

## Wildlife Bureau Survey Note

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# 2019-20 Small Game Harvest Results

A random survey of licensed hunters was conducted following the 2019-20 small game season to determine the size and distribution of Iowa's small game harvest (Figure 1). Survey questionnaires were mailed to 8,109 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 3,135 usable questionnaires for a response rate of 38%. The DNR sold 220,248 unique hunting licenses in 2019-20, a 2% 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 63,024 license holder's hunted small game (pheasant, quail, partridge, cottontail, or squirrel). Small game hunter numbers (-4.5%) were down slightly from last year.

By residency, the number of resident small game hunters decreased -4.6% from 54,819 in 2018, to 52,290 in 2019, while the number nonresident small game hunters decreased -3.7% from 11,141 in 2018, to 10,734 in 2019. Pheasant were the most commonly reported species hunted by small game hunters (82%), while squirrels were the second most sought-after species with 25% of small game hunters indicating they hunted squirrels (Table 1).

Small game hunters from over 35 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 average small game hunter reported hunting 8.6 days last fall.

Ring-necked Pheasant. - An estimated 51,891 pheasant hunters (24% of licensed hunters, 82% of small game hunters) took to Iowa's fields last fall and harvested 283,684 roosters (Tables 1 & 2). The number of pheasant hunters decreased -3%, while total harvest decreased -11% compared to 2018 estimates. Broken down by resident and non-resident hunters, an estimated 41,708 resident hunters harvested 217,102 pheasants and 10,183 nonresident hunters harvested 66,582 pheasants in 2019. Iowa's peak year for nonresident pheasant hunters was 1997 with 50,349. Resident hunter numbers declined -3%, while nonresident pheasant hunter numbers were unchanged compared to 2018 (Table 3).

Resident hunters hunted an average of 6.6 days last fall and harvested 5 birds during the season. Nonresident pheasant hunters averaged 5.2 days afield and harvested 7 birds for the season (Table 3). Hunter success (harvest/day) was highest through the first 9 days of the season, although late season hunting was almost as good (Table 4). Approximately 23% of the total pheasant harvest occurred in the first 9 days of the 2019 season and lower than 2018 (Table 4). This was expected given the late crop harvest for 2019 opener. Over half of pheasant hunters reported hunting 4 days or less during the 2019 season. Resident hunters accounted for 77% of the total pheasant harvest. Resident hunters in the NW, NC, NE, WC, C, and EC regions reported good hunting success with over 20,000+ roosters reported harvested in each region (Table 5).

The 2019 roadside survey showed Iowa's pheasant population was 17% lower than 2018 thus a reduced harvest was expected. Although harvest was down slightly from last year, it was still

the second highest in the last decade. Harvest per day was very good at the end of the season 0.91 birds/day, 30% above the long-term average, suggesting a lot of birds remained late in the season. This was not unexpected given Iowa's late crop harvest in 2019 which made hunting early in the season difficult. Non-resident hunter numbers were unchanged, but reported an additional 10,000+ more roosters harvested than last year. Non-residents harvested 6.5 roosters for the season 25% higher than 2018. Non-residents certainly had a good year in Iowa last fall!!

Bobwhite Quail. - Approximately 8,131 quail hunters (4% of licensed hunters, 13% of small game hunters) harvested 20,710 quail during the 2019 quail season (Table 1 & 2). Hunter numbers decreased -18% while harvest decreased -56% compared to 2018 estimates (Table 3). Quail hunters averaged 5.9 days a field and harvested 3 birds for the season (Table 3). Fifty-two percent of the quail harvest occurred in the first month of the 2019 season (Table 4). Fifty percent of Iowa quail hunters hunted 3 days or less during the 2019 season. Resident quail hunters accounted for 78% of the total quail harvest. Hunter success was best in the SW and SE regions (Table 5).

The 2019 roadside counts showed quail numbers were -36% lower than 2018 counts, so the lower hunter numbers and harvest, in 2019, was expected. The winter of 2018-19 was a tough one for quail in Iowa, with significant winter mortality. However, the winter of 2019-20 was relatively mild and Iowa should see a bump in quail numbers this fall.

Table 1. Estimated proportion of 2019 license buyers and small game hunters who hunted each species.

Species	Eligible Hunters <sup>a</sup>	Small Game Hunters <sup>b</sup>
Pheasants	23.6%	82.3%
Quail	3.7%	12.9%
Cottontail	6.9%	24.1%
Squirrels	7.3%	25.4%
Partridge	0.7%	2.5%
Mourning Dove	4.1%	13.6%

<sup>a</sup> 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 24% of license buyers hunted pheasants).

<sup>b</sup> Of the licensed hunters who indicated they hunted small game an estimated 82% hunted pheasants).

Figure 1. Small game survey card.

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### 2019-2020 Iowa Small Game Hunter Survey - 2nd Request

*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 2019-20?  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 26 to Nov 4	Nov 5-30	Dec 1 to Jan 10	SEASON TOTAL	Oct 26 to Nov 4	Nov 5-30	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"/> <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"/> <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"/>	<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"/>

Did you hunt during the 2019 Youth Pheasant Season?  Yes  No

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

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 2019-20 small game season.

License/Species	Hunters		Harvest		Days	
	Estimate	95% CI	Estimate	95% CI	Estimate	95% CI
<b>ALL LICENSE TYPES</b>						
Pheasant	51,891 ±	4,474	283,684 ±	45,411	328,444 ±	47,107
Quail	8,131 ±	2,066	20,710 ±	12,471	48,334 ±	17,794
Cottontail Rabbit	15,173 ±	2,710	54,285 ±	15,905	69,686 ±	15,760
Squirrel	16,018 ±	2,833	88,642 ±	21,736	92,464 ±	24,341
Hungarian Partridge	1,561 ±	955	853 ±	908	5,734 ±	3,594
Mourning Dove	9,000 ±	2,210	84,827 ±	36,197	34,607 ±	13,002
				Total Days*	544,662 ±	69,468
<b>RESIDENT HUNTERS</b>						
Pheasant	41,708 ±	4,266	217,102 ±	42,546	275,903 ±	45,109
Quail	6,264 ±	1,877	16,111 ±	11,966	40,071 ±	17,230
Cottontail Rabbit	14,310 ±	2,639	52,538 ±	15,847	65,450 ±	15,463
Squirrel	15,167 ±	2,766	84,557 ±	21,429	88,932 ±	24,214
Hungarian Partridge	1,312 ±	888	703 ±	882	4,439 ±	3,082
Mourning Dove	8,724 ±	2,182	83,685 ±	36,168	32,958 ±	12,833
				Total Days*	474,795 ±	67,549
<b>NONRESIDENT HUNTERS</b>						
Pheasant	10,183 ±	1,349	66,582 ±	15,877	52,541 ±	13,574
Quail	1,867 ±	864	4,599 ±	3,511	8,263 ±	4,447
Cottontail Rabbit	863 ±	616	1,747 ±	1,363	4,236 ±	3,044
Squirrel	851 ±	615	4,085 ±	3,639	3,532 ±	2,491
Hungarian Partridge	249 ±	350	150 ±	214	1,295 ±	1,849
Mourning Dove	276 ±	354	1,142 ±	1,472	1,649 ±	2,088
				Total Days*	69,867 ±	16,218

\* 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):  
63,024 ± 4,745

Estimated number of people who hunted upland game birds only (pheasant, quail, partridge) :  
40,794 ± 4,110

Estimated number of people who hunted small game mammals only (cottontail, squirrel):  
10,484 ± 2,297

Youth Pheasant Season

1,963 ± 1,051 Adult Hunters  
2,918 ± 1,880 Youths Hunted  
361 ± 314 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 2018-19 and 2019-20 small game seasons. N is most recent years sample size.

SPECIES	LICENSE TYPE											
	N	ALL LICENSE TYPES			N	RESIDENT			N	NONRESIDENT		
		2018	2019	%CHG		2018	2019	%CHG		2018	2019	%CHG
<b>Ring-necked pheasant</b>	708				591				117			
Hunters		53,266	51,891	-3%		43,070	41,708	-3%		10,196	10,183	0%
Harvest		319,811	283,684	-11%		266,237	217,102	-18%		53,574	66,582	24%
Days		335,348	328,444	-2%		289,762	275,903	-5%		45,586	52,541	15%
Harvest/hunter		6.0	5.5	-9%		6.2	5.2	-16%		5.3	6.5	25%
Days/hunter		6.3	6.3	0%		6.7	6.6	-2%		4.5	5.2	15%
Harvest/day		1.0	0.9	-9%		0.9	0.8	-14%		1.2	1.3	8%
<b>Bobwhite quail</b>	112				88				24 *			
Hunters		9,882	8,131	-18%		7,811	6,264	-20%		2,071	1,867	-10%
Harvest		47,305	20,710	-56%		42,791	16,111	-62%		4,514	4,599	2%
Days		56,916	48,334	-15%		50,648	40,071	-21%		6,268	8,263	32%
Harvest/hunter		4.8	2.6	-47%		5.5	2.6	-53%		2.2	2.5	13%
Days/hunter		5.8	5.9	3%		6.5	6.4	-1%		3.0	4.4	46%
Harvest/day		0.8	0.4	-48%		0.8	0.4	-52%		0.7	0.6	-22%
<b>Cottontail rabbit</b>	247				234				13 *			
Hunters		20,523	15,173	-26%		19,017	14,310	-25%		1,506	863	-43%
Harvest		123,309	54,285	-56%		116,298	52,538	-55%		7,011	1,747	-75%
Days		102,596	69,686	-32%		97,001	65,450	-33%		5,595	4,236	-24%
Harvest/hunter		6.0	3.6	-40%		6.1	3.7	-40%		4.7	2.0	-57%
Days/hunter		5.0	4.6	-8%		5.1	4.6	-10%		3.7	4.9	32%
Harvest/day		1.2	0.8	-35%		1.2	0.8	-33%		1.3	0.4	-67%
<b>Squirrel</b>	246				232				14 *			
Hunters		16,749	16,018	-4%		15,657	15,167	-3%		1,092	851	-22%
Harvest		80,843	88,642	10%		79,865	84,557	6%		978	4,085	318%
Days		60,737	92,464	52%		59,125	88,932	50%		1,612	3,532	119%
Harvest/hunter		4.8	5.5	14%		5.1	5.6	9%		0.9	4.8	433%
Days/hunter		3.6	5.8	59%		3.8	5.9	55%		1.5	4.2	180%
Harvest/day		1.3	1.0	-28%		1.4	1.0	-30%		0.6	1.2	90%
<b>Hungarian partridge</b>	21 *				17 *				4 *			
Hunters		2,379	1,561	-34%		1,675	1,312	-22%		704	249	-65%
Harvest		6,220	853	-86%		3,068	703	-77%		3,152	150	-95%
Days		10,295	5,734	-44%		4,916	4,439	-10%		5,379	1,295	-76%
Harvest/hunter		2.6	0.6	-79%		1.8	0.5	-70%		4.5	0.6	-87%
Days/hunter		4.3	3.7	-15%		2.9	3.4	15%		7.6	5.2	-32%
Harvest/day		0.6	0.2	-75%		0.6	0.2	-74%		0.6	0.1	-80%
<b>Mourning Dove</b>	129				123				6 *			
Hunters		9,767	9,000	-8%		9,161	8,724	-5%		606	276	-54%
Harvest		118,855	84,827	-29%		117,050	83,685	-29%		1,805	1,142	-37%
Days		32,594	34,607	6%		29,155	32,958	13%		3,439	1,649	-52%
Harvest/hunter		12.2	9.4	-23%		12.8	9.6	-25%		3.0	4.1	39%
Days/hunter		3.3	3.9	15%		3.2	3.8	19%		5.7	6.0	5%
Harvest/day		3.7	2.5	-33%		4.0	2.5	-37%		0.5	0.7	33%

\* Small sample size, view estimates accordingly.

Table 4. Mean hunting effort and harvest by time period for pheasant and quail hunters during the 2019-20 small game season.

SPECIES	Mean days	Mean harvest	Harvest/day	Proportion of effort (days)	Proportion of the harvest
<b>Ring-necked pheasants (N=633)</b>					
First 9 Days*	1.38	1.30	0.94	21%	23%
Day 10 - Nov. 30	2.91	2.37	0.81	44%	41%
Dec. 1 - Jan. 10	2.25	2.05	0.91	34%	36%
Jan. 11 - Jan 31	-	-	-	-	-
<b>Bobwhite quail (N=88)</b>					
First 9 Days	0.90	0.28	0.32	15%	10%
Day 10 - Nov. 30	2.39	1.15	0.48	39%	42%
Dec. 1 - Jan. 10	2.27	0.96	0.42	38%	35%
Jan. 11 - Jan 31	0.50	0.32	0.64	8%	12%

\* First 2 weekends of season.

Table 5. Harvest and proportion of harvest by August roadside survey region for the 2019-20 small game season\*.

REGION	Ring-necked Pheasant		Bobwhite Quail		Cottontail Rabbit		Squirrel		Hungarian Partridge		Mourning Dove	
	N	%	N	%	N	%	N	%	N	%	N	%
NW	32,389	11.4%	0	0.0%	2,037	3.8%	3,489	3.9%	26	3.0%	16,322	19.2%
NC	22,715	8.0%	25	0.1%	5,584	10.3%	7,054	8.0%	425	49.8%	5,033	5.9%
NE	22,158	7.8%	0	0.0%	6,919	12.7%	14,391	16.2%	52	6.1%	7,125	8.4%
WC	31,325	11.0%	738	3.6%	1,917	3.5%	3,473	3.9%	0	0.0%	5,402	6.4%
C	62,543	22.0%	4,193	20.2%	6,885	12.7%	16,269	18.4%	200	23.4%	9,906	11.7%
EC	16,752	5.9%	980	4.7%	8,836	16.3%	19,598	22.1%	0	0.0%	7,658	9.0%
SW	3,765	1.3%	6,188	29.9%	5,964	11.0%	208	0.2%	0	0.0%	1,430	1.7%
SC	11,957	4.2%	1,000	4.8%	6,068	11.2%	8,439	9.5%	0	0.0%	18,569	21.9%
SE	13,524	4.8%	2,987	14.4%	8,328	15.3%	11,636	13.1%	0	0.0%	12,240	14.4%
Nonresident	66,556	23.5%	4,599	22.2%	1,747	3.2%	4,085	4.6%	150	17.6%	1,142	1.3%
Total	283,684		20,710		54,285		88,642		853		84,827	

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