

Wildlife Bureau Survey Note

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2017-18 Small Game Harvest Results

A random survey of licensed hunters was conducted following the 2017-18 small game season to determine the size and distribution of Iowa's small game harvest (Figure 1). Survey questionnaires were mailed to 7,483 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 2,649 usable questionnaires for a response rate of 35%. The DNR sold 214,273 unique hunting licenses in 2017-18, a -7% decrease 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 69,759 license holder's hunted small game (pheasant, quail, partridge, cottontail, or squirrel). Small game hunter numbers (+0.3%) were unchanged from last year.

By residency, the number of resident small game hunters increased 1.5% from 58,544 in 2016 to 59,423 in 2017, while the number nonresident small game hunters decreased -6% from 11,007 in 2016 to 10,336 in 2017. Pheasant were the most commonly reported species hunted by small game hunters (79%), while cottontails were the second most sought after species with 34% of small game hunters indicating they hunted squirrels (Table 1).

Hunters from 42 different states visited Iowa last fall to hunt. Four states comprised 50% of Iowa's nonresident hunters, Minnesota, Wisconsin, Michigan, and Illinois in that order. The typical small game hunter reported hunting 9.9 days last fall.

Ring-necked Pheasant. - An estimated 54,915 pheasant hunters (26% of licensed hunters, 79% of small game hunters) took to Iowa's fields last fall and harvested 221,291 roosters (Tables 1 & 2). The number of pheasant hunters decreased -4%, while total harvest decreased -10% compared to 2016 estimates. An estimated 9,908 nonresident hunters harvested 43,529 pheasants in 2017. Iowa's peak year for nonresident pheasant hunters was 1997 with 50,349. Both resident (-3%) and nonresident (-8%) pheasant hunter numbers declined compared to 2016 (Table 3).

Resident hunters hunted an average of 6.6 days last fall and harvested 4 birds during the season. Nonresident pheasant hunters averaged 4.9 days afield and harvested 4 birds for the season (Table 3). Hunter success (harvest/day) was highest through the first 9 days of the season (Table 4). Approximately 26% of the total pheasant harvest occurred in the first 9 days of the 2017 season compared to 32% in 2016 (Table 4). This decline was expected given the late crop harvest during the 2017 opener. Over half of pheasant hunters reported hunting 3 days or less during the 2017 season. Resident hunters accounted for 82% of the total pheasant harvest. Resident hunters in the NW, NC, WC, and C regions reported good hunting success (Table 5).

The 2017 roadside survey showed Iowa's pheasant population was -30% lower compared to 2016; however drought conditions during the 2017 roadside count may have biased counts low. Given that overall pheasant harvest only declined 10% (Table 3) and harvest per hunters was nearly unchanged suggests bird numbers were a little better than roadside counts indicated.

Bobwhite Quail. - Approximately 8,568 quail hunters (4% of licensed hunters, 12% of small game hunters) harvested 26,955 quail during the 2017 quail season (Table 1 & 2). Hunter numbers decreased -14% while harvest increased 11% compared to 2016 estimates. Quail hunters averaged 5.6 days a field and harvested 3 birds for the season (Table 3). Forty percent of the quail harvest occurred in the first month of the 2017 season (Table 4). Fifty percent of Iowa quail hunters hunted 3 days or less during the 2017 season. Resident quail hunters accounted for 94% of the total quail harvest. Hunter success was best in the southern regions (Table 5).

The 2017 roadside counts showed quail numbers declined 23% compared to 2016, however drought conditions during the count may have biased the counts. Even though the 2017 roadside index was lower than 2016, it was still the 3rd highest index in the last 22 years, suggesting a good potential quail season. The quail harvest increased 11%, while harvest per hunter increased 29% suggesting quail were abundant last fall (Table 3). The mild winter weather across Iowa's quail range in 2017–18 bodes well for good over winter survival. The outlook for bobwhite quail looks very promising this coming fall assuming adequate weather throughout the summer breeding season.

Table 1. Estimated proportion of 2017 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 ^b
Pheasants	25.6%	78.7%
Quail	4.0%	12.3%
Cottontail	11.1%	34.1%
Squirrels	8.6%	26.4%
Partridge	1.3%	4.1%
Mourning Dove	4.7%	13.8%

^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 26% of license buyers hunted pheasants).

^b Of the licensed hunters who indicated they hunted small game an estimated 79% hunted pheasants).

Figure 1. Small game survey card.

Detach Here Detach Here

2017-2018 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 2017-18? 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 28 to Nov 5	Nov 6-30	Dec 1 to Jan 10	SEASON TOTAL	Oct 28 to Nov 5	Nov 6-30	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 2017 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 2017-18 small game season.

License/Species	Hunters		Harvest		Days	
	estimate	95% CI	estimate	95% CI	estimate	95% CI
ALL LICENSE TYPES						
Pheasant	54,915 ±	5,772	221,291 ±	41,401	344,725 ±	62,105
Quail	8,568 ±	2,712	26,955 ±	21,219	47,526 ±	26,619
Cottontail Rabbit	23,814 ±	4,548	118,942 ±	41,685	150,074 ±	76,891
Squirrel	18,428 ±	3,963	125,844 ±	49,355	129,918 ±	53,686
Hungarian Partridge	2,847 ±	1,642	1,754 ±	1,994	21,858 ±	19,680
Mourning Dove	9,982 ±	2,904	76,837 ±	28,206	45,783 ±	26,427
				Total Days*	694,101 ±	131,661
RESIDENT HUNTERS						
Pheasant	45,007 ±	5,590	177,762 ±	40,137	295,820 ±	59,927
Quail	7,604 ±	2,633	25,448 ±	21,184	43,795 ±	26,517
Cottontail Rabbit	23,137 ±	4,506	115,212 ±	41,258	147,746 ±	76,865
Squirrel	18,177 ±	3,961	125,169 ±	49,351	128,942 ±	53,679
Hungarian Partridge	2,360 ±	1,569	1,578 ±	1,987	20,651 ±	19,649
Mourning Dove	9,653 ±	2,899	72,881 ±	28,073	45,076 ±	26,423
				Total Days*	636,954 ±	130,607
NONRESIDENT HUNTERS						
Pheasant	9,908 ±	1,440	43,529 ±	10,149	48,905 ±	16,301
Quail	964 ±	650	1,507 ±	1,209	3,731 ±	2,325
Cottontail Rabbit	677 ±	620	3,730 ±	5,959	2,328 ±	1,934
Squirrel	251 ±	150	675 ±	529	976 ±	946
Hungarian Partridge	487 ±	483	176 ±	158	1,207 ±	1,080
Mourning Dove	329 ±	170	3,956 ±	2,744	757 ±	439
				Total Days*	57,147 ±	16,623

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

Estimated number of people who hunted small game (pheasant, quail, partridge, cottontail, or squirrels):
69,759 ± 6,211

Estimated number of people who hunted upland game birds only (pheasant, quail, partridge) :
39,634 ± 4,973

Estimated number of people who hunted small game mammals only (cottontail, squirrel):
14,431 ± 3,612

Youth Pheasant Season

2,057 ± 1,299 Adult Hunters
2,992 ± 2,736 Youths Hunted
1,158 ± 1,411 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 2016-17 and 2017-18 small game seasons.

SPECIES	N	LICENSE TYPE										
		ALL LICENSE TYPES			N	RESIDENT			N	NONRESIDENT		
		2016	2017	%CHG		2016	2017	%CHG		2016	2017	%CHG
Ring-necked pheasant	733				565				168			
Hunters		57,218	54,915	-4%		46,455	45,007	-3%		10,763	9,908	-8%
Harvest		244,769	221,291	-10%		200,229	177,762	-11%		44,540	43,529	-2%
Days		321,538	344,725	7%		278,826	295,820	6%		42,712	48,905	14%
Harvest/hunter		4.3	4.0	-6%		4.3	4.0	-8%		4.1	4.4	6%
Days/hunter		5.6	6.3	12%		6.0	6.6	10%		4.0	4.9	24%
Harvest/day		0.8	0.6	-16%		0.7	0.6	-17%		1.0	0.9	-14%
Bobwhite quail	115				93				22*			
Hunters		10,005	8,568	-14%		9,093	7,604	-16%		912	964	6%
Harvest		24,366	26,955	11%		21,452	25,448	19%		2,914	1,507	-48%
Days		52,876	47,526	-10%		50,269	43,795	-13%		2,607	3,731	43%
Harvest/hunter		2.4	3.2	29%		2.4	3.4	42%		3.2	1.6	-51%
Days/hunter		5.3	5.6	5%		5.5	5.8	4%		2.9	3.9	35%
Harvest/day		0.5	0.6	24%		0.4	0.6	35%		1.1	0.4	-64%
Cottontail rabbit	248				232				16*			
Hunters		23,475	23,814	1%		23,042	23,137	0%		433	677	56%
Harvest		99,464	118,942	20%		98,624	115,212	17%		840	3,730	344%
Days		111,104	150,074	35%		109,749	147,746	35%		1,355	2,328	72%
Harvest/hunter		4.2	5.0	18%		4.3	5.0	16%		1.9	5.5	184%
Days/hunter		4.7	6.3	33%		4.8	6.4	34%		3.1	3.4	10%
Harvest/day		0.9	0.8	-12%		0.9	0.8	-13%		0.6	1.6	158%
Squirrel	229				219				10*			
Hunters		21,874	18,428	-16%		21,603	18,177	-16%		271	251	-7%
Harvest		95,805	125,844	31%		93,639	125,169	34%		2,166	675	-69%
Days		96,972	129,918	34%		95,945	128,942	34%		1,027	976	-5%
Harvest/hunter		4.4	6.8	56%		4.3	6.9	59%		8.0	2.7	-66%
Days/hunter		4.4	7.1	59%		4.4	7.1	60%		3.8	3.9	3%
Harvest/day		1.0	1.0	-2%		1.0	1.0	-1%		2.1	0.7	-67%
Hungarian partridge	33*				22*				11*			
Hunters		2,686	2,847	6%		2,524	2,360	-6%		162	487	201%
Harvest		510	1,754	244%		456	1,578	246%		54	176	226%
Days		14,237	21,858	54%		13,238	20,651	56%		999	1,207	21%
Harvest/hunter		0.2	0.6	226%		0.2	0.7	272%		0.3	0.4	9%
Days/hunter		5.3	7.7	45%		5.2	8.8	67%		6.2	2.5	-60%
Harvest/day		0.0	0.1	100%		0.0	0.1	167%		0.1	0.2	200%
Mourning Dove	143				130				13*			
Hunters		13,409	9,982	-26%		12,713	9,653	-24%		696	329	-53%
Harvest		131,468	76,837	-42%		124,772	72,881	-42%		6,696	3,956	-41%
Days		51,713	45,783	-11%		49,087	45,076	-8%		2,626	757	-71%
Harvest/hunter		9.8	7.7	-21%		9.8	7.6	-23%		9.6	12.0	25%
Days/hunter		3.9	4.6	19%		3.9	4.7	21%		3.8	2.3	-39%
Harvest/day		2.5	1.7	-34%		2.5	1.6	-36%		2.6	5.2	105%

* Small sample response, view estimates accordingly.

Table 4. Mean hunting effort and harvest by time period for pheasant and quail hunters during the 2017-18 small game season.

SPECIES	Mean days	Mean harvest	Harvest/day	Proportion of effort (days)	Proportion of the harvest
Ring-necked pheasants (N=600)					
First 9 Days*	1.42	1.27	0.89	23%	26%
Day 10 - Nov. 30	2.70	2.07	0.77	43%	42%
Dec. 1 - Jan. 10	2.09	1.60	0.76	34%	32%
Jan. 11 - Jan 31	-	-	-	-	-
Bobwhite quail (N=83)					
First 9 Days	1.01	0.36	0.36	17%	11%
Day 10 - Nov. 30	2.24	0.95	0.42	39%	29%
Dec. 1 - Jan. 10	1.84	1.24	0.67	32%	38%
Jan. 11 - Jan 31	0.71	0.70	0.98	12%	21%

* First 2 weekends of season.

Table 5. Harvest and proportion of harvest by August roadside survey region for the 2017-18 small game season*.

REGION	Ring-necked Pheasant		Bobwhite Quail		Cottontail Rabbit		Squirrel		Hungarian Partridge		Mourning Dove	
	N	%	N	%	N	%	N	%	N	%	N	%
NW	32,398	14.6%	0	0.0%	9,066	7.6%	826	0.7%	957	54.6%	6,475	8.4%
NC	23,026	10.4%	0	0.0%	11,231	9.4%	5,046	4.0%	152	8.7%	1,260	1.6%
NE	16,571	7.5%	50	0.2%	36,317	30.5%	48,975	38.9%	25	1.4%	5,941	7.7%
WC	23,282	10.5%	922	3.4%	17,137	14.4%	12,481	9.9%	0	0.0%	13,221	17.2%
C	41,729	18.9%	12,190	45.2%	12,225	10.3%	20,036	15.9%	444	25.3%	13,630	17.7%
EC	16,536	7.5%	3,154	11.7%	11,918	10.0%	26,919	21.4%	0	0.0%	19,328	25.2%
SW	6,727	3.0%	1,253	4.6%	1,939	1.6%	4,416	3.5%	0	0.0%	5,261	6.8%
SC	7,909	3.6%	2,360	8.8%	9,808	8.2%	2,928	2.3%	0	0.0%	3,392	4.4%
SE	9,458	4.3%	5,519	20.5%	5,571	4.7%	3,542	2.8%	0	0.0%	4,373	5.7%
Nonresident	43,655	19.7%	1,507	5.6%	3,730	3.1%	675	0.5%	176	10.0%	3,956	5.1%
Total	221,291		26,955		118,942		125,844		1,754		76,837	

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