314</b>	<b>8,552</b>	<b>0.81</b>	<b>2.03</b>

Table 10. Hungarian partridge field bag check summary, 1996.

Region and County	All Hunts			Complete Hunts			Total Birds/ Hunter 100 Hr
	Total Parties	Total Hunters	Total Hours	Complete Hunts	Total Hunters	Total Hours	
<b>Northern Region</b>							
Box Elder	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--
<b>Central Region</b>							
Juab	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--
<b>Southern Region</b>							
Beaver							
Garfield							
Iron							
Kane							
Millard							
Piute							
Sevier							
Washington							
Wayne							
<b>REGIONAL TOTALS</b>							
<b>Northeastern Region</b>							
Daggett							
Duchesne							
Uintah							
<b>REGIONAL TOTALS</b>							
<b>Southeastern Region</b>							
Carbon							
Emery							
Grand							
San Juan							
<b>REGIONAL TOTALS</b>							
<b>STATE TOTALS</b>	--	--	--	--	--	--	--

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

Table 11. Hungarian partridge hunter success trend as determined by field bag check, 1991-96.

Region and County	1991		1992		1993		1994		1995		1996	
	Birds/ Hunter 100 Hr	Birds/ Hunter 100 Hr	Birds/ Hunter 100 Hr	Birds/ Hunter 100 Hr	Birds/ Hunter 100 Hr	Birds/ Hunter 100 Hr	Birds/ Hunter 100 Hr	Birds/ Hunter 100 Hr	Birds/ Hunter 100 Hr	Birds/ Hunter 100 Hr	Birds/ Hunter 100 Hr	Birds/ Hunter 100 Hr
<b>Northern Region</b>												
Box Elder	0.55	55	1.50	50								
Cache												
Davis												
Morgan												
Rich			0.55	86								
Summit												
Weber												
<b>REGIONAL TOTALS</b>	0.55	55	0.69	69								
<b>Central Region</b>												
Juab												
Salt Lake												
Sanpete												
Tooele												
Utah												
Wasatch												
<b>REGIONAL TOTALS</b>												
<b>Southern Region</b>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
<b>REGIONAL TOTALS</b>												
<b>Northeastern Region</b>												
Daggett												
Duchesne												
Uintah												
<b>REGIONAL TOTALS</b>												
<b>Southeastern Region</b>												
Carbon												
Emery												
Grand												
San Juan												
<b>REGIONAL TOTALS</b>												
<b>STATE TOTALS</b>												

NOT APPLICABLE

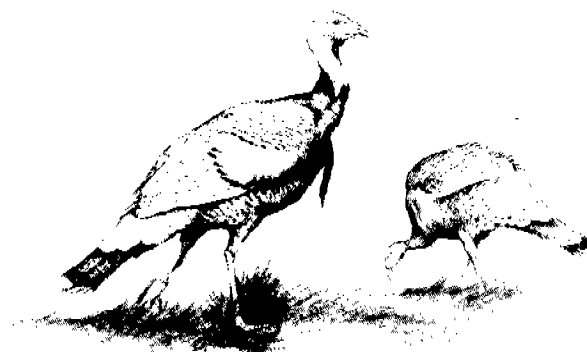
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# WILD TURKEY

## SUMMARY



In 1994, the entire state went to limited entry turkey hunting for both the Merriam's and Rio Grande sub-species. Drawing odds for each of the 1996 hunts is shown in Table 6.

## **Merriam's Turkeys**

Merriam's turkey populations remain stable. Limited entry hunting was allowed on 4 units, during a total of 6 seasons. Two units were open for early and late seasons. A total of 355 permits were sold. A fall turkey hunting season was not held in Utah in 1996. A total of 84 Merriam's turkeys were harvested in 1996. Merriam's turkey hunters experienced a 26 percent success rate.

## **Rio Grande Turkeys**

One hundred seventy four permits were sold in 1996. A total of 107 Rio Grande turkeys were harvested in 1996 for a success rate of 64 percent.

## **Sealed-Bid and Auction Permits**

In 1996 a limited entry wild turkey sealed-bid permit was available again. Minimum bid on the permit was \$350. The permit sold for \$531.00. In addition, 3 limited entry wild turkey auction permits were available and sold for \$700.00, \$600.00 and \$380.00.

# Harvest

## Spring Merriam's Gobbler Season

Results of the 1996 spring season are shown in Table 1 of this section. The trend of these data since 1968 is shown in Table 2 and Figures 1 and 2. Statewide summary of fall hunt statistics is in Table 3. The 1996 spring season survey compared to 1995 and the previous 27-year average follow:

	<u>1996</u>	<u>Percent change from 1995</u>	<u>Percent change from Average</u>
Permits sold	355	+3	+31
Hunters afield	320	+8	+31
Turkeys harvested	84	+31	+165
Hunter-days afield	1,151	-19	+52
Percent hunter success	26	+18	+114
Turkeys bagged per hunter-day	0.07	+40	+62
Percent of hunters who observed turkeys	78	--	--

Beginning in 1994, a limited entry turkey hunting program was implemented in Utah. Total harvest increased from 64 in 1995 to 84 in 1996. Hunter success rates increased 18 percent from 1995 and were 114 percent above the long-term average.

## Spring Rio Grande Gobbler Season

Results of the 1996 spring season are shown in Table 4 of this section. The trend of these data since 1991 is shown in Table 5. The 1996 spring season compared to 1995 and the previous 5-year average follows:

	<u>1996</u>	<u>Percent change from 1996</u>	<u>Percent change from Average</u>
Permits sold	174	+24	+169
Hunters afield	166	+35	+170
Turkeys harvested	107	+37	+156
Hunter-days afield	776	+24	+172
Percent hunter success	64	+2	-5
Turkeys bagged per hunter-day	0.14	+17	-13
Percent of hunters who observed turkeys	88	--	--

One hundred sixty six hunters averaged 4.67 days-afield each to harvest a total of 107 turkeys. Sixty four percent of the hunters afield harvested a bird.

As other Rio Grande populations continue to grow throughout the state, more limited entry opportunities will be provided.

## Brood Counts

Limited brood count data for 1996 is shown in Table 7.

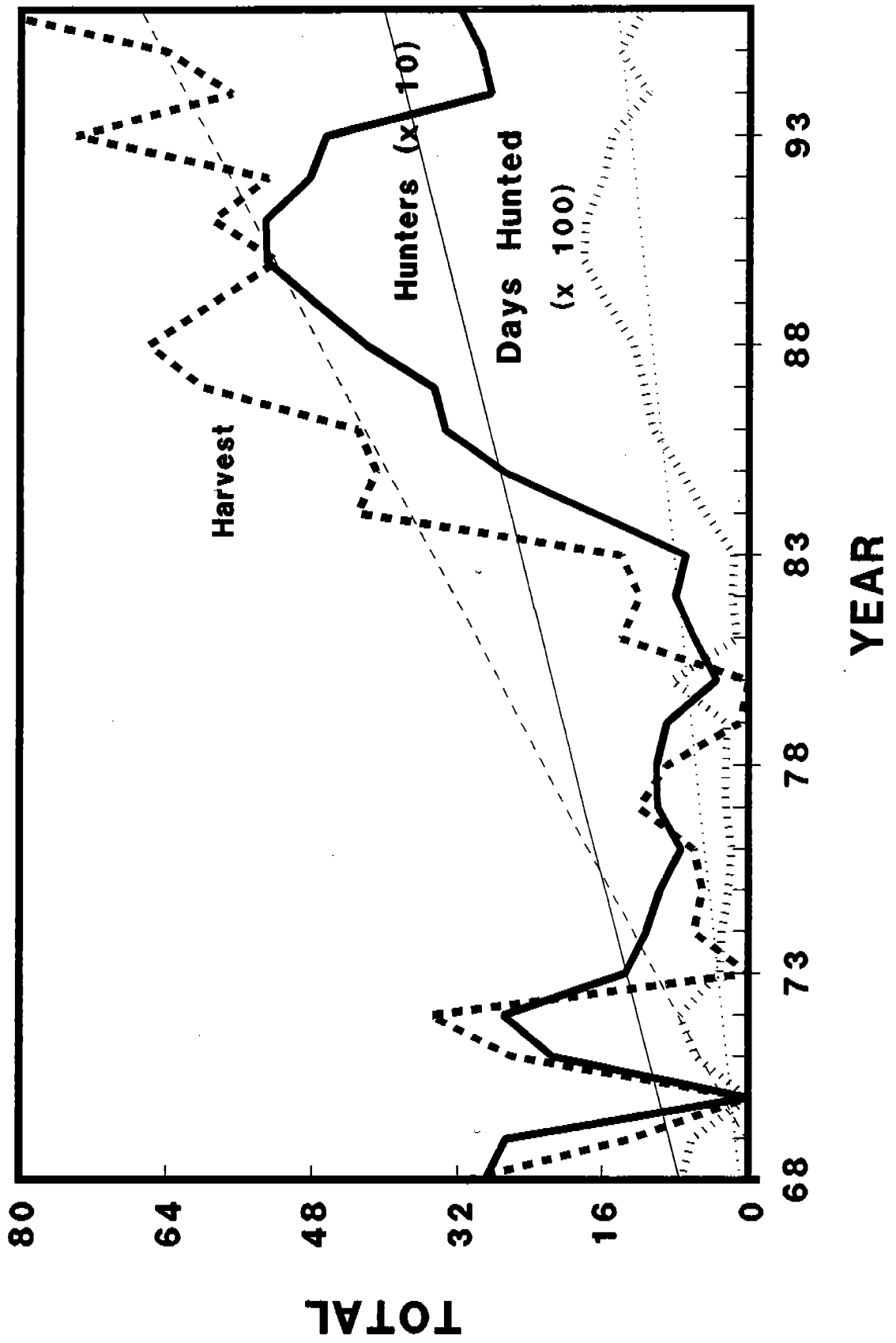


Figure 1. Spring Merriam's wild turkey hunters, harvest, and days hunted, 1968-96.

**TURKEYS PER HUNTER AND PER DAY**

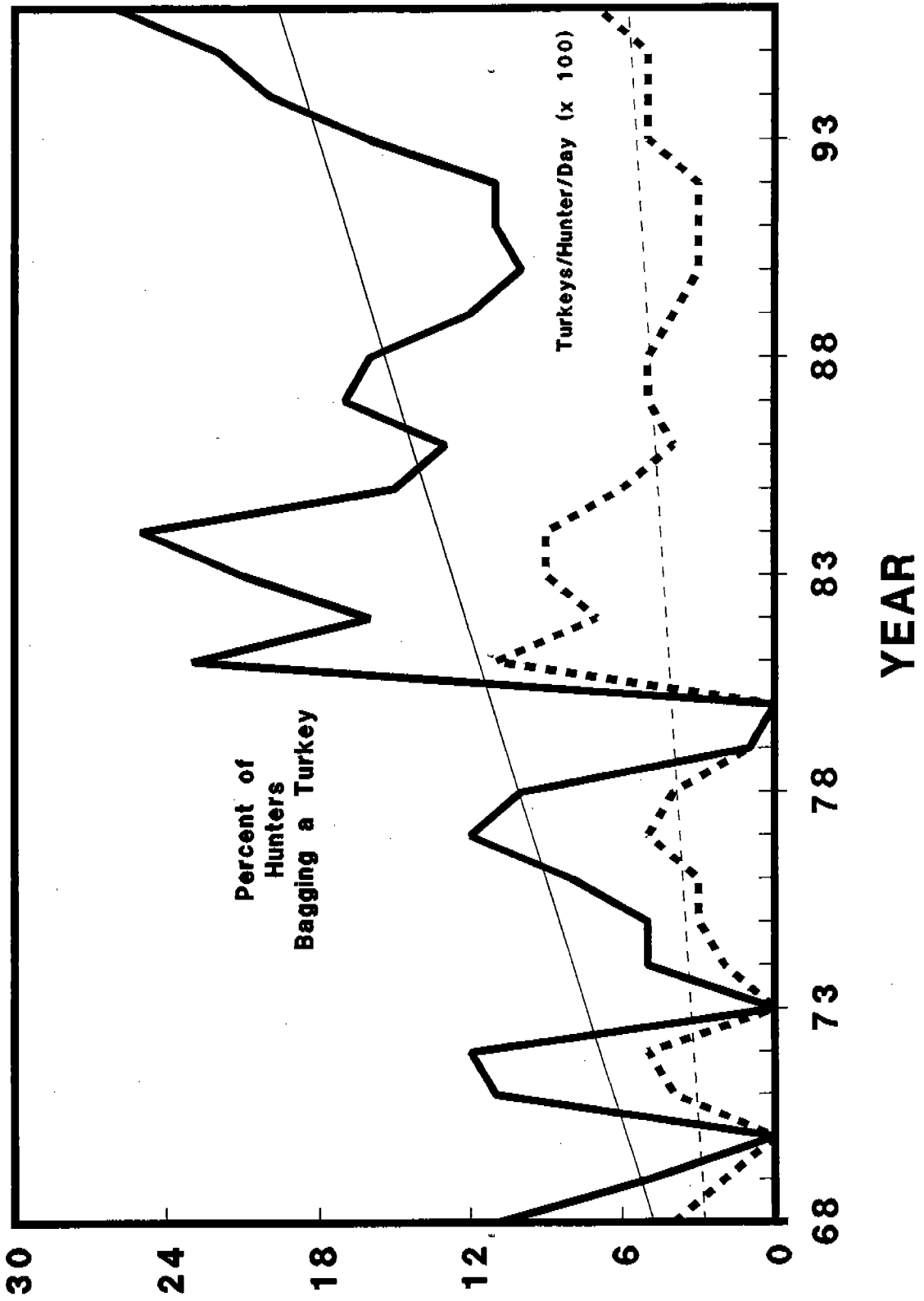


Figure 2. Spring Merriam's wild turkey hunting success, 1968-96.

Table 1. Summary of the 1996 spring Merriam's turkey season.

	Boulder (early)	Boulder (late)	Unit Totals	Zion (early)	Zion (late)	Unit Totals	Kolob	LaSal	STATE TOTALS
Permits Sold	75	75	150	75	75	150	35	20	355
No Hunts	6	9	15	5	13	18	0	2	35
Hunters Afield	69	66	135	70	62	132	35	18	320
Total Hunter-Days	242	264	506	224	207	431	144	70	1,151
Average Hunter-Days Afield	3.5	4.0	8	3.2	3.3	7	4.1	3.9	3.6
Turkeys Bagged	23	11	34	28	10	38	12	8	84
Percent Success	33	17	50	40	16	56	34	44	26
Turkeys Bagged Per Hunter-Day	0.10	0.04	0.07	0.13	0.05	0.09	0.08	0.11	0.07
Reported Crippling Loss (Loss/100 Bagged)	1	0	1	0	1	1	0	0	2
	4	0	3	0	10	3	0	0	2
Turkeys Observed									
Gobblers	84	24	108	81	31	112	16	29	265
Hens	157	67	224	77	54	131	58	20	433
Unidentified	35	8	43	3	20	23	21	0	87
Number of Hunters Who Saw Turkeys	63	48	111	62	42	104	29	15	259
Percent of Hunters Who Saw Turkeys	83	64	73.5	88	67	77.5	83	83	78
Percent of Hunters Who Saw Gobblers	75	67	71	65	41	53	25	67	57
Beard Length 0"-4" (% of Harvest)	25	0	12.5	0	0	0	0	0	4
Beard Length 4"-7" (% of Harvest)	12.5	33	22.75	0	62.5	31.25	0	17	21
Beard Length >7" (% of Harvest)	62.5	67	64.75	100	37.5	68.75	100	83	75
Blunt Spur (% of Harvest)	37.5	28.6	33.05	25	0	12.5	0	0	15
Rounded Spur (% of Harvest)	50	71.4	60.7	50	75	62.5	67	0	52
Sharp Spur (% of Harvest)	12.5	0	6.25	25	25	25	33	100	33

Table 2. Summary of Merrimack's turkey harvest statistics for spring gobbler seasons, 1967-96.

Hunting Unit	Year	Hunters Afield	Total Harvest	Hunter-Days Afield	Percent Success*	Turkeys Per Hunter-Day	Percent of Hunters Observing Turkeys	Total Permits**
STATE TOTALS	1968	290	31	738	11	0.04	41	310
	1969	267	13	612	5	0.02	22	276
	1970				NO SEASON			
	1971	215	26	576	11	0.04	38	223
	1972	269	35	751	12	0.05	39	285
	1973	135	0	311	0	0.00	10	150
	1974	112	6	289	5	0.02	22	121
	1975	97	5	219	5	0.03	29	103
	1976	74	6	185	8	0.03	32	81
	1977	99	12	248	12	0.05	39	108
	1978	101	9	246	10	0.04	42	116
	1979	90	1	237	1	0.01	8	113
	1980	35	0	84	0	0.00	17	40
	1981	60	14	129	23	0.11	53	83
	1982	80	12	184	16	0.07	62	91
	1983	69	14	161	21	0.09	55	92
	1984	169	43	482	25	0.09	72	190
	1985	270	41	747	15	0.06	52	314
	1986	335	43	1,054	13	0.04	57	362
	1987	347	60	1,150	17	0.05	57	384
	1988	421	66	1,267	16	0.05	50	490
	1989	477	59	1,568	12	0.04	55	527
	1990	531	52	1,812	10	0.03	51	579
	1991	532	59	1,792	11	0.03	49	587
	1992	484	53	1,599	11	0.03	46	538
	1993	466	74	1,508	16	0.05	54	500
	1994***	285	57	1,112	20	0.05	--	335
	1995	287	65	1,386	23	0.05	40	335
	1996	320	84	1,151	26	0.07	78	355
STATE TOTALS (1968-96)		6,917	940	21,598				7,688
STATE AVERAGES (1968-95)		244	32	757	12	0.04	40	272

\*Based on the number of hunters bagging one or more turkeys.

\*\*Total permits are sold on a statewide basis and not by unit, 1968-93. In 1994, permits were sold by unit.

\*\*\*Beginning in 1994, a limited entry turkey hunting program was initiated.



Table 3. Statewide summary of fall Merriam's wild turkey harvest statistics, 1964-96.

Year	Permits		Hunters		Hunter-Days		turkeys Bagged	Percent Success**	Turkeys per Hunter-Day	Crippling Loss/100 Bagged	Turkeys		Percent of Hunters Observing Turkeys
	Sold	Afield	Afield	Afield	Observed	Observed							
1964	229	211	362	81	38	0.22	15	1,158	60				
1965	214	207	406	50	24	0.12	8	730	29				
1966*	192	187	471	43	23	0.09	7	756	36				
1967	146	135	405	40	30	0.10	16	748	48				
1968*	368	344	883	183	38	0.21	15	2,321	54				
1969	223	210	549	36	11	0.06	19	466	17				
1970	197	174	418	58	24	0.14	6	564	31				
1971	184	174	444	60	21	0.14	8	451	28				
1972	124	118	303	12	7	0.04	10	173	21				
1973***	--	--	--	--	--	--	--	--	--				
1974	29	26	79	3	12	0.04	33	83	38				
1975	58	46	115	7	15	0.06	0	57	26				
1976	68	56	136	15	27	0.11	7	182	32				
1977	60	53	133	7	15	0.06	0	48	18				
1978*	102	88	223	7	9	0.03	33	335	38				
1979	46	36	71	3	9	0.05	0	61	19				
1980	43	39	69	11	32	0.16	38	127	44				
1981	63	55	114	12	22	0.11	56	141	32				
1982	56	50	136	11	23	0.08	10	185	47				
1983	61	49	112	15	28	0.13	0	303	49				
1984	97	86	193	28	32	0.14	14	380	49				
1985***	--	--	--	--	--	--	--	--	--				
1986***	--	--	--	--	--	--	--	--	--				
1987***	--	--	--	--	--	--	--	--	--				
1988***	--	--	--	--	--	--	--	--	--				
1989***	--	--	--	--	--	--	--	--	--				
1990***	--	--	--	--	--	--	--	--	--				
1991***	--	--	--	--	--	--	--	--	--				
1992***	--	--	--	--	--	--	--	--	--				
1993***	--	--	--	--	--	--	--	--	--				
1994***	--	--	--	--	--	--	--	--	--				
1995***	--	--	--	--	--	--	--	--	--				
1996***	--	--	--	--	--	--	--	--	--				
<b>TOTALS</b>													
(1964-84)	2,560	2,340	5,622	682	--	--	--	9,269	--	--	--	--	--
<b>AVERAGES</b>													
(1964-84)	122	111	268	32	21	0.10	14	441	34				

\*Some hunters hunted more than one area or failed to designate areas hunted. This accounts for the difference between totals given above and combined tables of separate units in Tables 5, 6 and 7.

\*\*During 1968, the Boulder Mountain and East Zion units had two-bird season limits and the LaSal Mountains a one-bird limit; from 1969 through 1972, all areas had a two-bird limit. Hunter success was based on the number of successful hunters rather than total turkeys bagged.

\*\*\* No fall season.



Table 5. Summary of Rio Grande turkey harvest statistics for spring gobbler seasons, 1991-96.

Hunting Unit	Year	Hunters		Total Harvest	Hunter-Days		Percent Success	Turkeys Per Hunter-Day		Percent of Hunters Observing Turkeys	Total Permits
		Afield			Afield			Hunter-Day			
STATE TOTALS	1991	18	11	71	61	0.15	--	20			
	1992	20	15	64	75	0.23	--	21			
	1993	41	26	200	63	0.13	--	42			
	1994	105	79	464	75	0.17	--	105			
	1995	123	78	628	63	0.12	--	135			
	1996	166	107	776	64	0.14	88	174			
STATE TOTALS (1991-96)		473	316	2,203	--	--	--	497			
STATE AVERAGE (1991-95)		61	42	285	67	0.16	--	65			

Table 6. Summary of wild turkey limited entry hunting unit drawing odds for 1996.

Hunting Unit Number	Hunting Unit Name	Permits Available	Applicants	Odds 1:
<b>Rio Grande</b>				
101A	Beaver (early)	20	260	13.0
101B	Beaver (late)	20	151	7.6
102	Duchesne County	10	84	8.4
103	Emery County	8	113	14.1
104	Grand County	8	40	5.0
105	Milford	5	46	9.2
106	Morgan-South Rich	5	36	7.2
107A	Pine Valley (early)	20	160	8.0
107B	Pine Valley (late)	20	95	4.8
108	Uintah County	8	61	7.6
109A	Utah County (early)	10	195	19.5
109B	Utah County (late)	15	271	18.1
110	Ogden	10	201	20.1
111	Abajo Mtns.	5	34	6.8
112	West Pine Valley	5	10	2.0
113	Monroe Mtn.	5	42	8.4
<b>Total</b>		<b>174</b>	<b>1,799</b>	<b>10.3</b>
<b>Merriam's</b>				
210A	Boulder Mountain (early)	75	236	3.1
201B	Boulder Mountain (late)	75	165	2.2
202	Kolob	35	18	Undersubscribed
203A	Zion (early)	75	67	Undersubscribed
203B	Zion (late)	75	47	Undersubscribed
204	LaSal	20	80	4.0
<b>Total</b>		<b>355</b>	<b>613</b>	<b>--</b>
<b>Grand Total</b>		<b>529</b>	<b>2,412</b>	<b>--</b>

Table 7. Wild turkey summer inventory summary, 1996.

Region and County	Distinct Broods		Mean Brood	Mixed Observations		Adults w/o Young		Total Adults	Total Young	Young/100 Ad	Vehicle Miles	Hours of Effort		Birds/100 Hr
	# Adults	Young		Adult	Young	Young	Young					Horse	Walk Total	
<b>Northern Region</b>														
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Central Region</b>														
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	77	77	267	3.47	36	118	43	156	385	247	433	--	--	81
Wasatch	--	--	--	--	4	15	7	11	15	136	--	--	--	3
<b>REGIONAL TOTALS</b>	77	77	267	3.47	40	133	50	167	400	240	433	--	--	84
<b>Southern Region</b>														
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Plute	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Northeastern Region</b>														
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Southeastern Region</b>														
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>STATE TOTALS</b>	77	77	267	3.47	40	133	50	167	400	240	433	--	--	84
<b>STATE TOTALS</b>	77	77	267	3.47	40	133	50	167	400	240	433	--	--	84
<b>STATE TOTALS</b>	77	77	267	3.47	40	133	50	167	400	240	433	--	--	84
<b>STATE TOTALS</b>	77	77	267	3.47	40	133	50	167	400	240	433	--	--	84

# SHARP-TAILED GROUSE

## SUMMARY



The Columbian sharp-tailed grouse is one of four species of grouse native to Utah. Sharptails were formerly abundant in the valley and foothill areas of northern and central Utah. Sharp-tailed grouse habitats were the most attractive areas for agricultural development and grazing. As a result, sharptail habitat was directly converted to farmland or was seriously impacted by heavy grazing.

There was no legal harvest of sharp-tailed grouse from 1980 through 1996. From 1988 through 1992, the number of birds present on active dancing grounds was substantially greater than in the previous years (Table 1.). It appears sharp-tailed grouse have made a moderate recovery in "core areas." Numbers on the fringe of their range appear to be low. Concurrent with the upswing in sharp-tailed populations has been a succession of mild winters. Since the catastrophic winter of 1983-84, all winters have been normal or milder than normal except 1988-89 and 1992-93. The winter of 1992-93 devastated sharp-tailed grouse populations. In addition, wildland fires in the summer of 1994 destroyed countless acres of sharp-tailed grouse habitat in Box Elder County.

In Box Elder County, habitat associated with existing populations of sharp-tailed grouse has been relatively unchanged since 1983 except that about 100,000 acres in Box Elder County have been entered into the Conservation Reserve Program (CRP). This may be benefitting sharp-tailed grouse populations by providing undisturbed nesting and brood-rearing cover.

We have minimal recent data on sharp-tailed grouse populations in the Cache, Weber, and Morgan County areas. By 1984, populations in these areas were at or below minimum viable population levels. Efforts have increased over the past four years to locate "new" dancing grounds in these counties (Table 1.). New "core" sharp-tailed grouse habitat areas are being attributed to CRP lands in these counties.

Sharp-tailed grouse brood count information for Box Elder County in 1996 is shown in Table 2.

Table 1. Summary of sharp-tailed grouse dancing ground counts, 1979-86.

County	Dancing Ground Name	Year																		
		1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
Box Elder	West Hillis Complex (Located 1977)	15	4	12	0	14	0	18	46	40	33	40**	75	53**	55**	5	6	NC	5	
	Hunsaker's Field (Located 1977)	3	0	0	0	0	0	0	18	0	3	0	-	3	32	4	2	NC	2	
	South White's Valley (Located 1977)	0	0	0	6	0	0	2	0	6	7	3	-	10	13	-	2	NC	5	
	North White's Valley #1 (Located 1977)	0	0	0	0	0	0	0	-	18	11	9**	-	14	5	3	7	NC	8	
	North White's Valley #2 (Located 1985)																	18	NC	
	Middle Canyon (Located 1991)																		19	NC
	Pocahontas Valley Complex (Located 197)	7	7	19	19	14	5	9	20	20	19	16**	11	4	NC	-	2	NC	19	
	Blue Creek (Located 1991)																		NC	NC
	Howell Valley #1 (Located 1991)																	A	NC	NC
	Microwave Tower (Located 1987)								6	6	7	9	-	-	6**	-	-	NC	NC	NC
	Sunset Pass (Located 1991)														NA	-	-	NC	NC	NC
	Nucor (Located 1991)														2**	-	-	NC	NC	NC
	Wellsville-Cottonwood (Located 1991)														11**	A	-	NC	NC	NC
Snowville-Radio Tower (Located 1991)														8**	8	2	NC	0	0	
Johnson Canyon (Located 1994)														8**	A	0	NC	NC	NC	
Cache	Bankhead Well (Relocated 1975)	2	2	0	0	-	-	-	-	-	-	-	-	NA	NC	-	-	NC	NC	
	Baxter Ridge (Relocated 1975)	-	3	5	3	-	-	-	-	-	-	-	-	NA	NC	-	-	NC	NC	
	Crow Mountain Complex (Located 197	13	4	11	3	-	-	-	-	-	0	-	-	27**	18**	9	8	NC	NC	
	High Creek (Located 1981)													22**	NC	-	13	NC	20	
	Clarkston (Located 1991)													20**	5**	A	12	NC	NC	
	Four Mile #1 (Located 1991)													5**	27**	-	-	NC	7	
	Four Mile #2 (Located 1991)													4**	-	-	-	NC	NC	
	McKenzie Flat (Located 1992)														3	-	-	NC	NC	
	Morgan	Cottonwood (Located 1975)	28	-	-	-	-	-	-	-	-	-	-	-	NA	NC	-	-	NC	NC
		Deep Creek		4	-	-	-	-	-	-	-	-	-	-	NA	NC	-	-	NC	NC
		Bohman Hollow (Located 1991)													11**	NC	-	-	NC	0
	Weber	Monastery (Located 1989)	3	0	0	0	-	-	-	-	-	-	-	-	-	NC	-	-	NC	NC
		Total Grounds Counted	15	16	17	15	11	2	11	6	8	12	11	2	18	16	9	12	1	9
Total Grouse Counted		71	24	57	31	28	5	29	84	90	80	77	86	236	210	26	66	18	66	
Average Number of Grouse/Ground		4.70	1.50	3.40	2.10	2.50	2.50	2.60	14.00	11.30	6.70	7.00	43.00	13.00	13.00	2.89	5.50	18.00	7.33	

\*\*High sagebrush precluded an accurate count—birds were counted when flushed.  
 Since visitation by females at any given time is low, an estimated 90% of the grouse seen on the ground are males.  
 Therefore, this figure is an estimate of the males on the ground.

A = ACTIVE  
 NA = NOT ACTIVE  
 NC = NOT COUNTED



Table 2. Sharp-tailed grouse summer inventory, 1996.

Region and County	Distinct Broods		Mean Brood	Mixed Young & Adults		Adults w/o Young	Total Adults	Total Young	Total Grouse	Young/100 Adults	Hours of Effort		Birds/100 Hr
	# Adults	Young		Adults	Young						Vehicle Miles	Horse	
Northern Region													
Box Elder	1	1	6	6.00	--	--	--	59	--	--	6	--	983
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>1</b>	<b>1</b>	<b>6</b>	<b>6.00</b>	<b>0</b>	<b>0</b>	<b>--</b>	<b>59</b>	<b>--</b>	<b>--</b>	<b>6</b>	<b>--</b>	<b>983</b>
Central Region													
Juab													
Salt Lake													
Sanpete													
Tooele													
Utah													
Wasatch													
<b>REGIONAL TOTALS</b>													
Southern Region													
Beaver													
Garfield													
Iron													
Kane													
Millard													
Piute													
Sevier													
Washington													
Wayne													
<b>REGIONAL TOTALS</b>													
Northeastern Region													
Daggett													
Duchesne													
Uintah													
<b>REGIONAL TOTALS</b>													
Southeastern Region													
Carbon													
Emery													
Grand													
San Juan													
<b>REGIONAL TOTALS</b>													
<b>STATE TOTALS</b>	<b>1</b>	<b>1</b>	<b>6</b>	<b>6.00</b>	<b>0</b>	<b>0</b>	<b>--</b>	<b>59</b>	<b>--</b>	<b>--</b>	<b>6</b>	<b>--</b>	<b>983</b>

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

# PTARMIGAN

## SUMMARY



PTARMIGAN

The white-tailed ptarmigan (Lagopus leucurus) was introduced into the Uinta Mountains of northeastern Utah in 1976 with the release of birds captured in Colorado. The initial transplant consisted of 22 paired birds released in June 1976. A second release of 35 mixed young and adults was accomplished in September of that same year.

Since introduction in 1976, ptarmigan have dispersed into available habitat from the west, 100 miles to the east in the Uinta Mountains.

## Breeding Territory and Brood Surveys

Surveys on the ptarmigan population continue, as time and manpower constraints allow. Two survey techniques are used. A breeding territory survey is conducted from mid- to late June. A brood survey is conducted from mid- to late August. Results of the last 10 years of survey data are found in Tables 1 and 2.

No spring survey of breeding territories and no summer brood survey was conducted in 1996.

## Harvest

Thirty hunters obtained free permits to hunt ptarmigan in Utah in 1996 (Table 3). An estimated 12 hunters actually pursued ptarmigan and 14 birds were killed. Twenty-nine percent of the hunters afield reported observing ptarmigan.

Many permits are obtained by sportsmen who think they might hunt during a fishing or big game hunting trip, but don't seriously plan on the ptarmigan hunt.

Table 1. Summary of white-tailed ptarmigan breeding territories (pairs), 1986-96.

County	Location	1986	1987	1988	1989(2)	1990	1991	1992	1993	1994	1995	1996
Duchesne	Painter Basin											
Duchesne	Gilbert Basin	C(1)		N O	N O	N O	N O	N O	N O	N O		N O
Duchesne	Atwood Basin	A N										
Duchesne	Yellowstone River	C E		S U R V E Y	S U R V E Y	S U R V E Y	S U R V E Y	S U R V E Y	S U R V E Y	S U R V E Y		S U R V E Y
Summit	Henry's Fork	L E										
Summit	Flat Top Mountain	D										
Summit	Lake Blanchard		3									
Summit	Beaver Creek											
Summit	Smith's Fork											
Summit	Burnt Fork Drainage										0	
Uintah	Lelidy Peak											

(1) Excessive snow cover precluded access to trail-heads during the June breeding period.

(2) Investigator was incapacitated.

Table 2. White-tailed ptarmigan brood inventory, 1986-96.

Area:	DATE											
	8/86	8/87	8/25-31/88	8/89	8/90	8/91	8/92	8/93	8/94	8/95	8/96	
Painter Basin												
n	--	--	--	--	--	--	--	--	--	--	--	--
Mean Brood	--	--	--	--	--	--	--	--	--	--	--	--
Young/100 Adult Hens	--	--	--	--	--	--	--	--	--	--	--	--
Hens w/o Broods	--	--	--	--	--	--	--	--	--	--	--	--
Adult Males	--	--	--	--	--	--	--	--	--	--	--	--
Henry's Fork			(e)									
n	4	3	3	--	--	--	--	--	--	--	--	--
Mean Brood	3.75	4.00	2.33	--	--	--	--	--	--	--	--	--
Young/100 Adult Hens	375	217	233	--	--	--	--	--	--	--	--	--
Hens w/o Broods	0	3	6	--	--	--	--	--	--	--	--	--
Adult Males	--	--	--	--	--	--	--	--	--	--	--	--
Yellowstone												
n	--	--	--	2	1	--	--	--	--	--	--	--
Mean Brood	--	--	--	4.00	4.00	--	--	--	--	--	--	--
Young/100 Adult Hens	--	--	--	366	400	--	--	--	--	--	--	--
Hens w/o Broods	--	--	--	4	0	--	--	--	--	--	--	--
Adult Males	--	--	--	18	0	--	--	--	--	--	--	--
Smith's Fork												
n	1	--	--	--	--	--	--	--	--	--	--	--
Mean Brood	--	6.00	--	--	--	--	--	--	--	--	--	--
Young/100 Adult Hens	--	120	--	--	--	--	--	--	--	--	--	--
Hens w/o Broods	--	4	--	--	--	--	--	--	--	--	--	--
Adult Males	--	--	--	--	--	--	--	--	--	--	--	--
Atwood Basin												
n	--	--	--	--	--	1	--	--	--	--	--	--
Mean Brood	--	--	--	--	--	2.00	--	--	--	--	--	--
Young/100 Adult Hens	--	--	--	--	--	200	--	--	--	--	--	--
Hens w/o Broods	--	--	--	--	--	0	--	--	--	--	--	--
Adult Males	--	--	--	--	--	0	--	--	--	--	--	--

Table 2. (continued)

Area: Statistics	DATE											
	8/86	8/87	8/25-31/88	8/89	8/90	8/91	8/92	8/93	8/94	8/95	8/96	
Flat Top Mountain			(e)									
n		1	3									
Mean Brood		6.00	4.33									
Young/100 Adult Hens		900	433									
Hens w/o Broods		0	9									
Adult Males		0	0									
Little E. Fork - Black's Fork												
n												
Mean Brood												
Young/100 Adult Hens												
Hens w/o Broods												
Adult Males												
Rainbow Basin												
n												
Mean Brood												
Young/100 Adult Hens												
Hens w/o Broods												
Adult Males												
Gilbert Basin												
n												
Mean Brood												
Young/100 Adult Hens												
Hens w/o Broods												
Adult Males												
Samuel's Draw												
n												
Mean Brood												
Young/100 Adult Hens												
Hens w/o Broods												
Adult Males												
Leidy Peak												
n		1										
Mean Brood		2.00										
Young/100 Adult Hens		200										
Hens w/o Broods		0										
Adult Males		0										

Table 2. (continued)

Area: Statistics	DATE											
	8/86	8/87	8/25-31/88	8/89	8/90	8/91	8/92	8/93	8/94	8/95	8/96	
<b>East F. Black's Fork</b>												
n	--	--	--	--	--	--	--	--	--	--	--	--
Mean Brood	--	--	--	--	--	--	--	--	--	--	--	--
Young/100 Adult Hens	--	--	--	--	--	--	--	--	--	--	--	--
Hens w/o Broods	--	--	--	--	--	--	--	--	--	--	--	--
Adult Males	--	--	--	--	--	--	--	--	--	--	--	--
<b>Joulious Creek</b>												
n	1	0	(e)	--	--	--	--	--	--	--	--	--
Mean Brood	1.00	0.00		--	--	--	--	--	--	--	--	--
Young/100 Adult Hens	300	0		--	--	--	--	--	--	--	--	--
Hens w/o Broods	0	4		--	--	--	--	--	--	--	--	--
Adult Males	0	0		--	--	--	--	--	--	--	--	--
<b>TOTALS</b>												
n	5	6	(e)	2	1	1	--	--	--	--	--	--
Mean Brood	3.75	3.86	3.33	4.00	4.00	2.00	--	--	--	--	--	--
Young/100 Adult Hens	375	236	333	366	400	200	--	--	--	--	--	--
Hens w/o Broods	0	7	19	4	0	0	--	--	--	--	--	--
Adult Males	0	0	0	0	0	0	--	--	--	--	--	--
Total Birds Observed	19	47	45	18	5	3	--	--	--	--	--	--
e Mixed Adults												

n Number of Broods

Table 3. Summary of white-tailed ptarmigan harvest statistics, 1982-96. Estimates are calculated based upon 100 percent samples or projection factors.

Year	Permits Sold	Hunters Afield	Hunter-Days Afield	Ptarmigan Bagged	Birds/ Hunter	Ptarmigan/ Hunter-Day	Crippling Loss/ 100 Bagged	% Hunters		
								Ptarmigan Observed	Observing Ptarmigan	Immatures per 100 Adults
1982	48	21	33	0	0.00	0.00	0	0	--	--
1983	31	13	21	14	1.08	0.67	0	25	30	--
1984	28	20	25	36	1.80	1.44	0	--	--	--
1985	55	10	13	7	0.70	0.54	14	9	14	--
1986	49	14	21	8	0.57	0.36	0	8	22	--
1987	45	9	9	8	0.89	0.89	--	--	--	--
1988**	28	15	15	22	1.47	1.47	--	59	--	4.50(11)
1989	20	3	18	13	4.33	0.72	--	35	--	--
1990	17	11	27	17	1.55	0.63	0	28	35	--
1991	15	13	16	26	2.00	1.63	0	95	50	--
1992	17	11	17	0	0.00	0.00	0	56	36	--
1993	10	10	13	13	1.30	1.00	0	140	38	--
1994	14	4	6	0	0.00	0.00	0	3	100	--
1995***	39	20	39	12	0.60	0.31	0	31	11	--
1996***	30	12	16	14	1.17	0.88	0	106	29	--

\*\*For the first time a handling fee of \$2.00 per permit was charged.

\*\*\*Permit still required, but at no charge.

Projection Factor = 1.76470588235 (number of permits sold/number of questionnaires returned)

30 permits sold

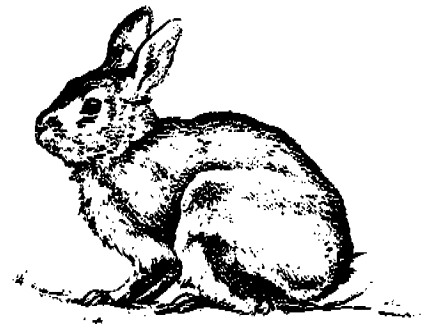
17 questionnaires returned



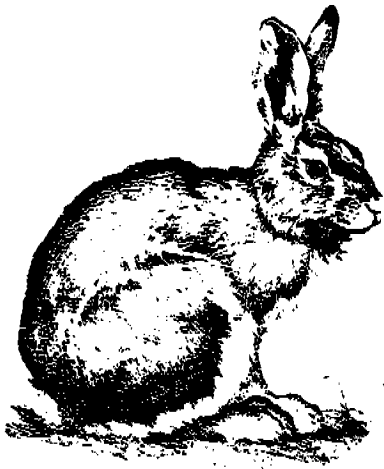
# **RABBITS AND HARES**

## **SUMMARY**

### **Cottontail Rabbits**



### **Snowshoe Hares**



Cottontail populations remain below a high in 1988.

Summer roadside counts indicated an increased population density statewide, and reproduction was above 1995. Harvest statistics indicated increased hunter success, but is still 44 percent below average.

Hunter numbers increased 15 percent from the previous year and remained below average. Although efforts have been made to educate hunters in the identification of the snowshoe hare and the white-tailed jackrabbit, it is still a potential problem which could bias the snowshoe data.

# COTTONTAIL RABBIT

## Roadside Counts

Results of the annual roadside counts for 1996 are shown in Table 1 and Figure 1. The long-term trend of cottontails observed per mile and young per 100 adults is shown in Figure 4 and Tables 2 and 3. Indices for 1996 compared to 1995 and the 10-year (1986-95) average follow:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Total miles driven	498	+12	-46
Total cottontails counted	283	+225	-3
Cottontails observed per mile	0.57	+185	+89
Young observed per 100 adults	163	+43	+141

Production data from roadside counts indicated an increase in the statewide cottontail population. The cottontail young per 100 adults index increased 23 percent from 1995, and was 141 percent above the long-term average.

## Harvest

### Hunter Questionnaire

Results of the 1996 hunter questionnaire are found in Table 4. Trends of cottontails bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 5-7. Trends of statewide harvest statistics are found in Table 8 and Figures 2 and 3. Results of the 1995 season compared to 1995 and the previous 29-year average follow:

	<u>1996</u>	Percent change from <u>1995</u>	Percent change from <u>Average</u>
Cottontail hunters	14,470	+5	-38
Cottontail harvest	82,803	+23	-44
Hunter-days afield	63,943	+10	-34
Cottontails per hunter-day	1.29	+11	-11
Cottontails per hunter	5.72	+18	-3

Ninety Percent confidence interval for overall cottontail harvest is +/- 8,703. Standard deviation is 2.1168547.

Total hunters increased 5 percent from 1995. Total harvest increased 43 percent. Total harvest was 44 percent below average. Hunter success was 11 percent below average. Harvest data indicate a year of below average populations of cottontails.

## Field Bag Checks

Results of field bag checks for 1996 are shown in Table 9. Trends of hunter success as determined by bag checks are shown in Table 10. Following is a comparison of the 1996 field bag check data to 1995 and the 10-year (1986-95) average.

	<u>1996</u>	<b>Percent change from <u>1995</u></b>	<b>Percent change from <u>Average</u></b>
Total hunters checked	--	--	--
Total hours hunted	--	--	--
Cottontails per hunter (complete hunts)	--	--	--
Cottontails bagged per 100 hours	--	--	--
Hours per hunter day	--	--	--
Hours per cottontail bagged (complete hunts)	--	--	--

No cottontail field bag check data was collected in 1996.

COTTONTAILS/MILE AND JUVENILES/ADULT

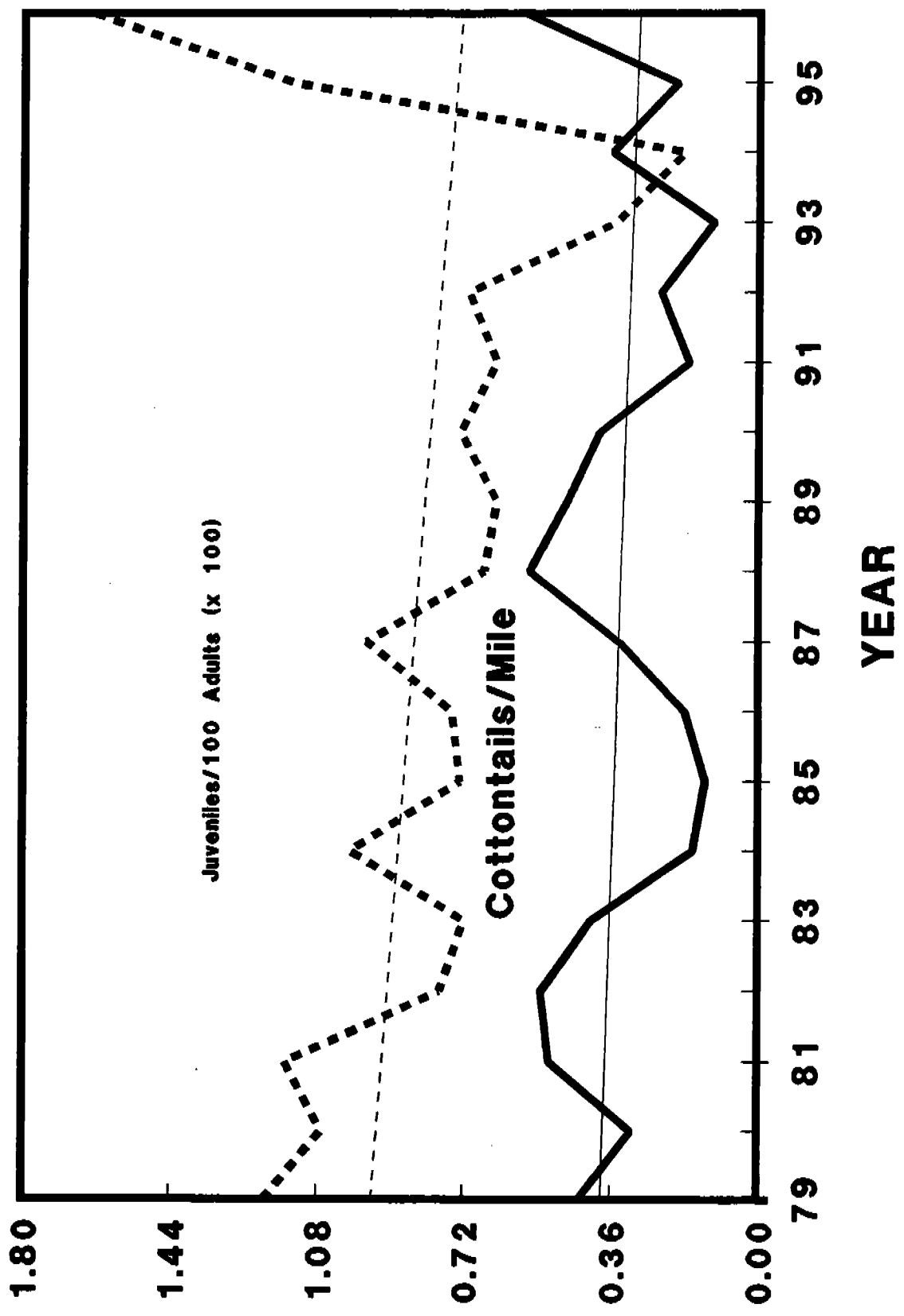


Figure 1. Cottontail rabbit population indices trends, 1979-96.

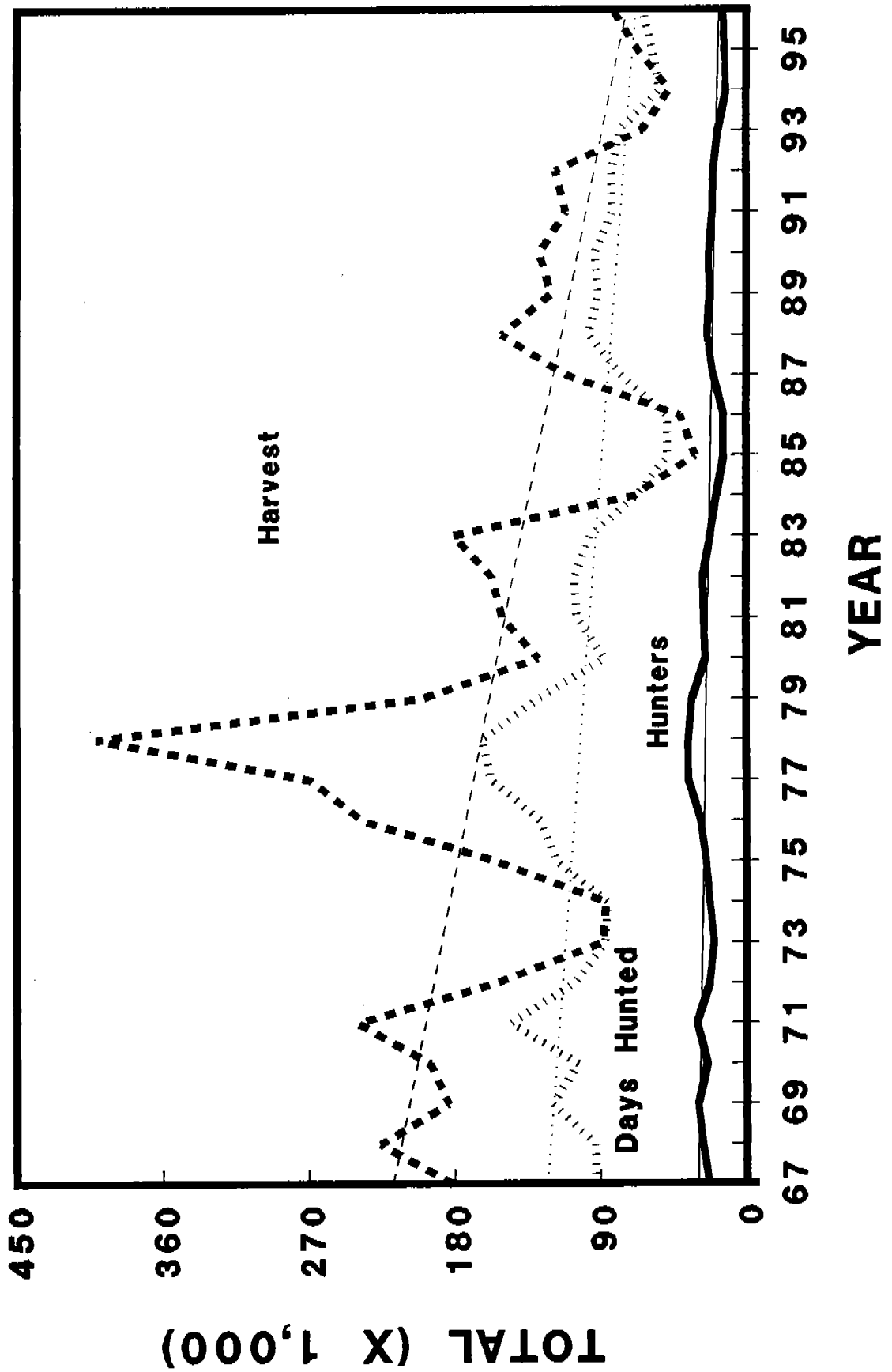


Figure 2. Statewide trends of cottontail rabbit harvest statistics, 1967-96.

COTTONTAILS PER HUNTER AND PER DAY

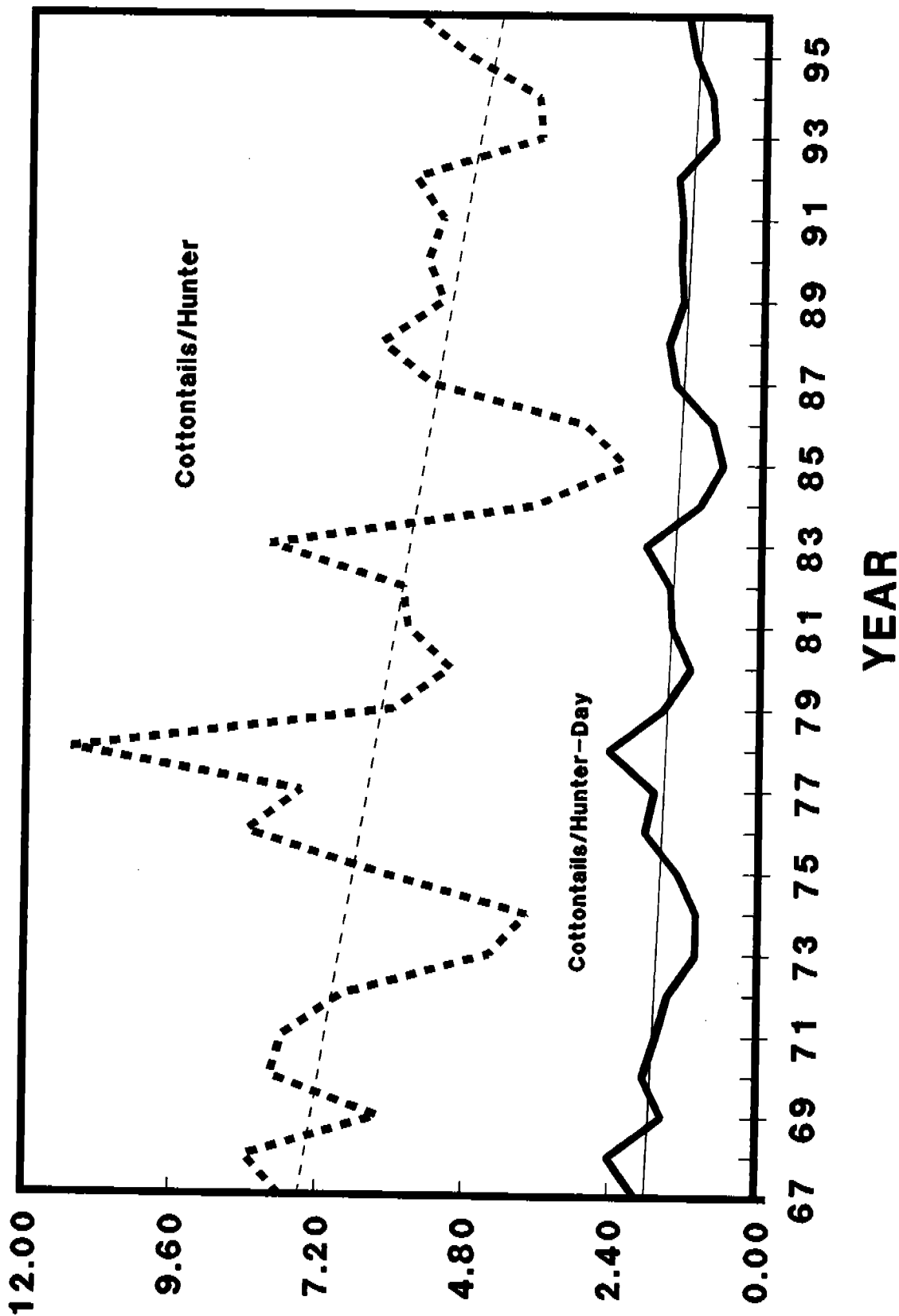
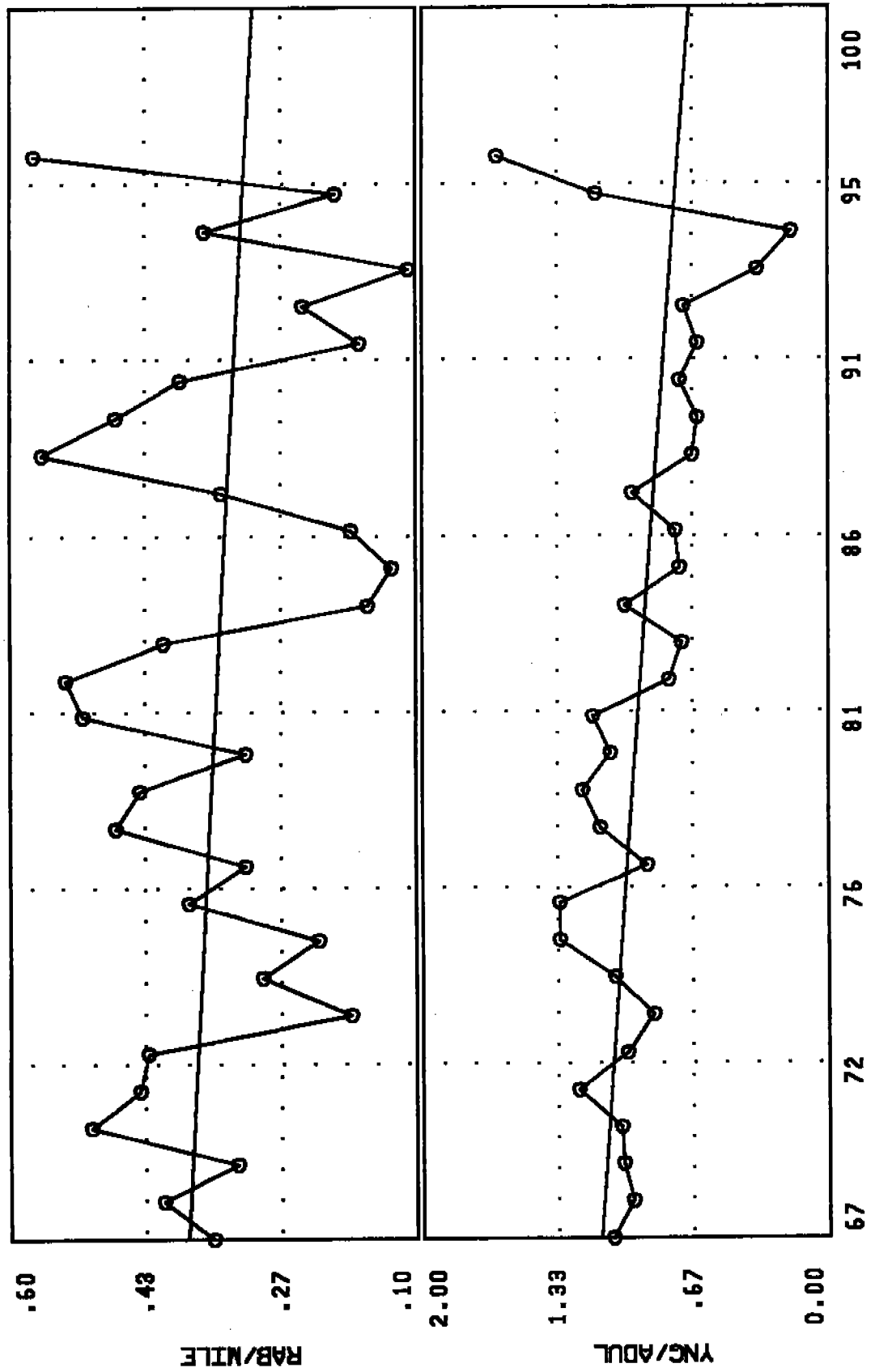


Figure 3. Statewide trends of cottontail rabbit hunter success rates, 1967-96.

FIGURE 4. COTTONTAIL RABBIT  
 PRODUCTION INDICES, 1967-96.





**Table 1. Cottontail rabbit summer inventory summary, 1996.**

Region and County	Miles Driven	Rabbits Observed			Total	Young/100 Adults	Rabbits/Mile
		Adults	Young	Unclassified			
<b>Northern Region</b>							
Box Elder	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--
<b>Central Region</b>							
Juab	90	1	1	0	2	100	0.02
Salt Lake	--	--	--	--	--	--	--
Sanpete	98	7	7	0	14	100	0.14
Tooele	90	0	0	0	0	--	0.00
Utah	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>278</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>16</b>	<b>100</b>	<b>0.06</b>
<b>Southern Region</b>							
Beaver	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--
<b>Northeastern Region</b>							
Daggett	70	22	39	5	66	177	0.94
Duchesne	90	32	55	65	152	172	1.69
Uintah	60	16	25	8	49	156	0.82
<b>REGIONAL TOTALS</b>	<b>220</b>	<b>70</b>	<b>119</b>	<b>78</b>	<b>267</b>	<b>170</b>	<b>1.21</b>
<b>Southeastern Region</b>							
Carbon	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	--
<b>STATE TOTALS</b>	<b>498</b>	<b>78</b>	<b>127</b>	<b>78</b>	<b>283</b>	<b>163</b>	<b>0.57</b>

Table 2. Summary of cottontail rabbits observed per mile during summer inventory, 1986-96.

Region and County	Year											Average 1986-95
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder	0.02	0.03	--	0.03	0.39	0.10	0.08	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	0.02	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>0.02</b>	<b>0.03</b>	<b>--</b>	<b>0.03</b>	<b>0.39</b>	<b>0.10</b>	<b>0.08</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.11</b>
<b>Central Region</b>												
Juab	0.02	0.00	0.54	0.30	0.23	--	--	--	--	0.01	0.02	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	0.47	0.22	0.65	0.09	0.15	0.01	--	0.07	0.14	--
Tooele	0.01	0.02	0.18	--	--	--	0.03	--	--	0.02	0.00	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>0.01</b>	<b>0.02</b>	<b>0.36</b>	<b>0.26</b>	<b>0.45</b>	<b>0.09</b>	<b>0.08</b>	<b>0.01</b>	<b>--</b>	<b>0.04</b>	<b>0.06</b>	<b>0.15</b>
<b>Southern Region</b>												
Beaver	0.10	0.04	0.06	--	--	--	--	--	--	--	--	--
Garfield	0.13	--	--	--	--	--	--	--	--	--	--	--
Iron	0.53	0.26	--	--	--	--	--	--	--	--	--	--
Kane	0.47	0.97	1.09	--	--	--	--	--	--	--	--	--
Millard	0.08	0.09	0.09	--	0.08	--	--	--	--	--	--	--
Piute	0.06	0.05	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	0.12	0.12	0.36	0.33	--	--	--	--	--	--	--	--
Wayne	0.20	0.24	0.34	--	--	0.83	0.21	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>0.24</b>	<b>0.27</b>	<b>0.33</b>	<b>0.33</b>	<b>0.08</b>	<b>0.83</b>	<b>0.21</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.33</b>
<b>Northeastern Region</b>												
Daggett	0.22	0.66	0.85	0.50	0.55	--	0.28	0.07	0.07	0.50	0.94	--
Duchesne	0.44	0.86	1.49	1.04	0.23	0.03	0.60	0.23	0.56	0.39	1.69	--
Uintah	0.02	0.36	1.26	1.40	1.00	--	0.18	0.17	0.24	0.23	0.82	--
<b>REGIONAL TOTALS</b>	<b>0.25</b>	<b>0.65</b>	<b>1.18</b>	<b>0.91</b>	<b>0.57</b>	<b>0.03</b>	<b>0.38</b>	<b>0.16</b>	<b>0.36</b>	<b>0.39</b>	<b>1.21</b>	<b>0.49</b>
<b>Southeastern Region</b>												
Carbon	0.08	0.33	0.41	0.34	0.02	0.20	0.21	0.13	--	--	--	--
Emery	--	0.40	0.34	0.33	0.40	0.37	0.34	0.06	--	--	--	--
Grand	0.80	--	0.10	0.06	0.01	0.05	0.13	0.20	--	--	--	--
San Juan	0.37	0.29	0.59	0.55	0.80	0.28	0.34	0.16	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>0.17</b>	<b>0.38</b>	<b>0.36</b>	<b>0.32</b>	<b>0.36</b>	<b>0.24</b>	<b>0.26</b>	<b>0.14</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.28</b>
<b>STATE TOTALS</b>	<b>0.18</b>	<b>0.34</b>	<b>0.56</b>	<b>0.47</b>	<b>0.39</b>	<b>0.17</b>	<b>0.24</b>	<b>0.11</b>	<b>0.36</b>	<b>0.20</b>	<b>0.57</b>	<b>0.30</b>

Table 3. Summary of cottontail rabbit young per 100 adults, 1986-96.

Region and County	Year											Average 1986-95
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>Northern Region</b>												
Box Elder	0	25	--	200	200	13	67	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	50	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>20</b>	<b>25</b>	<b>--</b>	<b>200</b>	<b>200</b>	<b>13</b>	<b>67</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>87</b>
<b>Central Region</b>												
Juab	0	0	20	13	--	--	--	--	--	0	100	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	88	40	40	50	50	--	--	133	100	--
Tooele	--	100	120	--	--	--	100	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>100</b>	<b>57</b>	<b>23</b>	<b>27</b>	<b>50</b>	<b>57</b>	<b>--</b>	<b>--</b>	<b>125</b>	<b>100</b>	<b>55</b>
<b>Southern Region</b>												
Beaver	22	--	--	--	--	--	--	--	--	--	--	--
Garfield	38	--	--	--	--	--	--	--	--	--	--	--
Iron	75	--	--	--	--	--	--	--	--	--	--	--
Kane	71	111	149	--	--	--	--	--	--	--	--	--
Millard	170	114	110	--	100	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	133	175	100	131	--	--	--	--	--	--	--	--
Wayne	360	2100	244	--	--	369	138	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>100</b>	<b>137</b>	<b>136</b>	<b>131</b>	<b>100</b>	<b>369</b>	<b>138</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>159</b>
<b>Northeastern Region</b>												
Daggett	136	116	30	59	55	--	89	33	--	100	177	--
Duchesne	26	24	39	29	--	50	138	36	17	183	172	--
Uintah	100	264	170	239	95	--	10	80	50	50	156	--
<b>REGIONAL TOTALS</b>	<b>58</b>	<b>74</b>	<b>46</b>	<b>82</b>	<b>58</b>	<b>50</b>	<b>95</b>	<b>47</b>	<b>18</b>	<b>113</b>	<b>170</b>	<b>64</b>
<b>Southeastern Region</b>												
Carbon	150	567	500	400	400	--	25	--	--	--	--	--
Emery	--	54	50	--	--	--	--	--	--	--	--	--
Grand	300	--	--	--	--	--	40	--	--	--	--	--
San Juan	61	47	49	80	60	54	37	18	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>69</b>	<b>100</b>	<b>64</b>	<b>110</b>	<b>67</b>	<b>100</b>	<b>33</b>	<b>18</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>70</b>
<b>STATE TOTALS</b>	<b>75</b>	<b>96</b>	<b>67</b>	<b>64</b>	<b>73</b>	<b>64</b>	<b>71</b>	<b>35</b>	<b>18</b>	<b>114</b>	<b>163</b>	<b>68</b>

Table 4. Summary of cottontail rabbit hunter success and distribution of harvest and hunting pressure by region and county, 1996.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	RABBITS BAGGED	RABBITS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	98	7,223	5,667	0.78	11.30	6.84
CACHE	11	580	325	0.56	0.91	0.39
DAVIS	3	139	371	2.67	0.22	0.45
MORGAN	2	255	510	2.00	0.40	0.62
RICH	16	1,091	1,881	1.72	1.71	2.27
SUMMIT	8	301	301	1.00	0.47	0.36
WEBER	5	348	441	1.27	0.54	0.53
<b>REGIONAL TOTALS</b>	<b>143</b>	<b>9,941</b>	<b>9,499</b>	<b>0.96</b>	<b>15.55</b>	<b>11.47</b>
<b>CENTRAL REGION</b>						
JUAB	38	1,765	1,904	1.08	2.76	2.30
SALT LAKE	7	1,161	2,508	2.16	1.82	3.03
SANPETE	31	2,485	2,113	0.85	3.89	2.55
TOOELE	73	5,202	3,600	0.69	8.14	4.35
UTAH	82	5,876	6,364	1.08	9.19	7.69
WASATCH	8	394	69	0.18	0.62	0.08
<b>REGIONAL TOTALS</b>	<b>239</b>	<b>16,885</b>	<b>16,560</b>	<b>0.98</b>	<b>26.41</b>	<b>20.00</b>
<b>SOUTHERN REGION</b>						
BEAVER	5	255	255	1.00	0.40	0.31
GARFIELD	2	371	139	0.38	0.58	0.17
IRON	11	1,254	1,207	0.96	1.96	1.46
KANE	3	232	23	0.10	0.36	0.03
MILLARD	26	2,531	2,090	0.83	3.96	2.52
PIUTE	2	92	116	1.25	0.15	0.14
SEVIER	22	3,251	3,391	1.04	5.09	4.10
WASHINGTON	11	1,625	2,276	1.40	2.54	2.75
WAYNE	6	464	952	2.05	0.73	1.15
<b>REGIONAL TOTALS</b>	<b>88</b>	<b>10,080</b>	<b>10,451</b>	<b>1.04</b>	<b>15.76</b>	<b>12.62</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT	14	534	1,532	2.87	0.84	1.85
DUCHESNE	79	7,246	14,400	1.99	11.33	17.39
UINTAH	79	6,851	18,256	2.66	10.72	22.05
<b>REGIONAL TOTALS</b>	<b>172</b>	<b>14,632</b>	<b>34,189</b>	<b>2.34</b>	<b>22.88</b>	<b>41.29</b>
<b>SOUTHEASTERN REGION</b>						
CARBON	39	4,180	4,900	1.17	6.54	5.92
EMERY	31	3,437	4,668	1.36	5.38	5.64
GRAND	16	2,810	1,138	0.40	4.40	1.37
SAN JUAN	19	1,834	975	0.53	2.87	1.18
<b>REGIONAL TOTALS</b>	<b>105</b>	<b>12,263</b>	<b>11,683</b>	<b>0.95</b>	<b>19.18</b>	<b>14.11</b>
Unknown	3	139	418	3.00	0.22	0.50
<b>STATE TOTALS</b>	<b>750</b>	<b>63,943</b>	<b>82,803</b>	<b>1.29</b>	<b>100.00</b>	<b>100.00</b>

\*Total hunter trips from questionnaire returns.

Table 5. Summary of cottontail rabbits bagged per hunter-day by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	1.29	1.49	1.31	1.46	0.71	0.82	1.00	0.78
Cache	0.66	0.87	1.41	1.50	0.76	1.30	0.76	0.56
Davis	1.00	0.25	1.50	0.00	0.08	0.00	0.50	2.67
Morgan	0.17	0.43	1.53	1.08	0.33	0.47	4.00	2.00
Rich	1.37	2.52	2.62	2.50	0.56	1.21	1.34	1.72
Summit	0.58	0.72	1.24	0.81	1.22	1.39	0.73	1.00
Weber	0.27	1.06	0.88	0.89	0.64	0.28	0.88	1.27
<b>REGIONAL TOTALS</b>	<b>1.09</b>	<b>1.55</b>	<b>1.47</b>	<b>1.50</b>	<b>0.71</b>	<b>0.77</b>	<b>0.97</b>	<b>0.96</b>
<b>Central Region</b>								
Juab	1.52	1.55	1.68	1.54	0.83	0.64	0.49	1.08
Salt Lake	1.35	0.79	0.72	0.97	0.57	2.00	0.57	2.16
Sanpete	1.10	0.85	1.26	0.86	0.40	1.02	0.75	0.85
Tooele	1.20	1.08	1.23	1.26	0.48	0.70	0.53	0.69
Utah	0.90	0.84	0.99	1.00	0.56	0.46	0.64	1.08
Wasatch	1.50	0.69	1.06	1.70	0.83	1.57	0.21	0.18
<b>REGIONAL TOTALS</b>	<b>118</b>	<b>1.03</b>	<b>1.24</b>	<b>1.19</b>	<b>0.57</b>	<b>0.67</b>	<b>0.56</b>	<b>0.98</b>
<b>Southern Region</b>								
Beaver	0.41	1.17	0.69	2.44	0.67	1.50	0.39	1.00
Garfield	1.97	1.03	0.46	0.52	1.53	1.04	1.36	0.38
Iron	0.85	1.21	1.06	0.94	0.80	1.05	0.68	0.96
Kane	1.00	0.90	0.93	0.97	1.62	0.91	3.50	0.10
Millard	1.27	1.84	1.15	1.35	1.56	0.69	0.88	0.83
Piute	0.28	1.36	0.57	0.00	0.63	0.33	0.80	1.25
Sevier	0.97	1.45	0.65	1.27	0.69	0.67	0.39	1.04
Washington	0.91	0.89	0.68	1.03	1.02	1.01	1.13	1.40
Wayne	1.05	1.34	1.20	2.26	0.73	1.06	1.38	2.05
<b>REGIONAL TOTALS</b>	<b>1.05</b>	<b>1.30</b>	<b>0.89</b>	<b>1.32</b>	<b>1.11</b>	<b>0.93</b>	<b>0.89</b>	<b>1.04</b>
<b>Northeastern Region</b>								
Daggett	1.65	1.79	1.83	2.00	1.47	1.52	3.55	2.87
Duchesne	1.49	1.83	2.15	1.97	1.16	1.43	2.40	1.99
Uintah	3.16	2.41	1.61	1.74	0.82	1.55	2.77	2.66
<b>REGIONAL TOTALS</b>	<b>2.13</b>	<b>2.10</b>	<b>1.86</b>	<b>1.87</b>	<b>1.04</b>	<b>1.51</b>	<b>2.61</b>	<b>2.34</b>
<b>Southeastern Region</b>								
Carbon	0.97	1.43	1.75	1.51	0.69	0.89	1.19	1.17
Emery	0.80	1.06	1.03	1.43	0.88	0.90	1.24	1.36
Grand	1.00	1.58	1.75	1.66	1.86	1.21	1.21	0.40
San Juan	1.28	1.37	1.87	2.34	0.81	0.97	1.14	0.53
<b>REGIONAL TOTALS</b>	<b>0.93</b>	<b>1.28</b>	<b>1.50</b>	<b>1.63</b>	<b>0.88</b>	<b>0.94</b>	<b>1.19</b>	<b>0.95</b>
<b>Unknown counties</b>	<b>2.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.40</b>	<b>0.00</b>	<b>1.07</b>	<b>3.00</b>
<b>STATE TOTALS</b>	<b>1.55</b>	<b>1.32</b>	<b>1.36</b>	<b>1.35</b>	<b>1.41</b>	<b>0.83</b>	<b>1.16</b>	<b>1.29</b>

Table 6. Percentage distribution of cottontail rabbit harvest by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	7.20	9.84	9.06	13.30	7.38	8.84	8.29	6.84
Cache	0.47	1.07	1.61	1.50	2.04	1.60	0.55	0.39
Davis	0.07	0.02	0.14	0.00	0.03	0.00	0.14	0.45
Morgan	0.03	0.05	0.41	0.65	0.12	0.56	0.12	0.62
Rich	1.92	6.07	4.14	4.31	0.56	0.85	1.36	2.27
Summit	0.73	0.63	2.00	0.79	0.97	0.41	0.64	0.36
Weber	0.14	0.27	0.45	0.59	0.62	0.33	1.21	0.53
<b>REGIONAL TOTALS</b>	<b>10.55</b>	<b>17.95</b>	<b>17.80</b>	<b>21.14</b>	<b>11.71</b>	<b>12.56</b>	<b>12.31</b>	<b>11.47</b>
<b>Central Region</b>								
Juab	6.32	5.86	7.68	7.50	6.20	4.09	1.53	2.30
Salt Lake	0.40	0.68	0.36	1.09	0.97	0.30	0.35	3.03
Sanpete	3.70	3.34	2.80	3.39	0.97	4.09	1.62	2.55
Tooele	14.73	11.60	16.76	15.72	10.18	10.59	5.83	4.35
Utah	5.20	6.51	6.20	6.42	5.28	4.42	5.52	7.69
Wasatch	0.47	0.44	1.09	1.10	0.59	0.41	0.32	0.08
<b>REGIONAL TOTALS</b>	<b>30.82</b>	<b>28.43</b>	<b>34.88</b>	<b>35.22</b>	<b>24.20</b>	<b>23.89</b>	<b>15.16</b>	<b>20.00</b>
<b>Southern Region</b>								
Beaver	0.40	0.44	0.92	1.51	0.18	3.90	0.92	0.31
Garfield	2.66	1.16	0.09	0.17	0.86	1.00	1.42	0.17
Iron	0.92	2.02	1.03	1.03	1.86	2.38	1.62	1.46
Kane	1.23	0.90	1.33	0.50	2.15	1.49	0.81	0.03
Millard	2.80	5.02	4.18	4.99	8.29	3.75	1.73	2.52
Piute	0.09	0.61	0.06	0.00	0.15	0.11	0.12	0.14
Sevier	1.66	3.07	1.75	1.79	2.27	2.23	0.64	4.10
Washington	2.69	2.02	1.34	0.94	6.96	6.24	5.95	2.75
Wayne	1.02	1.08	1.12	0.92	0.71	1.30	0.64	1.15
<b>REGIONAL TOTALS</b>	<b>13.46</b>	<b>16.33</b>	<b>11.84</b>	<b>11.85</b>	<b>23.43</b>	<b>22.40</b>	<b>13.84</b>	<b>12.62</b>
<b>Northeastern Region</b>								
Daggett	3.21	2.37	3.28	1.63	3.13	1.19	1.13	1.85
Duchesne	12.37	8.55	10.98	8.67	12.95	5.83	17.48	17.39
Uintah	19.31	13.44	9.10	7.25	8.29	11.55	21.55	22.05
<b>REGIONAL TOTALS</b>	<b>34.89</b>	<b>24.27</b>	<b>23.36</b>	<b>17.55</b>	<b>24.37</b>	<b>18.57</b>	<b>40.15</b>	<b>41.29</b>
<b>Southeastern Region</b>								
Carbon	4.56	5.83	5.04	6.05	4.22	10.25	6.09	5.29
Emery	3.78	4.20	3.26	4.13	4.19	4.20	5.00	5.64
Grand	0.26	0.66	0.66	0.73	2.69	5.60	2.72	1.37
San Juan	1.43	2.33	3.15	3.33	2.39	5.50	3.38	1.18
<b>REGIONAL TOTALS</b>	<b>10.04</b>	<b>13.02</b>	<b>12.12</b>	<b>14.24</b>	<b>13.48</b>	<b>22.55</b>	<b>17.19</b>	<b>14.11</b>
<b>Unknown counties</b>	<b>0.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.80</b>	<b>0.00</b>	<b>1.36</b>	<b>0.50</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Table 7. Percentage distribution of cottontail rabbit hunting pressure by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	7.34	9.00	9.33	12.87	8.60	9.55	9.65	11.30
Cache	0.93	1.67	1.53	1.41	2.22	1.06	0.84	0.91
Davis	0.09	0.09	0.13	0.00	0.29	0.33	0.33	0.22
Morgan	0.27	0.15	0.36	0.85	0.29	1.06	0.03	0.40
Rich	1.84	3.28	2.12	2.44	0.83	0.63	1.17	1.71
Summit	1.64	1.19	2.16	1.37	0.66	0.93	1.00	0.47
Weber	0.68	0.35	0.69	0.94	0.80	1.06	1.61	0.54
<b>REGIONAL TOTALS</b>	<b>2.80</b>	<b>15.74</b>	<b>16.33</b>	<b>19.88</b>	<b>13.70</b>	<b>14.64</b>	<b>14.64</b>	<b>15.55</b>
<b>Central Region</b>								
Juab	5.48	5.15	6.16	6.88	6.19	5.72	3.65	2.76
Salt Lake	0.39	1.17	0.67	1.58	1.41	0.13	0.70	1.82
Sanpete	4.41	5.35	2.98	5.56	2.00	3.57	2.51	3.89
Tooele	16.16	14.61	18.35	17.65	17.38	13.39	12.76	8.14
Utah	7.61	10.50	8.43	9.06	7.73	8.50	10.05	9.19
Wasatch	0.41	0.86	1.39	0.92	0.58	0.23	1.77	0.62
<b>REGIONAL TOTALS</b>	<b>34.45</b>	<b>37.63</b>	<b>37.98</b>	<b>41.65</b>	<b>35.29</b>	<b>31.54</b>	<b>31.45</b>	<b>26.41</b>
<b>Southern Region</b>								
Beaver	1.27	0.51	1.79	0.88	0.22	2.31	2.78	0.40
Garfield	1.77	1.54	0.27	0.45	0.46	0.86	1.21	0.58
Iron	1.41	2.27	1.30	1.54	1.93	2.02	2.75	1.96
Kane	1.61	1.36	1.91	0.73	1.10	1.45	0.27	0.36
Millard	2.91	3.72	4.92	5.21	4.39	4.86	2.28	3.96
Piute	0.41	0.62	0.15	0.04	0.19	0.30	0.17	0.15
Sevier	2.25	2.88	3.61	1.99	2.71	2.98	1.88	5.09
Washington	3.91	3.10	2.67	1.28	5.63	5.49	6.10	2.54
Wayne	1.27	1.10	1.26	0.58	0.80	1.09	0.54	0.73
<b>REGIONAL TOTALS</b>	<b>116.82</b>	<b>17.10</b>	<b>17.89</b>	<b>12.70</b>	<b>17.43</b>	<b>21.36</b>	<b>17.95</b>	<b>15.76</b>
<b>Northeastern Region</b>								
Daggett	2.57	1.80	2.42	1.15	1.75	0.69	0.37	0.84
Duchesne	10.91	6.36	6.87	6.22	9.26	3.64	8.44	11.33
Uintah	8.05	7.55	7.61	5.88	8.31	6.64	9.01	10.72
<b>REGIONAL TOTALS</b>	<b>121.52</b>	<b>15.71</b>	<b>16.90</b>	<b>13.25</b>	<b>19.33</b>	<b>10.98</b>	<b>17.82</b>	<b>22.88</b>
<b>Southeastern Region</b>								
Carbon	6.20	5.55	3.89	5.66	5.02	10.28	5.96	6.54
Emery	6.23	5.39	4.25	4.08	3.95	4.13	4.66	5.38
Grand	0.34	0.57	0.50	0.62	1.19	1.92	2.61	4.40
San Juan	1.48	2.31	2.27	2.01	2.44	5.06	3.45	2.87
<b>REGIONAL TOTALS</b>	<b>14.25</b>	<b>13.82</b>	<b>10.91</b>	<b>12.37</b>	<b>12.60</b>	<b>21.39</b>	<b>16.68</b>	<b>19.18</b>
<b>Unknown counties</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.15</b>	<b>1.66</b>	<b>0.10</b>	<b>1.47</b>	<b>0.22</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Table 8. Statewide summary of cottontail rabbit harvest statistics, 1967-96.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Cottontails Per Hunter-Day	Cottontails Per Hunter
1967	23,249	181,812	92,681	1.95	7.79
1968	26,889	225,450	93,126	2.42	8.38
1969	29,760	184,034	119,596	1.54	6.18
1970	24,486	195,248	103,725	1.86	7.97
1971	30,824	239,511	145,287	1.65	7.78
1972	22,835	155,102	105,941	1.46	6.79
1973	20,109	88,603	87,036	1.02	4.41
1974	22,737	86,506	85,499	1.01	3.80
1975	24,803	154,182	116,707	1.32	6.22
1976	28,239	235,952	126,737	1.86	8.39
1977	35,831	269,263	157,257	1.71	7.51
1978	35,590	401,071	163,019	2.46	11.27
1979	33,385	200,223	127,497	1.57	6.00
1980	25,156	127,652	87,051	1.47	5.07
1981	25,906	149,765	104,183	1.44	5.78
1982	26,714	156,696	105,644	1.48	5.87
1983	22,467	180,767	96,151	1.88	8.05
1984	18,616	69,186	67,643	1.02	3.72
1985	14,059	31,397	48,371	0.65	2.23
1986	13,992	40,636	48,694	0.83	2.90
1987	20,322	110,411	77,047	1.43	5.43
1988	24,076	150,386	97,190	1.55	6.25
1989	22,878	120,075	91,264	1.32	5.25
1990	23,070	127,389	93,515	1.36	5.52
1991	21,137	111,407	82,772	1.35	5.27
1992	20,509	117,454	83,154	1.41	5.73
1993	17,578	64,400	77,968	0.83	3.66
1994	12,709	47,322	53,175	0.89	3.72
1995	13,840	67,295	58,042	1.16	4.86
1996	14,470	82,803	63,943	1.29	5.72
<b>Totals</b> <b>(1967-96)</b>	<b>696,236</b>	<b>4,371,998</b>	<b>2,859,915</b>	<b>--</b>	<b>--</b>
<b>Averages</b> <b>(1967-95)</b>	<b>23,509</b>	<b>147,903</b>	<b>96,413</b>	<b>1.44</b>	<b>5.92</b>



Table 9. Cottontail rabbit field bag check summary, 1996.

Region and County	All Hunts				Complete Hunts					
	Total Parties	Total Hunters	Total Hours	Total Rabbits	Complete Hunts	Total Hunters	Total Hours	Total Rabbits	Rabbits/Hunter	Rabbits/100 Hr
<b>Northern Region</b>										
Box Elder	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>										
<b>Central Region</b>										
Juab	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>										
<b>Southern Region</b>										
Beaver	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>										
<b>Northeastern Region</b>										
Daggett	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>										
<b>Southeastern Region</b>										
Carbon	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>										
<b>STATE TOTALS</b>										

Table 10. Cottontail rabbit hunter success trend as determined by field bag check, 1991-96.

Region and County	1991			1992			1993			1994			1995			1996		
	Rabbits/ Hunter	Rabbits/ 100 Hr	Rabbits/ Hunter	Rabbits/ 100 Hr	Rabbits/ Hunter	Rabbits/ 100 Hr	Rabbits/ Hunter	Rabbits/ 100 Hr	Rabbits/ Hunter	Rabbits/ 100 Hr	Rabbits/ Hunter	Rabbits/ 100 Hr	Rabbits/ Hunter	Rabbits/ 100 Hr	Rabbits/ Hunter	Rabbits/ 100 Hr		
<b>Northern Region</b>																		
Box Elder	313	3.57																
Cache																		
Davis																		
Morgan																		
Rich																		
Summit																		
Weber																		
<b>REGIONAL TOTALS</b>	<b>313</b>	<b>3.57</b>																
<b>Central Region</b>																		
Juab																		
Salt Lake																		
Sanpete																		
Tooele																		
Utah																		
Wasatch																		
<b>REGIONAL TOTALS</b>																		
<b>Southern Region</b>																		
Beaver																		
Garfield																		
Iron																		
Kane																		
Millard																		
Piute																		
Sevier																		
Washington																		
Wayne	21	1.02																
<b>REGIONAL TOTALS</b>	<b>21</b>	<b>1.02</b>																
<b>Northeastern Region</b>																		
Daggett						1.25												
Duchesne	48	1.38					50											
Uintah	66	1.91																
<b>REGIONAL TOTALS</b>	<b>61</b>	<b>1.77</b>				<b>1.25</b>	<b>50</b>											
<b>Southeastern Region</b>																		
Carbon																		
Emery																		
Grand																		
San Juan																		
<b>REGIONAL TOTALS</b>																		
<b>STATE TOTALS</b>	<b>29</b>	<b>1.26</b>				<b>1.25</b>	<b>50</b>											

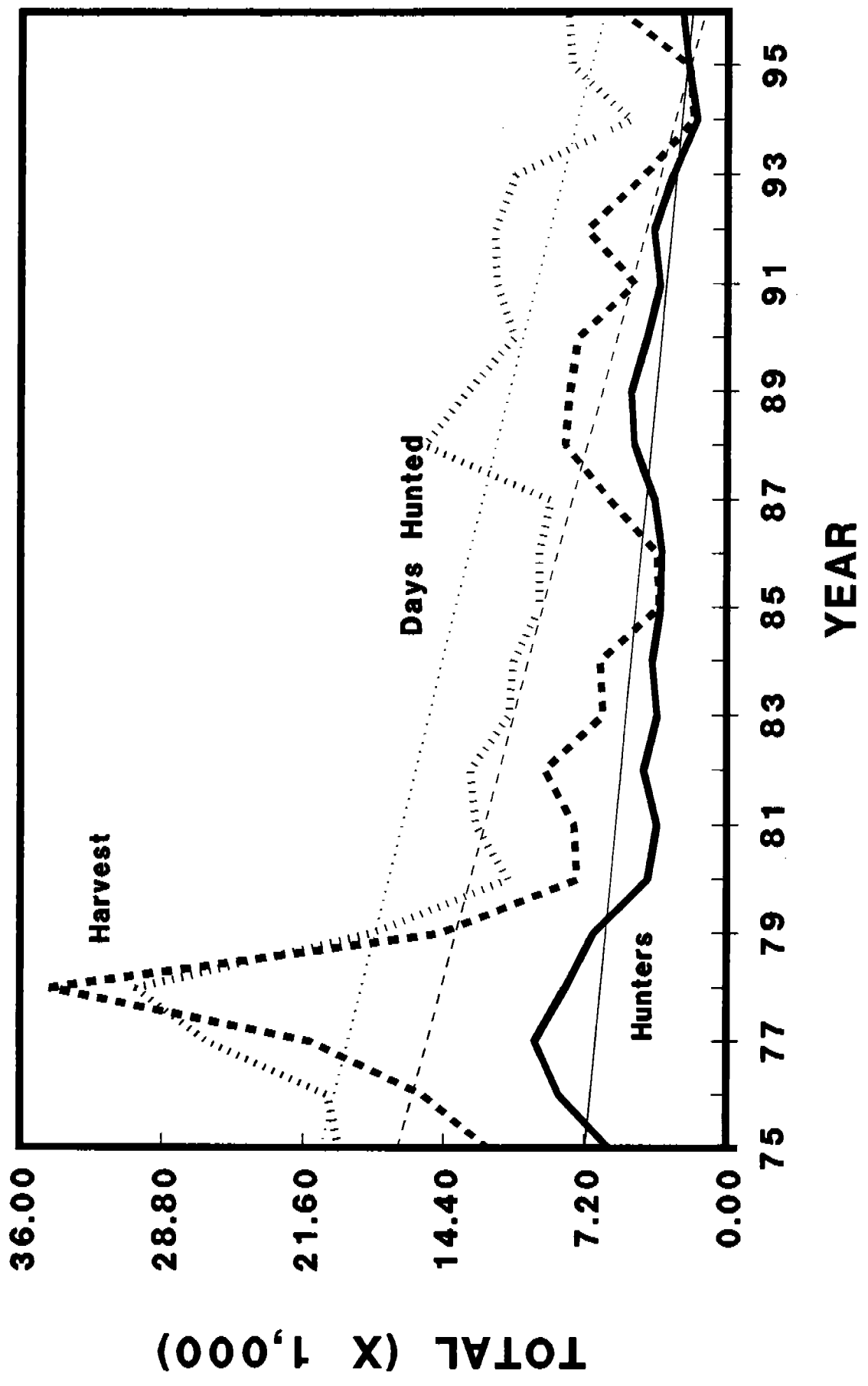


Figure 1. Statewide trends of snowshoe hare harvest statistics, 1975-96.

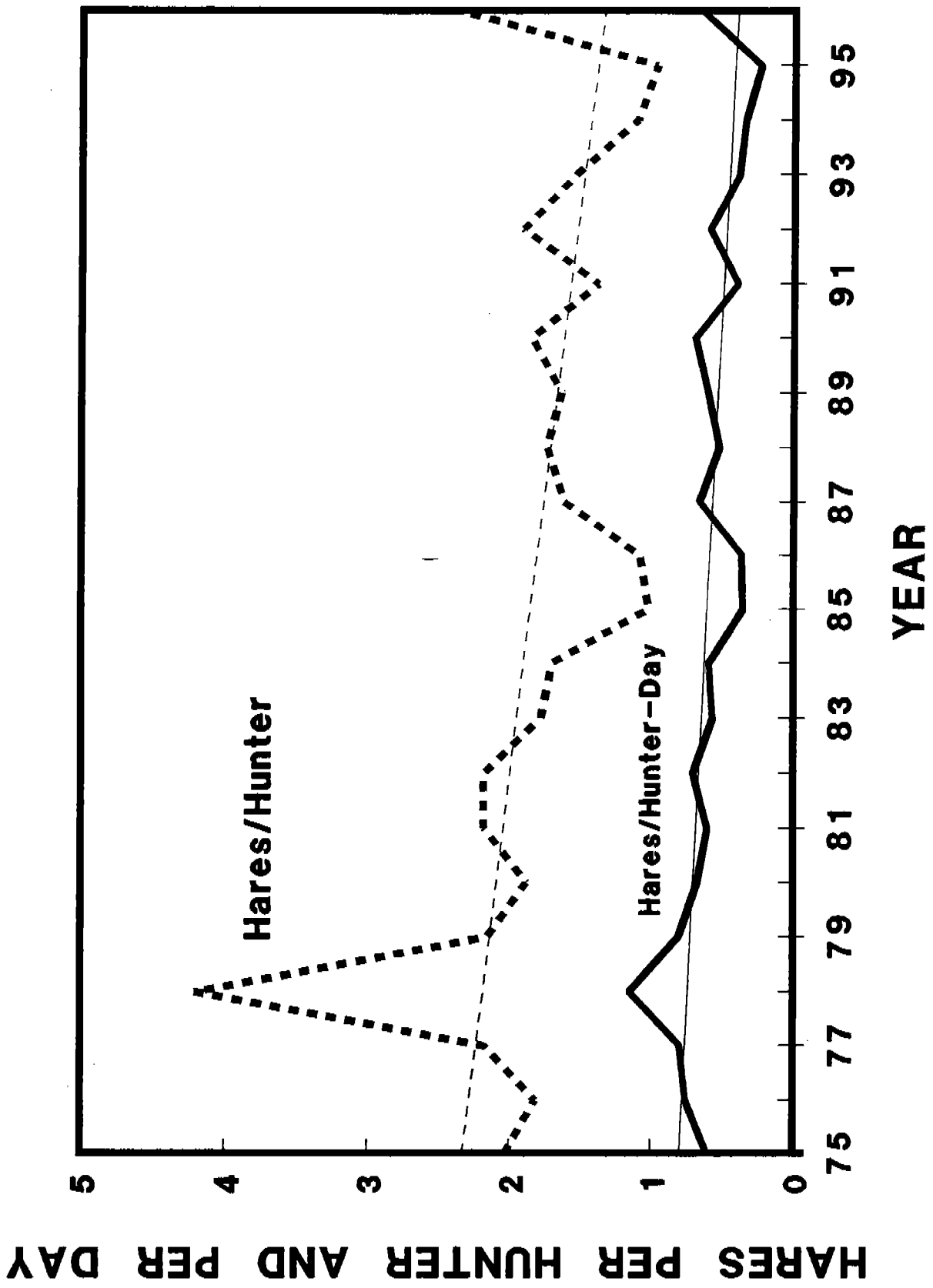


Figure 2. Statewide trends of snowshoe hare hunter success rates, 1975-96.

# SNOWSHOE HARE

## Harvest

Results of the 1996 hunter questionnaire are found in Table 11. Trends of snowshoe hares bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) are found in Tables 12-14. Trend in statewide harvest statistics by year are shown in Table 15 and Figures 1 and 2. The 1996 season compared to 1995 and the previous 21-year average follow:

	<u>1996</u>	<u>Percent change from 1995</u>	<u>Percent change from Average</u>
Snowshoe hare hunters	2,276	+15	-50
Snowshoe hares harvested	5,365	+179	-41
Hunter-days afield <sup>8</sup>	8,106	+3	-41
Snowshoes per hunter-day	0.66	+175	+11
Snowshoes per hunter	2.36	+143	+31

Ninety percent confidence interval for overall snowshoe hare harvest is +/- 1,133. Standard deviation is 0.885815.

Significant misidentification of white-tailed jackrabbits as snowshoe hares was anticipated prior to mailing the harvest questionnaire following the first season in 1975. This proved to be the case as a significant harvest of snowshoe hares was reported for counties outside the known range of the species. It was assumed that the problem was statewide, not just confined to those counties. Several attempts were made in the 1970s to reduce misidentification through pictures and descriptions in leaflets and questionnaires.

Beginning in 1988, harvest questionnaires, and in 1989 the Upland Game Proclamation had drawings and descriptions of the various rabbits and hares in an attempt to reduce misidentification. We believe this has been successful.

Results of the 1996 harvest questionnaire indicates a 179 percent increase in hunter success compared to 1995. Success was well below the long-term average.

Table 11. Summary of snowshoe hare hunter success and distribution of harvest and hunting pressure by region and county, 1996.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	SNOWSHOE BAGGED	SNOWSHOE HUNTER-DAY	% OF PRESSURE	% OF HARVEST
<b>NORTHERN REGION</b>						
BOX ELDER	16	1,672	348	0.21	20.63	6.49
CACHE	10	510	46	0.09	6.30	0.87
DAVIS	2	92	69	0.75	1.15	1.30
MORGAN	3	185	348	1.88	2.29	6.49
RICH	4	116	116	1.00	1.43	2.16
SUMMIT	4	185	139	0.75	2.29	2.60
WEBER	1	69	0	0.00	0.86	0.00
<b>REGIONAL TOTALS</b>	<b>40</b>	<b>2,833</b>	<b>1,068</b>	<b>0.38</b>	<b>34.96</b>	<b>19.91</b>
<b>CENTRAL REGION</b>						
JUAB	2	162	185	1.14	2.01	3.46
SALT LAKE	1	46	92	2.00	0.57	1.73
SANPETE	4	185	116	0.63	2.29	2.16
TOOELE	6	510	23	0.05	6.30	0.43
UTAH	20	1,649	580	0.35	20.34	10.82
WASATCH	8	441	46	0.11	5.44	0.87
<b>REGIONAL TOTALS</b>	<b>41</b>	<b>2,996</b>	<b>1,045</b>	<b>0.35</b>	<b>36.96</b>	<b>19.48</b>
<b>SOUTHERN REGION</b>						
BEAVER	0	0	0	0.00	0.00	0.00
GARFIELD	0	0	0	0.00	0.00	0.00
IRON	0	0	0	0.00	0.00	0.00
KANE	0	0	0	0.00	0.00	0.00
MILLARD	0	0	0	0.00	0.00	0.00
PIUTE	0	0	0	0.00	0.00	0.00
SEVIER	3	766	2,462	3.21	9.46	45.89
WASHINGTON	1	0	0	0.00	0.00	0.00
WAYNE	1	46	0	0.00	0.57	0.00
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>812</b>	<b>2,462</b>	<b>3.03</b>	<b>10.03</b>	<b>45.89</b>
<b>NORTHEASTERN REGION</b>						
DAGGETT	2	23	69	3.00	0.29	1.30
DUCHESNE	9	464	162	0.35	5.73	3.03
UINTAH	9	673	278	0.41	8.31	5.20
<b>REGIONAL TOTALS</b>	<b>20</b>	<b>1,161</b>	<b>510</b>	<b>0.44</b>	<b>14.33</b>	<b>9.52</b>
<b>SOUTHEASTERN REGION</b>						
CARBON	2	69	116	1.67	0.86	2.16
EMERY	3	232	162	0.70	2.87	3.03
GRAND	0	0	0	0.00	0.00	0.00
SAN JUAN	1	0	0	0.00	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>6</b>	<b>301</b>	<b>278</b>	<b>0.92</b>	<b>3.72</b>	<b>5.20</b>
<b>Unknown</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>STATE TOTALS</b>	<b>112</b>	<b>8,106</b>	<b>5,365</b>	<b>0.66</b>	<b>100.00</b>	<b>100.00</b>

\*Total hunter trips from questionnaire returns.

Table 12. Summary of snowshoe hare bagged per hunter-day by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	0.33	0.54	0.38	0.52	0.45	0.82	0.14	0.21
Cache	1.10	0.56	0.30	0.26	0.42	1.30	0.11	0.09
Davis	1.50	0.00	0.03	0.00	0.00	0.00	0.60	0.75
Morgan	0.36	0.80	2.17	0.15	0.00	0.47	0.00	1.88
Rich	0.51	0.76	1.31	1.15	0.38	1.21	0.21	1.00
Summit	0.73	1.05	0.24	0.62	0.18	0.39	0.23	0.75
Weber	0.50	0.25	0.25	1.00	1.12	0.28	0.91	0.00
<b>REGIONAL TOTALS</b>	<b>0.63</b>	<b>0.70</b>	<b>0.49</b>	<b>0.54</b>	<b>0.48</b>	<b>0.77</b>	<b>0.38</b>	<b>0.38</b>
<b>Central Region</b>								
Juab	0.00	0.53	0.50	0.38	0.00	0.64	0.15	1.14
Salt Lake	0.38	0.00	0.22	0.08	0.00	2.00	0.00	2.00
Sanpete	0.64	1.08	0.78	0.43	0.67	1.02	0.50	0.63
Tooele	0.77	0.32	0.35	0.58	0.25	0.70	0.38	0.05
Utah	0.37	0.51	0.71	0.79	0.08	0.46	0.10	0.35
Wasatch	1.00	0.17	0.22	0.48	8.67	1.57	0.04	0.11
<b>REGIONAL TOTALS</b>	<b>0.65</b>	<b>0.55</b>	<b>0.45</b>	<b>0.55</b>	<b>0.44</b>	<b>0.67</b>	<b>0.21</b>	<b>0.35</b>
<b>Southern Region</b>								
Beaver	0.00	0.50	0.00	0.00	0.00	1.50	0.05	0.00
Garfield	0.35	0.67	1.00	0.00	0.00	1.04	0.00	0.00
Iron	0.00	0.00	0.00	0.67	0.00	1.05	0.00	0.00
Kane	0.00	0.00	0.00	0.20	0.00	0.91	0.00	0.00
Millard	1.00	0.00	0.00	0.15	0.32	0.69	0.00	0.00
Piute	0.64	0.43	0.00	1.50	0.00	0.33	0.00	3.21
Sevier	0.55	0.96	0.61	0.78	0.44	0.67	0.00	0.00
Washington	0.00	0.00	0.00	0.00	0.00	1.01	0.00	0.00
Wayne	0.50	0.39	0.44	1.25	0.25	1.06	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>0.50</b>	<b>0.62</b>	<b>0.56</b>	<b>0.70</b>	<b>0.30</b>	<b>0.93</b>	<b>0.02</b>	<b>3.03</b>
<b>Northeastern Region</b>								
Daggett	1.00	0.50	0.14	1.00	0.43	1.52	0.00	3.00
Duchesne	0.54	1.33	0.18	0.23	0.22	1.43	0.12	0.35
Uintah	0.23	0.88	0.14	1.62	0.15	1.55	0.33	0.41
<b>REGIONAL TOTALS</b>	<b>0.40</b>	<b>1.17</b>	<b>0.17</b>	<b>0.79</b>	<b>0.23</b>	<b>1.51</b>	<b>0.24</b>	<b>0.44</b>
<b>Southeastern Region</b>								
Carbon	1.00	0.71	0.21	0.63	0.29	0.89	0.00	1.67
Emery	0.54	0.37	0.45	0.33	0.60	0.90	0.33	0.70
Grand	0.00	2.00	0.00	0.00	0.00	1.21	0.00	0.00
San Juan	1.67	0.00	0.00	1.00	0.00	0.97	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>0.77</b>	<b>0.56</b>	<b>0.30</b>	<b>0.46</b>	<b>0.37</b>	<b>0.94</b>	<b>0.20</b>	<b>0.92</b>
<b>Unknown counties</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.60</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>STATE TOTALS</b>	<b>0.61</b>	<b>0.70</b>	<b>0.40</b>	<b>0.60</b>	<b>0.39</b>	<b>0.35</b>	<b>0.24</b>	<b>0.66</b>

Table 13. Percentage distribution of snowshoe hare harvest by region and county, 1989-96.

Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	10.57	6.62	14.43	10.76	9.55	35.73	5.05	6.49
Cache	5.15	4.78	2.49	4.93	1.09	0.00	2.02	0.87
Davis	0.00	0.37	0.00	0.00	0.33	0.00	3.03	1.30
Morgan	1.08	4.78	0.50	0.00	1.06	3.06	0.00	6.49
Rich	14.09	20.22	5.72	1.35	0.63	4.08	3.03	2.16
Summit	11.11	4.41	6.47	1.35	0.93	0.00	3.03	2.60
Weber	0.27	1.84	0.50	8.52	1.06	0.00	30.31	0.00
<b>REGIONAL TOTALS</b>	<b>242.28</b>	<b>43.02</b>	<b>30.10</b>	<b>26.91</b>	<b>14.64</b>	<b>42.88</b>	<b>46.47</b>	<b>19.91</b>
<b>Central Region</b>								
Juab	2.71	1.47	3.23	0.00	5.72	1.02	4.04	3.46
Salt Lake	0.00	0.74	0.25	0.00	0.13	0.00	0.00	1.73
Sanpete	7.05	11.40	2.49	1.79	3.57	10.21	15.15	2.16
Tooele	3.25	8.83	7.21	8.07	13.39	2.04	12.12	0.43
Utah	4.88	5.52	11.44	2.24	8.50	9.19	6.06	10.82
Wasatch	0.27	3.68	2.99	23.32	0.23	4.08	1.01	0.87
<b>REGIONAL TOTALS</b>	<b>218.16</b>	<b>31.62</b>	<b>27.61</b>	<b>35.43</b>	<b>31.54</b>	<b>25.54</b>	<b>38.39</b>	<b>19.48</b>
<b>Southern Region</b>								
Beaver	0.27	0.00	0.00	0.00	2.31	0.00	1.01	0.00
Garfield	1.08	1.10	0.00	0.00	0.86	1.02	0.00	0.00
Iron	0.00	0.00	0.50	0.00	2.02	0.00	0.00	0.00
Kane	0.00	0.00	0.25	0.00	1.45	0.00	0.00	0.00
Millard	0.00	0.00	1.24	4.48	4.86	0.00	0.00	0.00
Piute	0.81	0.00	0.00	0.00	0.30	0.00	0.00	0.00
Sevier	7.05	10.30	5.22	3.14	2.98	5.10	0.00	45.89
Washington	0.00	0.00	0.00	0.00	5.49	1.02	0.00	0.00
Wayne	3.25	1.47	9.95	1.79	1.09	6.13	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>12.47</b>	<b>12.87</b>	<b>17.91</b>	<b>9.42</b>	<b>21.36</b>	<b>13.27</b>	<b>1.01</b>	<b>45.89</b>
<b>Northeastern Region</b>								
Daggett	0.54	1.10	1.00	5.83	0.69	0.00	0.00	1.30
Duchesne	16.26	6.25	3.73	6.28	3.64	2.04	3.03	3.03
Uintah	3.79	1.84	16.92	4.93	6.64	4.08	10.10	5.20
<b>REGIONAL TOTALS</b>	<b>20.60</b>	<b>9.19</b>	<b>21.64</b>	<b>17.04</b>	<b>10.98</b>	<b>6.13</b>	<b>13.13</b>	<b>9.52</b>
<b>Southeastern Region</b>								
Carbon	2.71	1.47	1.24	1.79	10.28	11.23	0.00	2.16
Emery	2.71	1.84	1.24	1.35	4.13	0.00	1.01	3.03
Grand	1.08	0.00	0.00	0.00	1.92	0.00	0.00	0.00
San Juan	0.00	0.00	0.25	0.00	5.06	0.00	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>6.50</b>	<b>3.31</b>	<b>2.74</b>	<b>3.14</b>	<b>21.39</b>	<b>11.23</b>	<b>1.01</b>	<b>5.20</b>
<b>Unknown counties</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.07</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>



Table 14. Percentage distribution of snowshoe hare hunting pressure by region and county, 1989-96.

*Region and County	Year							
	1989	1990	1991	1992	1993	1994	1995	1996
<b>Northern Region</b>								
Box Elder	5.64	13.69	7.11	16.67	9.35	31.07	8.62	20.63
Cache	6.27	6.46	6.37	5.71	4.59	0.36	4.68	6.30
Davis	0.31	0.19	4.59	0.00	0.35	0.71	1.23	1.15
Morgan	1.72	0.95	0.89	1.95	0.53	3.21	0.25	2.29
Rich	9.25	12.93	6.22	3.00	1.41	2.50	3.45	1.43
Summit	3.45	7.41	7.41	6.31	3.00	2.14	3.20	2.29
Weber	1.57	0.76	2.96	0.30	3.00	0.36	8.13	0.86
<b>REGIONAL TOTALS</b>	<b>28.21</b>	<b>42.40</b>	<b>35.56</b>	<b>33.93</b>	<b>22.22</b>	<b>40.36</b>	<b>29.56</b>	<b>34.96</b>
<b>Central Region</b>								
Juab	0.00	3.61	1.19	5.11	0.18	2.86	6.40	2.01
Salt Lake	1.25	0.00	1.33	1.95	5.47	0.00	1.23	0.57
Sanpete	8.78	4.56	5.93	3.45	1.06	4.29	7.39	2.29
Tooele	6.74	7.03	10.22	7.51	12.52	5.36	7.88	6.30
Utah	6.43	6.65	3.11	8.71	11.29	9.64	14.53	20.34
Wasatch	3.76	1.14	6.67	3.75	1.06	3.21	6.40	5.44
<b>REGIONAL TOTALS</b>	<b>326.96</b>	<b>23.00</b>	<b>28.45</b>	<b>30.48</b>	<b>31.57</b>	<b>25.63</b>	<b>43.85</b>	<b>36.96</b>
<b>Southern Region</b>								
Beaver	0.63	0.38	0.30	0.00	0.00	0.00	5.42	0.00
Garfield	3.13	1.14	0.44	0.00	1.23	1.79	0.00	0.00
Iron	0.00	0.00	0.00	0.45	0.00	0.71	0.00	0.00
Kane	0.00	0.00	0.15	0.75	0.00	0.00	0.74	0.00
Millard	0.94	0.19	0.00	5.11	5.47	0.36	0.49	0.00
Piute	1.72	1.33	0.30	0.30	0.00	0.00	0.00	0.00
Sevier	3.13	5.13	6.82	4.05	2.82	4.29	3.70	9.46
Washington	0.16	0.00	0.00	0.00	0.00	3.57	0.00	0.00
Wayne	5.64	5.89	1.33	4.80	2.82	3.57	0.99	0.57
<b>REGIONAL TOTALS</b>	<b>15.36</b>	<b>14.07</b>	<b>9.33</b>	<b>15.47</b>	<b>12.35</b>	<b>14.29</b>	<b>11.33</b>	<b>10.03</b>
<b>Northeastern Region</b>								
Daggett	0.16	0.76	3.26	0.60	5.29	0.00	0.00	0.29
Duchesne	7.52	8.56	13.78	9.61	11.29	4.29	6.16	5.73
Uintah	6.27	3.04	5.19	6.31	13.05	2.50	7.39	8.31
<b>REGIONAL TOTALS</b>	<b>113.95</b>	<b>12.36</b>	<b>22.22</b>	<b>16.52</b>	<b>29.63</b>	<b>6.79</b>	<b>13.55</b>	<b>14.33</b>
<b>Southeastern Region</b>								
Carbon	6.58	2.66	2.81	1.20	2.47	11.79	0.00	0.86
Emery	8.46	5.13	1.63	2.25	0.88	1.43	0.74	2.87
Grand	0.00	0.38	0.00	0.00	0.00	0.00	0.49	0.00
San Juan	0.47	0.00	0.00	0.15	0.00	0.00	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>5.52</b>	<b>8.17</b>	<b>4.44</b>	<b>3.60</b>	<b>3.35</b>	<b>13.21</b>	<b>1.23</b>	<b>3.72</b>
<b>Unknown counties</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.88</b>	<b>0.00</b>	<b>0.49</b>	<b>0.00</b>
<b>STATE TOTALS</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Table 15. Statewide summary of snowshoe hare harvest statistics, 1975-96.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Hares Per Hunter-Day	Hares Per Hunter
1975	5,961	12,072	19,770	0.61	2.03
1976	8,502	15,500	20,367	0.76	1.82
1977	9,752	21,232	26,535	0.80	2.18
1978	8,205	34,535	30,155	1.15	4.21
1979	6,787	14,641	18,115	0.81	2.16
1980	4,048	7,603	11,140	0.68	1.88
1981	3,554	7,750	12,782	0.61	2.18
1982	4,245	9,257	13,073	0.71	2.18
1983	3,544	6,302	11,088	0.57	1.78
1984	3,796	6,455	10,840	0.60	1.70
1985	3,365	3,429	9,494	0.36	1.02
1986	3,277	3,544	9,541	0.37	1.08
1987	3,702	6,005	8,947	0.67	1.62
1988	4,725	8,231	15,444	0.53	1.74
1989	4,895	8,006	13,233	0.61	1.64
1990	4,095	7,593	10,825	0.70	1.85
1991	3,427	4,731	11,742	0.40	1.38
1992	3,732	7,144	11,836	0.60	1.91
1993	2,755	4,237	10,774	0.39	1.54
1994	1,565	1,722	4,922	0.35	1.10
1995	1,983	1,924	7,891	0.24	0.97
1996	2,276	5,365	8,106	0.66	2.36
<b>Totals (1975-96)</b>	<b>98,191</b>	<b>197,278</b>	<b>296,620</b>	<b>--</b>	<b>--</b>
<b>Averages (1975-95)</b>	<b>4,567</b>	<b>9,139</b>	<b>13,739</b>	<b>0.60</b>	<b>1.81</b>



# APPENDICES

## APPENDIX A

### WEATHER CONDITIONS

Weather information used in this report (Tables 1 & 2 and Figures 1 & 2) is from the office of the Utah State Climatologist and N.O.A.A. Climatological Data Periodical.

The 1995-96 winter weather was fairly mild in terms of precipitation and in terms of cold temperature. Below average precipitation fell in October through December 1995. In November 1995 through February 1996 temperatures were above average.

In the spring of 1996, May precipitation was above normal. March, April, June and July, 1996 precipitation was below normal. Temperatures were above normal March through August, 1996.

Table 1. Comparison of 1996 monthly average temperatures (F) to the normal for each weather division and statewide.

Weather Division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
<b>No.1 Western</b>													
Normal	26.0	32.5	39.6	47.3	56.5	66.0	74.3	72.1	62.0	50.1	37.6	27.4	49.3
1996	31.0	33.0	42.3	48.5	57.6	69.0	75.8	72.5	61.1	49.6	39.5	32.8	51.1
Departure (degrees)	5.0	0.5	2.7	1.2	1.1	3.0	1.5	0.4	-0.9	-0.5	1.9	5.4	1.8
<b>No.2 Dixie</b>													
Normal	38.8	44.1	49.2	56.6	65.7	75.6	81.7	79.4	71.9	60.9	48.0	39.5	59.3
1996	42.3	49.6	53.1	61.3	69.6	79.0	85.1	83.4	71.8	60.0	49.4	41.6	62.2
Departure (degrees)	3.5	5.5	3.9	4.7	3.9	3.4	3.4	4.0	-0.1	-0.9	1.4	2.1	2.9
<b>No.3 North Central</b>													
Normal	25.8	31.3	39.3	47.7	56.9	66.2	74.4	72.3	62.4	50.9	38.3	27.8	49.5
1996	31.5	31.6	42.8	48.6	57.4	70.2	76.1	73.8	61.4	51.1	40.7	33.6	51.6
Departure (degrees)	5.7	0.3	3.5	0.9	0.5	4.0	1.7	1.5	-1.0	0.2	2.4	5.8	2.1
<b>No.4 South Central</b>													
Normal	26.5	31.6	37.6	45.1	54.0	63.4	70.4	68.2	59.9	49.3	37.3	28.1	47.6
1996	30.9	35.9	39.9	46.1	57.0	66.4	72.6	69.8	58.7	47.3	38.3	30.8	49.5
Departure (degrees)	4.4	4.3	2.3	1.0	3.0	3.0	2.2	1.6	-1.2	-2.0	1.0	2.7	1.9
<b>No.5 Northern Mountains</b>													
Normal	20.9	24.7	31.7	40.6	49.6	58.2	65.6	63.6	54.9	44.7	32.5	22.8	42.5
1996	25.7	26.8	34.3	41.4	51.0	61.6	67.4	65.2	54.1	44.2	34.7	27.0	44.5
Departure (degrees)	4.8	2.1	2.6	0.8	1.4	3.4	1.8	1.6	-0.8	-0.5	2.2	4.2	2.0
<b>No.6 Uintah Basin</b>													
Normal	16.7	24.0	36.3	46.8	56.2	65.3	72.2	69.8	60.2	48.3	34.0	20.5	45.8
1996	22.5	28.4	39.9	47.2	57.7	67.1	73.3	70.6	58.6	46.4	35.3	25.6	47.7
Departure (degrees)	5.8	4.4	3.6	0.4	1.5	1.8	1.1	0.8	-1.6	-1.9	1.3	5.1	1.9
<b>No.7 Southeast</b>													
Normal	26.9	34.2	41.9	50.5	60.0	70.1	76.7	74.2	65.2	53.4	40.2	29.5	51.9
1996	31.4	39.3	44.1	51.4	64.2	72.5	79.0	76.6	63.3	52.0	40.3	32.3	53.9
Departure (degrees)	4.5	5.1	2.2	0.9	4.2	2.4	2.3	2.4	-1.9	-1.4	0.1	2.8	2.0
<b>STATE AVERAGES</b>													
Normal	25.9	31.8	39.4	47.8	57.0	66.4	73.6	71.4	62.4	51.1	38.3	27.9	49.4
1996	30.8	34.9	42.3	49.2	59.2	69.4	75.6	73.1	61.3	50.1	39.7	32.0	51.5
Departure (degrees)	4.8	3.2	3.0	1.4	2.2	3.0	2.0	1.8	-1.1	-1.0	1.5	4.0	2.1

**Figure 1. Temperature Departure from Normal, (degrees F), 1996**

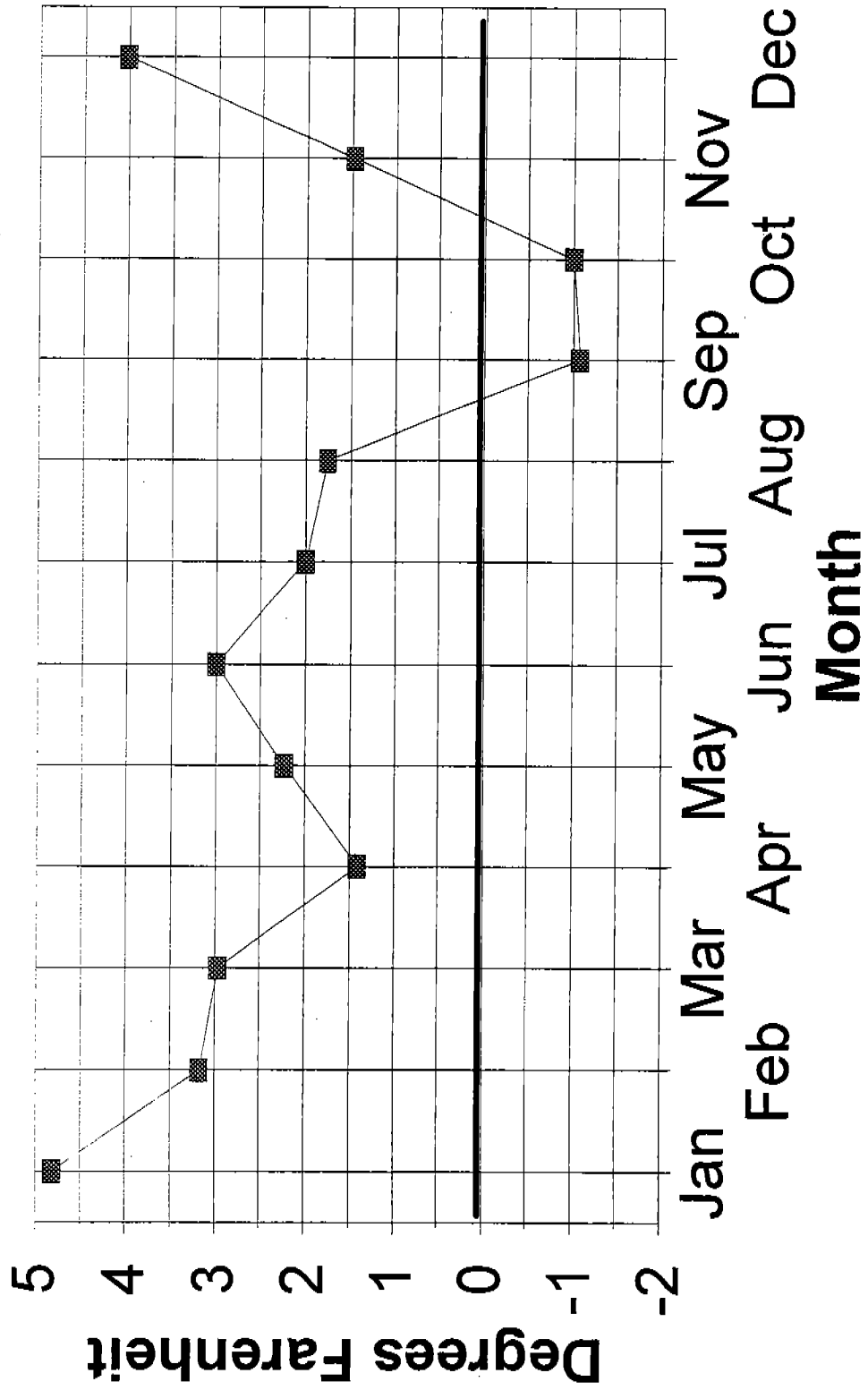
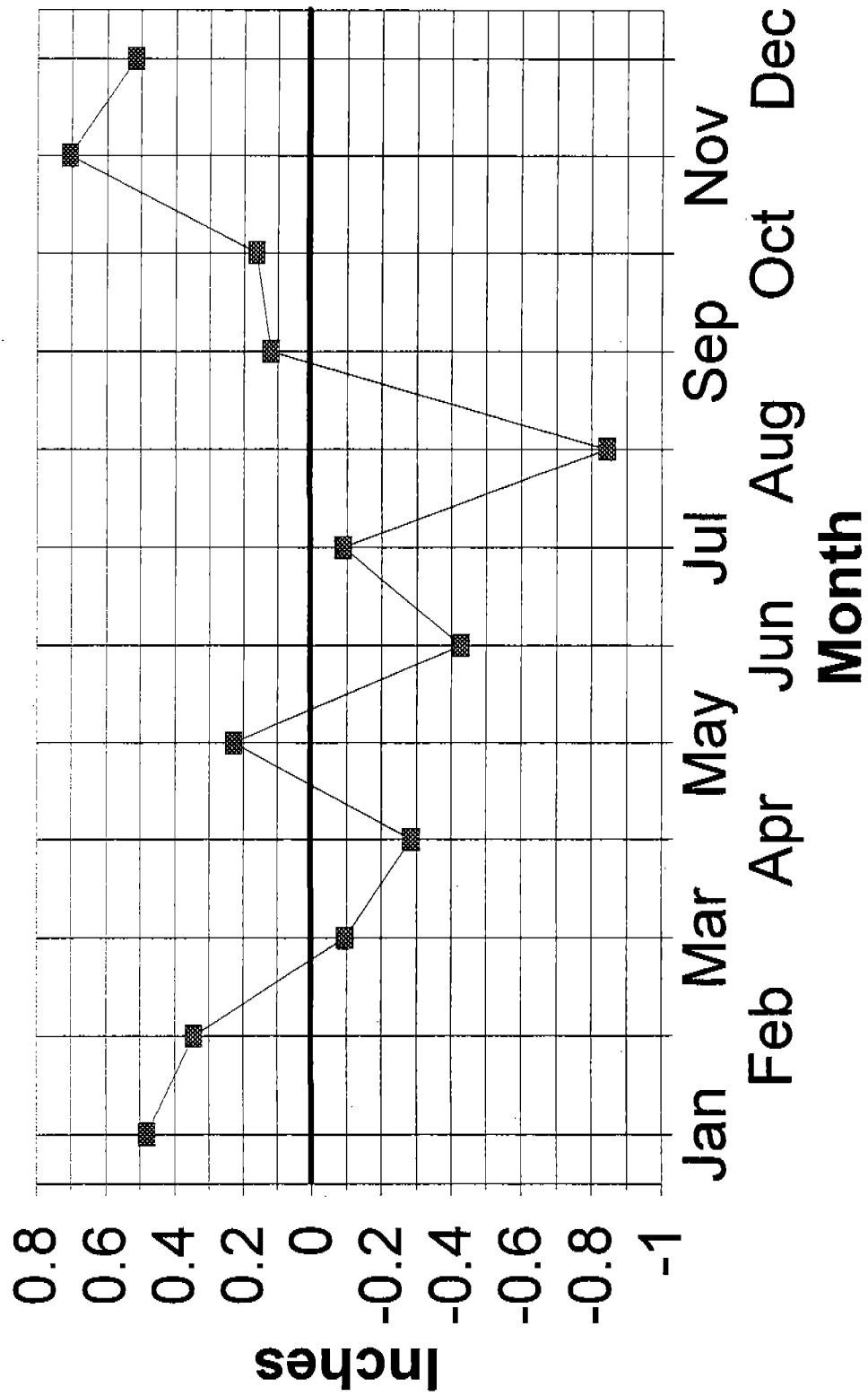


Table 2. Comparison of 1996 monthly average precipitation to the normal for each weather division and statewide.

Weather Division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
<b>No.1 Western</b>													
Normal	0.53	0.58	0.85	0.89	0.98	0.71	0.73	0.83	0.79	0.81	0.68	0.58	8.96
1996	0.58	0.73	0.95	0.52	1.32	0.02	0.84	0.10	0.64	0.64	0.96	1.04	8.34
Departure (inches)	0.05	0.15	0.10	-0.37	0.34	-0.69	0.11	-0.73	-0.15	-0.17	0.28	0.46	-0.62
<b>No.2 Dixie</b>													
Normal	1.32	1.29	1.67	0.90	0.63	0.31	0.90	1.19	0.86	0.78	1.19	1.01	12.05
1996	0.60	1.79	0.68	0.20	0.52	0.04	1.00	0.11	0.83	1.08	2.07	1.23	10.15
Departure (inches)	-0.72	0.50	-0.99	-0.70	-0.11	-0.27	0.10	-1.08	-0.03	0.30	0.88	0.22	-1.90
<b>No.3 North Central</b>													
Normal	1.34	1.39	1.77	1.94	1.84	1.21	0.85	0.99	1.43	1.64	1.53	1.49	17.42
1996	2.58	1.78	2.48	1.83	2.51	0.15	0.8	0.07	1.15	2.02	2.27	2.48	20.12
Departure (inches)	1.24	0.39	0.71	-0.11	0.67	-1.06	-0.05	-0.92	-0.28	0.38	0.74	0.99	2.70
<b>No.4 South Central</b>													
Normal	0.98	1.01	1.37	1.07	0.98	0.60	1.07	1.38	1.18	1.05	1.07	1.02	12.78
1996	1.06	1.82	1.16	0.58	0.93	0.14	1.02	0.43	1.16	1.34	2.02	1.20	12.86
Departure (inches)	0.08	0.81	-0.21	-0.49	-0.05	-0.46	-0.05	-0.95	-0.02	0.29	0.95	0.18	0.08
<b>No.5 Northern Mountains</b>													
Normal	1.83	1.78	1.93	1.95	1.68	1.19	1.04	1.19	1.52	1.69	1.83	1.92	19.55
1996	4.20	2.27	2.06	2.15	2.00	0.62	0.79	0.28	1.83	1.74	3.06	4.03	25.03
Departure (inches)	2.37	0.49	0.13	0.20	0.32	-0.57	-0.25	-0.91	0.31	0.05	1.23	2.11	5.48
<b>No.6 Uintah Basin</b>													
Normal	0.48	0.46	0.63	0.73	0.86	0.71	0.71	0.73	0.88	0.96	0.56	0.60	8.31
1996	0.97	0.55	0.46	0.48	1.26	0.67	0.65	0.16	1.08	0.82	0.82	0.47	8.39
Departure (inches)	0.49	0.09	-0.17	-0.25	0.40	-0.04	-0.06	-0.57	0.20	-0.14	0.26	-0.13	0.08
<b>No.7 Southeast</b>													
Normal	0.68	0.59	0.81	0.66	0.67	0.46	0.97	1.05	0.98	1.13	0.80	0.73	9.53
1996	0.53	0.57	0.58	0.38	0.70	0.56	0.55	0.31	1.80	1.57	1.40	0.51	9.46
Departure (inches)	-0.15	-0.02	-0.23	-0.28	0.03	0.10	-0.42	-0.74	0.82	0.44	0.60	-0.22	-0.07
<b>STATE AVERAGES</b>													
Normal	1.02	1.01	1.29	1.16	1.09	0.74	0.90	1.05	1.09	1.15	1.09	1.05	12.66
1996	1.50	1.36	1.20	0.88	1.32	0.31	0.81	0.21	1.21	1.32	1.80	1.57	13.48
Departure (inches)	0.48	0.34	-0.09	-0.29	0.23	-0.43	-0.09	-0.84	0.12	0.16	0.71	0.52	0.82

**Figure 2. Precipitation Departure  
from Normal, (inches), 1996**





## APPENDIX B

### LICENSE SALES

Small game license sales by type and cost are listed in Table 1. The number of licenses sold for all types, except non resident small game licenses, decreased slightly in 1996.

The proportion of Utah's population hunting small game is declining (Table 2). In the early 1970s about 9 percent of Utah's population was hunting small game. In 1996, only 3.5 percent of Utah's population hunted small game.

Table 3 identifies revenue generated to the Utah Division of Wildlife Resources from small game license sales. Small game program budgets run about half the revenue generated, with the other half going to support services such as law enforcement, administration, accounting, and public services.

**Table 1. Statewide small game license sales information, 1954-96.**

Year	Adult Res. Small Game		Juv. Res. Small Game		Non Res. Small Game		Combination License	
	Issued	Cost	Issued	Cost	Issued	Cost	Issued	Cost
1954	12,990	\$3.50	5,170	\$2.00	561	\$15.00	79,574	\$6.00
1955	12,086	\$3.50	5,369	\$2.00	478	\$15.00	79,960	\$6.00
1956	12,102	\$3.50	5,735	\$2.00	524	\$15.00	80,968	\$6.00
1957	12,239	\$3.50	6,192	\$2.00	505	\$15.00	81,271	\$6.00
1958	14,290	\$3.50	6,563	\$2.00	696	\$15.00	85,198	\$6.00
1959	13,421	\$3.50	5,966	\$2.00	669	\$15.00	90,069	\$6.00
1960	12,020	\$3.50	5,022	\$2.00	576	\$15.00	90,085	\$6.00
1961	12,177	\$3.50	6,108	\$2.00	617	\$15.00	88,180	\$6.00
1962	12,953	\$3.50	6,536	\$2.00	607	\$15.00	91,412	\$6.00
1963	13,365	\$3.50	6,319	\$2.00	642	\$15.00	94,768	\$6.00
1964	13,073	\$3.50	6,453	\$2.00	681	\$15.00	98,556	\$6.00
1965	12,913	\$3.50	6,755	\$2.00	716	\$15.00	100,410	\$6.00
1966	13,854	\$3.50	7,477	\$2.00	725	\$15.00	103,849	\$6.00
1967	18,588	\$4.50	12,851	\$2.50	652	\$20.00	86,218	\$10.00
1968	20,647	\$4.50	15,205	\$2.50	703	\$20.00	91,020	\$10.00
1969	20,221	\$4.50	15,567	\$2.50	853	\$20.00	96,117	\$10.00
1970	19,564	\$4.50	15,827	\$2.50	1,009	\$20.00	100,467	\$10.00
1971	20,681	\$4.50	16,044	\$2.50	1,000	\$20.00	102,284	\$10.00
1972	19,796	\$4.50	16,523	\$2.50	1,075	\$20.00	107,414	\$10.00
1973	18,836	\$4.50	16,522	\$2.50	964	\$20.00	155,436	\$10.00
1974	17,434	\$4.50	16,334	\$2.50	974	\$20.00	117,770	\$10.00
1975	17,057	\$4.50	15,869	\$2.50	967	\$20.00	115,362	\$10.00
1976	33,078	\$6.00	16,261	\$3.00	1,141	\$20.00	76,587	\$18.00
1977	36,473	\$6.00	15,795	\$3.00	1,270	\$20.00	74,600	\$18.00
1978	37,082	\$6.00	15,419	\$3.00	1,449	\$20.00	81,227	\$18.00
1979	36,721	\$6.00	14,200	\$3.00	1,575	\$20.00	84,450	\$18.00
1980	30,189	\$8.00	14,042	\$4.00	1,330	\$30.00	100,177	\$23.00
1981	37,804	\$8.00	13,874	\$4.00	1,559	\$30.00	83,486	\$23.00
1982	36,850	\$8.00	14,040	\$4.00	1,637	\$30.00	82,970	\$23.00
1983	39,602	\$8.00	13,814	\$4.00	1,685	\$30.00	73,529	\$23.00
1984	36,070	\$8.00	13,170	\$4.00	1,633	\$30.00	73,081	\$23.00
1985	30,102	\$12.00	12,987	\$6.00	1,500	\$40.00	82,137	\$35.00
1986	29,202	\$12.00	11,921	\$6.00	1,274	\$40.00	67,187	\$35.00
1987	26,781	\$12.00	11,228	\$6.00	1,235	\$40.00	66,715	\$35.00
1988	25,733	\$12.00	9,498	\$6.00	1,428	\$40.00	72,846	\$35.00
1989	25,845	\$12.00	5,769	\$6.00	1,422	\$40.00	74,274	\$35.00
1990	24,527	\$12.00	5,682	\$6.00	1,279	\$40.00	76,292	\$35.00
1991	23,276	\$12.00	5,626	\$6.00	1,212	\$40.00	79,165	\$35.00
1992	21,852	\$12.00	5,431	\$6.00	1,195	\$40.00	78,940	\$35.00
1993	20,899	\$12.00	4,887	\$6.00	1,150	\$40.00	78,030	\$25.00
1994	25,792	\$12.00	4,551	\$6.00	1,223	\$40.00	59,854	\$25.00
1995	24,219	\$12.00	4,403	\$6.00	1,379	\$40.00	66,607	\$25.00
1996	23,908	\$12.00	3,584	\$6.00	1,503	\$40.00	65,003	\$25.00

**Table 2. Actual (1971-1996) proportion of Utah population hunting small game.**

<b>Year</b>	<b>Utah Population</b>	<b>Resident Small Game Hunters 1</b>	<b>Proportion Hunting Small Game</b>
1971	1,101,000	93,399	8.5
1972	1,135,000	102,430	9.0
1973	1,169,000	106,868	9.1
1974	1,197,000	104,796	8.8
1975	1,234,000	100,702	8.2
1976	1,272,000	77,138	6.1
1977	1,316,000	78,652	6.0
1978	1,364,000	87,928	6.4
1979	1,416,000	93,016	6.6
1980	1,461,037	103,018	7.1
1981	1,524,830	96,104	6.3
1982	1,588,622	92,724	5.8
1983	1,652,415	86,396	5.2
1984	1,716,207	81,499	4.7
1985	1,780,000	88,498	5.0
1986a	1,665,000	87,442	5.3
1987a	1,678,000	79,485	4.7
1988	1,695,000	87,928	5.2
1989a	1,715,000	89,147	5.2
1990a	1,722,850	87,691	5.1
1991a	1,774,241	86,484	4.9
1992a	1,820,453	88,707	4.9
1993a	1,866,000	86,150	4.6
1994a	1,916,000	72,383	3.8
1995a	1,959,000	75,251	3.8
1996a	2,002,359	70,142	3.5

1 Resident Small Game Hunters = Adjusted combination and juvenile small game licenses sold (adjustments are outlined in Table 3) plus adult small game licenses sold.

a Utah Population Estimate Committee Report for July 1  
(Office of State Planning Coordinator)

Table 3. Small game license sales and income, 1971-96 (JSG=juvenile small game, RSG=adult resident small game, CMB=combination license, NRS=nonresident small game).

Year	License Fees				Number of Licenses Sold				No. Federal Duck Stamps				Total Gross Revenues Attributed to Small Game (\$)			
	JSG	RSG	CMB	NRS	JSG	RSG	CMB	NRS	Sold(3)	NRS	Sold(3)	JSG(4)	RSG	CMB(2)	NRS	TOTAL(1)
1971	2.50	4.50	10.00	20.00	16,044	20,681	102,284	1,000	37,588	20,055	93,064	200,557	20,000	313,676		
1972	2.50	4.50	10.00	20.00	16,523	19,796	107,414	4,075	33,042	20,653	89,082	230,553	21,500	340,288		
1973	2.50	4.50	10.00	20.00	16,522	18,836	115,436	964	35,665	20,652	84,762	247,290	19,280	352,704		
1974	2.50	4.50	10.00	20.00	16,334	17,434	117,770	974	38,575	20,417	78,453	245,504	19,480	344,374		
1975	2.50	4.50	10.00	20.00	15,869	17,057	115,362	967	39,652	19,836	76,756	234,701	19,340	330,993		
1976	3.00	6.00	18.00	20.00	16,261	33,078	76,587	1,141	40,658	24,391	198,468	184,675	22,820	407,534		
1977	3.00	6.00	18.00	20.00	15,795	36,473	74,600	1,270	40,319	23,692	218,838	176,204	25,400	418,734		
1978	3.00	6.00	18.00	20.00	15,419	37,082	81,227	1,449	38,091	23,128	222,492	221,719	28,980	467,339		
1979	3.00	6.00	18.00	20.00	14,200	36,721	84,450	1,575	35,255	21,300	220,326	252,862	31,500	494,488		
1980	4.00	8.00	23.00	30.00	14,042	30,189	100,177	1,330	34,369	28,084	241,512	425,120	39,900	694,716		
1981	4.00	8.00	23.00	30.00	13,874	37,804	83,486	1,559	32,123	27,748	302,432	331,805	46,770	661,985		
1982	4.00	8.00	23.00	30.00	14,040	36,850	82,970	1,637	34,116	28,080	294,800	315,597	49,110	638,477		
1983	4.00	8.00	23.00	30.00	13,814	39,602	73,529	1,685	33,642	25,620	305,249	257,670	50,134	588,539		
1984	4.00	8.00	23.00	30.00	13,170	36,070	73,081	1,633	34,237	26,340	288,560	250,544	48,990	565,444		
1985	6.00	12.00	35.00	40.00	12,987	30,102	82,137	1,500	30,235	38,961	361,224	484,246	60,000	884,431		
1986	6.00	12.00	35.00	40.00	11,946	39,567	67,435	1,274	25,533	35,838	354,804	395,973	50,960	786,615		
1987	6.00	12.00	35.00	40.00	11,228	26,781	66,715	1,235	19,625	33,684	321,372	439,350	49,400	794,406		
1988	6.00	12.00	35.00	40.00	9,498	25,733	72,846	1,428	15,400	28,494	308,796	535,971	57,120	873,261		
1989	6.00	12.00	35.00	40.00	5,769	25,845	74,274	1,422	13,857	17,307	310,140	563,691	56,880	891,138		
1990	6.00	12.00	35.00	40.00	5,682	24,527	76,292	1,279	15,969	17,046	294,324	543,986	51,160	855,356		
1991	6.00	12.00	35.00	40.00	5,626	23,276	79,165	1,212	18,770	16,878	279,312	563,485	48,480	859,675		
1992	6.00	12.00	35.00	40.00	5,431	21,852	78,940	1,195	14,801	16,293	262,224	598,417	47,800	924,734		
1993	6.00	12.00	25.00	40.00	4,887	20,899	78,030	1,150	15,223	14,661	250,788	585,989	46,000	897,438		
1994	6.00	12.00	25.00	40.00	4,551	25,792	59,854	1,223	15,539	13,653	309,504	413,459	48,920	785,536		
1995	6.00	12.00	25.00	40.00	4,403	24,219	66,607	1,379	17,777	13,209	290,628	455,584	55,160	814,581		
1996	6.00	12.00	25.00	40.00	3,584	23,908	65,003	1,503	20,561	10,752	286,896	563,080	60,120	920,848		

1 Value does not include cougar, bear, limited entry and conservation wild turkey permits, habitat authorization and cooperative wildlife management unit fees or commercial hunting area licenses.

It does not include NRSR revenue--this is assumed to be primarily non-resident bear and cougar hunters.

2 Combination license values are based on the assumption that all waterfowl hunters purchased only combination licenses.

They may fish and hunt big game but they do not hunt any other small game. Therefore, duck stamp sales are subtracted from combination license sales when projecting revenue generated. The proportion of the combination license fee attributed to small game equals the resident small game license fee divided by the resident fishing license fee, plus the resident small game license fee or \$12.67 for 1996.

3 Total Federal duck stamps sold does not include those sold during the second quarter, April-June, because persons purchasing stamps during this quarter tend not to be hunters.

4 Half of the juvenile small game license sales were attributed to waterfowl hunters. Federal duck stamps are not required of juveniles less than 16 years of age.

## APPENDIX C

### Surveys

Regional and statewide summary of effort expended on upland game summer surveys, 1972-96.

Generally hours spent and miles driven on upland game surveys in Utah have declined dramatically since 1972. This is the result of competing uses of time for biologists and conservation officers. In addition, the restriction to a 40 hour work week by the Federal Fair Labor and Standards Act has further eroded survey effort. When effort and results have reached a lower critical sample size, surveys have not been conducted or little effort expended.

Table 1. Regional and statewide summary of effort expended on upland game summer inventory, 1972-96.

Species	REGION						STATE TOTALS			
	Northern	Central	Southern	Northeastern	Southeastern	Hours	Miles	Hours	Miles	Hours
Pheasant	1972	469	963	752	535	297	3,016	--	297	--
	1973	322	891	740	488	230	2,471	--	230	--
	1974	479	819	848	508	317	2,971	--	317	--
	1975	490	846	993	515	393	3,237	--	393	--
	1976	476	822	773	434	400	2,905	--	400	--
	1977	484	731	790	554	343	2,902	--	343	--
	1978	479	642	654	512	588	2,875	--	588	--
	1979	438	642	721	562	209	2,572	--	209	--
	1980	358	672	750	546	270	2,596	--	270	--
	1981	459	525	801	535	330	2,650	--	330	--
	1982	437	639	583	477	332	2,468	--	332	--
	1983	260	442	780	426	330	2,238	--	330	--
	1984	444	359	473	463	166	1,905	--	166	--
	1985	383	303	650	492	180	2,008	--	180	--
	1986	455	617	669	520	270	2,531	--	270	--
	1987	432	518	574	546	90	2,160	--	90	--
	1988	334	436	604	469	90	1,933	--	90	--
	1989	499	427	45	403	90	1,464	--	90	--
	1990	518	509	97	240	90	1,454	--	90	--
	1991	485	496	120	375	90	1,566	--	90	--
1992	413	455	0	657	90	1,615	--	90	--	
1993	249	547	80	340	90	1,306	--	90	--	
1994	180	468	--	297	--	945	--	--	--	
1995	150	454	--	285	--	889	--	--	--	
1996	141	471.6	--	261.8	--	874.4	--	--	--	
Chukar	1972	712	1,423	950	1,012	984	5,081	58	984	386
	1973	1,063	1,494	72	705	702	4,036	68	702	412
	1974	125	1,591	564	440	1,115	3,835	67	1,115	278
	1975	188	808	892	908	786	3,582	55	786	299
	1976	875	964	465	727	687	3,718	66	687	350
	1977	405	1,198	601	600	429	3,233	44	429	322
	1978	359	459	135	315	536	1,804	52	536	159
	1979	546	793	415	293	267	2,314	14	267	189
	1980	283	1,668	235	0	53	2,239	10	53	214
	1981	330	591	147	245	260	1,880	32	260	169
	1982	473	571	475	260	101	1,818	9	101	171
	1983	17	190	20	488	103	85	7	103	85
	1984	654	303	--	--	118	1,075	16	118	129
	1985	236	453	--	--	174	863	12	174	121
	1986	384	432	--	--	--	961	--	--	116
	1987	813	398	0	305	--	1,691	23	--	213
	1988	379	457	60	--	180	1,076	14	180	105
	1989	105	505	11	--	144	765	12	144	67
	1990	--	1,190	--	85	235	1,510	20	235	126
	1991	0	311	0	0	225	536	11	225	29
1992	178	270	0	0	216	664	24	216	63	
1993	--	--	--	--	300	300	22	300	22	
1994	--	--	--	--	70	70	6	70	6	
1995	--	--	--	--	--	--	--	--	--	
1996	54	--	--	--	--	--	16.5	--	--	

Table 1 (continued)

Species	REGION												STATE TOTALS												
	Northern		Central		Southern		Northeastern		Southeastern		Miles		Hours		Miles		Hours								
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours							
Sage Grouse	1,628	323	1,187	143	751	144	2,125	170	1,280	141	6,971	921	1,628	323	1,187	143	751	144	2,125	170	1,280	141	6,971	921	
	3,146	353	927	147	1,171	116	1,952	238	496	41	7,692	895	3,146	353	927	147	1,171	116	1,952	238	496	41	7,692	895	
	2,026	321	1,551	115	1,881	193	2,964	248	887	124	9,309	1,001	2,026	321	1,551	115	1,881	193	2,964	248	887	124	9,309	1,001	
	1,254	249	963	123	714	226	1,868	236	1,098	131	5,897	965	1,254	249	963	123	1,868	236	1,098	131	1,098	131	5,897	965	
	1,965	281	426	121	375	183	1,881	227	1,222	161	5,873	973	1,965	281	426	121	1,881	227	1,222	161	1,222	161	5,873	973	
	1,966	305	1,370	133	465	157	1,995	215	928	116	6,724	926	1,966	305	1,370	133	1,995	215	928	116	6,724	926	1,966	305	
	1,408	267	541	124	490	152	1,616	226	879	97	4,934	866	1,408	267	541	124	1,616	226	879	97	4,934	866	1,408	267	
	1,051	150	700	132	563	143	1,719	203	279	20	4,312	648	1,051	150	700	132	1,719	203	279	20	4,312	648	1,051	150	
	1,003	218	806	150	518	94	1,471	184	278	60	4,076	706	1,003	218	806	150	1,471	184	278	60	4,076	706	1,003	218	
	619	194	691	99	285	57	771	163	377	39	2,743	552	619	194	691	99	771	163	377	39	2,743	552	619	194	
	1,669	169	762	92	454	83	862	116	--	--	3,747	460	1,669	169	762	92	862	116	--	--	3,747	460	1,669	169	
	610	158	720	164	284	51	992	125	108	10	2,714	508	610	158	720	164	992	125	108	10	2,714	508	610	158	
	1,411	278	283	82	289	54	530	95	151	17	2,664	526	1,411	278	283	82	530	95	151	17	2,664	526	1,411	278	
	2,164	169	481	74	410	45	666	84	106	9	3,827	381	2,164	169	481	74	666	84	106	9	3,827	381	2,164	169	
	1,024	197	281	39	169	43	948	146	146	14	2,568	387	1,024	197	281	39	948	146	146	14	2,568	387	1,024	197	
	1,939	205	172	37	286	50	1,114	124	195	18	3,706	434	1,939	205	172	37	286	50	1,114	124	195	18	3,706	434	
	2,092	177	678	108	315	66	690	91	--	--	3,775	442	2,092	177	678	108	690	91	--	--	3,775	442	2,092	177	
	465	108	360	56	46	19	557	61	167	24	1,595	268	465	108	360	56	557	61	167	24	1,595	268	465	108	
	175	73	444	89	90	42	244	30	70	7	1,023	241	175	73	444	89	244	30	70	7	1,023	241	175	73	
	554	210	270	21	30	21	60	18	86	13	1,000	261	554	210	270	21	60	18	86	13	1,000	261	554	210	
	--	126	96	44	265	50	193	21	204	23	758	261	--	126	96	44	193	21	204	23	758	261	--	126	
	--	82	36	32	--	--	65	3	130	23	231	140	--	82	36	32	65	3	130	23	231	140	--	82	
	58	16	155	18	--	--	135	10	65	8	413	51	58	16	155	18	135	10	65	8	413	51	58	16	
	117	98	--	--	--	--	157	13	--	--	274	111	117	98	--	--	157	13	--	--	274	111	117	98	
	41	46	--	--	475	90	664	113	--	--	1,180	203	41	46	--	--	664	113	--	--	1,180	203	41	46	
Forest Grouse	1,370	212	804	103	214	260	1,346	140	351	82	4,085	797	1,370	212	804	103	1,346	140	351	82	4,085	797	1,370	212	
	627	127	917	105	296	429	949	147	761	72	3,550	880	627	127	917	105	949	147	761	72	3,550	880	627	127	
	967	152	924	157	157	461	1,090	99	1,574	133	4,712	1,002	967	152	924	157	1,090	99	1,574	133	4,712	1,002	967	152	
	1,194	199	1,287	160	775	629	1,474	136	1,476	135	6,206	1,259	1,194	199	1,287	160	1,474	136	1,476	135	6,206	1,259	1,194	199	
	1,516	351	1,503	216	427	271	1,108	140	1,127	134	5,681	1,112	1,516	351	1,503	216	1,108	140	1,127	134	5,681	1,112	1,516	351	
	737	132	1,317	162	610	286	1,040	135	1,079	128	4,783	843	737	132	1,317	162	1,040	135	1,079	128	4,783	843	737	132	
	1,300	297	1,171	129	432	219	1,083	147	626	114	4,612	906	1,300	297	1,171	129	1,083	147	626	114	4,612	906	1,300	297	
	746	344	1,312	177	714	275	729	107	435	42	3,936	945	746	344	1,312	177	729	107	435	42	3,936	945	746	344	
	577	201	1,260	158	160	230	502	74	266	39	2,765	702	577	201	1,260	158	502	74	266	39	2,765	702	577	201	
	688	147	958	147	575	295	835	120	184	29	3,240	738	688	147	958	147	835	120	184	29	3,240	738	688	147	
	506	74	1,488	157	--	354	742	111	--	--	2,736	696	506	74	1,488	157	742	111	--	--	2,736	696	506	74	
	1,049	218	1,180	93	459	80	636	93	--	--	3,324	504	1,049	218	1,180	93	636	93	--	--	3,324	504	1,049	218	
	615	157	364	30	230	78	--	--	--	--	1,209	305	615	157	364	30	--	--	--	--	1,209	305	615	157	
	858	202	436	52	564	90	--	--	--	--	1,858	384	858	202	436	52	--	--	--	--	1,858	384	858	202	
	997	127	380	41	254	51	412	61	--	--	2,043	280	997	127	380	41	412	61	--	--	2,043	280	997	127	
	1,148	147	305	77	200	65	438	58	--	--	2,091	347	1,148	147	305	77	438	58	--	--	2,091	347	1,148	147	
	1,118	144	55	6	160	53	558	71	--	--	1,891	274	1,118	144	55	6	558	71	--	--	1,891	274	1,118	144	
	795	109	635	69	45	3	573	75	286	33	2,334	289	795	109	635	69	573	75	286	33	2,334	289	795	109	
	171	150	701	113	30	3	185	91	--	--	1,087	357	171	150	701	113	185	91	--	--	1,087	357	171	150	
	--	178	536	54	30	2	0	0	--	--	566	236	--	178	536	54	0	0	--	--	566	236	--	178	
	362	104	167	52	0	0	10	5	105	20	644	181	362	104	167	52	10	5	105	20	644	181	362	104	
	290	34	--	28	--	--	41	3	243	45	574	110	290	34	--	28	41	3	243	45	574	110	290	34	
	--	--	--	--	--	--	--	--	--	--	35	16	--	--	--	--	--	--	--	--	--	35	16	--	--
	--	--	--	--	--	--	25	7	--	--	25	7	--	--	--	--	25	7	--	--	25	7	--	--	
	--	--	30	2	--	--	20	4	--	--	50	6	--	--	30	2	20	4	--	--	50	6	--	--	

Table 1 (continued)

Species	REGION												STATE TOTALS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Quail	1972	46	9	342	30	575	39	870	63	120	8	1,953	149	1973	80	10	264	35	32	538	8	939	108	1974	24	4	43	27	853	227	214	21	1,361	146	1975	27	8	107	23	841	64	594	43	1,799	150	1976	81	10	206	29	503	44	597	75	1,462	155	1977	22	4	351	39	445	42	341	26	1,219	127	1978	--	--	239	18	563	61	541	46	1,431	142	1979	68	11	95	7	478	41	346	32	1,002	97	1980	36	9	265	23	240	36	410	34	951	102	1981	58	11	180	12	329	43	366	31	933	100	1982	0	0	151	14	304	44	475	44	930	102	1983	5	9	93	9	562	61	295	26	955	105	1984	--	--	82	8	266	40	--	--	348	48	1985	--	2	82	5	252	33	--	--	334	40	1986	--	--	10	2	306	28	--	--	316	30	1987	--	1	20	2	257	29	--	--	277	32	1988	0	5	--	--	277	37	96	12	373	54	1989	--	--	--	--	145	10	72	7	217	17	1990	--	--	--	--	97	8	--	--	97	11	1991	0	0	--	1	0	0	59	4	59	5	1992	0	0	0	0	0	0	1	1	20	3	1993	--	--	--	--	--	--	--	--	35	13	1994	--	--	--	--	--	--	--	--	--	--	8	1995	--	--	--	--	--	--	--	--	--	--	89	9	1996	--	--	--	--	--	--	--	--	--	--	89	--	Hungarian Partridge	1972	1,255	126	--	--	--	--	--	--	--	--	21	126	1973	1,643	156	12	4	--	--	--	--	--	--	--	1,655	160	1974	1,035	176	14	2	--	--	--	--	--	--	--	1,049	178	1975	344	64	0	0	--	--	--	--	--	--	--	344	64	1976	940	83	113	21	--	--	--	--	--	--	--	1,053	104	1977	1,145	156	125	5	--	--	--	--	--	--	--	1,270	161	1978	1,065	90	197	17	--	--	--	--	--	--	--	1,262	107	1979	440	27	37	3	--	--	--	--	--	--	--	477	30	1980	250	55	50	6	--	--	--	--	--	--	--	300	61	1981	270	23	65	3	--	--	--	--	--	--	--	335	26	1982	324	39	--	--	--	--	--	--	--	--	--	324	39	1983	0	60	--	--	--	--	--	--	--	--	--	0	60	1984	815	221	--	--	--	--	--	--	--	--	--	815	221	1985	114	38	--	--	--	--	--	--	--	--	--	114	38	1986	213	44	--	--	--	--	--	--	--	--	--	213	44	1987	300	40	--	--	--	--	--	--	--	--	--	300	40	1988	316	30	10	1	--	--	--	--	--	--	--	326	31	1989	0	0	--	--	--	--	--	--	--	--	--	0	0	1990	393	30	--	--	--	--	--	--	--	--	--	393	30	1991	--	41	0	0	--	--	--	--	--	--	--	0	41	1992	--	83	40	2	--	--	--	--	--	--	--	40	85	1993	--	42	--	--	--	--	--	--	--	--	--	--	--	42	1994	--	8	--	--	--	--	--	--	--	--	--	--	--	8	1995	--	12	--	--	--	--	--	--	--	--	--	--	--	12	1996	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



Table 1 (continued)

Species	REGION												STATE TOTALS						
	Northern		Central		Southern		Northeastern		Southeastern		Miles		Hours		Miles		Hours		
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours			
<b>Wild Turkey</b>																			
1972	--	--	--	--	73	62	--	--	--	--	290	54	363	116					
1973	--	--	--	--	143	11	--	--	--	--	--	--	143	11					
1974	--	--	--	--	0	0	--	--	--	799	64	799	64						
1975	--	--	--	--	215	18	--	--	--	792	100	1,007	118						
1976	--	--	--	--	125	16	--	--	--	362	45	487	61						
1977	--	--	--	--	193	29	--	--	--	421	58	614	87						
1978	--	--	--	--	--	--	--	--	--	204	55	204	55						
1979	--	--	--	--	--	--	--	--	--	190	14	190	14						
1980	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
1981	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
1982	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
1983	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
1984	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
1985	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
1986	--	--	--	--	--	--	--	--	--	41	15	41	15						
1987	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
1988	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
1989	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
1990	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
1991	--	--	155	68	--	--	--	--	--	150	15	305	83						
1992	--	--	100	16	--	--	--	--	--	35	6	135	22						
1993	--	--	--	--	--	--	57	3	117	9	174	12							
1994	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
1995	--	--	433	84	--	--	--	--	--	--	--	--	433	84					
1996	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
<b>Cottontail Rabbit</b>																			
1972	510	--	279	--	939	--	360	--	555	--	2,643	--							
1973	337	--	242	--	879	--	270	--	270	--	1,998	--							
1974	270	--	180	--	1,040	--	370	--	542	--	2,402	--							
1975	330	--	231	--	1,237	--	340	--	712	--	2,850	--							
1976	510	--	260	--	1,382	--	300	--	636	--	3,088	--							
1977	360	--	262	--	1,329	--	400	--	556	--	2,907	--							
1978	382	--	264	--	1,038	--	300	--	761	--	2,745	--							
1979	270	--	270	--	903	--	400	--	580	--	2,423	--							
1980	90	--	265	--	655	--	359	--	540	--	1,909	--							
1981	270	--	270	--	903	--	400	--	580	--	2,423	--							
1982	240	--	240	--	722	--	298	--	602	--	2,102	--							
1983	90	--	90	--	822	--	340	--	590	--	1,932	--							
1984	--	--	--	--	177	--	356	--	340	--	196	--							
1985	--	--	--	--	175	--	631	--	400	--	450	--							
1986	240	--	148	--	534	--	358	--	330	--	1,610	--							
1987	150	--	120	--	669	--	373	--	240	--	1,552	--							
1988	90	--	--	--	129	--	604	--	379	--	360	--							
1989	90	--	66	--	90	--	266	--	360	--	872	--							
1990	150	--	62	--	97	--	210	--	360	--	879	--							
1991	90	--	33	--	--	--	105	--	330	--	558	--							
1992	60	--	143	--	90	--	204	--	360	--	857	--							
1993	--	--	183	--	--	--	207	--	360	--	750	--							
1994	--	--	--	--	--	--	148	--	--	--	148	--							
1995	--	--	242	--	--	--	203	--	--	--	445	--							
1996	--	--	278	--	--	--	220	--	--	--	498	--							

# APPENDIX D

Season dates, bag limits and areas open by upland game species, 1996.

SPECIES	SEASON DATES	AREAS OPEN	BAG LIMIT	POSSESSION LIMIT	FOOTNOTES
Pheasant	Nov 2-Nov 17, 1996	<ul style="list-style-type: none"> <li>◆ Statewide, except closed areas.</li> <li>◆ In Juab County, the Mills Meadows WMA closes on November 17th.</li> <li>◆ In Tooele County, the James Walter Fitzgerald WMA closes on November 17th. In Tooele County, the James Walter Fitzgerald Wildlife Management Area is closed to dog training, except dogs may be used to locate and retrieve upland game during open hunting seasons.</li> </ul>	2	4	<ul style="list-style-type: none"> <li>◆ Males only may be harvested</li> <li>◆ Shooting begins at 8:00 a.m. on opening day (Nov. 2)</li> </ul>
	Nov 2-Nov 8, 1996	<ul style="list-style-type: none"> <li>◆ In all of Utah County, except the Powell Slough and Goshen Warm Springs Wildlife Management Areas, the pheasant hunt closes on November 8.</li> </ul>	2	4	
	Nov 2-Dec 1, 1996	<ul style="list-style-type: none"> <li>◆ In Carbon, Duchesne, Emery, Grand, Juab, Millard, San Juan, Sanpete, Sevier, Tooele, and Uintah counties, all state and federal land (including private land leased by the division subject to restrictions and closures imposed by administering agencies).</li> <li>◆ In Utah County, the Powell Slough and Goshen Warm Springs Wildlife Management areas as posted and marked.</li> </ul>	2	4	
Mourning Dove	Sept 2-Sept 30, 1996	<ul style="list-style-type: none"> <li>◆ Statewide, except closed areas.</li> </ul>	10	20	
Band-tailed Pigeon	Sept 2-Sept 30, 1996	<ul style="list-style-type: none"> <li>◆ Beaver, Garfield, Grand, Iron, Kane, Millard, Piute, San Juan, Sanpete, Sevier, Utah, Washington and Wayne counties</li> </ul>	5	10	<ul style="list-style-type: none"> <li>◆ Band-tailed pigeon permit required.</li> <li>◆ Permits are available at all Division offices at no charge.</li> </ul>

<b>Chukar Partridge</b>	Sept 14-Nov 30, 1996	<ul style="list-style-type: none"> <li>◆ Cache, Daggett, Davis, Iron, Millard, Morgan, Rich, Sanpete, Summit, Wasatch and Weber counties;</li> <li>◆ Those parts of Beaver, Iron, Juab, Millard, Salt Lake and Utah counties east of I-15;</li> <li>◆ That part of Box Elder County east of the Locomotive Springs-Snowville-Stone, Idaho Road;</li> <li>◆ That part of Sevier County north of I-70.</li> </ul>	5	10	* Antelope Island is closed to upland game hunting.
	Sept 14 1996-Jan 31, 1997	<ul style="list-style-type: none"> <li>◆ Carbon, Duchesne, Emery, Garfield, Grand, Kane, Piute, San Juan, Tooele, Uintah, Washington and Wayne counties;</li> <li>◆ Those parts of Beaver, Iron, Juab, Millard, Salt Lake and Utah counties west of I-15;</li> <li>◆ That part of Box Elder County west of the Locomotive Spring-Snowville-Stone, Idaho Road;</li> <li>◆ That part of Sevier County south of I-70</li> </ul>	5	10	
<b>Sage Grouse</b>	Sept 7-Sept 15, 1996	<ul style="list-style-type: none"> <li>◆ Daggett, Grand and Uintah counties;</li> <li>◆ That part of Box Elder County west of the Locomotive Springs-Snowville-Stone, Idaho Road;</li> <li>◆ That part of Duchesne County north and east of the Duchesne River.</li> </ul>	1	2	
	Sept 14-Sept 13, 1996	<ul style="list-style-type: none"> <li>◆ Rich County;</li> <li>◆ Parker Mountain - Beginning at the junction of Highway US-89 and I-70 near Siguard; south on Highway US-89 to Highway U-24; south on this highway to Highway U-62; south on this highway to Highway U-22; south on this highway to Antimony; south on the John's Valley Road through Widtsoe to Bryce Junction and Highway U-12; east and north on this highway to Highway U-24; west on this highway to Highway U-72 at Loa; north on this highway to I-70; west on this highway to Highway US-89.</li> </ul>			
<b>Forest Grouse (blue and ruffed)</b>	Sept 7-Nov 30, 1996	◆ Statewide except closed areas.	4	8	*Limits singly or in aggregate.

<b>Quail</b> (California & Gambel's)	Nov 2-Nov 17, 1996	<ul style="list-style-type: none"> <li>◆ Box Elder, Carbon, Daggett, Davis, Grand, Juab, Kane, Millard, Piute, Salt Lake, San Juan, Sevier, Tooele, Utah and Weber counties;</li> <li>◆ All of Emery County except the Desert Lake Waterfowl Management Area which is closed.</li> </ul>	5	10	* Shooting begins at 8:00 a.m. on opening day (Nov 2).
	Nov 2-Dec 31, 1996	<ul style="list-style-type: none"> <li>◆ Duchesne, Uintah and Washington counties</li> </ul>	5	10	
<b>Hungarian Partridge</b>	Sept 14-Nov 30, 1996	<ul style="list-style-type: none"> <li>◆ Cache, Davis, Morgan, Rich, Summit and Weber counties;</li> <li>◆ That part of Box Elder County east of the Locomotive Springs-Snowville-Stone, Idaho Road;</li> <li>◆ That part of Juab County east of I-15.</li> </ul>	5	10	
	Sept 14 1996-Jan 31, 1997	<ul style="list-style-type: none"> <li>◆ Tooele County;</li> <li>◆ That part of Box Elder County west of the Locomotive Springs-Snowville-Stone, Idaho Road;</li> <li>◆ That part of Juab County west of I-15.</li> </ul>	5	10	
<b>Sharp-tailed Grouse</b>	◆ The entire state is closed to hunting of sharp-tailed grouse.				
<b>White-tailed Ptarmigan</b>	Sept 7-Oct 10, 1996	<ul style="list-style-type: none"> <li>◆ Daggett, Duchesne, Summit and Uintah counties.</li> </ul>	4	8	<ul style="list-style-type: none"> <li>◆ Ptarmigan permit required.</li> <li>◆ Permits are available at all Division offices at no charge.</li> </ul>
<b>Cottontail Rabbit</b>	Sept 7, 1996-Feb 28, 1997	<ul style="list-style-type: none"> <li>◆ Statewide, except closed areas.</li> </ul>	10	20	
<b>Snowshoe Hare</b>	Sept 7, 1996-Feb 28, 1997	<ul style="list-style-type: none"> <li>◆ Statewide, except closed areas.</li> </ul>	5	10	
<b>Jackrabbit</b> (white-tailed & black-tailed)	◆ Jackrabbits are not protected in Utah. They are not under Wildlife Board authority and may be hunted without a license, year-round.				

# 1997 WILD TURKEY SEASON DATES, AREAS OPEN & SEASON LIMITS

## RIO GRANDE

HUNT NAME	HUNT NUMBER	SEASON DATES	SEASON LIMIT
<b>BEAVER (early)</b>	101a	Apr 12-Apr 23, 1997	One Male
<b>BEAVER (late)</b>	101b	Apr 26-May 18, 1997	One Male
<b>Areas open:</b> Boundary begins at the junction of I-70 and SR-89; then southerly on SR-89 to the Garfield-Piute county line; then westerly along this county line to the Beaver-Iron county line; then westerly along this county line to I-15; northerly on I-15 to I-70; easterly on I-70 to SR-89.			
<b>DUCHESNE COUNTY (early)*</b>	102a	Apr 12-Apr 23, 1997	One Male
<b>DUCHESNE COUNTY (late)*</b>	102b	Apr 26-May 18, 1997	One Male
<b>Areas open:</b> All of Duchesne County			
<b>WEST EMERY COUNTY*</b>	103	Apr 12-May 18, 1997	One Male
<b>Areas open:</b> All of Emery County west of US-6 and north of I-70.			
<b>FILLMORE</b>	104	Apr 12-May 19, 1997	One Male
<b>Areas open:</b> Boundary begins at the junction of I-15 and I-70 at Cover Fort; then north on I-15 to US-50 north and west on this highway to U-125 east and north on this highway to U-132 at Leamington; east along this highway to I-15 at Nephi; south on this highway to US-50 at Scipio; south and east on this highway to I-70 at Salina; south and west on this highway to I-15 at Cove Fort.			
<b>Colorado River (early)*</b>	105a	Apr 12-Apr 23, 1997	One male
<b>Colorado River (late)*</b>	105b	Apr 26-May 18, 1997	One male
<b>Areas open:</b> Grand County - one mile either side of the Colorado and Dolores rivers from the Colorado state line to Dewey bridge.			
<b>Green River*</b>	106	Apr 12-May 18, 1997	One Male
<b>Areas open:</b> Emery and Grand counties - two miles either side of the Green River from the confluence of the Price River to Ten Mile Canyon.			
<b>Mildford</b>	107	Apr 12-May 18, 1997	One Male
<b>Areas open:</b> Boundary begins at Milford, Utah; then northerly on SR-257 to Negro Mag Wash; then east on Negro Mag Wash to Cunningham Wash; then south on Cunningham Wash to Wildcat Creek; then south on Wildcat Creek to Indian Creek; then south on Indian creek to SR-21; then west and north on SR-21 to Milford.			
<b>Monroe Mountain</b>	108	Apr 12-May 18, 1997	One Male
<b>Areas open:</b> Piute and Sevier counties - boundary begins at Junction, Utah and US-89; north on US-89 to Sigurd, Utah; south on SR-24 to SR-62; south on SR-62 to the junction of SR-62 and SR-22; west on SR-62 to Junction, Utah.			
<b>Morgan-South Rich*</b>	109	Apr 5-May 18, 1997	One Male
<b>Areas open:</b> Morgan, Rich, Summit and Weber counties - boundary begins at the junction of I-84 and I-80 near Echo; then northeasterly on I-80 to the Utah-Wyoming state line; north along this state line to SR-16; north on SR-16 to SR-39 near Woodruff; west on SR-39 to SR-167 (Trappers Loop Road); south on SR-167 to SR-30 at Mountain Green; west on SR-30 to I-84; east on I-84 to I-80.			
<b>Ogden</b>	110	Apr 5-May 18, 1997	One Male
<b>Areas open:</b> Weber, Box Elder Cache, and Morgan counties - beginning at Hyrum; then easterly on SR-101 to the Ant Flat Road (at Hardware Ranch); southerly on this road to SR-39; westerly and southerly on SR-39 to SR-167 (the new Trappers Loop Road); southerly on this highway to I-84; westerly on I-84 to I-15; northerly on I-15 to exit 364 and US-91; easterly and northerly on US-91 to SR-101; easterly on this highway to Hyrum.			
<b>Pine Valley* (early)</b>	111a	Apr 12-Apr 23, 1997	One Male
<b>Pine Valley* (late)</b>	111b	Apr 26-May 18, 1997	One Male
<b>Areas open:</b> Boundary begins at the junction of I-15 and SR-56; then westerly on SR-56 to SR-18; then southerly on SR-18 to I-15; then northerly on I-15 to SR-56.			

<b>San Juan (early)</b>	112a	Apr 12-May 4, 1997	One Male
<b>San Juan (late)</b>	112b	May 10-May 31, 1997	One Male
<b>Areas open:</b> Boundary begins at Monticello; then east on US-666 to the Utah-Colorado state line; south on this line to the Navajo Indian Reservation boundary; west on this boundary to South Cottonwood creek; north along this creek and through Allen, Chippean, Deep and Mule canyons to the causeway; north from the causeway through Trough Canyon to North Cottonwood Creek; north on this creek to SR-211; east on this highway to US-191 south on this highway to Monticello.			
<b>Uintah County (early)*</b>	113a	Apr 12-Apr 23, 1997	One Male
<b>Uintah County (late)*</b>	113b	Apr 26-May 18, 1997	One Male
<b>Areas open:</b> All of Uintah County except that portion south of the White River and east of the Green River below the White River confluence.			
<b>Utah County (North)(early)</b>	114a	Apr 5-Apr 17, 1997	One Male
<b>Utah County (North) (late)</b>	114b	Apr 19-May 18, 1997	One Male
<b>Areas open:</b> That part of Utah County east of I-15 and north of US-6.			
<b>Utah County (South)</b>	115	Apr 26-May 11, 1997	One Male
<b>Areas open:</b> That part of Utah County east of I-15 and south of US-6.			
<b>Wasatch County</b>	116	Apr 26-May 11, 1997	One Male
<b>Areas open:</b> All of Wasatch County			
<b>West Pine Valley</b>	117	Apr 12-May 18, 1997	One Male
<b>Areas open:</b> Iron and Washington counties - boundary begins at St. George, Utah and I-15; south on I-15 to the Arizona border; west on the Arizona border to the Nevada border; north on the Nevada border to SR-56; east on SR-56 to Beryl Junction and SR-18; south on SR-18 to St. George Utah.			
<b>*HUNTS COMPRISED OF ALL OR LARGELY PRIVATE PROPERTY. BEFORE APPLYING FOR THE HUNT, HUNTERS SHOULD OBTAIN WRITTEN PERMISSION FROM THE LANDOWNER TO ACCESS PRIVATE PROPERTY.</b>			

## MERRIAM'S

HUNT NAME	HUNT NUMBER	SEASON DATES	SEASON LIMIT
<b>Boulder Mountain (early)</b>	201a	Apr 26-May 6, 1997	One Male
	201b	May 10-May 1997	One Male
<b>Areas open:</b> Boundary begins at the junction of SR-62 and SR-69 and SR-89 near Kingston, Utah; then southerly on SR-89 to the Pink Cliffs Road between Glendale and Cannonville; then easterly on the Pink Cliffs Road to SR-12; then easterly and northeasterly on SR-12 to the Burr Trail Road; then easterly on the Burr Trail Road to the Capitol Reef National Park boundary; then northerly along the park boundary to SR-24; then westerly on SR-24 to SR-62; then southerly on SR-62 to SR-89.			
<b>Kolob*</b>	202	Apr 26-May 31, 1997	One Male
<b>Areas open:</b> Area includes everything within the following description except for Zion National Park land; boundary begins at the junction of I-15 and SR-17; then easterly on SR-17 to SR-9 to the Zion National Park's east boundary; then northerly along the east boundary to the park's north boundary; then westerly along the park's north boundary to Deep Creek; then northerly on Deep Creek to Crystal Creek to the Cedar Mountain Road to I-15; then southerly on I-15 to SR-17.			
<b>LaSal (early)</b>	203a	Apr 26-May 6, 1997	One Male
<b>LaSal (late)</b>	203b	May 10-May 31, 1997	One Male
<b>Areas open:</b> Boundary begins at the junction of SR-128 and US-191; then south on this highway to SR-46; east on this highway to the Lisbon Valley Road; southeast on this road to the island Mesa Road; east on this road to the Utah-Colorado state line; north on this state line to a point one mile south of the Dolores River; west on a line one mile south of the Dolores River to SR-128; southwest on SR-128 to US-191.			

Zion (early)	204a	Apr 26-May 6, 1997	One Male
Zion (late)	204b	May 10-May 31, 1997	One Male

**Areas open:** Boundary begins at the junction of I-15 and SR-20; then southerly along I-15 to the Cedar Mountain Road; then southerly on the Cedar Mountain Road to Crystal Creek; then southerly on Crystal Creek to Deep Creek; then southerly on Deep Creek to the Zion National Park boundary; then easterly on the park boundary to the Washington-Kane county line; then southerly on the county line to SR-9; then easterly on SR-9 to SR-89; then northerly on SR-89 to SR-20; then westerly on SR-20 to I-15.

**\*HUNTS COMPRISED OF ALL OR LARGELY PRIVATE PROPERTY. BEFORE APPLYING FOR THE HUNT, HUNTERS SHOULD OBTAIN WRITTEN PERMISSION FROM THE LANDOWNER TO ACCESS PRIVATE PROPERTY.**

**APPENDIX E. Summary of upland game harvest questionnaire returns, 1962-96.**

Year	Questionnaires	Total	Useable		Licensees Who
	Mailed	Returns	Percent	Returns	Percent
1962	10,068	4,122	40.9	3,433	34.1
1963	11,058	5,062	45.8	4,325	39.1
1964	10,718	4,840	45.2	4,180	39.0
1965	11,917	6,232	52.3	--	0.0
1966	13,131	5,734	43.7	5,734	43.7
1967	12,012	5,764	48.0	5,764	48.0
1968	14,068	6,138	43.6	6,138	43.6
1969	15,036	6,429	42.8	6,429	42.8
1970	14,730	6,639	45.1	6,639	45.1
1971	15,149	--	43.2	--	0.0
1972	15,272	--	--	6,399	41.9
1973	17,572	--	--	7,999	45.5
1974	27,379	9,157	33.4	8,027	29.3
1975	26,657	10,880	40.8	9,132	34.3
1976	21,250	7,889	37.1	6,226	29.3
1977	20,984	9,329	44.5	8,099	38.6
1978	24,733	7,575	30.6	6,529	26.4
1979	27,616	10,498	38.0	9,274	33.6
1980	27,952	9,857	35.3	8,496	30.4
1981	13,925	7,941	57.0	6,367	45.7
1982	22,609	10,167	45.0	8,734	38.6
1983	23,430	10,324	44.1	9,497	40.5
1984	12,026	6,455	53.7	6,324	52.6
1985	10,772	5,904	54.8	5,843	54.2
1986	11,103	5,329	48.0	5,256	47.3
1987	10,022	4,294	42.8	4,272	42.6
1988	15,350	6,650	43.3	6,527	42.5
1989	12,894	5,135	39.8	5,105	39.6
1990	12,236	5,264	43.0	5,175	42.3
1991	15,054	6,419	42.6	6,212	41.3
1992	16,472	6,207	37.7	5,977	36.3
1993	16,534	6,293	38.1	5,442	32.9
1994	15,526	5,433	35.0	5,131	33.0
1995	14,777	4,951	33.5	4,866	32.9
1996	14,088	4,090	29.0	4,028	28.6