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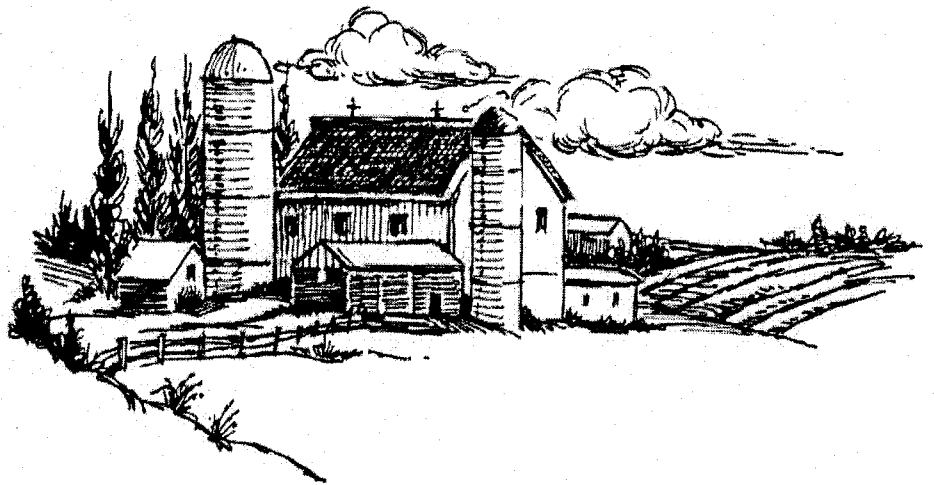
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# Perceptions of Wildlife Crop Damage and Depredation Among Agricultural Producers in Illinois



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**PERCEPTIONS OF WILDLIFE CROP DAMAGE  
AND DEPREDATION AMONG AGRICULTURAL  
PRODUCERS IN ILLINOIS**

**JOB COMPLETION REPORT**

**WILDLIFE HARVEST AND**

**HUMAN DIMENSIONS RESEARCH PROGRAM**

**STATE OF ILLINOIS**

**PROJECT NUMBER: W-112-R-11  
STUDY 105  
JOB NO. 105.1**

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**Federal Aid in Wildlife Restoration  
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**Illinois Department of Natural Resources**

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## **ABSTRACT**

A total of 971 (59%) resident agricultural producers responded to the 2002 Illinois Wildlife and Agriculture (Crop Damage) Survey. Two-thirds (65%) of the producers had experienced crop damage from wildlife in the past 12 months. The offending wildlife (usually deer) mostly damaged crops by eating young plants and/or mature grains and fruits. Sixty-three percent of the producers with damage reported  $\leq 5$  acres of damage and 78% reported  $\leq 10$  acres. Fifteen percent of the producers had lost livestock (usually calves) or poultry (usually chickens) to predation by wildlife (primarily coyote) in the past year. Majorities ( $\geq 50\%$ ) of the producers felt that wildlife-borne diseases posed no threat or slight threat to people, livestock, and farming operations. Twenty-nine percent of the producers had land in set-aside programs (mostly CRP) and 48% performed management practices (primarily conservation tillage) to benefit wildlife. Operations of agricultural producers are profiled, as are their attitudes toward wildlife and some personal characteristics.

## **OBJECTIVE**

The objective of this study was to survey agricultural producers in Illinois regarding their experiences with and attitudes toward wildlife-related problems on their land in the past year. For purposes of this study, *agricultural producers* is defined as those individuals whose farming operations include row crops, dairy, forage crops, orchards, livestock, nursery, and/or poultry.

## **METHODS**

A sample of 1,723 known agricultural producers was purchased from Survey Sampling, Inc. to serve as the mailing list for this survey. The sample was based on the 2000 U.S. Census, as it applied to Illinois (conducted by the U.S. Bureau of Census). These producers were mailed an 8-page, self-administered questionnaire and a letter of explanation on 16 May 2002 (Appendices A and B). The questionnaire addressed incidences of crop and property damage from wildlife, and attitudes and opinions toward these damages. Recipients were sent a follow-up postcard 10 days after the questionnaire, thanking them for participating in the survey and reminding nonrespondents to return the completed questionnaire. Nonrespondents were mailed a second questionnaire and another letter (Appendix C) on 13 June, followed 10 days later with another postcard. Finally, nonrespondents were sent a third copy of the questionnaire, and another copy of the 2<sup>nd</sup> letter, on 12 July.

There were 67 agricultural producers who were not reached by the U.S. Postal Service, causing the mailing list to be reduced to 1,656 potential participants. As of 21 August 2002, we received 971 usable questionnaires for a response of 58.6%. One hundred of the states' 102 counties were represented (Appendices D and E). Coded data were transferred from the questionnaires to a computer file and analyzed using SPSS 10.0.

## **RESULTS**

### Crop Damage

Two-thirds (65%) of the Illinois agricultural producers who participated in this survey had experienced crop damage from wildlife in the past 12 months (Table 1). Crop damage from wildlife was relatively low in IDNR Administrative Region 3 (55%) and relatively high in

Region 5 (76%). The types of damage most frequently reported were “eating young plants” (78% of producers with damage) and “eating mature grains and fruits” (71%) (Table 2).

By a wide margin, white-tailed deer was the wildlife species most frequently associated with crop damage (Table 3). Statewide, 91% of the producers claimed that deer caused damage - the percentage ranged from 85% to 94% across the administrative regions. Groundhog was the 2<sup>nd</sup> ranked species, with 34% of the producers reporting damage. Groundhog damage was greatest in the highly-urbanized Region 2, where 46% of the producers implicated this species. Respondents perceived that turkey-related damage was relatively high in Regions 4 and 5 (41% and 38%). In descending order of frequency, other birds (blackbirds, starlings, etc.) (17%), geese (14%), crows (8%), and rabbits (8%) were implicated in crop damage. Other crop-damaging species included the raccoon (13%) and ground squirrels/gophers (10%).

Agricultural producers who had crop damage estimated that deer damaged an average of 20 acres of crops (Table 4). However, 63% of the producers reported  $\leq 5$  acres of damage and 78% reported  $\leq 10$  acres. At the other extreme, 9 producers in the sample claimed high amounts of damage by deer (400 acres to 900 acres). More than two-thirds ( $\geq 69\%$ ) of the producers associated the other species listed in Table 4 with  $\leq 5$  acres of damage.

Of the agricultural producers who had crop damage, only 20% said they took action to correct the problem (Table 5). The steps taken involved a variety of actions—i.e., removing animals, contacting a state agency for advice or permit to shoot animals, use of chemicals or repellents to deter animals, installing fencing, and encouraging more hunting.

Only 19% of the producers with crop damage reported the problem to a state agency (Table 6). The Illinois Department of Natural Resources and the Illinois Department of



Agriculture were the agencies most frequently contacted. Majorities (74% and 62%) of the producers who reported damage rated these 2 agencies' responses as "poor" or "fair".

Majorities (61%) of the producers with crop damage thought the amount of damage due to wildlife was somewhat more or much more than 5 years ago (Table 7). This opinion prevailed in all administrative regions, ranging from 57% to 73%. Two-thirds (68%) of the producers blamed deer as the cause of the increase in crop damage (Table 8). Again, this opinion prevailed throughout the state, ranging from 63% in Administrative Region 3 to 71% in Region 5. Turkeys were implicated by 25% of the producers as causing more damage now than 5 years ago. However, judgments of turkeys varied widely: 34% and 35% of the producers in Regions 4 and 5 implicated this species with increases in crop damage, compared to only 3% and 8% in Regions 2 and 3.

#### Loss of Livestock and Poultry

Fifteen percent of the agricultural producers said they had lost livestock or poultry to predation by wildlife in the past year (Table 9). Losses to predation were relatively low in Administrative Region 3 (8%) and relatively high in Region 1 (18%). When asked to identify the wildlife species responsible for the predation, 78% of the producers who had losses indicted the coyote (Table 10). Second on the list was the raccoon, which was implicated by 28% of the state's producers. However, 57% of the producers in the highly-urbanized Region 2 associated raccoons with predation on livestock and/or poultry.

One-half (51%) of the producers who had experienced predation said they lost calves (Table 11). Loss of calves was relatively low in Administrative Region 2 (14%) and relatively

high in Region 5 (68%). However, the sample for Region 2 was small. Statewide, 32% of the producers with losses reported losing chickens.

Of the agricultural producers who had experienced predation losses, 36% said they removed the offending animal(s) themselves (Table 12). Only 4% of the producers hired someone else to do the removal work, and 3% of the producers said they reported the damage to a state agency (Table 13).

### Wildlife Diseases

The agricultural producers who participated in this survey were asked to express their perceptions of several wildlife species and their threat of spreading diseases to people and livestock. Responses are summarized in Tables 14 and 15. Majorities (55% to 94%) of the producers felt that the 9 species categories listed in the tables posed no threat or a slight threat of spreading diseases. Relatively speaking, the skunk and raccoon were the species of greatest concern - 36% to 39% of the producers believed these species posed moderate or severe threats of spreading diseases to people or livestock.

Similarly, majorities (59% to 82%) of the producers believed that the wildlife-borne diseases listed in Table 16 were either no threat or a slight threat to their farming operations. From a relative perspective, the disease of greatest concern was Lyme Disease - 41% of the producers considered it a moderate or severe threat.

### Agricultural Operations

Agricultural operations of the agricultural producers surveyed are profiled in Table 17. Statewide, 79% of the producers farm their own land. Of those who do not farm their own

land, 95% have their land farmed by someone else. The producers owned an average of 293 acres of land, and they farmed an average of 652 acres. Farming was the primary source of income for 66% of the producers. The farming operations were dominated by the production of row crops (92% of the producers), followed by livestock (46%) and forage crops (30%).

### Set-Aside Programs

Twenty-nine percent of the producers reported that they had land enrolled in conservation easement programs (Table 18). These programs were dominated by CRP (Conservation Reserve Program) - 88% of the producers in conservation programs had enrolled in CRP. Following at a distance was CREP (Conservation Reserve Enhancement Program), with 9% of the producers participating. The participants had signed up an average of 48 acres in CRP and 54 acres in CREP.

### Wildlife Management Practices

Almost one-half (48%) of the agricultural producers said they performed management practices on their property for the specific benefit of wildlife (Table 19). Participation in these management practices was higher in Administrative Region 3 (54%) than in the other regions (46% to 48%). The practice most frequently employed was “conservation tillage”, which was utilized by 74% of producers. Second in popularity was “planting trees/shrubs/grasses” (55%), followed by “forest management” (18%) and “wetland management” (13%).

### Attitudes Toward Wildlife

The attitudes of agricultural producers toward wildlife were assessed through 15 statements relating to wildlife and wildlife policy, in a 7-point Likert-type scale from strongly disagree (1) to strongly agree (7). Results are summarized in Table 20. It is noteworthy that a majority of the producers supported all 15 statements--i.e., >50% of them agreed with each statement. The producers most strongly agreed with the following:

- \*Set-aside programs provide benefits beyond wildlife habitat.
- \*Landowners have the right to use their land as they see fit.
- \*Property owners should have more control over wildlife on their land.
- \*People outside the farming community should not be able to tell farmers how to control wildlife on their land.

### Some Personal Characteristics of Agricultural Producers

Selected personal characteristics of the agricultural producers who participated in this survey are presented in Table 21. The producers were 92% male/8% female, and they averaged 58 years of age. The producers had farmed their current farm for an average of 32 years; 25% of them had farmed their current farm for >40 years.

Table 1. Have you experienced crop damage from wildlife in the past 12 months?  
(Illinois 2002)

Experienced Crop Damage	State- wide (n=971)	Administrative Region				
		1 (308)	2 (56)	3 (186)	4 (268)	5 (152)
Yes	65%	66%	59%	55%	65%	76%
No	35	34	41	45	35	24

Table 2. If "Yes," what type of damage did you experience? (Illinois 2002)

Type of Damage	State- wide (n=629)	Administrative Region				
		1 (204)	2 (33)	3 (103)	4 (173)	5 (116)
Eating young Plants	78%	74%	79%	75%	79%	85%
Eating mature grains or fruits	71	77	70	61	70	72
Damaging newly planted fields	47	45	39	45	52	47
Damaging trees	18	19	18	21	18	16
Other <sup>a</sup>	8 <sup>a</sup>	8	0	8	7	10

<sup>a</sup> Trampling crops (3%), bedding down in fields (2%), beaver dams (1%), digging holes (1%), and 2 miscellaneous types of damage (1%).

Table 3. What species were responsible for damages to your crops? (Illinois 2002)

Species	State-wide (n=629)	Administrative Region				
		1 (204)	2 (33)	3 (103)	4 (173)	5 (116)
Deer	91%	93%	91%	85%	92%	94%
Turkeys	28	26	3	10	41	38
Geese	14	15	33	10	13	10
Crows	8	10	3	6	4	15
Other birds <sup>a</sup>	17	9	12	18	21	26
Rabbits	8	7	3	10	8	13
Groundhogs	34	35	46	38	25	39
Other <sup>b</sup>	38 <sup>b</sup>	38	30	40	24	19

<sup>a</sup> Blackbirds, starlings, etc.

<sup>b</sup> Raccoons (13%), ground squirrels/gophers (10%), squirrels (4%), beavers (4%), and 10 miscellaneous species (7%).

Table 4. How many acres do you estimate were damaged by the following species? (Illinois 2002)

Species	n	Mean Acres	Distribution				
			1	2-5	6-10	11-20	>20Acres
Deer	(539)	20	20%	43%	15%	10%	12%
Turkeys	(157)	6	35	41	12	7	5
Geese	( 79)	23	33	41	10	6	10
Crows	( 39)	17	54	33	8	2	3
Other birds <sup>a</sup>	( 80)	31	43	26	11	6	14
Rabbits	( 43)	16	56	35	4	0	5
Groundhogs	(166)	4	55	36	4	3	2
Other <sup>b</sup>	(143)	8	43	27	21	3	6

<sup>b</sup> Raccoons, ground squirrels/gophers, squirrels, and beavers comprised 87% of the "other" species.

Table 5. Did you take any action to correct the problem? (Illinois 2002)

Took Action	Statewide
	(n=629)
Yes	20%
No	80
<u>Steps taken:</u>	(n=127)
Removed animals myself with live trap	23%
Removed animals myself with leg-hold trap	9
Called state agency for advice on removing the animals	9
Called state agency for permit to shoot the animals	13
Used household chemicals such as mothballs or ammonia to drive animals away	20
Used commercial repellents (Hot Sauce, Ro-Pel, etc. to drive animals away	18
Installed fencing	27
Other <sup>a</sup>	33

<sup>a</sup>Encouraged more hunting (17%), placed seed corn around dens (3%), harvested crops early (3%), destroyed animals (3%), and 6 miscellaneous steps (7%).

Table 6. Did you report this damage to a state agency? (Illinois 2002)

Reported Damage	Statewide
	(n=127)
Yes	19%
No	81

If “Yes,” to which agency did you report the damage? Please check all that apply.

<u>Agency reporting to:</u>	(n=24)
Illinois Department of Natural Resources	63%
Illinois Department of Agriculture	33
County Extension Agent	13
Illinois Farm Bureau	13

How do you rate the agency’s response to your report of damage?

Agency	Response				
	n	Poor	Fair	Good	Excellent
Illinois Department of Natural Resources	(15)	47%	27%	13%	13%
Illinois Department of Agriculture	( 8)	25	37	25	13
County Extension Agent	( 3)	67	33	0	0
Illinois Farm Bureau	( 4)	75	25	0	0
All above combined	(24)	33	37	17	13



Table 7. In your opinion, how did the amount of damage due to wildlife that you experienced this past year compare to 5 years ago? (Illinois 2002)

Amount of Damage	State-wide (n=619)	Administrative Region				
		1 (203)	2 (32)	3 (101)	4 (168)	5 (115)
Much more	24%	21%	28%	17%	26%	35%
Somewhat more	37	37	31	40	35	38
About the same	36	40	38	40	37	22
Somewhat less	2	1	3	3	2	1
Much less	1	1	0	0	0	4

Table 8. Which of the following species cause more damage on your land now than 5 years ago? (Illinois 2002)

Species	State-wide (n=629)	Administrative Region				
		1 (204)	2 (33)	3 (103)	4 (173)	5 (116)
Deer	68%	67%	67%	63%	70%	71%
Geese	10	8	27	6	10	10
Crows	3	3	0	1	3	3
Groundhogs	12	15	18	10	9	12
Turkeys	25	23	3	8	34	35
Other birds <sup>a</sup>	9	6	3	5	12	16
Rabbits	1	1	0	4	1	0
Other <sup>b</sup>	14 <sup>b</sup>	18	9	12	9	13

<sup>a</sup>Blackbirds, starlings, etc.

<sup>b</sup>Raccoons (5%), groundhogs/gophers (3%), beavers (2%), coyotes (1%), and 8 miscellaneous species (3%).

Table 9. Have you lost any livestock or poultry to predation by wildlife in the past year? (Illinois 2002)

Lost Livestock or Poultry	State- wide (n=971)	Administrative Region				
		1 (308)	2 (56)	3 (186)	4 (268)	5 (152)
Yes	15%	18%	13%	8%	15%	16%
No	85	82	87	92	85	84

Table 10. If "Yes," what wildlife species was responsible? (Illinois 2002)

Species	State- wide (n=142)	Administrative Region				
		1 (55)	2 (7)	3 (15)	4 (40)	5 (21)
Raccoon	28%	27%	57%	27%	33%	16%
Fox	11	7	14	13	10	20
Coyote	78	84	86	73	80	64
Bobcat	1	0	0	0	3	0
Other <sup>a</sup>	9	6	29	20	8	8

<sup>a</sup>Opossums (2%), owls (2%), mink (1%), stray dogs (1%), and 4 miscellaneous species (3%).

Table 11. What livestock or poultry did you lose? (Illinois 2002)

Livestock or Poultry	State- wide (n=142)	Administrative Region				
		1 (55)	2 (7)	3 (15)	4 (40)	5 (25)
Calf	51%	46%	14%	27%	65%	68%
Pig	16	26	14	20	13	0
Sheep	6	4	29	7	8	0
Goat	1	0	0	7	0	0
Chicken	32	24	57	40	33	36
Turkey	5	4	14	7	5	4
Other <sup>a</sup>	17	13	43	0	20	4

<sup>a</sup>Ducks(7%), geese(4%), pheasants (2%), rabbits (1%), and 4 miscellaneous species (3%).

Table 12. What actions did you take to prevent further loss? (Illinois 2002)

Took Action	Statewide
	(n=142)
Removed the offending animal(s) myself	36%
Hired someone to remove the offending animal(s)	4
Other <sup>a</sup>	21

<sup>a</sup>Encouraged more hunting (6%), moved livestock (4%), used cages (4%), put up fences (2%), locked up chickens at night (2%), and 4 miscellaneous actions (3%).

Table 13. Did you report the damage to a state agency (Illinois Farm Bureau, Department of Natural Resources, etc.)? (Illinois 2002)

Reported Damage	Statewide
	(n=142)
Yes	3%
No	97

Table 14. Please give your opinion of the species below and **their threat of spreading diseases to people.** (Illinois 2002)

Wildlife Species	n	No Threat	Slight Threat	Moderate Threat	Severe Threat
Raccoons	(825)	17%	46%	29%	8%
Bats	(736)	29	45	19	7
Coyotes	(797)	27	45	21	7
Deer	(810)	30	42	21	7
Foxes	(741)	47	40	11	2
Opossums	(748)	38	42	17	3
Squirrels	(726)	53	38	8	1
Beavers	(719)	64	30	5	1
Skunks	(791)	20	41	29	10
Birds (Other than geese)	(763)	25	40	26	9

Table 15. Please give your opinion of the species below and **their threat of spreading diseases to livestock.** (Illinois 2002)

Wildlife Species	n	No Threat	Slight Threat	Moderate Threat	Severe Threat
Raccoons	(759)	22%	42%	25%	11%
Bats	(700)	37	41	17	5
Coyotes	(754)	21	42	28	9
Deer	(768)	25	39	25	11
Foxes	(709)	41	41	14	4
Opossums	(704)	37	42	16	5
Squirrels	(691)	60	33	6	1
Beavers	(686)	66	27	5	2
Skunks	(742)	24	39	27	10
Birds (Other than geese)	(734)	21	34	27	18

Table 16. Please rate the threat of the following wildlife-borne diseases to your farming operations. (Illinois 2002)

Wildlife Disease	n	No Threat	Slight Threat	Moderate Threat	Severe Threat
Chronic Wasting Disease	(714)	40%	39%	14%	7%
Rabies	(785)	22	46	26	6
Avian Influenza	(674)	39	43	15	3
West Nile Virus	(717)	31	41	22	6
Lyme Disease	(803)	18	41	32	9

Table 17. A profile of operations of agricultural producers who participated in this survey. (Illinois 2002)

Operation	State-wide	Administrative Region				
		1	2	3	4	5
Do you farm your own land?						
	(n=950)	(301)	(54)	(182)	(261)	(151)
Yes	79%	83%	78%	73%	80%	78%
No	21	17	22	27	20	22
If "No," does someone else farm your land?						
	(n=191)	(49)	(12)	(47)	(50)	(32)
Yes	95%	98%	100%	96%	90%	94%
No	5	2	0	4	10	6
What type of farming do you or your tenant do on your land?						
	(n=950)	(301)	(54)	(182)	(261)	(151)
Row crops	92%	92%	89%	93%	94%	90%
Dairy	1	<1	4	1	1	0
Forage crops	30	38	26	15	31	34
Orchards	2	2	0	2	1	3
Livestock	46	53	37	26	47	55
Nursery	1	2	0	0	1	1
Poultry	4	4	7	2	4	5
Other	1	2	0	0	1	3

Table 17 – continued.

Table 17. .Continued page – 2.

Operation	State- wide	Administrative Region				
		1	2	3	4	5
How many acres do you own?						
	(n=842)	(264)	(48)	(159)	(235)	(136)
Mean acres	293	313	230	287	268	325
How many acres do you farm?						
	(n=846)	(277)	(45)	(158)	(236)	(130)
Mean acres	652	602	670	767	609	694
Is farming your primary source of income?						
	(n=930)	(297)	(53)	(176)	(256)	(147)
Yes	66%	71%	55%	68%	64%	61%
No	34	29	45	32	36	39

Table 18. Participation in set-aside programs. (Illinois 2002)

	State- wide	Administrative Region				
		1	2	3	4	5
Do you have land placed in set-aside programs (for example CRP, CREP, etc)?						
	(n=942)	(298)	(54)	(177)	(261)	(151)
Yes	29%	29%	19%	38%	23%	35%
No	71	71	81	62	77	65
If "Yes," please give the name of the program.						
	(n=256)	(75)	(8)	(67)	(55)	(51)
CRP	88%	83%	100%	94%	76%	98%
CREP	9	11	0	3	22	2
EQIP	2	3	0	3	0	0
WHIP	<1	1	0	0	0	0
WRP	1	1	0	0	2	0
Acres for Wildlife	<1	1	0	0	0	0
If "Yes," please give the number of acres in the program.						
	(n=191)	(49)	(7)	(54)	(40)	(41)
CRP	48	26	16	30	58	92
	(n=22)	(8)			(11)	
CREP	54	54	---	---	59	---
EQIP	---	---	---	---	---	---
WHP	---	---	---	---	---	---
WRP	---	---	---	---	---	---
Acres for Wildlife	---	---	---	---	---	---

<sup>a</sup>Sample sizes too small to calculate.

Table 19. Performance of wildlife management practices by agricultural producers.  
(Illinois 2002)

	State- wide	Administrative Region				
		1	2	3	4	5
Do you perform any management practices on your property for the specific benefit of wildlife?						
	(n=940)	(297)	(54)	(181)	(257)	(150)
Yes	48%	48%	48%	54%	46%	47%
No	52	52	52	46	54	53
If "Yes," check all the following management practices that apply.						
	(n=454)	(142)	(26)	(98)	(118)	(70)
Conservation tillage	74%	74%	73%	67%	80%	71%
Wetland management	13	14	31	9	10	14
Forest management	18	17	8	10	23	26
Planting trees/shrubs/grasses	55	61	54	55	49	51
Other <sup>a</sup>	26 <sup>a</sup>	19	15	27	34	30

<sup>a</sup>Food plots (8%), delayed mowing (3%), brush piles (3%), waterway management (2%), filter strips (1%), leave standing corn (1%), and 17 miscellaneous practices (8%).



Table 20. Attitudes of agricultural producers toward wildlife. (Illinois 2002)

	n	Strongly Disagree %	Disagree %	Slightly Disagree %	Unsure %	Slightly Agree %	Agree %	Strongly Agree %
Wildlife on private property should belong to landowners who support it.	(914)	3	9	3	14	15	31	25
Crop damage from wildlife is part of farming.	(921)	5	9	8	7	26	37	8
People outside of the farming community should not be able to tell farmers how to control wildlife on their land.	(928)	3	3	4	7	13	32	38
Preserving wildlife habitat is secondary to economic growth.	(916)	6	12	13	16	19	24	10
The state of Illinois is responsible to assist farmers with wildlife crop damage.	(920)	4	9	6	18	23	27	13
Farmers should be able to remove problem wildlife without first getting state permits or permission.	(939)	3	7	4	8	14	33	31
Taking land out of production for prairie preservation provides future generations with a natural heritage.	(916)	4	8	6	17	22	33	10
Property owners should have more control over wildlife on their land.	(927)	1	2	2	11	18	41	25
A sound economy is more important than protecting wildlife.	(917)	4	11	16	15	22	21	11
Wildlife belongs to all people of Illinois.	(924)	12	15	10	14	18	25	6
Landowners have the right to use their land as they see fit.	(933)	1	4	6	4	21	36	28
Farming is a better use of land than returning it to a tall-grass prairie.	(923)	1	3	5	12	17	41	21
Set-aside programs provide benefits beyond wildlife habitat.	(929)	1	2	2	9	18	49	20
A healthy environment will lead to a strong economy.	(922)	2	5	5	20	19	37	12
More emphasis should be placed on managing wildlife on agricultural land in Illinois.	(927)	4	9	8	22	20	27	10

Table 21. Some personal characteristics of agricultural producers who participated in this survey. ( Illinois 2002)

Characteristic	Statewide
Gender	(n=968)
Male	92%
Female	8%
Age	(n=942)
Mean	58 years
Distribution:	
17-40 years	9%
41-50 “	19%
51-60 “	29%
61-70 “	22%
>70 “	21%
Years farming current farm	(n=929)
Mean	32 years
Distribution:	
1-10 years	8%
11-20 “	17%
21-30 “	27%
31-40 “	23%
>40 “	25%

Appendix A

# Wildlife and Agriculture Survey

ALL RESPONSES ARE CONFIDENTIAL  
**THANK YOU FOR YOUR COOPERATION!**

Postage-paid return envelope provided

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Illinois Department of Natural Resources  
Division of Wildlife Resources  
and the  
Illinois Natural History Survey



The Department of Natural Resources is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under the Illinois Compiled Statutes, The Wildlife Code, Chapter 520. Disclosure of information is voluntary.

Please take 15 minutes of your time to complete this questionnaire. Your responses will tell us more about Illinois agriculture producers and wildlife in Illinois.

**Section 1. Wildlife Crop Damage.** Please answer the following questions regarding the extent of crop damage that you have experienced in the past growing season that was due to wildlife.

1. Have you experienced crop damage from wildlife in the past 12 months?

\_\_\_\_\_ Yes (go to question 2)

\_\_\_\_\_ No

2. If "Yes," what type of damage did you experience?

\_\_\_\_\_ eating young plants

\_\_\_\_\_ eating mature grains or fruits

\_\_\_\_\_ damaging newly planted fields

\_\_\_\_\_ damaging trees

\_\_\_\_\_ other (please identify): \_\_\_\_\_

3. What species were responsible for damages to your crops?

\_\_\_\_\_ deer

\_\_\_\_\_ turkeys

\_\_\_\_\_ geese

\_\_\_\_\_ crows

\_\_\_\_\_ other birds (blackbirds, starlings, etc.)

\_\_\_\_\_ rabbits

\_\_\_\_\_ groundhogs

\_\_\_\_\_ other (please identify): \_\_\_\_\_

4. How many acres do you estimate were damaged by the following species? Please give the estimated acres damaged by each species in the space provided.

# acres damaged

\_\_\_\_\_ deer

\_\_\_\_\_ turkeys

\_\_\_\_\_ geese

\_\_\_\_\_ crows

\_\_\_\_\_ other birds (blackbirds, starlings, etc.)

\_\_\_\_\_ rabbits

\_\_\_\_\_ groundhogs

\_\_\_\_\_ other (please identify): \_\_\_\_\_

5. Did you take any action to correct the problem?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No

6. What steps did you take? Please check all that apply.

- \_\_\_\_\_ Removed animals myself with live trap  
 \_\_\_\_\_ Removed animals myself with leg-hold trap  
 \_\_\_\_\_ Called state agency for advice on removing the animals  
 \_\_\_\_\_ Called state agency for permit to shoot the animals  
 \_\_\_\_\_ Used household chemicals such as mothballs or ammonia to drive animals away  
 \_\_\_\_\_ Used commercial repellents (Hot Sauce, Ro-Pel, etc.) to drive animals away  
 \_\_\_\_\_ Installed fencing

7. Did you report this damage to a state agency?

- \_\_\_\_\_ Yes (please go to **questions 7a and 7b**)  
 \_\_\_\_\_ No

7a. If "Yes," to which agency did you report the damage? Please check all that apply.

- \_\_\_\_\_ Illinois Department of Natural Resources  
 \_\_\_\_\_ Illinois Department of Agriculture  
 \_\_\_\_\_ County Extension Agent  
 \_\_\_\_\_ Illinois Farm Bureau

7b. How do you rate the agency's response to your report of damage? Please circle the number that matches your response.

Poor	Fair	Good	Excellent
1	2	3	4

8. In your opinion, how did the amount of damage due to wildlife that you experienced this past year compare to 5 years ago?

- \_\_\_\_\_ Much more  
 \_\_\_\_\_ Somewhat more  
 \_\_\_\_\_ About the same  
 \_\_\_\_\_ Somewhat less  
 \_\_\_\_\_ Much less

9. Which of the following species cause more damage on your land now than 5 years ago? Please check all that apply.

- deer                       turkeys  
 geese                       other birds (blackbirds, starlings, etc.)  
 crows                       rabbits  
 groundhogs               other (please identify): \_\_\_\_\_

10. Have you lost any livestock or poultry to predation by wildlife in the past year?

- Yes  
 No (If "No," please go to **Section 2, question 1**)

11. If "Yes," what wildlife species was responsible?

- raccoon  
 fox  
 coyote  
 bobcat  
 other (please identify): \_\_\_\_\_

12. What livestock or poultry did you lose?

- calf  
 pig  
 sheep  
 goat  
 chicken  
 turkey  
 other (please identify): \_\_\_\_\_

13. What actions did you take to prevent further loss?

- removed the offending animal(s) myself  
 hired someone to remove the offending animal(s)  
 other (please explain): \_\_\_\_\_

14. Did you report the damage to a state agency (Illinois Farm Bureau, Department of Natural Resources, etc.)?

- Yes  
 No

**Section 2. Wildlife Diseases.** Please respond to the following questions concerning wildlife diseases in Illinois.

1. Please give your opinion of the species below and **their threat of spreading diseases to people**. Please circle the number that matches your opinion.

Wildlife Species	No Threat	Slight Threat	Moderate Threat	Severe Threat
Raccoons	1	2	3	4
Bats	1	2	3	4
Coyotes	1	2	3	4
Deer	1	2	3	4
Foxes	1	2	3	4
Opossums	1	2	3	4
Squirrels	1	2	3	4
Beavers	1	2	3	4
Skunks	1	2	3	4
Birds (Other than geese)	1	2	3	4

2. Please give your opinion of the species below and **their threat of spreading diseases to livestock**. Please circle the number that matches your opinion.

Wildlife Species	No Threat	Slight Threat	Moderate Threat	Severe Threat
Raccoons	1	2	3	4
Bats	1	2	3	4
Coyotes	1	2	3	4
Deer	1	2	3	4
Foxes	1	2	3	4
Opossums	1	2	3	4
Squirrels	1	2	3	4
Beavers	1	2	3	4
Skunks	1	2	3	4
Birds (Other than geese)	1	2	3	4

3. Please rate the threat of the following wildlife-borne diseases to your farming operations.

Wildlife Disease	No Threat	Slight Threat	Moderate Threat	Severe Threat
Chronic Wasting Disease	1	2	3	4
Rabies	1	2	3	4
Avian Influenza	1	2	3	4
West Nile Encephelitous	1	2	3	4
Lyme Disease	1	2	3	4

**Section 3. Agricultural Operations.** Please help us find out more about agricultural operations by completing the questions listed below.

1. Do you farm your land?

\_\_\_\_\_ Yes (please go to **question 1b**)

\_\_\_\_\_ No

1a. If "No," does someone else farm your land?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

1b. What type of farming do you or your tenant do on your land? (Please check all that apply).

\_\_\_\_\_ row crops      \_\_\_\_\_ forage crops      \_\_\_\_\_ livestock      \_\_\_\_\_ poultry

\_\_\_\_\_ dairy      \_\_\_\_\_ orchards      \_\_\_\_\_ nursery      \_\_\_\_\_ other

2. How many acres do you own? \_\_\_\_\_ acres

3. How many acres do you farm? \_\_\_\_\_ acres

4. Is farming your primary source of income? \_\_\_\_\_ Yes      \_\_\_\_\_ No

5. Do you have land placed in set-aside programs (for example CRP, CREP, etc.)?

\_\_\_\_\_ Yes (please go to **questions 5a and 5b**)

\_\_\_\_\_ No

5a. If "Yes," please give the name of the program \_\_\_\_\_

5b. If "Yes," please give the number of acres in the program \_\_\_\_\_

6. Do you perform any management practices on your property for the specific benefit of wildlife?

\_\_\_\_\_ Yes (go to **question 6a**)

\_\_\_\_\_ No

6a. If "Yes," check all the following management practices that apply.

\_\_\_\_\_ conservation tillage      \_\_\_\_\_ wetland management

\_\_\_\_\_ forest management      \_\_\_\_\_ planting of trees, shrubs, or grasses

\_\_\_\_\_ other (please identify): \_\_\_\_\_



**Section 4. Attitudes Toward Wildlife in Illinois.** Please indicate whether you agree or disagree with the following statements about wildlife by circling the appropriate number provided.

	Strongly Disagree	Disagree	Slightly Disagree	Unsure	Slightly Agree	Agree	Strongly Agree
Wildlife on private property should belong to landowners who support it.	1	2	3	4	5	6	7
Crop damage from wildlife is part of farming.	1	2	3	4	5	6	7
People outside of the farming community should not be able to tell farmers how to control wildlife on their land.	1	2	3	4	5	6	7
Preserving wildlife habitat is secondary to economic growth.	1	2	3	4	5	6	7
The state of Illinois is responsible to assist farmers with wildlife crop damage.	1	2	3	4	5	6	7
Farmers should be able to remove problem wildlife without first getting state permits or permission.	1	2	3	4	5	6	7
Taking land out of production for prairie preservation provides future generations with a natural heritage.	1	2	3	4	5	6	7
Property owners should have more control over wildlife on their land.	1	2	3	4	5	6	7
A sound economy is more important than protecting wildlife.	1	2	3	4	5	6	7
Wildlife belongs to all people of Illinois.	1	2	3	4	5	6	7
Landowners have the right to use their land as they see fit.	1	2	3	4	5	6	7
Farming is a better use of land than returning it to a tall-grass prairie.	1	2	3	4	5	6	7
Set-aside programs provide benefits beyond wildlife habitat.	1	2	3	4	5	6	7
A healthy environment will lead to a strong economy.	1	2	3	4	5	6	7
More emphasis should be placed on managing wildlife on agricultural land in Illinois.	1	2	3	4	5	6	7

**Section 5. General Information.** The following questions are important to help us understand more about the people involved in farming in Illinois. Please tell us something about yourself by checking the responses that apply. All responses are kept confidential.

1. What is your gender?      \_\_\_\_\_ Male                      \_\_\_\_\_ Female
2. How long have you been farming the land you currently farm? \_\_\_\_\_ years
3. Please give your age.      \_\_\_\_\_ years
4. What is your county of residence?      \_\_\_\_\_ County

**COMMENTS**

**RETURN ENVELOPE IS PROVIDED – POSTAGE-PAID  
THANK YOU FOR YOUR TIME AND ASSISTANCE!**

Your input will help us understand more about agriculture and wildlife in Illinois.

The Illinois Department of Natural Resources receives federal assistance and therefore must comply with federal anti-discrimination laws. In compliance with the Illinois Human Rights Act, the Illinois Constitution, Title VI of the 1964 Civil Rights Act, Section 504 of the Rehabilitation Act as amended, and the U.S. Constitution, the Illinois Department of Natural Resources does not discriminate on the basis of race, color, sex, national origin, age, or disability. If you believe you have been discriminated against in any program, activity, or facility, please contact the Equal Employment Opportunity Officer, Department of Natural Resources, 524 S. Second St., Springfield, IL 62701-1787, (217) 782-7616 or the officer of Human Resources, U.S. Fish and Wildlife Service, Washington, D.C. 20240.



**ILLINOIS  
NATURAL  
HISTORY  
SURVEY**



Dear Illinois Agriculture Producer,

Crop damage from wildlife is a problem for some producers. The Illinois Department of Natural Resources is interested in the type and extent of wildlife-related problems you've experienced in the past year. We realize this is a busy time for you and your operations, but ask that you please take 15 minutes from your busy schedule to answer this questionnaire. Please complete the questionnaire and return it in the postage-paid envelope provided.

Thank you for your time and effort to respond to this survey. Your responses will help the Illinois DNR better understand how wildlife affect farming operations in Illinois.

If you have questions about this survey, we can be reached at (217) 244-5121.

Sincerely,

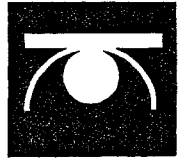
A handwritten signature in black ink, appearing to read "Craig A. Miller".

Craig A. Miller

Human Dimensions Research Program



ILLINOIS  
NATURAL  
HISTORY  
SURVEY



Dear Illinois Agriculture Producer,

As one of a select group of Illinois agriculture producers, you have been asked to provide information about wildlife damage to your crops. We recently mailed you a survey questionnaire regarding your experience with wildlife on your land. We have not received your completed questionnaire. Perhaps you recently mailed the questionnaire and it has not yet arrived in our office. If so, we thank you.

We realize this is a busy time for you and your operations, but ask that you please take 15 minutes from your busy schedule to answer this questionnaire. Please complete the questionnaire and return it in the postage-paid envelope provided. We are entering the period where wildlife impacts on crop production increases. **Your response is important** in helping the Illinois Department of Natural Resources understand more about wildlife and crop damage and develop management efforts to help agriculture producers.

Thank you for your time and effort to respond to this survey. Your responses will help the Illinois DNR better understand how wildlife affect farming operations in Illinois.

If you have questions about this survey, we can be reached at (217) 244-5121.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig A. Miller".

Craig A. Miller

Human Dimensions Research Program

## Appendix D

County of residence of agricultural producers who participated in the Wildlife and Agriculture Survey (Illinois 2002) (n=971).

County	Number of Respondents	County	Number of Respondents	County	Number of Respondents
Region 1		Region 3		Region 5	
Boone	5	Champaign	21	Alexander	1
Bureau	20	Clark	9	Clay	1
Carroll	16	Coles	10	Crawford	12
DeKalb	17	Cumberland	7	Edwards	4
Fulton	13	DeWitt	3	Effingham	16
Henderson	2	Douglas	8	Fayette	8
Henry	18	Edgar	7	Franklin	6
JoDaviess	12	Ford	14	Gallatin	5
Knox	14	Iroquois	24	Hamilton	1
LaSalle	23	Livingston	19	Hardin	0
Lee	14	Macon	20	Jackson	9
Marshall	5	McLean	7	Jasper	17
McDonough	9	Moultrie	5	Jefferson	11
Mercer	18	Piatt	7	Johnson	3
Ogle	16	Shelby	11	Lawrence	1
Peoria	14	Vermilion	14	Marion	9
Putnam	0	Subtotal	186	Massac	2
Rock Island	12			Perry	13
Stark	2	Region 4		Pope	1
Stephenson	13	Adams	18	Pulaski	3
Tazewell	19	Bond	10	Richland	8
Warren	14	Brown	1	Saline	6
Whiteside	13	Calhoun	3	Union	2
Winnebago	14	Cass	2	Wabash	2
Woodford	6	Christian	16	Wayne	3
Subtotal	308	Clinton	11	White	3
		Greene	4	Williamson	5
Region 2		Hancock	18	Subtotal	152
Cook	1	Jersey	5		
DuPage	1	Logan	15	Unknown	1
Grundy	10	Macoupin	20		
Kane	7	Madison	20		
Kankakee	12	Mason	10		
Kendall	2	Menard	3		
Lake	3	Monroe	10		
McHenry	6	Montgomery	17		
Will	14	Morgan	15		
Subtotal	56	Pike	5		
		Randolph	10		
		Sangamon	14		
		Schuyler	17		
		Scott	5		
		St. Clair	4		
		Washington	15		
		Subtotal	268		

Appendix E

Administrative Regions in Illinois.

