

# UTAH UPLAND GAME Annual Report 1977



**PUBLICATION NUMBER 78-8**

**Annual Performance Report for  
Federal Aid Project W-65-R-D-25  
Job A-4**

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF WILDLIFE RESOURCES

DONALD A. SMITH, *Director*

UTAH  
UPLAND GAME  
Annual Report  
1977

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Utah State Department of Natural Resources

DIVISION OF WILDLIFE RESOURCES

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Donald A. Smith  
Director

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GAME MANAGEMENT

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JOB PERFORMANCE REPORT  
RESEARCH PROJECT SEGMENT  
(Inventory)

State of U T A H

Project Title: Statewide Wildlife  
Management Inventory

Project No. W-65-R-D-25

Job Title: Statewide Upland Game  
Inventory and Management

Job No. A-4

Period Covered: January 1, 1977 to June 30, 1978

Abstract: This report includes upland game inventory and harvest data relating to the 1977-78 hunting seasons. Results of annual inventory and harvest surveys and long-term trends of indexes derived by each method are included. Data obtained in 1977 are compared to 1976 and long-term averages.

Objectives: To conduct annual inventories and determine the population trend and annual harvest of upland game.

Procedures: 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, 1976, through February 10, 1977, as snow cover conditions allowed. Indexes 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 3 on permanently established routes. Indexes 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 nation-wide survey administered by the 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.

Random brood counts were conducted on chukar and Hungarian partridge, forest grouse (ruffed and blue), sage grouse, wild turkey and quail from July 10 - August 5. Indexes derived for each species include mean brood size, young per 100 adults and birds observed per 100 hours effort.

Sage grouse strutting ground counts were conducted from March 15-May 15. Total cocks counted, average cocks per ground and percent change from 1976 for comparable grounds were determined on a county basis.

One Gambel's quail call-count route was run in Washington County in late April and early May. Long-period waterhole counts were completed in July and August.

Cottontail rabbit roadside counts were conducted over pre-established routes between July 15 and August 5. Indexes derived include rabbits per mile and young per 100 adults.

Separate harvest questionnaires were used to determine the harvest of upland game birds, cottontail rabbit and snowshoe hare, band-tailed pigeon and wild turkey. An approximate 20 percent sample of eligible licensees from the previous year (1976) license file was selected for the game bird questionnaire and a 12 percent sample for the rabbit and hare questionnaire. Questionnaires were mailed to all band-tailed pigeon and wild turkey permittees. Indexes derived included total hunters, hunter-days and harvest plus hunter success per day and for each season.

The game bird and rabbit and hare questionnaires were analyzed by the University of Utah Computer Center. Wild turkey and band-tailed pigeon questionnaires were analyzed by Game Management Section personnel.

Field bag checks of upland game hunters were made at random or at checking stations during each hunting season. Indexes 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.

**Recommendations:** This project should be continued for the purpose of determining trends of upland game populations 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 hunted.

This is the seventh edition of this annual Upland Game Report. It is a consolidation of, and annual performance report for, 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 and game managers of the 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 in Utah. A separate section is devoted to each form of upland game hunted in Utah. Data is 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 1977, a total of 89,593 Utah sportsmen spent 593,626 days afield in pursuit of various upland game species. The harvest of upland game totaled 819,065. The proportion of the total upland game hunters which pursued each species is shown in Appendix Table 3 and the percentage failing to bag at least one bird of each species in Appendix Table 4. The framework for 1977 upland game hunting seasons is shown in Appendix Table 6. Harvest Statistics by species were as follows:



Species	Hunters Afield	Total Harvest	Hunter Days	Bag/ Hunter-day	Bag/Hunter For Season
Pheasant	67,195	148,168	191,142	0.78	2.21
Mourning dove	26,905	267,487	83,218	3.21	9.94
Chukar partridge	12,691	34,155	38,873	0.88	2.69
Sage grouse	14,078	18,615	25,759	0.72	1.32
Forest grouse	19,188	42,476	48,746	0.87	2.21
Quail	4,446	9,496	9,646	0.98	2.14
Hungarian partridge	3,557	6,360	9,058	0.70	1.79
Wild turkey					
spring	99	12	248	0.05	0.12
fall	53	7	133	0.06	0.13
Band-tailed pigeon	47	302	151	2.00	6.40
Cottontail	35,831	269,263	157,257	1.71	7.51
Snowshoe hare	9,752	21,232	26,532	0.80	2.18

Total hunters afield for all species of upland game = 89,593

A total of 23,487 upland game bird questionnaires were mailed. Of this number 2,513 (10.7 percent) were non-deliverable due to address deficiencies. Of the 20,984 delivered questionnaires, 9,329 (44.5 percent) were returned. Of those returned, 1,230 (13.2 percent) did not purchase a license during 1977. Usable returns, hunts plus no hunts, totaled 8,099. When combined with a total 122,062 eligible licensees a projection factor of 15.073104 resulted.

Rabbit and hare questionnaires were mailed to 15,213 sportsmen. Of these, 1,518 (10.0 percent) were non-deliverable, resulting in 13,695 delivered questionnaires. A return of 4,610 (29.1 percent) questionnaires was achieved. Of this number, 567 (12.3 percent) did not purchase a 1977 hunting license. Usable returns, hunts plus no hunts, totaled 4,043. When combined with a total 122,062 eligible licenses, a projection factor of 30.288337 resulted.

The 1977 weather year was extremely variable and ran from one extreme to the other. Following the severely dry fourth quarter of 1976, the first four months of 1977 also recorded well below normal precipitation. This dry period resulted in critical moisture conditions for all areas of the state. Precipitation during May reversed this trend with near record totals recorded at many stations. June was again quite dry but the remainder of the summer provided above normal moisture in most parts of the state. The final quarter of the year was again below normal for most areas of the state.

Temperatures during 1977 also showed wide variation. Average temperatures for January were below normal statewide except the Uinta Basin area. During February, the state recorded above normal temperature values but in March, temperatures again dropped to below normal. April temperatures rose to above normal followed by below normal values in May, values much above in June, variable in July and August then well above normal during the last four months of the year. June and December temperatures averaged 5 degrees above normal statewide with December being the warmest on record for some areas. The 1977 year did accumulate heavy snowpack in the mountains during the early winter months; providing good promise for ground water recharge and water storage for the 1978 growing season.

Conditions for game bird nesting were generally poor during May with below average temperatures and much above average precipitation statewide. Nesting conditions for late nesting species and for renesting improved during June.

Based on weather summary for 1977 prepared by E. Arlo Richardson, State Climatologist)



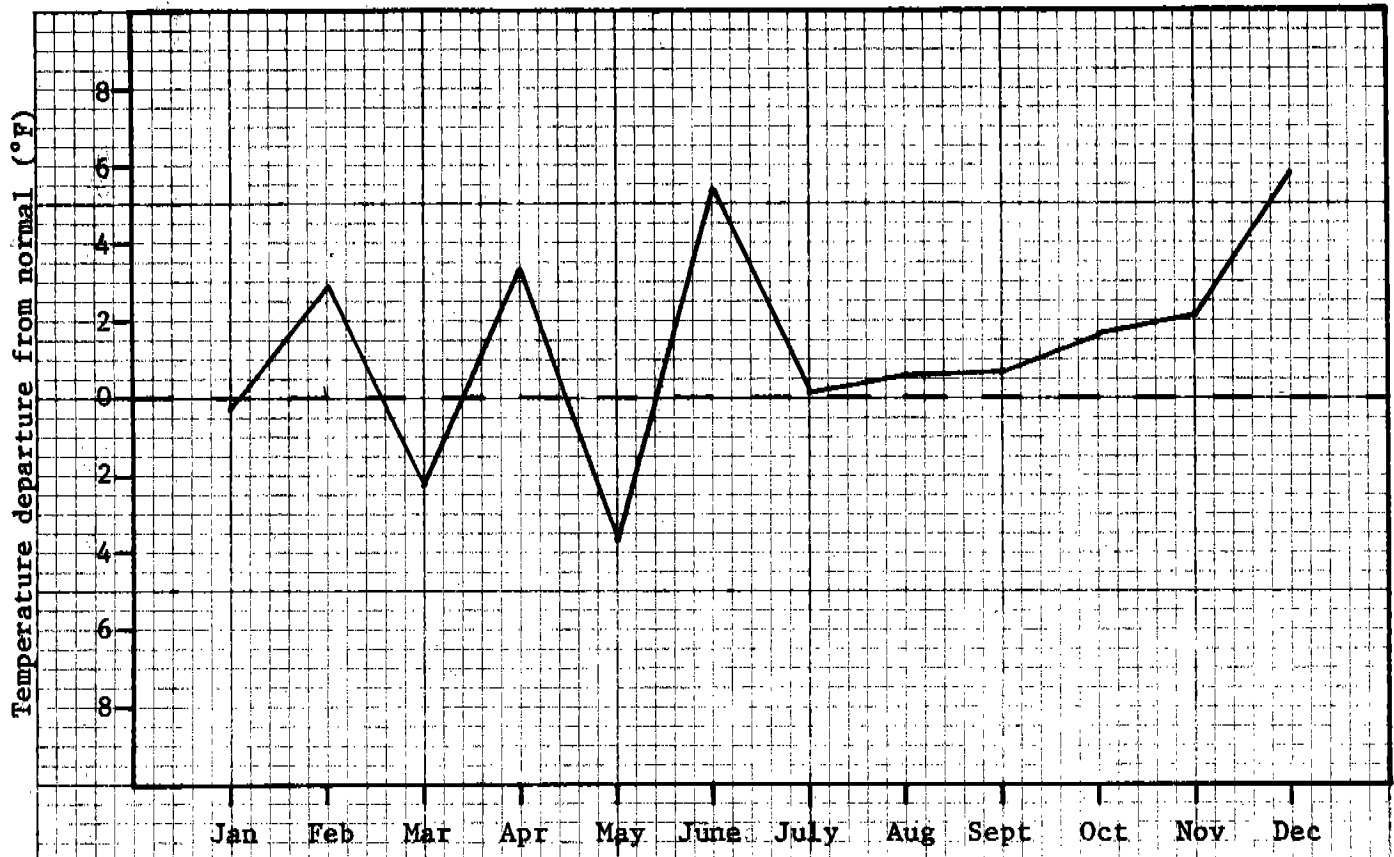


Figure 1. Monthly average temperature departure from normal, 1977.

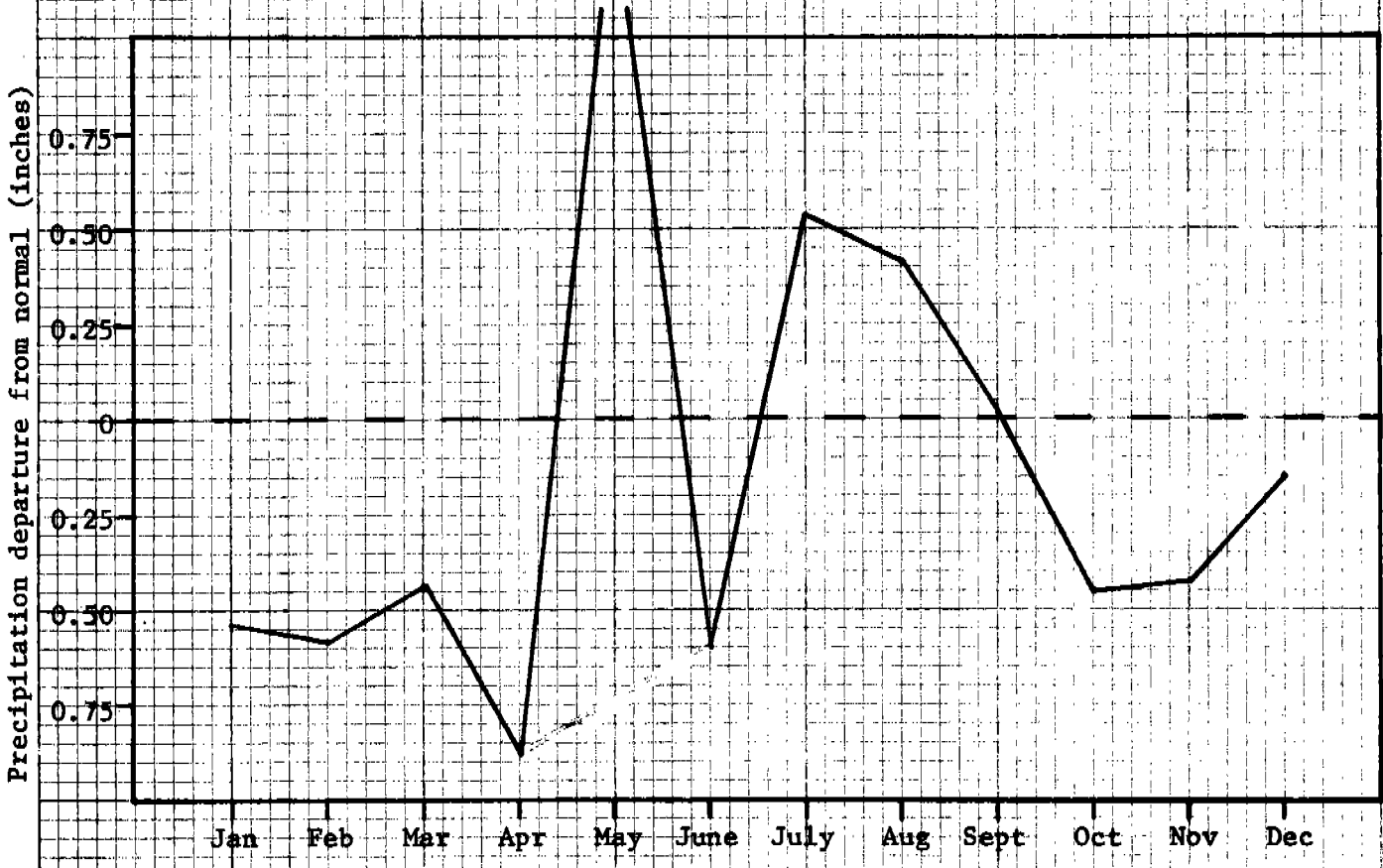


Figure 2. Monthly average precipitation departure from normal, 1977.

# RING-NECKED PHEASANT

## SUMMARY

The statewide breeding population indexes were below the 1976 level and below average except in the northeastern region. However, indexes probably represent poor counting conditions with little snow cover rather than reduced populations. Winter carry-over from 1976 appeared good due to the generally warm open winter.

Weather conditions during the nesting season were variable but generally poor. Production was slightly below 1976 and well below average statewide except in the northeastern region where production was average. The combination of higher carryover and lower production than 1976 resulted in fall populations very similar to the 1976 level and still below average.

Harvest statistics compiled from the questionnaire indicated a hunt very similar to 1976. Harvest was comparable to 1976. Hunter numbers decreased but, birds per hunter day and birds per hunter both increased slightly. Field bag check data showed that hunters spent less time afield per hunter day. The 0.66 birds per hunter index from field bag checks was 15 percent lower than the comparable index from hunter questionnaires.



### Winter Sex-ratio-Counts

Results of the survey for the winter of 1976-77 and long-term trends are shown in tables 1 and 2 of this section. Statewide comparisons to the winter of 1975-76 and the average are as follows:

	<u>Winter of</u> <u>1976-77</u>	<u>Percent change from</u>	
		<u>1975-76</u>	<u>Average</u>
Total pheasants counted (roadside)	7,709	-16	-44
Hens per cock	3.3	+ 3	-27
Pheasants observed per 100 hours	1,013	-12	-31
Total hours effort (roadside)	761	- 5	- 7

The winter sex-ratio counts indicated a lower breeding population than in 1976 but counting conditions were poor. Many counts were conducted with no or poor snow cover. Mild winter weather conditions with little snow resulted in high carry-over from 1976. The hen-cock ratio was similar to 1976 and narrower than average. Assuming a pre-season sex ratio of 1.2 females per male (summer inventory 1977), hunters harvested about 64 percent of the 1976 fall rooster population, a below average harvest rate compared to 1976.

### Roadside Counts

A summary of summer roadside pheasant counts for 1977 is shown on 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. Summer 1977 survey results compare to 1976 and average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total pheasants observed	2,049	-10	-43
Total miles driven	2,902	0	+ 2
Pheasants per mile	0.71	- 9	-44
Average brood size	4.94	- 8	- 9
Young per hen	3.11	-13	-23
Percent of hens with young	65	- 8	-12

April temperatures were somewhat above normal with low precipitation. May temperatures were much below normal and precipitation was very high. June was warm and dry. Counting conditions were near average over most of the state.

Production decreased from 1976 and remained well below average. Production was below 1976 levels in all regions and was almost 25 percent below the long-term state average. The density index (pheasants per mile) decreased from .78 in 1976 to .71 in 1977 and was well below the average of 1.27 pheasants per mile.

An increased carry-over from 1976 coupled with decreased production during 1977 resulted in pheasant populations similar to the 1976 population level.

## Harvest

### Hunter Questionnaire

Results of the hunter questionnaire for 1977 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. Following is a comparison of 1977 harvest statistics to 1976 and the average:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Pheasant hunters	67,195	- 9	-20
Pheasants harvested	148,168	- 2	-38
Hunter-days afield	191,142	-11	-14
Pheasants per hunter-day	0.78	+10	-30
Pheasants per hunter	2.84	+39	-01

Total hunters decreased from 1976 to the lowest level recorded since the initiation of a harvest survey in 1948. Hunter-days afield also declined. The total harvest decreased. Hunter success (pheasants per hunter-day and pheasants per hunter) increased over 1976 but remained below average.

Long-term trends (1964-77) of total hunters, hunter-days, harvest and hunter success are shown in Figure 1.

### Field Bag Checks

A summary of pheasant field bag check data for 1977 is shown in table 14. The hunter success trend determined via bag checks since 1972 is found in table 15. A comparison of 1977 data on a statewide basis to 1976 and the average follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total hunters checked	6,029	+24	+36
Total hours hunted	19,448	+20	+28
Pheasants per hunter (complete hunts)	0.66	-22	-27
Pheasants bagged per 100 hours	16	0	-16
Average hours per hunter-day (complete hunts)	4.1	-18	-13
Hours hunted per pheasant bagged	6.2	+ 7	+13

The increase in total hunters checked reflects increased efforts to collect data rather than increased hunter pressure. Some new checking stations were established to collect pheasant wings for age structure analysis and to collect field bag check data. The 0.66 birds per hunter index was 15 percent below the comparable index derived from the harvest questionnaire (0.78 birds per hunter day).

Overall, the field bag check showed decreased hunter effort per day and decreased hunter success compared to 1976. The average hunter spent 4.1 hours afield, compared to 5.0 for 1976.

Pheasants bagged per hunter and per hunter-day.

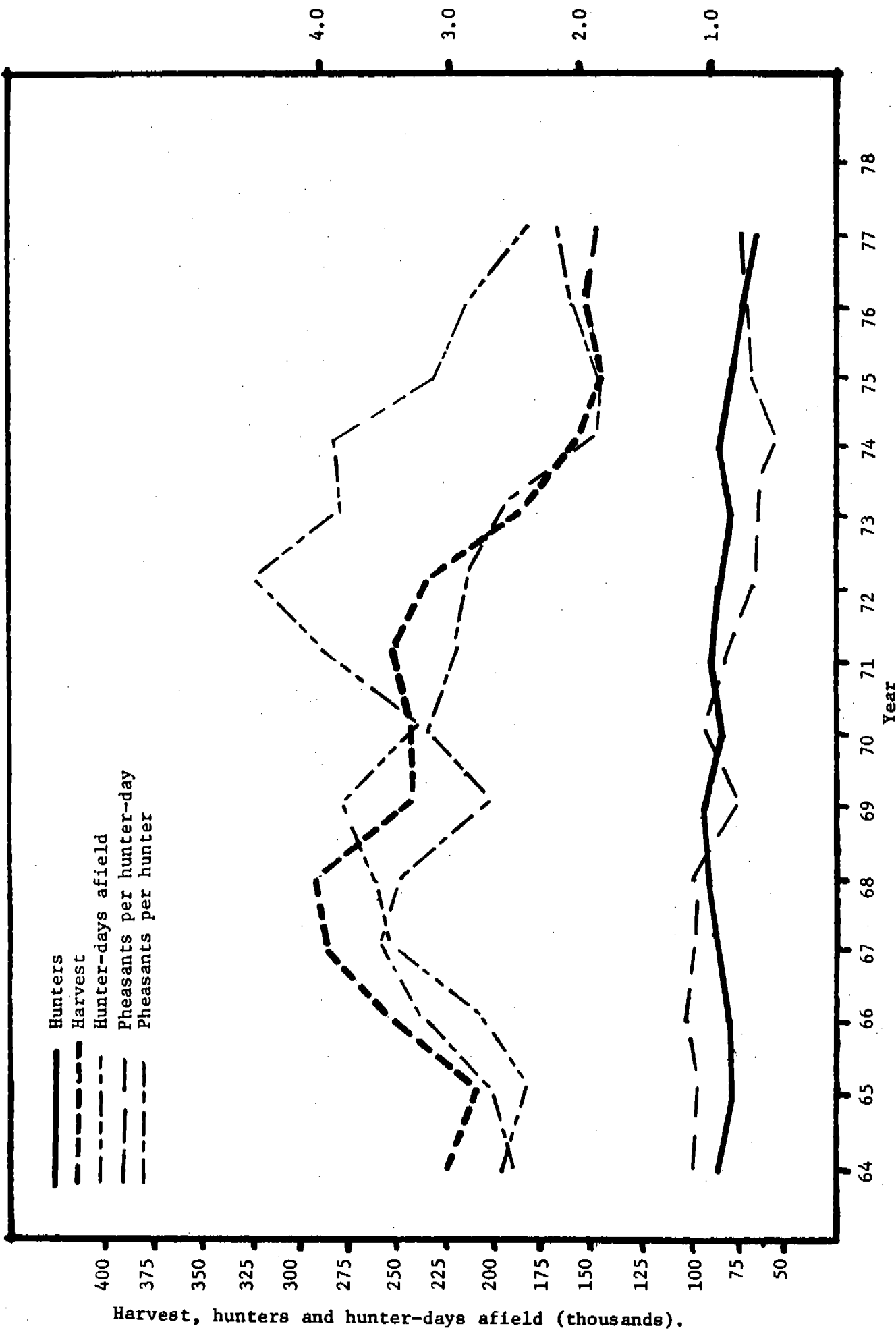


Figure 1. Statewide trend of pheasant harvest statistics.

Harvest, hunters and hunter-days afield (thousands).

Table 1. Summary of pheasant winter sex-ratio counts, 1976-77

Region & County	Roadside Observations			Flushing Observations			Effort Expended			Pheas. Obs. 100 Hrs. of Road. Obs.			
	Cocks	Hens	Total	Hens/100 Cocks	Cocks/100 Hens	Total	Hens/100 Cocks	Cocks/100 Hens	Vehicle Miles		Hours	Walk Total	
<u>Northern Region</u>													
Box Elder	66	170	236	2.58	39	0	0	0	320	32	3	35	738
Cache	70	296	366	4.23	24	4	55	59	630	49	7	56	747
Davis	49	317	366	6.47	15	0	0	0	275	25	0	25	1464
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	40	268	308	6.70	15	1	6	7	231	24	3	27	1283
<b>REGIONAL TOTALS</b>	<b>225</b>	<b>1051</b>	<b>1276</b>	<b>4.67</b>	<b>21</b>	<b>5</b>	<b>61</b>	<b>66</b>	<b>1456</b>	<b>130</b>	<b>13</b>	<b>143</b>	<b>982</b>
<u>Central Region</u>													
Juab	3	21	24	7.00	14	3	8	11	100	6	4	10	400
Salt Lake	101	310	411	3.07	33	3	29	32	1154	95	2	97	433
Sanpete	112	832	944	7.43	13	1	24	25	1192	106	8	114	891
Tooele	43	74	117	1.72	58	24	58	82	303	19	8	27	616
Utah	410	1669	2079	4.07	25	5	20	25	1900	161	8	169	1291
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGION TOTALS</b>	<b>669</b>	<b>2906</b>	<b>3575</b>	<b>4.34</b>	<b>23</b>	<b>36</b>	<b>139</b>	<b>175</b>	<b>4649</b>	<b>387</b>	<b>30</b>	<b>417</b>	<b>924</b>
<u>Southern Region</u>													
Beaver	4	32	36	8.00	12	--	--	--	108	12	0	12	300
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	6	23	29	3.83	26	--	--	--	66	5	--	5	580
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	46	115	161	2.50	40	4	44	48	440	40	1	41	402
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	49	121	170	2.46	40	1	10	11	354	30	0	30	567
Washington	49	262	311	5.35	19	8	61	69	235	18	3	21	1768
Wayne	12	19	31	1.58	63	20	90	110	66	8	20	28	388
<b>REGIONAL TOTALS</b>	<b>166</b>	<b>572</b>	<b>738</b>	<b>3.45</b>	<b>29</b>	<b>33</b>	<b>205</b>	<b>238</b>	<b>1269</b>	<b>113</b>	<b>24</b>	<b>137</b>	<b>653</b>
<u>Northeastern Region</u>													
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	325	517	842	1.59	63	102	169	271	771	46	6	52	1830
Uintah	216	541	757	2.50	40	21	140	161	503	43	6	49	1760
<b>REGIONAL TOTALS</b>	<b>541</b>	<b>1058</b>	<b>1599</b>	<b>1.96</b>	<b>51</b>	<b>123</b>	<b>309</b>	<b>432</b>	<b>1274</b>	<b>89</b>	<b>12</b>	<b>101</b>	<b>1797</b>
<u>Southeastern Region</u>													
Carbon	62	82	144	1.32	76	--	--	--	428	18	0	18	800
Emery	127	250	377	1.97	51	9	20	29	343	24	4	28	1571
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	34	151	185	0	0	19	19	--
<b>REGIONAL TOTALS</b>	<b>189</b>	<b>332</b>	<b>521</b>	<b>1.76</b>	<b>57</b>	<b>43</b>	<b>171</b>	<b>214</b>	<b>771</b>	<b>42</b>	<b>23</b>	<b>65</b>	<b>1240</b>
<b>STATE TOTALS</b>	<b>1790</b>	<b>5919</b>	<b>7709</b>	<b>3.31</b>	<b>30</b>	<b>240</b>	<b>885</b>	<b>1125</b>	<b>9419</b>	<b>761</b>	<b>102</b>	<b>863</b>	<b>1013</b>

\*Based on flushing observations

Table 2. Trend of Pheasant Winter Sex-ratio Counts, 1972-77.

Region & County	1972-73		1973-74		1974-75		1975-76		1976-77		Averages 1968-76
	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.	
<u>Northern Region</u>											
Box Elder	3.9	1941	5.6	1553	4.4	2074	4.4	1954	2.6	738	
Cache	9.3	912	5.9	443	3.4	575	3.4	839	4.2	747	
Davis	11.1	2420	6.3	912	3.8	1200	11.7	3817	6.5	1464	
Morgan	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	
Weber	9.8	2995	6.1	662	13.5	725	4.5	1326	6.7	1283	
<b>REGIONAL TOTALS</b>	<b>6.2</b>	<b>1838</b>	<b>5.7</b>	<b>980</b>	<b>4.5</b>	<b>1202</b>	<b>4.7</b>	<b>1481</b>	<b>4.7</b>	<b>982</b>	<b>5.2</b>
<u>Central Region</u>											
Juab	14.9	1725	6.0	117	19.0	111	2.7	110	7.0	400	
Salt Lake	5.0	2107	9.3	768	5.2	899	2.2	1300	3.1	433	
Sanpete	5.8	1674	6.2	2044	6.0	1314	5.3	2018	7.4	891	
Tooele	10.5	4631	--	--	6.6	1281	3.8	569	1.7	616	
Utah	5.4	1432	5.2	970	5.3	1144	2.9	1790	4.1	1291	
Wasatch	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>6.6</b>	<b>2215</b>	<b>6.3</b>	<b>1167</b>	<b>5.6</b>	<b>1075</b>	<b>3.1</b>	<b>1574</b>	<b>4.3</b>	<b>924</b>	<b>5.4</b>
<u>Southern Region</u>											
Beaver	10.4	705	3.7	540	2.7	480	1.4	277	8.0	300	
Garfield	--	--	--	--	--	--	--	--	--	--	
Iron	9.8	491	4.5	546	3.8	614	5.9	1200	3.8	580	
Kane	--	--	--	--	--	--	--	--	--	--	
Millard	9.2	1439	3.8	663	4.1	542	4.0	909	2.5	402	
Plute	--	--	--	--	--	--	--	--	--	--	
Sevier	7.7	1505	6.4	1839	5.4	1316	5.3	1024	2.5	567	
Washington	4.8	444	1.9	1232	5.0	360	4.2	595	5.4	1768	
Wayne	1.8	450	--	--	2.1	450	2.0	447	1.6	388	
<b>REGIONAL TOTALS</b>	<b>7.7</b>	<b>984</b>	<b>4.1</b>	<b>963</b>	<b>4.4</b>	<b>781</b>	<b>3.9</b>	<b>712</b>	<b>3.5</b>	<b>653</b>	<b>4.9</b>
<u>Northeastern Region</u>											
Daggett	--	--	--	--	--	--	--	--	--	--	
Duchesne	2.3	839	3.1	507	2.5	587	2.6	664	1.6	1830	
Uintah	2.0	1795	3.0	1184	3.4	1316	2.6	1065	2.5	1760	
<b>REGIONAL TOTALS</b>	<b>2.1</b>	<b>1219</b>	<b>3.0</b>	<b>867</b>	<b>2.9</b>	<b>827</b>	<b>2.6</b>	<b>833</b>	<b>2.0</b>	<b>1797</b>	<b>2.5</b>
<u>Southeastern Region</u>											
Carbon	1.8	578	3.5	169	--	--	2.8	870	1.3	800	
Emery	3.2	1141	1.9	721	3.1	372	1.6	214	2.0	1571	
Grand	1.8	243	4.4	270	1.9	289	--	--	--	--	
San Juan	--	--	1.7	2167	--	600	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>2.8</b>	<b>855</b>	<b>2.3</b>	<b>406</b>	<b>3.1</b>	<b>367</b>	<b>1.9</b>	<b>287</b>	<b>1.8</b>	<b>1240</b>	<b>3.0</b>
<b>STATE TOTALS</b>	<b>5.6</b>	<b>1692</b>	<b>4.8</b>	<b>981</b>	<b>4.5</b>	<b>944</b>	<b>3.2</b>	<b>1156</b>	<b>3.3</b>	<b>1014</b>	<b>4.5</b>

Table 3. Pheasant Summer Inventory Summary, 1977.

Region & County	No. Routes	Total Miles	Distinct Broods		Mixed Observ.	Adults w/o		Total Yng.	Total Cocks	Total Hens	Total Pheas.	Mile	Yng./Mile	Mean Brood Ad.	Yng./Hen w/Yng.	% Hens	
			No.	Yng.		Young Cocks	Young Hens										
<u>Northern Region</u>																	
Box Elder	2	170	15	70	0	13	4	19	70	13	102	0.60	0.41	4.67	3.68	79	
Cache	1	120	5	20	0	1	0	5	20	1	26	0.22	0.17	4.00	4.00	100	
Davis	1	90	15	86	4	19	14	33	105	12	150	1.67	1.17	5.73	3.18	58	
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Weber	1	104	7	46	11	41	7	23	41	87	135	1.30	0.84	6.57	2.12	44	
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>484</b>	<b>42</b>	<b>222</b>	<b>15</b>	<b>60</b>	<b>33</b>	<b>41</b>	<b>98</b>	<b>282</b>	<b>413</b>	<b>0.85</b>	<b>0.58</b>	<b>5.29</b>	<b>2.88</b>	<b>58</b>	
<u>Central Region</u>																	
Juab	1	35	2	16	0	0	1	0	2	16	1	19	0.54	0.46	8.00	8.00	100
Salt Lake	1	76	3	16	0	3	0	3	16	3	22	0.29	0.21	5.33	5.33	100	
Sanpete	2	171	26	128	2	40	9	33	168	9	210	1.23	0.98	4.92	5.09	85	
Tooele	1	60	6	20	2	7	5	6	14	27	46	0.77	0.45	3.33	1.93	57	
Utah	4	389	45	205	11	28	55	36	233	55	380	0.98	0.60	4.56	2.53	61	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>9</b>	<b>731</b>	<b>82</b>	<b>385</b>	<b>15</b>	<b>75</b>	<b>73</b>	<b>47</b>	<b>144</b>	<b>460</b>	<b>677</b>	<b>0.93</b>	<b>0.63</b>	<b>4.70</b>	<b>3.19</b>	<b>67</b>	
<u>Southern Region</u>																	
Beaver	1	90	5	30	0	0	5	4	9	30	5	44	0.49	0.33	6.00	3.33	56
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Iron	1	69	2	12	0	7	0	2	12	7	21	0.30	0.17	6.00	6.00	100	
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Millard	2	293	17	89	2	11	16	9	28	100	144	0.49	0.34	5.23	3.57	68	
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sevier	2	209	18	111	9	36	7	3	30	147	184	0.88	0.70	6.17	4.90	90	
Washington	2	99	7	25	4	12	4	4	15	37	4	56	0.57	0.37	3.57	2.47	73
Wayne	1	30	0	0	0	0	1	0	0	1	1	0.03	0	--	--	--	
<b>REGIONAL TOTALS</b>	<b>9</b>	<b>790</b>	<b>49</b>	<b>267</b>	<b>15</b>	<b>59</b>	<b>40</b>	<b>20</b>	<b>84</b>	<b>326</b>	<b>450</b>	<b>0.57</b>	<b>0.41</b>	<b>5.45</b>	<b>3.88</b>	<b>76</b>	
<u>Northeastern Region</u>																	
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	3	364	20	91	2	1	22	5	27	92	141	0.39	0.25	4.55	3.41	81	
Uintah	2	190	24	120	6	30	19	19	49	150	218	1.15	0.79	5.00	3.06	61	
<b>REGIONAL TOTALS</b>	<b>5</b>	<b>554</b>	<b>44</b>	<b>211</b>	<b>8</b>	<b>31</b>	<b>41</b>	<b>24</b>	<b>76</b>	<b>242</b>	<b>359</b>	<b>0.65</b>	<b>0.44</b>	<b>4.80</b>	<b>3.18</b>	<b>68</b>	
<u>Southeastern Region</u>																	
Carbon	2	169	2	5	0	0	22	10	12	5	22	0.23	0.03	2.50	0.42	17	
Emery	3	159	12	52	0	0	23	10	22	52	23	0.61	0.33	4.33	2.36	55	
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
San Juan	1	15	1	4	2	2	3	2	5	6	3	14	0.93	0.40	4.00	1.20	60
<b>REGIONAL TOTALS</b>	<b>6</b>	<b>343</b>	<b>15</b>	<b>61</b>	<b>2</b>	<b>2</b>	<b>48</b>	<b>22</b>	<b>39</b>	<b>63</b>	<b>48</b>	<b>0.44</b>	<b>0.18</b>	<b>4.07</b>	<b>1.62</b>	<b>44</b>	
<b>STATE TOTALS</b>	<b>34</b>	<b>2902</b>	<b>232</b>	<b>1146</b>	<b>55</b>	<b>227</b>	<b>235</b>	<b>154</b>	<b>441</b>	<b>1373</b>	<b>235</b>	<b>0.71</b>	<b>0.47</b>	<b>4.94</b>	<b>3.11</b>	<b>65</b>	



Table 4. Trend of pheasants observed per mile during summer roadside counts, 1967-77.

Region & County	Year											Average 1962-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	0.91	0.82	0.68	0.57	1.75	1.10	0.38	0.87	0.21	0.46	0.60	
Cache	1.50	2.20	1.46	1.90	1.98	1.10	0.36	0.48	0.68	0.44	0.22	
Davis	1.39	0.83	4.04	0.70	2.75	1.77	--	0.32	1.55	0.54	1.67	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	0.32	--	--	--	--	--	--	--	--	--	
Weber	1.67	2.00	3.18	0.71	1.82	2.44	2.36	1.77	1.23	2.24	1.30	
REGIONAL TOTALS	1.24	1.27	1.89	1.20	2.04	1.45	1.04	0.80	0.71	0.86	0.85	1.41
<u>Central Region</u>												
Juab	1.30	1.07	0.46	1.20	0.32	0.64	0.23	0.46	0.82	1.20	0.54	
Salt Lake	1.40	3.04	2.60	0.88	1.74	1.29	0.44	0.48	0.54	0.55	0.29	
Sanpete	1.00	2.61	2.33	3.34	2.22	3.27	1.78	1.60	0.80	1.37	1.23	
Tooele	1.40	3.70	2.82	3.18	1.69	2.52	0.07	0.87	0.17	1.02	0.77	
Utah	2.40	2.74	2.49	1.84	2.31	2.02	1.36	1.29	0.64	1.45	0.98	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	1.77	2.74	2.38	1.97	2.00	2.06	0.98	1.11	0.62	1.16	0.93	1.95
<u>Southern Region</u>												
Beaver	0.83	0.88	0.46	0.96	0.69	0.75	0.60	0.60	0.07	0.69	0.49	
Garfield	0.41	0.79	1.05	0.36	0.03	--	--	--	--	--	--	
Iron	0.69	--	0.73	0.87	0.77	0.51	0.56	0.53	0.19	0.39	0.30	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	1.19	1.61	1.68	1.01	1.15	1.09	0.57	0.79	0.41	0.47	0.49	
Piute	0.39	--	0.64	0.53	0.35	--	--	--	--	--	--	
Sevier	1.67	1.71	1.66	1.99	4.13	2.37	1.03	0.89	0.40	0.72	0.88	
Washington	1.49	0.99	0.67	0.29	1.32	0.92	1.12	1.34	0.47	0.47	0.57	
Wayne	--	--	--	--	--	--	--	0.48	0.09	1.33	0.03	
REGIONAL TOTALS	1.08	1.37	1.12	0.92	1.48	1.19	0.79	0.78	0.28	0.58	0.57	1.16
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.31	0.30	0.36	0.45	0.32	0.27	0.31	0.33	0.33	0.34	0.39	
Uintah	0.47	1.14	1.27	0.66	0.82	0.74	0.61	1.33	0.54	1.45	1.15	
REGIONAL TOTALS	0.36	0.46	0.70	0.51	0.51	0.42	0.39	0.61	0.39	0.67	0.65	0.62
<u>Southeastern Region</u>												
Carbon	0	2.34	0.09	0.20	0.05	0.15	0.01	0	0.02	0.39	0.23	
Emery	1.21	0.32	0.69	0.83	0.55	1.32	0.64	1.06	0.88	0.47	0.61	
Grand	--	--	--	--	--	1.03	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	5.00	3.57	0.93	0.93	
REGIONAL TOTALS	0.84	0.93	0.39	0.57	0.31	0.76	0.34	0.64	0.60	0.44	0.44	0.77
STATE TOTALS	1.15	1.58	1.40	1.18	1.40	1.33	0.74	0.83	0.49	0.78	0.71	1.27

Table 5. Trend of young observed per mile during summer roadside pheasant counts, 1967-77.

Region & County	Year											Average 1962-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	0.71	0.51	0.40	0.35	1.32	0.76	0.28	0.62	0.13	0.31	0.41	
Cache	1.25	1.84	1.05	1.39	1.62	0.81	0.32	0.35	0.43	0.30	0.17	
Davis	0.95	0.65	3.11	0.54	2.25	1.28	--	0.22	0.84	0.54	1.17	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	0.19	--	--	--	--	--	--	--	--	--	
Weber	1.33	1.60	2.35	0.58	1.35	1.74	1.72	1.31	0.77	1.47	0.84	
<b>REGIONAL TOTALS</b>	<b>0.99</b>	<b>0.97</b>	<b>1.37</b>	<b>0.86</b>	<b>1.62</b>	<b>1.04</b>	<b>0.77</b>	<b>0.59</b>	<b>0.43</b>	<b>0.58</b>	<b>0.58</b>	<b>1.04</b>
<u>Central Region</u>												
Juab	1.10	0.90	0.27	0.95	0.18	0.50	0.17	0.38	0.71	1.06	0.46	
Salt Lake	1.00	2.14	1.91	0.61	1.31	1.04	0.32	0.32	0.35	0.37	0.21	
Sanpete	0.80	2.10	1.90	2.54	1.74	2.64	1.43	1.26	0.56	1.12	0.98	
Tooele	1.20	3.15	2.49	2.74	1.41	2.09	0.00	0.62	0.07	0.69	0.45	
Utah	1.80	2.11	1.88	1.30	1.68	1.35	1.02	0.95	0.33	0.99	0.60	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>1.40</b>	<b>2.10</b>	<b>1.84</b>	<b>1.46</b>	<b>1.50</b>	<b>1.53</b>	<b>0.73</b>	<b>0.83</b>	<b>0.38</b>	<b>0.84</b>	<b>0.63</b>	<b>1.50</b>
<u>Southern Region</u>												
Beaver	0.55	0.80	0.26	0.64	0.48	0.57	0.39	0.47	0.03	0.54	0.33	
Garfield	0.30	0.63	0.74	0.19	0.00	--	--	--	--	--	--	
Iron	0.48	--	0.53	0.55	0.62	0.39	0.51	0.46	0.08	0.31	0.17	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	0.86	1.39	1.32	0.84	0.90	0.87	0.48	0.57	0.27	0.34	0.34	
Piute	0.28	--	0.53	0.31	0.25	--	--	--	--	--	--	
Sevier	1.38	1.49	1.26	1.58	3.21	1.93	0.85	0.70	0.28	0.56	0.70	
Washington	1.03	0.71	0.46	0.17	0.95	0.65	0.72	1.03	0.26	0.35	0.37	
Wayne	--	--	--	--	--	--	--	0.14	0.02	0.87	0.00	
<b>REGIONAL TOTALS</b>	<b>0.81</b>	<b>1.15</b>	<b>0.85</b>	<b>0.69</b>	<b>1.14</b>	<b>0.95</b>	<b>0.61</b>	<b>0.59</b>	<b>0.17</b>	<b>0.44</b>	<b>0.41</b>	<b>0.89</b>
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	0.19	0.20	0.25	0.27	0.21	0.15	0.18	0.21	0.23	0.21	0.25	
Uintah	0.33	0.86	0.86	0.40	0.55	0.55	0.47	1.08	0.27	1.07	0.79	
<b>REGIONAL TOTALS</b>	<b>0.23</b>	<b>0.32</b>	<b>0.47</b>	<b>0.31</b>	<b>0.34</b>	<b>0.28</b>	<b>0.26</b>	<b>0.45</b>	<b>0.24</b>	<b>0.47</b>	<b>0.44</b>	<b>0.44</b>
<u>Southeastern Region</u>												
Carbon	0.00	1.82	0.03	0.17	0.03	0.10	--	0.00	0.00	0.22	0.03	
Emery	0.89	0.18	0.58	0.56	0.30	0.96	0.47	0.81	0.57	0.20	0.33	
Grand	--	--	--	--	--	0.67	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	4.07	2.43	0.47	0.40	
<b>REGIONAL TOTALS</b>	<b>0.61</b>	<b>0.67</b>	<b>0.31</b>	<b>0.39</b>	<b>0.17</b>	<b>0.54</b>	<b>0.25</b>	<b>0.50</b>	<b>0.39</b>	<b>0.22</b>	<b>0.18</b>	<b>0.56</b>
<b>STATE TOTALS</b>	<b>0.88</b>	<b>1.23</b>	<b>1.06</b>	<b>0.86</b>	<b>1.06</b>	<b>0.99</b>	<b>0.55</b>	<b>0.62</b>	<b>0.30</b>	<b>0.55</b>	<b>0.47</b>	<b>0.98</b>

Table 6. Trend of young per adult hen ratios found during summer roadside pheasant counts 1967-77

Region & County	Year											Average 1962-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	4.02	2.07	2.00	2.19	4.02	3.26	3.23	3.19	2.44	4.18	3.68	
Cache	6.29	5.65	3.38	3.65	6.64	3.88	10.00	3.00	2.69	4.50	4.00	
Davis	2.75	4.82	4.00	4.00	5.45	3.42	--	3.00	1.53	3.75	3.18	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	1.75	--	--	--	--	--	--	--	--	--	
Weber	4.47	4.74	3.70	4.22	3.40	3.49	3.72	3.66	2.07	2.35	2.12	
<b>REGIONAL TOTALS</b>	<b>4.58</b>	<b>3.89</b>	<b>3.27</b>	<b>3.32</b>	<b>5.02</b>	<b>3.50</b>	<b>3.82</b>	<b>3.35</b>	<b>2.10</b>	<b>2.91</b>	<b>2.88</b>	<b>3.80</b>
<u>Central Region</u>												
Juab	6.30	5.40	3.25	4.22	2.33	4.50	4.00	5.00	6.00	7.40	8.00	
Salt Lake	3.40	3.02	3.63	2.96	4.08	4.74	3.24	2.87	2.39	3.50	5.33	
Sanpete	5.60	4.71	5.48	4.02	4.73	5.52	5.33	4.45	2.67	5.22	5.09	
Tooele	8.40	7.08	7.89	6.78	5.95	5.95	0.00	3.36	1.33	3.06	1.93	
Utah	3.80	3.94	3.85	3.69	3.28	2.71	3.33	3.58	1.62	3.32	2.53	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>4.20</b>	<b>3.92</b>	<b>4.30</b>	<b>3.94</b>	<b>3.86</b>	<b>3.78</b>	<b>3.46</b>	<b>3.77</b>	<b>2.16</b>	<b>3.85</b>	<b>3.19</b>	<b>4.07</b>
<u>Southern Region</u>												
Beaver	2.05	10.67	1.86	5.33	3.27	5.38	2.78	5.83	0.86	6.14	3.33	
Garfield	3.83	4.00	3.50	2.00	--	--	--	--	--	--	--	
Iron	2.93	--	3.21	2.53	4.43	4.54	13.67	9.50	0.86	5.50	6.00	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	4.91	6.10	4.58	5.89	4.62	5.65	5.75	2.91	2.52	3.67	3.57	
Piute	2.50	--	5.33	1.75	5.00	--	--	--	--	--	--	
Sevier	5.89	6.72	3.74	4.30	4.34	4.94	5.18	3.80	3.06	4.79	4.90	
Washington	3.33	3.42	2.88	1.50	3.45	3.50	2.62	3.89	1.94	5.83	2.47	
Wayne	--	--	--	--	--	--	--	0.54	0.25	2.60	--	
<b>REGIONAL TOTALS</b>	<b>3.98</b>	<b>5.75</b>	<b>3.84</b>	<b>3.92</b>	<b>4.19</b>	<b>4.98</b>	<b>4.41</b>	<b>3.73</b>	<b>1.93</b>	<b>4.36</b>	<b>3.88</b>	<b>4.28</b>
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	3.21	5.92	5.00	2.51	3.50	3.00	4.06	3.71	3.73	4.06	3.41	
Uintah	4.27	4.24	3.37	2.62	3.08	4.84	5.64	5.43	1.78	4.48	3.06	
<b>REGIONAL TOTALS</b>	<b>3.60</b>	<b>4.93</b>	<b>3.77</b>	<b>2.56</b>	<b>3.23</b>	<b>3.92</b>	<b>4.70</b>	<b>4.69</b>	<b>2.73</b>	<b>4.34</b>	<b>3.18</b>	<b>4.22</b>
<u>Southeastern Region</u>												
Carbon	0.00	4.52	1.40	5.00	5.00	4.33	--	--	0.00	2.05	0.42	
Emery	5.17	2.46	6.78	3.55	2.25	3.34	4.70	7.46	3.96	1.46	2.36	
Grand	--	--	--	--	--	2.22	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	7.62	2.55	1.75	1.20	
<b>REGIONAL TOTALS</b>	<b>5.17</b>	<b>3.91</b>	<b>5.61</b>	<b>3.74</b>	<b>2.36</b>	<b>3.20</b>	<b>4.70</b>	<b>7.52</b>	<b>3.28</b>	<b>1.74</b>	<b>1.62</b>	<b>4.32</b>
<b>STATE TOTALS</b>	<b>4.20</b>	<b>4.25</b>	<b>3.94</b>	<b>3.68</b>	<b>4.09</b>	<b>3.93</b>	<b>3.95</b>	<b>3.95</b>	<b>2.28</b>	<b>3.56</b>	<b>3.11</b>	<b>4.05</b>

Table 7. Trend of the percent of hens observed with broods during summer roadside pheasant counts, 1967-77.

Region & County	Year											Average 1963-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	88	57	58	59	75	69	62	78	78	73	79	
Cache	86	65	62	66	86	78	50	68	66	80	100	
Davis	62	91	56	82	87	85	--	100	97	75	58	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	38	--	--	--	--	--	--	--	--	--	
Weber	100	87	80	100	77	54	82	69	34	58	44	
<b>REGIONAL TOTALS</b>	<b>86</b>	<b>66</b>	<b>66</b>	<b>68</b>	<b>82</b>	<b>70</b>	<b>77</b>	<b>74</b>	<b>68</b>	<b>64</b>	<b>58</b>	<b>73</b>
<u>Central Region</u>												
Juab	100	100	75	100	67	100	100	100	100	100	100	
Salt Lake	71	69	76	62	66	78	71	52	45	59	100	
Sanpete	81	97	91	78	95	91	93	88	64	90	85	
Tooele	100	88	100	100	84	74	0	64	33	78	57	
Utah	66	72	74	60	69	57	62	58	42	66	61	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>71</b>	<b>76</b>	<b>79</b>	<b>71</b>	<b>74</b>	<b>69</b>	<b>66</b>	<b>68</b>	<b>49</b>	<b>73</b>	<b>67</b>	<b>72</b>
<u>Southern Region</u>												
Beaver	75	100	72	100	82	88	64	83	14	86	56	
Garfield	100	100	83	50	--	--	--	--	--	--	--	
Iron	76	--	75	59	62	54	100	80	14	100	100	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	74	100	77	94	81	88	100	50	48	81	68	
Piute	50	--	100	50	100	--	--	--	--	--	--	
Sevier	100	100	96	88	85	90	85	83	59	92	90	
Washington	67	92	42	67	74	62	66	78	31	50	73	
Wayne	--	--	--	--	--	--	--	8	50	40	--	
<b>REGIONAL TOTALS</b>	<b>78</b>	<b>98</b>	<b>79</b>	<b>77</b>	<b>80</b>	<b>83</b>	<b>79</b>	<b>64</b>	<b>42</b>	<b>78</b>	<b>76</b>	<b>76</b>
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	53	92	81	44	68	68	81	76	59	88	81	
Uintah	91	65	59	42	55	84	91	100	48	94	61	
<b>REGIONAL TOTALS</b>	<b>67</b>	<b>76</b>	<b>65</b>	<b>43</b>	<b>60</b>	<b>76</b>	<b>85</b>	<b>90</b>	<b>53</b>	<b>91</b>	<b>68</b>	<b>75</b>
<u>Southeastern Region</u>												
Carbon	0	74	20	75	100	67	--	--	0	59	17	
Emery	86	77	94	70	42	66	76	77	65	29	55	
Grand	--	--	--	--	--	56	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	100	55	50	60	
<b>REGIONAL TOTALS</b>	<b>86</b>	<b>75</b>	<b>78</b>	<b>71</b>	<b>44</b>	<b>64</b>	<b>76</b>	<b>86</b>	<b>60</b>	<b>44</b>	<b>44</b>	<b>70</b>
<b>STATE TOTALS</b>	<b>76</b>	<b>78</b>	<b>74</b>	<b>69</b>	<b>75</b>	<b>72</b>	<b>74</b>	<b>71</b>	<b>54</b>	<b>71</b>	<b>65</b>	<b>74</b>

Table 8. Trend of average brood size for pheasants, 1967-77.

Region & County	Year											Average 1962-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	4.93	3.80	3.53	3.68	4.96	4.81	4.75	4.17	3.14	5.75	4.67	
Cache	5.86	6.88	5.63	7.12	8.34	5.47	5.00	4.38	4.67	5.83	4.00	
Davis	5.17	5.14	6.67	5.14	6.52	4.50		3.50	2.75	4.33	5.73	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	4.67	--	--	--	--	--	--	--	--	--	
Weber	3.00	5.69	5.33	3.43	4.80	6.07	6.55	7.27	5.78	5.05	6.57	
<b>REGIONAL TOTALS</b>	<b>5.13</b>	<b>5.25</b>	<b>5.56</b>	<b>5.28</b>	<b>6.33</b>	<b>5.13</b>	<b>6.00</b>	<b>4.84</b>	<b>4.26</b>	<b>5.19</b>	<b>5.29</b>	<b>5.21</b>
<u>Central Region</u>												
Juab	6.30	5.40	4.33	4.22	7.00	4.50	--	5.00	9.00	7.33	8.00	
Salt Lake	4.67	5.28	5.35	4.95	5.76	6.93	4.58	5.00	5.73	6.09	5.33	
Sanpete	5.18	4.68	5.13	5.52	4.94	6.11	5.92	4.59	4.72	5.88	4.92	
Tooele	8.38	8.10	7.89	6.78	6.81	8.07	--	6.50	4.00	4.38	3.33	
Utah	5.94	5.07	5.08	5.13	5.89	5.31	5.78	6.24	4.12	4.86	4.56	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>5.83</b>	<b>5.28</b>	<b>5.37</b>	<b>5.41</b>	<b>5.70</b>	<b>5.92</b>	<b>5.60</b>	<b>5.46</b>	<b>4.73</b>	<b>5.35</b>	<b>4.70</b>	<b>5.49</b>
<u>Southern Region</u>												
Beaver	4.75	10.67	--	--	5.75	6.17	4.33	8.00	6.00	7.75	6.00	
Garfield	4.25	4.00	4.25	3.00	--	--	--	--	--	--	--	
Iron	5.62	--	11.00	4.50	7.17	5.67	6.00	9.50	6.00	5.25	6.00	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	6.88	--	5.74	6.24	4.44	5.31	5.50	6.20	5.73	6.93	5.23	
Piute	5.00	--	5.00	3.50	5.00	--	--	--	--	--	--	
Sevier	5.35	--	4.22	5.00	5.24	5.67	6.14	4.82	4.25	5.17	6.17	
Washington	5.72	4.31	8.00	--	5.25	6.33	4.33	4.42	5.80	8.00	3.57	
Wayne	--	--	--	--	--	--	--	7.00	--	7.00	--	
<b>REGIONAL TOTALS</b>	<b>5.78</b>	<b>5.37</b>	<b>5.42</b>	<b>5.30</b>	<b>5.13</b>	<b>5.60</b>	<b>5.38</b>	<b>5.83</b>	<b>5.31</b>	<b>6.37</b>	<b>5.45</b>	<b>5.49</b>
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	6.10	6.45	6.45	4.82	6.50	4.45	5.64	5.43	6.40	4.64	4.55	
Uintah	4.70	6.54	6.65	6.14	6.05	5.75	6.28	5.21	4.22	5.00	5.00	
<b>REGIONAL TOTALS</b>	<b>5.40</b>	<b>6.50</b>	<b>6.59</b>	<b>5.33</b>	<b>6.21</b>	<b>5.13</b>	<b>5.89</b>	<b>5.29</b>	<b>5.37</b>	<b>4.85</b>	<b>4.80</b>	<b>5.67</b>
<u>Southeastern Region</u>												
Carbon	--	7.50	1.00	4.00	5.00	6.50	--	--	--	3.00	2.50	
Emery	6.67	4.00	8.42	5.64	6.00	5.08	6.22	6.67	5.00	4.86	4.33	
Grand	--	--	--	--	--	4.00	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	6.12	--	3.50	4.00	
<b>REGIONAL TOTALS</b>	<b>6.67</b>	<b>6.45</b>	<b>7.85</b>	<b>5.29</b>	<b>5.89</b>	<b>5.00</b>	<b>6.22</b>	<b>6.36</b>	<b>5.00</b>	<b>4.40</b>	<b>4.07</b>	<b>5.79</b>
<b>STATE TOTALS</b>	<b>5.70</b>	<b>5.40</b>	<b>5.59</b>	<b>5.36</b>	<b>5.73</b>	<b>5.62</b>	<b>5.65</b>	<b>5.46</b>	<b>4.80</b>	<b>5.37</b>	<b>4.94</b>	<b>5.46</b>

Table 9. Summary of pheasant hunter success and distribution of harvest and hunting pressure by region and county, 1977.

Region and County	Hunters Reporting	Days Hunted	Birds Bagged	Birds per Hunter-day	Birds per Hunter*	% of Pressure	% of Harvest
<u>Northern Region</u>							
Box Elder	490	1,169	1,126	0.96	3.02	9.22	11.45
Cache	399	920	814	0.88	2.45	7.25	8.28
Davis	503	1,298	882	0.68	2.34	10.24	8.97
Morgan	15	33	24	0.73	2.30	0.26	0.24
Rich	3	3	1	0.33	1.50	0.02	0.01
Summit	1	1	0	0	3.07	0.01	0.00
Weber	568	1,566	1,195	0.76	2.47	12.35	12.16
REGIONAL TOTALS	1,979	4,990	4,042	0.81	2.50	39.35	41.12
<u>Central Region</u>							
Juab	62	149	101	0.68	2.48	1.17	1.03
Salt Lake	523	1,230	738	0.60	1.75	9.70	7.51
Sanpete	240	583	460	0.79	2.06	4.60	4.68
Tooele	132	317	174	0.55	1.75	2.50	1.77
Utah	947	2,149	1,679	0.78	2.39	16.95	17.08
Wasatch	1	2	1	0.50	4.92	0.02	0.01
REGIONAL TOTALS	1,905	4,430	3,153	0.71	2.02	34.93	32.08
<u>Southern Region</u>							
Beaver	29	86	64	0.74	2.19	0.68	0.65
Garfield	5	8	7	0.88	1.20	0.06	0.07
Iron	38	79	47	0.59	1.68	0.62	0.48
Kane	0	0	0	0.00	2.00	0.00	0.00
Millard	208	501	395	0.79	2.36	3.95	4.02
Piute	6	18	10	0.56	1.75	0.14	0.10
Sevier	224	546	417	0.76	1.93	4.31	4.24
Washington	61	157	72	0.46	1.27	1.24	0.73
Wayne	6	10	4	0.40	0.00	0.08	0.04
REGIONAL TOTALS	577	1,405	1,016	0.72	1.88	11.08	10.34
<u>Northeastern Region</u>							
Daggett	0	0	0	0.00	0.00	0.00	0.00
Duchesne	207	526	575	1.09	2.64	4.15	5.85
Uintah	155	466	518	1.11	3.30	3.67	5.27
REGIONAL TOTALS	362	992	1,093	1.10	3.06	7.82	11.12
<u>Southeastern Region</u>							
Carbon	64	155	78	0.50	2.07	1.22	0.79
Emery	127	320	177	0.55	1.86	2.52	1.80
Grand	4	8	6	0.75	1.29	0.06	0.06
San Juan	3	6	2	0.33	0.0	0.05	0.02
REGIONAL TOTALS	198	489	263	0.54	1.89	3.86	2.68
Unknown counties	153	374	263	0.70	1.00	2.95	2.68
Mixed counties	1	1	0	0.00	0.00	0.01	0.00
STATE TOTALS	5,175	12,681	9,830	0.78	2.21	100	100

\*Based on county of residence.

Table 10. Summary of pheasants bagged per hunter-day by region and county, 1970-77.

Region and County	1970	1971	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>								
Box Elder	1.25	1.18	0.85	0.85	0.69	0.83	0.76	0.96
Cache	1.29	1.09	0.85	0.87	0.70	0.79	0.82	0.88
Davis	0.69	0.67	0.54	0.50	0.47	0.52	0.54	0.68
Morgan	0.95	1.02	0.54	0.63	0.30	0.24	0.87	0.73
Rich	1.00	1.00	0.38	0.00	1.00	0.56	0.00	0.33
Summit	0.50	0.00	1.00	0.33	0.69	0.50	0.00	0.00
Weber	0.79	0.72	0.69	0.63	0.52	0.59	0.66	0.76
REGIONAL TOTALS	1.02	0.92	0.75	0.72	0.59	0.66	0.68	0.81
<u>Central Region</u>								
Juab	1.09	0.93	0.52	0.43	0.39	0.38	0.59	0.68
Salt Lake	0.76	0.59	0.55	0.61	0.44	0.47	0.56	0.60
Sanpete	1.32	1.14	0.91	0.81	0.89	0.80	0.78	0.79
Tooele	0.95	0.69	0.46	0.48	0.37	0.47	0.71	0.55
Utah	1.11	0.86	0.75	0.67	0.61	0.58	0.73	0.78
Wasatch	0.00	0.41	0.25	0.00	0.00	0.22	0.54	0.50
REGIONAL TOTALS	1.01	0.80	0.68	0.65	0.56	0.56	0.68	0.71
<u>Southern Region</u>								
Beaver	0.91	1.00	0.70	0.53	0.58	0.58	0.70	0.74
Garfield	1.00	0.95	0.50	0.88	0.44	0.21	0.27	0.88
Iron	0.69	0.75	0.63	0.45	0.55	0.43	0.38	0.59
Kane	--	3.00	--	--	--	0.33	1.00	0.00
Millard	1.18	0.99	0.81	0.86	0.65	0.73	0.71	0.79
Piute	0.79	0.93	0.39	0.77	0.88	0.40	0.73	0.56
Sevier	1.28	1.02	0.84	0.73	0.70	0.56	0.73	0.76
Washington	0.47	0.54	0.49	0.36	0.38	0.39	0.97	0.46
Wayne	1.17	0.88	0.00	1.57	1.09	0.00	0.71	0.40
REGIONAL TOTALS	1.04	0.90	0.74	0.70	0.63	0.58	0.72	0.72
<u>Northeastern Region</u>								
Daggett	0.50	0.47	1.00	0.50	0.50	2.25	1.40	0.00
Duchesne	1.22	1.19	1.09	1.15	0.83	0.76	1.08	1.09
Uintah	1.13	1.10	0.82	0.92	0.70	0.74	1.12	1.11
REGIONAL TOTALS	1.16	1.13	0.93	1.03	0.76	0.76	1.10	1.10
<u>Southeastern Region</u>								
Carbon	0.70	0.58	0.45	0.52	0.25	0.34	0.54	0.50
Emery	1.07	0.92	0.92	0.60	0.46	0.53	0.67	0.55
Grand	0.50	0.75	0.20	0.30	0.00	0.31	0.42	0.75
San Juan	2.00	0.75	--	1.08	0.94	0.31	0.56	0.33
REGIONAL TOTALS	0.94	0.76	0.73	0.57	0.42	0.46	0.61	0.54
Unknown counties	0.58	0.67	0.75	0.75	0.63	0.83	0.74	0.70
Mixed counties	4.00	--	0.00	0.75	1.95	0.00	0.00	0.00
STATE TOTALS	1.02	0.88	0.73	0.70	0.59	0.61	0.71	0.78

Table 11. Percentage distribution of pheasant harvest by region and county, 1970-77.

Region and County	1970	1971	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>								
Box Elder	14.94	15.36	16.87	12.86	11.64	13.05	10.10	11.45
Cache	13.44	11.47	12.07	11.31	11.76	8.75	9.13	8.28
Davis	6.95	6.60	6.81	5.70	8.27	8.73	7.99	8.97
Morgan	0.34	0.36	0.37	0.38	0.24	0.09	0.27	0.24
Rich	0.01	0.01	0.03	0.00	0.05	0.06	0.00	0.01
Summit	0.01	0.00	0.02	0.04	0.10	0.01	0.00	0.00
Weber	7.54	9.15	9.21	8.31	10.26	13.21	13.40	12.17
REGIONAL TOTALS	43.24	42.95	45.39	38.60	42.31	43.91	40.89	41.12
<u>Central Region</u>								
Juab	1.65	1.50	1.31	0.87	0.96	0.69	1.25	1.03
Salt Lake	7.58	6.43	6.33	7.80	8.12	8.73	7.65	7.51
Sanpete	4.70	5.18	4.90	6.88	6.56	6.03	5.59	4.68
Tooele	1.42	2.52	1.46	1.87	1.72	1.80	3.00	1.77
Utah	15.84	15.41	14.51	15.84	14.27	14.70	14.35	17.08
Wasatch	0.00	0.10	0.01	0.00	0.00	0.02	0.09	0.01
REGIONAL TOTALS	31.19	31.13	28.52	33.26	31.65	31.97	31.94	32.08
<u>Southern Region</u>								
Beaver	0.48	0.75	0.79	0.82	0.64	0.34	1.23	0.65
Garfield	0.04	0.16	0.07	0.07	0.05	0.05	0.04	0.07
Iron	1.38	1.26	1.41	1.06	0.77	0.98	0.55	0.48
Kane	0.00	0.05	--	--	--	0.03	0.01	0.00
Millard	5.62	4.37	5.05	6.01	5.32	5.23	3.71	4.02
Piute	0.09	0.12	0.08	0.35	0.17	0.07	0.25	0.10
Sevier	4.26	4.33	4.25	4.06	5.39	4.62	4.47	4.24
Washington	0.52	1.06	0.93	0.74	0.89	1.06	2.28	0.73
Wayne	0.06	0.06	0.00	0.32	0.14	0.00	0.13	0.04
REGIONAL TOTALS	12.45	12.15	12.59	13.42	13.36	12.38	12.68	10.34
<u>Northeastern Region</u>								
Daggett	0.03	0.06	0.01	0.02	0.02	0.10	0.09	0.00
Duchesne	3.56	4.22	3.30	4.45	3.97	2.86	4.00	5.85
Uintah	4.62	4.09	3.95	4.24	4.24	4.24	4.39	5.27
REGIONAL TOTALS	8.22	8.37	7.27	8.71	8.24	8.24	8.49	11.12
<u>Southeastern Region</u>								
Carbon	1.10	1.30	1.05	1.51	0.36	0.87	0.95	0.79
Emery	3.21	2.52	3.62	2.32	1.86	2.69	2.34	1.80
Grand	0.02	0.10	0.04	0.03	0.00	0.05	0.11	0.06
San Juan	0.03	0.02	--	0.13	0.17	0.05	0.07	0.02
REGIONAL TOTALS	4.36	3.94	4.71	3.99	2.39	3.65	3.46	2.68
Unknown counties	0.44	1.45	1.52	1.99	1.59	1.04	2.55	2.68
Mixed counties	0.10	--	0.00	0.03	0.47	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100



Table 12. Percentage distribution of pheasant hunting pressure by county hunted, 1970-77.

Region and County	1970	1971	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>								
Box Elder	12.23	11.47	14.61	10.71	9.95	9.61	9.39	9.22
Cache	10.64	9.23	10.42	9.21	9.92	6.75	7.90	7.25
Davis	10.35	8.73	9.28	8.05	10.34	10.24	10.54	10.24
Morgan	0.37	0.31	0.50	0.42	0.46	0.23	0.22	0.26
Rich	0.01	0.01	0.06	0.01	0.03	0.06	0.02	0.02
Summit	0.02	0.01	0.01	0.08	0.09	0.01	0.01	0.01
Weber	9.79	11.23	9.76	9.24	11.64	13.70	14.28	12.35
REGIONAL TOTALS	43.41	40.99	44.64	37.72	42.43	40.60	42.35	39.35
<u>Central Region</u>								
Juab	1.54	1.42	1.84	1.44	1.48	1.12	1.49	1.17
Salt Lake	10.27	9.64	8.46	8.99	11.06	11.37	9.70	9.70
Sanpete	3.63	3.99	3.95	6.00	4.39	4.62	5.08	4.60
Tooele	1.53	3.19	2.31	2.72	2.74	2.33	2.98	2.50
Utah	14.62	15.78	14.27	16.68	13.87	15.42	13.95	16.95
Wasatch	0.01	0.21	0.03	0.03	0.01	0.06	0.12	0.02
REGIONAL TOTALS	31.60	34.23	30.86	35.85	33.54	34.92	33.32	34.93
<u>Southern Region</u>								
Beaver	0.55	0.66	0.83	1.10	0.65	0.36	1.25	0.68
Garfield	0.04	0.15	0.10	0.05	0.06	0.13	0.10	0.06
Iron	2.03	1.49	1.66	1.66	0.83	1.40	1.01	0.62
Kane	0.00	0.01	--	--	--	0.06	0.01	0.00
Millard	4.86	3.89	4.60	4.95	4.89	4.42	3.67	3.95
Piute	0.12	0.11	0.16	0.32	0.11	0.10	0.25	0.14
Sevier	3.40	3.74	3.70	3.93	4.55	5.04	4.35	4.31
Washington	1.15	1.72	1.39	1.44	1.39	1.65	1.66	1.24
Wayne	0.05	0.06	0.07	0.14	0.07	0.01	0.13	0.08
REGIONAL TOTALS	12.20	11.83	12.50	13.59	12.55	13.18	12.44	11.08
<u>Northeastern Region</u>								
Daggett	0.07	0.11	0.01	0.03	0.03	0.03	0.05	0.00
Duchesne	2.99	3.13	2.22	2.72	2.83	2.29	2.63	4.15
Uintah	4.19	3.26	3.52	3.23	3.58	3.38	2.78	3.67
REGIONAL TOTALS	7.25	6.50	5.76	5.98	6.43	5.70	5.45	7.82
<u>Southeastern Region</u>								
Carbon	1.61	1.98	1.71	2.05	0.85	1.56	1.25	1.22
Emery	3.05	2.41	2.88	2.73	2.40	3.09	2.47	2.52
Grand	0.05	0.12	0.14	0.07	0.03	0.09	0.18	0.06
San Juan	0.02	0.03	--	0.08	0.11	0.09	0.09	0.05
REGIONAL TOTALS	4.73	4.54	4.73	4.93	3.40	4.82	3.99	3.86
Unknown counties	0.78	1.92	1.49	1.88	1.50	0.77	2.45	2.95
Mixed counties	0.03	--	0.03	0.03	0.14	0.00	0.00	0.01
STATE TOTALS	100	100	100	100	100	100	100	100

Table 13. State-wide summary of pheasant harvest statistics, 1948-1977.

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
<hr/>					
TOTALS (1948-77)	2,493,441	7,083,598	6,405,543	1.11	2.84
<hr/>					
AVERAGES (1948-76)	83,664	239,153	221,953	1.11	2.85

Table 14. Pheasant field bag check summary, 1977

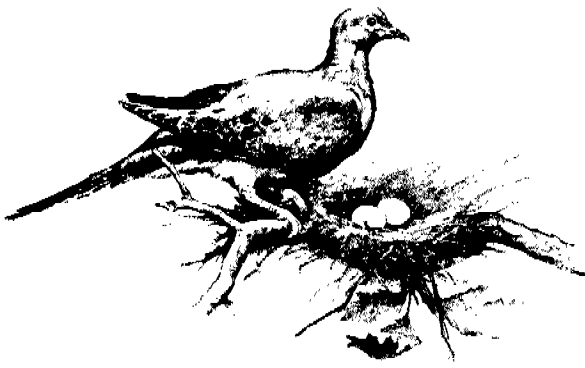
Region & County	ALL HUNTS				COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds/100 Hrs.	Total Complete Hunts	Total Hunters	Total Hours	Total Birds/100 Hrs.	Birds/Hunter	
<u>Northern Region</u>										
Box Elder	397	890	2,600	402	15	532	1,589	285	18	0.54
Cache	246	554	1,845	292	16	288	1,073	182	17	0.63
Davis	112	331	912	97	11	179	485	45	9	0.25
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--
Weber	97	203	446	51	11	4	24	3	13	0.75
<b>REGIONAL TOTALS</b>	<b>852</b>	<b>1,978</b>	<b>5,803</b>	<b>842</b>	<b>15</b>	<b>1,003</b>	<b>3,171</b>	<b>515</b>	<b>16</b>	<b>0.51</b>
<u>Central Region</u>										
Juab	21	64	145	23	15	12	30	8	27	0.67
Salt Lake	39	88	185	18	9	28	56	2	4	0.07
Sanpete	137	431	1,273	158	12	22	60	16	27	0.73
Tooele	71	189	380	51	13	1	3	2	67	2.00
Utah	345	909	2,562	348	13	143	383	94	25	0.66
Wasatch	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>613</b>	<b>1,681</b>	<b>4,545</b>	<b>598</b>	<b>13</b>	<b>206</b>	<b>532</b>	<b>122</b>	<b>23</b>	<b>0.59</b>
<u>Southern Region</u>										
Beaver	8	26	30	12	40	15	23	10	43	0.67
Garfield	--	--	--	--	--	--	--	--	--	--
Iron	9	27	56	14	25	3	12	2	17	0.67
Kane	--	--	--	--	--	--	--	--	--	--
Millard	274	721	2,482	273	11	243	917	91	10	0.37
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	90	271	734	150	20	57	287	57	20	1.00
Washington	9	20	58	2	3	7	17	2	12	0.29
Wayne	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>390</b>	<b>1,065</b>	<b>3,360</b>	<b>451</b>	<b>13</b>	<b>325</b>	<b>1,256</b>	<b>162</b>	<b>13</b>	<b>0.50</b>
<u>Northeastern Region</u>										
Daggett	--	--	--	--	--	--	--	--	--	--
Duchesne	203	543	2,970	480	16	303	2,124	346	16	1.14
Uintah	147	358	1,685	287	17	203	1,356	205	15	1.01
<b>REGIONAL TOTALS</b>	<b>350</b>	<b>901</b>	<b>4,655</b>	<b>767</b>	<b>17</b>	<b>506</b>	<b>3,480</b>	<b>551</b>	<b>16</b>	<b>1.10</b>
<u>Southeastern Region</u>										
Carbon	17	43	115	14	12	16	37	4	11	0.25
Emery	121	336	896	108	12	53	191	40	21	0.75
San Juan	5	10	29	1	3	6	19	0	0	0.00
Wayne	7	15	46	1	2	3	6	1	17	0.33
<b>REGIONAL TOTALS</b>	<b>150</b>	<b>404</b>	<b>1,085</b>	<b>134</b>	<b>12</b>	<b>78</b>	<b>253</b>	<b>45</b>	<b>18</b>	<b>0.58</b>
<b>STATE TOTALS</b>	<b>2,355</b>	<b>6,029</b>	<b>19,448</b>	<b>2,792</b>	<b>14</b>	<b>918</b>	<b>8,692</b>	<b>1,395</b>	<b>16</b>	<b>0.66</b>

Table 15. Pheasant hunter success trend as determined by field bag check, 1972-77.

Region & County	1972		1973		1974		1975		1976		1977	
	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
<u>Northern Region</u>												
Box Elder	18	1.18	13	0.51	13	0.43	18	0.52	24	0.74	18	0.54
Cache	19	0.70	16	0.69	16	0.61	15	0.61	13	0.46	17	0.63
Davis	16	1.12	13	0.52	11	0.55	8	0.28	14	0.51	9	0.25
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	18	0.65	13	0.37	14	0.54	8	0.38	10	0.35	13	0.75
<b>REGIONAL TOTALS</b>	18	0.59	14	0.53	14	0.47	12	0.48	17	0.60	16	0.51
<u>Central Region</u>												
Juab	--	--	6	0.80	5	0.10	16	0.28	7	0.11	27	0.67
Salt Lake	13	0.39	15	0.71	9	0.27	15	0.47	11	0.12	4	0.07
Sanpete	15	0.58	20	1.68	13	0.14	14	0.73	15	1.09	27	0.73
Tooele	10	0.64	17	0.67	10	1.67	13	0.34	27	0.53*	67	2.00
Utah	15	0.65	13	0.62	17	0.94	11	0.42	14	1.05	25	0.66
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	14	0.51	15	0.77	14	0.46	13	0.58	15	0.89	23	0.59
<u>Southern Region</u>												
Beaver	22	0.86	11	0.94	--	--	14	0.56	14	0.16*	43	0.67
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	25	1.07	7	--	18	0.44	39	0.37	--	--	17	0.67
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	14	0.87	14	0.79	14	0.79	12	0.70	13	0.44	10	0.37
Piute	--	--	--	--	20	1.00	--	--	--	--	--	--
Sevier	24	1.30	14	0.80	16	0.30	15	0.66	17	0.63	20	1.00
Washington	14	0.31	17	0.80	--	--	15	0.29	21	0.33	12	0.29
Wayne	--	--	--	--	--	--	--	--	17	0.35*	--	--
<b>REGIONAL TOTALS</b>	19	1.13	14	0.81	15	0.57	14	0.65	15	0.50	13	0.50
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	15	1.14	16	1.13	9	0.57	12	0.89	15	1.41	16	1.14
Uintah	16	0.88	15	0.89	10	0.59	13	0.71	18	1.27	15	1.01
<b>REGIONAL TOTALS</b>	16	1.09	16	1.03	9	0.58	12	0.81	16	1.34	16	1.10
<u>Southeastern Region</u>												
Carbon	3	0.08	6	0.15	3	0.40	14	0.54	9	0.24	11	0.25
Emery	15	0.62	9	0.42	12	0.42	10	0.41	18	0.44	21	0.75
Grand	--	--	--	--	--	--	--	--	19	1.00	--	--
San Juan	--	--	12	0.40	15	0.62	11	0.38	8	0.23	0	0.00
<b>REGIONAL TOTALS</b>	14	0.54	9	0.37	11	0.46	12	0.47	16	0.42	18	0.58
<b>STATE TOTALS</b>	16	0.82	14	0.70	12	0.51	13	0.63	16	0.85	16	0.66

# MIGRATORY UPLAND GAME BIRDS

## SUMMARY



### Mourning Doves

The breeding density index decreased slightly in 1977 but was near average. May weather was cold and wet statewide and may have curtailed early nesting.

Harvest statistics derived from the questionnaire showed decreased hunter pressure and harvest but increased hunter success compared to 1976. Although harvest decreased from 1976, the total harvest was among the highest ever recorded and was over 50 percent above the 1951-1976 average.

Field bag checks indicated slightly increased hunting pressure and reduced hunter success contrary to the questionnaire survey. Neither survey indicated a substantial change from 1976. The 1977 hunt was similar to the 1976 hunt.

Fewer wings were collected for aging during 1977 than in 1976 and 1975. The adult:juvenile ratio was among the highest ever recorded and indicated a delayed hatch and subsequent delayed migration of young doves.

### Band-tailed Pigeons

During 1977, 319 band-tailed pigeons were banded raising the long-term total (since 1969) to 2,547. An additional 64 previously banded pigeons were recaptured.

Hunter participation during the 1977 season remained at an extremely low level with only 47 hunters afield. Total hunter-days decreased from 1976 but remained above average. Total harvest was the highest ever in Utah with 302 pigeons harvested.



## MOURNING DOVE

### Call-Count Survey

Results of the 1977 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. Indexes shown in each of these tables are unweighted and consequently differ from those published in the annual Mourning Dove Status Report compiled by the Fish and Wildlife Service; however, indicated trends are similar (Figure 1). Following is a comparison of the results of the 1977 survey to 1976 and the average for the period 1964-76:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total doves heard per route	14.3	- 4	- 5
Total calls heard per route	51.1	-26	-20
Total doves seen per route	10.9	-27	-32

The 1977 breeding population was very similar to 1976. May weather was cold and wet following the dry spring and winter. Early production may have been adversely affected by the cold wet May weather.

### Harvest

#### Hunter Questionnaire

Information obtained from the hunter questionnaire for 1977 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. Harvest statistics for 1977 compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Mourning dove hunters	26,905	-14	+40
Mourning dove harvest	267,487	-10	+49
Hunter-days afield	83,218	-23	+43
Mourning doves per hunter-day	3.21	+17	-13
Mourning doves per hunter	9.94	+ 4	+12

Hunting pressure and harvest decreased from 1976, but hunter success increased. The harvest was among the highest on record.

Long-term harvest trends are depicted in Figure 2.

## Field Bag Checks

A summary of field bag check data for 1977 is shown in Table 8. Hunter success trends determined via this method are shown in Table 9. Results of the 1977 survey compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total hunters checked	1,623	+ 8	+12
Total hours hunted	4,649	+10	+12
Doves per hunter (complete hunts)	3.14	-18	-14
Doves bagged per 100 hours	90	- 7	- 9
Average hours per hunter-day (complete hunts)	3.4	0	- 6
Hours hunted per dove bagged	0.9	0	-18

Field bag checks indicated slightly increased hunting pressure and reduced hunter success contrary to the questionnaire results. Neither survey indicated substantial change and the 1977 hunt was comparable to the 1976 hunt. Dove hunters spent the same amount of time afield per hunter-day as in 1976 and the same time was spent per dove bagged.

## Age Composition of the Harvest

A summary of the age composition of harvested mourning doves from 1967 through 1977 is contained in Table 10. Hatching dates for immature doves harvested in the Northern Region are shown in Table 11.

Following is a comparison of data collected in 1977 to 1976 and long-term averages:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Sample size	2,184	-24	-25
Immatures/100 adults	200	+69	+67
Percent of immatures hatched on:			
August 3 or later	36.4	-14	- 4
July 25 or later	81.5	- 2	+ 4
Before July 25	18.5	+11	-13

Fewer wings were collected for aging during the 1977 season compared to 1976 and 1975. The 200 immatures per 100 adults ratio was among the highest recorded and indicated a delayed hatch and subsequent delayed migration of newly hatched young. The proportion of immatures in each age class was similar to 1976 and near average.

## Banding

A banding moratorium was declared for the Western Management Unit beginning in 1976 to facilitate a complete analysis of past accumulated banding data.

A summary of banding accomplished by county and region through 1975 is contained in Table 12, a summary of Statewide recovery rates through 1973 in Table 13 and a summary of recovery and return locations through 1971 in Table 14. A summary of doves recovered in Utah that were banded in other states through August, 1970 is found in Table 15.

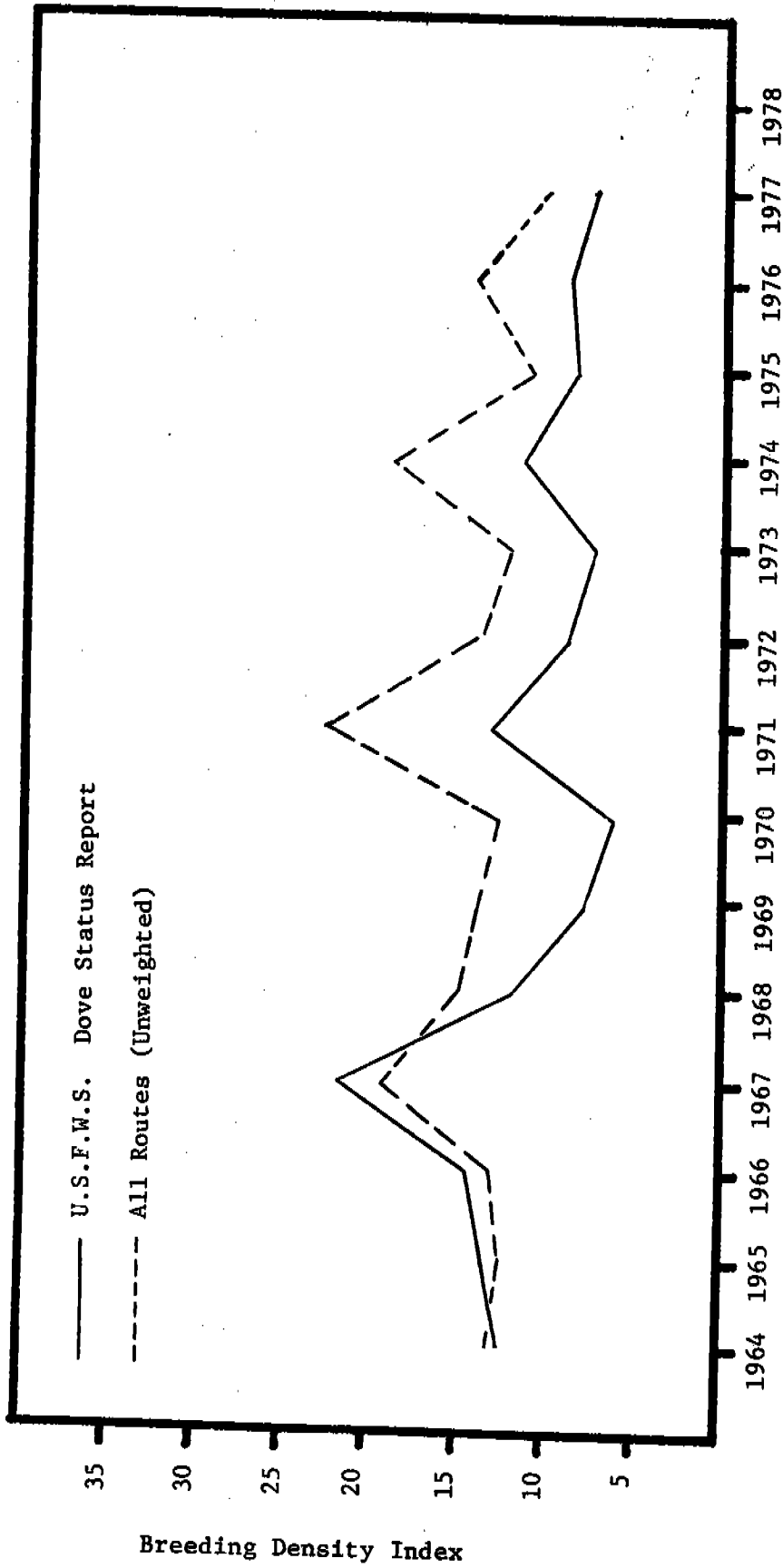


Figure 1. Mourning dove breeding density index trend, 1964--77



Doves bagged per hunter and per hunter-day.

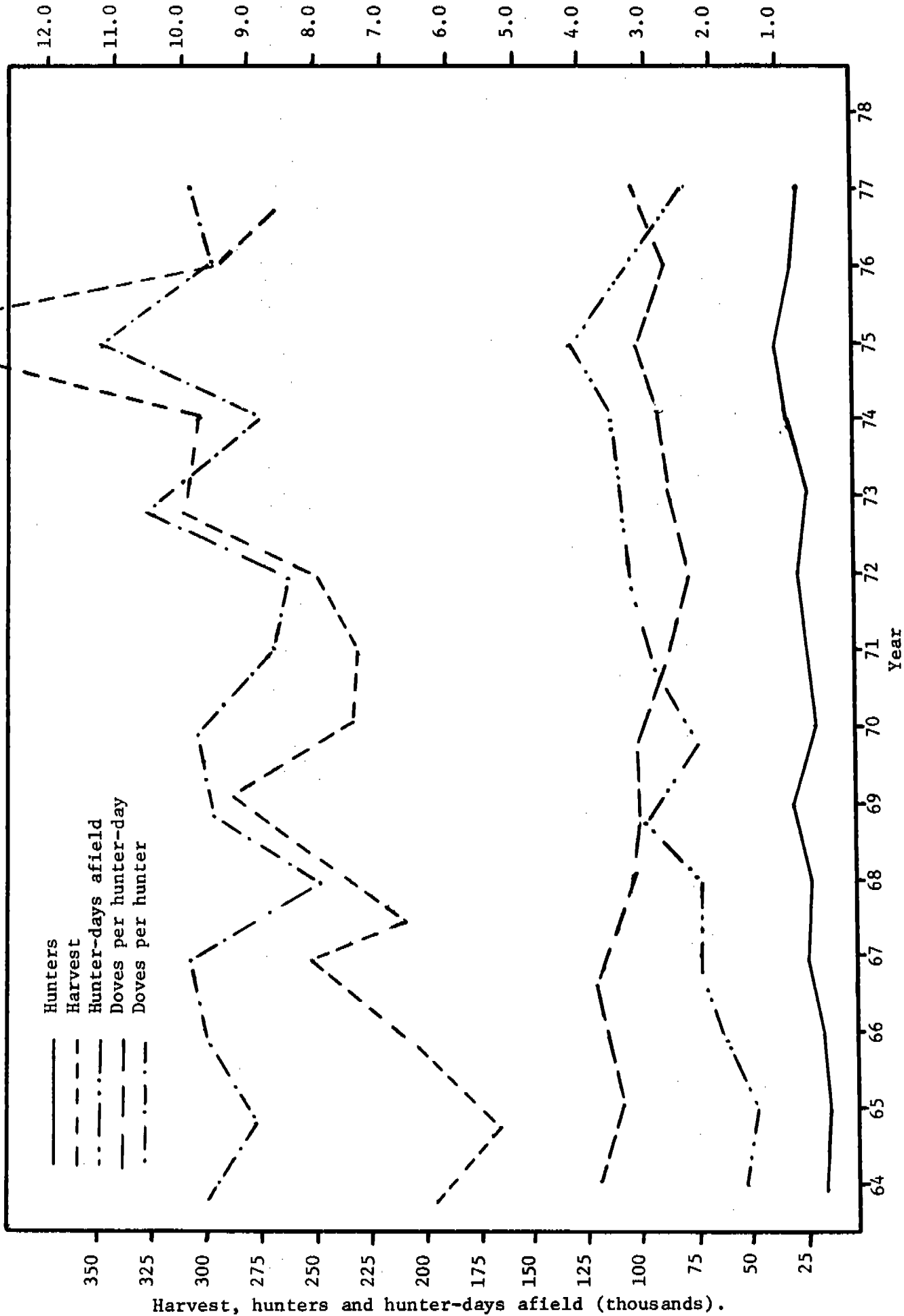


Figure 2. Statewide trends of mourning dove harvest statistics.

Table 1. Summary of the mourning dove call-count survey for 1977.

Region & County	Route Number	Total Doves Heard Per Route	Total Calls Heard Per Route	Total Doves Seen Per Route
<u>Northern Region</u>				
Summit	R1020	10	50	3
Box Elder	R1500	4	14	4
<b>REGIONAL TOTALS</b>		14	64	7
<u>Central Region</u>				
Juab	R2830	25	100	2
<b>REGIONAL TOTALS</b>		25	100	2
<u>Southern Region</u>				
Sevier-Sanpete	R0370	2	3	3
Wayne-Sevier	R0660	8	12	8
Garfield	R1090	1	2	0
Millard	R3640	29	--	5
Beaver	R3820	0	0	13
Iron	R4000	27	126	3
Washington	R4310	15	81	21
<b>REGIONAL TOTALS</b>		82	224	53
<u>Northeastern Region</u>				
Duchesne	R0080	14	63	8
Uintah	R0220	7	29	1
<b>REGIONAL TOTALS</b>		21	92	9
<u>Southeastern Region</u>				
Emery	R0540	4	8	1
San Juan	R1170	67	277	91
San Juan	R1450	1	1	0
<b>REGIONAL TOTALS</b>		72	286	92
<b>STATE TOTALS</b>		214	766	163
<b>STATE AVERAGE</b>		14.3	51.1	10.9
<b>PERCENT CHANGE (from previous year)</b>		-4	-26	-27

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, 1967-77.

Region & County	Route Number	Number Of Doves Heard Per Route										
		1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>												
Summit	R1020	10	16	7	11	10	7	3	3	3	11	10
Box Elder	R1500	2	6	3	7	4	2	5	3	5	1	4
<b>REGIONAL TOTALS</b>		12	22	10	18	14	9	8	6	8	12	14
<u>Central Region</u>												
Juab	R2830	42	23	8	15	32	6	17	16	13	28	25
<b>REGIONAL TOTALS</b>		42	23	8	15	32	6	17	16	13	28	25
<u>Southern Region</u>												
Sevier-Sanpete	R0370	7	1	0	1	1	0	0	0	0	0	2
Wayne-Sevier	R0660	12	7	2	8	11	20	11	16	7	5	8
Garfield	R1090	27	17	18	6	14	29	0	0	0	3	1
Millard	R3640	40	43	26	7	17	19	24	22	21	6	29
Beaver	R3820	9	23	9	17	12	13	6	24	0	0	0
Iron	R4000	19	13	26	15	24	20	35	103	42	45	27
Washington	R4310	40	21	38	54	64	61	26	32	37	19	15
<b>REGIONAL TOTALS</b>		154	125	119	108	143	162	102	197	107	78	82
<u>Northeastern Region</u>												
Duchesne	R0080	62	11	10	3	16	8	3	14	9	11	14
Uintah	R0220	17	33	38	15	66	4	18	12	7	27	7
<b>REGIONAL TOTALS</b>		79	44	48	18	82	12	21	26	16	38	21
<u>Southeastern Region</u>												
Emery	R0540	2	7	11	9	10	1	27	4	6	14	4
San Juan	R1170	6	7	18	33	60	24	17	41	32	51	67
San Juan	R1450	0	0	Automatic Zero							2	1
<b>REGIONAL TOTALS</b>		8	14	29	42	70	25	44	45	38	67	72
<b>STATE TOTALS</b>		295	228	214	201	341	214	192	290	182	223	214
<b>STATE AVERAGES</b>		19.7	15.2	14.3	13.4	22.7	14.3	12.8	19.3	12.1	14.9	14.3
<b>Percent Change (from previous year)</b>		+46	-23	-6	-6	+69	-37	-10	+51	-37	+23	-4

Table 3. Summary of mourning dove hunter success and distribution of harvest and hunting pressure by region and county, 1977.

Region & County	Hunters Reporting	Days Hunted	Birds Bagged	Birds per Hunter-Day	Birds per Hunter*	% of Pressure	% of Harvest
<u>Northern Region</u>							
Box Elder	161	382	1,498	3.92	8.06	6.92	8.44
Cache	64	165	468	2.84	8.29	2.99	2.64
Davis	67	178	322	1.81	8.74	3.22	1.81
Morgan	28	71	275	3.87	7.91	1.29	1.55
Rich	10	17	14	0.82	1.50	0.31	0.08
Summit	13	36	205	5.69	7.37	0.65	1.16
Weber	116	335	661	1.97	9.32	6.07	3.72
REGIONAL TOTALS	459	1,184	3,443	2.91	8.76	21.45	19.40
<u>Central Region</u>							
Juab	131	267	1,353	5.07	16.55	4.84	7.62
Salt Lake	208	584	1,507	2.58	8.97	10.58	8.49
Sanpete	59	141	587	4.16	0.71	2.55	3.31
Tooele	144	389	1,269	3.26	10.64	7.05	7.15
Utah	404	995	2,910	2.92	9.34	18.02	16.40
Wasatch	12	40	100	2.50	10.56	0.72	0.56
REGIONAL TOTALS	958	2,416	7,726	3.20	9.35	43.76	43.54
<u>Southern Region</u>							
Beaver	27	86	453	5.27	14.35	1.56	2.55
Garfield	4	26	27	1.04	8.00	0.47	0.15
Iron	41	176	704	4.00	18.21	3.19	3.97
Kane	6	22	67	3.05	12.83	0.40	0.38
Millard	104	279	1,290	4.62	16.15	5.05	7.27
Piute	6	21	65	3.10	9.33	0.38	0.37
Sevier	66	234	857	3.66	13.69	4.24	4.83
Washington	39	140	678	4.84	19.91	2.54	3.82
Wayne	5	10	64	6.40	0.00	0.18	0.36
REGIONAL TOTALS	298	994	4,205	4.23	16.15	18.00	23.70
<u>Northeastern Region</u>							
Daggett	5	18	62	3.44	7.00	0.33	0.35
Duchesne	26	101	268	2.65	9.56	1.83	1.51
Uintah	43	125	387	3.10	9.16	2.26	2.18
REGIONAL TOTALS	74	244	717	2.94	9.21	4.42	4.04
<u>Southeastern Region</u>							
Carbon	43	160	360	2.25	10.34	2.90	2.03
Emery	40	113	326	2.88	7.65	2.05	1.84
Grand	11	46	58	1.26	15.33	0.83	0.33
San Juan	15	69	268	3.88	18.43	1.25	1.51
REGIONAL TOTALS	109	388	1,012	2.61	10.96	7.03	5.70
Unknown counties	68	293	623	2.13	19.75	5.31	3.51
Mixed counties	1	2	20	10.00	5.00	0.04	0.11
STATE TOTALS	1,967	5,521	17,746	3.21	9.94	100	100

\*Based on county of residence.

Table 4. Summary of mourning doves bagged per hunter-day by region and county, 1970-77.

Region and County	1970	1971	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>								
Box Elder	3.60	3.85	3.16	4.25	3.34	4.74	3.55	3.92
Cache	3.27	2.62	2.23	2.29	1.92	2.62	2.26	2.84
Davis	1.56	1.64	1.30	1.43	1.30	1.70	1.54	1.81
Morgan	3.70	3.63	2.11	3.42	3.09	3.14	2.58	3.87
Rich	3.44	3.80	3.08	1.30	1.97	2.89	1.53	0.82
Summit	5.00	2.77	2.03	2.65	2.21	2.73	1.52	5.69
Weber	1.98	1.59	1.67	1.36	1.53	1.78	1.67	1.97
REGIONAL TOTALS	2.77	2.53	2.23	2.53	2.14	2.89	2.39	2.91
<u>Central Region</u>								
Juab	5.89	5.06	3.83	5.38	3.62	5.30	4.11	5.07
Salt Lake	2.18	2.03	1.81	2.36	1.88	2.35	2.16	2.58
Sanpete	3.64	3.90	2.04	2.50	3.65	2.65	3.15	4.16
Tooele	3.76	2.98	2.38	2.58	2.80	3.70	3.53	3.26
Utah	3.41	2.71	2.24	2.78	2.66	2.50	2.30	2.92
Wasatch	2.41	1.75	1.48	2.12	2.00	3.12	1.83	2.50
REGIONAL TOTALS	3.16	2.75	2.31	2.90	2.70	2.98	2.71	3.20
<u>Southern Region</u>								
Beaver	4.28	4.00	4.71	4.31	2.94	5.37	2.87	5.27
Garfield	1.33	3.25	4.93	6.03	1.79	5.35	2.44	1.04
Iron	3.72	3.41	3.35	3.96	4.65	4.09	4.45	4.00
Kane	3.00	3.53	2.60	4.98	2.83	4.92	3.52	3.05
Millard	5.83	4.45	3.84	4.63	5.14	4.73	3.78	4.62
Piute	7.67	3.60	3.54	2.00	2.00	3.30	2.59	3.10
Sevier	2.95	3.32	2.44	3.22	2.83	3.67	2.47	3.66
Washington	4.38	3.87	3.33	3.92	3.85	5.05	2.70	4.84
Wayne	2.58	3.00	2.50	6.74	2.83	4.10	4.93	6.40
REGIONAL TOTALS	4.15	3.79	3.42	4.15	3.82	4.36	3.26	4.23
<u>Northeastern Region</u>								
Daggett	7.30	5.86	2.70	0.82	2.12	4.63	5.00	3.44
Duchesne	4.54	3.00	4.91	4.73	2.80	3.55	4.76	2.65
Uintah	3.05	2.30	1.58	2.97	1.78	3.03	2.27	3.10
REGIONAL TOTALS	3.70	2.60	2.39	3.04	2.05	3.21	3.01	2.94
<u>Southeastern Region</u>								
Carbon	2.26	0.89	2.95	3.65	2.55	2.87	2.31	2.25
Emery	1.28	2.39	2.68	2.66	1.86	1.93	2.86	2.88
Grand	5.79	2.71	3.14	3.84	3.62	3.68	1.94	1.26
San Juan	2.29	3.15	3.94	4.36	4.22	3.21	2.24	3.88
REGIONAL TOTALS	2.38	1.93	3.15	3.61	2.49	2.73	2.41	2.61
Unknown counties	4.55	2.49	2.90	2.58	3.55	4.18	3.45	2.13
Mixed counties	0.00	--	10.00	0.00	3.00	--	--	10.00
STATE TOTALS	3.14	2.79	2.53	3.14	2.71	3.20	2.74	3.21

Table 5. Percentage distribution of mourning dove harvest by region and county, 1970-77.

Region and County	1970	1971	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>								
Box Elder	10.11	9.99	10.11	7.85	9.09	9.86	9.82	8.44
Cache	5.42	4.13	4.08	3.29	3.68	3.50	4.19	2.64
Davis	3.31	2.62	1.69	1.80	2.62	1.68	2.16	1.81
Morgan	1.77	0.92	1.24	1.27	1.57	1.02	0.96	1.55
Rich	0.49	0.72	0.38	0.08	0.47	0.30	0.33	0.08
Summit	0.71	0.68	0.75	0.61	0.40	0.35	0.41	1.16
Weber	3.52	4.61	5.05	2.03	4.00	3.74	3.39	3.72
<b>REGIONAL TOTALS</b>	<b>25.32</b>	<b>23.68</b>	<b>23.31</b>	<b>16.93</b>	<b>21.83</b>	<b>20.43</b>	<b>21.26</b>	<b>19.40</b>
<u>Central Region</u>								
Juab	6.56	8.07	8.16	8.58	8.30	9.64	6.98	7.62
Salt Lake	12.04	11.08	8.83	7.95	6.51	8.02	7.67	8.49
Sanpete	3.63	2.65	2.13	2.51	3.61	2.10	5.31	3.31
Tooele	5.51	8.51	5.99	6.07	5.06	6.83	8.39	7.15
Utah	17.46	17.46	16.48	14.30	19.26	16.31	16.70	16.40
Wasatch	0.72	1.69	0.38	1.11	0.53	0.83	0.37	0.56
<b>REGIONAL TOTALS</b>	<b>45.93</b>	<b>49.45</b>	<b>41.97</b>	<b>40.52</b>	<b>43.26</b>	<b>43.73</b>	<b>45.42</b>	<b>43.54</b>
<u>Southern Region</u>								
Beaver	1.21	1.85	3.45	2.26	1.15	2.03	2.00	2.55
Garfield	0.04	0.61	0.70	1.08	0.52	0.64	0.30	0.15
Iron	4.57	2.76	3.09	5.63	3.87	3.96	4.40	3.97
Kane	0.03	0.50	0.12	1.35	0.51	0.49	1.10	0.38
Millard	6.23	5.71	4.70	8.04	8.68	5.30	5.92	7.27
Piute	0.20	0.17	0.87	0.31	0.22	0.42	1.10	0.37
Sevier	3.02	3.57	3.71	3.26	4.57	6.07	4.01	4.83
Washington	1.32	3.43	4.02	3.63	3.87	4.31	2.38	3.82
Wayne	0.27	0.17	0.09	0.79	0.11	0.66	1.00	0.36
<b>REGIONAL TOTALS</b>	<b>16.88</b>	<b>18.77</b>	<b>20.76</b>	<b>26.37</b>	<b>23.48</b>	<b>23.89</b>	<b>22.21</b>	<b>23.70</b>
<u>Northeastern Region</u>								
Daggett	0.64	0.39	0.26	0.20	0.11	0.34	0.03	0.35
Duchesne	0.52	0.42	1.54	1.61	1.06	1.00	1.58	1.51
Uintah	1.97	2.04	1.59	1.85	1.87	3.35	1.81	2.18
<b>REGIONAL TOTALS</b>	<b>3.14</b>	<b>2.85</b>	<b>3.38</b>	<b>3.66</b>	<b>3.03</b>	<b>4.69</b>	<b>3.43</b>	<b>4.04</b>
<u>Southeastern Region</u>								
Carbon	2.85	0.64	2.75	3.47	1.56	2.22	1.50	2.03
Emery	0.93	0.81	1.20	2.02	2.12	1.60	1.74	1.84
Grand	1.69	0.72	1.73	2.51	0.65	1.12	0.62	0.33
San Juan	1.13	0.98	1.95	3.18	1.20	1.70	0.74	1.51
<b>REGIONAL TOTALS</b>	<b>6.60</b>	<b>3.15</b>	<b>7.62</b>	<b>11.18</b>	<b>5.54</b>	<b>6.64</b>	<b>4.61</b>	<b>5.70</b>
Unknown counties	2.13	2.09	2.48	1.34	2.66	0.61	3.08	3.51
Mixed counties	0.00	--	0.47	0.00	0.19	--	--	0.11
<b>STATE TOTALS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 6. Percentage distribution of mourning dove hunting pressure by region and county, 1970-77.

Region and County	1970	1971	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>								
Box Elder	8.83	7.23	8.11	5.80	7.37	6.65	7.58	6.92
Cache	5.22	4.39	4.65	4.50	5.20	4.28	5.09	2.99
Davis	6.66	4.45	3.30	3.96	5.46	3.17	3.85	3.22
Morgan	1.50	0.71	1.49	1.16	1.38	1.04	1.02	1.29
Rich	0.44	0.53	0.31	0.19	0.64	0.33	0.59	0.31
Summit	0.44	0.68	0.94	0.72	0.49	0.41	0.74	0.65
Weber	5.58	8.08	7.68	4.70	7.10	6.73	5.58	6.07
REGIONAL TOTALS	28.68	26.07	26.48	21.03	27.63	22.60	24.46	21.45
<u>Central Region</u>								
Juab	3.50	4.45	5.39	5.01	6.20	5.82	4.66	4.84
Salt Lake	17.38	15.23	12.37	10.59	9.38	10.91	9.76	10.58
Sanpete	3.14	1.89	2.65	3.16	2.67	2.53	4.63	2.55
Tooele	4.61	7.97	6.38	7.37	4.89	5.90	6.52	7.05
Utah	16.10	17.94	18.66	16.12	19.61	20.89	19.88	18.02
Wasatch	0.94	2.68	0.65	1.65	0.72	0.85	0.56	0.72
REGIONAL TOTALS	45.67	50.17	46.10	43.91	43.48	46.90	46.01	43.76
<u>Southern Region</u>								
Beaver	0.89	1.29	1.86	1.65	1.06	1.21	1.91	1.56
Garfield	0.08	0.53	0.36	0.56	0.79	0.38	0.33	0.47
Iron	3.86	2.26	2.34	4.46	2.25	3.10	2.71	3.19
Kane	0.03	0.39	0.12	0.85	0.49	0.32	0.85	0.40
Millard	3.36	3.58	3.11	5.45	4.57	3.59	4.29	5.05
Piute	0.08	0.13	0.63	0.49	0.30	0.41	1.17	0.38
Sevier	3.22	3.00	3.85	3.18	4.37	5.29	4.46	4.24
Washington	0.94	2.47	3.06	2.91	2.72	2.73	2.42	2.54
Wayne	0.33	0.16	0.10	0.37	0.10	0.52	0.56	0.18
REGIONAL TOTALS	12.80	13.81	15.41	19.93	16.66	17.56	18.71	18.00
<u>Northeastern Region</u>								
Daggett	0.28	0.18	0.24	0.76	0.13	0.23	0.02	0.33
Duchesne	0.36	0.39	0.79	1.07	1.03	0.90	0.91	1.83
Uintah	2.03	2.47	2.55	1.96	2.84	3.54	2.19	2.26
REGIONAL TOTALS	2.67	3.05	3.59	3.78	4.00	4.67	3.12	4.22
<u>Southeastern Region</u>								
Carbon	3.97	2.00	2.36	2.99	1.66	2.47	1.78	2.90
Emery	2.28	0.95	1.13	2.39	3.09	2.65	1.67	2.05
Grand	0.92	0.74	1.40	2.06	0.49	0.98	0.87	0.83
San Juan	1.55	0.87	1.25	2.29	0.77	1.69	0.91	1.25
REGIONAL TOTALS	8.72	4.55	6.14	9.72	6.02	7.79	5.24	7.03
Unknown counties	1.47	2.34	2.17	1.63	2.03	0.47	2.45	5.31
Mixed counties	0.00	--	0.12	0.00	0.17	--	--	0.04
STATE TOTALS	100	100	100	100	100	100	100	100

Table 7. State-wide summary of mourning dove harvest statistics, 1951-77.

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
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TOTALS					
1951-1977	520,330	4,842,919	1,571,521	3.08	9.29
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AVERAGES					
1951-1976	19,271	179,367	58,204	3.69	8.91

\*Estimated



Table 8. Mourning dove field bag check summary, 1977

Region & County	ALL HUNTS				COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds	Total Hunts	Total Hunters	Total Hours	Total Birds	Birds/100 Hrs. Hunter	
<u>Northern Region</u>										
Box Elder	182	453	1,539	1,252	81	163	1,472	1,200	82	2.96
Cache	21	44	80	60	75	3	13	23	177	2.88
Davis	15	34	41	12	29	7	16	5	31	0.36
Morgan	5	11	19	7	37	4	13	5	38	0.56
Rich	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--
Weber	30	73	125	21	17	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>253</b>	<b>615</b>	<b>1,804</b>	<b>1,352</b>	<b>75</b>	<b>177</b>	<b>1,514</b>	<b>1,233</b>	<b>81</b>	<b>2.82</b>
<u>Central Region</u>										
Juab	36	108	517	361	70	13	206	166	81	4.49
Salt Lake	63	142	318	208	65	18	87	79	91	1.80
Sanpete	33	84	159	110	69	12	53	20	38	0.69
Tooele	54	115	375	212	57	2	30	28	93	4.00
Utah	53	113	264	251	95	10	111	81	73	2.61
Wasatch	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>239</b>	<b>562</b>	<b>1,633</b>	<b>1,142</b>	<b>69</b>	<b>55</b>	<b>487</b>	<b>374</b>	<b>77</b>	<b>2.53</b>
<u>Southern Region</u>										
Beaver	--	--	--	--	--	--	--	--	--	--
Garfield	2	2	16	16	800	--	--	--	--	--
Iron	20	33	67	120	179	1	3	20	666	10.0
Kane	6	12	20	12	60	1	2	0	--	--
Millard	88	223	784	925	117	15	224	306	136	6.80
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--
Washington	10	21	31	65	209	5	22	51	231	3.92
Wayne	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>126</b>	<b>291</b>	<b>904</b>	<b>1,138</b>	<b>125</b>	<b>22</b>	<b>251</b>	<b>377</b>	<b>150</b>	<b>6.08</b>
<u>Northeastern Region</u>										
Daggett	--	--	--	--	--	--	--	--	--	--
Duchesne	4	10	14	31	221	--	--	--	--	--
Uintah	28	45	89	122	137	17	53	64	121	2.66
<b>REGIONAL TOTALS</b>	<b>32</b>	<b>55</b>	<b>103</b>	<b>153</b>	<b>148</b>	<b>17</b>	<b>53</b>	<b>64</b>	<b>121</b>	<b>2.66</b>
<u>Southeastern Region</u>										
Carbon	12	36	92	103	111	8	61	78	127	3.12
Emery	11	20	21	97	461	1	12	4	33	2.00
Grand	5	9	18	17	94	1	6	3	50	1.50
San Juan	10	26	61	154	252	8	53	133	250	6.33
Wayne	4	9	13	18	138	2	5	13	260	3.20
<b>REGIONAL TOTALS</b>	<b>42</b>	<b>100</b>	<b>205</b>	<b>389</b>	<b>189</b>	<b>20</b>	<b>137</b>	<b>231</b>	<b>168</b>	<b>4.27</b>
<b>STATE TOTALS</b>	<b>692</b>	<b>1,623</b>	<b>4,649</b>	<b>4,174</b>	<b>90</b>	<b>291</b>	<b>2,442</b>	<b>2,279</b>	<b>93</b>	<b>3.14</b>

Table 9. Mourning dove hunter success trend determined by field bag checks, 1972-77.

Region & County	1972		1973		1974		1975		1976		1977	
	Doves/ 100 hrs. Hunter	Doves/ Hunter	Doves/ 100 hrs. Hunter	Doves/ Hunter	Doves/ 100 hrs. Hunter	Doves/ Hunter	Doves/ 100 hrs. Hunter	Doves/ Hunter	Doves/ 100 hrs. Hunter	Doves/ Hunter	Doves/ 100 hrs. Hunter	Doves/ 100 hrs. Hunter
<u>Northern Region</u>												
Box Elder	84	3.43	85	3.41	77	3.74	120	5.34	114	4.35	82	2.96
Cache	79	1.88	33	1.00	25	1.12	76	1.69*	--	--	177	2.88
Davis	--	--	30	0.33	7	0.18	92	2.01	--	--	31	0.36
Morgan	45	1.20	--	--	--	--	169	5.30	--	--	38	0.56
Rich	39	0.85	55	0.80	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	108	2.26	83	3.50	38	1.59	34	0.67*	20	0.38	--	--
<b>REGIONAL TOTALS</b>	84	3.20	83	3.37	72	3.40	114	4.85	107	3.94	81	2.82
<u>Central Region</u>												
Juab	135	3.83	119	10.00	171	3.95*	178	7.53	100	8.36	81	4.49
Salt Lake	47	1.53	57	1.16	27	0.32	78	1.61	50	0.98	91	1.80
Sanpete	167	3.17	47	1.94	49	0.63	--	--	64	1.28*	38	0.69
Tooele	41	2.72	83	7.15	85	3.33	109	6.82	40	1.08*	93	4.00
Utah	82	1.38	105	3.89	45	1.06	85	3.47	67	2.63	73	2.61
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	73	1.95	80	2.51	58	0.90	104	3.35	66	2.50	77	2.53
<u>Southern Region</u>												
Beaver	81	1.30	150	4.50	114	6.56	181	4.40*	179	9.86	--	--
Garfield	--	--	150	1.50	100	10.00	164	4.00	98	2.32	--	--
Iron	300	6.60	249	7.67	--	--	204	4.95*	238	7.47	666	10.00
Kane	233	3.00	220	6.67	352	6.75	--	--	--	--	--	--
Millard	108	3.16	88	4.29	109	7.08	142	6.70	150	3.90*	136	6.80
Piute	--	--	200	0.66	86	1.50	--	--	--	--	--	--
Sevier	76	0.80	105	5.57	151	3.32*	121	5.30	64	0.64*	--	--
Washington	175	3.50	42	0.72	--	--	--	--	--	--	231	3.92
Wayne	93	3.50	88	1.75	100	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	118	4.45	119	5.19	120	6.71	148	6.05	158	5.29	150	6.08
<u>Northeastern Region</u>												
Daggett	94	2.03	20	0.75	5	0.40	12	0.00	--	--	--	--
Duchesne	69	1.85	238	6.76	98	3.92	265	5.48	115	2.07	--	--
Uintah	149	3.26	179	7.11	135	4.23	167	7.60	108	2.59	121	2.66
<b>REGIONAL TOTALS</b>	122	2.74	162	4.95	104	3.65	181	5.77	110	2.35	121	2.66
<u>Southeastern Region</u>												
Carbon	--	--	92	1.00	--	--	256	7.00	0	0.00	127	3.12
Emery	--	--	147	1.87	--	--	162	4.05	50	1.50	33	2.00
Grand	--	--	--	--	--	--	188	5.75	47	1.06*	50	1.50
San Juan	--	--	--	--	185	6.32	187	5.08	203	5.69	250	6.33
<b>REGIONAL TOTALS</b>	--	--	126	1.00	185	6.32	181	5.05	155	5.21	168	4.27
<b>STATE TOTALS</b>	86	3.03	92	3.51	81	3.51	124	4.81	97	3.81	93	3.14

\*Doves per hunter index based on all hunts.

Table 10. Age composition (Immatures/100 Adults) of mourning doves harvested, 1967-77.

Region & County	1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		1977		1967-77 Average		
	I/100A	(n*)	I/100A	(n)	I/100A	(n)	I/100A	(n)	I/100A	(n)	I/100A	(n)	I/100A	(n)	I/100A	(n)	I/100A	(n)	I/100A	(n)	I/100A	(n)	I/100A	(n)	
<b>Northwestern Region</b>																									
Box Elder	100	(2611)	140	(2559)	119	(1753)	109	(991)	145	(963)	112	(1380)	102	(1324)	129	(1430)	123	(2830)	103	(1870)	216	(1296)	126	(1802)	
Cache	102	(172)	157	(113)	100	(160)	---	---	100	(58)	155	(28)	100	(2)	---	---	66	(128)	114	(15)	0	(2)	91	(85)	
Davis	800	(9)	---	---	---	---	---	---	450	(11)	---	---	---	---	---	---	100	(4)	---	---	150	(10)	138	(18)	
Morgan	360	(67)	167	(40)	147	(57)	288	(101)	151	(93)	41	(24)	---	---	250	(7)	84	(116)	---	---	---	---	156	(89)	
Rich	114	(30)	217	(76)	187	(23)	---	---	---	---	125	(9)	100	(10)	---	---	---	---	---	---	---	---	100	(38)	
Summit	---	---	---	---	328	(30)	66	(10)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	213	(38)	
Weber	100	(8)	160	(39)	206	(105)	160	(39)	---	---	70	(136)	71	(24)	213	(119)	100	(26)	117	(13)	233	(20)	144	(23)	
<b>REGIONAL TOTALS</b>	103	2897	143	2827	120	2128	118	1141	106	1114	106	1577	103	1371	134	1556	118	3104	103	1898	216	1328	126	2607	
<b>Central Region</b>																									
Juab	56	(260)	105	(43)	---	---	32	(139)	77	(39)	79	(86)	29	(66)	105	(88)	228	(220)	240	(136)	283	(199)	107	(132)	
Salt Lake	160	(161)	155	(56)	578	(61)	111	(213)	204	(164)	57	(74)	136	(33)	50	(9)	109	(338)	147	(42)	275	(120)	146	(131)	
Sanpete	---	---	---	---	---	---	---	---	---	---	227	(85)	46	(114)	185	(111)	650	(30)	222	(87)	139	(74)	165	(96)	
Tooele	90	(268)	114	(188)	83	(146)	88	(45)	129	(16)	211	(28)	290	(82)	99	(219)	76	(202)	156	(115)	195	(177)	105	(147)	
Utah	155	(102)	82	(31)	82	(237)	88	(139)	170	(189)	178	(153)	132	(267)	123	(261)	128	(392)	170	(278)	113	(286)	125	(215)	
Wasatch	---	---	---	---	354	(59)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
<b>REGIONAL TOTALS</b>	94	(791)	116	(318)	117	(503)	76	(536)	167	(408)	130	(426)	101	(562)	118	(688)	128	1182	184	(658)	177	(856)	123	(674)	
<b>Southern Region</b>																									
Beaver	33	(145)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37	(78)	
Garfield	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	100	(39)	
Iron	38	(65)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	176	(47)	---	---	---	---	84	(94)	
Kane	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Millard	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Piute	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Sevier	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Washington	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Wayne	---	---	83	(77)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	134	(112)	
<b>REGIONAL TOTALS</b>	35	(210)	83	(77)	---	---	---	---	---	---	---	---	---	---	---	---	176	(47)	320	(30)	---	---	113	(171)	
<b>Northeastern Region</b>																									
Daggett	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Duchesne	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Hintsh	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
<b>REGIONAL TOTALS</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
<b>Southeastern Region</b>																									
Carbon	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Emery	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	157	(54)	
Grand	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	233	(30)	---	---	---	---	171	(85)	
San Juan	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	300	(84)	---	---	---	---	611	(124)	
<b>REGIONAL TOTALS</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	189	(214)	97	(274)	---	---	136	(171)	
<b>STATE TOTALS</b>	96	(3898)	138	(3222)	120	(2755)	103	(1677)	149	(1522)	111	(2003)	102	(1933)	136	(2440)	126	(4661)	118	(2860)	200	(2184)	127	(2866)	

\*n = wing sample

Table 11. Percent of harvest by hatching date of immature mourning doves in northern Utah, 1968-77.

Date Hatched	Age (Days)	Percent of Harvest by Hatch Date										Sample Size									
		1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Aug. 3	29	50.6	41.7	36.1	36.2	40.8	22.2	48.3	11.1	42.5	36.4	832	479	224	236	322	154	428	177	409	329
July 31	32	26.9	23.9	30.8	23.0	27.2	21.4	28.6	24.3	22.9	27.9	443	275	191	150	215	149	253	389	220	252
July 25	38	11.6	17.6	17.2	17.2	15.7	18.8	14.3	32.3	17.9	17.3	192	202	107	112	124	131	127	517	172	156
July 18	45	5.2	9.0	9.4	10.3	9.6	15.4	3.7	18.4	7.2	6.7	87	104	58	67	76	107	33	295	69	60
July 9	54	3.1	4.0	3.9	7.8	3.9	9.9	2.3	8.6	4.0	4.3	51	46	24	51	31	69	20	137	38	39
June 30	63	1.7	2.5	1.9	2.9	2.3	6.8	1.1	5.3	2.0	2.4	29	29	12	19	18	47	10	85	19	22
June 21	72	0.4	0.9	0.6	1.8	0.2	3.7	1.2	--	1.0	2.9	7	11	4	12	2	26	11	--	10	26
June 8	85	0.6	0.2	--	0.5	0.1	1.6	0.4	--	0.9	2.2	1	2	--	3	1	11	4	--	9	20
May 22	102	--	--	--	0.2	--	0.1	--	--	1.7	--	--	--	--	1	--	1	--	--	16	--
Apr. 27	127	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Apr. 21	133	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		100	100	100	100	100	100	100	100	100	100	1642	1148	620	651	789	695	886	1600	962	904



Table 13. Summary of mourning dove band recovery rates for the period 1949-73.

Time Period	Doves Banded	Number of Recoveries		Recovery Rates	
		Direct	Total**	Direct	Total
1949-62	4,001	43	110	.011	.027
1964	1,945	37	68	.019	.035
1965	1,416	33	57	.023	.040
1966	973	1	7	.001	.007
1967	2,233	37	60	.017	.027
1968	640	6	14	.009	.022
1969	2,006	36	55	.018	.027
1970	1,487	16	40	.011	.027
1971	1,571	8	13	.005	.008
1972	1,413	5	--	.004	--
1973	755	5	--	.007	--
<hr/>					
TOTALS 1964-73	14,439	184	314***	.013	.026
<hr/>					
GRAND TOTALS	18,440	227	424***	.012	.026

\*Direct recovery - A banded dove that is killed during the first hunting season following banding.

\*\*Total recovery - Direct recoveries plus all subsequent recoveries for any given cohort of banded doves.

\*\*\*Total recoveries updated through 1971 only.

Table 14. Summary of combined recoveries, returns and foreign retraps of mourning doves banded in Utah, 1961-71.

State and Country of Recovery	Recoveries as of August, 1970	(Percent)	Recoveries During 1970 and 1971*	Total Recoveries	(Percent)
<b>UNITED STATES</b>					
Utah	540	(81.3)	15	555	(78.6)
Arizona	38	( 5.7)	16	54	( 7.6)
Northern	2		--	--	
Southern	36		--	--	
California	21	( 3.2)	2	23	( 3.2)
Northern	3		--	--	
Central	4		--	--	
Southern	14		--	--	
New Mexico	4	( 0.6)	1	5	( 0.7)
Northern	2		--	--	
Southern	2		--	--	
Idaho	2	( 0.3)	0	2	( 0.3)
Texas	2	( 0.3)	0	2	( 0.3)
Oregon	2	( 0.3)	0	2	( 0.3)
Colorado	2	( 0.3)	0	2	( 0.3)
Nevada	1	( 0.2)	0	1	( 0.1)
Iowa	1	( 0.2)	0	1	( 0.1)
States Other Than Utah	73	(11.0)	19	92	(13.0)
United States Total	613	(92.3)	34	647	(91.6)
<b>MEXICO</b>					
Jalisco	20	( 3.0)	1	21	( 3.0)
Michoacan	7	( 1.0)	4	11	( 1.6)
Sinaloa	9	( 1.4)	0	9	( 1.3)
Sonora	5	( 0.8)	0	5	( 0.7)
Unknown State	1	( 0.2)	3	4	( 0.6)
Durango	2	( 0.3)	0	2	( 0.3)
Guanajuato	1	( 0.2)	0	1	( 0.1)
Aguascalientes	1	( 0.2)	0	1	( 0.1)
Colima	1	( 0.2)	0	1	( 0.1)
Nayarit	1	( 0.2)	0	1	( 0.1)
Mexico State	1	( 0.2)	0	1	( 0.1)
Baja California	1	( 0.2)	0	1	( 0.1)
Mexico Total	50	( 7.5)	8	58	( 8.2)
<b>HONDURAS</b>	1	( 0.2)	0	1	( 0.1)
<b>TOTAL RETURNS</b>	664	( 100)	42	706	( 100)

\*As per reports received as of March 31, 1972

Table 15. Summary of mourning doves banded in other states and recovered in Utah through August, 1970.

<u>State Where Banded</u>	<u>Number of Returns</u>
Arizona	14
Idaho	7
Washington	4
Nevada	3
Texas	2
Oregon	<u>1</u>
Total Recoveries and Returns of Doves Banded In Other States:	31



## BAND-TAILED PIGEON

### Banding

Results of banding efforts in 1977 are summarized in Table 16 and State totals since 1969 in Table 17.

During 1977, 319 pigeons were banded. An additional 64 previously banded pigeons were recaptured. Since 1969, 2,547 total pigeons have been banded in Utah and 910 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 1977 harvest questionnaire are shown in Table 18 and harvest trends since 1970 in Table 19. A comparison of the 1977 season to 1976 and the average follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Band-tailed pigeon hunters	47	-13	- 4
Band-tailed pigeon harvest	302	+154	+163
Hunter-days afield	151	- 7	+47
Pigeons per hunter-day	2.0	+174	+79
Pigeons per hunter	6.4	+193	+225

Total hunters decreased somewhat from 1976 and hunter-days afield decreased from 1976. Total harvest increased dramatically over 1976 and was the highest ever recorded, about 50 percent above the previous high harvest (211 in 1972). Most of the 1977 harvest occurred in San Juan County.

Table 16. Results of band-tailed pigeon banding efforts in Utah during 1977.

Area	Time Period	Adults		Total Immatures	Total Pigeons	Immatures/100 adults	Total Recaptures
		Males	Females				
Monticello, San Juan County	June 2 - July 2	239	2	241	4	245	2 53
New Harmony, Washington Co.	June 2	47	23	70	4	74	6 11
Totals		286	25	311	8	319	3 64

\*Includes repeats and returns.

Table 17. Band-tailed pigeon banding trend for Utah, 1969-77.

Year	Adults		Total Immatures	Total Pigeons	Immatures/100 Adults	Total* Recaptures
	Males	Females				
1969	147	51	39	237	20	7
1970	254	94	54	402	16	43
1971	110	52	79	241	49	72
1972	284	117	4	405	1	235
1973	263	54	14	331	4	
1974	87	12	11	110	11	78
1975	202	70	13	285	5	118
1976	180	33	4	217	2	131
1977	286	25	8	319	3	64
Total	1,813	508	226	2,547	10	910

\*Includes repeats and returns

Table 18. Band-tailed pigeon harvest statistics, 1977.

Area Hunted	Hunters	Hunter days	Harvest	Pigeons/ Hunter-day	Pigeons/ hunter	Percent of Pressure*	Percent of Harvest
Beaver County	2	2	0	0.0	0.0	3.8	0.0
Blue Mountain-Elk Ridge	18	67	199	3.0	11.1	34.0	65.9
Garfield County	1	1	0	0.0	0.0	1.9	0.0
Iron County	8	32	20	0.6	2.5	15.1	6.6
Kane County	4	11	19	1.7	4.8	7.5	6.3
LaSal Mountain	12	25	48	1.9	4.0	22.6	15.9
Millard County	--	--	--	--	--	--	--
Piute County	1	1	0	0.0	0.0	1.9	0.0
Washington County	6	11	16	1.4	2.7	11.3	5.3
Wayne County	1	1	0	0.0	0.0	1.9	0.0
Totals	**53	151	302	2.0	6.4	100	100

\*Based on hunter-days

\*\*Actual number of hunters afield was 47 as some hunters hunted more than one area.

Table 19. Band-tailed pigeon harvest trend, 1970-77.

Year	Total		Hunter-		Pigeons per	
	Hunters	Harvest	days afield	Hunter-day	Hunter	Hunter
1970	34	109	53	2.06	3.21	3.21
1971	54	156	110	1.42	2.89	2.89
1972	61	211	122	1.74	3.46	3.46
1973	24	15	33	0.45	0.62	0.62
1974	63	81	120	0.68	1.29	1.29
1975	54	116	119	0.97	2.15	2.15
1976	54	119	162	0.73	2.20	2.20
1977	47	302	151	2.00	6.43	6.43
Totals	391	1,109	870	1.27	2.84	2.84
Averages	49	115	103	1.12	1.98	1.98

# CHUKAR PARTRIDGE

## SUMMARY

The breeding population of chukars was slightly higher in 1976 than in 1975. Over-winter survival was good because of favorable snow conditions. Late winter and early spring precipitation, critical to successful chukar production, was far below average; indicating poor reproductive potential.

Results of the brood survey confirmed the poor reproduction expected due to the lack of spring moisture and resulting poor forage conditions during breeding and nesting. The indicated chukar density was extremely low and the few broods located were generally small.

Harvest statistics reflected the low chukar density with harvest being particularly poor in eastern Utah. Total hunters afield was the lowest since 1959 and harvest was the lowest since 1962.



### Brood Counts

Results of the annual random brood survey for 1977 are shown in Table 1 of this section. Long-term trends of young-adult ratios, mean brood size and chukars observed per 100 hours are found in Tables 2-4. Survey results for 1977 compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total chukars observed	308	-76	-78
Young per 100 adults	170	-13	-59
Mean brood size	5.77	-19	-35
Chukars observed per 100 hours	96	-74	-75
Total hours effort	322	- 8	-12

Harvest data for 1976 indicated increased breeding populations for 1977 in all regions except the Southeastern. Late winter and early spring precipitation (Dec.-April) was extremely meager over the entire state. May precipitation, in contrast, was in near record amounts over most of the state.

Forage conditions were extremely poor until the May rains. The wet cold May weather interfered with nesting and, although forage conditions improved following the rains, the improvement was apparently too late to materially effect chukar production.

Effort on chukar brood counts decreased from 1975 and remained below average. Efforts were probably curtailed somewhat because the extremely low numbers of chukars observed discouraged many observers. The 97 birds observed per 100 hours effort was the lowest recorded state total since prior to 1967 and was 33 percent below the previous low during the period (150 in 1973).

Brood count sample sizes were extremely small (4 or less) for all regions except the Central where 14 of the state total of 22 broods were counted. Indicated production was very low. The 170 young per 100 adult chukars and the 5.77 mean brood sizes were the lowest ratios recorded since prior to 1962.

### Harvest

#### Hunter Questionnaire

Results of the hunter questionnaire survey for 1977 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. Following is a comparison of 1977 harvest statistics to 1976 and the average.

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Chukar hunters	12,691	-10	-19
Chukars harvested	34,155	-22	-21
Hunter-days afield	38,873	-18	-15
Chukars per hunter-day	0.88	- 5	- 3
Chukars per hunter	2.69	-13	+ 8

Chukars harvested, chukar hunters, hunter days afield and chukars per hunter-day all decreased from 1976 and all were below average. The 12,691 hunters afield was the lowest total since 1959 and the harvest of 34,155 was the lowest since 1962. Daily and seasonal success (chukars per hunter day and chukars per hunter) were both below 1976 but chukars per hunter was slightly above the average. Harvest was especially low in the eastern part of the state where harvest averaged only about one-fourth of the chukar per day compared to near one chukar per day in the western segment of the state.

Field Bag Check

A summary of field-bag check data for 1977 is shown in Table 10. The hunter success trend determined via bag checks since 1972 is shown in Table 11. Data for the 1977 season compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total hunters checked	434	+ 7	-34
Total hours hunted	1,561	+ 4	-49
Chukars per hunter (complete hunts)	0.44	-60	-62
Chukars bagged per 100 hours	10	-58	-58
Average hours per hunter-day (complete hunts)	3.9	- 9	-19
Hour hunted per chukar bagged	10	+156	+122

Field bag checks reflected the low success shown by the questionnaire. Chukars per hunter dropped by 60 percent from 1976 and was over 60 percent below the average. Total hunters checked and total hours hunted increased from 1976 reflecting increased bag check effort principally in Cache County.

The daily hunter success rate shown by field bag checks was only about half the rate shown by the questionnaire. This probably reflects the poor weather during the opening weekend of the hunt. Hunter success apparently increased later in the season but remained low.

The average hours hunted per day decreased somewhat and the amount of time spent to bag each chukar increased dramatically.

Chukars bagged per hunter and per hunter-day.

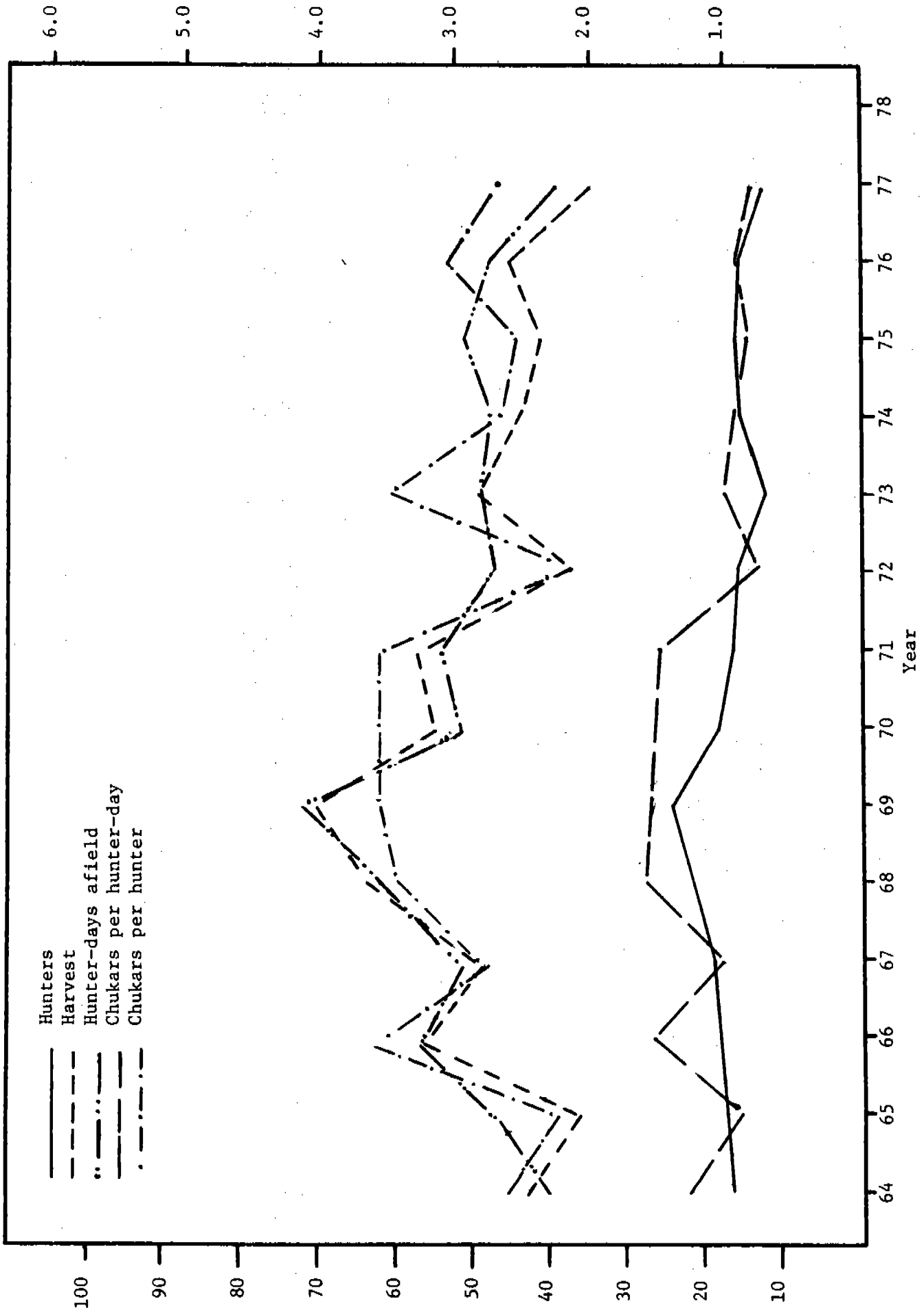


Figure 1. Statewide trends of chukar partridge harvest statistics.

Hunters, harvest and hunter-days afield (thousands).

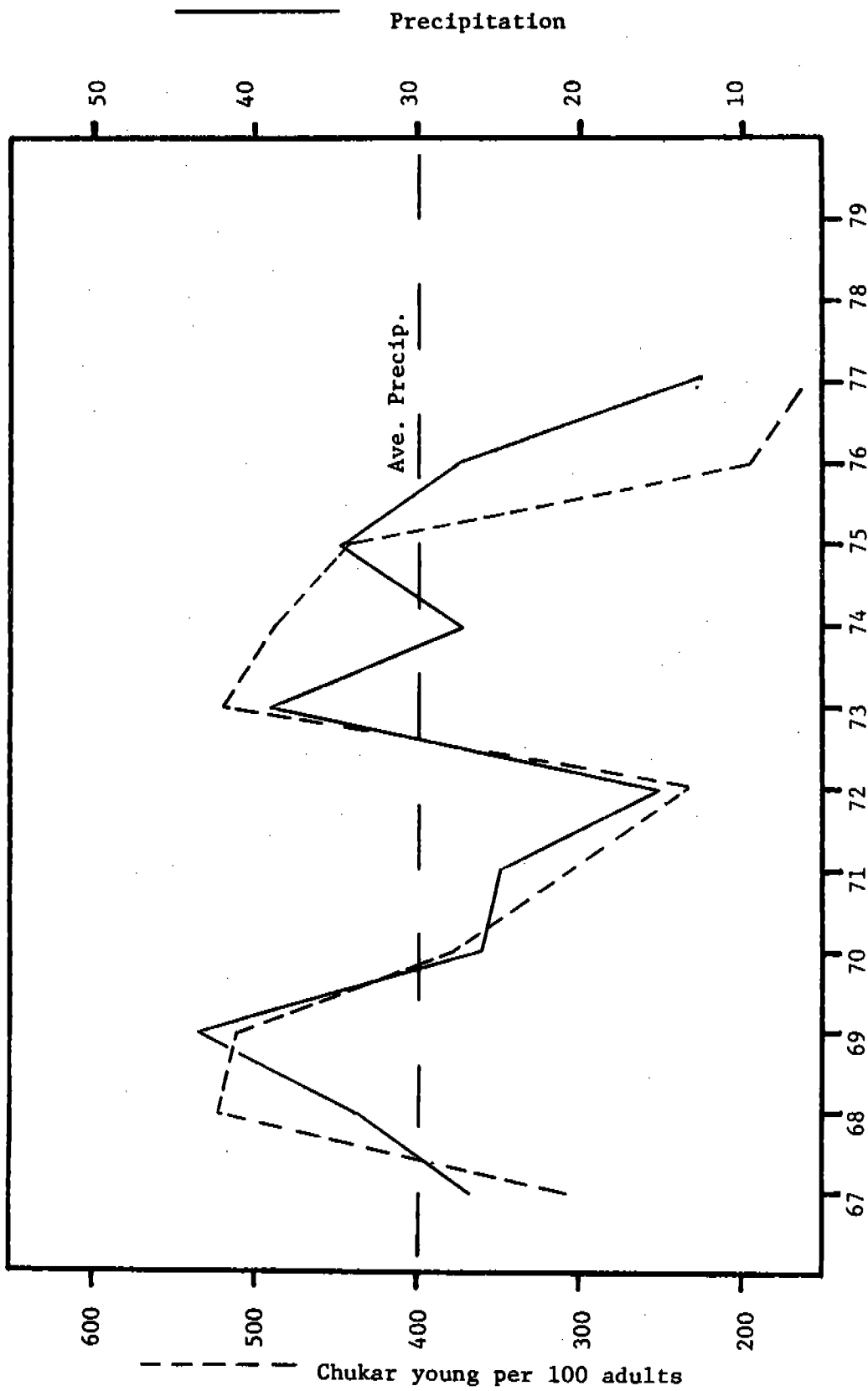


Figure 2. Relationship between late winter and early spring (Jan.-April) precipitation and chukar production.



Table 1. Chukar summer inventory summary, 1977.

Region and County	Distinct Broods		Mixed Yng. & Adults		Adults w/o Yng.	Total Yng. 100 Ad.	Vehicle Miles	Hours Effort		Birds/100 hrs.					
	No. Ad.	Yng.	Mean Brood	Yng.				Horse	Walk		Total				
<u>Northern Region</u>															
Box Elder	2	4	12	6.00	0	0	4	12	300	405	29	16	5	50	32
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>2</b>	<b>4</b>	<b>12</b>	<b>6.00</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>12</b>	<b>300</b>	<b>405</b>	<b>29</b>	<b>16</b>	<b>5</b>	<b>50</b>	<b>32</b>
<u>Central Region</u>															
Juab	3	4	27	9.00	5	5	9	32	356	247	20	0	7	27	152
Salt Lake	0	0	0	--	4	19	1	19	380	48	4	0	2	6	400
Sanpete	6	6	39	6.50	4	14	6	53	331	356	19	11	6	36	192
Tooele	4	4	24	6.00	0	0	21	24	96	443	26	0	10	36	136
Utah	1	1	3	3.00	0	0	1	3	150	104	15	0	0	15	33
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>14</b>	<b>15</b>	<b>93</b>	<b>6.64</b>	<b>13</b>	<b>38</b>	<b>29</b>	<b>131</b>	<b>230</b>	<b>1,198</b>	<b>84</b>	<b>11</b>	<b>25</b>	<b>120</b>	<b>157</b>
<u>Southern Region</u>															
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	95	5	0	0	5	0
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	2	2	7	3.50	6	13	13	20	95	345	17	0	2	19	216
Piute	--	--	--	--	--	--	--	--	--	60	3	0	0	3	0
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	0	0	0	--	0	0	1	0	0	101	8	0	2	10	10
<b>REGIONAL TOTALS</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>3.50</b>	<b>6</b>	<b>13</b>	<b>14</b>	<b>20</b>	<b>91</b>	<b>601</b>	<b>33</b>	<b>0</b>	<b>4</b>	<b>37</b>	<b>114</b>
<u>Northeastern Region</u>															
Daggett	0	0	0	--	0	0	0	0	--	190	22	0	2	24	0
Duchesne	4	4	15	3.75	0	0	4	15	375	240	23	0	3	26	73
Uintah	0	0	0	--	0	0	0	0	--	170	13	4	4	21	0
<b>REGIONAL TOTALS</b>	<b>4</b>	<b>4</b>	<b>15</b>	<b>3.75</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>15</b>	<b>375</b>	<b>600</b>	<b>58</b>	<b>4</b>	<b>9</b>	<b>71</b>	<b>27</b>
<u>Southeastern Region</u>															
Carbon	0	0	0	--	2	5	2	4	5	12	1	0	1	2	450
Emery	0	0	0	--	0	0	0	0	--	122	10	0	0	10	0
Grand	0	0	0	--	0	0	4	0	0	90	10	0	0	10	40
San Juan	0	0	0	--	5	11	14	19	58	205	20	0	2	22	136
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>--</b>	<b>7</b>	<b>16</b>	<b>20</b>	<b>16</b>	<b>59</b>	<b>429</b>	<b>41</b>	<b>0</b>	<b>3</b>	<b>44</b>	<b>98</b>
<b>STATE TOTALS</b>	<b>22</b>	<b>25</b>	<b>127</b>	<b>5.77</b>	<b>26</b>	<b>67</b>	<b>63</b>	<b>114</b>	<b>170</b>	<b>3,233</b>	<b>245</b>	<b>31</b>	<b>46</b>	<b>322</b>	<b>96</b>

Table 2. Trend of chukar young per 100 adults ratios, 1967-77.

Region & County	Year											Average 1962-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	360	455	600	247	529	492	760	663	842	733	300	
Cache	220	--	1011	250	258	--	488	750	550	1900	--	
Davis	0	--	1100	--	--	--	--	--	--	--	--	
Morgan	88	315	668	178	950	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	350	--	--	525	--	--	--	--	--	--	--	
Weber	--	--	91	--	286	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>276</b>	<b>420</b>	<b>510</b>	<b>267</b>	<b>382</b>	<b>475</b>	<b>639</b>	<b>684</b>	<b>814</b>	<b>722</b>	<b>300</b>	<b>477</b>
<u>Central Region</u>												
Juab	475	450	607	421	594	420	725	350	500	352	356	
Salt Lake	671	409	372	0	367	--	0	--	0	--	380	
Sanpete	368	400	194	256	171	216	0	--	--	488	331	
Tooele	--	1733	1360	922	372	154	410	356	264	417	96	
Utah	--	240	463	360	352	552	335	96	--	800	150	
Wasatch	--	--	767	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>445</b>	<b>407</b>	<b>496</b>	<b>471</b>	<b>386</b>	<b>208</b>	<b>364</b>	<b>300</b>	<b>308</b>	<b>411</b>	<b>230</b>	<b>432</b>
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	495	275	--	--	--	--	450	--	
Iron	500	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	1108	812	700	255	66	--	--	50	264	95	
Piute	--	--	--	--	550	500	--	--	500	--	--	
Sevier	--	--	--	--	--	800	--	0	--	--	--	
Washington	315	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	67	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>315</b>	<b>1108</b>	<b>812</b>	<b>581</b>	<b>245</b>	<b>131</b>	<b>--</b>	<b>0</b>	<b>114</b>	<b>294</b>	<b>95</b>	<b>487</b>
<u>Northeastern Region</u>												
Daggett	436	709	1250	150	--	--	--	--	--	--	--	
Duchesne	0	515	548	--	120	--	--	--	--	800	375	
Uintah	1075	482	463	450	678	--	--	733	--	766	--	
<b>REGIONAL TOTALS</b>	<b>485</b>	<b>540</b>	<b>575</b>	<b>279</b>	<b>479</b>	<b>--</b>	<b>--</b>	<b>733</b>	<b>--</b>	<b>775</b>	<b>375</b>	<b>590</b>
<u>Southeastern Region</u>												
Carbon	--	1000	--	383	474	372	650	794	633	--	125	
Emery	317	--	--	900	--	--	725	842	367	200	--	
Grand	367	1000	--	446	205	274	871	656	377	98	0	
San Juan	57	590	138	234	161	317	500	650	552	40	58	
<b>REGIONAL TOTALS</b>	<b>269</b>	<b>635</b>	<b>138</b>	<b>338</b>	<b>226</b>	<b>324</b>	<b>712</b>	<b>717</b>	<b>437</b>	<b>94</b>	<b>59</b>	<b>408</b>
<b>STATE TOTALS</b>	<b>306</b>	<b>523</b>	<b>511</b>	<b>382</b>	<b>311</b>	<b>235</b>	<b>519</b>	<b>487</b>	<b>443</b>	<b>196</b>	<b>170</b>	<b>413</b>

Table 3. Trend of chukar mean brood size from 1967-77.

Region & County	Year											Average 1962-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	7.53	10.09	8.00	10.59	6.17	13.23	13.00	11.00	11.00	10.50	6.00	
Cache	8.00	--	12.00	10.00	3.43	--	13.00	7.00	--	19.00	--	
Davis	--	--	10.50	--	--	--	--	--	--	--	--	
Morgan	7.50	--	10.17	8.00	9.50	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	7.00	--	--	7.33	--	--	--	--	--	--	--	
Weber	--	--	--	--	20.00	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>7.52</b>	<b>10.09</b>	<b>9.67</b>	<b>9.91</b>	<b>6.25</b>	<b>13.23</b>	<b>13.00</b>	<b>8.00</b>	<b>11.00</b>	<b>13.33</b>	<b>6.00</b>	<b>9.54</b>
Juab	7.00	9.00	11.62	5.25	9.33	9.53	9.67	11.00	8.67	7.75	9.00	
Salt Lake	--	11.25	16.50	--	--	--	--	--	--	--	--	
Sanpete	7.00	6.00	--	6.67	7.00	6.00	--	--	--	11.00	6.50	
Tooele	--	17.33	14.50	12.14	11.29	10.83	15.00	11.89	9.00	7.20	6.00	
Utah	--	5.62	9.40	9.00	8.14	7.50	8.40	8.00	--	8.00	3.00	
Wasatch	--	--	11.50	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>7.00</b>	<b>9.22</b>	<b>11.38</b>	<b>9.00</b>	<b>9.88</b>	<b>9.98</b>	<b>10.10</b>	<b>11.35</b>	<b>8.83</b>	<b>7.68</b>	<b>6.64</b>	<b>8.80</b>
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	5.00	--	--	8.20	5.00	--	--	--	--	9.50	--	
Iron	--	--	--	--	0	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	15.43	9.67	--	11.50	10.00	--	--	3.00	6.71	3.50	
Piute	--	--	--	--	5.50	5.67	--	--	5.00	--	--	
Sevier	--	--	--	--	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	6.00	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>5.00</b>	<b>15.43</b>	<b>9.67</b>	<b>8.20</b>	<b>7.80</b>	<b>6.75</b>	<b>--</b>	<b>--</b>	<b>4.00</b>	<b>7.33</b>	<b>3.50</b>	<b>8.38</b>
<u>Northeastern Region</u>												
Daggett	7.71	19.00	15.50	4.00	--	--	--	--	--	--	--	
Duchesne	--	7.64	11.50	--	6.00	--	--	--	--	8.00	3.75	
Uintah	--	--	9.00	4.50	7.00	10.00	--	6.00	--	7.67	--	
<b>REGIONAL TOTALS</b>	<b>7.71</b>	<b>8.58</b>	<b>12.00</b>	<b>4.33</b>	<b>6.86</b>	<b>10.00</b>	<b>--</b>	<b>6.00</b>	<b>--</b>	<b>7.75</b>	<b>3.75</b>	<b>8.19</b>
<u>Southeastern Region</u>												
Carbon	--	10.00	--	7.67	7.29	9.29	9.00	9.50	9.00	--	--	
Emery	7.33	--	--	9.00	--	--	12.00	9.80	12.00	6.17	--	
Grand	9.35	10.00	--	7.20	8.33	7.20	1.00	6.25	4.00	6.00	--	
San Juan	6.50	--	6.60	6.50	5.82	9.00	--	10.00	4.33	3.00	--	
<b>REGIONAL TOTALS</b>	<b>8.48</b>	<b>10.00</b>	<b>6.60</b>	<b>7.36</b>	<b>6.88</b>	<b>8.50</b>	<b>8.50</b>	<b>9.05</b>	<b>6.00</b>	<b>5.58</b>	<b>--</b>	<b>8.32</b>
<b>STATE TOTALS</b>	<b>7.91</b>	<b>10.16</b>	<b>10.47</b>	<b>8.34</b>	<b>7.81</b>	<b>10.08</b>	<b>10.65</b>	<b>10.00</b>	<b>7.12</b>	<b>7.10</b>	<b>5.77</b>	<b>8.86</b>

Table 4. Trend of chukars observed per 100 hours ratios, 1967-77.

Region & County	Year											Averages 1962-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	165	274	1322	386	71	374	77	468	895	208	32	
Cache	291	0	911	175	358	--	--	--	130	167	--	
Davis	50	--	600	--	--	--	--	--	--	--	--	
Morgan	107	--	1670	500	262	--	--	--	--	100	--	
Rich	0	0	--	--	--	--	--	--	--	--	--	
Summit	19	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	928	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>125</b>	<b>288</b>	<b>1196</b>	<b>445</b>	<b>132</b>	<b>374</b>	<b>119</b>	<b>632</b>	<b>640</b>	<b>197</b>	<b>32</b>	<b>415</b>
<u>Central Region</u>												
Juab	230	367	450	197	1724	613	174	338	229	413	152	
Salt Lake	270	830	354	15	108	--	60	--	25	0	400	
Sanpete	202	48	91	371	475	527	7	0	0	157	192	
Tooele	--	688	730	1022	592	2044	198	730	291	452	136	
Utah	--	567	938	177	210	833	336	140	0	129	33	
Wasatch	--	0	867	0	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>222</b>	<b>285</b>	<b>408</b>	<b>320</b>	<b>510</b>	<b>997</b>	<b>167</b>	<b>437</b>	<b>178</b>	<b>302</b>	<b>157</b>	<b>383</b>
<u>Southern Region</u>												
Beaver	--	--	0	--	--	--	--	--	--	--	--	
Garfield	300	--	0	761	123	--	0	0	0	440	--	
Iron	--	--	--	--	0	--	--	--	--	--	--	
Kane	--	--	0	--	--	--	0	--	--	--	--	
Millard	--	--	3950	--	529	573	--	291	36	1020	216	
Piute	0	--	0	0	650	2400	--	--	150	0	--	
Sevier	--	--	--	--	--	900	--	100	--	--	--	
Washington	372	--	0	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	600	--	--	--	0	--	10	
<b>REGIONAL TOTALS</b>	<b>216</b>	<b>--</b>	<b>484</b>	<b>1448</b>	<b>259</b>	<b>543</b>	<b>0</b>	<b>79</b>	<b>37</b>	<b>616</b>	<b>114</b>	<b>469</b>
<u>Northeastern Region</u>												
Daggett	2143	741	2700	1333	0	--	0	0	0	--	0	
Duchesne	4	496	438	0	41	--	0	0	0	22	73	
Uintah	115	200	255	110	350	48	0	227	0	96	0	
<b>REGIONAL TOTALS</b>	<b>199</b>	<b>433</b>	<b>396</b>	<b>82</b>	<b>162</b>	<b>16</b>	<b>0</b>	<b>83</b>	<b>0</b>	<b>52</b>	<b>27</b>	<b>162</b>
<u>Southeastern Region</u>												
Carbon	288	550	--	--	1282	621	375	947	1100	--	450	
Emery	3550	0	0	--	--	--	194	1130	233	370	0	
Grand	3329	37	--	693	643	710	358	900	2277	2950	40	
San Juan	419	1144	438	731	321	431	800	789	721	492	136	
<b>REGIONAL TOTALS</b>	<b>1550</b>	<b>284</b>	<b>211</b>	<b>816</b>	<b>364</b>	<b>541</b>	<b>298</b>	<b>915</b>	<b>996</b>	<b>883</b>	<b>98</b>	<b>686</b>
<b>STATE TOTALS</b>	<b>328</b>	<b>382</b>	<b>516</b>	<b>459</b>	<b>325</b>	<b>556</b>	<b>150</b>	<b>469</b>	<b>303</b>	<b>370</b>	<b>96</b>	<b>385</b>

Table 5. Summary of chukar hunting success and distribution of harvest and hunting pressure by region and county, 1977

Region and County	Hunters Reporting	Days Hunted	Birds Bagged	Birds per Hunter-day	Birds per Hunter*	% of Pressure	% of Harvest
<u>Northern Region</u>							
Box Elder	248	688	844	1.23	4.17	26.68	37.25
Cache	66	142	158	1.11	2.65	5.51	6.97
Davis	17	31	40	1.29	3.81	1.20	1.77
Morgan	28	57	50	0.88	2.46	2.21	2.21
Rich	5	15	2	0.13	0.00	0.58	0.09
Summit	9	15	15	1.00	2.25	0.58	0.66
Weber	24	36	27	0.75	3.34	1.40	1.19
REGIONAL TOTALS	397	984	1,136	1.15	3.46	38.15	50.13
<u>Central Region</u>							
Juab	30	66	48	0.73	1.92	2.56	2.12
Salt Lake	41	93	131	1.41	2.27	3.61	5.78
Sanpete	16	52	47	0.90	3.86	2.02	2.07
Tooele	153	451	387	0.86	2.46	17.49	17.08
Utah	94	345	193	0.56	2.76	13.38	8.52
Wasatch	9	18	10	0.56	6.00	0.70	0.44
REGIONAL TOTALS	343	1,025	816	0.80	2.45	39.74	36.01
<u>Southern Region</u>							
Beaver	2	5	1	0.20	2.00	0.19	0.04
Garfield	1	1	0	0.00	6.00	0.04	0.00
Iron	--	--	--	--	1.50	--	--
Kane	--	--	--	--	--	--	--
Millard	29	86	57	0.66	1.37	3.33	2.52
Piute	8	24	16	0.67	3.50	0.93	0.71
Sevier	38	109	58	0.53	1.00	4.23	2.56
Washington	1	3	1	0.33	0.00	0.12	0.04
Wayne	6	16	63	3.94	0.00	0.62	2.78
REGIONAL TOTALS	85	244	196	0.80	1.40	9.46	8.65
<u>Northeastern Region</u>							
Daggett	--	--	--	--	--	--	--
Duchesne	13	48	9	0.19	1.20	1.86	0.40
Uintah	11	43	14	0.33	0.64	1.67	0.62
REGIONAL TOTALS	24	91	23	0.25	0.81	3.53	1.02
<u>Southeastern Region</u>							
Carbon	16	31	6	0.19	1.45	1.20	0.26
Emery	22	51	20	0.39	0.70	1.98	0.88
Grand	21	80	21	0.26	1.10	3.10	0.93
San Juan	5	10	0	0.00	1.50	0.39	0.00
REGIONAL TOTALS	64	172	47	0.27	1.20	6.67	2.07
Unknown counties	29	62	48	0.77	0.00	2.40	2.12
Mixed counties	1	1	0	0.00	0.00	0.04	0.00
STATE TOTALS	943	2,579	2,266	0.88	2.69	100	100

Table 6. Summary of chukars bagged per hunter-day by region and county, 1970-77.

Region and County	1970	1971	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>								
Box Elder	1.00	1.66	0.88	1.41	1.47	1.20	1.31	1.23
Cache	1.28	0.91	0.75	0.68	0.92	0.64	0.70	1.11
Davis	0.93	0.98	0.89	1.12	1.61	0.31	0.89	1.29
Morgan	1.75	1.68	0.85	1.64	0.48	0.69	0.31	0.88
Rich	1.78	1.00	0.67	0.80	1.33	0.20	0.81	0.13
Summit	0.47	0.67	1.28	1.00	0.43	1.47	1.43	1.00
Weber	0.60	0.86	1.10	0.35	0.54	0.46	0.60	0.75
REGIONAL TOTALS	1.09	1.36	0.90	1.17	1.19	0.97	1.07	1.15
<u>Central Region</u>								
Juab	1.22	1.24	0.87	0.81	0.79	0.55	0.46	0.73
Salt Lake	1.15	0.77	0.64	1.01	0.55	0.76	0.54	1.41
Sanpete	0.21	0.83	0.63	1.12	0.96	0.72	0.35	0.90
Tooele	1.30	1.45	0.77	0.88	0.79	0.67	0.86	0.86
Utah	1.05	0.48	0.67	0.85	0.71	0.42	0.90	0.56
Wasatch	0.88	0.52	0.23	1.46	0.88	0.18	0.56	0.56
REGIONAL TOTALS	1.17	1.04	0.72	0.90	0.74	0.58	0.77	0.80
<u>Southern Region</u>								
Beaver	0.50	--	0.00	--	0.00	0.00	0.59	0.20
Garfield	2.57	0.00	0.50	0.00	1.00	5.00	0.50	0.00
Iron	2.00	1.17	1.74	0.33	0.00	0.00	0.75	--
Kane	0.00	2.00	0.00	--	0.00	0.00	0.00	--
Millard	2.10	1.63	1.33	0.96	0.52	0.48	0.87	0.66
Piute	0.42	1.15	1.29	0.58	0.29	0.69	0.24	0.67
Sevier	0.88	0.34	0.29	0.41	0.54	0.40	0.57	0.53
Washington	0.00	0.00	1.50	--	0.00	0.33	0.80	0.33
Wayne	0.44	0.80	0.87	0.00	0.73	2.43	2.74	3.94
REGIONAL TOTALS	1.29	0.86	0.90	0.62	0.51	0.64	0.79	0.80
<u>Northeastern Region</u>								
Daggett	0.00	0.00	0.00	0.00	0.00	0.00	2.00	--
Duchesne	0.29	0.88	0.59	0.71	0.50	0.34	0.77	0.19
Uintah	0.60	0.81	0.69	0.22	0.12	1.32	0.40	0.33
REGIONAL TOTALS	0.46	0.82	0.60	0.40	0.30	0.67	0.74	0.25
<u>Southeastern Region</u>								
Carbon	0.54	0.26	0.62	0.35	0.61	0.72	0.69	0.19
Emery	0.46	0.79	0.04	0.67	0.65	1.44	1.37	0.39
Grand	1.72	0.63	0.42	0.79	2.84	1.85	1.42	0.26
San Juan	5.00	0.11	0.25	1.46	1.33	0.50	0.43	0.00
REGIONAL TOTALS	0.94	0.44	0.40	0.64	1.22	1.31	1.05	0.27
Unknown counties	2.00	1.49	0.43	0.35	0.60	0.59	1.18	0.77
Mixed counties	0.00	--	0.00	--	3.00	0.00	0.00	0.00
STATE TOTALS	1.12	1.10	0.79	0.95	0.91	0.81	0.93	0.88

Table 7. Percentage distribution of chukar harvest by region and county, 1970-77.

Region and County	1970	1971	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>								
Box Elder	16.49	25.52	30.59	27.24	40.28	30.32	32.64	37.25
Cache	12.09	4.69	6.44	5.44	5.70	3.56	5.04	6.97
Davis	2.35	1.78	1.96	3.00	1.57	0.39	2.31	1.77
Morgan	3.41	4.76	3.13	7.17	2.00	3.71	0.79	2.21
Rich	0.59	0.21	0.37	0.16	0.34	0.08	0.60	0.09
Summit	0.29	0.49	4.23	1.69	0.55	2.31	0.46	0.66
Weber	1.39	3.36	5.33	1.02	2.08	2.03	1.16	1.19
REGIONAL TOTALS	36.61	40.80	52.05	45.72	52.53	42.40	43.00	50.13
<u>Central Region</u>								
Juab	2.64	3.57	3.19	3.23	2.85	2.23	1.85	2.12
Salt Lake	6.41	3.46	5.52	6.23	3.66	3.79	2.36	5.78
Sanpete	0.15	1.01	0.74	1.14	2.21	2.62	0.69	2.07
Tooele	21.80	30.42	17.17	15.33	14.16	13.09	12.71	17.08
Utah	11.69	5.59	6.87	16.24	11.23	6.57	13.96	8.52
Wasatch	0.77	1.15	0.18	2.64	0.64	0.23	0.42	0.44
REGIONAL TOTALS	43.46	45.21	33.66	44.82	34.75	28.53	31.99	36.01
<u>Southern Region</u>								
Beaver	0.04	--	0.00	--	0.00	0.00	0.46	0.04
Garfield	0.66	0.00	0.06	0.00	0.30	0.39	0.23	0.00
Iron	0.37	0.24	2.02	0.08	0.00	0.00	0.14	--
Kane	0.00	0.07	0.00	--	0.00	0.00	0.00	--
Millard	5.31	4.44	3.43	2.84	1.53	1.25	2.54	2.52
Piute	0.18	0.80	0.55	0.59	0.43	0.70	0.37	0.71
Sevier	3.22	1.40	0.98	1.69	1.62	2.34	1.57	2.56
Washington	0.00	0.00	0.18	--	0.00	0.04	0.18	0.04
Wayne	0.26	0.14	1.23	0.00	0.34	2.19	2.40	2.78
REGIONAL TOTALS	10.04	7.10	8.46	5.20	4.21	6.92	7.91	8.65
<u>Northeastern Region</u>								
Daggett	0.00	0.00	0.00	0.00	0.00	0.00	0.18	--
Duchesne	0.37	0.98	1.41	0.39	0.68	0.59	0.79	0.40
Uintah	1.06	1.33	1.47	0.16	0.17	1.29	0.18	0.62
REGIONAL TOTALS	1.43	2.31	2.88	0.55	0.85	1.88	1.16	1.02
<u>Southeastern Region</u>								
Carbon	1.61	0.38	1.59	0.79	1.40	3.17	2.22	0.26
Emery	0.44	0.52	0.06	0.39	0.85	7.93	1.90	0.88
Grand	2.97	0.84	0.67	1.02	3.74	7.89	5.50	0.93
San Juan	0.37	0.07	0.06	0.75	0.34	0.27	0.46	0.00
REGIONAL TOTALS	5.39	1.82	2.39	2.96	6.34	19.27	10.08	2.07
Unknown counties	3.08	2.76	0.55	0.75	1.19	1.02	5.87	2.12
Mixed counties	0.00	--	0.00	--	0.13	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100	100	100

Table 8. Percentage distribution of chukar hunting pressure by region and county, 1970-77.

Region and County	1970	1971	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>								
Box Elder	18.48	16.95	27.51	18.38	25.08	20.53	23.07	26.68
Cache	10.62	5.71	6.82	7.56	5.68	4.55	6.65	5.51
Davis	2.84	2.01	1.75	2.55	0.89	1.02	2.40	1.20
Morgan	2.18	3.13	2.92	4.16	3.77	4.39	2.36	2.21
Rich	0.37	0.23	0.44	0.19	0.23	0.32	0.69	0.58
Summit	0.70	0.81	2.63	1.61	1.17	1.27	0.30	0.58
Weber	2.59	4.29	3.85	2.77	3.54	3.56	1.80	1.40
REGIONAL TOTALS	37.78	33.13	45.91	37.21	40.36	35.63	37.26	38.15
<u>Central Region</u>								
Juab	2.43	3.17	2.92	3.78	3.30	3.31	3.73	2.56
Salt Lake	6.26	4.94	6.82	5.84	6.03	4.07	4.03	3.61
Sanpete	0.78	1.35	0.93	0.97	2.10	2.96	1.84	2.02
Tooele	18.81	23.24	17.67	16.51	16.41	15.80	13.77	17.49
Utah	12.55	12.99	8.08	18.23	14.42	12.71	14.45	13.38
Wasatch	0.99	2.43	0.63	1.72	0.66	1.05	0.69	0.70
REGIONAL TOTALS	41.81	48.11	37.05	47.06	42.92	39.89	38.51	39.74
<u>Southern Region</u>								
Beaver	0.08	--	0.10	--	0.00	0.00	0.73	0.19
Garfield	0.29	0.12	0.10	0.04	0.27	0.06	0.43	0.04
Iron	0.21	0.23	0.93	0.22	0.00	0.25	0.17	--
Kane	0.00	0.04	0.00	--	0.00	0.00	0.21	--
Millard	2.84	3.01	2.04	2.81	2.68	2.10	2.70	3.33
Piute	0.49	0.77	0.34	0.97	1.36	0.83	1.42	0.93
Sevier	4.12	4.48	2.73	3.89	2.76	4.74	2.57	4.23
Washington	0.08	0.23	0.10	--	0.00	0.10	0.21	0.12
Wayne	0.66	0.19	1.12	0.04	0.43	0.73	0.81	0.62
REGIONAL TOTALS	8.77	9.07	7.45	7.97	7.50	8.80	9.26	9.46
<u>Northeastern Region</u>								
Daggett	0.12	0.04	0.19	0.11	0.08	0.10	0.09	--
Duchesne	1.40	1.24	1.90	0.52	1.24	1.40	0.94	1.86
Uintah	1.98	1.81	1.70	0.67	1.28	0.79	0.43	1.67
REGIONAL TOTALS	3.50	3.09	3.80	1.31	2.60	2.29	1.46	3.53
<u>Southeastern Region</u>								
Carbon	3.33	1.62	2.04	2.13	2.10	3.59	3.00	1.20
Emery	1.07	0.73	1.22	0.56	1.21	4.48	1.29	1.98
Grand	1.93	1.47	1.27	1.24	1.21	3.46	3.60	3.10
San Juan	0.08	0.73	0.19	0.49	0.23	0.45	0.99	0.39
REGIONAL TOTALS	6.42	4.56	4.72	4.42	4.74	11.98	8.88	6.67
Unknown counties	1.73	2.05	1.02	2.02	1.83	1.40	4.63	2.40
Mixed counties	0.00	--	0.05	--	0.04	0.00	0.00	0.04
STATE TOTALS	100	100	100	100	100	100	100	100



Table 9. State-wide summary of chukar partridge harvest statistics, 1956-77.

Year	Total Hunters	Total Harvest	Hunter Days Afield	Chukars per Hunter-Day	Chukars per Hunter
1956	--	--	--	--	0.91
1957	--	--	--	--	0.92
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
<b>TOTALS</b> (1958-77)	312,091	855,812	905,239	0.95	2.74
<b>AVERAGES</b> (1958-76)	15,762	43,243	45,594	0.91	2.49

Table 10. Chukar field bag check summary, 1977

Region & County	ALL HUNTS				COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds/100 Hrs.	Total Complete Hunts	Total Hunters	Total Hours	Total Birds/100 Hrs.	Birds/Hunter	
<u>Northern Region</u>										
Box Elder	66	162	657	106	16	134	578	101	17	0.75
Cache	59	142	489	12	2	104	380	12	3	0.12
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	125	304	1,146	118	10	238	958	113	12	0.47
<u>Central Region</u>										
Juab	17	35	105	8	8	22	69	8	12	0.36
Salt Lake	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--
Tooele	25	58	204	21	10	17	69	3	4	0.18
Utah	2	5	12	4	33	2	6	0	0	0.00
Wasatch	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	44	98	321	33	10	41	144	11	8	0.27
<u>Southern Region</u>										
Beaver	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--
Millard	4	17	75	1	1	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	4	17	75	1	1	--	--	--	--	--
<u>Northeastern Region</u>										
Daggett	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--
Uintah	2	10	9	3	33	4	6	2	33	0.50
<b>REGIONAL TOTALS</b>	2	10	9	3	33	4	6	2	33	0.50
<u>Southeastern Region</u>										
Carbon	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--
Grand	3	5	10	1	10	5	10	1	10	0.20
San Juan	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	3	5	10	1	10	5	10	1	10	0.20
<b>STATE TOTALS</b>	178	434	1,561	156	10	288	1,118	127	11	0.44

Table 11. Chukar hunter success trend as determined via field bag checks, 1972-77.

Region & County	1972		1973		1974		1975		1976		1977	
	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
<u>Northern Region</u>												
Box Elder	24	1.35	20	0.98	29	2.12	17	1.05	27	1.10	17	0.75
Cache	18	0.72	19	0.91	16	0.79	53	1.00	18	0.56	3	0.12
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	25	0.50	--	--
Summit	--	--	17	1.00	--	--	--	--	--	--	--	--
Weber	0	0	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	23	1.21	20	0.96	28	1.94	18	1.04	25	0.98	12	0.47
<u>Central Region</u>												
Juab	11	0.78	8	0.50	3	0.16	4	0.33	11	1.00	12	0.36
Salt Lake	17	--	11	0.33	0	0.00	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	6	0.60	12	0.79	21	0.68	21	0.84	21	1.39	4	0.18
Utah	19	0.43	0	0.00	--	--	7	0.29*	11	0.50	0	0.00
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	8	0.69	9	0.62	17	0.55	17	0.78	16	1.13	8	0.27
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	233	1.75	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	22	0.72	37	1.54	--	--
Piute	--	--	--	--	--	--	100	0.50	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	--	--	22	0.70	40	1.60	--	--
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	0	0.00	--	--	--	--	--	--
Uintah	17	0.50	--	--	--	--	--	--	--	--	33	0.50
<b>REGIONAL TOTALS</b>	17	0.50	--	--	0	0.00	--	--	--	--	33	0.50
<u>Southeastern Region</u>												
Carbon	18	0.55	--	--	--	--	--	--	--	--	--	--
Emery	41	1.50	18	0.67	200	1.33	47	1.75	9	1.00	--	--
Grand	--	--	67	1.71	112	4.00	53	2.73	20	2.08	10	0.20
San Juan	--	--	--	--	0	0.00	34	1.14	56	2.00	--	--
<b>REGIONAL TOTALS</b>	31	1.04	48	1.40	104	2.40	48	1.68	22	1.95	10	0.20
<b>STATE TOTALS</b>	15	0.97	17	0.91	27	1.60	24	0.95	24	1.11	11	0.44

\*Chukars per hunter index based on all hunts.

# SAGE GROUSE

## SUMMARY

Harvest data for 1976 and spring strutting ground counts for 1977 indicated an increased breeding population for 1977.

Brood surveys showed significantly decreased production throughout the state during 1977. Brood size and the percentage of hens with broods both decreased. Statewide production was very poor; well below both 1976 and average.

The poor production of 1977 was apparent in harvest statistics collected from questionnaires and from field bag checks. Total statewide harvest decreased by almost 25 percent. Total hunters and hunter-days afield both decreased. Sage grouse bagged per hunter and per 100 hours effort both decreased markedly.

Wing samples collected at checking stations confirmed the poor 1977 production. The young per 100 adult ratio dropped by 60 percent and the young per 100 adult hens ratio dropped almost as dramatically. Production was substantially below 1976 and average.



### Strutting Ground Counts

The status of the sage grouse breeding population for 1977 as indicated by strutting ground counts is shown in Table 1 of this section. Results of this survey for 1977 compared to 1976 and the 1967-77 average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Number of grounds counted	136	+ 4	+40
Total grouse counted	2,855	+16	+41
Average male grouse per ground	21.0	+12	-11
Percent change from previous year (comparable grounds)	+6.2	--	--

The spring 1977 strutting ground counts indicated increased breeding populations in the Northern, Southern and Southeastern regions. Counts were down slightly (6.2 percent) in the Central region and down 13 percent in the Northeastern region. The statewide index for comparable grounds was up 6.2 percent. Harvest data for 1976 indicated increased populations going into the 1976-77 winter throughout the state compared to 1975.

### Brood Counts

Results of this survey for 1977 are found in Table 2. Long-term trends of young-adult ratios, mean brood size and sage grouse observed per 100 hours are shown in Tables 3-5. Indexes for 1977 compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total sage grouse counted	4,123	- 1	+36
Young per 100 adults	87	-49	-42
Mean brood size	3.99	-18	-12
Sage grouse observed per 100 hours	445	+ 4	+29
Total hours effort	926	- 5	+ 6

The effort devoted to sage grouse brood counts was down somewhat compared to 1976 but was above average. The total number of grouse counted was comparable to 1976 and well above average.

Significantly decreased production was apparent throughout the state during 1977. Mean brood size decreased in every region and by almost one chick per brood statewide.

The young per 100 adult ratio decreased statewide except in the Southeastern region; statewide the decrease was almost 50 percent. Statewide production was poor, below both 1976 and average.

Production during 1976 was good and the breeding population for 1977 was generally up but production during 1977 was very poor. As a result, the fall 1977 population level was below 1976 levels. The spring 1977 population contained a fairly high percentage of yearling hens who are characteristically less successful nesters than adults. The combination of yearling hens and poor nesting conditions during May resulted in poor production.

## Harvest

### Hunter Questionnaire

Results of the 1977 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 1977 hunting season compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Sage grouse hunters	14,078	- 8	+41
Sage grouse harvested	18,615	-24	+36
Hunter-days afield	25,759	- 9	+58
Sage grouse per hunter-day	0.72	-17	-17
Sage grouse per hunter	1.32	-18	- 3

The very poor production of 1977 was very apparent in the harvest. Total statewide harvest decreased by almost 25 percent and the harvest consisted of a much higher percentage of adult birds (see below, Sex and Age Composition of Harvest). Total sage grouse hunters and hunter days-afield both decreased from 1976. Hunters and days-afield remained above long-term averages reflecting the increased interest in sage grouse hunting. Hunter success decreased in every region except the Central where it was comparable to 1976.

Long-term sage grouse harvest trends are shown in Figure 1.

### Field Bag Checks

A summary of field bag check data for 1977 is shown in Table 11. Hunter success trends determined via this method are shown in Table 12. Results of the 1977 survey compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total hunters checked	2,859	+14	+42
Total hours hunted	11,271	+21	+41
Sage grouse per hunter (complete hunts)	0.65	-27	-18
Sage grouse bagged per 100 hours	15	-32	-21
Average hours per hunter-day (complete hunts)	4.3	+ 8	+10
Hours hunted per grouse bagged	6.8	+55	+23

Field bag checks substantiated the harvest questionnaire data on hunter success. Sage grouse bagged per hunter decreased by over one-quarter of a bird and grouse bagged per 100 hours effort decreased by one-third. The average hunter spent slightly more time afield than in 1976. Hunter interest was apparently high as more hunters were checked at checking stations than during 1976.

### Sex and Age Composition of the Harvest

A summary of the sex and age composition of harvested sage grouse in 1977 is found in Table 13 and the trend from 1974-77 in Table 14.

Following is a comparison of data derived from wing surveys in 1977 to 1976 and the 1973-76 averages:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Sample size	1,207	-20	+ 9
Percent males	44	- 2	0
Percent females	56	+ 2	- 3
Young per 100 adults	78	-60	-47
Young per 100 hens (adult)	133	-56	-41

Analysis of wing samples collected at checking stations confirmed the poor 1977 production indicated by summer brood surveys. The young per 100 adult ratio dropped by 60 percent and the young per 100 hens dropped almost as dramatically ( down 56 percent). Both figures were substantially below average.

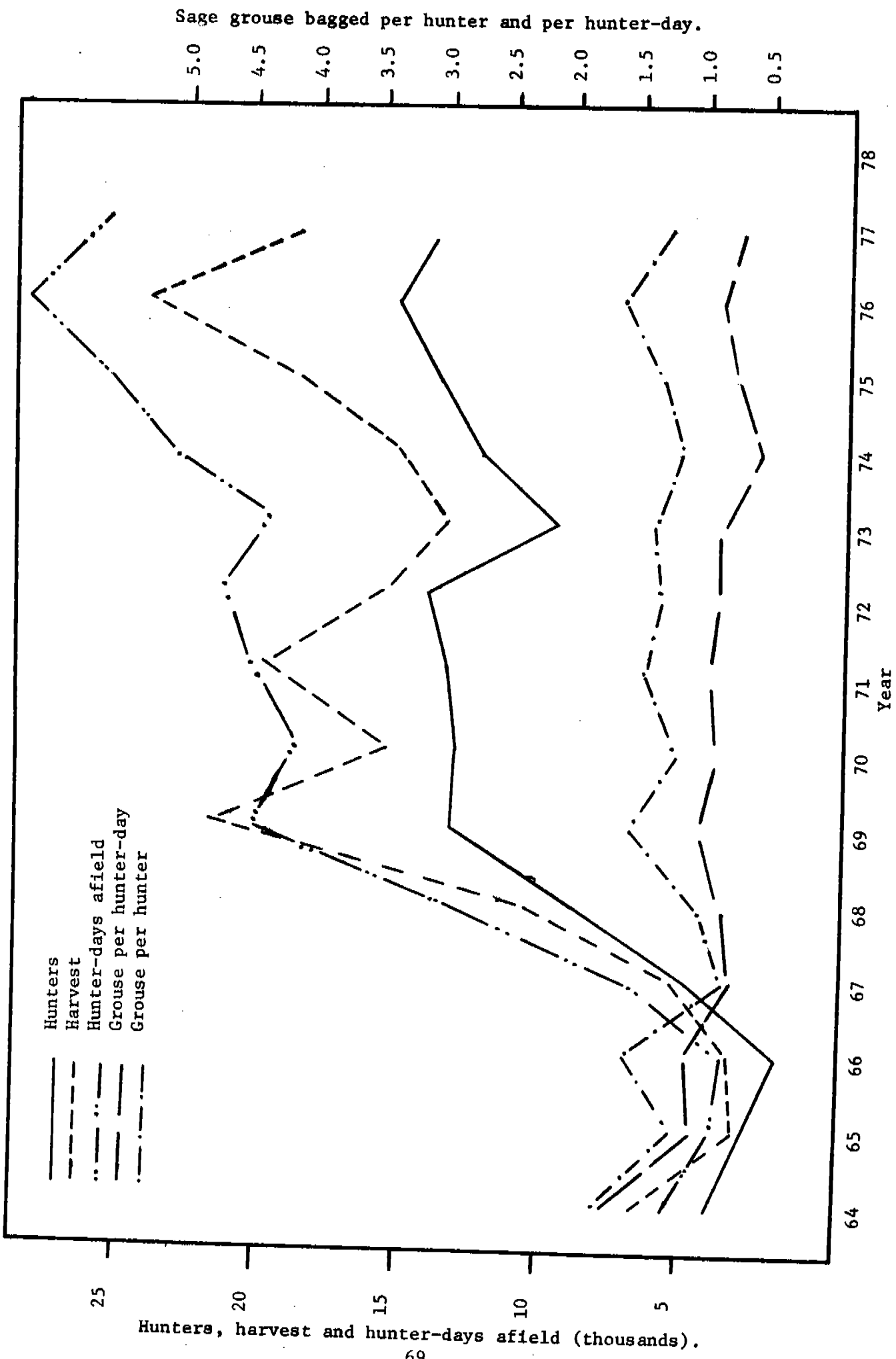


Figure 1. Statewide trend of sage grouse harvest statistics.



Table 1. Summary of sage grouse strutting ground counts by region and county, 1967-77.

Region and County	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>											
<b>BOX ELDER</b>											
No. strutting grounds counted	12	15	22	21	21	20	21	25	19	15	22
Total grouse counted	152	253	667	556	479	422	325	306	346	239	621
County average (All strutting grounds)	12.7	16.9	30.3	26.5	22.8	21.1	15.5	12.2	18.2	15.9	28.2
% Change from previous year - comparable grounds	-33.3	+23.1	+94.1	-8.4	-14.0	-10.4	-30.0	-18.5	+29.1	0.0	+53.0
<b>CACHE</b>											
No. strutting grounds counted	1	3	2	2	3	3	2	3	3	3	3
Total grouse counted	45	30	45	59	68	57	50	44	100	35	45
County average (All strutting grounds)	45.0	10.0	22.5	29.5	22.7	19.0	25.0	14.7	33.1	11.7	15.0
% Change from previous year - comparable grounds	+87.5	-77.8	+57.0	+31.1	+6.8	-16.3	+6.0	-14.0	+132.6	-68.0	+28.6
<b>MORGAN</b>											
No. strutting grounds counted			2	2	2	3	3	3	3	3	3
Total grouse counted			85	45	35	53	61	63	41	52	43
County average (All strutting grounds)			42.5	22.5	17.5	17.7	20.3	21.0	13.7	17.3	14.3
% Change from previous year - comparable grounds			--	-47.0	-22.2	+29.0	+15.0	+3.4	-34.7	+27.0	-17.3
<b>RICH</b>											
No. strutting grounds counted	5	10	6	8	7	9	12	14	10	8	13
Total grouse counted	134	280	298	324	240	254	299	389	268	326	321
County average (All strutting grounds)	26.8	28.0	49.7	40.5	34.3	28.2	24.9	27.8	26.8	40.8	24.7
% Change from previous year - comparable grounds	+7.2	-1.5	+84.1	-20.0	-12.0	-18.1	-13.0	+31.1	-32.0	+57.0	-12.9

Table 1. Continued

Region and County	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
<b>SUMMIT</b>											
No. strutting grounds counted	4	4	5	5	5	5	5	5	4	6	6
Total grouse counted	58	71	168	185	223	152	138	113	88	107	169
County average											
(All strutting grounds)	14.5	17.8	33.6	37.0	44.6	30.4	27.6	22.6	22.0	17.8	28.2
% Change from previous year - comparable grounds	+24.5	+22.8	+60.1	+10.1	+20.5	-31.8	-18.0	-18.1	-30.0	-10.0	+52.1
<b>REGIONAL TOTALS</b>											
No. strutting grounds counted	22	32	37	37	38	40	43	50	39	35	47
Total grouse counted	389	634	1263	1147	1045	938	873	915	843	759	1,199
Regional average											
(All strutting grounds)	17.7	19.8	34.1	31.0	27.5	23.4	20.3	18.3	21.6	22.7	25.5
% Change from previous year - comparable grounds	+1.1	+7.9	+84.7	-9.0	-15.9	-15.8	-20.0	-1.0	-1.4	+8.0	+18.9
<b>Southern Region</b>											
<b>GARFIELD</b>											
No. strutting grounds counted	6	6	10	13	14	14	14	14	14	14	10
Total grouse counted	117	96	213	322	351	330	166	327	233	201	192
County average											
(All strutting grounds)	19.5	16.0	21.3	24.8	25.1	23.5	11.9	23.4	16.6	14.3	19.2
% Change from previous year - comparable grounds	--	-17.9	+59.4	+31.0	-0.3	-6.8	-50.0	+114.3	-34.9	-13.8	+1.5
<b>WAYNE</b>											
No. strutting grounds counted	9	7	8	11	11	12	10	11	11	13	12
Total grouse counted	302	331	497	458	248	311	231	237	160	260	256
County average											
(All strutting grounds)	33.6	47.3	62.1	41.6	22.5	26.0	23.1	21.5	14.5	20.0	21.3
% Change from previous year - comparable grounds	--	+3.0	+46.6	-14.6	-45.9	+18.2	-20.6	+2.6	-32.6	+2.9	+18.8

Table 1. Continued

Region and County	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
<b>BEAVER</b>											
No. strutting grounds counted		2	2	2	5	5	5	5	6	8	7
Total grouse counted		0	79	47	141	153	82	110	122	108	90
County average (All strutting grounds)		0.0	39.5	23.5	28.2	30.6	16.4	22.0	20.3	13.5	12.9
% Change from previous year - comparable grounds		--	--	-40.5	-49.4	+8.5	-46.6	+34.2	+1.4	-31.8	+7.7
<b>PIUTE</b>											
No. strutting grounds counted	1	0	1	1	1	1	1	--	--	--	--
Total grouse counted	2	--	6	7	7	5	0	--	--	--	--
County average (All strutting grounds)	2.0	--	6.0	7.0	7.0	5.0	--	--	--	--	--
% Change from previous year - comparable grounds	--	--	--	+16.7	0.0	-28.5	--	--	--	--	--
<b>IRON</b>											
No. strutting grounds counted		5	3	4	6	7	0	9	9	9	5
Total grouse counted		3	23	64	47	66	0	86	51	26	54
County average (All strutting grounds)		0.6	7.7	16.0	7.8	9.3	--	9.6	5.6	2.8	10.8
% Change from previous year - comparable grounds		--	--	-8.7	-50.0	+42.3	--	--	-41.1	-50.0	+107.7
<b>SEVIER</b>											
No. strutting grounds counted	1	1	0	1	1	1	1	1	--	2	3
Total grouse counted	11	0	--	0	0	0	0	9	--	2	26
County average (All strutting grounds)	11.0	0.0	--	0.0	0.0	0.0	--	9.0	--	1.0	8.9
% Change from previous year - comparable grounds	--	100	--	--	--	--	--	--	--	--	+200

Table 1. Continued

Region and County	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
<b>REGIONAL TOTALS</b>											
No. strutting grounds counted	17	21	24	33	38	40	31	40	40	47	37
Total grouse counted	432	430	818	928	794	865	479	769	566	608	618
Regional average	25.4	20.5	34.1	28.1	20.9	21.6	15.4	19.2	14.3	12.9	16.7
(All strutting grounds)											
% Change from previous year - comparable grounds	--	-3.5	+75.4	-4.8	-30.3	+6.7	-40.0	+49.1	-30.0	-12.6	+14.4
<b>Central Region</b>											
<b>SANPETE</b>											
No. strutting grounds counted					2	1	2	2	2	2	2
Total grouse counted					13	2	0	0	5	10	4
County average					6.5	2.0	--	--	2.5	5.0	2.0
(All strutting grounds)											
% Change from previous year - comparable grounds					--	-75.0	--	--	--	+100.0	-60.0
<b>TOOELE</b>											
No. strutting grounds counted		2	3	3	4	5	5	5	5	5	5
Total grouse counted		44	96	74	92	128	60	95	59	80	77
County average		22.0	32.0	24.7	23.0	25.6	12.0	19.0	11.8	16.0	15.4
(All strutting grounds)											
% Change from previous year - comparable grounds		--	+59.1	-22.9	-16.2	0.0	-34.8	+43.3	-29.6	+15.0	-3.8
<b>WASATCH</b>											
No. strutting grounds counted			2	2	2	2	2	2	2	2	2
Total grouse counted			100	70	102	52	99	201	216	206	206
County average			50.0	35.0	51.0	26.0	49.5	100.5	108.0	108.0	103.0
(All strutting grounds)											
% Change from previous year - comparable grounds			--	-30.0	+45.7	-49.0	+90.4	+103.0	+7.0	+7.0	-4.6

Table 1. Continued

Region and County	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
<b>REGIONAL TOTALS</b>											
No. strutting grounds counted				5	8	8	9	9	9	9	9
Total grouse counted				174	175	232	112	194	265	306	287
Regional average (All strutting grounds)				34.8	21.9	29.0	12.4	21.6	29.4	34.0	31.9
% Change from previous year - Comparable grounds				-22.9	-24.1	+15.2	-42.1	+64.7	+45.2	+12.0	-6.2
<b>Northeastern Region</b>											
<b>DAGGETT</b>											
No. strutting grounds counted				1	4	4	5	4	3	3	3
Total grouse counted				26	37	26	41	53	30	40	55
County average (All strutting grounds)				26.0	9.2	6.5	8.2	13.2	10.0	13.3	18.3
% Change from previous year - comparable grounds				--	-38.5	-28.0	+31.0	-5.4	-18.7	+2.5	+37.5
<b>DUCHESNE</b>											
No. strutting grounds counted				2	3	5	5	11	11	15	14
Total grouse counted				27	27	74	43	172	172	245	161
County average (All strutting grounds)				13.5	9.0	14.8	8.6	15.6	15.6	16.3	11.5
% Change from previous year - comparable grounds				--	-25.9	0.0	-40.5	+44.4	-4.7	-13.7	-20.3
<b>UINTAH</b>											
No. strutting grounds counted	2	0	2	4	5	6	11	11	9	10	11
Total grouse counted	134	--	98	105	63	118	156	163	240	257	245
County average (All strutting grounds)	67.0	--	49.0	26.2	12.6	19.7	14.2	14.8	26.7	25.7	22.3
% Change from previous year - comparable grounds	--	--	--	-31.6	-42.0	+77.0	-25.0	+7.9	+28.7	+0.4	-15.8

Table 1. Continued

Region and County	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
<b>REGIONAL TOTALS</b>											
No. strutting grounds counted	2	0	2	7	12	15	21	26	23	28	28
Total grouse counted	134	--	98	158	127	218	240	388	442	542	461
Regional averages											
(All strutting grounds)	67.0	--	49.0	22.6	10.6	14.5	11.4	14.9	19.2	19.4	16.5
% Change from previous year - comparable grounds	--	--	--	-31.6	-38.6	+32.2	-24.5	+12.5	+11.8	-2.9	-13.3
<b>Southeastern Region</b>											
<b>CARBON</b>											
No. strutting grounds counted	1	1	7	1	3	1	0	8	2	5	9
Total grouse counted	1	1	45	39	58	40	0	77	65	134	140
County average											
(All strutting grounds)	1.0	6.4	39.0	19.3	40.0	40.0	--	9.6	32.5	26.8	15.6
% Change from previous year - comparable grounds	--	+100	--	--	0	+2.0	--	--	+47.7	+83.0	-10.4
<b>EMERY</b>											
No. strutting grounds counted	1	2	2	3	3	3	0	3	--	1	2
Total grouse counted	5	17	8	8	3	11	0	2	--	13	33
County average											
(All strutting grounds)	5.0	8.5	2.7	1.0	3.7	3.7	--	0.6	--	13.0	16.5
% Change from previous year - comparable grounds	--	+60	-82	-62.5	+270.0	--	--	--	--	--	+23.1
<b>SAN JUAN</b>											
No. strutting grounds counted	2	3	3	6	6	6	4	6	6	6	4
Total grouse counted	8	42	115	152	168	168	105	137	115	98	117
County average											
(All strutting grounds)	4.0	14.0	19.2	25.3	28.0	28.0	26.2	22.8	19.1	16.3	29.2
% Change from previous year - comparable grounds	--	+312	+38.1	+31.8	+10.7	+41.6	+19.2	-9.0	-14.0	+21.9	

Table 1. Continued

Region and County	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
<b>REGIONAL TOTALS</b>											
No. strutting grounds counted		4	12	10	12	10	4	17	8	12	15
Total grouse counted		14	104	121	213	219	105	216	180	245	290
Regional average (All strutting grounds)		3.5	8.7	12.1	17.8	21.9	26.2	12.8	22.5	20.4	19.3
% Change from previous year - comparable grounds		---	+193.8	+3.4	+19.8	+12.9	+41.6	-19.2	+20.7	+20.4	+4.1
<b>STATE TOTALS</b>											
No. strutting grounds counted	22	59	78	92	108	113	108	142	119	131	136
Total grouse counted	389	1112	2379	2528	2354	2472	1809	2482	2296	2460	2855
State average grouse per strutting grounds	17.7	19.0	30.5	27.5	21.8	21.9	16.8	17.5	19.3	18.8	21.0
% Change from previous year - comparable grounds	+1.1	+0.9	+81.3	-8.4	-17.0	-0.7	-26.4	+17.0	-3.9	+1.7	+6.2

Table 2. Sage grouse summer inventory summary, 1977.

Region and County	Distinct Broods		Mixed Yng. & Adults		Adults w/o Yng.	Total Adults	Total Yng. 100 Ad.	Vehicle Miles	Hours Effort		Birds/100 hrs.					
	No. Ad.	Yng.	Mean Brood Ad.	Yng. & Adults					Veh.	Horse		Walk	Total			
														100 Ad.	Total	
<u>Northern Region</u>																
Box Elder	59	59	257	4.36	15	87	387	461	344	75	783	50	67	3	120	670
Cache	2	2	9	4.50	0	0	0	2	9	450	430	29	2	7	38	29
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	8	8	28	3.50	0	0	71	79	28	35	0	0	49	0	49	218
Rich	30	30	115	3.83	37	35	106	173	150	81	568	22	0	32	54	580
Summit	12	12	54	4.50	6	28	59	77	82	106	185	12	16	16	44	361
Weber	0	0	0	--	0	0	1	1	0	0	0	0	0	0	0	--
<b>REGIONAL TOTALS</b>	<b>111</b>	<b>111</b>	<b>463</b>	<b>4.17</b>	<b>58</b>	<b>150</b>	<b>624</b>	<b>793</b>	<b>613</b>	<b>77</b>	<b>1966</b>	<b>113</b>	<b>134</b>	<b>58</b>	<b>305</b>	<b>461</b>
<u>Central Region</u>																
Juab	2	2	9	4.50	10	16	21	33	25	76	122	4	4	2	10	580
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	10	10	32	3.20	16	45	4	30	77	257	604	14	9	19	42	255
Tooele	12	12	50	4.17	6	15	35	53	65	123	420	12	4	22	38	311
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	48	48	157	3.27	16	33	285	349	190	54	224	16	17	10	43	1253
<b>REGIONAL TOTALS</b>	<b>72</b>	<b>72</b>	<b>248</b>	<b>3.44</b>	<b>48</b>	<b>109</b>	<b>345</b>	<b>465</b>	<b>357</b>	<b>77</b>	<b>1370</b>	<b>46</b>	<b>34</b>	<b>53</b>	<b>133</b>	<b>618</b>
<u>Southern Region</u>																
Beaver	7	7	25	3.57	35	38	49	91	63	69	15	1	20	15	36	428
Garfield	10	10	40	4.00	25	42	12	47	82	174	44	3	58	0	61	211
Iron	1	1	3	3.00	3	9	11	15	12	80	31	2	0	1	3	771
Kane	0	0	0	--	0	0	0	0	0	--	145	9	0	0	9	0
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	0	0	0	--	0	0	5	5	0	0	0	0	6	0	6	83
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	10	10	44	4.40	2	10	35	47	54	115	230	32	2	8	42	240
<b>REGIONAL TOTALS</b>	<b>28</b>	<b>28</b>	<b>112</b>	<b>4.00</b>	<b>65</b>	<b>99</b>	<b>112</b>	<b>205</b>	<b>211</b>	<b>103</b>	<b>465</b>	<b>47</b>	<b>86</b>	<b>24</b>	<b>157</b>	<b>265</b>
<u>Northeastern Region</u>																
Daggett	5	5	24	4.80	66	135	23	94	159	169	925	31	0	13	44	575
Duchesne	16	16	57	3.56	37	27	104	157	84	53	260	21	15	18	54	446
Uintah	50	50	224	4.48	62	197	67	179	421	235	810	107	4	6	117	513
<b>REGIONAL TOTALS</b>	<b>71</b>	<b>71</b>	<b>305</b>	<b>4.30</b>	<b>165</b>	<b>359</b>	<b>194</b>	<b>430</b>	<b>664</b>	<b>154</b>	<b>1995</b>	<b>159</b>	<b>19</b>	<b>37</b>	<b>215</b>	<b>509</b>
<u>Southeastern Region</u>																
Carbon	7	7	29	4.14	9	19	89	105	48	46	352	32	5	17	54	283
Emery	0	0	0	--	0	0	0	0	0	--	59	5	0	0	5	0
Grand	0	0	0	--	8	3	88	96	3	3	158	14	0	4	18	550
San Juan	7	7	23	3.29	25	3	75	107	26	24	359	28	0	11	39	341
<b>REGIONAL TOTALS</b>	<b>14</b>	<b>14</b>	<b>52</b>	<b>3.71</b>	<b>42</b>	<b>25</b>	<b>252</b>	<b>308</b>	<b>77</b>	<b>25</b>	<b>928</b>	<b>79</b>	<b>5</b>	<b>32</b>	<b>116</b>	<b>332</b>
<b>STATE TOTALS</b>	<b>296</b>	<b>296</b>	<b>1180</b>	<b>3.99</b>	<b>378</b>	<b>742</b>	<b>1527</b>	<b>2201</b>	<b>1922</b>	<b>87</b>	<b>6724</b>	<b>444</b>	<b>278</b>	<b>204</b>	<b>926</b>	<b>445</b>



Table 3. Trend of sage grouse young per 100 adults, 1967-77.

Region & County	Year											Average 1963-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	176	162	153	62	75	83	225	119	106	250	75	
Cache	680	600	71	10	168	171	80	161	329	486	450	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	160	--	533	400	58	600	245	131	64	71	35	
Rich	85	92	98	133	137	55	132	153	94	106	81	
Summit	89	133	121	211	158	173	146	275	52	247	106	
Weber	650	--	208	--	325	144	500	--	--	200	0	
REGIONAL TOTALS	159	132	128	94	135	99	167	131	102	170	77	133
<u>Central Region</u>												
Juab	125	600	300	117	--	1800	500	--	--	--	76	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	119	0	191	84	288	177	138	89	280	414	257	
Tooele	200	416	395	215	188	322	318	314	168	286	123	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	101	90	89	205	212	145	68	101	118	123	54	
REGIONAL TOTALS	104	103	137	170	208	216	106	141	138	187	77	165
<u>Southern Region</u>												
Beaver	173	--	169	--	250	467	329	219	205	181	69	
Garfield	132	263	238	107	93	93	121	143	277	174	174	
Iron	400	--	550	214	183	37	350	46	--	--	80	
Kane	--	--	470	300	--	336	450	--	--	0	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	--	--	--	317	67	0	--	
Sevier	98	82	107	--	--	--	500	400	0	533	0	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	140	371	178	347	63	62	394	166	545	286	115	
REGIONAL TOTALS	135	257	201	186	85	76	311	157	287	194	103	175
<u>Northeastern Region</u>												
Daggett	145	560	493	344	168	273	150	266	51	190	169	
Duchesne	140	209	156	77	230	219	--	161	120	161	53	
Uintah	237	596	450	419	339	105	312	446	107	249	235	
REGIONAL TOTALS	176	446	383	305	278	134	234	321	97	206	154	264
<u>Southeastern Region</u>												
Carbon	433	512	250	167	145	125	328	185	116	214	46	
Emery	--	300	164	100	--	--	--	0	--	--	--	
Grand	--	--	--	--	275	--	0	--	400	25	3	
San Juan	61	214	37	28	70	26	375	82	47	22	24	
REGIONAL TOTALS	94	369	64	30	81	56	340	100	63	68	25	176
STATE TOTALS	141	178	160	117	138	100	195	160	120	171	87	151

Table 4. Trend of sage grouse mean brood size, 1967-1977.

Region & County	Year											Average 1963-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	4.04	3.80	5.16	4.13	4.25	3.93	4.69	4.07	3.81	5.59	4.36	
Cache	6.80	6.00	4.60	5.00	4.50	4.88	4.00	4.62	5.00	6.25	4.50	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	4.00	--	5.33	4.00	5.50	6.00	4.40	4.75	3.80	4.25	3.50	
Rich	5.00	4.07	5.42	4.68	4.44	4.69	4.48	3.91	4.00	6.04	3.83	
Summit	4.47	3.94	5.91	5.00	5.58	4.73	4.56	5.00	3.75	5.00	4.50	
Weber	6.50	--	3.38	--	4.33	6.50	5.00	--	--	2.00	--	
REGIONAL TOTALS	4.43	3.94	5.18	4.55	4.98	4.58	4.55	4.17	4.03	5.45	4.17	4.53
<u>Central Region</u>												
Juab	--	6.00	2.00	3.50	--	7.50	5.00	--	--	--	4.50	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	5.67	--	5.40	4.50	6.00	5.33	4.75	4.00	4.00	5.67	3.20	
Tooele	2.00	5.75	5.62	4.44	4.19	4.81	4.90	5.25	5.50	5.07	4.17	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	5.15	4.29	4.64	4.52	2.94	3.06	4.00	4.24	3.86	4.70	3.27	
REGIONAL TOTALS	5.13	4.46	5.03	4.45	3.94	3.90	4.38	4.49	4.22	4.98	3.44	4.66
<u>Southern Region</u>												
Beaver	4.60	--	5.44	--	5.00	3.83	4.31	3.64	3.90	4.95	3.57	
Garfield	3.50	4.10	3.86	3.67	3.73	3.25	3.50	5.41	4.18	3.50	4.00	
Iron	4.00	--	--	3.67	4.33	3.71	5.33	6.33	--	--	3.00	
Kane	--	--	5.00	3.00	--	4.00	4.50	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Plute	--	--	--	--	--	--	--	5.67	1.00	--	--	
Sevler	5.20	4.62	4.14	--	--	--	5.00	4.00	--	5.33	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	3.68	4.91	3.89	3.55	4.02	3.36	5.17	4.70	5.45	3.95	4.40	
REGIONAL TOTALS	3.89	4.42	4.07	3.60	4.10	3.53	4.72	4.54	4.27	4.18	4.00	4.27
<u>Northeastern Region</u>												
Daggett	3.00	6.00	4.93	4.37	4.00	3.80	4.65	4.93	3.25	4.55	4.80	
Duchesne	5.20	4.09	5.00	5.00	5.17	5.40	--	3.82	3.60	4.11	3.56	
Uintah	5.70	6.13	4.91	4.44	5.19	4.60	4.60	5.06	4.69	5.21	4.48	
REGIONAL TOTALS	4.90	5.54	4.92	4.46	5.04	4.60	4.61	4.82	4.24	4.70	4.30	4.83
<u>Southeastern Region</u>												
Carbon	4.00	5.86	2.50	5.00	4.67	4.14	3.50	3.92	2.67	5.05	4.14	
Emery	--	3.00	9.33	1.00	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	4.00	3.00	--	
San Juan	4.00	5.00	4.20	4.29	5.10	3.93	5.67	6.65	3.50	--	3.29	
REGIONAL TOTALS	4.00	5.36	4.92	4.00	5.00	4.05	4.43	5.47	3.17	4.77	3.71	4.59
STATE TOTALS	4.48	4.50	4.82	4.28	4.62	4.16	4.58	4.57	4.15	4.89	3.99	4.53

Table 5. Trend of sage grouse observed per 100 hours, 1967-77.

Region & County	Year											Average 1967-75
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	471	273	563	365	253	467	166	459	187	457	670	
Cache	390	100	90	431	229	183	150	250	261	410	29	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	34	--	59	333	176	111	345	514	140	433	218	
Rich	27	436	678	987	228	348	298	428	452	724	580	
Summit	131	522	236	161	420	349	119	188	109	268	361	
Weber	375	--	800	--	155	92	40	--	--	12	--	
REGIONAL TOTALS	283	358	468	387	288	319	188	398	204	429	461	330
<u>Central Region</u>												
Juab	180	467	200	217	0	181	30	--	0	0	580	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	128	80	135	123	107	106	135	85	86	263	255	
Tooele	25	426	407	194	342	786	161	665	257	781	311	
Utah	--	--	--	0	--	--	--	--	--	--	--	
Wasatch	571	735	690	321	377	364	666	529	520	1353	1253	
REGIONAL TOTALS	318	475	427	208	230	341	244	402	329	740	618	368
<u>Southern Region</u>												
Beaver	--	--	1186	--	420	486	277	460	188	555	428	
Garfield	--	941	646	409	604	358	258	603	112	226	211	
Iron	--	--	118	346	426	1133	200	241	--	--	771	
Kane	--	--	924	80	--	253	550	--	--	233	0	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Plute	--	0	--	--	--	--	--	833	62	100	--	
Sevier	--	283	581	--	--	--	--	500	0	950	83	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	691	1363	447	2061	555	742	335	209	491	240	
REGIONAL TOTALS	244	601	714	388	911	494	393	413	134	348	265	469
<u>Northeastern Region</u>												
Daggett	715	388	626	414	835	346	308	381	132	352	575	
Duchesne	400	117	122	100	159	118	0	196	84	347	446	
Uintah	385	671	487	474	735	594	310	459	386	716	513	
REGIONAL TOTALS	444	313	361	319	523	349	233	358	217	473	509	360
<u>Southeastern Region</u>												
Carbon	--	63	26	59	45	309	500	146	49	147	283	
Emery	--	22	152	33	0	--	--	11	0	--	0	
Grand	--	--	--	0	133	25	25	--	500	1125	550	
San Juan	--	157	2875	653	560	775	300	856	321	304	341	
REGIONAL TOTALS	159	68	179	451	218	432	215	360	128	220	332	240
STATE TOTALS	296	374	443	346	383	373	237	387	196	428	445	345

Table 6. Summary of sage grouse hunter success and distribution of harvest and hunting pressure by region and county, 1977

Region and County	Hunters Reporting	Days Hunted	Birds Bagged	Birds per Hunter-day	Birds per Hunter**	% of Pressure	% of Harvest
<u>Northern Region</u>							
Box Elder	76	125	87	0.70	0.96	7.31	7.04
Cache	78	139	71	0.51	1.55	8.13	5.75
Davis	8	22	10	0.45	1.16	1.29	0.81
Morgan	29	47	27	0.57	1.00	2.75	2.19
Rich	83	137	81	0.59	1.00	8.02	6.56
Summit	87	158	97	0.61	1.12	9.25	7.85
Weber	35	61	48	0.79	1.01	3.57	3.89
REGIONAL TOTALS	396	689	421	0.61	1.12	40.32	34.09
<u>Central Region</u>							
Juab	12	28	18	0.64	0.75	1.64	1.46
*Salt Lake	9	30	15	0.50	1.39	1.76	1.21
Sanpete	9	41	25	0.61	2.08	2.40	2.02
Tooele	76	115	69	0.60	0.91	6.73	5.59
Utah	37	75	89	1.19	1.46	4.39	7.21
Wasatch	96	144	102	0.71	1.56	8.43	8.26
REGIONAL TOTALS	239	433	318	0.73	1.37	25.34	25.75
<u>Southern Region</u>							
Beaver	14	23	19	0.83	1.56	1.35	1.54
Garfield	32	58	41	0.71	1.91	3.39	3.32
Iron	12	19	16	0.84	0.69	1.11	1.30
Kane	1	1	2	2.00	2.00	0.06	0.16
Millard	4	10	5	0.50	0.67	0.59	0.40
Piute	7	7	4	0.57	1.00	0.41	0.32
Sevier	18	31	15	0.48	1.33	1.81	1.21
*Washington	2	3	2	0.67	1.20	0.18	0.16
Wayne	39	71	49	0.69	0.00	4.15	3.97
REGIONAL TOTALS	129	223	153	0.69	1.29	13.05	12.39
<u>Northeastern Region</u>							
Daggett	14	22	33	1.50	3.50	1.29	2.67
Duchesne	31	58	49	0.84	1.42	3.39	3.97
Uintah	72	128	156	1.22	2.02	7.49	12.63
REGIONAL TOTALS	117	208	238	1.14	1.95	12.17	19.27
<u>Southeastern Region</u>							
Carbon	47	71	60	0.85	1.33	4.15	4.86
Emery	6	12	4	0.33	0.63	0.70	0.32
Grand	1	1	0	0.00	0.00	0.06	0.00
San Juan	1	2	4	2.00	4.00	0.12	0.32
REGIONAL TOTALS	55	86	68	0.79	1.23	5.03	5.51
Unknown counties	35	67	31	0.46	0.00	3.92	2.51
Mixed counties	1	3	6	2.00	0.00	0.18	0.49
STATE TOTALS	972	1,709	1,235	0.72	1.32	100	100

\*Illegal areas

\*\*Based on county of residence

Table 7. Summary of sage grouse bagged per hunter-day by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	0.73	0.59	0.68	0.85	1.02	0.70
Cache	0.44	0.64	0.52	0.78	0.78	0.51
Davis	0.67	--	0.25	0.60	0.43	0.45
Morgan	0.86	0.67	0.34	0.63	0.50	0.57
Rich	0.64	0.74	0.52	0.47	0.77	0.59
Summit	0.65	0.49	0.63	0.63	0.80	0.61
Weber	0.55	0.42	0.70	0.75	0.79	0.79
REGIONAL TOTALS	0.64	0.62	0.56	0.70	0.77	0.61
<u>Central Region</u>						
Juab	0.50	0.63	0.73	0.50	1.11	0.64
Salt Lake	*	*	*	*	*	*
Sanpete	0.67	0.85	0.50	*	1.37	0.61
Tooele	0.35	0.55	0.72	0.45	0.54	0.60
Utah	0.91	0.74	0.53	0.56	0.47	1.19
Wasatch	0.35	1.00	0.91	0.91	0.80	0.71
REGIONAL TOTALS	0.58	0.72	0.55	0.66	0.71	0.73
<u>Southern Region</u>						
Beaver	0.94	0.68	0.58	0.37	0.98	0.83
Garfield	1.09	1.12	0.81	1.16	0.90	0.71
Iron	0.67	0.50	1.89	0.57	1.20	0.84
Kane	1.00	1.00	0.67	0.00	0.00	2.00
Millard	0.00	--	2.50	0.00	0.33	0.50
Piute	0.41	0.82	0.55	0.94	1.50	0.57
Sevier	0.50	0.67	0.92	0.74	0.77	0.48
Washington	*	*	*	*	*	*
Wayne	0.86	0.68	1.00	0.91	1.26	0.69
REGIONAL TOTALS	0.78	0.79	0.92	0.85	0.96	0.69
<u>Northeastern Region</u>						
Daggett	1.12	1.27	1.07	0.68	1.19	1.50
Duchesne	1.23	1.18	0.64	0.94	1.05	0.84
Uintah	0.90	1.28	1.12	0.95	1.36	1.22
REGIONAL TOTALS	1.03	1.24	0.92	0.90	1.29	1.14
<u>Southeastern Region</u>						
Carbon	1.10	0.46	0.76	0.95	1.26	0.85
Emery	1.00	0.50	1.00	0.18	0.50	0.33
Grand	1.00	*	*	--	2.00	0.00
San Juan	2.00	0.64	0.75	0.67	0.00	2.00
REGIONAL TOTALS	1.25	0.53	0.77	0.82	1.24	0.79
Unknown counties	0.28	0.56	0.36	0.43	0.87	0.46
Mixed counties	--	--	--	--	3.00	2.00
Illegal areas	0.25	0.00	1.50	1.68	0.36	0.51
STATE TOTALS	0.72	0.73	0.65	0.74	0.87	0.72

\*Closed Season.

Table 8. Percentage distribution of sage grouse harvest by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	17.00	8.99	6.74	8.58	8.32	7.04
Cache	5.38	9.40	9.99	10.73	11.53	5.75
Davis	0.85	--	0.25	0.77	1.89	0.81
Morgan	3.54	3.95	2.00	2.06	1.57	2.19
Rich	8.92	9.13	6.87	4.03	10.21	6.56
Summit	6.66	4.50	6.37	7.04	4.28	7.85
Weber	3.26	1.50	5.37	6.18	4.45	3.89
REGIONAL TOTALS	45.61	37.47	37.58	39.40	42.26	34.09
<u>Central Region</u>						
Juab	0.14	0.68	1.00	0.26	1.73	1.46
Salt Lake	*	*	*	*	*	*
Sanpete	1.42	3.13	0.62	*	3.95	2.02
Tooele	1.70	3.95	5.24	1.89	3.54	5.59
Utah	4.39	7.22	5.74	8.93	2.64	7.21
Wasatch	0.85	2.18	3.62	6.09	3.95	8.26
REGIONAL TOTALS	8.64	18.12	17.85	21.46	16.47	25.75
<u>Southern Region</u>						
Beaver	2.12	1.77	1.37	0.60	3.79	1.54
Garfield	6.80	7.77	4.87	6.87	3.79	3.32
Iron	1.70	0.95	2.12	1.12	0.49	1.30
Kane	0.28	0.41	0.25	0.00	0.00	0.16
Millard	0.00	--	0.62	0.00	0.25	0.40
Piute	0.99	1.23	0.75	1.29	0.49	0.32
Sevier	1.98	2.18	2.75	3.86	1.98	1.21
Washington	*	*	*	*	*	*
Wayne	4.39	5.18	6.99	7.47	5.52	3.97
REGIONAL TOTALS	18.27	19.48	19.98	21.37	16.31	12.39
<u>Northeastern Region</u>						
Daggett	2.69	1.91	1.87	1.29	1.57	2.67
Duchesne	8.36	7.90	4.00	2.75	1.89	3.97
Uintah	9.92	9.26	8.36	6.44	9.88	12.63
REGIONAL TOTALS	20.96	19.07	14.23	10.47	13.34	19.27
<u>Southeastern Region</u>						
Carbon	3.12	1.63	3.12	5.32	4.04	4.86
Emery	0.28	0.68	0.37	0.17	0.08	0.32
Grand	0.14	*	*	--	0.16	0.00
San Juan	1.42	1.23	0.75	0.69	0.00	0.32
REGIONAL TOTALS	4.96	3.81	4.24	6.18	4.28	5.51
Unknown counties	1.56	2.04	4.24	1.12	5.60	2.51
Mixed counties	--	--	1.87	--	1.73	0.49
Illegal areas	0.14	1.22	1.87	4.46	0.66	1.37
STATE TOTALS	100	100	100	100	100	100

\*Closed Season.

Table 9. Percentage distribution of sage grouse hunting pressure by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	16.70	11.06	6.38	7.45	7.06	7.31
Cache	8.76	10.66	12.44	10.16	12.77	8.13
Davis	0.92	--	0.65	0.95	3.78	1.29
Morgan	2.95	4.28	3.80	2.40	2.71	2.75
Rich	10.08	9.06	8.48	6.25	11.41	8.02
Summit	7.33	6.67	6.54	8.27	4.64	9.25
Weber	4.28	2.59	4.93	6.06	4.85	3.57
REGIONAL TOTALS	51.02	44.32	43.21	41.54	47.22	40.32
<u>Central Region</u>						
Juab	0.20	0.80	0.89	0.38	1.36	1.64
Salt Lake	*	*	*	*	*	*
Sanpete	1.53	2.69	0.81	*	2.50	2.40
Tooele	3.46	5.28	4.68	3.09	5.71	6.73
Utah	3.46	7.17	6.95	11.81	4.85	4.39
Wasatch	1.73	1.59	2.58	4.92	4.28	8.43
REGIONAL TOTALS	10.79	18.43	20.84	23.99	19.97	25.34
<u>Southern Region</u>						
Beaver	1.63	1.89	1.53	1.20	3.35	1.35
Garfield	4.48	5.08	3.88	4.36	3.64	3.39
Iron	1.83	1.39	0.73	1.45	0.36	1.11
Kane	0.20	0.30	0.24	0.25	0.21	0.06
Millard	0.41	--	0.16	0.25	0.64	0.59
Piute	1.73	1.1	0.89	1.01	0.29	0.41
Sevier	2.85	2.39	1.94	3.85	2.21	1.81
Washington	*	*	*	*	*	*
Wayne	3.67	5.58	4.52	6.06	3.78	4.15
REGIONAL TOTALS	16.80	17.93	13.97	18.50	14.76	13.05
<u>Northeastern Region</u>						
Daggett	1.73	1.10	1.13	1.39	1.14	1.29
Duchesne	4.89	4.88	4.04	2.15	1.57	3.39
Uintah	7.94	5.28	4.85	4.99	6.28	7.49
REGIONAL TOTALS	14.56	11.25	10.02	8.52	8.99	12.17
<u>Southeastern Region</u>						
Carbon	2.04	2.59	2.67	4.10	2.78	4.15
Emery	0.20	1.00	0.24	0.69	0.14	0.70
Grand	0.10	*	*	0.00	0.07	0.06
San Juan	0.51	1.39	0.65	0.76	0.00	0.12
REGIONAL TOTALS	2.85	5.28	3.55	5.56	3.00	5.03
Unknown counties	3.97	2.69	7.59	1.89	5.56	3.92
Mixed counties	--	--	0.81	--	0.50	0.18
Illegal areas	0.41	1.40	5.01	3.85	1.57	1.94
STATE TOTALS	100	100	100	100	100	100

\*Closed Season.

Table 10. Statewide summary of sage grouse harvest statistics, 1951-77.

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	13,793	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
<hr/>					
TOTALS (1963-77)	153,485	210,029	256,610	0.91	1.45
<hr/>					
AVERAGES (1963-76)	9,958	13,672	16,489	0.87	1.36

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

\*\*Estimated.

\*\*\*Totals and indexes based on indiscreet data.



Table 11. Sage grouse field bag check summary, 1977.

Region & County	ALL HUNTS				COMPLETE HUNTS				Birds/ Hunter	
	Total Parties	Total Hunters	Total Hours	Total Birds/ 100 Hrs.	Total Complete Hunts	Total Hunters	Total Hours	Total Birds/ 100 Hrs.		
<u>Northern Region</u>										
Box Elder	214	585	2856	545	19	567	2791	545	20	0.96
Cache	92	205	749	55	7	192	724	49	7	0.26
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	24	59	109	36	33	59	109	35	32	0.59
Rich	207	504	2673	111	4	504	2673	111	4	0.22
Summit	17	35	96	14	15	15	31	14	45	0.93
Weber	6	12	36	0	0	12	36	0	0	0.00
<b>REGIONAL TOTALS</b>	<b>560</b>	<b>1400</b>	<b>6519</b>	<b>761</b>	<b>12</b>	<b>1349</b>	<b>6364</b>	<b>754</b>	<b>12</b>	<b>0.56</b>
<u>Central Region</u>										
Juab	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--
Tooele	54	149	459	61	13	83	252	61	24	0.73
Utah	--	--	--	--	--	--	--	--	--	--
Wasatch	139	382	855	199	23	253	599	199	33	0.79
<b>REGIONAL TOTALS</b>	<b>193</b>	<b>531</b>	<b>1314</b>	<b>260</b>	<b>20</b>	<b>336</b>	<b>851</b>	<b>260</b>	<b>31</b>	<b>0.77</b>
<u>Southern Region</u>										
Beaver	--	--	--	--	--	--	--	--	--	--
Garfield	33	93	303	52	17	44	171	31	18	0.71
Iron	9	22	31	17	55	9	19	14	74	1.56
Kane	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	5	11	32	4	13	2	5	4	80	2.00
Washington	--	--	--	--	--	--	--	--	--	--
Wayne	141	370	1735	254	15	319	1677	237	14	0.74
<b>REGIONAL TOTALS</b>	<b>188</b>	<b>496</b>	<b>2101</b>	<b>327</b>	<b>16</b>	<b>374</b>	<b>1872</b>	<b>286</b>	<b>15</b>	<b>0.76</b>
<u>Northeastern Region</u>										
Daggett	23	67	197	63	32	38	45	27	60	0.71
Duchesne	10	29	89	21	24	20	47	12	26	0.60
Uintah	121	293	916	211	23	172	632	134	21	0.78
<b>REGIONAL TOTALS</b>	<b>154</b>	<b>389</b>	<b>1202</b>	<b>295</b>	<b>25</b>	<b>230</b>	<b>724</b>	<b>173</b>	<b>24</b>	<b>0.75</b>
<u>Southeastern Region</u>										
Carbon	9	33	96	23	24	14	44	16	36	1.14
Emery	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--
San Juan	4	10	39	4	10	5	26	4	15	0.80
<b>REGIONAL TOTALS</b>	<b>13</b>	<b>43</b>	<b>135</b>	<b>27</b>	<b>20</b>	<b>19</b>	<b>70</b>	<b>20</b>	<b>29</b>	<b>1.05</b>
<b>STATE TOTALS</b>	<b>1108</b>	<b>2859</b>	<b>11271</b>	<b>1670</b>	<b>15</b>	<b>2308</b>	<b>9881</b>	<b>1493</b>	<b>15</b>	<b>0.65</b>

\*Based on all hunts.

Table 12. Sage grouse hunter success trend determined by field bag checks, 1972-77.

Region & County	1972		1973		1974		1975		1976		1977	
	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
<u>Northern Region</u>												
Box Elder	15	0.88	19	0.75	12	0.57	24	0.74	20	0.90	20	0.96
Cache	7	0.31	13	0.52	9	0.42	10	0.38	14	0.49	7	0.26
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	6	0.29	41	0.92	--	--	27	0.36	28	0.64	32	0.59
Rich	11	0.50	9	0.36	12	0.58	10	0.45	13	0.63	4	0.22
Summit	6	0.29	8	--	27	0.41*	15	0.61	--	--	45	0.93
Weber	7	0.32	3	0.15	5	0.18	6	0.45	6	0.29	0	0.00
REGIONAL TOTALS	13	0.68	13	0.55	11	0.51	12	0.51	15	0.64	12	0.56
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	109	1.00	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	22	0.46	20	1.27	22	0.83	16	0.95	28	0.85	24	0.73
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	16	0.65	34	0.98	33	0.79
REGIONAL TOTALS	22	0.46	20	1.27	22	0.83	16	0.79	33	0.92	31	0.77
<u>Southern Region</u>												
Beaver	--	--	0	0.00	27	0.61	35	0.78	--	--	--	--
Garfield	20	1.22	23	0.74	21	0.88	25	0.26	17	1.54	18	0.71
Iron	10	0.07	133	1.33	--	--	30	1.74	67	1.04*	74	1.56
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	12	1.20	18	0.75	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	18	0.50	31	0.57*	80	2.00
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	13	0.73	19	1.09	20	0.98	16	0.91	24	1.38	14	0.74
REGIONAL TOTALS	14	0.75	20	0.92	21	0.92	19	0.86	23	1.40	15	0.76
<u>Northeastern Region</u>												
Daggett	15	1.00	20	0.25	30	0.73	20	0.81	46	2.64	60	0.71
Duchesne	28	2.00	31	1.29	14	0.31	26	1.06	34	1.59	26	0.60
Uintah	56	1.46	20	1.27	23	0.71	32	1.21	46	1.33	21	0.78
REGIONAL TOTALS	37	1.40	22	1.17	23	0.68	30	1.13	42	1.44	24	0.75
<u>Southeastern Region</u>												
Carbon	33	1.00	14	1.00	--	--	17	0.31	59	1.00	36	1.14
Emery	--	--	0	0.00	--	--	--	--	0	0.00	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	59	0.71	34	1.03	21	0.67	--	--	15	0.80
REGIONAL TOTALS	33	1.00	28	0.61	34	1.03	19	0.45	58	0.97	29	1.05
STATE TOTALS	15	0.71	17	0.73	15	0.64	17	0.67	22	0.90	15	0.65

\*Sage grouse per hunter index based on all hunts.

Table 13. Sex and age composition of harvested sage grouse, 1977.

Region & County	Sex Composition (%)										Young/ 100 Hens	Young/ 100 Adults			
	Males					Females							Total		
	Ad. Yng. Tot.	Ad. Yng. Tot.	Ad. Yng. Tot.	Ad. Yng. Tot.	Ad. Yng. Tot.	Ad. Yng. Tot.	Ad. Yng. Tot.	Ad. Yng. Tot.	Ad. Yng. Tot.	Ad. Yng. Tot.			Ad. Yng. Tot.	Ad. Yng. Tot.	
<u>Northern Region</u>															
Box Elder	91	49	140	95	52	147	287	32	17	49	33	18	51	106	54
Cache	14	7	21	8	5	13	34	41	21	62	23	15	38	150	54
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan & Summit	6	13	19	8	13	21	40	15	33	48	20	33	53	325	186
Rich	9	8	17	11	9	20	37	24	22	46	30	24	54	155	85
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>120</b>	<b>77</b>	<b>197</b>	<b>122</b>	<b>79</b>	<b>201</b>	<b>398</b>	<b>30</b>	<b>19</b>	<b>49</b>	<b>31</b>	<b>20</b>	<b>51</b>	<b>128</b>	<b>64</b>
<u>Central Region</u>															
Juab	33	44	77	58	39	97	174	19	25	44	33	22	55	141	90
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	26	9	35	21	12	33	68	38	13	51	31	18	49	100	45
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>59</b>	<b>53</b>	<b>112</b>	<b>79</b>	<b>51</b>	<b>130</b>	<b>242</b>	<b>24</b>	<b>22</b>	<b>46</b>	<b>33</b>	<b>21</b>	<b>54</b>	<b>138</b>	<b>75</b>
<u>Southern Region</u>															
Beaver	0	2	2	4	5	9	11	0	18	18	36	45	81	175	175
Garfield	6	10	16	10	12	22	38	16	26	42	26	32	58	220	138
Iron	0	2	2	4	5	9	11	0	18	18	36	45	81	175	175
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	41	35	76	88	38	126	202	20	17	37	44	19	63	83	57
<b>REGIONAL TOTALS</b>	<b>47</b>	<b>49</b>	<b>96</b>	<b>106</b>	<b>60</b>	<b>166</b>	<b>262</b>	<b>9</b>	<b>20</b>	<b>29</b>	<b>36</b>	<b>35</b>	<b>71</b>	<b>103</b>	<b>71</b>
<u>Northeastern Region</u>															
Daggett	12	15	27	15	10	25	52	23	29	52	29	19	48	167	93
Duchesne	7	18	25	11	17	28	53	13	34	49	21	32	53	318	139
Uintah	33	46	79	67	54	121	200	17	23	40	34	27	61	150	100
<b>REGIONAL TOTALS</b>	<b>52</b>	<b>79</b>	<b>131</b>	<b>93</b>	<b>81</b>	<b>174</b>	<b>305</b>	<b>17</b>	<b>26</b>	<b>43</b>	<b>30</b>	<b>27</b>	<b>57</b>	<b>172</b>	<b>110</b>
<u>Southeastern Region</u>															
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>STATE TOTALS</b>	<b>278</b>	<b>258</b>	<b>536</b>	<b>400</b>	<b>271</b>	<b>671</b>	<b>1,207</b>	<b>23</b>	<b>21</b>	<b>44</b>	<b>33</b>	<b>22</b>	<b>56</b>	<b>133</b>	<b>78</b>

Table 14. Sex and age composition of harvested sage grouse from 1974-77.

Region & County	1974				1975				1976				1977				Averages 1974-77									
	Sex Ratio % Young**/		Sex Ratio % Young**/		Sex Ratio % Young**/		Sex Ratio % Young**/		Sex Ratio % Young**/		Sex Ratio % Young**/		Sex Ratio % Young**/		Sex Ratio % Young**/		Sex Ratio % Young**/									
	n*	Male	Female	% Young**/100H	n*	Male	Female	% Young**/100H	n*	Male	Female	% Young**/100H	n*	Male	Female	% Young**/100H	n*	Male	Female	% Young**/100H						
<b>Northern Region</b>																										
Box Elder	127	45	55	151	87	84	51	49	169	110	117	45	55	262	185	287	49	51	106	54	162	47	53	183	118	
Cache	84	58	42	423	190	109	43	57	206	153	118	51	49	381	211	34	62	38	150	54	87	53	47	318	156	
Davis	21	52	48	280	200	33	39	61	191	175	3	67	33	---	---	40	48	53	325	186	25	53	47	263	193	
Morgan	98	40	60	214	158	158	44	56	241	168	295	49	51	402	299	37	46	54	155	85	137	45	55	229	189	
Summit	---	---	---	---	---	---	---	---	---	---	6	33	67	---	---	---	---	---	---	---	---	---	---	---	---	---
Weber	---	---	---	---	---	---	---	---	---	---	3	33	67	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>REGIONAL TOTALS</b>	<b>330</b>	<b>47</b>	<b>53</b>	<b>221</b>	<b>132</b>	<b>384</b>	<b>45</b>	<b>55</b>	<b>209</b>	<b>149</b>	<b>542</b>	<b>48</b>	<b>52</b>	<b>357</b>	<b>247</b>	<b>398</b>	<b>49</b>	<b>51</b>	<b>128</b>	<b>64</b>	<b>412</b>	<b>47</b>	<b>53</b>	<b>242</b>	<b>154</b>	
<b>Central Region</b>																										
Juab	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	174	44	55	141	90	174*	44	56	141	90	
Salt Lake	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Sanpete	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Tooele	39	56	44	230	144	69	51	49	269	165	109	37	63	377	319	68	51	49	100	45	64	46	54	228	157	
Utah	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Wasatch	---	---	---	---	---	---	---	---	---	---	76	63	37	327	181	---	---	---	---	---	---	---	---	---	---	
<b>REGIONAL TOTALS</b>	<b>39</b>	<b>56</b>	<b>44</b>	<b>230</b>	<b>144</b>	<b>107</b>	<b>43</b>	<b>57</b>	<b>215</b>	<b>138</b>	<b>185</b>	<b>48</b>	<b>52</b>	<b>357</b>	<b>249</b>	<b>242</b>	<b>46</b>	<b>54</b>	<b>138</b>	<b>75</b>	<b>121</b>	<b>46</b>	<b>54</b>	<b>236</b>	<b>140</b>	
<b>Southern Region</b>																										
Beaver	13	31	69	100	63	---	---	---	---	---	9	11	89	---	---	11	18	82	175	175	11*	18	82	175	175	
Garfield	103	36	64	178	124	120	32	68	162	131	63	46	54	308	174	38	42	58	220	138	92	44	56	258	169	
Iron	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	11	18	82	175	175	11	18	82	175	175	
Kane	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Millard	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Piute	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Sevier	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Washington	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Wayne	176	31	69	173	138	204	39	61	168	140	357	36	64	247	161	202	37	63	83	57	22	35	65	183	136	
<b>REGIONAL TOTALS</b>	<b>292</b>	<b>33</b>	<b>67</b>	<b>171</b>	<b>128</b>	<b>324</b>	<b>36</b>	<b>64</b>	<b>165</b>	<b>136</b>	<b>429</b>	<b>37</b>	<b>63</b>	<b>260</b>	<b>166</b>	<b>262</b>	<b>29</b>	<b>71</b>	<b>103</b>	<b>71</b>	<b>342</b>	<b>35</b>	<b>65</b>	<b>197</b>	<b>142</b>	
<b>Northeastern Region</b>																										
Daggett	8	25	75	600	300	162	18	82	232	142	28	46	54	300	180	52	52	48	167	93	63	34	66	335	184	
Duchesne	32	44	56	170	113	32	22	78	262	191	82	54	46	158	86	53	47	53	318	139	50	41	59	221	132	
Uintah	113	45	55	153	77	157	45	55	438	265	247	47	53	320	184	200	40	61	150	100	178	40	60	73	160	
<b>REGIONAL TOTALS</b>	<b>153</b>	<b>44</b>	<b>56</b>	<b>167</b>	<b>89</b>	<b>351</b>	<b>30</b>	<b>70</b>	<b>307</b>	<b>190</b>	<b>357</b>	<b>49</b>	<b>51</b>	<b>270</b>	<b>153</b>	<b>305</b>	<b>43</b>	<b>57</b>	<b>172</b>	<b>110</b>	<b>291</b>	<b>41</b>	<b>59</b>	<b>233</b>	<b>137</b>	
<b>Southeastern Region</b>																										
Carbon	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Emery	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Grand	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
San Juan	11	55	45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
<b>REGIONAL TOTALS</b>	<b>11</b>	<b>55</b>	<b>45</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>---</b>	<b>---</b>	<b>---</b>	<b>---</b>	
<b>STATE TOTALS</b>	<b>825</b>	<b>42</b>	<b>58</b>	<b>195</b>	<b>124</b>	<b>1166</b>	<b>38</b>	<b>62</b>	<b>217</b>	<b>155</b>	<b>1513</b>	<b>45</b>	<b>55</b>	<b>305</b>	<b>196</b>	<b>1,207</b>	<b>44</b>	<b>56</b>	<b>133</b>	<b>78</b>	<b>1,111</b>	<b>42</b>	<b>58</b>	<b>227</b>	<b>148</b>	

\* Wings collected during 1977 only, no previous data

\*\*wing sample size

\*\*young per 100 hens (adult females) and young per 100 adults.

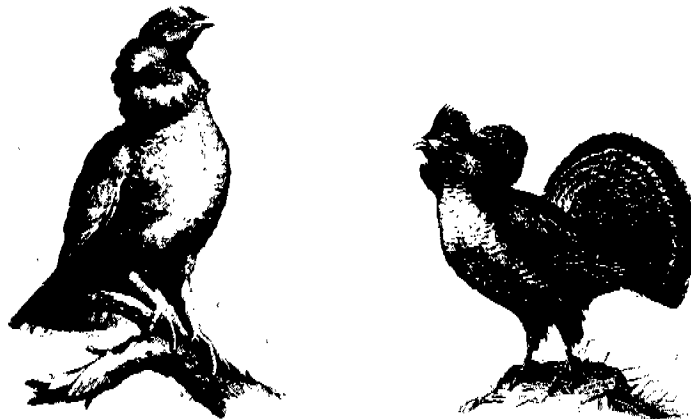
# FOREST GROUSE

## SUMMARY

Judging from harvest statistics for 1976, the 1977 breeding populations of both ruffed and blue grouse were up from 1976. Production of ruffed grouse indicated by a small brood sample was up from 1976 to near average. Blue grouse production was very poor during 1976; the poorest recorded since before 1966. The number of grouse of both species observed during brood surveys and the apparent density (grouse per 100 hours) suggested a markedly decreased abundance in 1977 compared to 1976; with figures down 44 percent and 32 percent from long-term averages for ruffed and blue grouse respectively. A total of only 93 forest grouse broods were observed during 1977 compared to 181 during 1976.

Harvest statistics confirmed the low density of forest grouse. Total harvest decreased from 63,436 during 1976 to 42,476 in 1977; a 33 percent decrease in harvest. Total hunters decreased from 21,186 in 1976 to 19,188 in 1977 and days-afield decreased from 56,422 to 48,746; 9 percent and 14 percent decreases respectively.

Field bag check data confirmed the reduced pressure and success shown by the questionnaire. Poor opening day weather combined with low grouse numbers depressed field bag check data even more dramatically than questionnaire results.



## Brood Counts

### Ruffed Grouse

Results of the annual random brood survey for 1977 are shown in Table 1 of this section. Long-term trends of young-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 1977 compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total ruffed grouse observed	191	-32	-33
Young per 100 adults	298	+22	- 1
Mean brood size	4.26	+ 3	- 7
Ruffed grouse observed per 100 hours	23	- 8	-41
Total hours effort (Forest Grouse)	843	-24	+ 3

Harvest statistics for 1976 indicated an increased breeding population for 1977.

Effort on brood surveys decreased in comparison to 1976 but remained average.

Total ruffed grouse observed decreased from 1976 and was well below average. The density index (grouse observed per 100 hours) was slightly below 1976 and far below average.

Mean brood size, based on a small sample of 30 broods, increased somewhat.

### Blue Grouse

Results of the annual random brood survey for 1977 are shown in Table 5 of this section. Long-term trends of young-adult ratios, mean brood size and blue grouse observed per 100 hours are found in Tables 6-8. Survey results for 1977 compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total blue grouse observed	439	-51	-26
Young per 100 adults	181	-36	-34
Mean brood size	4.00	- 7	-14
Blue grouse observed per 100 hours	52	-36	-32
Total hours effort (Forest Grouse)	843	-24	+ 3

Harvest statistics for 1976 indicated an increased breeding population for 1977.

All indications from the 1977 summer surveys on blue grouse were that production was very poor. Despite the indicated increase in breeding population, the total number of grouse observed decreased by over 50 percent. The young per 100 adult ratio and number of grouse observed per 100 hours effort both decreased by over one-third.

Casual observation from the field and the summer inventory both indicated a substantially reduced fall blue grouse population. Wing samples collected at checking stations in northern Utah confirmed the low production with the adult:juvenile ratio being the lowest recorded since 1968 when collection of wing data commenced.

## Harvest

### Hunter Questionnaire

Results of the 1977 forest grouse (ruffed and blue grouse combined) hunter questionnaire are shown in Table 10. 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 11-13 and total statewide harvest statistics in Table 14. Harvest statistics for 1977 compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Forest grouse hunters	19,188	- 9	+36
Forest grouse harvested	42,476	-33	+36
Hunter-days afield	48,746	-14	+64
Forest grouse per hunter-day	0.87	-22	-17
Forest grouse per hunter	2.21	-26	0
Percent ruffed grouse	37.1	0	- 9
Percent blue grouse	55.2	- 2	+ 6
Percent unidentified	7.7	+15	+ 7

Results from the harvest questionnaire confirmed the low population level indicated by summer surveys. Although the total number of forest grouse hunters afield decreased by only 9 percent, the total statewide harvest decreased by one-third. A reduction in harvest was evident for both species of forest grouse.

### Field Bag Checks

A summary of field bag check data for 1977 is found in Table 15. Hunter success trends determined via this method are shown in Table 16. Results of the 1977 survey compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1977</u>	<u>Average</u>
Total hunters checked	1,924	-36	+58
Total hours hunted	7,225	-38	+45
Forest grouse per hunter (complete hunts)	0.28	-58	-61
Forest grouse bagged per 100 hours	7	-58	-63
Average hours per hunter-day (complete hunts)	3.9	- 5	- 7
Hours hunted per grouse bagged	13.6	+123	+142

Field bag checks mirrored the results of the harvest questionnaire. Pressure, harvest and success were all down markedly. Poor opening weekend weather in northern Utah combined with low grouse populations caused field bag check data (the majority of bag checks were collected the opening weekend) to show even poorer hunter success than indicated by the questionnaire.

Forest grouse bagged per hunter and per hunter-day.

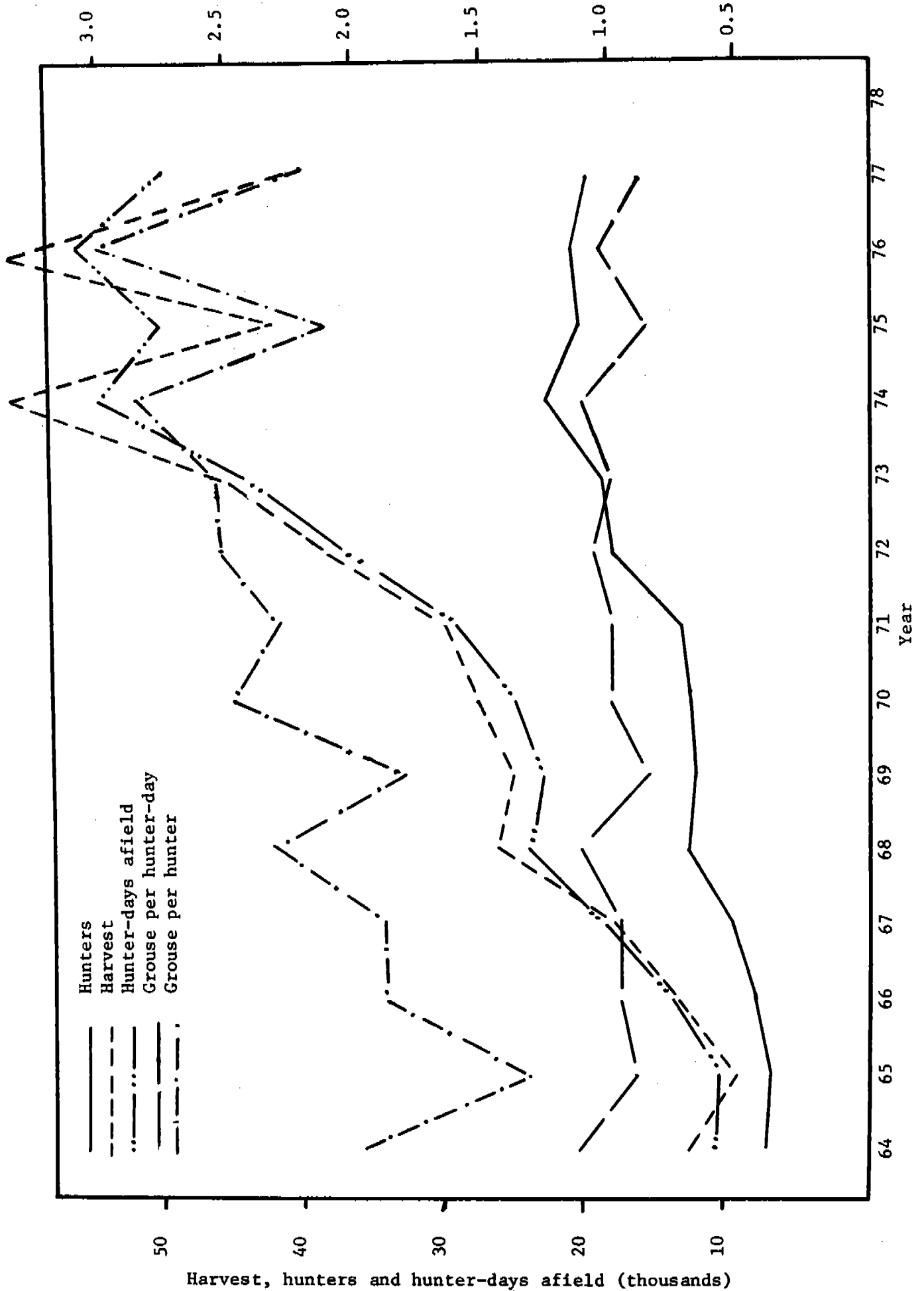


Figure 1. Statewide trends of forest grouse harvest statistics.



Table 1. Ruffed grouse summer inventory, 1977.

Region & County	Distinct Broods		Mean Brood	Mixed Yng. & Ad.		Adults w/o Yng.	Total Adults	Total Young	Young/100 Ad.	Grouse/100 Hrs.
	No. Adult	Yng.		Adults	Young					
<u>Northern Region</u>										
Box Elder	--	--	--	--	--	--	--	--	--	--
Cache	6	24	4.00	0	0	2	8	24	300	50
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--
Summit	4	19	4.75	0	0	0	4	19	475	144
Weber	2	8	4.00	0	0	0	2	8	400	111
<b>REGIONAL TOTALS</b>	<b>12</b>	<b>12</b>	<b>4.25</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>14</b>	<b>51</b>	<b>364</b>	<b>49</b>
<u>Central Region</u>										
Juab	--	--	--	--	--	--	--	--	--	--
Salt Lake	0	0	--	0	0	1	1	0	0	4
Sanpete	9	40	4.44	7	15	3	19	55	289	125
Tooele	0	0	--	0	0	0	0	0	--	0
Utah	3	9	3.00	0	0	3	6	9	150	25
Wasatch	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>12</b>	<b>12</b>	<b>4.08</b>	<b>7</b>	<b>15</b>	<b>7</b>	<b>26</b>	<b>64</b>	<b>246</b>	<b>56</b>
<u>Southern Region</u>										
Beaver	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	4	23	5.75	0	0	0	4	23	575	12
Washington	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>4</b>	<b>4</b>	<b>5.75</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>23</b>	<b>575</b>	<b>9</b>
<u>Northeastern Region</u>										
Daggett	0	0	0.00	0	0	0	0	0	--	0
Duchesne	1	2	2.00	0	0	2	3	2	67	9
Uintah	0	0	--	0	0	0	0	0	--	0
<b>REGIONAL TOTALS</b>	<b>1</b>	<b>1</b>	<b>2.00</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>67</b>	<b>4</b>
<u>Southeastern Region</u>										
Carbon	1	1	3.00	0	0	0	1	3	300	7
Emery	0	0	--	0	0	0	0	0	--	0
Grand	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>1</b>	<b>1</b>	<b>3.00</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>300</b>	<b>3</b>
<b>STATE TOTALS</b>	<b>30</b>	<b>30</b>	<b>4.26</b>	<b>7</b>	<b>15</b>	<b>11</b>	<b>48</b>	<b>143</b>	<b>298</b>	<b>23</b>

Table 2. Trend of ruffed grouse young per 100 adults ratios, 1967-77.

Region & County	Year											Average 1962-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	400	0	--	--	--	--	--	0	250	250	--	--
Cache	425	225	321	468	383	900	--	300	329	300	300	300
Davis	600	400	0	--	--	388	--	--	--	--	--	--
Morgan	--	--	200	400	540	--	400	--	--	500	--	--
Rich	300	150	--	--	--	375	600	--	317	300	--	--
Summit	--	500	333	500	514	650	333	500	217	250	475	400
Weber	--	450	143	--	340	--	450	--	--	--	364	359
<b>REGIONAL TOTALS</b>	<b>427</b>	<b>292</b>	<b>260</b>	<b>471</b>	<b>426</b>	<b>453</b>	<b>417</b>	<b>369</b>	<b>286</b>	<b>245</b>	<b>364</b>	<b>359</b>
<u>Central Region</u>												
Juab	550	275	333	470	325	--	300	400	500	100	--	--
Salt Lake	0	150	133	470	100	--	--	125	--	167	0	0
Sanpete	228	259	171	300	240	329	264	195	233	387	289	289
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	450	433	267	256	300	475	125	313	57	56	150	150
Wasatch	450	--	--	--	--	300	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>333</b>	<b>236</b>	<b>214</b>	<b>331</b>	<b>242</b>	<b>358</b>	<b>231</b>	<b>221</b>	<b>164</b>	<b>273</b>	<b>246</b>	<b>264</b>
<u>Southern Region</u>												
Beaver	--	--	97	--	200	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	200	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	0	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	225	183	280	--	--	--	--	--	--	--
Piute	--	--	--	--	300	--	--	--	--	--	--	--
Sevier	243	425	400	533	221	333	311	500	233	--	575	575
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	200	--	--	--	367	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>189</b>	<b>425</b>	<b>139</b>	<b>300</b>	<b>235</b>	<b>333</b>	<b>325</b>	<b>147</b>	<b>233</b>	<b>--</b>	<b>575</b>	<b>283</b>
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	500	--	--
Duchesne	--	450	800	225	--	367	--	333	600	124	67	67
Uintah	--	0	700	250	375	--	600	--	--	500	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>386</b>	<b>766</b>	<b>233</b>	<b>375</b>	<b>367</b>	<b>--</b>	<b>400</b>	<b>600</b>	<b>195</b>	<b>67</b>	<b>424</b>
<u>Southeastern Region</u>												
Carbon	--	40	--	0	--	--	--	480	200	350	300	300
Emery	--	350	400	700	500	--	300	400	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>128</b>	<b>400</b>	<b>489</b>	<b>500</b>	<b>--</b>	<b>300</b>	<b>467</b>	<b>200</b>	<b>350</b>	<b>300</b>	<b>360</b>
<b>STATE TOTALS</b>	<b>335</b>	<b>268</b>	<b>219</b>	<b>372</b>	<b>308</b>	<b>385</b>	<b>297</b>	<b>267</b>	<b>241</b>	<b>244</b>	<b>298</b>	<b>300</b>

Table 3. Trend of ruffed grouse mean brood size, 1967-77.

Region & County	Year											Average 1962-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	4.00	--	--	--	--	--	--	--	5.00	2.50	--	--
Cache	6.38	2.00	4.09	4.78	5.55	9.00	--	5.00	3.83	3.00	4.00	--
Davis	6.00	4.00	--	--	--	4.80	--	--	--	--	--	--
Morgan	--	--	4.67	4.00	6.75	--	4.00	--	--	5.00	--	--
Rich	3.00	3.00	--	--	--	3.75	6.00	--	4.75	3.00	--	--
Summit	--	5.00	6.00	5.00	6.00	6.50	5.00	5.00	3.00	4.00	4.75	--
Weber	--	4.50	2.50	--	8.00	--	4.50	--	--	--	4.00	--
<b>REGIONAL TOTALS</b>	5.82	4.00	4.30	4.79	6.09	5.08	5.00	4.54	4.00	3.08	4.25	4.71
<u>Central Region</u>												
Juab	6.60	5.33	4.00	4.67	4.33	--	3.00	4.00	5.00	2.00	--	--
Salt Lake	--	--	4.00	4.67	4.00	--	4.00	--	--	5.00	--	--
Sanpete	3.89	3.54	4.67	4.64	5.50	4.67	4.60	3.00	4.50	5.36	4.44	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	4.60	4.33	3.80	7.00	3.75	4.75	5.00	4.25	4.00	2.00	3.00	--
Wasatch	4.50	--	--	--	--	3.00	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	4.76	4.00	4.17	4.78	4.75	4.55	4.43	3.44	4.50	4.94	4.08	4.47
<u>Southern Region</u>												
Beaver	--	--	6.00	--	5.00	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	2.00	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	2.25	--	4.67	--	--	--	--	--	--	--
Piute	--	--	--	--	3.00	--	--	--	--	--	--	--
Sevier	4.25	4.25	4.00	--	3.83	4.29	4.00	5.00	2.33	--	5.75	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	2.00	--	--	--	5.50	--	--	--	--	--
<b>REGIONAL TOTALS</b>	4.25	4.25	3.30	--	4.08	4.29	4.33	4.40	2.33	--	5.75	3.85
<u>Northeastern Region</u>												
Daggett	--	--	--	--	--	--	--	--	--	5.00	--	--
Duchesne	--	4.50	8.00	3.00	--	3.67	--	3.33	6.00	3.50	2.00	--
Uintah	--	--	7.00	2.50	5.00	--	--	6.00	--	5.00	--	--
<b>REGIONAL TOTALS</b>	--	4.50	7.67	2.80	5.00	3.67	--	4.00	6.00	4.10	2.00	4.72
<u>Southeastern Region</u>												
Carbon	--	2.00	--	--	--	--	--	4.80	2.00	3.50	3.00	--
Emery	--	3.50	3.00	7.00	5.00	--	5.00	4.00	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	3.00	3.00	7.00	5.00	--	5.00	4.67	2.00	3.50	3.00	4.50
<b>STATE TOTALS</b>	5.33	4.05	4.24	4.66	5.16	4.61	4.58	4.09	3.87	4.12	4.26	4.56

Table 4. Trend of ruffed grouse observed per 100 hours, 1967-77.

Region & County	Year											Averages	
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1967-76	1967-76
<u>Northern Region</u>													
Box Elder	--	2	--	--	--	--	--	2	54	50	--	--	--
Cache	--	54	83	270	67	14	--	34	45	13	50	--	--
Davis	--	31	3	--	--	244	--	0	0	10	--	--	--
Morgan	--	--	58	62	128	--	--	136	0	33	--	--	--
Rich	--	62	--	--	--	--	--	--	--	27	--	--	--
Summit	--	40	63	42	108	100	140	185	46	100	144	--	--
Weber	--	92	44	--	73	--	62	--	--	0	111	--	--
<b>REGIONAL TOTALS</b>	<b>37</b>	<b>33</b>	<b>50</b>	<b>80</b>	<b>77</b>	<b>39</b>	<b>24</b>	<b>49</b>	<b>41</b>	<b>20</b>	<b>49</b>	<b>45</b>	<b>45</b>
<u>Central Region</u>													
Juab	206	500	158	179	142	--	33	250	27	40	--	--	--
Salt Lake	--	111	20	47	16	--	0	30	0	20	4	--	--
Sanpete	87	316	158	143	167	240	129	124	69	181	125	--	--
Tooele	--	--	--	--	--	--	0	0	0	0	0	--	--
Utah	21	61	63	32	40	37	23	73	32	19	25	--	--
Wasatch	100	--	--	--	0	50	--	--	0	0	--	--	--
<b>REGIONAL TOTALS</b>	<b>58</b>	<b>395</b>	<b>78</b>	<b>81</b>	<b>85</b>	<b>84</b>	<b>50</b>	<b>71</b>	<b>23</b>	<b>64</b>	<b>56</b>	<b>99</b>	<b>99</b>
<u>Southern Region</u>													
Beaver	--	--	314	--	250	--	--	0	--	--	--	--	--
Garfield	--	--	--	--	--	--	0	38	0	--	0	--	--
Iron	--	--	--	--	--	--	--	0	0	--	0	--	--
Kane	--	--	--	--	--	--	0	--	0	--	0	--	--
Millard	--	--	--	213	317	--	0	0	--	--	0	--	--
Piute	--	--	--	--	267	--	--	--	0	--	0	--	--
Sevier	--	--	--	--	28	22	10	8	2	--	12	--	--
Washington	--	--	--	--	--	--	--	0	0	--	0	--	--
Wayne	--	--	--	--	--	--	117	0	--	--	0	--	--
<b>REGIONAL TOTALS</b>	<b>78</b>	<b>--</b>	<b>314</b>	<b>62</b>	<b>35</b>	<b>15</b>	<b>12</b>	<b>8</b>	<b>2</b>	<b>--</b>	<b>9</b>	<b>67</b>	<b>67</b>
<u>Northeastern Region</u>													
Daggett	--	--	--	--	0	--	0	0	0	20	0	--	--
Duchesne	--	157	58	29	0	28	0	30	11	47	9	--	--
Uintah	--	20	88	18	83	--	0	16	0	62	0	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>119</b>	<b>65</b>	<b>23</b>	<b>83</b>	<b>10</b>	<b>0</b>	<b>20</b>	<b>5</b>	<b>44</b>	<b>4</b>	<b>41</b>	<b>41</b>
<u>Southeastern Region</u>													
Carbon	--	61	--	5	0	--	0	53	33	12	7	--	--
Emery	--	16	30	16	46	--	67	42	0	--	0	--	--
Grand	--	--	--	--	--	--	0	--	0	--	--	--	--
San Juan	--	--	--	--	--	--	0	0	0	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>--</b>	<b>17</b>	<b>30</b>	<b>12</b>	<b>46</b>	<b>--</b>	<b>28</b>	<b>26</b>	<b>11</b>	<b>7</b>	<b>3</b>	<b>22</b>	<b>22</b>
<b>STATE TOTALS</b>	<b>48</b>	<b>70</b>	<b>59</b>	<b>55</b>	<b>54</b>	<b>28</b>	<b>18</b>	<b>28</b>	<b>12</b>	<b>25</b>	<b>23</b>	<b>39</b>	<b>39</b>

Table 5. Blue grouse summer inventory summary, 1977.

Region & County	Distinct Broods		Mean		Mixed Yng. & Ad.		Adults w/o Yng.	Total Adults	Total Young	Young/100 Ad.	Grouse/100 Hrs.
	No.	Adult Yng.	Brood	Adults	Young	Ad.					
<u>Northern Region</u>											
Box Elder	--	--	--	--	--	--	--	--	--	--	--
Cache	5	17	3.40	2	3	13	20	20	100	62	
Davis	3	11	3.67	2	5	0	5	16	320	84	
Morgan	5	14	2.80	0	0	7	12	14	117	173	
Rich	--	--	--	--	--	--	--	--	--	--	
Summit	2	10	5.00	0	0	1	3	10	333	81	
Weber	3	12	4.00	0	0	0	3	12	400	167	
REGIONAL TOTALS	18	64	3.56	4	8	21	43	72	167	87	
<u>Central Region</u>											
Juab	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	4	19	4.75	0	0	4	8	19	238	112	
Sanpete	3	13	4.33	0	0	2	5	13	260	31	
Tooele	2	5	2.50	5	9	10	17	14	82	172	
Utah	2	3	1.50	0	0	9	11	3	27	23	
Wasatch	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	11	40	3.64	5	9	25	41	49	120	56	
<u>Southern Region</u>											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	1	6	6.00	0	0	1	2	6	300	53	
Iron	0	0	--	0	0	0	0	0	--	0	
Kane	0	0	--	0	0	0	0	0	--	0	
Millard	1	7	7.00	0	0	0	1	7	700	133	
Piute	0	0	--	0	0	0	0	0	--	0	
Sevier	7	30	4.29	0	0	28	35	30	86	28	
Washington	0	0	--	0	0	0	0	0	--	0	
Wayne	1	6	6.00	2	11	0	3	17	567	2,000	
REGIONAL TOTALS	10	49	4.90	2	11	29	41	60	146	35	
<u>Northeastern Region</u>											
Daggett	6	22	3.67	0	0	0	6	22	367	89	
Duchesne	9	38	4.22	0	0	1	10	38	380	84	
Uintah	2	7	3.50	0	0	0	2	7	350	20	
REGIONAL TOTALS	17	67	3.94	0	0	1	18	67	372	63	
<u>Southeastern Region</u>											
Carbon	4	19	4.75	0	1	0	4	20	500	44	
Emery	1	3	3.00	0	0	0	1	3	300	40	
Grand	1	6	6.00	0	0	1	2	6	300	62	
San Juan	1	4	4.00	2	2	3	6	6	100	24	
REGIONAL TOTALS	7	32	4.57	2	3	4	13	35	269	38	
STATE TOTALS	63	252	4.00	13	31	80	156	283	181	52	

Table 6. Trend of blue grouse young per 100 adults ratios, 1967-77.

Region & County	Year											Average 1963-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	133	382	222	389	--	500	--	236	100	429	--	
Cache	350	318	154	316	245	288	192	357	356	331	100	
Davis	400	138	250	--	520	82	--	300	0	150	320	
Morgan	--	--	500	600	533	250	375	300	130	341	117	
Rich	333	--	--	300	--	300	--	--	167	500	--	
Summit	450	--	400	433	600	533	314	--	143	333	333	
Weber	500	500	325	--	557	68	700	625	0	400	400	
<b>REGIONAL TOTALS</b>	<b>193</b>	<b>289</b>	<b>248</b>	<b>361</b>	<b>305</b>	<b>191</b>	<b>222</b>	<b>305</b>	<b>194</b>	<b>333</b>	<b>167</b>	<b>300</b>
<u>Central Region</u>												
Juab	300	--	383	--	--	--	50	--	500	--	--	
Salt Lake	0	--	175	900	67	--	0	300	25	333	238	
Sanpete	267	467	--	283	425	156	300	--	--	325	260	
Tooele	800	400	--	--	--	--	143	179	86	227	82	
Utah	275	267	230	314	422	375	415	222	0	300	27	
Wasatch	333	360	--	550	450	600	--	333	400	400	--	
<b>REGIONAL TOTALS</b>	<b>326</b>	<b>337</b>	<b>231</b>	<b>389</b>	<b>324</b>	<b>321</b>	<b>285</b>	<b>218</b>	<b>92</b>	<b>277</b>	<b>120</b>	<b>334</b>
<u>Southern Region</u>												
Beaver	--	238	--	--	--	--	--	500	--	--	--	
Garfield	--	140	--	100	600	133	--	--	400	100	300	
Iron	--	400	8	--	267	--	--	150	--	--	--	
Kane	233	--	--	150	200	240	211	--	--	--	--	
Millard	--	--	--	--	280	67	--	450	--	--	700	
Plute	--	200	--	--	--	--	--	--	--	200	--	
Sevier	67	--	--	140	136	100	100	320	233	106	86	
Washington	366	--	38	170	--	271	533	350	--	500	--	
Wayne	--	--	182	--	--	--	--	400	--	275	567	
<b>REGIONAL TOTALS</b>	<b>160</b>	<b>224</b>	<b>75</b>	<b>135</b>	<b>213</b>	<b>149</b>	<b>192</b>	<b>313</b>	<b>246</b>	<b>142</b>	<b>146</b>	<b>168</b>
<u>Northeastern Region</u>												
Daggett	--	150	350	--	--	286	286	567	--	487	367	
Duchesne	200	257	433	--	400	275	600	300	350	431	380	
Uintah	666	--	480	400	167	557	500	250	300	525	350	
<b>REGIONAL TOTALS</b>	<b>555</b>	<b>186</b>	<b>414</b>	<b>400</b>	<b>225</b>	<b>339</b>	<b>344</b>	<b>311</b>	<b>320</b>	<b>461</b>	<b>372</b>	<b>375</b>
<u>Southeastern Region</u>												
Carbon	--	138	--	0	167	92	--	243	167	321	500	
Emery	300	250	--	450	300	--	667	--	--	--	300	
Grand	--	--	--	--	--	114	0	43	200	110	300	
San Juan	200	400	456	153	386	375	--	242	200	155	100	
<b>REGIONAL TOTALS</b>	<b>250</b>	<b>288</b>	<b>456</b>	<b>139</b>	<b>310</b>	<b>216</b>	<b>333</b>	<b>188</b>	<b>189</b>	<b>209</b>	<b>269</b>	<b>274</b>
<b>STATE TOTALS</b>	<b>246</b>	<b>268</b>	<b>235</b>	<b>253</b>	<b>292</b>	<b>224</b>	<b>237</b>	<b>284</b>	<b>195</b>	<b>281</b>	<b>181</b>	<b>273</b>

Table 7. Trend of blue grouse mean brood size, 1967-77

Region & County	Year											Average 1962-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	3.67	4.43	5.54	3.83	--	5.00	--	5.06	3.00	5.75	--	--
Cache	4.67	4.38	3.35	4.28	5.18	5.50	4.66	4.95	5.30	4.48	3.40	3.40
Davis	4.00	4.50	7.00	--	6.25	2.67	--	--	--	4.00	3.67	3.67
Morgan	--	--	5.00	6.00	5.33	5.33	5.50	4.62	3.25	4.45	2.80	2.80
Rich	3.33	--	--	3.00	--	4.50	--	--	5.00	5.00	--	--
Summit	4.50	--	8.00	4.33	6.00	5.33	4.40	--	2.75	5.00	5.00	5.00
Weber	4.00	5.00	4.75	--	6.50	4.75	7.00	6.25	--	6.00	4.00	4.00
REGIONAL TOTALS	4.10	4.50	4.51	4.21	5.54	4.96	4.79	5.00	4.25	4.67	3.56	4.80
<u>Central Region</u>												
Juab	3.00	--	4.60	--	--	--	1.00	--	5.00	--	--	--
Salt Lake	--	--	4.40	9.00	2.00	--	--	6.00	1.00	5.00	4.75	4.75
Sanpete	4.00	4.67	--	2.83	4.25	2.80	3.00	--	--	3.25	4.33	4.33
Tooele	8.00	4.00	--	--	--	--	6.00	4.40	3.50	3.45	2.50	2.50
Utah	5.00	3.40	4.67	5.50	4.22	4.22	5.38	5.00	--	4.29	1.50	1.50
Wasatch	10.00	3.60	--	5.50	4.50	6.00	--	5.00	4.00	4.00	--	--
REGIONAL TOTALS	4.78	3.80	4.54	4.67	4.00	4.12	4.54	4.83	3.40	3.97	3.64	4.50
<u>Southern Region</u>												
Beaver	--	3.75	--	--	--	--	--	5.00	--	--	--	--
Garfield	--	2.00	--	3.00	6.00	4.00	--	--	6.00	--	6.00	6.00
Iron	--	4.00	--	--	8.00	--	--	3.00	--	--	--	--
Kane	--	--	--	3.00	6.00	3.33	6.33	--	--	--	--	--
Millard	--	--	--	--	4.67	2.00	--	4.50	--	--	7.00	7.00
Piute	--	2.00	--	--	--	--	--	--	--	2.00	--	--
Sevier	2.00	--	1.50	--	3.00	2.62	3.00	5.89	3.82	3.17	4.29	4.29
Washington	6.00	--	4.00	3.40	--	4.00	5.33	3.50	--	5.00	--	--
Wayne	--	--	--	--	--	--	--	4.00	--	5.50	6.00	6.00
REGIONAL TOTALS	3.00	3.22	5.50	3.25	4.45	3.06	4.55	5.31	4.00	3.50	4.90	3.74
<u>Northeastern Region</u>												
Daggett	--	--	3.50	--	--	5.00	5.00	5.67	--	4.88	3.67	3.67
Duchesne	2.00	9.00	4.33	--	4.00	4.71	6.00	4.22	7.00	4.60	4.22	4.22
Uintah	6.67	--	6.00	5.50	2.50	6.50	5.00	5.00	4.50	5.25	3.50	3.50
REGIONAL TOTALS	5.50	9.00	4.46	5.50	3.00	5.21	5.20	4.71	5.33	4.78	3.94	5.27
<u>Southeastern Region</u>												
Carbon	--	4.00	--	--	5.00	6.00	--	3.40	3.33	4.25	4.75	4.75
Emery	6.00	5.00	--	4.50	3.00	--	6.67	--	--	--	3.00	3.00
Grand	--	--	--	--	--	2.67	--	1.50	4.00	3.67	6.00	6.00
San Juan	4.00	4.33	5.20	4.00	5.25	6.17	--	4.83	3.50	3.40	4.00	4.00
REGIONAL TOTALS	5.00	4.33	5.20	4.20	4.82	5.50	6.67	3.77	3.57	3.88	4.57	4.84
STATE TOTALS	4.42	4.24	4.46	4.28	4.86	4.64	4.81	4.88	4.05	4.29	4.00	4.64

Table 8. Trend of blue grouse observed per 100 hours, 1967-77.

Region & County	Year											Average 1963-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	--	129	412	99	--	35	0	273	46	132	--	
Cache	--	192	146	198	171	133	409	271	124	75	62	
Davis	--	194	170	--	194	125	--	80	10	52	84	
Morgan	--	--	50	88	76	125	173	400	35	417	173	
Rich	--	--	--	33	--	39	0	--	--	40	--	
Summit	--	--	32	56	18	127	138	8	83	93	81	
Weber	--	150	364	--	153	147	--	--	125	62	167	
<b>REGIONAL TOTALS</b>	<b>63</b>	<b>103</b>	<b>127</b>	<b>97</b>	<b>135</b>	<b>111</b>	<b>266</b>	<b>274</b>	<b>80</b>	<b>94</b>	<b>87</b>	<b>135</b>
<u>Central Region</u>												
Juab	138	--	175	--	0	--	25	0	27	0	--	
Salt Lake	2	--	64	28	20	--	20	27	14	98	112	
Sanpete	68	68	--	43	34	92	39	0	0	27	31	
Tooele	675	500	--	--	--	--	94	144	108	354	172	
Utah	32	106	38	63	94	92	172	64	118	54	23	
Wasatch	100	87	--	260	1,100	262	--	433	36	250	--	
<b>REGIONAL TOTALS</b>	<b>64</b>	<b>97</b>	<b>52</b>	<b>57</b>	<b>51</b>	<b>98</b>	<b>95</b>	<b>57</b>	<b>29</b>	<b>91</b>	<b>56</b>	<b>69</b>
<u>Southern Region</u>												
Beaver	--	88	--	--	--	--	--	300	--	--	--	
Garfield	--	240	--	86	45	10	0	25	56	16	53	
Iron	--	143	140	15	42	--	--	167	--	--	0	
Kane	--	--	--	111	51	--	76	--	0	--	0	
Millard	--	--	--	--	317	83	0	122	--	--	133	
Piute	--	54	--	--	--	--	--	--	0	75	0	
Sevier	--	--	38	--	16	23	7	40	21	34	28	
Washington	--	--	86	174	--	260	--	129	0	55	0	
Wayne	--	--	--	--	--	--	8	--	--	375	2,000	
<b>REGIONAL TOTALS</b>	<b>116</b>	<b>102</b>	<b>56</b>	<b>162</b>	<b>29</b>	<b>37</b>	<b>18</b>	<b>47</b>	<b>21</b>	<b>40</b>	<b>35</b>	<b>63</b>
<u>Northeastern Region</u>												
Daggett	--	1,400	193	--	0	146	45	182	0	157	88	
Duchesne	10	119	33	--	13	90	13	130	14	105	84	
Uintah	255	--	156	41	35	87	19	78	27	86	20	
<b>REGIONAL TOTALS</b>	<b>51</b>	<b>210</b>	<b>150</b>	<b>41</b>	<b>18</b>	<b>104</b>	<b>27</b>	<b>112</b>	<b>15</b>	<b>112</b>	<b>63</b>	<b>84</b>
<u>Southeastern Region</u>												
Carbon	--	543	9	32	80	258	0	44	35	77	44	
Emery	29	12	--	12	31	--	77	0	0	--	40	
Grand	--	--	--	--	13	103	19	25	33	68	62	
San Juan	75	158	196	211	178	238	0	158	53	108	24	
<b>REGIONAL TOTALS</b>	<b>33</b>	<b>67</b>	<b>98</b>	<b>40</b>	<b>97</b>	<b>216</b>	<b>36</b>	<b>56</b>	<b>39</b>	<b>81</b>	<b>38</b>	<b>76</b>
<b>STATE TOTALS</b>	<b>67</b>	<b>101</b>	<b>84</b>	<b>71</b>	<b>71</b>	<b>95</b>	<b>66</b>	<b>91</b>	<b>33</b>	<b>81</b>	<b>52</b>	<b>76</b>



Table 9. Summary of effort expended on forest grouse brood counts, 1977.

Region & County	Vehicle Miles Traveled	Hours Effort Expended			Total
		Vehicle	Horseback	Walking	
<u>Northern Region</u>					
Box Elder	14	3	0	0	3
Cache	350	31	33	0	64
Davis	256	22	0	3	25
Morgan	0	0	15	0	15
Rich	--	--	--	--	--
Summit	37	6	0	10	16
Weber	80	9	0	0	9
<b>REGIONAL TOTALS</b>	<b>737</b>	<b>71</b>	<b>48</b>	<b>13</b>	<b>132</b>
<u>Central Region</u>					
Juab	--	--	--	--	--
Salt Lake	279	16	0	8	24
Sanpete	478	37	12	10	59
Tooele	63	2	0	16	18
Utah	497	47	4	10	61
Wasatch	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>1,317</b>	<b>102</b>	<b>16</b>	<b>44</b>	<b>162</b>
<u>Southern Region</u>					
Beaver	--	--	--	--	--
Garfield	148	13	0	2	15
Iron	55	4	0	1	5
Kane	114	10	0	0	10
Millard	100	6	0	0	6
Piute	30	3	0	0	3
Sevier	0	0	234	0	234
Washington	163	12	0	0	12
Wayne	0	1	0	0	1
<b>REGIONAL TOTALS</b>	<b>610</b>	<b>49</b>	<b>234</b>	<b>3</b>	<b>286</b>
<u>Northeastern Region</u>					
Daggett	297	21	0	11	32
Duchesne	395	38	7	12	57
Uintah	348	40	4	2	46
<b>REGIONAL TOTALS</b>	<b>1,040</b>	<b>99</b>	<b>11</b>	<b>25</b>	<b>135</b>
<u>Southeastern Region</u>					
Carbon	461	45	5	5	55
Emery	139	10	0	0	10
Grand	133	12	0	1	13
San Juan	346	34	0	16	50
<b>REGIONAL TOTALS</b>	<b>1,079</b>	<b>101</b>	<b>5</b>	<b>22</b>	<b>128</b>
<b>STATE TOTALS</b>	<b>4,783</b>	<b>422</b>	<b>314</b>	<b>107</b>	<b>843</b>

Table 10. Summary of forest grouse hunter success and distribution of harvest and hunting pressure by region and county, 1977.

Region & County	Hunters Reporting	Days Hunted	Birds Bagged			Total	Birds/Day	Birds/Hunter*	% of Pressure	% of Harvest
			Ruffed	Blue	Unident.					
<b>Northern Region</b>										
Box Elder	43	97	33	82	4	119	1.23	1.40	3.00	4.22
Cache	249	614	169	362	33	564	0.92	2.80	18.99	20.01
Davis	59	110	40	52	7	99	0.90	1.76	3.40	3.51
Morgan	40	79	48	48	2	98	1.24	2.50	2.44	3.48
Rich	50	103	23	35	2	60	0.58	0.00	3.18	2.13
Summit	101	229	111	79	10	200	0.87	2.10	7.08	7.10
Weber	118	294	95	200	3	298	1.01	2.85	9.09	10.57
<b>REGIONAL TOTALS</b>	<b>660</b>	<b>1,526</b>	<b>519</b>	<b>858</b>	<b>61</b>	<b>1,438</b>	<b>0.94</b>	<b>2.49</b>	<b>47.19</b>	<b>51.03</b>
<b>Central Region</b>										
Juab	20	35	12	20	2	34	0.97	1.57	1.08	1.21
Salt Lake	40	84	13	36	5	54	0.64	1.75	2.60	1.92
Sanpete	57	138	56	32	13	101	0.73	2.53	4.27	3.58
Tooele	41	81	12	55	3	70	0.86	2.10	2.50	2.48
Utah	176	450	170	185	29	384	0.85	2.21	13.91	13.63
Wasatch	80	166	74	43	8	125	0.75	2.89	5.13	4.44
<b>REGIONAL TOTALS</b>	<b>414</b>	<b>954</b>	<b>337</b>	<b>371</b>	<b>60</b>	<b>768</b>	<b>0.81</b>	<b>1.97</b>	<b>29.50</b>	<b>27.25</b>
<b>Southern Region</b>										
Beaver	5	10	0	2	2	4	0.40	1.00	0.31	0.14
Garfield	5	8	0	0	2	2	0.25	0.80	0.25	0.07
Iron	22	64	8	48	2	58	0.91	2.68	1.98	2.06
Kane	3	4	1	0	1	2	0.50	0.00	0.12	0.07
Millard	10	17	0	21	2	23	1.35	2.00	0.53	0.82
Piute	7	23	4	8	3	15	0.65	1.00	0.71	0.53
Sevier	62	136	51	79	31	161	1.18	3.10	4.21	5.71
Washington	1	2	1	2	0	3	1.50	0.00	0.06	0.11
Wayne	2	3	0	0	3	3	1.00	0.00	0.09	0.11
<b>REGIONAL TOTALS</b>	<b>117</b>	<b>267</b>	<b>65</b>	<b>160</b>	<b>46</b>	<b>271</b>	<b>1.01</b>	<b>2.51</b>	<b>8.26</b>	<b>9.62</b>
<b>Northeastern Region</b>										
Daggett	20	80	7	23	3	33	0.41	1.67	2.47	1.17
Duchesne	31	58	27	17	16	60	1.03	3.10	1.79	2.13
Uintah	28	63	13	27	7	47	0.75	1.38	1.95	1.67
<b>REGIONAL TOTALS</b>	<b>79</b>	<b>201</b>	<b>47</b>	<b>67</b>	<b>26</b>	<b>140</b>	<b>0.70</b>	<b>2.08</b>	<b>6.22</b>	<b>4.97</b>
<b>Southeastern Region</b>										
Carbon	35	106	14	36	18	68	0.64	1.52	3.28	2.41
Emery	20	39	18	12	1	31	0.79	1.80	1.21	1.10
Grand	3	6	1	3	0	4	0.67	0.67	0.19	0.14
San Juan	4	5	0	2	0	2	0.40	1.00	0.15	0.07
<b>REGIONAL TOTALS</b>	<b>62</b>	<b>156</b>	<b>33</b>	<b>53</b>	<b>19</b>	<b>105</b>	<b>0.67</b>	<b>1.45</b>	<b>4.82</b>	<b>3.73</b>
Unknown counties	56	130	45	47	4	96	0.74	0.00	4.02	3.41
Mixed counties	0	0	0	0	0	0	0.00	0.00	0.00	0.00
<b>STATE TOTALS</b>	<b>1,388</b>	<b>3,234</b>	<b>1,046</b>	<b>1,556</b>	<b>216</b>	<b>2,818</b>	<b>0.87</b>	<b>2.21</b>	<b>100</b>	<b>100</b>

\*Based on county of residence.

Table 11. Summary of forest grouse bagged per hunter-day by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	1.32	0.79	0.92	1.12	0.84	1.23
Cache	1.14	1.04	1.39	1.13	1.25	0.92
Davis	0.85	1.31	0.69	0.73	0.84	0.90
Morgan	1.73	1.25	1.29	0.85	0.88	1.24
Rich	1.15	1.18	0.89	0.82	0.75	0.58
Summit	0.77	1.04	1.03	0.80	1.26	0.87
Weber	1.42	0.99	1.14	0.87	1.56	1.01
REGIONAL TOTALS	1.20	1.04	1.19	0.96	1.17	0.94
<u>Central Region</u>						
Juab	0.50	0.69	1.25	0.86	1.09	0.97
Salt Lake	1.26	1.35	1.08	0.70	1.08	0.64
Sanpete	1.40	0.88	1.12	0.65	0.98	0.73
Tooele	0.70	0.70	0.66	0.89	1.02	0.86
Utah	1.13	1.03	1.03	0.71	1.22	0.85
Wasatch	1.00	0.95	0.89	1.00	1.06	0.75
REGIONAL TOTALS	1.10	0.98	1.03	0.76	1.13	0.81
<u>Southern Region</u>						
Beaver	1.00	0.93	0.25	0.53	0.88	0.40
Garfield	0.60	0.27	0.17	0.73	0.68	0.25
Iron	0.71	0.96	0.86	0.68	1.48	0.91
Kane	0.69	0.64	2.00	0.50	0.50	0.50
Millard	0.68	1.42	1.66	0.65	1.55	1.35
Piute	0.20	1.10	0.71	0.33	1.17	0.65
Sevier	0.87	1.18	1.39	0.73	0.66	1.18
Washington	--	2.00	--	0.79	1.00	1.50
Wayne	1.50	0.00	0.63	1.00	1.50	1.00
REGIONAL TOTALS	0.75	1.05	1.14	0.68	0.98	1.01
<u>Northeastern Region</u>						
Daggett	1.37	0.30	1.11	0.50	1.12	0.41
Duchesne	1.23	1.06	0.76	0.72	1.02	1.03
Uintah	0.40	0.85	1.49	0.97	0.87	0.75
REGIONAL TOTALS	0.93	0.83	1.14	0.76	0.96	0.70
<u>Southeastern Region</u>						
Carbon	1.03	1.11	0.79	0.57	1.20	0.64
Emery	1.00	0.50	0.87	0.42	1.50	0.79
Grand	0.67	0.13	0.50	0.83	0.00	0.67
San Juan	2.00	1.20	1.00	0.44	0.00	0.40
REGIONAL TOTALS	1.06	0.90	0.81	0.53	1.18	0.67
Unknown counties	0.57	1.06	1.35	0.89	1.06	0.74
Mixed counties	--	0.00	--	0.00	0.00	0.00
STATE TOTALS	1.09	1.01	1.13	0.84	1.12	0.87

Table 12. Percentage distribution of forest grouse harvest by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	5.01	3.15	3.01	2.75	2.17	4.22
Cache	24.23	27.39	29.84	26.81	26.39	20.01
Davis	2.08	2.47	1.55	3.52	2.93	3.51
Morgan	4.69	3.61	3.29	5.43	2.71	3.48
Rich	3.19	3.27	4.05	3.25	3.03	2.13
Summit	4.31	5.91	4.65	4.82	4.72	7.10
Weber	17.09	6.54	7.85	8.37	9.66	10.57
REGIONAL TOTALS	60.60	52.35	54.24	54.95	51.59	51.03
<u>Central Region</u>						
Juab	0.91	1.01	3.38	1.41	1.53	1.21
Salt Lake	3.35	2.89	2.92	2.37	2.52	1.91
Sanpete	4.10	4.24	4.78	4.05	5.39	3.58
Tooele	0.37	0.80	0.70	1.84	1.40	2.48
Utah	12.14	14.35	12.32	11.24	16.76	13.63
Wasatch	3.51	4.24	4.05	6.08	3.38	4.44
REGIONAL TOTALS	24.39	27.52	28.14	27.00	30.98	27.25
<u>Southern Region</u>						
Beaver	0.48	0.55	0.21	0.69	1.37	0.14
Garfield	0.32	0.13	0.06	0.42	0.41	0.07
Iron	1.28	1.97	0.58	1.80	1.27	2.06
Kane	0.59	0.38	0.06	0.15	0.06	0.07
Millard	0.80	1.55	2.92	1.07	1.63	0.82
Piute	0.11	0.92	0.15	0.23	0.45	0.53
Sevier	2.56	3.61	3.01	4.55	1.59	5.71
Washington	--	0.08	--	0.42	0.19	0.11
Wayne	0.16	0.00	0.15	0.38	0.29	0.11
REGIONAL TOTALS	6.28	9.19	7.15	9.71	7.27	9.62
<u>Northeastern Region</u>						
Daggett	1.17	0.29	0.61	0.80	0.57	1.17
Duchesne	1.97	2.10	1.25	1.26	1.56	2.13
Uintah	0.64	1.17	2.68	2.18	1.69	1.67
REGIONAL TOTALS	3.78	3.56	4.53	4.24	3.82	4.97
<u>Southeastern Region</u>						
Carbon	1.86	3.52	1.34	1.72	1.53	2.41
Emery	0.53	0.59	0.79	0.61	0.38	1.10
Grand	0.11	0.04	0.03	0.19	0.00	0.14
San Juan	0.32	0.25	0.03	0.27	0.00	0.07
REGIONAL TOTALS	2.82	4.40	2.19	2.79	1.91	3.73
Unknown counties	2.13	2.98	3.74	1.30	4.43	3.41
Mixed counties	--	0.00	--	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 13. Percent distribution of forest grouse hunting pressure by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	4.13	4.03	3.71	2.05	2.90	3.00
Cache	23.20	26.68	24.24	19.97	23.79	18.99
Davis	2.67	1.91	2.54	4.04	3.91	3.40
Morgan	2.97	2.93	2.89	5.36	3.48	2.44
Rich	3.02	2.80	5.12	3.34	4.55	3.18
Summit	6.10	5.73	5.12	5.07	4.19	7.08
Weber	13.14	6.66	7.77	8.12	6.95	9.09
REGIONAL TOTALS	55.23	50.72	51.39	47.96	49.77	47.19
<u>Central Region</u>						
Juab	1.98	1.48	3.06	1.38	1.58	1.08
Salt Lake	2.91	2.16	3.06	2.83	2.62	2.60
Sanpete	3.20	4.88	4.81	5.23	6.20	4.27
Tooele	0.58	1.15	1.20	1.73	1.54	2.50
Utah	11.69	14.12	13.51	13.39	15.41	13.91
Wasatch	3.84	4.50	5.16	5.10	3.58	5.13
REGIONAL TOTALS	24.19	28.29	30.80	29.66	30.92	29.50
<u>Southern Region</u>						
Beaver	0.52	0.59	0.96	1.09	1.76	0.31
Garfield	0.58	0.47	0.41	0.48	0.68	0.25
Iron	1.98	2.08	0.76	2.22	0.97	1.98
Kane	0.93	0.59	0.03	0.26	0.14	0.12
Millard	1.28	1.10	1.99	1.38	1.18	0.53
Piute	0.58	0.85	0.24	0.58	0.43	0.71
Sevier	3.20	3.10	2.44	5.20	2.72	4.21
Washington	--	0.04	--	0.45	0.21	0.06
Wayne	0.12	0.00	0.28	0.32	0.21	0.09
REGIONAL TOTALS	9.19	8.82	7.12	11.97	8.31	8.26
<u>Northeastern Region</u>						
Daggett	0.93	0.98	0.62	1.35	0.57	2.47
Duchesne	1.74	1.99	1.86	1.48	1.72	1.79
Uintah	1.74	1.40	2.03	1.89	2.19	1.95
REGIONAL TOTALS	4.42	4.37	4.50	4.72	4.48	6.22
<u>Southeastern Region</u>						
Carbon	1.98	3.22	1.93	2.54	1.43	3.28
Emery	0.58	1.19	1.03	1.22	0.29	1.21
Grand	0.17	0.34	0.07	0.19	0.00	0.19
San Juan	0.17	0.21	0.03	0.51	0.11	0.15
REGIONAL TOTALS	2.91	4.96	3.06	4.46	1.83	4.82
Unknown counties	4.07	2.84	3.13	1.22	4.69	4.02
Mixed counties	--	0.00	--	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 14. State-wide summary of forest grouse harvest statistics, 1961-1977.

Year	Total Harvest			Hunter-days afield			Grouse/hunter-day								
	hunters	Ruffed	%	Blue	%	Unknown	%	Total	Ruffed	Blue	Total				
1961*	256	128	(36.3)	220	(62.3)	5	(1.4)	353	--	--	0.50	0.86	1.38		
1962**	2,386	1,885	(56.3)	1,464	(43.7)	0	(0.0)	3,349	4,276	1.19	0.76	1.96	--		
1963	7,425	5,470	(40.2)	7,372	(54.2)	766	(5.6)	13,608	12,313	0.44	0.66	1.11	0.74	0.99	1.83
1964	6,487	5,354	(42.2)	6,685	(57.7)	652	(5.1)	12,691	10,566	0.51	0.63	1.20	0.82	1.03	1.96
1965	6,005	3,225	(37.2)	4,924	(56.8)	520	(6.0)	8,669	10,504	0.31	0.47	0.83	0.54	0.82	1.44
1966	6,683	6,966	(56.6)	4,659	(37.8)	696	(5.7)	12,321	12,387	0.56	0.38	0.99	1.04	0.68	1.84
1967	9,420	8,476	(48.4)	6,773	(38.6)	2,277	(13.0)	17,526	17,773	0.48	0.38	0.99	0.87	0.69	1.86
1968	13,061	17,048	(52.6)	12,604	(38.9)	2,762	(8.5)	32,414	26,537	0.64	0.47	1.22	1.30	0.96	2.48
1969	12,523	9,490	(44.1)	10,419	(48.5)	1,589	(7.4)	21,498	24,572	0.38	0.42	0.87	0.76	0.83	1.72
1970	12,775	15,590	(48.9)	13,515	(42.4)	2,793	(8.7)	31,898	26,619	0.59	0.51	1.20	1.22	1.06	2.50
1971	13,363	15,759	(49.4)	13,749	(43.1)	2,393	(7.5)	31,901	29,100	0.54	0.47	1.10	1.18	1.03	2.39
1972	16,640	20,648	(48.6)	19,221	(45.2)	2,649	(6.2)	42,518	38,940	0.53	0.49	1.09	1.24	1.16	2.56
1973	17,588	7,153	(15.8)	36,846	(81.4)	1,233	(2.7)	45,232	44,738	0.16	0.82	1.01	0.41	2.09	2.57
1974	21,920	24,561	(39.3)	32,236	(51.6)	5,642	(9.0)	62,439	55,258	0.44	0.58	1.13	1.12	1.47	2.85
1975	20,102	15,750	(37.1)	23,138	(54.5)	3,573	(8.4)	42,461	50,579	0.31	0.45	0.84	0.78	1.15	2.11
1976	21,186	23,551	(37.1)	35,660	(56.2)	4,225	(6.7)	63,436	56,422	0.42	0.63	1.12	1.11	1.68	2.99
1977	19,188	15,766	(37.1)	23,455	(55.2)	3,256	(7.7)	42,476	48,746	0.37	0.48	0.87	0.82	1.22	2.21

TOTALS 207,008 196,820 (40.6)252,939 (52.2) 35,031 (7.2)484,790 465,054 0.42 0.54 1.04 0.95 1.22 2.34  
(1961-77)

AVERAGES

1963-76 14,121 12,789 (40.8) 16,271 (51.9) 2,269 (7.2) 31,330 29,737 0.45 0.53 1.05 0.93 1.11 2.22

\*Estimated

\*\*Totals and indexes based on indiscreet data.

Table 15. Forest grouse field bag check summary, 1977.

Region & County	ALL HUNTS				COMPLETE HUNTS				Birds/ Hunter
	Total Parties	Total Hunters	Total Hours	Total Birds/ 100 Hrs.	Total Hunts	Total Hunters	Total Hours	Total Birds/ 100 Hrs.	
<u>Northern Region</u>									
Box Elder	4	6	22	0	4	6	22	0	0.00
Cache	412	899	3,766	264	405	891	3,735	263	0.30
Davis	4	8	12	1	1	2	5	0	0.00
Morgan	--	--	--	--	--	--	--	--	--
Rich	90	203	848	33	86	194	823	32	0.16
Summit	--	--	--	--	--	--	--	--	--
Weber	45	94	293	22	45	94	293	22	0.23
<b>REGIONAL TOTALS</b>	<b>555</b>	<b>1,210</b>	<b>4,941</b>	<b>320</b>	<b>541</b>	<b>1,187</b>	<b>4,878</b>	<b>317</b>	<b>0.27</b>
<u>Central Region</u>									
Juab	17	32	105	3	11	21	66	2	0.10
Salt Lake	3	5	12	1	2	3	8	1	0.33
Sanpete	2	3	11	1	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	199	434	1,377	109	167	352	1,152	89	0.25
Wasatch	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>221</b>	<b>474</b>	<b>1,505</b>	<b>114</b>	<b>180</b>	<b>376</b>	<b>1,226</b>	<b>92</b>	<b>0.24</b>
<u>Southern Region</u>									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	4	7	9	7	4	7	9	7	1.00
Iron	--	--	--	--	--	--	--	--	--
Kane	3	7	14	5	3	7	14	5	0.71
Millard	8	19	101	13	7	18	97	13	0.72
Piute	--	--	--	--	--	--	--	--	--
Sevier	8	22	74	13	1	4	24	4	1.00
Washington	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>23</b>	<b>55</b>	<b>198</b>	<b>38</b>	<b>15</b>	<b>36</b>	<b>144</b>	<b>29</b>	<b>0.81</b>
<u>Northeastern Region</u>									
Daggett	4	9	36	10	1	3	9	1	0.33
Duchesne	11	26	94	11	6	18	70	7	0.39
Uintah	50	148	449	36	34	96	309	26	0.27
<b>REGIONAL TOTALS</b>	<b>65</b>	<b>183</b>	<b>579</b>	<b>57</b>	<b>41</b>	<b>117</b>	<b>388</b>	<b>34</b>	<b>0.29</b>
<u>Southeastern Region</u>									
Carbon	1	2	2	2	1	2	2	2	1.00
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1.00</b>
<b>STATE TOTALS</b>	<b>865</b>	<b>1,924</b>	<b>7,225</b>	<b>531</b>	<b>778</b>	<b>1,718</b>	<b>6,638</b>	<b>474</b>	<b>0.28</b>

Table 16. Forest grouse hunter success trend determined by field bag checks, 1972-77.

Region & County	1972		1973		1974		1975		1976		1977	
	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
<u>Northern Region</u>												
Box Elder	25	0.78	33	1.00	24	0.96	18	0.79	17	1.36	0	0.00
Cache	20	0.97	18	0.80	12	0.62	12	0.58	18	0.72	7	0.30
Davis	--	--	--	--	--	--	2	0.05	--	--	0	0.00
Morgan	0	0.00	50	0.50	--	--	6	0.32	19	1.25	--	--
Rich	16	0.81	11	0.52	10	0.46	4	0.22	7	0.29	4	0.16
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	22	1.00	15	0.60	12	0.57	7	0.40	17	0.77	8	0.23
<b>REGIONAL TOTALS</b>	19	0.94	17	0.74	12	0.59	10	0.48	17	0.69	6	0.27
<u>Central Region</u>												
Juab	33	1.36	26	1.29	--	--	11	0.21*	22	0.88	3	0.10
Salt Lake	0	0.00	75	1.12	--	--	--	--	--	--	13	0.33
Sanpete	26	0.88	23	0.50	38	1.08*	16	0.28*	14	0.14	--	--
Tooele	33	1.00	9	0.40	31	1.00	--	--	34	1.00	--	--
Utah	27	0.69	26	1.08	27	1.80	12	0.35	14	0.53	8	0.25
Wasatch	--	--	89	2.67	56	1.52	71	1.17	20	0.33	--	--
<b>REGIONAL TOTALS</b>	26	0.75	27	1.11	35	1.24	15	0.38	15	0.56	8	0.24
<u>Southern Region</u>												
Beaver	--	--	0	0.00	--	--	--	--	--	--	--	--
Garfield	--	--	38	1.00	--	--	50	0.33	80	0.57	78	1.00
Iron	--	--	--	--	--	--	36	1.00	--	--	--	--
Kane	51	2.56	73	2.83	--	--	20	--	--	--	36	0.71
Millard	--	--	--	--	--	--	24	0.80	--	--	13	0.72
Piute	12	0.75	47	1.50	--	--	100	2.00	--	--	--	--
Sevier	44	1.36	400	3.00	--	--	31	2.00	18	0.78	17	1.00
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	4	0.33	--	--
<b>REGIONAL TOTALS</b>	42	1.86	63	1.91	--	--	26	1.13	18	0.68	20	0.81
<u>Northeastern Region</u>												
Daggett	21	0.57	--	--	33	0.44	90	2.25	41	4.00	11	0.33
Duchesne	20	0.50	28	1.44	25	0.50	0	--	11	1.22	10	0.39
Uintah	150	1.50	--	--	15	0.54	28	1.32	60	1.31	8	0.27
<b>REGIONAL TOTALS</b>	39	0.85	28	1.44	16	0.53	30	1.48	33	1.50	9	0.29
<u>Southeastern Region</u>												
Carbon	--	--	100	--	--	--	--	--	46	1.00	100	1.00
Emery	--	--	33	1.00	5	0.17	4	0.10*	--	--	--	--
Grand	--	--	75	3.00	17	0.50*	150	3.00	25	1.33	--	--
San Juan	--	--	--	--	17	0.30	67	0.80	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	55	1.67	11	0.25	11	0.30	39	1.08	100	1.00
<b>STATE TOTALS</b>	20	0.95	19	0.80	13	0.59	11	0.50	17	0.67	7	0.28

\*Forest grouse per hunter index based on all hunts.



# QUAIL

## SUMMARY

The 1977 breeding populations of California and Gambel's quail were estimated to be comparable to or slightly higher than 1976.

Production of both Gambel's and California quail decreased from 1976 to much below average. Population densities were lower than 1976 in most areas of the state.

Harvest statistics showed decreased hunter success. Total hunters, total harvest and success were all far below average for both species of quail.



### Brood Count

Results of the annual random brood survey for 1977 are shown in Table 1 of this section. Long-term trends of young-adult ratios, mean brood size and quail observed per 100 hours are shown in Tables 2-4. Survey results for 1977 compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total quail observed	747	-16	-29
Young per 100 adults	112	-31	-52
Mean brood size	6.25	+12	-12
Quail observed per 100 hours	588	+ 3	-11
Total hours effort	127	-18	-21

Harvest statistics for 1976 indicated slightly increased breeding populations of California quail statewide except in northern Utah and slightly increased numbers of Gambel's quail in Washington County.

Gambel quail call counts on the west slope of Beaver Dam Mountains showed a significant decline from 1976. The 1976 counts may have been artificially depressed by being run one week too late and the 1977 counts were even lower.

Production of both California and Gambel's quail was decreased from 1976 and was much below average. The density index (quail observed per 100 hours) indicated decreased abundance throughout the state.

### Harvest

Results of the annual hunter questionnaire for 1977 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.

The 1977 season compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Quail hunters	4,446	-15	-40
Quail harvested	9,496	-34	-56
Hunter-days afield	9,646	-27	-48
Quail per hunter	2.14	-23	-25
Quail per hunter-day	1.15	+ 5	- 1

Total hunters, total harvest and success all decreased during 1977 and were far below average.

Hunter success for Washington County (Gambel's Quail) was down from 1976 and hunting pressure also declined. About 25 percent of the statewide harvest of quail was taken in Washington County during 1977 compared to 40 percent in 1976 and nearly 50 percent in 1975.

Long-term quail harvest statistics are shown in figure 1.

### Gambel's Quail Studies

Annual call-count surveys, long-period waterhole counts and vegetative surveys have been conducted on the west slopes of the Beaver Dam Mountains since 1962.

Call counts showed less than one bird calling per route compared to 2.0 in 1976 and 6.0 in 1975.

Waterhole counts totaled 17 birds during 1977 compared to 114 during 1976 and 165 during 1975.

Vegetative studies were discontinued in 1977.

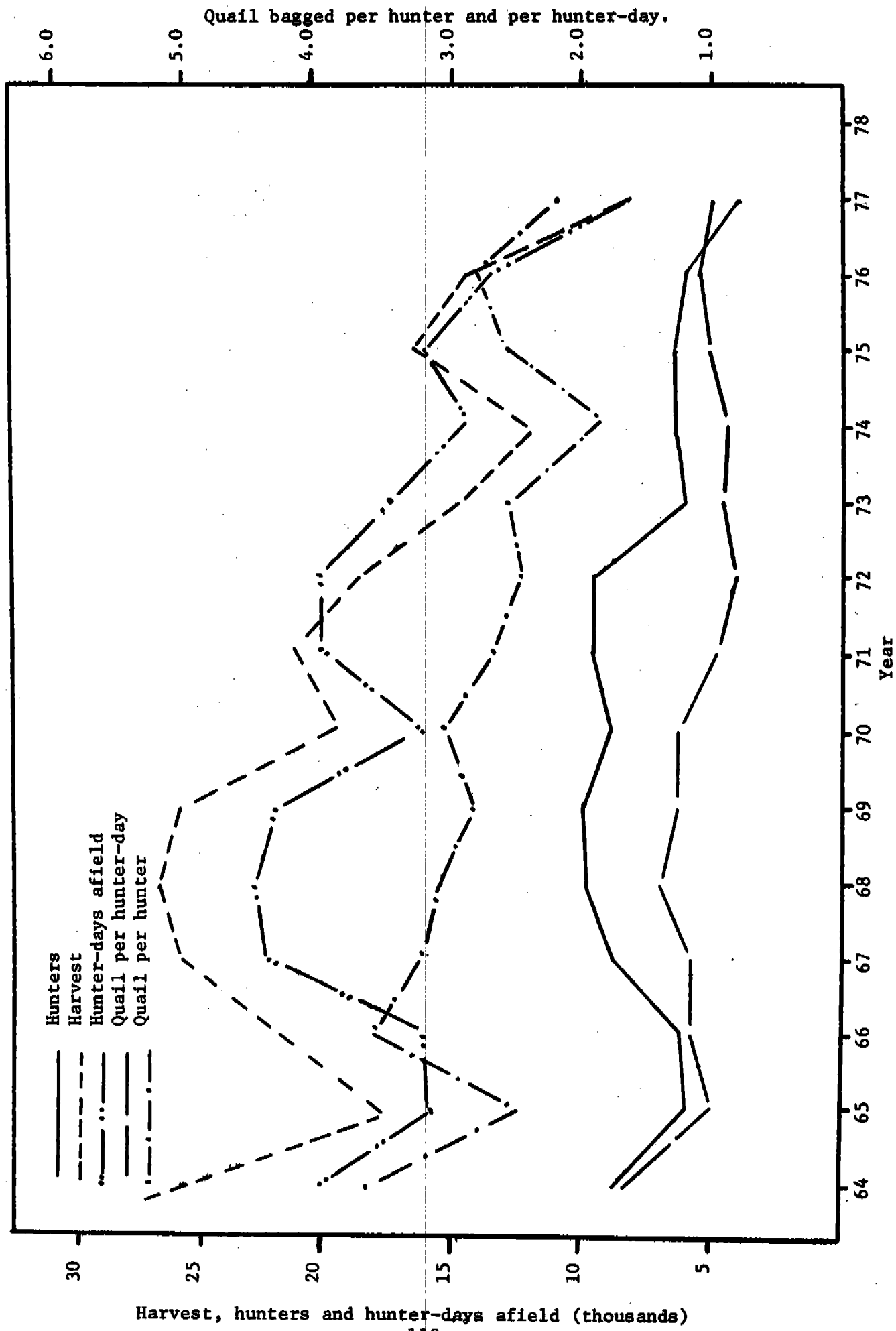


Figure 1. Statewide trend of quail harvest statistics.

Table 1. Quail summer inventory summary, 1977.

Region and County	Distinct Broods		Mixed Yng. & Adults		Adults w/o Yng.	Total Yng.	Total Adults	Total Yng. 100 Ad.	Vehicle Miles	Hours Horse Walk	Effort Total	Birds/100 hrs.
	No. Ad.	Yng.	Mean Brood	Ad. Yng.								
<u>Northern Region</u>												
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	0	0	0	2	4	8	6	8	22	2	0	4
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>8</b>	<b>6</b>	<b>8</b>	<b>22</b>	<b>2</b>	<b>0</b>	<b>4</b>
<u>Central Region</u>												
Juab	0	0	0	0	0	0	0	0	5	0	0	2
Salt Lake	10	20	64	6.40	39	62	87	146	140	12	0	13
Sanpete	3	3	13	4.33	5	10	2	10	149	8	0	14
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	1	1	4	4.00	0	0	4	5	57	8	0	10
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>14</b>	<b>24</b>	<b>81</b>	<b>5.78</b>	<b>44</b>	<b>72</b>	<b>93</b>	<b>161</b>	<b>351</b>	<b>28</b>	<b>0</b>	<b>39</b>
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	6	11	40	6.67	4	3	29	44	140	7	0	8
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	6	12	47	7.83	14	35	29	55	260	23	0	23
Wayne	2	2	26	13.00	10	24	9	21	45	6	0	11
<b>REGIONAL TOTALS</b>	<b>14</b>	<b>25</b>	<b>113</b>	<b>8.07</b>	<b>28</b>	<b>62</b>	<b>67</b>	<b>120</b>	<b>445</b>	<b>36</b>	<b>0</b>	<b>42</b>
<u>Northeastern Region</u>												
Daggett	0	0	0	--	0	0	14	14	--	--	--	--
Duchesne	7	7	24	3.43	3	3	11	21	281	18	0	20
Uintah	3	5	23	7.67	0	0	1	6	60	5	0	6
<b>REGIONAL TOTALS</b>	<b>10</b>	<b>12</b>	<b>47</b>	<b>4.70</b>	<b>3</b>	<b>3</b>	<b>26</b>	<b>41</b>	<b>341</b>	<b>23</b>	<b>0</b>	<b>26</b>
<u>Southeastern Region</u>												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	0	0	0	--	0	0	2	2	60	3	0	3
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	2	2	9	4.50	0	0	20	22	0	0	0	13
<b>REGIONAL TOTALS</b>	<b>2</b>	<b>2</b>	<b>9</b>	<b>4.50</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>24</b>	<b>60</b>	<b>3</b>	<b>0</b>	<b>16</b>
<b>STATE TOTALS</b>	<b>40</b>	<b>63</b>	<b>250</b>	<b>6.25</b>	<b>77</b>	<b>145</b>	<b>212</b>	<b>352</b>	<b>1,219</b>	<b>92</b>	<b>0</b>	<b>127</b>
												<b>588</b>

Table 2. Trend of quail young per 100 adults ratios 1967-77\*

Region & County	Year											Average 1963-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	800	--	--	--	--	--	250	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	5	1,500	400	--	314	--	--	--	--	--	--	--
Morgan	141	153	94	329	300	575	400	640	--	300	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	267	--	450	--	--	--	--	--	--	--	--	--
Weber	--	600	125	0	255	111	50	--	217	0	133	--
<b>REGIONAL TOTALS</b>	<b>83</b>	<b>273</b>	<b>183</b>	<b>230</b>	<b>290</b>	<b>254</b>	<b>230</b>	<b>640</b>	<b>217</b>	<b>180</b>	<b>133</b>	<b>246</b>
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	241	230	360	173	240	114	222	175	154	97	86	--
Sanpete	262	625	327	476	440	500	174	175	300	580	230	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	282	319	300	228	220	275	241	250	229	64	80	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>264</b>	<b>306</b>	<b>337</b>	<b>198</b>	<b>267</b>	<b>143</b>	<b>222</b>	<b>200</b>	<b>188</b>	<b>108</b>	<b>95</b>	<b>247</b>
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
*Kane	625	--	--	1,075	160	--	--	--	--	--	--	--
Millard	--	--	122	--	233	117	0	113	50	146	98	--
Plute	333	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
*Washington	215	323	138	48	320	57	--	273	580	199	149	--
*Wayne	--	400	--	--	0	--	--	86	--	244	238	--
<b>REGIONAL TOTALS</b>	<b>223</b>	<b>324</b>	<b>260</b>	<b>98</b>	<b>270</b>	<b>75</b>	<b>0</b>	<b>171</b>	<b>429</b>	<b>190</b>	<b>146</b>	<b>197</b>
<u>Northeastern Region</u>												
Daggett	--	--	--	524	267	--	0	525	450	600	0	--
Duchesne	171	183	54	0	--	--	--	333	314	0	129	--
Uintah	133	200	138	218	217	165	700	438	475	323	383	--
<b>REGIONAL TOTALS</b>	<b>141</b>	<b>194</b>	<b>123</b>	<b>301</b>	<b>243</b>	<b>165</b>	<b>350</b>	<b>431</b>	<b>411</b>	<b>265</b>	<b>122</b>	<b>246</b>
<u>Southeastern Region</u>												
Carbon	220	200	114	283	125	--	533	--	--	450	--	--
Emery	--	0	--	--	50	438	--	109	0	--	0	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	1,200	--	--	--	--	--	--	--	--	--	41	--
<b>REGIONAL TOTALS</b>	<b>383</b>	<b>150</b>	<b>114</b>	<b>283</b>	<b>100</b>	<b>438</b>	<b>533</b>	<b>109</b>	<b>0</b>	<b>450</b>	<b>38</b>	<b>265</b>
<b>STATE TOTALS</b>	<b>202</b>	<b>302</b>	<b>229</b>	<b>200</b>	<b>255</b>	<b>171</b>	<b>216</b>	<b>248</b>	<b>360</b>	<b>163</b>	<b>112</b>	<b>235</b>

\*Washington, Kane and Wayne counties, Gabel's quail. All others, California quail.

Table 3. Trend of quail mean brood size from 1967-77\*.

Region & County	Year											Average 1959-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	8.00	--	--	--	--	--	5.00	--	--	--	--	--
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	15.00	8.20	--	11.00	--	--	--	--	--	--	--
Morgan	6.00	--	4.80	7.67	12.00	11.50	8.00	9.00	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	8.00	--	7.00	--	--	--	--	--	--	--	--	--
Weber	--	12.00	4.00	--	9.33	10.00	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>6.57</b>	<b>14.25</b>	<b>5.94</b>	<b>7.67</b>	<b>10.50</b>	<b>11.00</b>	<b>7.00</b>	<b>9.00</b>	--	--	--	<b>7.87</b>
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	9.00	6.67	11.42	8.61	7.00	8.00	7.50	5.00	6.80	7.00	6.40	--
Sanpete	6.30	7.50	6.00	5.67	5.70	5.40	5.60	4.00	6.00	5.80	4.33	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	6.80	8.24	8.75	7.85	7.43	7.17	7.36	6.67	7.00	2.50	4.00	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>6.86</b>	<b>7.91</b>	<b>9.67</b>	<b>7.98</b>	<b>6.50</b>	<b>7.18</b>	<b>6.95</b>	<b>5.29</b>	<b>6.56</b>	<b>5.64</b>	<b>5.78</b>	<b>7.23</b>
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
*Kane	--	--	--	--	8.00	--	--	--	--	--	--	--
Millard	--	--	4.00	--	8.00	7.00	--	7.00	8.00	10.20	6.67	--
Piute	4.00	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
*Washington	5.30	7.92	2.90	4.00	6.62	2.67	--	5.17	10.84	6.08	7.83	--
*Wayne	--	--	--	--	--	--	--	9.00	--	9.00	13.00	--
<b>REGIONAL TOTALS</b>	<b>5.34</b>	<b>7.92</b>	<b>3.50</b>	<b>4.00</b>	<b>7.21</b>	<b>3.75</b>	--	<b>6.30</b>	<b>10.63</b>	<b>7.40</b>	<b>8.07</b>	<b>6.74</b>
<u>Northeastern Region</u>												
Daggett	--	--	--	5.29	5.45	--	--	5.25	4.50	6.00	--	--
Duchesne	--	3.67	3.00	--	--	--	--	5.00	--	--	3.43	--
Uintah	6.25	4.80	6.00	5.43	5.33	5.92	7.00	11.00	10.00	3.55	7.67	--
<b>REGIONAL TOTALS</b>	<b>6.25</b>	<b>4.38</b>	<b>5.50</b>	<b>5.32</b>	<b>5.41</b>	<b>5.92</b>	<b>7.00</b>	<b>6.73</b>	<b>6.86</b>	<b>3.67</b>	<b>4.70</b>	<b>6.28</b>
<u>Southeastern Region</u>												
Carbon	3.67	3.00	4.67	--	--	--	8.00	--	--	9.00	--	--
Emery	--	--	--	--	2.00	9.86	--	5.00	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	4.50	--
<b>REGIONAL TOTALS</b>	<b>3.67</b>	<b>3.00</b>	<b>4.67</b>	--	<b>2.00</b>	<b>9.86</b>	<b>8.00</b>	<b>5.00</b>	--	<b>9.00</b>	<b>4.50</b>	<b>6.61</b>
<b>STATE TOTALS</b>	<b>5.80</b>	<b>7.76</b>	<b>6.95</b>	<b>6.97</b>	<b>6.58</b>	<b>7.21</b>	<b>7.04</b>	<b>6.20</b>	<b>9.16</b>	<b>5.58</b>	<b>6.25</b>	<b>7.10</b>

\*Washington, Kane and Wayne counties, Gambel's quail. All others, California quail.

Table 4. Trend of quail observed per 100 hours ratios, 1967-77\*.

Region & County	Year											Average 1967-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	--	--	--	--	--	--	175	--	--	--	--	--
Cache	0	0	--	--	--	--	--	--	--	--	--	--
Davis	727	1,200	1,625	0	829	--	--	--	--	--	--	--
Morgan	189	--	631	1,200	400	1,350	--	925	--	1,200	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	23	--	1,100	--	--	--	--	--	--	--	--	--
Weber	--	65	100	86	300	271	100	--	238	22	350	--
<b>REGIONAL TOTALS</b>	141	577	657	550	471	511	330	925	238	140	350	455
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	0
Salt Lake	1,400	248	3,684	2,637	1,133	2,706	414	550	592	2,838	2,092	--
Sanpete	470	483	427	817	982	771	525	138	480	262	236	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	2,625	1,351	2,086	959	988	1,071	1,194	400	383	512	90	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	1,418	1,330	2,083	1,704	1,030	1,873	808	267	513	1,041	805	1,207
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	66	--	--	--	--	--	--	--	--	--	--	--
*Kane	264	--	--	2,350	578	--	--	--	--	--	--	--
Millard	--	--	1,800	--	3,000	118	125	1,067	1,600	2,867	1,088	--
Piute	400	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
*Washington	673	1,600	322	316	600	122	--	194	1,143	632	596	--
*Wayne	--	--	--	--	33	--	--	300	14	517	645	--
<b>REGIONAL TOTALS</b>	866	1,600	2,122	420	708	90	125	254	917	729	702	784
<u>Northeastern Region</u>												
Daggett	--	--	--	3,017	1,900	--	18	208	157	41	--	--
Duchesne	43	45	170	29	0	--	0	325	153	43	240	--
Uintah	525	514	1,575	894	1,120	1,005	533	1,950	460	715	483	--
<b>REGIONAL TOTALS</b>	146	118	794	628	769	303	47	739	226	241	350	401
<u>Southeastern Region</u>												
Carbon	533	300	377	271	300	--	--	0	--	220	--	--
Emery	--	--	--	--	83	1,950	0	343	17	--	67	--
Grand	--	--	--	--	--	--	--	0	--	--	--	--
San Juan	1,300	--	--	--	--	--	--	--	--	0	238	--
<b>REGIONAL TOTALS</b>	750	300	377	271	181	1,950	112	343	17	110	206	441
<b>STATE TOTALS</b>	525	887	1,049	939	728	664	336	364	549	571	588	662

\*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, 1977.

Region and County	Hunters Reporting	Days Hunted	Birds Bagged	Birds per Hunter-day	Birds per Hunter*	% of Pressure	% of Harvest
<u>Northern Region</u>							
Box Elder	11	13	15	1.15	2.00	2.03	2.38
Cache	4	4	4	1.00	2.00	0.62	0.63
Davis	23	64	51	0.80	1.68	10.00	8.10
Morgan	4	5	6	1.20	0.00	0.78	0.95
Rich	0	0	0	0.00	0.00	0.00	0.00
Summit	2	2	2	1.00	2.33	0.31	0.32
Weber	22	67	42	0.63	2.20	10.47	6.67
REGIONAL TOTALS	66	155	120	0.77	1.94	24.22	19.05
<u>Central Region</u>							
Juab	1	1	0	0.00	0.67	0.16	0.00
Salt Lake	27	57	63	1.11	2.07	8.91	10.00
Sanpete	1	2	3	1.50	0.00	0.31	0.48
Tooele	2	2	3	1.50	2.00	0.31	0.48
Utah	55	103	87	0.84	2.53	16.09	13.81
Wasatch	0	0	0	0.00	2.00	0.00	0.00
REGIONAL TOTALS	86	165	156	0.95	2.31	25.78	24.76
<u>Southern Region</u>							
Beaver	0	0	0	0.00	0.00	0.00	0.00
Garfield	0	0	0	0.00	0.00	0.00	0.00
Iron	1	1	0	0.00	2.00	0.16	0.00
Kane	0	0	0	0.00	0.00	0.00	0.00
Millard	3	8	1	0.13	1.00	1.25	0.16
Piute	2	2	8	4.00	4.00	0.31	1.27
Sevier	5	7	0	0.00	0.17	1.09	0.00
Washington	52	103	168	1.63	0.00	16.09	26.67
Wayne	6	7	6	0.86	0.00	1.09	0.95
REGIONAL TOTALS	69	128	183	1.43	1.64	20.00	29.05
<u>Northeastern Region</u>							
Daggett	0	0	0	0.00	0.00	0.00	0.00
Duchesne	22	46	50	1.09	3.13	7.19	7.94
Uintah	22	67	51	0.76	2.28	10.47	8.10
REGIONAL TOTALS	44	113	101	0.89	2.54	17.66	16.03
<u>Southeastern Region</u>							
Carbon	14	37	29	0.78	1.94	5.78	4.60
Emery	10	23	12	0.52	1.20	3.59	1.90
Grand	0	0	0	0.00	0.00	0.00	0.00
San Juan	1	2	4	2.00	1.33	0.31	0.63
REGIONAL TOTALS	25	62	45	0.73	1.64	9.69	7.14
Unknown counties	9	17	25	1.47	0.00	2.66	3.97
Mixed counties	0	0	0	0.00	0.00	0.00	0.00
STATE TOTALS	299	640	630	0.98	2.14	100	100

\*Based on county of residence.

Table 6. Summary of quail bagged per hunter-day by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	1.12	0.65	0.83	0.43	0.18	1.15
Cache	0.05	1.00	0.60	0.33	0.67	1.00
Davis	0.98	0.62	0.70	0.73	0.70	0.80
Morgan	0.50	0.67	0.31	0.70	0.80	1.20
Rich	1.00	--	0.00	0.00	0.00	0.00
Summit	0.67	0.80	0.79	1.75	0.17	1.00
Weber	0.74	0.32	0.62	0.64	0.52	0.63
REGIONAL TOTALS	0.79	0.57	0.62	0.68	0.62	0.77
<u>Central Region</u>						
Juab	--	0.00	--	0.00	0.00	0.00
Salt Lake	1.14	0.71	0.94	1.30	0.86	1.11
Sanpete	0.17	0.50	0.89	0.50	0.13	1.50
Tooele	0.00	0.33	0.75	1.25	0.00	1.50
Utah	0.80	0.77	0.75	0.66	0.88	0.84
Wasatch	0.00	2.50	--	1.25	0.00	0.00
REGIONAL TOTALS	0.82	0.76	0.79	0.78	0.82	0.95
<u>Southern Region</u>						
Beaver	1.50	--	--	0.00	0.43	0.00
Garfield	--	--	--	0.00	0.00	0.00
Iron	1.00	2.00	1.00	0.23	1.40	0.00
Kane	--	2.69	--	0.00	0.00	0.00
Millard	0.30	0.50	0.50	0.36	1.53	0.13
Piute	--	2.00	0.00	0.00	0.00	4.00
Sevier	0.00	0.50	0.00	0.11	0.33	0.00
Washington	1.07	1.47	1.39	2.09	2.22	1.63
Wayne	2.00	0.00	2.50	3.00	2.00	0.86
REGIONAL TOTALS	1.01	1.55	1.22	1.73	2.01	1.43
<u>Northeastern Region</u>						
Daggett	0.00	0.00	1.00	0.00	0.00	0.00
Duchesne	2.25	1.39	0.20	0.55	1.94	1.09
Uintah	0.38	0.78	0.88	0.79	0.70	0.76
REGIONAL TOTALS	0.44	0.93	0.79	0.73	1.07	0.89
<u>Southeastern Region</u>						
Carbon	0.31	0.81	0.43	0.48	0.80	0.78
Emery	0.00	0.58	0.33	0.96	0.33	0.52
Grand	--	0.00	--	0.25	0.00	0.00
San Juan	--	--	--	0.00	0.00	2.00
REGIONAL TOTALS	0.25	0.76	0.42	0.57	0.72	0.73
Unknown counties	0.80	0.27	0.67	0.29	0.89	1.47
Mixed counties	--	--	2.37	0.00	0.00	0.00
STATE TOTALS	0.76	0.81	0.82	1.01	1.09	0.98

Table 7. Percentage distribution of quail harvest by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	3.70	1.46	2.37	0.29	0.28	2.38
Cache	0.14	0.79	0.95	0.19	0.84	0.63
Davis	10.84	7.55	6.65	7.30	9.93	8.10
Morgan	1.10	3.84	1.42	2.02	1.68	0.95
Rich	0.14	--	0.00	0.00	0.00	0.00
Summit	0.27	2.12	1.74	0.67	0.14	0.32
Weber	7.00	3.05	4.59	4.42	3.22	6.67
REGIONAL TOTALS	23.18	18.81	17.72	14.89	16.08	19.05
<u>Central Region</u>						
Juab	--	0.00	--	0.00	0.00	0.00
Salt Lake	13.58	6.36	9.81	7.49	3.36	10.00
Sanpete	0.55	0.40	1.27	0.10	0.14	0.48
Tooele	0.00	0.40	0.47	0.48	0.00	0.48
Utah	31.82	29.01	28.96	16.43	12.73	13.81
Wasatch	0.00	1.32	--	0.48	0.00	0.00
REGIONAL TOTALS	45.95	37.48	40.51	24.98	16.22	24.76
<u>Southern Region</u>						
Beaver	0.41	--	--	0.00	0.42	0.00
Garfield	--	--	--	0.00	0.00	0.00
Iron	0.27	1.59	0.16	0.58	0.98	0.00
Kane	--	4.64	--	0.00	0.00	0.00
Millard	0.41	0.13	1.42	0.48	3.64	0.16
Piute	--	0.26	0.00	0.00	0.00	1.27
Sevier	0.00	0.40	0.00	0.19	0.14	0.00
Washington	18.24	19.34	23.58	48.41	40.14	26.67
Wayne	0.55	0.06	0.79	0.29	1.68	0.95
REGIONAL TOTALS	19.89	26.36	25.95	49.95	46.99	29.05
<u>Northeastern Region</u>						
Daggett	0.00	0.00	0.32	0.00	0.00	0.00
Duchesne	1.23	3.31	0.32	0.58	4.90	7.94
Uintah	6.17	5.30	8.39	2.88	4.20	8.10
REGIONAL TOTALS	7.41	8.61	9.02	3.46	9.09	16.03
<u>Southeastern Region</u>						
Carbon	1.92	6.23	3.01	3.65	3.36	4.60
Emery	0.00	0.93	0.47	2.59	0.28	1.90
Grand	0.00	0.00	--	0.29	0.00	0.00
San Juan	0.00	--	--	0.00	0.00	0.63
REGIONAL TOTALS	1.92	7.15	3.48	6.53	3.64	7.14
Unknown counties	1.65	1.59	0.32	0.19	7.97	3.97
Mixed counties	--	--	3.01	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 8. Percentage distribution of quail hunting pressure by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	2.49	1.81	2.33	0.68	1.68	2.03
Cache	1.98	0.64	1.29	0.58	1.37	0.62
Davis	8.42	9.82	7.75	10.05	15.40	10.00
Morgan	1.66	4.59	3.75	2.90	2.29	0.78
Rich	0.10	--	0.26	0.48	0.00	0.00
Summit	0.31	2.13	1.81	0.39	0.91	0.31
Weber	7.17	7.68	6.07	6.96	6.71	10.47
<b>REGIONAL TOTALS</b>	<b>22.14</b>	<b>26.68</b>	<b>23.26</b>	<b>22.03</b>	<b>28.35</b>	<b>24.22</b>
<u>Central Region</u>						
Juab	--	0.32	--	0.19	0.15	0.16
Salt Lake	9.04	7.26	8.53	5.80	4.27	8.91
Sanpete	2.49	0.64	1.16	0.19	1.22	0.31
Tooele	0.52	0.96	0.52	0.39	0.15	0.31
Utah	30.15	30.20	31.65	25.12	15.85	16.09
Wasatch	0.52	0.43	--	0.39	0.00	0.00
<b>REGIONAL TOTALS</b>	<b>42.72</b>	<b>39.81</b>	<b>41.86</b>	<b>32.08</b>	<b>21.65</b>	<b>25.78</b>
<u>Southern Region</u>						
Beaver	0.21	--	--	0.00	1.07	0.00
Garfield	--	--	--	0.00	0.00	0.00
Iron	0.21	0.64	0.13	2.51	0.76	0.16
Kane	--	1.39	--	0.00	0.00	0.00
Millard	1.04	0.21	2.33	1.35	2.59	1.25
Piute	--	0.11	0.26	0.00	0.00	0.31
Sevier	0.42	0.64	0.52	1.74	0.46	1.09
Washington	12.89	10.57	13.82	23.29	19.66	16.09
Wayne	0.21	0.11	0.26	0.10	0.91	1.09
<b>REGIONAL TOTALS</b>	<b>14.97</b>	<b>13.66</b>	<b>17.31</b>	<b>28.99</b>	<b>25.46</b>	<b>20.00</b>
<u>Northeastern Region</u>						
Daggett	0.10	0.11	0.26	0.00	0.00	0.00
Duchesne	0.42	1.92	1.29	1.06	2.74	7.19
Uintah	12.27	5.44	7.75	3.67	6.55	10.47
<b>REGIONAL TOTALS</b>	<b>12.79</b>	<b>7.47</b>	<b>9.30</b>	<b>4.73</b>	<b>9.30</b>	<b>17.66</b>
<u>Southeastern Region</u>						
Carbon	4.68	6.19	5.68	7.63	4.57	5.78
Emery	1.14	1.28	1.16	2.71	0.91	3.59
Grand	--	0.11	--	1.16	0.00	0.00
San Juan	--	--	--	0.00	0.00	0.31
<b>REGIONAL TOTALS</b>	<b>5.82</b>	<b>7.58</b>	<b>6.85</b>	<b>11.50</b>	<b>5.49</b>	<b>9.69</b>
Unknown counties	1.56	4.80	0.39	0.68	9.76	2.66
Mixed counties	--	--	1.03	0.00	0.00	0.00
<b>STATE TOTALS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 9. State-wide summary of quail harvest statistics, 1951-1977.

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	--	--	--	1.17	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
<hr/>					
<b>TOTALS</b>					
(1959-77)	138,037	394,217	344,176	1.15	2.86
<hr/>					
<b>AVERAGES</b>					
(1959-76)	7,422	21,373	18,585	1.16	2.84

Table 10. Gambel's quail call-count trends on the west slope of the Beaver Dam Mountains, Washington County, 1971-77.

Index	1971	1972	1973	1974	1975	1976	1977
Mean calls per station	1.57	0.36	0.06	0.00	2.55	0.76	0.25
Mean quail calling per station	0.37	0.11	0.03	0.00	0.40	0.13	0.03
Mean total calls-route	23.5	5.30	1.00	0.00	38.20	11.40	3.75
Mean total quail calling-route	5.5	1.7	0.40	0.00	6.00	2.00	0.50

Table 11. Gambel's quail long-period waterhole count trend on the west slope of the Beaver Dam Mountains, Washington County, 1971-77.

Area	1971	1972	1973	1974	1975	1976	1977
Total young	33	0	0	24	145	61	--
Total adults	8	0	0	6	20	53	--
Total quail	41	0	0	30	165	114	17
Young per 100 adults	412	--	--	400	725	115	--

# HUNGARIAN PARTRIDGE

## SUMMARY

Increased breeding populations for 1977 were suggested by 1976 harvest data. Limited brood data samples suggested increased production but were too small to warrant confidence in indicating trends.

The 1977 hunt was very similar to 1976 and well below average in terms of pressure and harvest.



### Brood Counts

Results of the annual random brood counts for 1977 are shown in Table 1 of this section. Long-term trends of young-adult ratios, mean brood size and Huns observed per 100 hours are shown in Tables 2-4. Results of this survey for 1977 compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total Huns observed	211	-15	-32
Young per 100 adults	369	+13	-24
Mean brood size	10.77	+11	+11
Huns observed per 100 hours	131	-45	-48
Total hours effort	161	+55	+25

Harvest data for 1976 indicated an increased breeding population for 1977 in northern Utah and a decreased breeding population in central Utah.

The only broods observed during 1977 were in Box Elder County. The young per 100 adult ratio and mean brood size indicated increased production compared to 1976.

### Harvest

#### Hunter Questionnaire

Results of the annual hunter questionnaire for 1977 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 1977 season compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Hungarian partridge hunters	3,557	+ 1	-15
Hungarian partridge harvest	6,360	+ 1	-32
Hunter-days afield	9,058	+ 3	-14
Huns per hunter-day	0.70	- 3	-18
Huns per hunter	1.79	0	-15

The 1977 hunt was very similar to 1976. Total hunters, harvest, days-afield, huns-per-day and per-season all remained essentially unchanged and all were markedly below average.

Long-term trends of hungarian partridge harvest statistics are shown in figure 1.



### Field Bag Checks

Results of this survey for 1977 are shown in Table 10. Hunter success trends determined via this method are shown in Table 11. Indexes obtained for 1977 compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total hunters checked	30	-25	-81
Total hours hunted	91	-31	-88
Huns per hunter (complete hunts)	0.80	+233	-02
Huns bagged per 100 hours	26	+271	+53
Average hours per hunter-day (complete hunts)	3.0	-14	-36
Hours hunted per Hun bagged	3.8	-73	-38

Almost all the field bag check data was from Box Elder County. The sample was too small to be meaningful but indicated success was up from 1976. Huns bagged per hunter was near average but the average hunter spent less time afield and bagged more birds per hour effort.

Hungarian partridge bagged per hunter and per hunter-day.

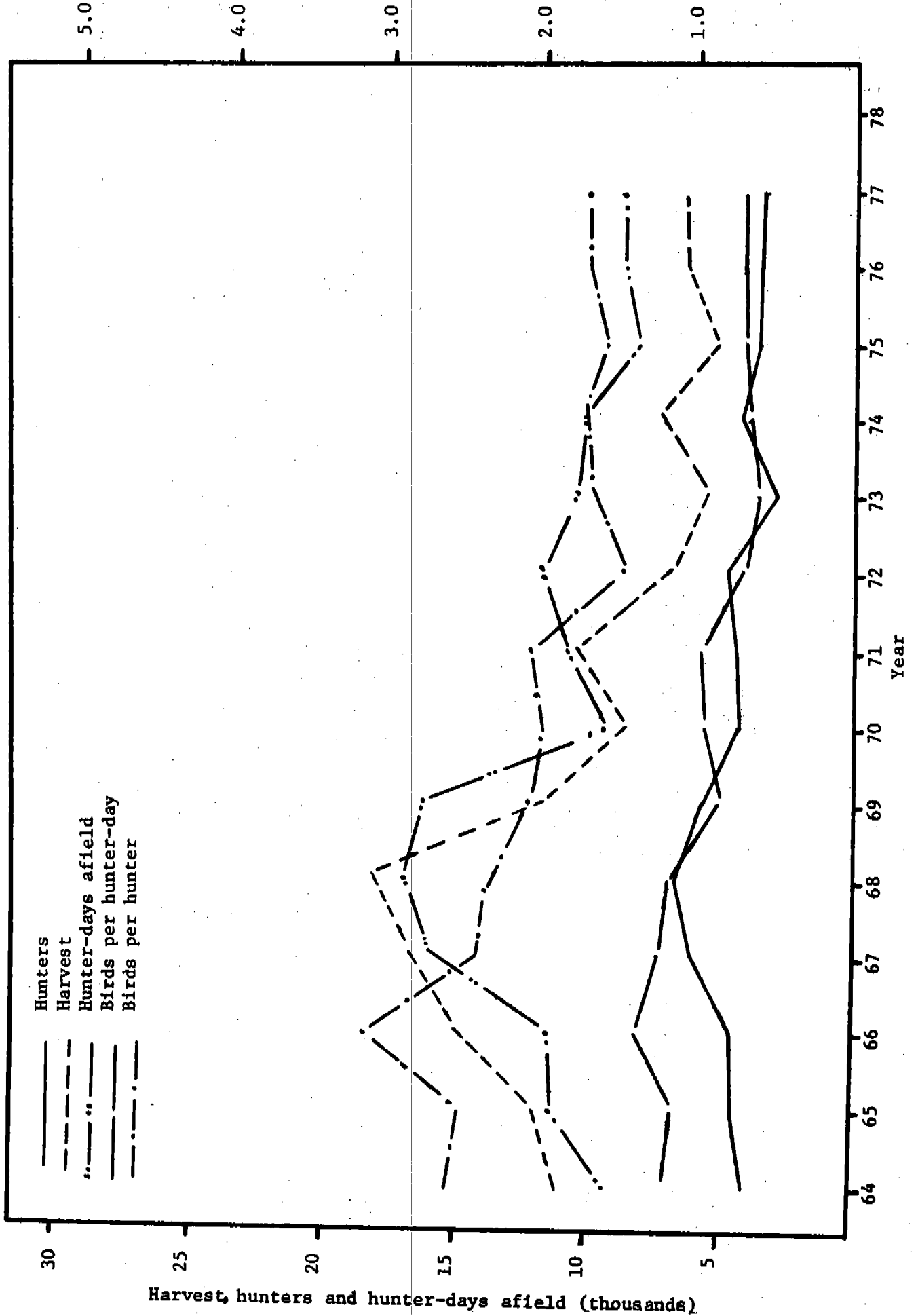


Figure 1. Statewide trend of Hungarian partridge harvest statistics.

Table 1. Hungarian partridge summer inventory summary, 1977.

Region and County	Distinct Broods		Mixed Yng. & Adults		Adults w/o Yng.	Total Adults	Total Yng. 100 Ad.	Vehicle Miles	Hours Effort		Birds/100 hrs.			
	No. Ad.	Yng. Brood	Ad.	Yng.					Veh.	Horse		Walk	Total	
<u>Northern Region</u>														
Box Elder	13	25	140	10.77	0	5	140	467	1,145	88	58	10	156	109
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>13</b>	<b>25</b>	<b>140</b>	<b>10.77</b>	<b>0</b>	<b>5</b>	<b>140</b>	<b>467</b>	<b>1,145</b>	<b>88</b>	<b>58</b>	<b>10</b>	<b>156</b>	<b>109</b>
<u>Central Region</u>														
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	0	0	0	--	15	26	26	173	125	2	0	3	5	820
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>--</b>	<b>15</b>	<b>26</b>	<b>26</b>	<b>173</b>	<b>125</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>820</b>
<u>Southern Region</u>														
Beaver	1	2												
Garfield														
Iron														
Kane														
Millard														
Piute														
Sevier														
Washington														
Wayne														
<b>REGIONAL TOTALS</b>	<b>1</b>	<b>2</b>												
<u>Northeastern Region</u>														
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></b>	<b></b>
<u>Southeastern Region</u>														
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>STATE TOTALS</b>	<b>13</b>	<b>25</b>	<b>140</b>	<b>10.77</b>	<b>15</b>	<b>26</b>	<b>26</b>	<b>369</b>	<b>1,270</b>	<b>90</b>	<b>58</b>	<b>13</b>	<b>161</b>	<b>131</b>

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

Table 2. Trend of Hungarian partridge young per 100 adults ratios, 1967-77.

Region & County	Year											Average 1963-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	447	400	325	306	524	379	575	775	600	421	467	
Cache	875	450	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	300	--	--	--	1400	--	400	675	--	533	--	
Rich	288	900	0	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>449</b>	<b>421</b>	<b>319</b>	<b>306</b>	<b>553</b>	<b>379</b>	<b>560</b>	<b>755</b>	<b>600</b>	<b>431</b>	<b>467</b>	<b>499</b>
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	233	173	
Tooele	--	--	--	--	--	--	--	--	--	550	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	403	442	497	414	350	800	450	800	--	20	--	
<b>REGIONAL TOTALS</b>	<b>403</b>	<b>442</b>	<b>497</b>	<b>414</b>	<b>350</b>	<b>800</b>	<b>450</b>	<b>800</b>	<b>--</b>	<b>200</b>	<b>173</b>	<b>459</b>
<u>Southern Region</u>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
<b>NOT APPLICABLE</b>												
<u>REGIONAL TOTALS</u>												
<u>Northeastern Region</u>												
Daggett												
Duchesne												
Uintah												
<b>NOT APPLICABLE</b>												
<u>REGIONAL TOTALS</u>												
<u>Southeastern Region</u>												
Carbon												
Emery												
Grand												
San Juan												
<b>NOT APPLICABLE</b>												
<u>REGIONAL TOTALS</u>												
<b>STATE TOTALS</b>	<b>435</b>	<b>430</b>	<b>325</b>	<b>319</b>	<b>495</b>	<b>424</b>	<b>552</b>	<b>757</b>	<b>600</b>	<b>328</b>	<b>369</b>	<b>485</b>

Table 3. Trend of Hungarian partridge mean brood size from 1967-77.

Region & County	Year											Average 1963-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	8.60	7.00	5.75	11.82	7.82	11.50	11.86	11.22	13.44	10.22	10.77	
Cache	11.67	9.00	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	--	--	--	14.00	--	8.33	13.50	--	--	--	
Rich	7.67	9.00	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>8.77</b>	<b>7.24</b>	<b>5.75</b>	<b>11.58</b>	<b>8.16</b>	<b>11.50</b>	<b>10.80</b>	<b>11.64</b>	<b>13.44</b>	<b>10.22</b>	<b>10.77</b>	<b>9.96</b>
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	10.00	9.00	9.94	7.25	--	8.00	4.50	8.00	--	2.00	--	
<b>REGIONAL TOTALS</b>	<b>10.00</b>	<b>9.00</b>	<b>9.94</b>	<b>7.25</b>	<b>--</b>	<b>8.00</b>	<b>4.50</b>	<b>8.00</b>	<b>--</b>	<b>2.00</b>	<b>--</b>	<b>7.46</b>
<u>Southern Region</u>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
<b>NOT APPLICABLE</b>												
<u>Northeastern Region</u>												
Daggett												
Duchesne												
Uintah												
<b>NOT APPLICABLE</b>												
<u>Southeastern Region</u>												
Carbon												
Emery												
Grand												
San Juan												
<b>NOT APPLICABLE</b>												
<b>REGIONAL TOTALS</b>	<b>9.07</b>	<b>7.93</b>	<b>6.87</b>	<b>10.50</b>	<b>8.16</b>	<b>10.33</b>	<b>9.75</b>	<b>11.33</b>	<b>13.44</b>	<b>9.40</b>	<b>10.77</b>	<b>9.68</b>
<u>STATE TOTALS</u>												

Table 4. Trend of Hungarian partridge observed per 100 hours, 1967-77.

Region & County	Year											Average 1967-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	256	261	416	210	213	133	91	80	262	184	109	
Cache	175	209	0	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	73	--	--	--	--	--	428	--	--	1900	--	
Rich	238	333	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>235</b>	<b>261</b>	<b>385</b>	<b>210</b>	<b>213</b>	<b>133</b>	<b>106</b>	<b>97</b>	<b>262</b>	<b>205</b>	<b>109</b>	<b>211</b>
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	400	820	
Tooele	--	--	--	--	--	--	--	--	--	2600	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	777	1193	1415	720	300	450	275	450	--	120	--	
<b>REGIONAL TOTALS</b>	<b>777</b>	<b>1193</b>	<b>1415</b>	<b>720</b>	<b>300</b>	<b>171</b>	<b>275</b>	<b>450</b>	<b>--</b>	<b>371</b>	<b>820</b>	<b>634</b>
<u>Southern Region</u>												
Beaver												
Garfield												
Iron												
Kane												
Millard												
Piute												
Sevier												
Washington												
Wayne												
<b>REGIONAL TOTALS</b>												
<u>Northeastern Region</u>												
Daggett												
Duchesne												
Uintah												
<b>REGIONAL TOTALS</b>												
<u>Southeastern Region</u>												
Carbon												
Emery												
Grand												
San Juan												
<b>REGIONAL TOTALS</b>												
<b>STATE TOTALS</b>	<b>292</b>	<b>383</b>	<b>508</b>	<b>249</b>	<b>243</b>	<b>139</b>	<b>110</b>	<b>101</b>	<b>262</b>	<b>238</b>	<b>131</b>	<b>252</b>

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

Table 5. Summary of Hungarian partridge hunter success and distribution of harvest and hunting pressure by region and county, 1977.

Region and County	Hunters Reporting	Days Hunted	Birds Bagged	Birds per Hunter-day	Birds per Hunter*	% of Pressure	% of Harvest
<u>Northern Region</u>							
Box Elder	130	376	280	0.74	2.87	62.56	66.35
Cache	39	66	61	0.92	2.09	10.98	14.45
Davis	1	2	0	0.00	2.00	0.33	0.00
Morgan	8	16	7	0.44	0.80	2.66	1.66
Rich	6	9	2	0.22	0.00	1.50	0.47
Summit	7	8	7	0.88	1.33	1.33	1.66
Weber	12	30	29	0.97	1.83	4.99	6.87
REGIONAL TOTALS	203	507	386	0.76	2.02	84.36	91.47
<u>Central Region</u>							
Juab	4	6	2	0.33	0.00	1.00	0.47
Salt Lake	1	4	3	0.75	1.29	0.67	0.71
Sanpete	1	3	0	0.00	0.00	0.50	0.00
Tooele	4	14	3	0.21	0.50	2.33	0.71
Utah	7	22	6	0.27	1.06	3.66	1.42
Wasatch	10	20	11	0.55	2.33	3.33	2.61
REGIONAL TOTALS	27	69	25	0.36	1.24	11.48	5.92
<u>Southern Region</u>							
Beaver	0	0	0	0.00	0.00	0.00	0.00
Garfield	1	2	1	0.50	0.00	0.33	0.24
Iron	0	0	0	0.00	0.00	0.00	0.00
Kane	0	0	0	0.00	0.00	0.00	0.00
Millard	0	0	0	0.00	0.00	0.00	0.00
Piute	0	0	0	0.00	0.00	0.00	0.00
Sevier	1	1	1	1.00	0.50	0.17	0.24
Washington	1	1	0	0.00	0.00	0.17	0.00
Wayne	0	0	0	0.00	0.00	0.00	0.00
REGIONAL TOTALS	3	4	2	0.50	0.50	0.67	0.47
<u>Northeastern Region</u>							
Daggett	0	0	0	0.00	0.00	0.00	0.00
Duchesne	0	0	0	0.00	0.00	0.00	0.00
Uintah	2	6	0	0.00	0.00	1.00	0.00
REGIONAL TOTALS	2	6	0	0.00	0.00	1.00	0.00
<u>Southeastern Region</u>							
Carbon	0	0	0	0.00	6.00	0.00	0.00
Emery	1	1	0	0.00	0.00	0.17	0.00
Grand	0	0	0	0.00	0.00	0.00	0.00
San Juan	0	0	0	0.00	0.00	0.00	0.00
REGIONAL TOTALS	1	1	0	0.00	6.00	0.17	0.00
Unknown counties	11	14	9	0.64	0.00	2.33	2.13
Mixed counties	0	0	0	0.00	0.00	0.00	0.00
STATE TOTALS	247	601	422	0.70	1.79	100	100

\*Based on county of residence

Table 6. Summary of Hungarian partridge bagged per hunter-day by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	0.56	0.54	0.84	0.69	0.90	0.74
Cache	0.70	0.91	0.68	0.66	0.68	0.92
Davis	1.33	0.12	2.00	0.40	0.64	0.00
Morgan	1.14	0.58	0.50	0.88	0.29	0.44
Rich	0.43	1.25	0.33	0.43	0.09	0.22
Summit	0.50	0.34	1.25	0.20	0.00	0.88
Weber	0.78	0.33	0.25	0.22	0.46	0.97
REGIONAL TOTALS	0.65	0.57	0.76	0.68	0.75	0.76
<u>Central Region</u>						
Juab	0.00	1.40	1.00	0.33	0.00	0.33
Salt Lake	0.00	0.19	0.60	1.67	2.00	0.75
Sanpete	1.00	2.00	0.67	0.00	0.50	0.00
Tooele	0.17	0.06	0.00	0.50	0.00	0.21
Utah	0.15	0.38	0.35	0.88	0.50	0.27
Wasatch	0.44	0.79	0.42	0.44	0.00	0.55
REGIONAL TOTALS	0.33	0.57	0.36	0.71	0.31	0.36
<u>Southern Region</u>						
Beaver	--	0.00	0.00	0.00	0.50	0.00
Garfield	--	0.00	0.00	0.00	0.00	0.50
Iron	--	0.00	0.00	0.60	0.00	0.00
Kane	--	0.00	0.00	0.00	0.00	0.00
Millard	--	0.00	0.40	0.00	0.00	0.00
Piute	--	0.00	0.00	0.00	0.00	0.00
Sevier	--	1.00	0.00	0.00	0.33	1.00
Washington	--	0.00	0.00	0.00	0.00	0.00
Wayne	--	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	--	0.06	0.40	0.21	0.40	0.50
<u>Northeastern Region</u>						
Daggett	1.00	0.00	0.00	0.00	0.00	0.00
Duchesne	--	1.00	0.00	1.00	0.00	0.00
Uintah	0.00	0.00	0.33	0.00	0.00	0.00
REGIONAL TOTALS	0.20	0.20	0.33	0.56	0.00	0.00
<u>Southeastern Region</u>						
Carbon	0.33	0.00	0.00	0.00	0.00	0.00
Emery	--	0.00	0.00	0.00	0.00	0.00
Grand	--	0.00	0.00	0.00	0.00	0.00
San Juan	--	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.33	0.00	0.00	0.00	0.00	0.00
Unknown counties	1.46	0.00	0.84	0.40	1.17	0.64
Mixed counties	0.00	0.00	2.00	0.00	0.00	0.00
STATE TOTALS	0.60	0.52	0.68	0.65	0.72	0.70



Table 7. Percentage distribution of Hungarian partridge harvest by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	48.15	37.22	54.50	46.97	68.49	66.35
Cache	13.58	19.24	13.11	15.45	12.54	14.45
Davis	2.47	0.63	1.54	0.61	2.25	0.00
Morgan	10.19	11.99	4.11	11.52	3.54	1.66
Rich	0.93	1.58	0.51	3.03	0.32	0.47
Summit	0.62	4.42	3.86	0.30	0.00	1.66
Weber	8.64	0.95	1.80	1.52	1.93	6.87
REGIONAL TOTALS	84.57	76.03	79.43	79.39	89.07	91.47
<u>Central Region</u>						
Juab	0.00	2.21	0.26	1.52	0.00	0.47
Salt Lake	0.00	2.52	3.86	3.03	0.64	0.71
Sanpete	0.62	0.63	1.03	0.00	0.64	0.00
Tooele	0.31	1.89	0.00	0.91	0.00	0.71
Utah	0.93	1.58	2.31	9.09	2.25	1.42
Wasatch	7.10	14.51	2.83	2.42	0.00	2.61
REGIONAL TOTALS	8.95	23.34	10.28	16.97	3.54	5.92
<u>Southern Region</u>						
Beaver	--	0.00	0.00	0.00	0.32	0.00
Garfield	--	0.00	0.00	0.00	0.00	0.24
Iron	--	0.00	0.00	0.91	0.00	0.00
Kane	--	0.00	0.00	0.00	0.00	0.00
Millard	--	0.00	0.51	0.00	0.00	0.00
Piute	--	0.00	0.00	0.00	0.00	0.00
Sevier	0.00	0.32	0.00	0.00	0.32	0.24
Washington	--	0.00	0.00	0.00	0.00	0.00
Wayne	0.00	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.00	0.32	0.51	0.91	0.64	0.47
<u>Northeastern Region</u>						
Daggett	0.31	0.00	0.00	0.00	0.00	0.00
Duchesne	--	0.32	0.00	1.52	0.00	0.00
Uintah	0.00	0.00	0.26	0.00	0.00	0.00
REGIONAL TOTALS	0.31	0.32	0.26	1.52	0.00	0.00
<u>Southeastern Region</u>						
Carbon	0.31	0.00	0.00	0.00	0.00	0.00
Emery	--	0.00	0.00	0.00	0.00	0.00
Grand	--	0.00	0.00	0.00	0.00	0.00
San Juan	--	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.31	0.00	0.00	0.00	0.00	0.00
Unknown counties	5.86	0.00	7.97	1.21	6.75	2.13
Mixed counties	0.00	0.00	1.54	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 8. Percentage distribution of Hungarian partridge hunting pressure by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	51.68	36.24	44.54	44.66	54.50	62.56
Cache	11.75	11.04	13.20	15.22	13.16	10.98
Davis	1.12	2.80	0.53	0.99	2.54	0.33
Morgan	5.41	10.71	5.63	8.50	8.78	2.66
Rich	1.31	0.66	1.06	1.38	2.54	1.50
Summit	0.75	6.75	2.11	0.99	0.46	1.33
Weber	6.72	1.48	4.93	4.55	3.00	4.99
REGIONAL TOTALS	78.73	69.69	72.01	76.28	84.99	84.36
<u>Central Region</u>						
Juab	0.37	0.82	0.18	2.96	0.00	1.00
Salt Lake	1.12	7.08	4.40	1.19	0.23	0.67
Sanpete	0.37	0.16	1.06	0.00	0.92	0.50
Tooele	1.12	1.65	4.58	1.19	2.31	2.33
Utah	3.73	2.14	4.58	6.72	3.23	3.66
Wasatch	9.70	9.56	4.58	3.56	1.62	3.33
REGIONAL TOTALS	16.42	21.42	19.37	15.61	8.31	11.48
<u>Southern Region</u>						
Beaver	--	0.00	0.00	0.00	0.46	0.00
Garfield	--	0.00	0.00	0.00	0.00	0.33
Iron	--	0.00	0.00	0.99	0.00	0.00
Kane	--	0.00	0.00	0.00	0.00	0.00
Millard	--	2.80	0.88	0.00	0.00	0.00
Piute	--	0.00	0.00	0.00	0.00	0.00
Sevier	0.56	0.16	0.00	1.78	0.69	0.17
Washington	--	0.00	0.00	0.00	0.00	0.17
Wayne	0.19	0.00	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.75	2.97	0.88	2.77	1.15	0.67
<u>Northeastern Region</u>						
Daggett	0.19	0.16	0.00	0.40	0.00	0.00
Duchesne	--	0.16	0.00	0.99	0.00	0.00
Uintah	0.75	0.49	0.53	0.40	0.69	1.00
REGIONAL TOTALS	0.93	0.82	0.53	1.78	0.69	1.00
<u>Southeastern Region</u>						
Carbon	0.56	0.99	0.18	0.99	0.69	0.00
Emery	--	0.16	0.00	0.59	0.00	0.17
Grand	--	0.16	0.00	0.00	0.00	0.00
San Juan	--	0.16	0.00	0.00	0.00	0.00
REGIONAL TOTALS	0.56	1.48	0.18	1.58	0.69	0.17
Unknown counties	2.43	3.46	6.51	1.98	4.16	2.33
Mixed counties	0.19	0.16	0.53	0.00	0.00	0.00
STATE TOTALS	100	100	100	100	100	100

Table 9. Statewide summary of Hungarian partridge harvest statistics, 1955-77.

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	3,557	6,360	9,058	0.70	1.79
<b>TOTALS</b> (1959-77)	79,467	173,491	198,921	0.87	2.18
<b>AVERAGE</b> (1959-76)	4,217	9,285	10,548	0.85	2.10

Table 10. Hungarian partridge field bag check summary, 1977.

Region & County	ALL HUNTS				COMPLETE HUNTS					
	Total Parties	Total Hunters	Total Hours	Total Birds/100 Hrs.	Total Complete Hunts	Total Hunters	Total Hours	Total Birds/100 Hrs.	Birds/Hunter	
<u>Northern Region</u>										
Box Elder	9	24	61	36	9	24	61	22	36	0.92
Cache	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	9	24	61	36	9	24	61	22	36	0.92
<u>Central Region</u>										
Juab	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--
Wasatch	1	6	30	67	1	6	30	2	7	0.33
<b>REGIONAL TOTALS</b>	1	6	30	67	1	6	30	2	7	0.33
<u>Southern Region</u>										
Beaver										
Garfield										
Iron										
Kane										
Millard										
Piute										
Sevier										
Washington										
Wayne										
<b>REGIONAL TOTALS</b>										
<u>Northeastern Region</u>										
Daggett										
Duchesne										
Uintah										
<b>REGIONAL TOTALS</b>										
<u>Southeastern Region</u>										
Carbon										
Emery										
Grand										
San Juan										
<b>REGIONAL TOTALS</b>										
<b>STATE TOTALS</b>	10	30	91	26	10	30	91	24	26	0.80

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

Table 11. Hungarian partridge hunter success trend determined by field bag checks, 1972-77.

Region & County	1972		1973		1974		1975		1976		1977	
	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
<u>Northern Region</u>												
Box Elder	16	0.78	12	0.78	23	1.36	12	0.60	8	0.24	36	0.92
Cache	15	0.42	--	--	--	--	10	0.40	6	0.33	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	6	0.33	12	0.86	19	0.54	--	--	--	--
Summit	133	1.33	--	--	--	--	17	0.50	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	17	0.75	12	0.76	21	1.28	13	0.57	7	0.24	36	0.92
<u>Central Region</u>												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	0	0.00	--	--	--	--	--	--	7	0.33
<b>REGIONAL TOTALS</b>	--	--	0	0.00	--	--	--	--	--	--	7	0.33
<u>Southern Region</u>												
Beaver	138											
Garfield												
Iron												
Kane												
Millard												
Piute												
Seiver												
Washington												
Wayne												
<b>REGIONAL TOTALS</b>												
<u>Northeastern Region</u>												
Daggett												
Duchesne												
Uintah												
<b>REGIONAL TOTALS</b>												
<u>Southeastern Region</u>												
Carbon												
Emery												
Grand												
San Juan												
<b>REGIONAL TOTALS</b>												
<b>STATE TOTALS</b>	17	0.75	12	0.74	21	1.28	13	0.57	7	0.24	26	0.80

NOT APPLICABLE

NOT APPLICABLE

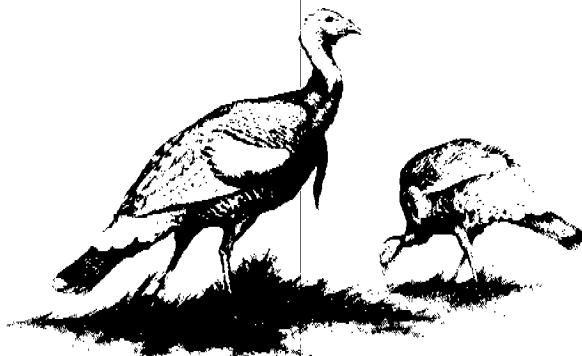
NOT APPLICABLE

# WILD TURKEY

## SUMMARY

Hunter success and turkey observational data for the 1977 spring season indicated a Statewide turkey population level slightly higher than 1976 and approaching average.

Fall hunting pressure statewide was comparable to 1976 but the total harvest for 1977 was only one-half that of 1976. Both hunter success and total harvest for 1977 were below the long-term average.



## Brood Counts

Annual random brood counts have been conducted each year since the introduction of turkeys into Utah in the early 1950's; however, success in finding broods has usually been poor. Sample sizes have generally been too low to meaningfully indicate relative density or production from year to year. Harvest data for 1976 indicated an increased breeding population for 1977. No turkey brood observations were reported in 1977.

## Harvest

### Spring Gobbler Season

Results of the 1977 spring season are shown in Table 1 of this section. The trend of these data since the first season in 1967 is shown in Table 2. The 1977 spring season compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Permits sold	108	+33	-39
Hunters afield	99	+33	-40
Turkeys harvested	12	+100	-20
Hunter-days afield	248	+34	-40
Percent hunter success	12	+50	+50
Turkeys bagged per hunter-day	0.05	+67	+25
Percent of hunters who observed turkeys	39	+22	+18

Permit sales and consequently hunters afield and total hunter-days afield increased from 1976 but remained well below average. The total harvest increased from 6 in 1976 to 12 in 1977. The proportion of hunters who reported having observed turkeys increased to an above average level. The East Zion and LaSal units accounted for 70 percent of the hunting pressure and 83 percent of the harvest.

The trend of spring turkey harvest statistics is shown in Figure 1.

### Fall Season

Results of the 1977 fall season are shown in Table 3 of this section. The trend of these data since 1966 are shown in Tables 4-9. The 1977 season compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Permits sold	60	-12	-66
Hunters afield	53	- 5	-68
Turkeys harvested	7	-53	-86
Hunter-days afield	133	- 2	-66
Percent hunter success	15	-44	-32
Turkeys bagged per hunter-day	0.06	-45	-50
Percent of hunters observing turkeys	18	-44	-50

Turkey permit sales, total hunters and hunter-days afield all decreased from 1976 and remained well below average.

Permit sales, hunters afield and hunter-days afield all decreased slightly from 1976 and remained well below average. Harvest declined 53 percent and was far below average. The percent of hunters observing turkeys declined by 44 percent and was only 50 percent of average.

The trend of fall harvest statistics is shown in Figure 2.



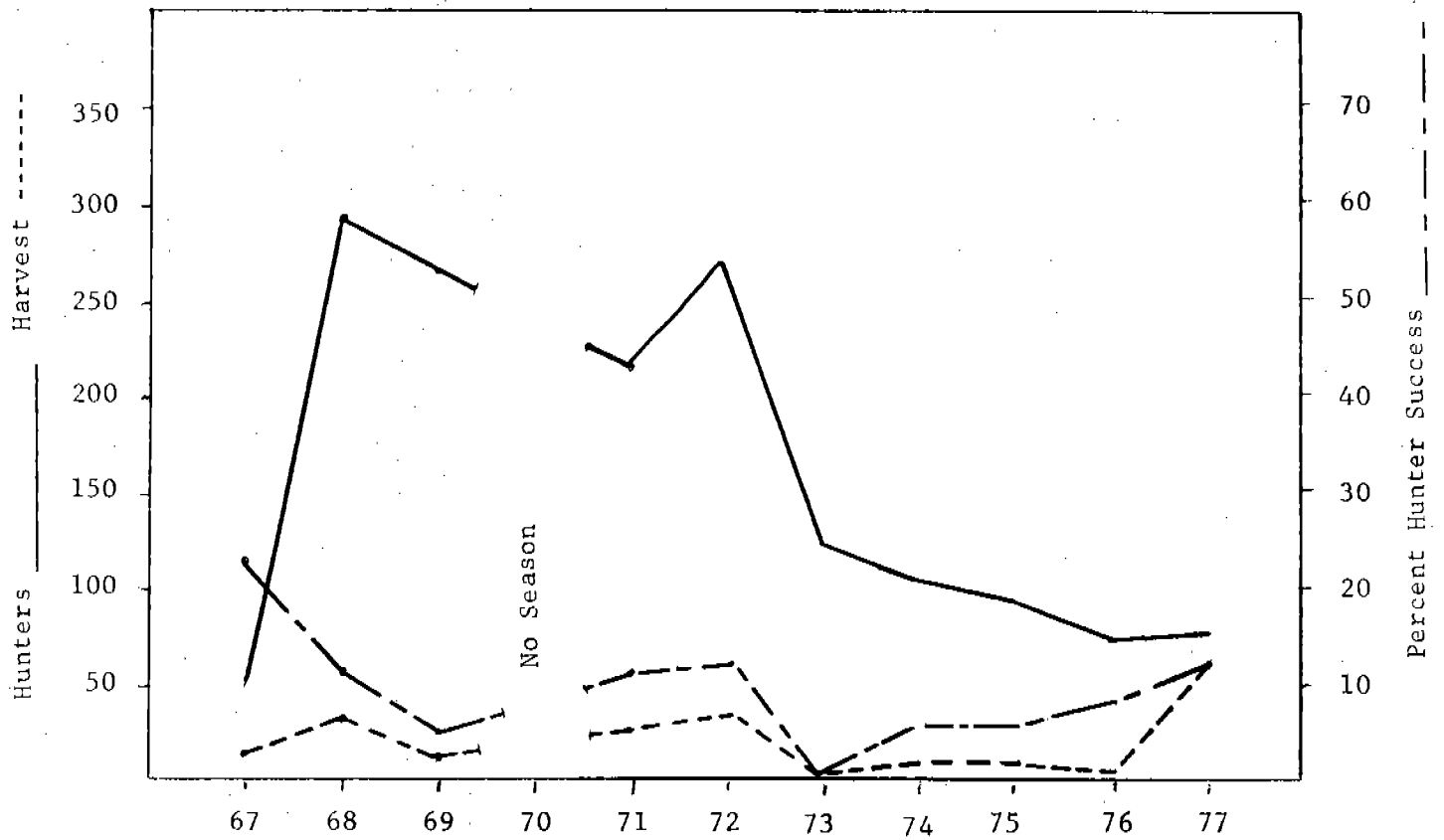


Figure 1. Wild turkey gobbler harvest trends for spring seasons.

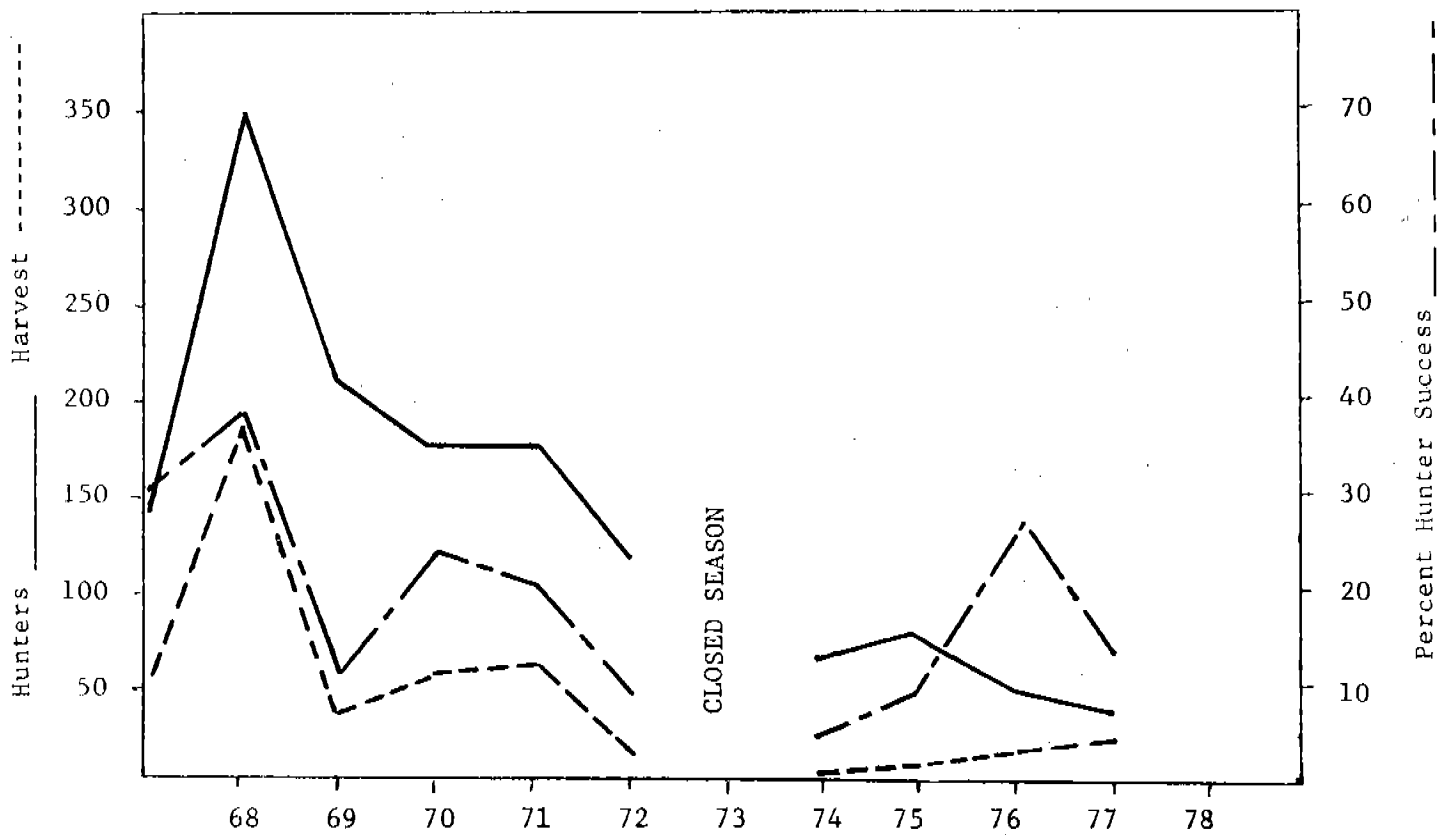


Figure 2. Wild turkey harvest trends for fall seasons.

Table 1. Summary of the 1977 spring turkey season.

	BLUE MTN-ELK RIDGE		EAST ZION		BOULDER		LASAL		BEAVER		PINE VALLEY		MIXED UNITS		STATE TOTALS	
	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc
Permits sold															108	--
No Hunts															8	9
Hunters afield	6	7	40	47	5	6	20	24	3	4	2	2	8	9	84	99
Hunter days	12	14	100	117	11	13	45	53	12	14	6	7	25	29	211	248
Turkeys bagged	1	1	5	6	0	0	3	4	0	0	0	0	1	1	10	12
Percent success	17	--	13	--	0	--	15	--	0	--	0	--	13	--	12	--
Turkeys bagged per hunter day	0.08	--	0.05	--	0	--	0.07	--	0	--	0	--	0.04	--	0.05	--
Reported crippling loss (loss/100 bagged)	0	--	0	--	0	--	33	--	0	--	0	--	0	--	10	--
Turkeys observed	1	--	64	--	36	--	73	--	0	--	0	--	5	--	179	--
Gobblers	1	--	30	--	2	--	23	--	0	--	0	--	2	--	58	--
Hens	0	--	32	--	7	--	46	--	0	--	0	--	3	--	88	--
Unidentified	0	--	2	--	27	--	4	--	0	--	0	--	0	--	33	--
Number of hunters who saw turkeys	1	--	19	--	2	--	9	--	0	--	0	--	4	--	33	--
Percent of hunters who saw turkeys	17	--	48	--	40	--	45	--	0	--	0	--	50	--	39	--

Projection factor 1.1739

Table 2. Summary of turkey harvest statistics for spring gobbler seasons, 1967-77.

Hunting Unit and Year	Hunters		Total Harvest	Hunter-days		Percent Success*	Turkeys per Hunter-day	Percent of Hunters Observing Turkeys	Total Permits**
	Afield			Afield					
1967	24		9	59		38	0.15	58	
1968	130		16	364		11	0.04	48	
1969	77		4	210		6	0.02	35	
1970		NO SEASON							
1971	106		14	272		12	0.05	38	
1972	113		20	321		14	0.06	47	
1973	43		0	96		0	0.00	14	
1974	34		2	73		7	0.03	23	
1975	29		3	42		8	0.06	33	
1976	31		5	74		16	0.05	38	
1977	47		6	117		13	0.05	48	
1967	17		2	43		12	0.05	75	
1968	134		15	330		10	0.05	33	
1969	141		6	300		4	0.02	16	
1970		NO SEASON							
1971	27		1	64		4	0.02	13	
1972	42		3	107		8	0.03	28	
1973	22		0	52		0	0.00	6	
1974	23		0	56		0	0.00	25	
1975	16		1	34		7	0.04	8	
1976	12		0	25		0	0.00	10	
1977	6		0	13		0	0.00	40	
1967	6		0	16		0	0.00	33	
1968	17		0	44		0	0.00	62	
1969	39		3	102		9	0.03	24	
1970		NO SEASON							
1971	17		1	34		6	0.03	20	
1972	50		3	129		7	0.03	29	
1973	23		0	53		0	0.00	16	
1974	20		0	66		0	0.00	11	
1975	11		0	30		0	0.00	33	
1976	8		0	25		0	0.00	14	
1977	24		4	53		15	0.07	45	
1971	27		2	54		8	0.04	39	
1972	17		2	53		13	0.04	20	
1973	17		0	34		0	0.00	7	
1974	1		0	1		0	0.00	0	
1975	5		0	7		0	0.00	0	
1976	2		0	8		0	0.00	0	
1977	4		0	14		0	0.00	0	

Table 2. Continued

Hunting Unit and Year	Hunters Afield	Total Harvest	Hunter-days Afield	Percent Success*	Turkeys per Hunter-day	Percent of Hunters Observing Turkeys	Total Permits**
Pine Valley	23	4	92	15	0.04	70	
1972	22	1	52	5	0.02	42	
1973	17	0	38	0	0.00	7	
1974	8	1	23	14	0.05	43	
1975	6	0	12	0	0.00	0	
1976	6	0	13	0	0.00	40	
1977	2	0	7	0	0.00	0	
Blue	17	2	34	13	0.07	27	
Mountain-	19	1	62	6	0.02	56	
Elk Ridge	11	0	23	0	0.00	33	
1977	7	1	14	17	0.08	17	
1967	2		By	0	By	0	
1968	9		Unit	12	Unit	12	
1969	10			0		11	
1970		NO SEASON					
1971	15	4		15		61	
1972	25	5	89	18	0.05	50	
1973	12	0	38	0	0.00	0	
1974	9	0	36	0	0.00	12	
1975	11	0	32	0	0.00	22	
1976	4	1	17	25	0.07	100	
1977	9	1	29	13	0.04	50	
1967	49	11	118	22	0.09	59	52
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
STATE TOTALS							
AVERAGES(1967-76)	166	15	422	8	0.04	33	176

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

\*\*Total permits are sold on a state basis and not by unit.

Table 3. Summary of the 1977 fall turkey season.

Data	Pine Valley		Blue Mtn.- Elk Ridge		Boulder Mtns.		East Zion		LaSal		State Totals**	
	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc
Permits sold	--	--	--	--	--	--	--	--	--	--	60	--
No hunts	--	--	--	--	--	--	--	--	--	--	6	7
Hunters afield*	1	1	4	5	2	2	19	22	20	24	45	53
Hunter days	2	2	12	14	4	5	29	34	66	78	113	133
Turkeys bagged	0	0	1	1	0	0	4	5	1	1	6	7
Percent success**	0	0	25	29	0	0	21	25	5	6	13	15
Turkeys bagged per hunter day	0	--	0.08	0.09	0	--	0.14	0.16	0.02	0.02	0.05	0.06
Reported crippling loss (loss/100 bagged)	0	--	0	--	0	--	0	--	0	--	0	--
Turkeys observed	0	--	2	--	0	--	33	--	13	--	48	--
Number of hunters who saw turkeys	0	--	1	--	0	--	5	--	2	--	8	--
Percent of hunters who saw turkeys	0	--	25	--	0	--	26	--	10	--	18	--

Projection factor = (60 + 51) = 1.176

\*One hunter hunted two units, therefore, the state total will not equal the unit totals.

\*\*The season limit was one bird.

Table 4. Summary of Boulder Mountain wild turkey harvest data for fall hunts from 1967-77.

Harvest Data	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Hunters afield	22	77	45	24	20	7			13	4	2
Hunter-days	71	195	103	77	46	17			36	10	5
Turkeys bagged	4	37	0	2	0	0			0	0	0
Percent success*	20	32	0	8	0	0			0	0	0
Percent bagging two turkeys	--	13	00	00	00	00			--	--	--
Birds bagged/day	0.06	0.19	0.00	0.03	0.00	0.00			0.00	0.00	0.00
Reported crippling loss (loss:100 bagged)	25	18	--	0	0	0			0	0	0
Turkeys observed	55	436	0	16	0	0			0	0	0
No. hunters who observed turkeys	8	27	0	2	0	0			0	0	0
Percent of hunters who observed turkeys	40	38	0	10	0	0			0	0	0

\*Season bag limits from 1968-72 were two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

Table 5. Summary of East Zion wild turkey harvest data for fall hunts from 1967-77.

Harvest Data	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Hunters afield	113	218	137	87	90	59			13	31	22
Hunter-days	334	569	374	203	229	154			18	57	34
Turkeys bagged	36	127	35	43	39	10			6	13	5
Percent success**	32	40	16	32	27	12			46	42	25
Percent bagging two turkeys	--	19	10	16	16	4			--	--	--
Birds bagged/day	0.11	0.22	0.9	0.21	0.17	0.06			0.33	0.23	0.16
Reported crippling loss (loss:100 bagged)	15	15	19	5	6	12			0	8	0
Turkeys observed	693	1661	426	469	264	96			36	137	33
No. hunters who observed turkeys	51	122	30	30	23	11			4	13	5
Percent of hunters who observed turkeys	50	60	25	40	31	22			44	50	26

\*Season bag limits from 1968-72 were two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

Table 6. Summary of LaSal Mountain wild turkey harvest data for fall hunts from 1968-77.

Harvest Data	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Hunters afield	45	17	18	13	31		20	9	15	24
Hunter-days	119	51	30	27	70		61	33	49	78
Turkeys bagged	19	1	3	5	2		2	1	2	1
Percent success*	43	7	11	18	4		10	11	13	6
Percent bagging two turkeys	0	0	6	18	4		--	--	--	--
Birds bagged/day	0.16	0.02	0.10	0.18	0.02		0.03	0.03	0.04	0.02
Reported crippling loss (loss:100 bagged)	11	0	0	0	0		100	0	0	0
Turkeys observed	214	40	15	25	63		61	21	45	13
No. hunters who observed turkeys	21	1	3	3	7		6	4	2	2
Percent of hunters who observed turkeys	50	7	20	27	27		38	67	15	10

CLOSED SEASON

\*Season bag limits from 1969-72 were two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.



Table 7. Summary of Beaver Mountain wild turkey harvest data for fall hunts from 1970-77.

Harvest Data	1970*	1971	1972	1973	1974	1975	1976	1977
Hunters afield	30	13	6			5	5	--
Hunter-days	87	24	12			13	18	--
Turkeys bagged	7	5	0			0	0	--
Percent success**	15	18	0			0	0	--
Percent bagging two turkeys	8	18	0			--	--	--
Birds bagged/day	0.08	0.20	0			0	0	--
Reported crippling loss (loss:100 bagged)	0	0	0	CLOSED SEASON	CLOSED SEASON	0	0	--
Turkeys observed	48	64	11			0	0	--
No. hunters who observed turkeys	8	5	2			0	0	--
Percent of hunters who observed turkeys	31	46	40			0	0	--

\*Wild turkeys were transplanted onto the Beaver Mountain during the winter of 1967-68. The first hunting season was held in 1970.

\*\*Season bag limits from 1969-72 were two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

Table 8. Summary of Pine Valley Mountain wild turkey harvest data for fall hunts from 1970-77.

Harvest Data	1970*	1971	1972	1973	1974	1975	1976	1977
Hunters afield	6	32	11			0	0	1
Hunter-days	21	87	19			0	0	2
Turkeys bagged	3	11	0			0	0	0
Percent success	50	23	0			0	0	0
Percent bagging two turkeys**	0	12	0			0	0	0
Birds bagged/day	0.14	0.13	0			0	0	0
Reported crippling loss (loss:100 bagged)	33	22	0			0	0	0
Turkeys observed	16	98	0			0	0	0
No. hunters who observed turkeys	4	9	0			0	0	0
Percent of hunters who observed turkeys	80	35	0			0	0	0

\*Wild turkeys were transplanted onto the Pine Valley Mountain during the winter of 1967-68. The first hunting season was held in 1970.

\*\*Season bag limits from 1969-72 were two turkeys. Percent success was based on successful hunters rather than total turkeys bagged.

Table 9. Summary of Blue Mountain-Elk Ridge wild turkey harvest data for the fall hunt, 1974-77.

Harvest Data	1974*	1975	1976	1977
Hunters afield	5	6	1	5
Hunter-days	9	15	2	14
Turkeys bagged	1	0	0	1
Percent success	20	0	0	29
Birds bagged/day	0.11	0.00	0.00	0.09
Reported crippling loss (loss:100 bagged)	0	0	0	0
Turkeys observed	20	0	0	2
No. hunters who observed turkeys	1	0	0	1
Percent of hunters who observed turkeys	20	0	0	25

\*Wild turkeys were initially transplanted onto the Blue Mountains in 1957 and on Elk Ridge in 1959. Those releases failed. Additional releases were made beginning in 1970 on Blue Mountain and 1972 on Elk Ridge with successful results, particularly on Blue Mountain.

Table 10. Statewide summary of wild turkey harvest for fall hunts from 1967 through 1977.

Harvest Data	1967	1968*	1969	1970	1971	1972	1973	1974	1975	1976	1977	AVERAGES (1963-76)
Permits sold	146	368	223	197	184	124		29	58	68	60	179
Hunters afield	135	344	210	174	174	118		26	46	56	53	165
Hunter-days	405	883	549	418	444	303		79	115	136	133	387
Turkeys bagged	40	183	36	58	60	12		3	7	15	7	51
Percent success**	30	38	11	24	21	7		12	15	27	15	22
Percent bagging two turkeys	--	15	6	10	13	3		--	--	--	--	9
Birds bagged/day	0.10	0.21	0.06	0.14	0.14	0.04		0.04	0.06	0.11	0.06	0.12
Reported crippling loss (loss:100 bagged)	16	15	19	6	8	10		33	0	7	0	13
Turkeys observed	748	2321	466	564	451	173		83	57	182	48	593
No. hunters who observed turkeys	59	171	31	47	40	21		8	8	15	8	60
Percent of hunters who observed turkeys	48	54	17	31	28	21		38	26	32	18	36

\*During 1966, 1968 and later years 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 Mountain 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.

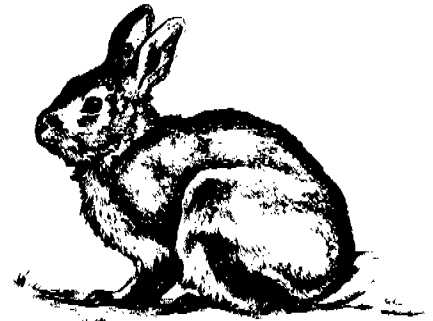
# RABBITS AND HARES

## SUMMARY

### Cottontail Rabbits

An increased breeding population level for 1977 was indicated by 1976 harvest statistics.

Summer roadside counts indicated an increased population density in northern and central Utah. Harvest statistics indicated a record harvest (269,263) and a record number of hunters afield (35,831).



### Snowshoe Hares



The 1977 snowshoe hare hunting season was the third held since the Legislature provided protected status to this species in 1975.

Harvest statistics reflected increased hunter participation, hunter success and total harvest. However, results shown are biased upward by an unknown quantity because of hunters confusing snowshoes with the white-tailed jack-rabbit.

## COTTONTAIL RABBIT

### Roadside Counts

Results of the annual roadside counts for 1977 are shown in Table 1 of this section. The trend of cottontails observed per mile and young per 100 adults since 1967 is shown in Tables 2 and 3 respectively. Indexes for 1977 compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total miles driven	2,907	- 5	+11
Total cottontails counted	914	-21	- 2
Cottontails observed per mile	0.31	-18	- 9
Young observed per 100 adults	89	-33	-18

An increased breeding population for 1977 was indicated by 1976 harvest statistics.

Indicated production was below 1976 and the average.

The cottontail per mile index was up in northern and central Utah and down in southern and eastern Utah. The index was above average in all of northern Utah.

### Harvest

#### Hunter Questionnaire

Results of the 1977 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 since 1967 are found in Tables 5-7. Trends of statewide harvest statistics are found in Table 8 and Figure 2. The 1977 season compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Cottontail hunters	35,831	+26	+41
Cottontail harvest	269,263	+14	+60
Hunter-days afield	157,257	+24	+49
Cottontails per hunter-day	1.71	- 8	+ 6
Cottontails per hunter	7.51	-10	+11

Total hunters, days afield and total harvest all increased from 1976 to record levels. Success declined somewhat but remained above average.

## Field Bag Checks

Results of this survey for 1976 are shown in Table 9. Trends of hunter success as determined by bag checks are shown in Table 10. The 1977 season compared to 1976 and the average as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Total hunters checked	456	-23	+ 1
Total hours hunted	1,375	-27	+ 9
Cottontails per hunter (complete hunts)	1.82	-36	- 3
Cottontails bagged per 100 hours	46	-23	-15
Hours per hunter-day (complete hunts)	3.8	+12	+15
Hours per cottontail bagged	2.2	+83	+10

Fewer cottontail hunters were checked in 1977 than in 1976 but this reflects poor opening weekend weather rather than an actual reduction in hunter pressure. Success decreased and was somewhat below average. Hunters spent more time afield and the time required to bag a cottontail almost doubled. Hunter success increased later on in the season.

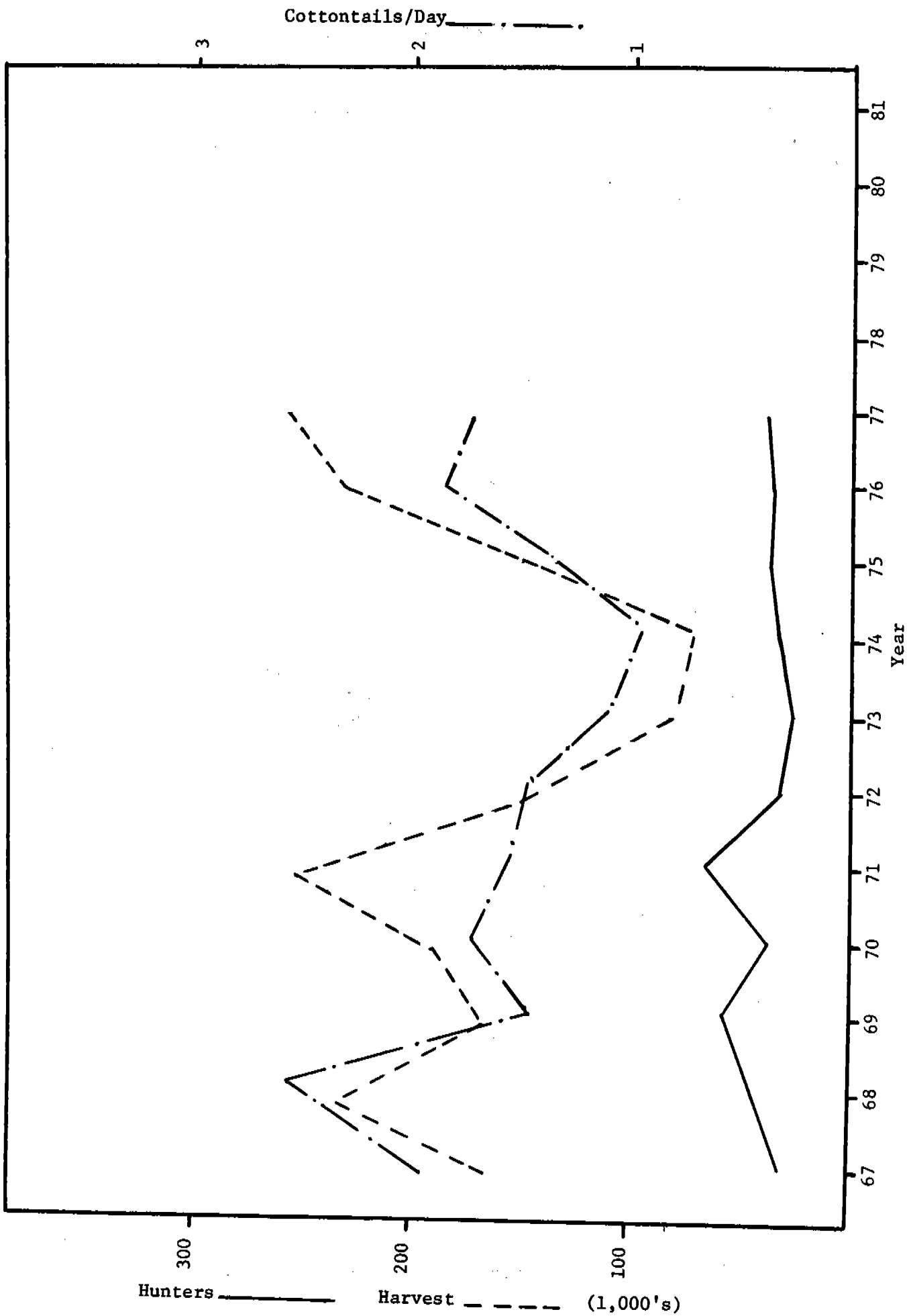


Figure 2. Cottontail Rabbit Harvest Trend



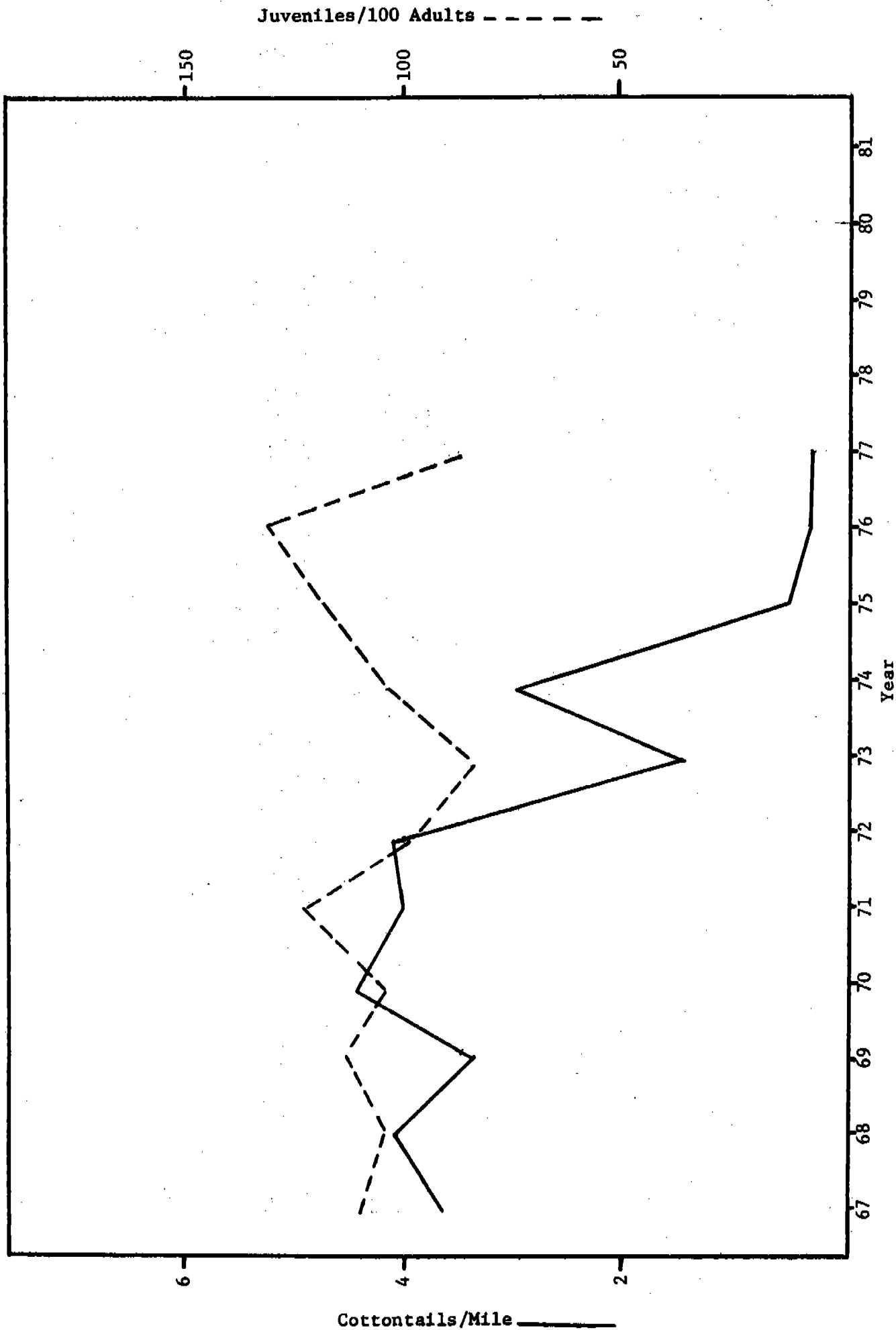


Figure 1. Cottontail Rabbit Population Indexes Trend.

Table 1. Cottontail rabbit summer inventory summary, 1977.

Region & County	Miles Driven	Rabbits Observed				Young per 100 Adults	Rabbits per Mile
		Adults	Young	Unclass.	Total		
<u>Northern Region</u>							
Box Elder	18	73	75	26	174	103	0.97
Cache	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--
Morgan	90	7	7	0	14	100	0.16
Rich	90	13	7	3	23	54	0.26
Summit	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--
REGIONAL TOTALS	360	93	89	29	211	96	0.59
<u>Central Region</u>							
Juab	82	6	6	3	15	100	0.18
Salt Lake	--	--	--	--	--	--	--
Sanpete	90	11	22	0	33	200	0.37
Tooele	90	7	9	1	17	129	0.19
Utah	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--
REGIONAL TOTALS	262	24	37	4	65	154	0.25
<u>Southern Region</u>							
Beaver	120	3	1	9	13	33	0.11
Garfield	178	14	10	3	27	71	0.15
Iron	90	15	14	3	32	93	0.36
Kane	120	23	15	0	38	65	0.32
Millard	259	21	14	1	36	67	0.14
Piute	90	0	0	0	0	--	0.00
Sevier	147	19	24	13	56	126	0.38
Washington	180	7	4	26	37	57	0.21
Wayne	145	4	9	0	13	225	0.09
REGIONAL TOTALS	1,329	106	91	55	252	86	0.19
<u>Northeastern Region</u>							
Daggett	160	27	13	0	40	48	0.25
Duchesne	120	85	56	4	145	66	1.21
Uintah	120	32	43	7	82	134	0.68
REGIONAL TOTALS	400	144	112	11	267	78	0.67
<u>Southeastern Region</u>							
Carbon	169	8	9	0	17	112	0.10
Emery	117	23	7	0	30	30	0.26
Grand	90	6	6	5	17	100	0.19
San Juan	180	25	30	0	55	120	0.31
REGIONAL TOTALS	556	62	52	5	119	84	0.21
STATE TOTALS	2,907	429	381	104	914	89	0.31

Table 2. Summary of cottontail rabbits observed per mile during summer inventory, 1967-77.

Region & County	Year											Average 1967-76
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	0.36	0.78	0.50	0.76	0.43	0.37	0.06	1.01	0.32	0.72	0.97	
Cache	0.00	0.02	0.01	--	0.06	0.07	--	--	--	0.00	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	0.02	0.17	0.10	--	0.28	--	0.14	0.1	0.02	0.17	0.16	
Rich	0.26	0.50	0.52	0.43	0.22	0.11	0.14	0.04	0.16	0.46	0.26	
Summit	0.16	0.22	0.08	0.39	--	0.13	--	--	--	--	--	
Weber	--	--	0.16	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>0.19</b>	<b>0.44</b>	<b>0.23</b>	<b>0.59</b>	<b>0.31</b>	<b>0.25</b>	<b>0.09</b>	<b>0.36</b>	<b>0.19</b>	<b>0.45</b>	<b>0.59</b>	<b>0.31</b>
<u>Central Region</u>												
Juab	0.26	0.42	0.51	0.72	0.33	0.14	0.13	--	0.07	0.08	0.18	
Salt Lake	0.01	0	0	--	--	--	--	--	--	--	--	
Sanpete	0.30	0.36	0.53	0.63	0.77	0.72	0.33	0.23	0.18	0.36	0.37	
Tooele	0.07	0.34	0.28	0.28	0.22	0.14	0.02	0.06	0.04	0.16	0.19	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	<b>0.15</b>	<b>0.29</b>	<b>0.32</b>	<b>0.54</b>	<b>0.46</b>	<b>0.33</b>	<b>0.18</b>	<b>0.14</b>	<b>0.09</b>	<b>0.20</b>	<b>0.25</b>	<b>0.27</b>
<u>Southern Region</u>												
Beaver	0	0.23	0.36	--	0.18	0.36	0.29	0.33	0.04	0.20	0.11	
Garfield	0.15	0.25	0.48	0.48	0.33	0.29	0.12	0.14	0.28	0.39	0.15	
Iron	0.09	0.64	0.40	--	0.38	0.58	0.00	0.06	0.09	0.21	0.36	
Kane	0.67	--	--	0.71	0.17	0.60	0.32	0.26	0.48	0.49	0.32	
Millard	0.22	0.30	0.39	0.28	0.15	0.29	0.11	0.10	0.07	0.17	0.14	
Piute	0.01	0.09	0	0	0	0	--	0.02	0.07	0.08	0.00	
Sevier	0.18	0.13	0.47	0.58	0.46	0.41	0.10	0.18	0.11	0.26	0.38	
Washington	0.80	0.55	0.61	0.17	0.46	1.16	0.57	1.30	0.56	0.32	0.21	
Wayne	0.08	0.10	0.12	--	0.08	0.07	0.04	0.06	0.03	0.17	0.09	
<b>REGIONAL TOTALS</b>	<b>0.27</b>	<b>0.32</b>	<b>0.35</b>	<b>0.35</b>	<b>0.25</b>	<b>0.48</b>	<b>0.19</b>	<b>0.32</b>	<b>0.20</b>	<b>0.27</b>	<b>0.19</b>	<b>0.31</b>
<u>Northeastern Region</u>												
Daggett	1.93	0.81	0.60	0.77	0.76	0.73	0.50	0.24	0.24	0.68	0.25	
Duchesne	1.40	0.77	0.68	0.56	0.58	0.24	0.14	0.29	0.67	1.00	1.21	
Uintah	1.00	0.98	0.84	1.56	1.39	0.97	0.14	0.19	0.32	1.36	0.68	
<b>REGIONAL TOTALS</b>	<b>1.30</b>	<b>0.82</b>	<b>0.68</b>	<b>0.93</b>	<b>0.89</b>	<b>0.60</b>	<b>0.26</b>	<b>0.24</b>	<b>0.43</b>	<b>0.98</b>	<b>0.67</b>	<b>0.72</b>
<u>Southeastern Region</u>												
Carbon	0.05	0.64	0.13	0.13	0.24	0.20	0.46	0.15	0.18	0.18	0.10	
Emery	0.37	0.33	0.17	0.20	0.04	0.30	0.06	0.08	0.04	0.27	0.26	
Grand	0.34	0.16	--	0.14	0.53	0.66	0.07	0.14	0.18	0.22	0.19	
San Juan	0.58	0.64	0.50	0.30	0.97	0.48	--	0.58	0.42	0.67	0.31	
<b>REGIONAL TOTALS</b>	<b>0.39</b>	<b>0.42</b>	<b>0.21</b>	<b>0.25</b>	<b>0.53</b>	<b>0.45</b>	<b>0.19</b>	<b>0.28</b>	<b>0.22</b>	<b>0.35</b>	<b>0.21</b>	<b>0.33</b>
<b>STATE TOTALS</b>	<b>0.35</b>	<b>0.41</b>	<b>0.32</b>	<b>0.50</b>	<b>0.44</b>	<b>0.43</b>	<b>0.18</b>	<b>0.29</b>	<b>0.22</b>	<b>0.38</b>	<b>0.31</b>	<b>0.34</b>

Table 3. Summary of cottontail rabbit young per 100 adults ratios, 1967-77.

Region & County	Year											Average 1967-6
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	
<u>Northern Region</u>												
Box Elder	94	106	94	95	129	62	100	173	144	281	103	
Cache	--	--	0	--	0	0	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	100	900	--	25	--	--	0	--	200	100	
Rich	125	86	186	40	80	100	50	0	56	100	54	
Summit	67	56	33	64	--	14	--	--	--	--	--	
Weber	--	--	75	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	104	97	115	76	100	56	73	145	120	222	96	110
<u>Central Region</u>												
Juab	175	257	239	246	171	117	100	--	67	20	100	
Salt Lake	--	--	0	--	--	--	--	--	--	--	--	
Sanpete	257	133	311	123	144	148	142	50	38	256	200	
Tooele	200	113	127	100	100	100	0	67	100	133	129	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
<b>REGIONAL TOTALS</b>	218	179	224	157	145	135	121	53	54	160	154	145
<u>Southern Region</u>												
Beaver	--	36	56	--	14	61	92	11	0	--	33	
Garfield	28	85	138	103	118	86	57	56	77	103	71	
Iron	200	75	33	--	162	100	0	100	0	70	93	
Kane	129	--	--	28	50	86	44	200	160	87	65	
Millard	32	143	22	41	32	271	32	82	88	63	67	
Plute	--	0	--	--	--	--	--	0	20	75	--	
Sevler	157	22	360	350	390	450	200	183	44	67	126	
Washington	271	71	114	22	71	11	81	98	212	118	57	
Wayne	100	50	300	--	167	50	200	50	0	250	225	
<b>REGIONAL TOTALS</b>	115	75	85	68	93	64	67	92	120	89	86	86
<u>Northeastern Region</u>												
Daggett	56	62	34	57	81	121	63	87	77	152	48	
Duchesne	142	146	148	131	150	78	160	146	258	177	66	
Uintah	231	117	154	203	191	141	100	114	211	151	134	
<b>REGIONAL TOTALS</b>	118	107	77	126	139	120	87	114	198	159	78	124
<u>Southeastern Region</u>												
Carbon	150	55	122	100	53	145	250	117	227	85	112	
Emery	73	238	200	183	100	125	16	40	0	58	30	
Grand	106	7	--	160	79	297	33	62	47	54	100	
San Juan	45	--	166	228	215	111	--	140	150	179	120	
<b>REGIONAL TOTALS</b>	62	92	161	115	132	180	142	118	124	112	84	125
<b>STATE TOTALS</b>	106	96	110	102	123	99	86	105	132	132	89	109

Table 4. Summary of cottontail rabbit hunter success and distribution of harvest and hunting pressure by region and county, 1977.

Region & County	Hunters Reporting	Days Hunted	Cottontails Bagged	Cottontails/Hunter-day	Cottontails per Hunter*	% of Pressure	% of Harvest
<u>Northern Region</u>							
Box Elder	199	555	1,039	1.87	4.41	10.69	11.69
Cache	30	67	86	1.28	5.33	1.29	0.97
Davis	7	12	22	1.83	7.12	0.23	0.25
Morgan	56	151	266	1.76	6.62	2.91	2.99
Rich	40	94	214	2.28	6.50	1.81	2.41
Summit	32	123	96	0.78	4.82	2.37	1.08
Weber	22	64	61	0.95	5.44	1.23	0.69
REGIONAL TOTALS	386	1,066	1,784	1.67	5.89	20.53	20.07
<u>Central Region</u>							
Juab	80	244	375	1.54	9.00	4.70	4.22
Salt Lake	29	46	55	1.20	6.31	0.89	0.62
Sanpete	36	148	122	0.82	2.62	2.85	1.37
Tooele	155	526	923	1.75	6.07	10.13	10.38
Utah	147	465	617	1.33	7.57	8.96	6.94
Wasatch	20	63	79	1.25	5.71	1.21	0.89
REGIONAL TOTALS	467	1,492	2,171	1.46	6.65	28.74	24.42
<u>Southern Region</u>							
Beaver	8	23	41	1.78	4.67	0.44	0.46
Garfield	5	18	9	0.50	2.25	0.35	0.10
Iron	13	39	42	1.08	3.58	0.75	0.47
Kane	6	49	125	2.55	24.75	0.94	1.41
Millard	47	122	217	1.78	12.56	2.35	2.44
Piute	6	16	33	2.06	6.00	0.31	0.37
Sevier	27	60	91	1.52	3.71	1.16	1.02
Washington	19	65	62	0.95	3.47	1.25	0.70
Wayne	21	74	213	2.88	9.70	1.43	2.40
REGIONAL TOTALS	152	466	833	1.79	6.94	8.98	9.37
<u>Northeastern Region</u>							
Daggett	16	60	126	2.10	10.67	1.16	1.42
Duchesne	96	335	979	2.92	16.10	6.45	11.01
Uintah	99	503	1,260	2.50	16.04	9.69	14.17
REGIONAL TOTALS	211	898	2,365	2.63	15.88	17.30	26.60
<u>Southeastern Region</u>							
Carbon	63	403	481	1.19	12.47	7.76	5.41
Emery	48	377	498	1.32	13.06	7.26	5.60
Grand	14	39	48	1.23	6.73	0.75	0.54
San Juan	16	64	67	1.05	4.43	1.23	0.75
REGIONAL TOTALS	141	883	1,094	1.24	11.26	17.01	12.31
Unknown counties	50	132	246	1.86	8.67	2.54	2.77
Mixed counties	26	254	397	1.56	0.00	4.89	4.47
STATE TOTALS	1,434	5,192	8,890	1.71	7.51	100	100

\*Based on county of residence.

Table 5. Summary of cottontail rabbits bagged per hunter-day by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	1.48	0.90	1.03	1.25	1.63	1.87
Cache	1.71	0.52	1.12	0.31	1.30	1.28
Davis	0.57	0.85	0.66	0.21	2.05	1.83
Morgan	0.26	0.81	0.68	0.65	0.71	1.76
Rich	3.97	0.92	1.14	1.45	1.50	2.28
Summit	1.19	0.39	0.62	0.66	0.96	0.78
Weber	0.28	1.79	0.35	0.74	0.85	0.95
REGIONAL TOTALS	1.28	0.87	0.86	0.96	1.40	1.67
<u>Central Region</u>						
Juab	1.14	0.70	0.90	0.78	1.77	1.54
Salt Lake	1.24	0.24	0.86	0.94	1.35	1.20
Sanpete	1.34	0.88	1.14	0.64	1.27	0.82
Tooele	1.25	0.84	0.79	0.75	1.56	1.75
Utah	1.10	0.69	0.81	1.11	1.26	1.33
Wasatch	1.26	0.68	0.57	1.00	0.89	1.25
REGIONAL TOTALS	1.20	0.73	0.84	0.87	1.41	1.46
<u>Southern Region</u>						
Beaver	1.06	0.84	0.89	1.44	2.09	1.78
Garfield	1.45	2.24	1.45	1.00	1.02	0.50
Iron	1.31	0.55	0.61	0.84	1.19	1.08
Kane	1.62	1.18	1.57	2.31	1.00	2.55
Millard	1.87	1.47	1.15	0.70	1.67	1.78
Piute	0.75	2.50	0.08	1.14	0.60	2.06
Sevier	1.87	1.45	1.12	1.45	1.11	1.52
Washington	2.29	1.61	1.02	1.98	1.05	0.95
Wayne	2.15	0.74	1.08	1.73	2.17	2.88
REGIONAL TOTALS	1.85	1.19	1.03	1.53	1.45	1.79
<u>Northeastern Region</u>						
Daggett	2.93	1.25	1.69	0.73	3.18	2.10
Duchesne	2.91	1.07	1.44	1.86	3.31	2.92
Uintah	1.47	1.10	0.96	1.81	3.02	2.50
REGIONAL TOTALS	2.15	1.11	1.24	1.78	3.17	2.63
<u>Southeastern Region</u>						
Carbon	1.15	1.21	0.95	1.17	1.54	1.19
Emery	1.49	1.46	0.80	1.56	1.59	1.32
Grand	2.35	1.00	1.93	3.55	2.78	1.23
San Juan	2.13	2.26	2.12	1.81	1.42	1.05
REGIONAL TOTALS	1.61	1.43	1.11	1.70	1.74	1.24
Unknown counties	0.76	0.64	2.13	0.33	1.00	1.86
Mixed counties			5.33	0.00	1.49	1.56
STATE TOTALS	1.46	1.02	1.01	1.32	1.86	1.71

Table 6. Percentage distribution of cottontail rabbit harvest by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	14.54	7.48	11.33	8.37	7.22	11.69
Cache	2.02	0.87	1.19	0.35	1.21	0.97
Davis	0.38	0.67	0.42	0.17	0.95	0.25
Morgan	0.54	1.28	0.86	0.58	0.55	2.99
Rich	2.41	0.70	0.55	1.50	1.14	2.41
Summit	2.51	1.28	2.00	1.11	0.77	1.08
Weber	0.36	3.62	0.70	1.17	0.59	0.69
REGIONAL TOTALS	22.75	15.88	17.04	13.25	12.44	20.07
<u>Central Region</u>						
Juab	3.67	3.10	4.35	2.84	3.77	4.22
Salt Lake	1.89	0.41	2.94	1.28	0.72	0.62
Sanpete	4.10	1.94	1.98	1.57	0.97	1.37
Tooele	6.56	8.32	4.19	4.82	7.12	10.38
Utah	6.51	6.81	9.84	7.21	6.12	6.94
Wasatch	2.46	1.45	0.55	0.87	1.05	0.89
REGIONAL TOTALS	25.18	22.03	23.85	18.59	19.75	24.42
<u>Southern Region</u>						
Beaver	0.31	1.04	1.60	0.25	1.68	0.46
Garfield	0.26	1.10	0.70	0.31	0.53	0.10
Iron	1.72	2.20	0.92	1.26	1.37	0.47
Kane	0.21	0.38	0.97	1.61	0.02	1.41
Millard	5.34	4.64	4.63	1.09	2.90	2.44
Piute	0.05	0.14	0.02	0.16	0.03	0.37
Sevier	1.87	2.06	1.05	1.07	0.36	1.02
Washington	4.95	7.01	4.79	8.51	2.47	0.70
Wayne	0.46	1.07	1.25	1.11	2.33	2.40
REGIONAL TOTALS	15.18	19.65	15.94	15.37	11.70	9.37
<u>Northeastern Region</u>						
Daggett	2.59	2.00	1.82	0.47	3.12	1.42
Duchesne	9.84	6.38	8.89	9.56	18.80	11.01
Uintah	7.03	6.72	5.99	14.01	15.38	14.17
REGIONAL TOTALS	19.46	15.10	16.71	24.03	37.30	26.60
<u>Southeastern Region</u>						
Carbon	4.85	9.22	8.37	7.60	6.05	5.41
Emery	2.10	7.65	5.53	9.09	4.74	5.60
Grand	1.66	2.87	2.46	7.58	4.14	0.54
San Jaun	6.51	7.33	5.20	4.47	1.40	0.75
REGIONAL TOTALS	15.11	27.07	21.56	28.74	16.33	12.31
Unknown counties	2.08	0.26	4.55	0.02	0.01	2.77
Mixed counties			0.35	0.00	2.08	4.47
STATE TOTALS	100	100	100	100	100	100

Table 7. Percentage distribution of cottontail rabbit hunting pressure by region and county, 1972-77.

Region & County	1972	1973	1974	1975	1976	1977
<u>Northern Region</u>						
Box Elder	14.43	8.44	11.18	8.88	8.27	10.69
Cache	1.73	1.71	1.07	1.51	1.75	1.29
Davis	0.96	0.80	0.64	1.08	0.86	0.23
Morgan	3.10	1.59	1.27	1.18	1.47	2.91
Rich	0.89	0.77	0.49	1.36	1.42	1.81
Summit	3.10	3.30	3.27	2.23	1.51	2.37
Weber	1.90	2.07	2.04	0.08	1.29	1.23
REGIONAL TOTALS	26.10	18.68	19.95	18.33	16.57	20.53
<u>Central Region</u>						
Juab	4.73	4.51	4.91	4.80	3.99	4.70
Salt Lake	2.23	1.74	3.44	1.80	0.99	0.89
Sanpete	4.49	2.24	1.76	3.26	1.42	2.85
Tooele	7.66	10.09	5.40	8.52	8.53	10.13
Utah	8.69	10.12	12.31	8.57	9.07	8.96
Wasatch	2.86	2.18	0.98	1.16	2.20	1.21
REGIONAL TOTALS	30.67	30.89	28.79	28.11	26.20	28.74
<u>Southern Region</u>						
Beaver	0.43	1.27	1.82	0.23	1.51	0.44
Garfield	0.26	0.50	0.49	0.41	0.97	0.35
Iron	1.92	4.10	1.53	1.98	2.15	0.75
Kane	0.19	0.32	0.62	0.92	0.04	0.94
Millard	4.18	3.22	4.09	2.05	3.23	2.35
Piute	0.10	0.06	0.29	0.18	0.11	0.31
Sevier	1.46	1.45	0.96	0.98	0.60	1.16
Washington	3.17	4.43	4.75	5.67	4.40	1.25
Wayne	0.31	1.48	1.18	0.85	2.00	1.43
REGIONAL TOTALS	12.03	16.82	15.73	13.27	15.02	8.98
<u>Northeastern Region</u>						
Daggett	1.30	1.62	1.09	0.85	1.83	1.16
Duchesne	4.95	6.08	6.24	6.78	10.60	6.45
Uintah	7.01	6.20	6.29	10.24	9.50	9.69
REGIONAL TOTALS	13.26	13.90	13.62	17.86	21.93	17.30
<u>Southeastern Region</u>						
Carbon	6.20	7.73	8.93	8.57	7.35	7.76
Emery	2.07	5.34	6.98	7.70	5.58	7.26
Grand	1.03	2.92	1.29	2.82	2.78	0.75
San Jaun	4.47	3.30	2.49	3.26	1.83	1.23
REGIONAL TOTALS	13.76	19.30	19.68	22.36	17.54	17.01
Unknown counties	4.01	0.41	2.16	0.08	0.02	2.54
Mixed counties			0.07	0.00	2.61	4.89
STATE TOTALS	100	100	100	100	100	100



Table 8. Statewide summary of cottontail rabbit harvest statistics, 1967-77.

Year	Total Hunters	Total Harvest	Hunter Days Afield	Cottontail 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
<b>TOTALS</b>					
(1967-77)	289,864	2,015,703	1,233,592	1.63	6.95
<b>AVERAGES</b>					
(1967-66)	25,403	174,644	107,634	1.61	6.77

\*Based on county of residence.

Table 9. Cottontail rabbit field bag check summary, 1977.

Region & County	Total Parties	Total Hunters	Total Hours	Total Rabbits	Total Rabbits/100 Hrs.	Total Complete Hunts	Total Hunters	Total Hours	Total Rabbits	Rabbits/100 Hrs.	Rabbits/Hunter
<u>Northern Region</u>											
Box Elder	15	36	148	59	40	13	30	128	59	46	1.97
Cache	2	3	12	2	17	2	3	12	2	17	0.67
Davis	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	3	7	48	16	33	3	7	48	16	33	2.29
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>20</b>	<b>46</b>	<b>208</b>	<b>77</b>	<b>37</b>	<b>18</b>	<b>40</b>	<b>188</b>	<b>77</b>	<b>41</b>	<b>1.92</b>
<u>Central Region</u>											
Juab	1	1	3	1	33	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--
Sanpete	19	68	162	23	14	6	19	60	8	13	0.42
Tooele	18	68	222	63	28	5	20	87	33	38	1.65
Utah	--	--	--	--	--	--	--	--	--	--	--
Wasatch	1	4	16	8	50	1	4	16	8	50	2.00
<b>REGIONAL TOTALS</b>	<b>39</b>	<b>141</b>	<b>403</b>	<b>95</b>	<b>24</b>	<b>12</b>	<b>43</b>	<b>163</b>	<b>49</b>	<b>30</b>	<b>1.14</b>
<u>Southern Region</u>											
Beaver	--	--	--	--	--	--	--	--	--	--	--
Garfield	1	1	1	1	100	1	1	1	1	100	1.00
Iron	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	2	3	7	4	57	2	3	7	4	57	1.33
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	<b>3</b>	<b>4</b>	<b>8</b>	<b>5</b>	<b>63</b>	<b>3</b>	<b>4</b>	<b>8</b>	<b>5</b>	<b>63</b>	<b>1.25</b>
<u>Northeastern Region</u>											
Daggett	36	68	191	127	66	12	27	85	46	54	1.70
Duchesne	29	63	231	170	74	17	37	150	99	66	2.68
Uintah	11	23	62	51	82	5	6	21	29	138	4.83
<b>REGIONAL TOTALS</b>	<b>76</b>	<b>154</b>	<b>484</b>	<b>348</b>	<b>72</b>	<b>34</b>	<b>70</b>	<b>256</b>	<b>174</b>	<b>68</b>	<b>2.49</b>
<u>Southeastern Region</u>											
Carbon	14	33	115	54	47	6	17	82	51	62	3.00
Emery	14	39	98	26	27	2	10	37	3	8	0.30
Grand	4	8	21	7	33	3	7	18	2	11	0.29
San Juan	15	31	39	18	46	7	14	18	13	72	0.93
<b>REGIONAL TOTALS</b>	<b>47</b>	<b>111</b>	<b>272</b>	<b>105</b>	<b>39</b>	<b>18</b>	<b>48</b>	<b>155</b>	<b>69</b>	<b>45</b>	<b>1.44</b>
<b>STATE TOTALS</b>	<b>185</b>	<b>456</b>	<b>1,375</b>	<b>630</b>	<b>46</b>	<b>85</b>	<b>205</b>	<b>770</b>	<b>374</b>	<b>49</b>	<b>1.82</b>

Table 10. Cottontail hunter success trend determined by field bag checks, 1972-77.

Region & County	1972		1973		1974		1975		1976		1977	
	Bag/ 100 Hrs. Hunter	Bag/ 100 Hrs. Hunter	Bag/ 100 Hrs. Hunter	Bag/ 100 Hrs. Hunter	Bag/ 100 Hrs. Hunter	Bag/ 100 Hrs. Hunter	Bag/ 100 Hrs. Hunter	Bag/ 100 Hrs. Hunter	Bag/ 100 Hrs. Hunter	Bag/ 100 Hrs. Hunter	Bag/ 100 Hrs. Hunter	Bag/ 100 Hrs. Hunter
<u>Northern Region</u>												
Box Elder	10	0.38	--	--	10	1.00	10	0.48	9	0.40	46	1.97
Cache	100	0.50	--	--	--	--	--	--	--	--	17	0.67
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	11	0.25	--	--	--	--	30	1.33	--	--	--	--
Summit	--	--	--	--	--	--	--	--	58	2.21	33	2.29
Weber	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	10	0.34	--	--	10	1.00	15	0.69	37	1.59	41	1.92
<u>Central Region</u>												
Juab	100	1.00	--	--	--	--	0	0.00	10	2.00	--	--
Salt Lake	--	--	--	--	33	0.50*	--	--	400	4.00	--	--
Sanpete	--	--	--	--	--	--	--	--	11	1.00	13	0.42
Tooele	38	1.50	14	0.50	20	0.61*	0	0.00	14	0.57	38	1.65
Utah	--	--	--	--	--	--	--	--	7	0.23	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	50	2.00
<b>REGIONAL TOTALS</b>	40	1.45	14	0.50	21	0.60*	0	0.00	14	0.76	30	1.14
<u>Southern Region</u>												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	138	6.11	--	--	314	3.14	100	1.00
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	57	1.33
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
<b>REGIONAL TOTALS</b>	--	--	--	--	138	6.11	--	--	314	3.14	63	1.25
<u>Northeastern Region</u>												
Daggett	109	1.83	--	--	36	0.40	59	0.44	81	2.59	54	1.70
Duchesne	101	4.32	94	4.43	19	1.05	39	1.72	77	4.03	66	2.68
Uintah	101	6.10	55	4.10	36	1.68	87	2.93	157	6.24	138	4.83
<b>REGIONAL TOTALS</b>	103	4.05	78	4.33	30	1.39	54	1.91	98	4.60	68	2.49
<u>Southeastern Region</u>												
Carbon	98	2.17	80	1.47	100	2.35	57	2.00	40	2.19	62	3.00
Emery	6	0.27	127	1.00	17	0.50	6	0.00	28	2.19	8	0.30
Grand	--	--	--	--	--	--	112	3.33	47	1.39	11	0.29
San Juan	78	2.32	73	1.95	44	2.00	96	2.93	63	2.00	72	0.93
<b>REGIONAL TOTALS</b>	58	2.21	77	1.61	47	1.15	74	2.51	38	1.86	45	1.44
<b>STATE TOTALS</b>	58	2.27	77	2.15	45	1.91	43	1.80	60	2.85	49	1.82

\*Cottontails per hunter based on all hunts.

## SNOWSHOE HARE

### Harvest

During 1977, the third annual snowshoe hare hunting season was held statewide. Results of the 1977 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. The 1977 season compared to the season in 1976 and to the average of the first two hunts as follows:

	<u>1977</u>	<u>Percent change from</u>	
		<u>1976</u>	<u>Average</u>
Snowshoe hare hunters	9,752	+14	+35
Snowshoe hares harvested	21,232	+37	+54
Hunter-days afield	26,532	+30	+32
Snowshoes per hunter-day	0.80	+ 4	+16
Snowshoes per hunter	2.18	+20	+13

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 was reported for Box Elder and Tooele counties; outside the known range of the species. It was assumed that the problem was Statewide, not just confined to those counties.

The 1976 harvest questionnaire was modified in an attempt to better inform respondents concerning the potential for misidentification and aid them in distinguishing between these two varying hares. Comparative reported harvests in Box Elder and Tooele counties between 1975 and 1976 suggest that this was accomplished, at least to a significant degree, but the still relatively large harvest suggests continued substantial confusion. Further refinement was made in the 1977 harvest questionnaire in an effort to more clearly define the snowshoe hare harvest; however, some confusion still exists especially among hunters hunting in Box Elder County.

The estimated number of hunters increased sharply in comparison to 1975 and 1976 and the number of hunter-days afield increased substantially. The indicated total harvest also showed a marked increase. An unknown, ~~pro~~portion of the indicated harvest were actually white-tailed jackrabbits.

Table 11. Summary of snowshoe hare hunter success and distribution of harvest and hunting pressure by region and county, 1977.

Region & County	Hunters Reporting	Days Hunted	Snowshoes Bagged	Snowshoes/Hunter-day	Snowshoes* per Hunter	% of Pressure	% of Harvest
<u>Northern Region</u>							
Box Elder	24	46	36	0.78	2.43	5.25	5.14
Cache	23	60	42	0.70	2.43	6.85	5.99
Davis	4	6	6	1.00	2.05	0.68	0.86
Morgan	34	79	69	0.87	1.50	9.02	9.84
Rich	19	50	31	0.62	2.00	5.71	4.42
Summit	36	103	109	1.06	4.60	11.76	15.55
Weber	18	42	28	0.67	1.89	4.79	3.99
REGIONAL TOTALS	158	386	321	0.83	2.13	44.06	45.79
<u>Central Region</u>							
Juab	3	9	0	0.00	0.50	1.03	0.00
Salt Lake	13	16	27	1.69	2.19	1.83	3.85
Sanpete	19	44	42	0.95	2.75	5.02	5.99
Tooele	7	12	4	0.33	0.00	1.37	0.57
Utah	25	43	29	0.67	1.78	4.9	4.14
Wasatch	30	64	53	0.83	0.67	7.31	7.56
REGIONAL TOTALS	97	188	155	0.82	2.00	21.46	22.11
<u>Southern Region</u>							
Beaver	1	1	1	1.00	0.00	0.11	0.14
Garfield	0	0	0	0.00	0.00	0.00	0.00
Iron	0	0	0	0.00	0.00	0.00	0.00
Kane	0	0	0	0.00	0.00	0.00	0.00
Millard	1	2	1	0.50	1.50	0.23	0.14
Piute	1	1	1	1.00	0.00	0.11	0.14
Sevier	9	29	10	0.34	1.14	3.31	1.43
Washington	1	1	2	2.00	0.00	0.11	0.29
Wayne	4	9	22	2.44	8.33	1.03	3.14
REGIONAL TOTALS	17	43	37	0.86	3.00	4.91	5.28
<u>Northeastern Region</u>							
Daggett	2	3	6	2.00	0.00	0.34	0.86
Duchesne	23	54	40	0.74	7.40	6.16	5.71
Uintah	16	44	26	0.59	1.00	5.02	3.71
REGIONAL TOTALS	41	101	72	0.71	4.20	11.53	10.27
<u>Southeastern Region</u>							
Carbon	14	40	24	0.60	2.42	4.57	3.42
Emery	6	16	7	0.44	3.00	1.83	1.00
Grand	1	3	0	0.00	0.00	0.34	0.00
San Juan	0	0	0	0.00	0.00	0.00	0.00
REGIONAL TOTALS	21	59	31	0.53	2.50	6.74	4.42
Unknown counties	16	24	28	1.17	0.00	2.74	3.99
Mixed counties	6	75	57	0.76	0.00	8.56	8.13
STATE TOTALS	356	876	701	0.80	2.18	100	100

\*Based on county of residence.

Table 12. Summary of snowshoe hares bagged per hunter-day by region and county, 1975-77.

Region & County	1975	1976	1977
<u>Northern Region</u>			
Box Elder	0.79	0.43	0.78
Cache	0.49	0.82	0.70
Davis	0.07	0.40	1.00
Morgan	0.67	0.72	0.87
Rich	1.21	0.86	0.62
Summit	0.34	1.16	1.06
Weber	0.40	0.88	0.67
REGIONAL TOTALS	0.57	0.87	0.83
<u>Central Region</u>			
Juab	0.50	0.50	0.00
Salt Lake	0.85	1.25	1.69
Sanpete	0.39	0.29	0.95
Tooele	0.80	0.40	0.33
Utah	0.47	0.71	0.67
Wasatch	0.67	0.62	0.83
REGIONAL TOTALS	0.60	0.63	0.82
<u>Southern Region</u>			
Beaver	0.50	0.75	1.00
Garfield	0.00	0.33	0.00
Iron	1.00	0.00	0.00
Kane	0.00	0.00	0.00
Millard	0.00	0.00	0.50
Piute	1.00	0.00	1.00
Sevier	0.47	0.63	0.34
Washington	0.00	0.00	2.00
Wayne	1.25	1.27	2.44
REGIONAL TOTALS	0.47	0.84	0.86
<u>Northeastern Region</u>			
Daggett	1.37	0.00	2.00
Duchesne	0.69	0.51	0.74
Uintah	0.91	0.69	0.59
REGIONAL TOTALS	0.91	0.56	0.71
<u>Southeastern Region</u>			
Carbon	0.81	0.94	0.60
Emery	0.33	0.61	0.44
Grand	0.00	1.00	0.00
San Juan	0.00	1.90	0.00
REGIONAL TOTALS	0.71	1.00	0.53
Unknown counties	--	1.00	1.17
Mixed counties	--	0.40	0.76
STATE TOTALS	0.61	0.76	0.80

Table 13. Percentage distribution of snowshoe hare harvested by region and county, 1967-77.

Region & County	1975	1976	1977
<u>Northern Region</u>			
Box Elder	15.38	2.25	5.14
Cache	9.18	10.03	5.99
Davis	0.25	0.35	0.86
Morgan	2.98	7.44	9.84
Rich	8.44	4.33	4.42
Summit	6.70	20.59	15.55
Weber	3.97	2.60	3.99
REGIONAL TOTALS	46.90	47.58	45.79
<u>Central Region</u>			
Juab	0.25	1.21	0.00
Salt Lake	2.73	1.73	3.85
Sanpete	2.98	1.04	5.99
Tooele	8.68	0.35	0.57
Utah	6.45	10.03	4.14
Wasatch	4.47	6.92	7.56
REGIONAL TOTALS	25.56	21.28	22.11
<u>Southern Region</u>			
Beaver	1.07	1.04	0.14
Garfield	0.40	0.17	0.00
Iron	0.27	0.00	0.00
Kane	0.00	0.00	0.00
Millard	0.13	0.00	0.14
Piute	0.00	0.00	0.14
Sevier	1.07	0.87	1.43
Washington	0.00	0.00	0.29
Wayne	2.00	3.29	3.14
REGIONAL TOTALS	4.93	5.36	5.28
<u>Northeastern Region</u>			
Daggett	0.67	0.00	0.86
Duchesne	8.12	5.36	5.71
Uintah	6.79	6.06	3.71
REGIONAL TOTALS	15.58	11.42	10.27
<u>Southeastern Region</u>			
Carbon	4.53	5.54	3.42
Emery	2.40	1.90	1.00
Grand	0.27	0.35	0.00
San Juan	1.33	3.29	0.00
REGIONAL TOTALS	8.52	11.07	4.42
Unknown counties	--	0.35	3.99
Mixed counties	--	1.04	8.13
STATE TOTALS	100	100	100

Table 14. Percentage distribution of snowshoe hare hunting pressure by region and county, 1975-77.

Region & County	1975	1976	1977
<u>Northern Region</u>			
Box Elder	11.82	3.99	5.25
Cache	11.36	9.45	6.85
Davis	2.27	0.67	0.68
Morgan	2.73	7.99	9.02
Rich	4.24	3.86	5.71
Summit	11.97	13.72	11.76
Weber	6.06	2.26	4.79
<b>REGIONAL TOTALS</b>	<b>50.45</b>	<b>41.94</b>	<b>44.06</b>
<u>Central Region</u>			
Juab	0.30	1.86	1.03
Salt Lake	1.97	1.07	1.83
Sanpete	4.70	2.80	5.02
Tooele	6.67	0.67	1.37
Utah	8.33	10.92	4.91
Wasatch	4.09	8.66	7.31
<b>Regional Totals</b>	<b>26.06</b>	<b>25.97</b>	<b>21.46</b>
<u>Southern Region</u>			
Beaver	0.30	1.07	0.11
Garfield	1.21	0.40	0.00
Iron	0.15	0.27	0.00
Kane	0.00	0.00	0.00
Millard	0.00	0.13	0.23
Piute	0.15	0.00	0.11
Sevier	2.88	1.07	3.31
Washington	0.15	0.00	0.11
Wayne	0.61	2.00	1.03
<b>REGIONAL TOTALS</b>	<b>5.45</b>	<b>4.93</b>	<b>4.91</b>
<u>Northeastern Region</u>			
Daggett	1.21	0.67	0.34
Duchesne	2.42	8.12	6.16
Uintah	3.48	6.79	5.02
<b>REGIONAL TOTALS</b>	<b>7.12</b>	<b>15.58</b>	<b>11.53</b>
<u>Southeastern Region</u>			
Carbon	8.64	4.53	4.57
Emery	2.27	2.40	1.83
Grand	0.00	0.27	0.34
San Juan	0.00	1.33	0.00
<b>REGIONAL TOTALS</b>	<b>10.91</b>	<b>8.52</b>	<b>6.74</b>
Unknown counties	--	0.27	2.74
Mixed counties	--	2.00	8.56
<b>STATE TOTALS</b>	<b>100</b>	<b>100</b>	<b>100</b>



Table 15. Statewide summary of snowshoe hare harvest statistics, 1975-77.

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	0.77	1.82
1977	9,752	21,232	26,532	0.80	2.18
<b>TOTALS</b>					
(1975-77)	24,215	48,804	66,669	0.73	2.02
<b>AVERAGES</b>					
(1975-76)	7,238	13,786	20,069	0.69	1.93

\*Based on county of residence.

**APPENDIX**

Table 1. Comparison of 1977 monthly average temperatures to the normal for each weather division and statewide.

Weather Division	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
<b>No. 1 WESTERN</b>												
Normal	25.9	31.8	38.0	47.2	56.4	54.4	74.0	72.0	62.4	50.6	37.2	28.6
1977	25.3	33.3	35.5	50.9	52.5	71.0	74.7	72.6	63.4	52.4	39.7	35.9
Departure (degrees)	-0.6	+1.5	-2.5	+3.7	-3.9	+6.6	+0.7	+0.6	+1.0	+1.8	+2.5	+7.3
<b>No. 2 DIXIE</b>												
Normal	39.0	44.1	49.2	57.6	66.5	75.2	82.6	80.6	73.7	62.5	48.4	40.2
1977	38.6	47.4	45.6	60.6	60.4	77.6	81.7	81.1	72.7	64.5	50.2	44.6
Departure (degrees)	-0.4	+3.3	-3.6	+3.0	-6.1	+2.4	-0.9	+0.5	-1.0	+2.0	+1.8	+4.4
<b>No. 3 NORTH CENTRAL</b>												
Normal	26.7	31.9	38.5	48.3	57.5	65.0	74.6	72.7	63.5	51.7	38.5	29.7
1977	24.0	32.0	35.6	51.7	53.1	71.1	73.9	71.9	63.2	52.7	39.9	35.1
Departure (degrees)	-2.7	+0.1	-2.9	+3.4	-4.4	+6.1	-0.7	-0.8	-0.3	+1.0	+1.4	+5.4
<b>No. 4 SOUTH CENTRAL</b>												
Normal	26.9	31.5	36.9	45.6	54.4	62.3	70.0	68.1	60.5	50.0	37.6	29.3
1977	25.0	33.9	34.0	48.0	50.5	66.8	70.3	69.1	61.6	51.7	40.1	34.7
Departure (degrees)	-1.9	+2.6	-2.9	+2.4	-3.9	+4.5	+0.3	+1.0	+1.1	+1.7	2.5	+5.4
<b>No. 5 NORTHERN MOUNTAINS</b>												
Normal	20.9	24.3	30.2	40.8	49.9	56.8	65.1	63.2	55.0	45.0	32.3	24.2
1977	20.8	27.1	29.0	43.9	47.1	63.0	65.6	64.1	56.4	47.0	35.2	28.3
Departure (degrees)	-0.1	+2.8	-1.2	+3.1	-2.8	+6.2	+0.5	+0.9	+1.4	+2.0	+2.9	+4.1
<b>No. 6 UINTAH BASIN</b>												
Normal	16.8	23.9	35.0	46.7	56.4	63.8	71.5	69.2	60.4	48.7	34.1	22.1
1977	21.8	31.0	34.5	50.4	54.1	70.7	72.1	69.7	61.8	49.9	35.2	29.3
Departure (degrees)	+5.0	+7.1	-0.5	+3.7	-2.3	+6.9	+0.6	+0.5	+1.4	+1.2	+1.1	+7.2
<b>No. 7 SOUTHEAST</b>												
Normal	27.3	33.6	40.6	50.6	60.1	68.7	76.1	73.7	65.6	53.7	39.3	29.8
1977	24.9	37.1	38.7	54.0	58.4	74.3	76.0	75.4	67.1	55.1	41.5	35.5
Departure (degrees)	-2.4	+3.5	-1.9	+3.4	-1.7	+5.6	-0.1	+1.7	+1.5	+1.4	+2.2	+5.7
<b>STATE AVERAGES</b>												
Normal	26.2	31.6	38.3	48.1	57.3	65.2	73.4	71.4	63.0	51.7	38.2	29.1
1977	25.8	34.5	36.1	51.4	53.7	70.6	73.5	72.0	63.7	53.3	40.3	34.8
Departure (degrees)	-0.4	+2.9	-2.2	+3.3	-3.6	+5.4	+0.1	+0.6	+0.7	+1.6	+2.1	+5.7

Table 2. Comparison of 1977 monthly average precipitation to the normal for each weather division and statewide.

Weather Division	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
<b>No. 1 WESTERN</b>												
Normal	0.60	0.59	0.75	0.87	0.84	0.82	0.61	0.76	0.50	0.76	0.69	0.70
1977	0.29	0.09	0.48	0.13	2.74	0.46	0.88	1.43	0.51	0.21	0.35	0.50
Departure (inches)	-0.31	-0.50	-0.27	-0.74	+1.90	-0.36	+0.27	+0.67	0.01	-0.55	-0.34	-0.20
<b>No. 2 DIXIE</b>												
Normal	1.15	1.21	1.30	0.91	0.53	0.38	0.89	0.95	0.67	0.88	0.91	1.17
1977	0.66	.09	0.45	0.08	2.68	0.49	0.79	1.24	0.92	0.29	0.26	1.33
Departure (inches)	-0.49	-1.12	-0.85	-0.83	+2.15	+0.11	-0.10	+0.29	0.25	-0.59	-0.65	+0.16
<b>No. 3 NORTH CENTRAL</b>												
Normal	1.47	1.32	1.62	1.96	1.67	1.50	0.59	0.94	0.85	1.36	1.49	1.56
1977	0.75	0.58	1.50	0.52	4.31	0.17	1.34	2.39	1.39	0.93	0.74	1.40
Departure (inches)	-0.72	-0.74	-0.12	-1.44	+2.64	-1.33	+0.75	+1.45	+0.54	-0.43	-0.75	-0.16
<b>No. 4. SOUTH CENTRAL</b>												
Normal	1.03	0.98	1.18	1.13	0.88	0.76	0.96	1.39	0.88	1.03	0.93	1.08
1977	0.50	0.27	.70	0.15	1.55	0.52	1.38	1.26	0.50	0.76	0.35	0.80
Departure (inches)	-0.53	-0.71	-0.48	-0.98	+0.67	-0.24	+0.42	-0.13	-0.38	-0.27	-0.58	-0.28
<b>No. 5 NORTHERN MOUNTAINS</b>												
Normal	2.19	1.89	2.05	1.86	1.52	1.52	0.86	1.34	1.05	1.57	1.82	2.24
1977	0.62	1.44	1.37	0.42	3.16	0.23	1.57	1.97	1.45	1.30	1.29	2.26
Departure (inches)	-1.57	-0.45	-0.68	-1.44	+1.64	-1.29	+0.71	+0.63	+0.40	-0.27	-0.53	+0.02
<b>No. 6 UINTA BASIN</b>												
Normal	0.51	0.43	0.50	0.68	0.68	0.90	0.62	0.88	0.72	0.94	0.51	0.69
1977	0.31	0.33	0.22	0.55	1.07	0.20	1.49	1.21	0.31	0.44	0.51	0.31
Departure (inches)	-0.20	-0.10	-0.28	-0.13	+0.39	-0.70	+0.87	+0.34	-0.41	-0.50	0.00	-0.38
<b>No. 7 SOUTHEAST</b>												
Normal	0.61	0.56	0.60	0.68	0.59	0.56	0.74	1.23	0.77	1.07	0.61	0.73
1977	0.62	0.15	0.16	0.18	0.64	0.15	1.61	0.94	0.53	0.55	0.46	0.52
Departure (inches)	+0.01	-0.41	-0.44	-0.50	+0.05	-0.41	-0.87	-0.29	-0.24	-0.52	-0.15	-0.21
<b>STATE AVERAGES</b>												
Normal	1.08	1.00	1.14	1.16	0.96	0.92	0.75	1.07	0.78	1.09	0.99	1.17
1977	0.54	0.42	0.70	0.29	2.31	0.32	1.29	1.49	0.80	0.64	0.57	1.02
Departure (inches)	-0.54	-0.58	-0.44	-0.87	+1.35	-0.60	+0.54	+0.42	+0.02	-0.45	-0.42	-0.15

Table 3. Number and percent of total upland game hunters afield who reported hunting each game species during 1972-77.

Species	Number of Hunters					Percent of Total						
	1972	1973	1974	1975	1976	1977	1972	1973	1974	1975	1976	1977
Pheasant	84,311	75,968	85,252	77,566	74,029	67,195	87.8	82.5	85.6	79.3	81.1	75.0
Chukars	16,685	13,888	16,412	16,156	14,171	12,691	17.4	15.1	16.5	16.5	15.5	14.2
Mourning Doves	29,341	27,435	34,021	37,378	31,293	26,905	30.5	29.8	34.2	38.2	34.3	30.0
Sage Grouse	13,040	10,017	12,214	13,996	15,283	14,078	13.6	10.9	12.3	14.3	16.8	15.7
Forest Grouse	16,640	17,588	21,290	20,102	21,186	19,188	17.3	19.1	22.0	20.6	23.2	21.4
Quail	7,380	5,654	6,097	6,397	5,215	4,446	7.7	6.1	6.1	6.5	5.7	5.0
Hungarian Partridge	4,754	3,566	4,103	3,409	3,517	3,557	4.9	3.9	4.1	3.5	38.6	4.0
Wild turkey**	351*	135	138*	143*	130*	152	0.4	0.1	0.1	0.1	0.1	0.2
Cottontail	22,835	20,109	22,737	24,803	28,239	35,831	23.8	21.8	22.8	25.4	31.0	40.0
Snowshoe hare				5,961	8,502	9,752				6.1	9.3	10.9
TOTAL HUNTERS	96,047	92,098	99,556	97,808	91,226	89,593						

\*Includes both spring and fall hunts.

\*\*Although wild turkey harvest was determined by separate questionnaire, it is assumed that these hunters are derived from the same group of hunters who reported hunting other upland game bird species.

Table 4. Percent of hunter trips resulting in failure to bag at least one bird, 1961-77.

Year	Pheasants		Doves		Chukars		Sage Grouse		Forest Grouse		Quail		Huns																						
	Bag	Hunt. %	0	Bag	Hunt. %	0	Bag	Hunt. %	0	Bag	Hunt. %	0	Bag	Hunt. %																					
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	188	281	67	71	305	23	59	177	33														
1964	911	3,115	29	60	681	9	266	568	47	45	154	29	144	229	63	94	316	30	62	150	41														
1965	1,165	4,009	29	--	--	--	486	851	57	82	168	49	225	311	72	128	371	34	93	233	40														
1966	1,242	4,297	29	136	1,067	13	423	881	48	54	131	41	133	331	40	106	315	34	63	219	29														
1967	1,353	4,833	28	153	1,319	12	477	915	52	138	266	52	194	475	41	161	424	38	116	315	37														
1968	1,422	5,223	27	236	1,312	18	495	1,095	45	185	449	41	177	665	27	171	457	37	132	347	38														
1969	1,897	5,335	36	214	1,568	14	647	1,250	52	241	648	37	273	646	42	182	465	39	148	292	51														
1970	1,546	4,686	33	193	1,274	15	466	962	48	257	603	43	209	666	31	126	314	40	101	210	48														
1971	1,783	5,049	35	210	1,333	16	464	934	50	234	625	37	223	673	33	162	385	42	87	210	41														
1972	1,743	4,617	38	270	1,421	19	457	827	55	259	593	44	271	794	34	154	339	45	120	224	54														
1973	1,659	4,699	35	209	1,596	13	414	824	50	226	553	41	329	1,019	32	128	311	41	97	196	49														
1974	2,347	5,323	44	323	1,951	17	511	955	54	292	668	44	388	1,259	31	157	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	40	177	406	44	121	220	55														
1976	1,739	4,294	40	273	1,709	16	408	781	52	259	783	33	371	1,131	33	105	266	39	87	184	47														
1977	1,874	5,175	36	295	1,967	15	511	943	54	397	972	41	528	1,388	38	125	299	42	106	247	43														
AVERAGES																																			
(1961-76)															33	13	51	41	42	37	44														

Table 5. Regional and statewide summary of effort expended on upland game summer inventory, 1971-77.

Species	R E G I O N												STATE TOTALS				
	Northern		Central		Southern		Northeastern		Southeastern		Miles		Hours				
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours			
<b>Pheasant</b>																	
1971	507	--	878	--	796	--	588	--	346	--	3,115	--	3,115	--			
1972	469	--	963	--	752	--	535	--	297	--	3,016	--	3,016	--			
1973	322	--	691	--	740	--	488	--	320	--	2,561	--	2,561	--			
1974	479	--	819	--	848	--	508	--	317	--	2,971	--	2,971	--			
1975	490	--	846	--	993	--	515	--	393	--	3,237	--	3,237	--			
1976	476	--	822	--	773	--	434	--	400	--	2,905	--	2,905	--			
1977	484	--	731	--	790	--	554	--	343	--	2,902	--	2,902	--			
<b>Quail</b>																	
1971	192	24	289	40	344	28	587	49	140	13	1,652	13	1,652	13			154
1972	46	9	342	30	575	39	870	63	120	8	1,953	8	1,953	8			149
1973	80	10	264	35	32	8	538	38	25	17	939	17	939	17			108
1974	24	4	43	27	853	66	227	28	214	21	1,361	21	1,361	21			146
1975	27	8	107	23	841	64	594	43	230	12	1,799	12	1,799	12			150
1976	81	10	206	29	503	62	597	44	75	10	1,462	10	1,462	10			155
1977	22	4	351	39	445	42	341	26	60	16	1,219	16	1,219	16			127
<b>Chukar</b>																	
1971	182	82	929	130	1,103	100	636	50	496	105	3,346	105	3,346	105			468
1972	712	91	1,423	131	950	37	1,012	69	984	58	5,081	58	5,081	58			386
1973	1,063	119	1,494	167	72	10	705	48	702	68	4,036	68	4,036	68			363
1974	125	31	1,591	107	564	43	440	30	1,115	67	3,835	67	3,835	67			278
1975	188	30	808	85	892	41	908	88	786	55	3,582	55	3,582	55			299
1976	875	75	964	110	465	32	727	67	687	66	3,718	66	3,718	66			350
1977	405	50	1,198	120	601	37	600	71	429	44	3,233	44	3,233	44			322
<b>Forest Grouse</b>																	
1971	1,201	240	785	173	796	249	794	77	440	89	4,016	89	4,016	89			828
1972	1,370	212	804	103	214	260	1,346	140	351	82	4,085	82	4,085	82			797
1973	627	127	917	105	296	429	949	147	761	72	3,550	72	3,550	72			880
1974	967	152	924	157	157	461	1,090	99	1,574	133	4,712	133	4,712	133			1,002
1975	1,194	199	1,287	160	775	629	1,474	136	1,476	135	6,206	135	6,206	135			1,259
1976	1,516	351	1,503	216	427	271	1,108	140	1,127	134	5,681	134	5,681	134			1,112
1977	737	132	1,317	162	610	286	1,040	135	1,079	128	4,783	128	4,783	128			843





Table 6. Season framework for upland game during 1977.

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
Pheasant	Nov. 5-13	2 cocks	4 cocks	Statewide except Daggett, Duchesne and Uintah counties.
	Nov. 5-18	2 cocks	4 cocks	Daggett, Duchesne and Uintah counties.
	Nov. 5-Dec. 4	2 cocks	4 cocks	All State and Federal lands subject to restrictions and closures imposed by administering agencies.
Mourning dove	Sept. 1-30	10	20	Statewide
Band-tailed Pigeon	Sept. 1-30	5	10	Grand, San Juan, Beaver, Garfield, Iron, Kane, Millard, Piute, Sevier, Washington, and Wayne counties.
Chukar	Sept. 17, 1977 to Jan. 15, 1978	5	10	Statewide
Sage Grouse	Sept. 17-23	3	6	Beaver, Garfield, Iron, Kane, Millard, Piute, Sevier and Wayne counties.
	Sept. 17-23	2	4	Carbon, Daggett, Duchesne, Emery, Grand, San Juan, Sanpete (part), Uintah, Utah (part), Wasatch (part) and Box Elder (part).
	Sept. 17-23	1	2	Box Elder (part), Cache, Davis, Morgan, Rich, Summit, Tooele, Wasatch (part), Weber and Juab (part) counties.
	Sept. 17-18	1	2	Wasatch county (part).
	The following counties were closed to sage grouse hunting during 1977:			
Forest grouse	Sept. 17-Nov. 30	4 aggregate	8 aggregate	Statewide

Table 6. Continued

Species	Season Dates	Daily Bag Limit	Possession Limit	Area Open
Quail	Nov. 5-13	5	10	Statewide except Daggett, Duchesne, Uintah and Washington counties.
	Nov. 5-18	5	10	Daggett, Duchesne and Uintah counties.
	Nov. 5, 1977 to January 2, 1978	8	16	Washington County
Hungarian Partridge	Sept. 17, 1977 to Jan. 15, 1978	5	10	Statewide
Wild turkeys	Spring hunt April 30- May 15, 1977	Season limit 1 male turkey		Beaver, Garfield, Grand, Iron, Kane, Piute, San Juan, Sevier, Washington (part) and Wayne counties.
	Fall hunt Sept. 17-Oct. 2	Season limit one (1) turkey of either sex		Beaver, Garfield, Grand, Iron, Kane, Millard, Piute, San Juan, Sevier, Washington and Wayne counties.
Snowshoe hare	Sept. 17, 1977 to Jan. 31, 1978	5	10	Statewide
Cottontail rabbit	Sept. 17, 1977 to Jan. 31, 1978	10	20	Statewide except Box Elder, Cache, Davis, Morgan, Rich, Summit and Weber counties.
	Sept. 17, 1977 to Jan. 31, 1978	5	10	Box Elder, Cache, Davis, Morgan, Rich, Summit and Weber counties.

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