

Archery Hunting Questionnaire 2009

By Brian Dhuey

Abstract

The average archer in Wisconsin is male, 46 years old, has 21.5 years of archery hunting experience, hunted for 15.8 days in 2009, uses a compound bow, camouflage, a tree stand, bow sights, deer scent, grunt call and mechanical release. Bowhunter density ranged from a high of 17.6 hunters per square mile of deer range per day in deer management unit 69C, to a low of 0.04 hunters per square mile of deer range per day in deer management unit 78.

Methods

Survey participant's names were randomly drawn from 2009-10 non-resident and resident archery, and conservation patron license holders in proportion to license sales in each county. Ten thousand questionnaires were mailed to participants at the close of the archery season. A second mailing was made to 5,000 non-respondents. Archers were asked specific questions about their bowhunting season and asked to mail the questionnaire back. All returned questionnaires were entered into the DNR UNIX productions server. Analysis was done using the Statistical Analysis System (SAS).

Results

Responses were received from 4,954 archers, duplicate responses were removed, and 4,883 responses were used in summarizing the survey. The corrected response rate was 48.8%.

The most common types of licenses purchased were archery (37.7%) and gun deer (30.0%). The mean age of archers in Wisconsin is 46.1 years. They have 21.5 years of archery hunting experience, and are predominantly male (96.2%). They average 15.8 days a field, used a compound bow, camouflage, a tree stand, bow sights, deer scent, a grunt call, and a mechanical release (Table 1; Questions 1-4, 16 and 17).

Survey participants were asked how strongly do they oppose or support a 4-day antlerless-only hunt in mid-October for management units 20% or more above goal. Most archery respondents strongly oppose such a season. When asked how the Herd control and CWD October antlerless-only gun deer season affected archery hunting in effected units, the most common response was that it made deer nocturnal (26.5%). The next most common answer was "Removed too many does and affected breeding activity" (25.4%). Archery hunters do not support (59% = No) making the crossbow a legal weapon for use during the archery deer season for any Wisconsin archery hunter (Table 1, Questions 5, 6, and 7).

Almost 96% of respondents reported archery hunting during the 2009-10 season. Of the archers that hunted, 81% reported hunting deer. The next most frequently hunted animal was the turkey (Table 1, Questions 8 and 9).

Active archers purchased an average 0.3 antlerless permits. They registered 0.25 antlered bucks, 0.19 adult does, 0.05 buck fawns, and 0.05 doe fawns. Most archers; hunted on private land (80.3%), did not pass up a "good" shot at an antlerless deer hoping to shoot a buck later

(64.1%), and did not hit a deer they were unable to retrieve (90.7%) (Table 1, Questions 11, 13, 14, 15).

An estimate of bow hunting pressure was derived from questionnaire responses. The following formula was used to estimate archery hunter days, ((2009-10 archery license sales * Percent active hunters) * Percent hunters in a unit) * Mean days hunted in a unit). The result is the number of hunter days for each deer management unit in the state (Table 1, Question 12).

About 75% of respondents rated the quality of the 2009 archery deer season as "Very Low" or "Fairly Low". The factor the respondents indicated being the most important for a "quality" deer hunt was "Seeing deer". Eight-four percent indicated that they had "Little" or "No confidence" in the DNR's estimate of the deer herd, while 12% indicated "Some" or "A great deal of confidence" (Table 1, Questions 19-21).

Forty-four percent of respondents were "very dissatisfied" with the number of deer they saw during the entire archery season. "Declining local deer populations" was the most stated factor affecting the number of deer seen by archers; "increased hunting pressure" was the next most stated factor. "Not enough deer in my area to hunt" and "Other time commitments" were both the most listed factor and the most influential factor that limited the amount of time archers spent deer hunting this fall (Table 1, Questions 22-25).

Table 1. Responses to the 2009 Archery Hunter Questionnaire.

1. What type of license did you buy for the 2009-10 hunting season? Please check all that apply.

Response	Frequency	Percent
I did not buy a license	14	0.1%
Sports	736	7.8%
Small Game	928	9.9%
Bear	225	2.4%
Gun Deer	2,810	30.0%
Archery	3,535	37.7%
Patron	1,134	12.1%

2. What is your age? Mean age = 46.1

Age Group	Frequency	Percent
12-18	243	5.0%
19-30	575	11.8%
31-45	1,375	28.2%
46-65	2,219	45.5%
65+	463	9.5%

No Answer = 42

3. What is your sex?

Response	Frequency	Percent
Male	4,698	96.2%
Female	186	3.8%

No Answer = 33

4. How many years have you archery hunted? Mean experience = 21.5

Experience Group	Frequency	Percent
0-7	1,084	22.4%
8-15	833	17.2%
16-22	711	14.7%
23-30	945	19.5%
30+	1,268	26.2%

No Answer = 77

5. The Wisconsin DNR is mandated by law to manage the deer herd to overwinter goals. Overwinter goals are based on the land's ability to sustain a healthy deer population without causing long-term effects to the habitat or causing human/deer conflicts. When deer routinely exceed this overwinter goal, negative effects occur on the landscape. In past years a mid-October antlerless-only gun deer hunt has been implemented as a way to reduce the deer population in units that are above their population goals. How strongly do you oppose or support a 4-day antlerless-only hunt in mid-October for management units 20% or more above goal? **(circle ONE number)** **Mean response = 2.19**

Response	Frequency	Percent
1 (Strongly oppose)	2,853	58.8%
2	606	12.5%
3	307	6.3%
4 (Neither oppose nor support)	437	9.0%
5	241	5.0%
6	168	3.5%
7 (Strongly support)	240	5.0%

No Answer = 66

6. If **YOUR** unit was a Herd Control or CWD unit with an October gun hunt in 2009, which of these options **BEST** explains how the October antlerless-only hunt affected you archery deer hunting? **(check ONE number)**

Response	Frequency	Percent
Limited my time in the woods	524	13.5%
Limit my opportunity to kill a buck	368	9.5%
Made deer nocturnal	1,030	26.5%
Limited my deer hunting during the early rut period	467	12.0%
Removed too many does and affected breeding activity	986	25.4%
No significant effect on my archery deer hunting	511	13.2%

No Answer = 1,032

7. Do you support making the crossbow a legal weapon for use during the archery deer season for any Wisconsin archery hunter?

Response	Frequency	Percent
Yes	1,986	41.2%
No	2,833	58.8%

No Answer = 99

8. Did you hunt with archery equipment during the 2009 season?

Response	Frequency	Percent
Yes	4,659	95.5%
No	218	4.5%

No Answer = 39

9. If you archery hunted during the 2009 season, what did you hunt? Please check all that apply.

Response	Frequency	Percent
Deer	4,533	80.7%
Bear	67	1.2%
Small Game	287	5.1%
Turkey	690	12.3%
Waterfowl	43	0.8%

10. How many additional antlerless permits did you purchase this season?

Mean antlerless permits = 0.31

11. How many and what type of deer did you register during the 2009 archery deer season?

Response	Mean
Antlered	0.25
Adult Doe	0.19
Buck Fawn	0.05
Doe Fawn	0.05

12. Please list the deer management units you hunted in and give you best estimate of the number of days you hunted deer in each listed unit. Any hour counts as one day even if you did not spend the entire day hunting.

Unit	Deer Range (miles sq)	# of Responses	% hunting	Mean Days Hunted	Hunters/mile ² /day of season	Total Hunter Days
01	161	17	0.24	11.6	0.41	6,902
1M	32	8	0.12	13.3	0.94	3,949
02	627	54	0.78	15.3	0.45	29,618
03	555	35	0.50	14.3	0.31	17,707
04	349	22	0.32	11.8	0.26	9,385
06	546	47	0.68	12.3	0.37	20,788
07	189	7	0.10	6.9	0.09	1,701
08	370	53	0.76	11.2	0.55	21,196
09	438	53	0.76	14.9	0.62	28,047
10	345	43	0.62	13.0	0.56	20,017
11	341	48	0.69	14.3	0.69	24,453
12	264	31	0.45	8.9	0.36	9,980
13	715	70	1.01	9.5	0.32	23,879
14	328	48	0.69	13.3	0.67	22,791
15	414	58	0.83	14.3	0.68	29,373
16	335	41	0.59	11.5	0.48	16,865
17	238	25	0.36	11.7	0.42	10,430
18	368	46	0.66	14.8	0.64	24,291
19	403	52	0.75	13.2	0.59	24,549
20	378	33	0.47	8.8	0.26	10,248
21	225	51	0.73	14.9	1.15	26,958
22	349	44	0.63	17.4	0.75	27,286
22A	353	53	0.76	14.6	0.75	27,594
23	403	59	0.85	15.3	0.77	32,318
24	278	28	0.40	16.2	0.56	16,113

12. Continued.

Unit	Deer Range (miles sq)	# of Responses	% hunting	Mean Days Hunted	Hunters/mile ² /day of season	Total Hunter Days
25	437	56	0.81	14.8	0.66	29,741
26	391	69	0.99	14.1	0.85	34,666
27	248	67	0.96	14.6	1.35	34,808
28	656	41	0.59	16.0	0.34	23,444
29A	239	25	0.36	13.7	0.49	12,266
29B	233	12	0.17	9.3	0.16	3,939
30	315	29	0.42	6.7	0.21	6,977
31	414	41	0.59	11.7	0.40	17,143
32	487	70	1.01	14.8	0.73	37,097
33	276	44	0.63	16.6	0.90	25,909
34	262	22	0.32	15.6	0.45	12,389
35	354	47	0.68	14.4	0.66	24,301
36	274	41	0.59	16.6	0.85	24,293
37	235	42	0.60	15.0	0.91	22,276
38	429	39	0.56	13.7	0.43	19,039
39	425	40	0.58	11.5	0.37	16,565
40	328	48	0.69	12.8	0.64	21,865
41	195	35	0.50	13.7	0.84	17,049
42	327	38	0.55	17.4	0.70	23,753
43	408	38	0.55	12.5	0.40	17,101
44	466	69	0.99	10.6	0.54	25,963
45	593	80	1.15	14.1	0.65	40,183
46	321	66	0.95	18.9	1.33	44,496
47	269	63	0.91	16.1	1.30	36,407
48	356	1	0.01	8.0	0.01	199
49A	235	69	0.99	14.3	1.44	35,158
49B	182	49	0.70	15.1	1.38	26,180
50	334	46	0.66	13.1	0.62	21,472
51A	220	55	0.79	16.3	1.39	31,881
51B	389	101	1.45	19.3	1.71	69,319
52	304	49	0.70	15.2	0.84	26,389
52A	1	1	0.01	12.0	-	298
53	461	128	1.84	15.6	1.48	71,056
54A	484	115	1.65	13.8	1.12	56,466
54B	186	83	1.19	15.7	2.39	46,280
54BCWD	203	6	0.09	15.8	0.17	3,538
54C	95	17	0.24	14.2	0.86	8,446
54D		1	0.01	40.0	-	993
55	631	125	1.80	14.9	1.01	66,472
56	335	52	0.75	10.1	0.54	18,868
57	146	37	0.53	18.1	1.57	23,797
57A	238	57	0.82	15.1	1.24	30,648
57B	252	64	0.92	16.7	1.46	38,156
57C	266	66	0.95	15.0	1.27	35,295
58	506	121	1.74	13.7	1.13	59,330
59A	520	86	1.24	14.7	0.83	45,176
59B	687	109	1.57	16.7	0.91	65,152
59C	626	145	2.09	16.0	1.27	82,994
59D	384	65	0.94	17.5	1.02	40,783
59M	44	17	0.24	21.8	2.86	12,970
60A	170	35	0.50	18.1	1.27	22,488
60B	83	36	0.52	17.9	2.68	23,051
60M	80	32	0.46	15.2	1.65	17,353
61	958	170	2.45	14.9	0.91	90,719
61A	2	2	0.03	16.5	5.01	1,229
62A	402	130	1.87	18.6	2.07	86,518
62B	363	195	2.81	18.1	3.34	126,310

12. Continued.

Unit	Deer Range (miles sq)	# of Responses	% hunting	Mean Days Hunted	Hunters/mile ² /day of season	Total Hunter Days
63A	339	166	2.39	20.4	3.43	121,142
63B	252	87	1.25	16.6	1.97	51,531
64	243	138	1.99	17.2	3.36	84,904
64M	81	53	0.76	20.7	3.65	39,013
65A	172	52	0.75	16.1	1.67	29,969
65B	347	155	2.23	16.6	2.55	92,043
66	172	87	1.25	17.7	3.07	54,946
67A	354	128	1.84	18.3	2.27	83,531
67B	188	67	0.96	18.4	2.24	43,820
68A	130	58	0.83	20.7	3.15	42,647
68B	183	72	1.04	11.8	1.61	30,580
69	391	149	2.14	16.4	2.14	86,893
69C	1	2	0.03	13.0	17.57	969
70CWD	273	49	0.70	16.8	1.03	29,118
70ACWD	219	42	0.60	20.0	1.31	29,861
70BCWD	212	53	0.76	14.9	1.28	28,122
70CCWD	7			0.0	0.00	0
70DCWD	2			0.0	0.00	0
70ECWD	69	21	0.30	16.8	1.74	12,487
70FCWD	1			0.0	0.00	0
70GCWD	122	48	0.69	15.8	2.13	27,023
71CWD	626	74	1.06	16.0	0.65	42,145
72	504	112	1.61	16.0	1.22	63,773
72A	6			0.0	0.00	0
73A	6			0.0	0.00	0
73B	185	38	0.55	16.6	1.18	22,674
73BCWD	54	1	0.01	35.0	0.15	869
73D	158	20	0.29	16.8	0.73	12,063
73ECWD	277	41	0.59	15.0	0.76	21,978
74A	200	36	0.52	15.8	0.98	20,404
74B	432	42	0.60	12.1	0.40	18,060
75ACWD	146	24	0.35	14.5	0.83	12,638
75BCWD	5			0.0	0.00	0
75CCWD	124	25	0.36	15.0	1.04	13,446
75DCWD	112	22	0.32	17.3	1.17	13,724
76CWD	320	64	0.92	12.6	0.86	28,674
76ACWD	305	113	1.63	17.8	2.27	71,933
76MCWD	78	24	0.35	11.2	1.19	9,718
77ACWD	124	56	0.81	21.0	3.27	42,163
77BCWD	216	68	0.98	21.4	2.32	52,083
77CCWD	187	7	0.10	13.7	0.17	3,402
77C	135	133	1.91	18.8	6.35	89,175
77D	3	4	0.06	11.3	5.12	1,676
77M	312	108	1.55	21.1	1.97	81,144
78	22	1	0.01	4.0	0.04	99
79	59			0.0	0.00	0
80A	152	25	0.36	17.5	0.99	15,628
80B	194	58	0.83	20.4	2.09	42,111
80C	5			0.0	0.00	0
81	18	3	0.04	9.0	0.48	895
82	4			0.0	0.00	0
MCC	75	8	0.12	14.0	0.54	4,172
	36,536	6948	99.91	15.8	1.03	3,916,440

13. On what type of land did you do **most** of your hunting during the 2009 archery deer season? (Check **ONLY** one)

Response	Frequency	Percent
Private	3,719	80.3%
Public	798	17.2%
Industrial Forest Land	40	0.9%
Private land "Forest Tax Law"	72	1.6%

No Answer = 30

14. Did you pass up a "good" shot at an antlerless deer hoping to shoot a buck later?

Response	Frequency	Percent
Yes	1,657	35.9%
No	2,958	64.1%

No Answer = 43

15. Did you hit a deer that you were unable to retrieve?

Response	Frequency	Percent
Yes	429	9.3%
No	4,190	90.7%

No Answer = 39

16. Please check all the following methods and equipment that you used during the deer season.

Response	Frequency	Percent
Camouflage	4,510	96.8%
Tree Stand	4,314	92.6%
String Tracker	0	0.0%
Bow Sights	4,218	90.5%
Deer Scent (attractant)	3,004	64.5%
Grunt call	3,560	76.4%
Rattling	2,278	48.9%
Mechanical Release	3,439	73.8%
Ground Blind	1,615	34.6%

17. What type of bow did you use most this past season? Please check only one.

Response	Frequency	Percent
Longbow	41	0.9%
Recurve	62	1.3%
Compound	3,993	86.4%
Crossbow	528	11.4%

No Answer = 35

18. Did you hunt in a unit where baiting was legal?

Response	Frequency	Percent
Yes	2,587	56.1%
No	1,495	32.4%
Unsure	527	11.4%

No Answer = 50

If YES, did you bait for deer?

Response	Frequency	Percent
Yes	1,286	50.1%
No	1,282	49.9%

No Answer = 18

19. Overall, how would you rate the quality of your 200 archery deer hunt? Please check only one.

Response	Frequency	Percent
Very High	126	2.7%
Fairly High	260	5.6%
About Average	785	17.0%
Fairly Low	1,577	34.1%
Very Low	1,874	40.6%

No Answer = 37

20. How much confidence do you have in the DNR's estimate of the deer herd in Wisconsin? (Check **ONLY** one)

Response	Frequency	Percent
A great deal of confidence	89	1.9%
Some confidence	478	10.3%
Little confidence	1,523	32.9%
No confidence	2,371	51.2%
Unsure	174	3.8%

No Answer = 24

21. Please rate the factors that most influence your perception of a “quality” deer hunt. Enter a value of 1 to 7 next to each statement, with “1” having the most effect and “7” having the least effect on your hunting experience.

Response	% Rating it # 1	Mean
An opportunity to kill a deer	22.5%	3.2
Seeing deer	55.1%	2.1
Seeing bucks	24.9%	3.0
Weather	6.5%	5.0
Not seeing other hunters	15.0%	4.3
Spending time with friends and family	29.5%	3.6
Killing a deer	13.7%	4.4

22. Think about the number of deer you saw during the **ENTIRE** Archery season. How satisfied are you with the number of deer you saw? (**circle ONE number**)

Mean response value = 2.3

Response	Frequency	Percent
1 (Very Dissatisfied)	2,026	43.8%
2	1,072	23.2%
3	654	14.1%
4 (Neutral)	394	8.5%
5	247	5.3%
6	133	2.9%
7 (Very Satisfied)	102	2.2%

No Answer = 31

23. Many factors can affect the number of deer you see while hunting. Please check all of the factors below that you believe affected the number of deer you saw during your 2009 archery deer hunt. (Check all that apply)

Response	Frequency	Percent
Increased deer sanctuary on the landscape	672	7.1%
Baiting and/or feeding causing reduced deer movements	908	9.5%
Declining local deer populations	4,077	42.7%
Increased hunting pressure	1,257	13.2%
Decreased hunting pressure	600	6.3%
Change in hunting strategies that don't tend to “move” deer	755	7.9%
Increasing local deer populations	186	2.0%
Weather events caused reduced deer movement	1,083	11.4%

24. Please check all of the factors that may have limited the amount of time you spent **deer** hunting this fall. (Check all that apply)

Response	Frequency	Percent
Limited access to a place to hunt	778	5.9%
Other interests or hobbies	1,014	7.7%
Not enough deer in my area to hunt	2,560	19.4%
Other time commitments (work and family)	2,430	18.4%
Length of season	251	1.9%
Cost of transportation and/or lodging	526	4.0%
Cost of licenses	492	3.7%
Cost of deer processing	182	1.4%
Not enough freezer space	41	0.3%
Did not want to shoot any more deer	454	3.4%
No place to donate deer	26	0.2%
Wanted to save deer till next year	1,141	8.6%
Deer harvest was limited by the landowner	132	1.0%
Weather conditions during the season	888	6.7%
Limited number of permits available (all tags were filled)	48	0.4%
Other concurrent hunting season	932	7.1%
No one to hunt with	160	1.2%
Health related issues	246	1.9%
Deer registration is too inconvenient	112	0.9%
Nothing limited my time deer hunting	790	6.0%

25. If any of the above factors limited your deer hunting this fall, which **TWO** factors were most influential in limiting the amount of time you hunted?

Response	Frequency	Percent
Limited access to a place to hunt	442	5.9%
Other interests or hobbies	427	5.7%
Not enough deer in my area to hunt	2,193	29.2%
Other time commitments (work and family)	1,725	23.0%
Length of season	98	1.3%
Cost of transportation and/or lodging	250	3.3%
Cost of licenses	144	1.9%
Cost of deer processing	19	0.3%
Not enough freezer space	13	0.2%
Did not want to shoot any more deer	195	2.6%
No place to donate deer	7	0.1%
Wanted to save deer till next year	610	8.1%
Deer harvest was limited by the landowner	40	0.5%
Weather conditions during the season	391	5.2%
Limited number of permits available (all tags were filled)	22	0.3%
Other concurrent hunting season	538	7.2%
No one to hunt with	54	0.7%
Health related issues	170	2.3%
Deer registration is too inconvenient	13	0.2%
Nothing limited my time deer hunting	148	2.0%