



No.  2003	<b>AUTHOR:</b> Chad M. Stewart, Deer Research Biologist	<b>DATE</b>  7/7/14
	<b>TITLE:</b> 2013 Deer Damage Control Program	

**Abstract:** In 2013, district wildlife biologists issued 479 deer control permits for out of season use, resulting in the reported removal of 2,419 deer statewide. Of the deer killed, 77% were female. Primary crops implicated in damage were soybeans (44.1%) and corn (35.6%), with nearly 63% of complaints occurring during June and July. Ninety-nine (99%) of landowners utilize hunting during the regular season on their property, though damage is often associated with habitat on adjacent private and governmental properties. Deer damage complaints have proven to be a valid secondary indicator for the state’s deer herd level, though precautions should be taken to use the statistic for local trends.

Indiana has a tiered approach when dealing with deer damage occurring on commercial or non-commercial property. Landowners experiencing deer damage in Indiana first contact the IDNR and report the damage. Of land exhibiting deer damage, most complaints are observed on agricultural properties. A landowner complaint may result in an inspection by a biologist who will discuss non-lethal and lethal options. Based on the inspection, the biologist provides technical advice tailored to meet the needs of the landowner. Except in cases where sport hunting is not feasible, district biologists recommend hunting as the most important step a landowner can take to reduce deer damage. Biologists provide guidelines for the landowner on a harvest strategy to optimize herd control. Recommendations for non-lethal control, such as fences and repellents, are made when appropriate. If lethal options are deemed appropriate, Deer Damage Control Permits for out-of-season removal of deer may then be issued. During 2013, 492 damage reports were filed, with soybeans and corn being the most frequently damaged crop. The number of control permits issued and deer removed on those permits in 2013 are 479 and 2,419, respectively.

*Deer Damage Control Permits.*— The deer damage control permit system was adopted by the IDNR in 1987 as a means of giving farmers immediate relief from severe localized deer damage problems by allowing farmers and their designated shooters the ability to remove those deer specifically causing the damage. The objective of deer damage control permit system is to give farmers a tool for preventing additional damage to their crops during that growing season. The system allows landowners to remove deer outside the deer-hunting season in situations where damage from deer exceeds \$500 and non-lethal control measures are inadequate. Does are recommended for harvest, and antlers from bucks harvested on a damage permit may be asked to be surrendered to the appropriate authority.



The Deer Damage Control Permit program is not a deer population control tool, but rather a tool to address an immediate problem on a specific property. Deer population control measures are addressed during the deer hunting seasons at the county level through annual adjustments to county bonus antlerless permit quotas.

*Deer Damage Reports.*— During 2013, 492 damage complaints were received by the IDNR. This was 34 more (7%) than the 458 complaints reported in 2012. Despite efforts to reduce and stabilize the statewide deer population since 2003, the number of complaints this year rank as the highest of any years following the elimination of the Deer Depredation Zones in 1995 (Figure 1). Ninety-eight percent (98%) of the damage complaints received involved properties with a previous history of deer damage. A total of 76% had previously notified and worked with IDNR personnel on damage problems. Of all properties filing damage complaints, 98% of the landowners hunted their property (Table 1).

Soybeans were the principal crop damaged in over 44% of the complaints, followed by corn at nearly 36% of the reports (Table 2). The percentage of crop most commonly lost ranged from 1-5% (33.5% of all complaints; Table 3). Most of the complaints for deer damage were submitted during the June-July period (63.1%; Table 4). Privately owned parcels adjoining damaged property was implicated as a contributing factor to damage in 70.2% of the cases investigated, while governmental land holdings accounted for only ~5% of parcels adjoining damaged property (Table 5).

*Deer Damage Control Permits.* —A total of 479 deer permits were issued in 2013, an increase of just over 5%. Under this program, 6,566 deer were authorized to be taken. This was a nearly 7% increase from the 6,152 deer in 2012. Of the authorized deer for 2013, 2,419 deer were reported harvested (Table 6) for a success rate of 37%. The number of deer harvested in 2013 increased by 60 deer from 2012 under the deer damage permit program; harvest has increased 89% from the 1,282 deer harvested in 2003. Of the 2,419 deer harvested, 315 were reported as adult male (13%), 236 were reported as button bucks (10%), and 1,868 were reported as female (77%).

## RECOMMENDATIONS:

Deer damage complaints have been used as a secondary trend indicator for Indiana deer management for more than 20 years. The basic assumption is that as deer densities increase, so should deer damage, and therefore damage complaints. However, Downing (1980) warned that some crops may be more palatable than native forage and will be eaten in large quantities at any population level. McCaffery (1987) noted that damage problems may be unrelated to population levels because of unique unquantifiable local situations. Temporal and spatial variation in the number of crop damage complaints received might be related to deer densities. Supporting this argument is analyses done in the 2004 Federal Aid Report (McNew 2004) stating that deer damage reports correlate strongly to total statewide deer harvests, moderately to antlered deer harvests, and poorly to county harvest models. The high correlation between DDCP and total statewide deer harvest supports the use of damage complaints as a secondary population trend indicator for the state. Locally, complaints are likely influenced by changes in the tolerances of landowners to damage, familiarity with Division programs, ease of access to Division personnel, weather (as it affects crop yield), and possibly crop prices. Unless control can be exerted over these auxiliary factors, or variation in these factors can be measured, or at the very least assumed to be consistent

across time and space, then use of deer damage reports as a population index at the county level is likely compromised. Regardless, this program continues to remain necessary to provide economic relief to landowners and tenants who are receiving crop damage due to deer herbivory during the susceptible time of the year when it most impacts yield.

## Number of Damage Complaints

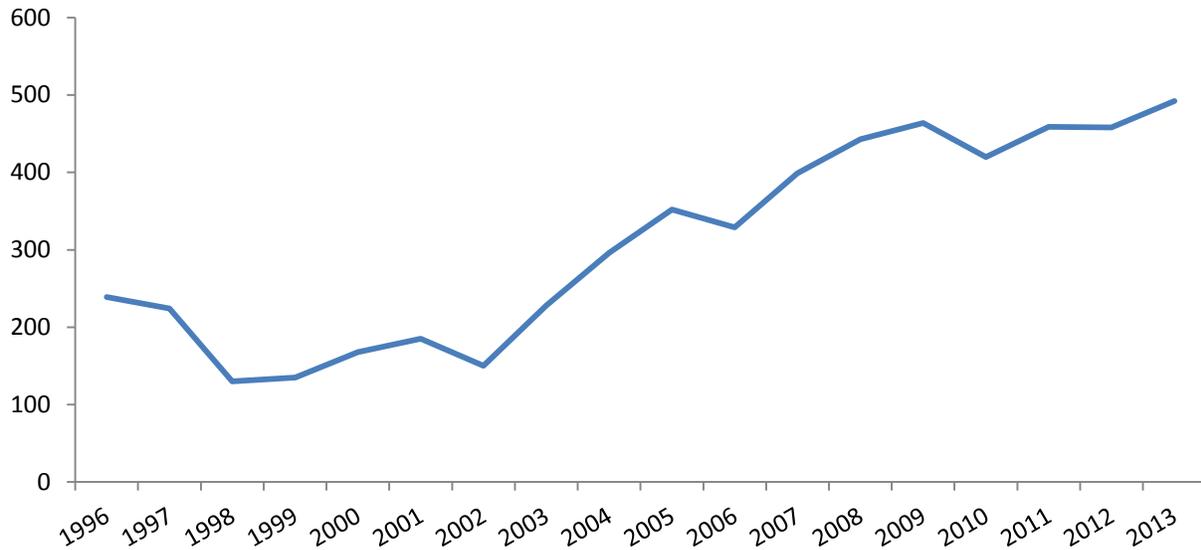


Figure 1. Number of damage reports filed between 1996-2013.

Table 1. Total proportion of landowners who filed damage reports in 2013.

	% of Reports Previous Contact with Biologist	% of Reports Previous History of Damage	% of Reports Allow Hunting
Yes	76	98	98
No	24	2	2

Table 2. Crops and other property associated with deer damage in Indiana for 2013

Crop Type	% of Complaints
Soybeans	44.1
Corn	35.6
Truck crops	3.6
Other	3.4
Hay Crops	3.0
Orchard	3.0
Landscaping	3.0
Tree Nursery	2.8
Vineyard	0.6
Wheat	0.4

Berry Crops	0.2
Christmas Trees	0.2
Other Grains	0.2

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Table 3. Estimated percentage of crop lost to deer damage in Indiana for 2013.

<u>% Crop Lost</u>	<u>% of Complaints</u>
< 1%	6.4
1 - 5%	33.5
6 - 10%	24.5
11 - 20%	15.1
> 20%	20.4

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Table 4. Months associated with 2013 deer damage reports.

<u>Month Damage Occurred</u>	<u>% of Associated Reports</u>
January	2.9
February	1.8
March	2.2
April	1.2
May	9.0
June	34.4
July	28.7
August	16.5
September	2.9
October	0.0
November	0.0
December	0.4

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Table 5. Adjoining land ownerships associated with 2013 deer damage reports

<u>Adjoining Land Type</u>	<u>% of Associate Reports</u>
Adjacent Private Property	70.8
Complainant's Own Property	24.6
National Forest	1.7
State Forest	0.6
State FWA	0.6
State Park	0.6
Military Installation	0.3
Other Gov't Land	0.3
National Park	0.3
State Nature Preserve	0.3

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Table 6. Summary of Indiana's deer damage control program, 1987-2013.

Year	DDCP	Deer Authorized	No. of Deer Harvested	% Success
1987 <sup>a</sup>	30	271	104	38
1988	88	754	207	27
1989	68	610	148	24
1990	135	1,113	349	24
1991	193	1,819	529	29
1992	137	1,218	382	31
1993	59	531	207	39
1994	226	2,063	545	26
1995	249	2,357	994	42
1996	226	2,516	1,048	42
1997	288	2,674	837	31
1998	158	1,459	453	31
1999	169	1,494	536	36
2000	199	1,701	625	37
2001	204	1,814	640	35
2002	201	1,685	687	41
2003	302	2,627	1,282	49
2004 <sup>b</sup>	330	3,228	1,431	44
2005	413	4,035	1,406	35
2006	398	3,802	1,499	39
2007	486	4,970	2,181	44
2008 <sup>c</sup>	429	6,869	2,777	40
2009	535	7,346	3,126	42
2010	457	6,672	2,282	34
2011	460	6,124	2,358	39
2012	456	6,152	2,359	38
2013	479	6,566	2,419	37

a. The Deer Damage Control Program was initiated in August 1987 and was not fully implemented until 1988.

b. Data for District 20 lost due to computer error. Thus, deer authorized for 2004 is likely 8-15% higher and deer harvested is likely 10-20% higher than reported.

c. Some data from District 12 was lost, and numbers may range 1-5% higher than reported.