

Wildlife Bureau Survey Note

Todd Bogenschutz

Andrew Norton

Boone Wildlife Research Station

[515-432-2823]

2015-16 Small Game Harvest Results

A random survey of licensed hunters was conducted following the 2015-16 small game season to determine the size and distribution of Iowa's small game harvest (Figure 1). Survey questionnaires were mailed to 7,716 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 2,927 usable questionnaires for a response rate of 38%. The DNR sold 227,757 unique hunting licenses in 2015-16, a 6% 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 72,465 license holder's hunted small game (pheasant, quail, partridge, cottontail, or squirrel). This is a 15% increase in small game hunters compared to the year before.

By residency, the number of resident small game hunters increased 13%, from 54,498 in 2014 to 61,750 in 2015, while the number nonresident small game hunters increased 21% from 8,886 in 2014 to 10,715 in 2015. Pheasant were the most commonly reported species hunted by small game hunters (76%), while squirrels were the second most sought after species with 35% of small game hunters indicating they hunted squirrels (Table 1).

Hunters from 45 different states visited Iowa last fall to hunt. Over 52% of Iowa's nonresident hunters came from 4 states, Minnesota, Wisconsin, Michigan, and Illinois in that order. The typical small game hunter reported hunting just over 9 days last fall.

Ring-necked Pheasant. - An estimated 56,159 pheasant hunters (25% of licensed hunters, 78% of small game hunters) took to Iowa's fields last fall and harvested 268,464 roosters (Tables 1 & 2). The number of pheasant hunters increased 12%, while total harvest increased 24% compared to 2014 estimates. The last time Iowa shot this many roosters was 2009. An estimated 9,480 nonresident hunters harvested 55,606 pheasants in 2015. Iowa's peak year for nonresident pheasant hunters was 1997 with 50,349. Resident hunter numbers increased 13% while the number of nonresident pheasant hunters increased 9% (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 2015 season (Table 4). Over half of pheasant hunters reported hunting 4 days or less during the 2015 season. Resident hunters accounted for 79% of the total pheasant harvest. Nonresident hunters and hunters from NW and Central Iowa reported very good hunting success (Table 5).

The 2015 roadside survey showed a significant increase in Iowa's pheasant population thus the increase in hunters and harvest was expected. This marks the fourth consecutive year of increasing pheasant harvest, suggesting the population is showing a rebound from the catastrophic weather years of 2007-2011. The winter of 2015-16 was very mild across the SE half of Iowa with more significant snow reported across the NW half of the state. Favorable

weather during nesting in 2016 could lead to a very promising outlook for pheasant hunters in the fall of 2016, especially across the SE half of Iowa.

Bobwhite Quail. - Approximately 9,762 quail hunters (4% of licensed hunters, 14% of small game hunters) harvested 28,362 quail during the 2015 quail season (Table 1 & 2). The last time Iowa quail hunters shot more quail was 2007. Hunter numbers increased 49% while harvest increased 165% compared to 2014 estimates. Quail hunters averaged 5.5 days a field and harvested 2.9 birds for the season (Table 3). Fifty percent of the quail harvest occurred in the first month of the 2015 season (Table 4). Sixty percent of Iowa quail hunters hunted 4 days or less during the 2015 season. Resident quail hunters accounted for 92% of the total quail harvest. Quail hunters in the SC region reported the best success last fall (Table 5).

The 2015 roadside counts were at a 21 year high for bobwhite so the higher harvest was expected. The mild winter weather across Iowa's quail range in 2015-16 bodes well for good over winter survival, suggesting roadside counts in 2016 may be the highest we've seen for bobwhite since 1985. The outlook for bobwhite quail looks very promising this coming fall assuming good weather during nesting.

Table 1. Estimated proportion of 2015 license buyers (those who bought a hunting license) and proportion (who indicated they hunted small game) by species.

Species	Eligible Hunters*	Small Game Hunters
Pheasants	24.7%	77.5%
Quail	4.3%	13.5%
Cottontail	11.0%	34.3%
Squirrels	11.1%	34.6%
Partridge	0.9%	2.8%
Mourning Dove	5.0%	15.0%

* All Iowa resident and nonresident hunters are required to purchase a hunting license deer, turkey, waterfowl, and small game hunters. All are eligible to hunt small game.

Figure 1. Small game survey card.

Detach Here
Detach Here

2015-2016 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.

Please respond only in the spaces provided.

Did you hunt **SMALL GAME** in **IOWA** during 2015-16? 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 31 to Nov 8	Nov 9-30	Dec 1 to Jan 10	SEASON TOTAL	Oct 31 to Nov 8	Nov 9-30	Dec 1 to 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"/>
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"/>

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 2015 Youth Pheasant Season? Yes No

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

Youths Wild Pheasants Harvested

DO NOT make unnecessary marks on this form.

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

Table 2. Estimated small game hunters, harvest, effort by species and license type for the 2015-16 small game season.

License/Species	Hunters		Harvest		Days	
	estimate	95% CI	estimate	95% CI	estimate	95% CI
ALL LICENSE TYPES						
Pheasant	56,159 ±	4,944	268,464 ±	39,318	343,100 ±	49,858
Quail	9,762 ±	2,395	28,362 ±	19,489	53,476 ±	21,964
Cottontail Rabbit	24,838 ±	3,862	113,276 ±	30,064	113,876 ±	31,237
Squirrel	25,081 ±	3,853	175,507 ±	43,283	145,467 ±	40,707
Hungarian Partridge	1,994 ±	1,043	1,698 ±	1,167	9,075 ±	4,584
Mourning Dove	11,353 ±	2,602	117,358 ±	39,518	39,546 ±	11,642
				Total Days ^a	664,994	
RESIDENT HUNTERS						
Pheasant	46,679 ±	4,771	212,858 ±	37,371	298,709 ±	48,943
Quail	8,189 ±	2,267	26,081 ±	19,433	47,166 ±	21,631
Cottontail Rabbit	23,766 ±	3,800	111,746 ±	30,000	110,981 ±	31,166
Squirrel	23,785 ±	3,760	167,486 ±	42,665	140,922 ±	40,574
Hungarian Partridge	1,467 ±	918	1,296 ±	1,006	7,279 ±	4,325
Mourning Dove	10,257 ±	2,486	108,306 ±	37,654	36,754 ±	11,470
				Total Days	605,057	
NONRESIDENT HUNTERS						
Pheasant	9,480 ±	1,297	55,606 ±	12,213	44,391 ±	9,508
Quail	1,573 ±	773	2,281 ±	1,476	6,310 ±	3,807
Cottontail Rabbit	1,072 ±	692	1,530 ±	1,988	2,895 ±	2,095
Squirrel	1,296 ±	841	8,021 ±	7,278	4,545 ±	3,303
Hungarian Partridge	527 ±	496	402 ±	593	1,796 ±	1,521
Mourning Dove	1,096 ±	769	9,052 ±	11,997	2792 ±	1,994
				Total Days	59,937	

^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):

72,465 ± 5,404

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

37,645 ± 4,042

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

16,091 ± 3,116

Youth Pheasant Season

2,380 ± 1,258 Adult Hunters
 2,333 ± 1,407 Youths Hunted
 2,336 ± 1,846 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 2014-15 and 2015-16 small game seasons.

SPECIES	N	LICENSE TYPE								
		<i>ALL LICENSE TYPES</i>			<i>RESIDENT</i>			<i>NONRESIDENT</i>		
		2014	2015	%CHG	2014	2015	%CHG	2014	2015	%CHG
Ring-necked pheasant	811									
Hunters		49,925	56,159	12%	41,200	46,679	13%	8,725	9,480	9%
Harvest		215,816	268,464	24%	165,000	212,858	29%	50,816	55,606	9%
Days		283,220	343,100	21%	245,934	298,709	21%	37,286	44,391	19%
Harvest/hunter		4.3	4.8	11%	4.0	4.6	14%	5.8	5.9	1%
Days/hunter		5.7	6.1	8%	6.0	6.4	7%	4.3	4.7	10%
Harvest/day		0.8	0.8	3%	0.7	0.7	6%	1.4	1.3	-8%
Bobwhite quail	138									
Hunters		6,546	9,762	49%	5,428	8,189	51%	1,118	1,573	41%
Harvest		10,705	28,362	165%	9,666	26,081	170%	1,039	2,281	120%
Days		34,670	53,476	54%	30,538	47,166	54%	4,132	6,310	53%
Harvest/hunter		1.6	2.9	77%	1.8	3.2	79%	0.9	1.5	56%
Days/hunter		5.3	5.5	3%	5.6	5.8	2%	3.7	4.0	8%
Harvest/day		0.3	0.5	71%	0.3	0.6	72%	0.3	0.4	44%
Cottontail rabbit	329									
Hunters		20,904	24,838	19%	19,941	23,766	19%	963	1,072	11%
Harvest		102,379	113,276	11%	100,774	111,746	11%	1,605	1,530	-5%
Days		97,618	113,876	17%	95,260	110,981	17%	2,358	2,895	23%
Harvest/hunter		4.9	4.6	-7%	5.1	4.7	-7%	1.7	1.4	-14%
Days/hunter		4.7	4.6	-2%	4.8	4.7	-2%	2.5	2.7	10%
Harvest/day		1.1	1.0	-6%	1.1	1.0	-5%	0.7	0.5	-22%
Squirrel	323									
Hunters		19,704	25,081	27%	19,051	23,785	25%	653	1,296	98%
Harvest		110,600	175,507	59%	109,775	167,486	53%	825	8,021	872%
Days		100,439	145,467	45%	99,226	140,922	42%	1,213	4,545	275%
Harvest/hunter		5.6	7.0	25%	5.8	7.0	22%	1.3	6.2	391%
Days/hunter		5.1	5.8	14%	5.2	5.9	14%	1.9	3.5	89%
Harvest/day		1.1	1.2	10%	1.1	1.2	7%	0.7	1.8	159%
Hungarian partridge	34 ^a									
Hunters		1,631	1,994	22%	1,555	1,467	-6%	76	527	593%
Harvest		451	1,698	276%	426	1,296	204%	25	402	1508%
Days		8,071	9,075	12%	7,894	7,279	-8%	177	1,796	915%
Harvest/hunter		0.3	0.9	204%	0.3	0.9	226%	0.3	0.8	130%
Days/hunter		5.0	4.6	-8%	5.1	5.0	-2%	2.3	3.4	46%
Harvest/day		0.1	0.2	217%	0.1	0.2	260%	0.1	0.2	57%
Mourning Dove	157									
Hunters		11,396	11,353	0%	10,853	10,257	-5%	543	1,096	102%
Harvest		137,927	117,358	-15%	135,791	108,306	-20%	2,136	9,052	324%
Days		43,950	39,546	-10%	41,734	36,754	-12%	2,216	2,792	26%
Harvest/hunter		12.1	10.3	-15%	12.5	10.6	-16%	3.9	8.3	110%
Days/hunter		3.9	3.5	-10%	3.9	3.6	-7%	4.1	2.6	-38%
Harvest/day		3.1	3.0	-5%	3.3	3.0	-9%	1.0	3.2	238%

a - Small sample response, view estimates accordingly.

Table 4. Mean hunting effort and harvest by time period for pheasant and quail hunters during the 2015-16 small game season.

SPECIES	Mean days	Mean harvest	Harvest/day	Proportion of effort (days)	Proportion of the harvest
Ring-necked pheasants (N=654)					
Oct. 31- Nov. 8	1.76	1.67	0.95	28%	32%
Nov. 9- Nov. 30	2.47	2.03	0.82	39%	39%
Dec. 1- Jan. 10	2.09	1.56	0.75	33%	30%
Jan. 11- Jan 31	-	-	-	-	-
Bobwhite quail (N=93)					
Oct. 31- Nov. 8	1.23	0.38	0.31	23%	14%
Nov. 9- Nov. 30	1.93	0.99	0.51	36%	36%
Dec. 1- Jan. 10	1.45	1.02	0.70	27%	37%
Jan. 11- Jan 31	0.81	0.38	0.47	15%	14%

Table 5. Harvest and proportion of harvest by August roadside survey region for the 2014-15 small game season^a.

REGION	Ring-necked Pheasant		Bobwhite Quail		Cottontail Rabbit		Squirrel		Hungarian Partridge		Mourning Dove	
	N	%	N	%	N	%	N	%	N	%	N	%
NW	50,519	18.8%	0	0.0%	12,972	11.5%	12,580	7.2%	156	9.2%	10,415	8.9%
NC	16,460	6.1%	0	0.0%	8,512	7.5%	1,779	1.0%	312	18.4%	6,777	5.8%
NE	11,766	4.4%	135	0.5%	14,305	12.6%	46,510	26.5%	588	34.6%	18,945	16.1%
WC	34,959	13.0%	4,871	17.2%	12,022	10.6%	10,645	6.1%	27	1.6%	5,686	4.8%
C	44,681	16.6%	6,024	21.2%	24,733	21.8%	25,923	14.8%	108	6.4%	9,084	7.7%
EC	27,927	10.4%	1,280	4.5%	16,519	14.6%	40,948	23.3%	105	6.2%	18,604	15.9%
SW	5,712	2.1%	1,630	5.7%	4,513	4.0%	5,835	3.3%	0	0.0%	8,442	7.2%
SC	9,024	3.4%	10,549	37.2%	4,175	3.7%	4,083	2.3%	0	0.0%	12,827	10.9%
SE	11,758	4.4%	1,592	5.6%	13,995	12.4%	19,183	10.9%	0	0.0%	17,526	14.9%
Nonresident	55,658	20.7%	2,281	8.0%	1,530	1.4%	8,021	4.6%	402	23.7%	9,052	7.7%
Total	268,464		28,362		113,276		175,507		1,698		117,358	

^a County of residence is used to assign harvest location, which may not be where person hunted.