

Wildlife Bureau Survey Note

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2016-17 Small Game Harvest Results

A random survey of licensed hunters was conducted following the 2016-17 small game season to determine the size and distribution of Iowa's small game harvest (Figure 1). Survey questionnaires were mailed to 7,783 license holders. Survey participants were asked which species they hunted, how many days they hunted, and how many of each species they harvested. Survey participants returned 2,660 usable questionnaires for a response rate of 34%. The DNR sold 230,584 unique hunting licenses in 2016-17, a 1% increase from the previous year. All resident and nonresident hunters (deer, turkey, waterfowl, and small game) are required to purchase a hunting license whether they intend to hunt small game or not. Based on survey responses an estimated 69,551 license holder's hunted small game (pheasant, quail, partridge, cottontail, or squirrel). This is a 4% decrease in small game hunters compared to the year before.

By residency, the number of resident small game hunters decreased -45, from 61,750 in 2015 to 58,544 in 2016, while the number nonresident small game hunters increased 3% from 10,715 in 2015 to 11,007 in 2016. Pheasant were the most commonly reported species hunted by small game hunters (82%), while cottontails were the second most sought after species with 34% of small game hunters indicating they hunted squirrels (Table 1).

Hunters from 39 different states visited Iowa last fall to hunt. Over 51% of Iowa's nonresident hunters came from 4 states, Minnesota, Wisconsin, Michigan, and Illinois in that order. The typical small game hunter reported hunting 8.6 days last fall.

Ring-necked Pheasant. - An estimated 57,218 pheasant hunters (25% of licensed hunters, 82% of small game hunters) took to Iowa's fields last fall and harvested 244,769 roosters (Tables 1 & 2). The number of pheasant hunters increased 2%, while total harvest decreased -9% compared to 2015 estimates. An estimated 10,763 nonresident hunters harvested 44,540 pheasants in 2016. Iowa's peak year for nonresident pheasant hunters was 1997 with 50,349. Resident hunter numbers were unchanged from 2015 while the number of nonresident pheasant hunters increased 14% (Table 3).

Resident hunters hunted an average of 6.4 days last fall and harvested 5 birds during the season. Nonresident pheasant hunters averaged 4.7 days afield and harvested 6 birds for the season (Table 3). Hunter success (harvest/day) was highest through the first 9 days of the season (Table 4). Approximately 32% of the total pheasant harvest occurred in the first 9 days of the 2016 season (Table 4). Over half of pheasant hunters reported hunting 4 days or less during the 2016 season. Resident hunters accounted for 82% of the total pheasant harvest. Resident hunters in the NW, NC, WC, and C regions reported very good hunting success (Table 5).

The 2016 roadside survey showed Iowa's pheasant population was unchanged from 2015; staff counted on average 3 less birds/route compared to 2015. Given the success hunters saw in 2015 an increase in hunters and harvest was expected for 2016, given similar bird numbers. Hunter numbers increased in 2016 but harvest was down slightly (-23,700 roosters) compared to 2015 (Table 3). The winter of 2016-17 was very mild across the southern 2/3rds of Iowa with

more significant snow reported in the NW and NC regions. Good overwinter hen survival could potentially lead into another increase in pheasant populations in 2017 if Iowa experiences good nesting weather.

Bobwhite Quail. - Approximately 10,005 quail hunters (4.3% of licensed hunters, 14% of small game hunters) harvested 24,366 quail during the 2016 quail season (Table 1 & 2). Hunter numbers increased 2% while harvest decreased -14% compared to 2015 estimates. Quail hunters averaged 5.5 days a field and harvested 3 birds for the season (Table 3). Sixty percent of the quail harvest occurred in the first month of the 2016 season (Table 4). Fifty percent of Iowa quail hunters hunted 3 days or less during the 2016 season. Resident quail hunters accounted for 88% of the total quail harvest. Hunter success was best in the southern regions (Table 5).

The 2016 roadside counts were at a 27 year high for bobwhite so higher hunter numbers and harvest were expected. The drop in harvest this year does not match field reports from hunters which suggested a very good quail season. This may be an artifact of a small sample size with only about 100+ quail hunters sampled in the survey. The mild winter weather across Iowa's quail range in 2016-17 bodes well for good over winter survival. The outlook for bobwhite quail looks very promising this coming fall assuming good weather during nesting.

Table 1. Estimated proportion of 2016 license buyers (those who bought a hunting license) and proportion (who indicated they hunted small game) by species.

Species	Eligible Hunters ^a	Small Game Hunters
Pheasants	24.8%	82.3%
Quail	4.3%	14.4%
Cottontail	10.3%	33.8%
Squirrels	9.6%	31.5%
Partridge	1.2%	3.9%
Mourning Dove	5.9%	18.6%

^a All Iowa resident and nonresident hunters (deer, turkey, waterfowl, and small game) are required to purchase a hunting license. All are eligible to hunt small game (e.g., an estimated 25% of license buyers hunted pheasants).

^b Of the licensed hunters who indicated they hunted small game an estimated 82% hunted pheasants).

Figure 1. Small game survey card.

2016-2017 Iowa Small Game Hunter Survey

Please report only YOUR SMALL GAME hunting IN IOWA. If you did not hunt small game in Iowa, please answer "No" to the first question and return this card.

Did you hunt SMALL GAME in IOWA during 2016-17? Yes No

Total number of days hunted in IOWA (for small game only):

Please report season totals **AND** period totals for pheasants and quail:
NOTE: the period totals must add up to equal the season total.

	Wild Pheasants (not game farm)				Wild Quail (not game farm)				
	SEASON TOTAL	Oct 29 to Nov 6	Nov 7-30	Dec 1 to Jan 10	SEASON TOTAL	Oct 29 to Nov 6	Nov 7-30	Dec 1 to Jan 10	Jan 11-31
Number YOU Harvested	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Number of Days Hunted	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Please report season totals for each species below:

	Cottontail Rabbit	Squirrel	Hungarian Partridge	Mourning Dove
Number YOU Harvested	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Number of Days Hunted	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Did you hunt during the 2016 Youth Pheasant Season? Yes No

If YES, how many youths hunted with you and how many pheasants were harvested?

Youths Wild Pheasants Harvested

Machine-scanned form, please print neatly using blue or black ballpoint pen.

Please respond only in the spaces provided.

DO NOT make unnecessary marks on this form.

Table 2. Estimated small game hunters, harvest, effort by species and license type for the 2016-17 small game season.

License/Species	Hunters		Harvest		Days	
	estimate	95% CI	estimate	95% CI	estimate	95% CI
ALL LICENSE TYPES						
Pheasant	57,218 ±	5,451	244,769 ±	46,142	321,538 ±	48,418
Quail	10,005 ±	2,738	24,366 ±	11,729	52,876 ±	18,742
Cottontail Rabbit	23,475 ±	4,128	99,464 ±	26,689	111,104 ±	30,637
Squirrel	21,874 ±	3,904	95,805 ±	21,329	96,972 ±	31,199
Hungarian Partridge	2,686 ±	1,464	510 ±	515	14,237 ±	9,984
Mourning Dove	13,409 ±	3,189	131,468 ±	43,398	51,713 ±	20,278
				Total Days ^a	596,727	
RESIDENT HUNTERS						
Pheasant	46,455 ±	5,314	200,229 ±	44,896	278,826 ±	47,379
Quail	9,093 ±	2,662	21,452 ±	11,523	50,269 ±	18,657
Cottontail Rabbit	23,042 ±	4,124	98,624 ±	26,683	109,749 ±	30,629
Squirrel	21,603 ±	3,902	93,639 ±	21,231	95,945 ±	31,191
Hungarian Partridge	2,524 ±	1,458	456 ±	506	13,238 ±	9,937
Mourning Dove	12,713 ±	3,185	124,772 ±	43,122	49,087 ±	20,251
				Total Days	548,027	
NONRESIDENT HUNTERS						
Pheasant	10,763 ±	1,217	44,540 ±	10,649	42,712 ±	9,976
Quail	912 ±	645	2,914 ±	2,193	2,607 ±	1,782
Cottontail Rabbit	433 ±	198	840 ±	561	1,355 ±	696
Squirrel	271 ±	161	2,166 ±	2,038	1,027 ±	739
Hungarian Partridge	162 ±	125	54 ±	104	999 ±	956
Mourning Dove	696 ±	153	6,696 ±	4,888	2626 ±	1,045
				Total Days	48,700	

^a Total days does not include mourning dove days of hunting for historical comparisons.

Estimated number of people who hunted (pheasant, quail, partridge, cottontail, and squirrels):

69,551 ± 5,801

Estimated number of people who hunted upland game birds only (pheasant, quail, partridge) :

38,904 ± 4,473

Estimated number of people who hunted small game mammals only (cottontail, squirrel):

11,679 ± 2,867

Youth Pheasant Season

2,360 ± 1,341 Adult Hunters
 3,061 ± 2,060 Youths Hunted
 2,024 ± 1,723 Harvest

Table 3. Estimated number of small game hunters, harvest, and days hunted, by license type, species, and year, in Iowa during in Iowa during the 2015-16 and 2016-17 small game seasons.

SPECIES	N	LICENSE TYPE								
		<i>ALL LICENSE TYPES</i>			<i>RESIDENT</i>			<i>NONRESIDENT</i>		
		2015	2016	%CHG	2015	2016	%CHG	2015	2016	%CHG
Ring-necked pheasant	714									
Hunters		56,159	57,218	2%	46,679	46,455	0%	9,480	10,763	14%
Harvest		268,464	244,769	-9%	212,858	200,229	-6%	55,606	44,540	-20%
Days		343,100	321,538	-6%	298,709	278,826	-7%	44,391	42,712	-4%
Harvest/hunter		4.8	4.3	-10%	4.6	4.3	-5%	5.9	4.1	-29%
Days/hunter		6.1	5.6	-8%	6.4	6.0	-6%	4.7	4.0	-15%
Harvest/day		0.8	0.8	-3%	0.7	0.7	1%	1.3	1.0	-17%
Bobwhite quail	127									
Hunters		9,762	10,005	2%	8,189	9,093	11%	1,573	912	-42%
Harvest		28,362	24,366	-14%	26,081	21,452	-18%	2,281	2,914	28%
Days		53,476	52,876	-1%	47,166	50,269	7%	6,310	2,607	-59%
Harvest/hunter		2.9	2.4	-16%	3.2	2.4	-26%	1.5	3.2	121%
Days/hunter		5.5	5.3	-4%	5.8	5.5	-4%	4.0	2.9	-29%
Harvest/day		0.5	0.5	-13%	0.6	0.4	-22%	0.4	1.1	211%
Cottontail rabbit	255									
Hunters		24,838	23,475	-5%	23,766	23,042	-3%	1,072	433	-60%
Harvest		113,276	99,464	-12%	111,746	98,624	-12%	1,530	840	-45%
Days		113,876	111,104	-2%	110,981	109,749	-1%	2,895	1,355	-53%
Harvest/hunter		4.6	4.2	-7%	4.7	4.3	-9%	1.4	1.9	36%
Days/hunter		4.6	4.7	3%	4.7	4.8	2%	2.7	3.1	16%
Harvest/day		1.0	0.9	-9%	1.0	0.9	-11%	0.5	0.6	17%
Squirrel	268									
Hunters		25,081	21,874	-13%	23,785	21,603	-9%	1,296	271	-79%
Harvest		175,507	95,805	-45%	167,486	93,639	-44%	8,021	2,166	-73%
Days		145,467	96,972	-33%	140,922	95,945	-32%	4,545	1,027	-77%
Harvest/hunter		7.0	4.4	-37%	7.0	4.3	-38%	6.2	8.0	29%
Days/hunter		5.8	4.4	-24%	5.9	4.4	-25%	3.5	3.8	8%
Harvest/day		1.2	1.0	-18%	1.2	1.0	-18%	1.8	2.1	20%
Hungarian partridge	31 ^a									
Hunters		1,994	2,686	35%	1,467	2,524	72%	527	162	-69%
Harvest		1,698	510	-70%	1,296	456	-65%	402	54	-87%
Days		9,075	14,237	57%	7,279	13,238	82%	1,796	999	-44%
Harvest/hunter		0.9	0.2	-78%	0.9	0.2	-80%	0.8	0.3	-57%
Days/hunter		4.6	5.3	16%	5.0	5.2	6%	3.4	6.2	81%
Harvest/day		0.2	0.0	-79%	0.2	0.0	-83%	0.2	0.1	-77%
Mourning Dove	140									
Hunters		11,353	13,409	18%	10,257	12,713	24%	1,096	696	-36%
Harvest		117,358	131,468	12%	108,306	124,772	15%	9,052	6,696	-26%
Days		39,546	51,713	31%	36,754	49,087	34%	2,792	2,626	-6%
Harvest/hunter		10.3	9.8	-5%	10.6	9.8	-7%	8.3	9.6	16%
Days/hunter		3.5	3.9	11%	3.6	3.9	8%	2.6	3.8	48%
Harvest/day		3.0	2.5	-14%	3.0	2.5	-14%	3.2	2.6	-21%

a - Small sample response, view estimates accordingly.

Table 4. Mean hunting effort and harvest by time period for pheasant and quail hunters during the 2016-17 small game season.

SPECIES	Mean days	Mean harvest	Harvest/day	Proportion of effort (days)	Proportion of the harvest
Ring-necked pheasants (N=577)					
First 9 Days ^a	1.76	1.61	0.91	27%	32%
Day 10 - Nov. 30	2.67	2.10	0.79	41%	41%
Dec. 1 - Jan. 10	2.03	1.41	0.69	31%	28%
Jan. 11 - Jan 31	-	-	-	-	-
Bobwhite quail (N=84)					
First 9 Days	1.32	0.45	0.34	20%	15%
Day 10 - Nov. 30	2.57	1.42	0.55	40%	46%
Dec. 1 - Jan. 10	1.89	0.95	0.50	29%	31%
Jan. 11 - Jan 31	0.68	0.29	0.42	11%	9%

^a First 2 weekends of season.

Table 5. Harvest and proportion of harvest by August roadside survey region for the 2016-17 small game season^a.

REGION	Ring-necked Pheasant		Bobwhite Quail		Cottontail Rabbit		Squirrel		Hungarian Partridge		Mourning Dove	
	N	%	N	%	N	%	N	%	N	%	N	%
NW	35,021	14.3%	0	0.0%	15,403	15.5%	384	0.4%	0	0.0%	9,455	7.2%
NC	32,206	13.2%	162	0.7%	4,686	4.7%	2,597	2.7%	27	5.3%	7,979	6.1%
NE	14,516	5.9%	540	2.2%	21,884	22.0%	28,147	29.4%	270	52.9%	1,564	1.2%
WC	31,518	12.9%	1,239	5.1%	8,765	8.8%	4,477	4.7%	0	0.0%	16,896	12.9%
C	30,224	12.3%	5,114	21.0%	14,736	14.8%	12,315	12.9%	159	31.2%	7,793	5.9%
EC	23,613	9.6%	354	1.5%	10,962	11.0%	18,794	19.6%	0	0.0%	26,106	19.9%
SW	8,292	3.4%	4,369	17.9%	2,471	2.5%	3,544	3.7%	0	0.0%	8,014	6.1%
SC	8,353	3.4%	5,178	21.3%	5,842	5.9%	7,847	8.2%	0	0.0%	31,533	24.0%
SE	16,486	6.7%	4,496	18.5%	13,875	13.9%	15,534	16.2%	0	0.0%	15,972	12.1%
Nonresident	44,540	18.2%	2,914	12.0%	840	0.8%	2,166	2.3%	54	10.6%	6,156	4.7%
Total	244,769		24,366		99,464		95,805		510		131,468	

^a A County of residence is used to assign harvest location, which may not be location where game was harvested.