Deer Hunting Questionnaire
2020

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Abstract

At the conclusion of all 2020 deer seasons, hunters in Wisconsin were surveyed about their activities, efforts, expectations, weapon usage, and opinions of their hunt(s). Again in 2020, a more wholistic approach was tried with the goal of tracking all types of deer hunters during all seasons instead of focusing on a single season. Results from the survey showed that Wisconsin deer hunters spent approximately 7.4 million days afield in the pursuit of deer. Archery and crossbow seasons saw the most activity with approximately 4.3 million hunter days afield with archery/crossbow tackle, followed by the 9-day firearm season where hunters spent about 2.6 million days in pursuit of deer. While opinions varied by group, overall, more hunters said they had "Fun" rather than "No Fun". Opinions on the "current state of deer hunting" favored those who are satisfied over those who are dissatisfied.

Methods

A survey was mailed to approximately 10,000 licensed deer hunters after the completion of the 2020 deer seasons (Figure 1). The sample was drawn from the 2020 deer license sales database in proportion to license types purchased. The questionnaire included specific questions about the days and deer management units in which deer hunters hunted as well as the type of weapons used (archery, crossbow, or firearm), and opinions on and satisfaction with deer hunting in Wisconsin. A second mailing was sent to all non-respondents. Data from all returned questionnaires were entered into the DNR production server and summarized using the Statistical Analysis System (SAS).

Survey participants were categorized into three basic response groupings based on their answers to survey questions. Wisconsin's deer management units are broken down into 4 Deer Management Zones (DMZ). These zones are based on habitat types that dominate the zone, forest (Central and Northern, 37.2% of the state) or farmland (Central and Southern, 62.8% of the state). Hunters were asked what deer management zone they hunted in during the season, and they were categorized as either having hunted in the forest zone, the farmland zone, or both based on responses. These zone groups were then used to compare activity, opinions on likely outcomes, hunting techniques, hunter selection, success, weapon usage, and satisfaction.

Results

Responses were received from 4,377 of 10,000 hunters surveyed. After duplicates were removed, the resulting response rate was 44%. Survey responses were then weighted by license type to reflect the proportions of license types that were in the survey pool.

Most deer hunters who purchased a license that allowed the pursuit of deer hunted during one or more of Wisconsin's deer season, 95.6%. Most hunted the 9-day firearm season, with

82.2% of respondents saying they hunted some amount during that season. This was followed by the Crossbow, Archery, December antlerless firearm, Muzzleloader, Holiday firearm, and Youth firearm deer seasons in decreasing order of participation and days afield. Total days afield by DMZ was similar to availability of area with slightly higher percentage of days hunted in the farmland than land available (Table 1).

Hunters were asked if the Covid-19 pandemic changed their deer hunting plans or activities. Responses were each assigned a value (0=No change, 1=Slightly, 4=Somewhat, 7=A lot) and a mean response was calculated for each DMZ hunted. While all hunters felt there was only a "slight" impact of Covid-19 on their hunting activities, those who hunted both zones felt more effected than those who hunted in the farmland (Table 2).

Those who hunted the farmland felt that the likelihood of them "seeing an antlered buck" was higher than that of those who hunted in both DMZ's, which was higher than those who hunted the forest zones. The same was true for "seeing antlerless deer or fawns", with those who hunted the farmland thinking their likelihood was higher than that of forest hunters, while those who hunted in both zones was not different than farmland and forest zone responses. Farmland hunters felt the likelihood of "Harvesting an antlered buck" and "Harvesting antlerless deer or fawns" was higher than that of forest zone hunters (Table 3). All differences were at the P=.05 level or lower.

Hunters were asked if they "passed up a shot at an ANTLERED deer that they had in range" during any hunt throughout the 2020 deer season. Forty-six percent of all active 2020 deer hunters said that they passed on an antlered deer they had in range. Of the hunters who answered "Yes" to passing on an antlered deer, they were asked the number of shots passed which was then categorized by the DMZ they hunted. Those who hunted in the farmland passed on more shots at antlered deer than those who hunted in the forest, those who hunted in both was between the farmland and the forest and not different than either (Table 4). Regardless of DMZ's hunted, the most commonly stated reason for passing on an antlered deer was "I was waiting for a buck with larger antlers" closely followed by "I wanted to let the buck go so it might have larger antlers next season". The least common reason for passing on an antlered deer was "I was concerned it might have CWD" (Table 5).

Although the differences were slight, those who hunted in the farmland and both DMZ's took significantly more shots at "ANY deer" during all seasons than did those who hunted in the forest. Likewise, those who hunted both DMZ's and those who hunted the farmland also significantly "hit" and "recovered" more deer than did those who hunted in the forest (Table 6).

Hunters were asked questions about the "quality" of their deer season, the amount of "Fun" they had, and their "satisfaction with the current state of deer hunting". On a scale of 1-5 (1=very high, 5=very low) most hunters felt the "quality" of the 2020 deer hunt was more likely to be low than high ($\bar{x}$ = 3.25). There were differences in the quality rating by DMZ, with those who hunted in the forest rating the quality of their hunt lower than those who hunted both zones who's rating was lower than those who hunted solely in the farmland (Table 7). The same held true for the "amount of fun" (1=no fun, 7=a lot of fun) the 2020 deer season provided, with those who hunted in both DMZ's and the farmland

rating the amount of "FUN" they had higher than those who hunted in the forest. All areas of the state rankings of "Fun" were all more toward the "A lot of fun" than toward "No fun" ($\bar{x}$ = 5.4). The same was true for their "satisfaction with the current state of deer hunting" (1=Very dissatisfied, 7=Very satisfied) with all groups more satisfied than dissatisfied ($\bar{x}$ = 4.4). Farmland hunters were the most "satisfied", follow by those who hunted both zones, and then the forest zone (Table 7). All differences were at the P=.05 level or lower.

Table 1. *Estimated hunter days afield in 2020 by season and deer zone.*

Season	Forested Zone Days	Farmland Zone Days	Total Days
9-Day	864,159	1,778,389	2,642,548
Archery	553,456	1,589,083	2,142,539
Crossbow	724,493	1,438,075	2,162,568
Muzzleloader	71,264	146,642	217,906
December Antlerless	37,416	111,778	149,194
Holiday Hunt	0	82,191	82,191
Youth[1]	11,485	35,178	46,663
Total	**2,262,273**	**5,181,336**	**7,443,609**

[1]Youth were not surveyed. This is an estimate of chaperone days, actual days afield for the youth season is probably higher.

Table 2. *Did the Covid-19 pandemic change your deer hunting plans or activities in any way this fall? The rating scale comprised of 7 points where 0=No Change, 1=Slightly, 4=Somewhat, 7=A lot. (Items are presented in order of descending mean effects; homogeneous subsets are indicated by the superscript letters.)*

Pandemic effect on deer hunting	DMZ Hunted	N	Mean effect values	Sig.
	Both[a]	384	1.81	.0007
	Forest[ab]	1059	1.61	
	Farmland[b]	2571	1.41	

Table 3. *Hunters preseason estimate of the likelihood of seeing and killing a deer (Antlered and Antlerless) by DMZ they hunted. The rating scale comprised of 0%=No chance to 100%=Certain. (Items are presented in order of descending likelihood; homogeneous subsets are indicated by the superscript letters.)*

Perceived likelihood by preferred weapon	DMZ Hunted	N	Mean %	Sig.
Percent likelihood of **seeing a buck**	Farmland[a]	2567	62.19%	<.0001
	Both[b]	382	53.83%	
	Forest[c]	1057	48.96%	
Percent likelihood of **seeing a doe**	Farmland[a]	2566	81.89%	<.0001
	Both[b]	382	77.58%	
	Forest[b]	1055	75.29%	
Percent likelihood of **killing a buck**	Farmland[a]	2557	45.50%	<.0001
	Both[b]	382	39.84%	
	Forest[c]	1059	36.93%	
Percent likelihood of **killing a doe**	Farmland[a]	2485	66.31%	<.0001
	Both[a]	349	63.18%	
	Forest[b]	709	57.73%	

Table 4. *Mean number of hunter's estimates of shots passed on antlered deer by DMZ hunted. (Items are presented in order of descending mean shots passed, homogeneous subsets are indicated by the superscript letters.)*

Antlered shots passed by weapon type	DMZ hunted	N	Mean	Sig.
	Farmland[a]	1268	6.42	.0025
	Both[ab]	189	5.51	
	Forest[b]	329	4.38	

Table 5. *Most commonly stated reasons for passing on an antlered deer by DMZ hunted.*

Reason	Forest %	Farmland %	Both %
I was waiting for a buck with larger antlers	28.8	27.1	26.0
I was waiting for an older buck	19.3	18.9	18.9
It was early in the season and knew I would get more chances to harvest a buck	10.1	11.3	12.1
I wanted to let the buck go so it might have larger antlers next season	24.3	23.3	21.0
I didn't want to use my buck tag early in the season	4.5	4.9	5.9
I prefer to shoot antlerless deer for venison	1.9	3.7	3.7
I was concerned it might have CWD	0.1	0.1	0.0
I did not want to deal with a harvested deer at the time it gave me an opportunity	2.5	2.5	3.3
I was targeting a specific buck I had scouted during the year	7.5	6.5	6.8
I had already used my buck tag	1.0	1.7	2.5

Table 6. *Mean number of shots taken at "any deer", deer hit, and deer recovered by DMZ hunted. (Items are presented in order of descending mean response, homogeneous subsets are indicated by the superscript letters.)*

"# of shots taken"	DMZ hunted	N	Mean Shots	Sig.
	Both[a]	230	2.17	<.0001
	Farmland[a]	1523	2.17	
	Forest[b]	393	1.63	
"# of deer hit"			Mean Hits	
	Both[a]	200	1.65	<.0001
	Farmland[a]	1258	1.56	
	Forest[b]	340	1.31	
"# of deer recovered"			Mean Recovered	
	Both[a]	193	1.55	<.0001
	Farmland[a]	1207	1.50	
	Forest[b]	327	1.27	

Table 7. *Mean rating of the "quality", "amount of fun", and "overall satisfaction" by hunters by DMZ hunted. Quality rating 1=Very High, 5=Very Low. Fun rating 1=No Fun, 7=A lot of Fun. Overall satisfaction rating 1=Very dissatisfied, 7=Very satisfied. (Items are presented in order of descending mean response, homogeneous subsets are indicated by the superscript letters.)*

"quality of your 2020 deer season"	DMZ hunted	N	Mean rating	Sig.
	Forest[a]	1054	3.54	<.0001
	Both[b]	383	3.33	
	Farmland[c]	2560	3.11	
"amount of FUN you had"			Mean Fun	
	Both[a]	382	5.55	<.0001
	Farmland[a]	2559	5.47	
	Forest[b]	1055	5.19	
"satisfaction with current state of deer hunting"			Mean Satisfaction	
	Farmland[a]	2551	4.64	<.0001
	Both[b]	381	4.04	
	Forest[c]	327	3.80	

Wisconsin Deer Hunting Questionnaire

Dear Wisconsin Deer Hunter:

I hope you had a great deer season! Each year, the Wisconsin DNR asks a random sample of deer hunters about their hunting experiences which helps in the on-going effort to improve deer management and hunting in our state.

For your convenience, we have printed a map on the back of this questionnaire and encourage you to refer to it when indicating where you hunted during the deer season.

In order to ensure that our analyses accurately reflect hunter activities, please share only your own hunting experience in Wisconsin, and not those of other members of your party, family, or friends.

Please return the questionnaire in the enclosed postage paid envelope.

We sincerely appreciate your help with this important effort. Thank you!

Sincerely,

Bob Nack

Bob Nack
Big Game Section Chief

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1. Did you hunt deer during **ANY** Wisconsin deer season in 2020? ☐ Yes (*Go to #3*) ☐ No (*Go to #2*)

2. Please tell us the reason(s) you did NOT deer hunt in 2020. (*Check ALL that apply*)

☐ No time ☐ Covid-19 pandemic ☐ Planned to but had an unexpected conflict

☐ Medical reason / injury ☐ No access to land ☐ Other: _____

Please return your survey in the included postage paid envelope. Thank you!

3. Did the Covid-19 pandemic change your deer hunting plans or activities in any way this fall?

0	1	2	3	4	5	6	7
No change	Slightly			Somewhat			A lot

4. Now think about the amount of yearly deer hunting you did for the PAST 3-5 deer seasons in Wisconsin. Please tell us how your activity this season compares to your PAST deer hunting.

In 2020 I hunted...

☐ A lot less

☐ Somewhat less

☐ Slightly less

☐ About the same

☐ Slightly more

☐ Somewhat more

☐ A lot more

5. Please fill in your **best estimate** of the number of days hunted on private and public land for each weapon and season you hunted. Consider any partial days as a full day of hunting. (*Enter number of days you hunted with each weapon, season, and land type combination*)

Weapon	Season	# of days on private land	# of days on public land
Bow	Archery		
Crossbow	Crossbow		
Firearm	Youth (as a hunter or mentor)		
	9 – Day		
	Muzzleloader		
	December Antlerless		
	Holiday Hunt (select units)		

6. List the deer management zone(s) and unit(s) you hunted in during the 2020 deer season. For each area you hunted, estimate the percent of your total deer hunting season spent in that area (*See map on back for zone and unit information*).

Deer Zone	Unit (County)	% of time	
			Should total 100%

Figure 1. *The 2020 Deer Hunting Questionnaire.*

7. Prior to your first 2020 deer hunt, how many times did you visit your primary hunting location since the end of the last deer season? **(Check ONE).**

- ☐ None, no pre-season visits (*Go to #9*)
- ☐ 1 visit
- ☐ 2-3 visits
- ☐ 4-5 visits
- ☐ 6 or more visits
- ☐ I live at my hunting location

8. Deer hunters may do many activities that pertain to deer or deer hunting when visiting their hunting location. Please check all the activities from the list below that you performed while visiting your hunting area in the past year. *(Check ALL that apply)*

- ☐ Scouting for deer sign
- ☐ Placing bait
- ☐ Creating stand locations / placing tree stands
- ☐ Performing deer habitat improvements
- ☐ Searching for shed antlers
- ☐ Planting / maintaining food plots
- ☐ Placing / checking trail cameras

9. Prior to the start of your 2020 deer season, what did you think the likelihood was of **SEEING** each of the deer types below during ALL your deer hunting? Put a X on the line at your expectation of seeing each of the deer types.

% chance of SEEING an Antlered buck

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
No chance   Certain

% chance of SEEING an Antlerless deer or fawns

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
No chance   Certain

10. Prior to the start of your 2020 deer season, what did you think the likelihood was of **HARVESTING** each of the deer types below during ALL your deer hunting? Put a X on the line at your expectation of harvesting each of the deer types.

% chance of HARVESTING an Antlered buck

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
No chance   Certain

% chance of HARVESTING Antlerless deer or fawns   ☐ No tag

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
No chance   Certain

11. Did you harvest a deer during **ANY** 2020 deer season?   ☐ Yes (*Go to #12*)   ☐ No (*Go to #15*)

12. Below is a series of statements related to the experience of harvesting a deer. We are interested in knowing how many of these statements applied to your deer harvest(s) during the 2020 deer season. You do not need to tell us which statements applied to you, only how many. We use responses to this question to statistically estimate incident rates for all deer hunters without associating actions with any individuals.

Thinking about the 2020 deer season, how many of the following statements were TRUE for each deer that you harvested?

- I harvested the deer from an elevated deer stand
- I processed the meat myself
- I harvested the first deer that I saw
- I donated the meat to charity
- I used an ATV to get the deer out

12a. For the FIRST DEER that I harvested, _____ (0-5) statements were TRUE.

12b. For the SECOND DEER that I harvested, _____ (0-5) statements were TRUE.
        OR
☐ **12c.** Did not harvest a second deer *(Go to #13)*

Figure 1. *Continued.*

13. How many total deer (antlered and antlerless) did you harvest in 2020? _____

    13a. Please indicate below, how each of these deer were processed. Write in the number of deer for each method below:

	# of deer
I processed them myself or with friends	_____
I brought it to a seasonal venison processor	_____
I brought it to a year-round meat processor	_____

14. Thinking about the number of deer you EXPECTED to harvest during your 2020 deer hunting, how did that compare to the number you harvested? *(Check ONE)*

☐ I harvested MORE deer than I expected
☐ I harvested EXACTLY what I expected
☐ I harvested LESS deer than I expected

15. Did you pass up a shot at an ANTLERED deer that you had in range for the weapon you were using during the 2020 deer season?

☐ Yes (*Go to #16*)
☐ No (*Go to #18*)

16. For each weapon type below please list your best estimate of the number of shots at ANTLERED deer you passed.
(Leave the box blank if you did not pass on a shot with that weapon)

Weapon	# of shots at ANTLERED deer you passed
Vertical Bow	
Crossbow	
Firearm	

17. There are many reasons for passing on a shot at a deer. From the list below, please select all the reasons you passed up a shot(s) at an ANTLERED deer this season. *(Check ALL that apply)*

☐ I was waiting for a buck with larger antlers
☐ I was waiting for an older buck
☐ It was early in the season and knew I would get more chances to harvest a buck
☐ I wanted to let the buck go so it might have larger antlers next season
☐ I didn't want to use my buck tag early in the season

☐ I prefer to shoot antlerless deer for venison
☐ I was concerned it might have CWD
☐ I did not want to deal with a harvested deer at the time it gave me an opportunity
☐ I was targeting a specific buck I had scouted during the year
☐ I had already used my buck tag(s)

18. For each weapon type, list the number of shots taken at **ANY** deer, number of deer hit, and number of deer recovered during the 2020 deer season. Enter a ZERO for each weapon you used but no shots were taken, deer hit, or deer recovered.

Weapon	# of Shots taken	# of Deer hit	# of Deer recovered
Vertical Bow			
Crossbow			
Firearm			

19. For each weapon type you **USED** to hunt deer, please tell us the **maximum** range that you would expect to kill a deer (antlered or antlerless) with one shot. *(Check ALL that apply)*

Weapon	I did not use this weapon	Less than 10 yards	11 – 30 yards	31 – 50 yards	51 – 75 yards	76 – 100 yards	101 – 150 yards	151 – 200 yards	201 – 250 yards	251+ yards
Recurve/longbow										
Compound Bow										
Crossbow										
Muzzleloader										
Shotgun										
Handgun										
Rifle										

Figure 1. *Continued*

Now think about all the deer hunting you did in Wisconsin during the 2020 deer seasons

20. Overall, how would you rate the quality of your 2020 deer season? *(Check ONE)*
　　☐ Very High　　☐ Fairly High　　☐ About Average　　☐ Fairly Low　　☐ Very Low

21. Considering all of your experiences leading up to and participating in the 2020 deer season, please rate the amount of fun you had. *(Circle ONE number)*

1	2	3	4	5	6	7

No fun
at all　　　　　Neither　　　　　A lot
　　　　　　　　　　　　　　　　of fun

22. What is your overall satisfaction with the current state of deer hunting in Wisconsin? *(Circle ONE number)*

1	2	3	4	5	6	7

Very
dissatisfied　　　Neither　　　Very
　　　　　　　　　　　　　satisfied

23. Which of the following categories best describes you, as a deer hunter? *(Check ONE)*

　☐ I enjoy deer hunting, but it is not as important to me as some other leisure activities.

　☐ Deer hunting is an important part of my life, but a few other leisure activities are just as important.

　☐ Deer hunting is the most important leisure activity in my life.

24. Which of the following weapons is currently your **MOST PREFERRED** way to hunt deer? *(Check only ONE)*

　☐ Recurve or longbow　☐ Muzzleloader　☐ Rifle
　☐ Compound bow　　　☐ Shotgun
　☐ Crossbow　　　　　☐ Handgun

25. During the 2020 deer season did you know of any hunters:

　who may have hunted without a license?
　　　　☐ Yes　　☐ No

　who may have harvested a deer but did not register it?
　　　　☐ Yes　　☐ No
　　(You will NOT be contacted about your responses)

C

Figure 1. *Continued.*