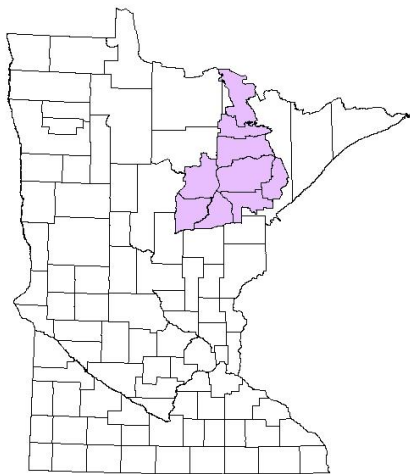




Fish and Wildlife Division

Deer Goal Setting Attitude Survey Report

Block 14: Border Uplands/St. Louis Moraines



Contents

Deer Goal Setting Attitude Survey Report0

 Statement of Purpose and Scope5

 Data Collection Process5

 Deer Hunters5

 Landowners6

Block 14: Border Uplands/St. Louis Moraines7

 Figure 1. Goal setting Block 14 DPA boundaries7

Response Rates and Weighting8

 Hunters8

 Landowners8

 Table 1. Response rates for hunter samples, by DPA.....9

 Table 2. Population and sample proportions by age quantile, and weights 10

 Table 3. Response rates for landowner samples, by DPA 11

 Table 4. Population and sample proportions by acres strata, and weights 12

Summary of Deer Population Preferences 13

 Figure 2. Landowners’ and hunters’ mean desired percent change in the deer population, by DPA 14

 Figure 3. Deer permit area 119 deer hunters’ and landowners’ preference for future deer population .. 15

 Figure 4. Deer permit area 132 landowners’ and hunters’ preference for future deer population..... 16

 Figure 5. Deer permit area 171 landowners’ and hunters’ preference for future deer population..... 17

 Figure 6. Deer permit area 173 landowners’ and hunters’ preference for future deer population..... 18

 Figure 7. Deer permit area 176 landowners’ and hunters’ preference for future deer population..... 19

 Figure 8. Deer permit area 177 landowners’ and hunters’ preference for future deer population..... 20

 Figure 9. Deer permit area 178 landowners’ and hunters’ preference for future deer population..... 21

 Figure 10. Deer permit area 179 landowners’ and hunters’ preference for future deer population..... 22

Figure 11. Deer permit area 181 landowners' and hunters' preference for future deer population.....	23
Figure 12. Deer permit area 199 landowners' and hunters' preference for future deer population.....	24
Hunters	25
Table 5. Percent of respondents reporting hunting deer during the last three years, by DPA	27
Table 6. Percent of 2019 deer hunters participating in deer hunting seasons, by DPA.....	28
Table 7. Percent of deer hunters' time spent hunting on different land ownership types, by DPA.....	29
Table 8. Percent of deer hunters hunting on properties with different harvest restrictions above and beyond state regulations, by DPA	30
Table 9. Deer hunters' satisfaction with their most recent deer hunting season, by DPA	31
Table 10. Deer hunters' agreement with elements of their satisfaction with their most recent deer hunting season, by DPA.....	32
Table 10. Continued.	33
Table 10. Continued	34
Table 11. Deer hunters' perceived change in the deer population over last 5 years, by DPA.....	35
Table 12. Deer hunters' satisfaction with the deer population where they hunt, by DPA.....	36
Table 13. Percent of deer hunters that would shoot an antlerless deer, by DPA.....	37
Table 14. Deer hunters' mean stated importance for factors to consider in making deer population goals, by DPA	38
Table 15. Deer hunters' perception of the deer population in the DPA where they hunt, by DPA.....	39
Table 16. Deer hunters' preference for future deer populations, by DPA.....	40
Table 17. Deer hunters' mean preferred percent change in the deer population, by DPA.....	41
Table 18. Deer hunters' support for regulations to increase proportion of antlered bucks in the area they hunt, by DPA.....	42
Table 19. Mean number of years that deer hunters have been hunting deer in Minnesota, by DPA.....	43
Table 20. Percent of deer hunters that set out food for deer to consume, by DPA	44
Table 21. Percent of deer hunters that set out minerals for deer to consume, by DPA.....	45
Table 22. Percent of deer hunters that belong to a deer hunting organization, by DPA.....	46

Table 23. Deer hunters' mean level of agreement with statements about the MNDNR, by DPA	47
Landowners	48
Table 24. Mean acres owned and leased by landowners, by DPA.....	50
Table 25. Percent of landowners with agriculture on their land, percent experiencing damage from deer, and severity of damage, by DPA.....	51
Table 26. Percent of landowners with forest on their land, percent experiencing damage from deer, and severity of damage, by DPA.....	52
Table 27. Percent of landowners with residential land use on their land, percent experiencing damage from deer, and severity of damage, by DPA	53
Table 28. Landowners' perceived trend in damage from deer over 5 years, by DPA.....	54
Table 29. Landowners' perceived trend in the deer population over the last 5 years, by DPA.....	55
Table 30. Landowners' satisfaction with the current deer population in the area of their property, by DPA	56
Table 31. Landowners' satisfaction with the deer population on their land, by DPA and hunting status..	57
Table 32. Landowners' perception of the deer population on their land, by DPA	58
Table 33. Landowners' perception of the deer population on their land, by DPA and hunting status	59
Table 34. Landowners' preference for future deer populations, by DPA	60
Table 35. Landowners' preference for future deer populations, by DPA and hunting status	61
Table 36. Landowners' mean preferred percent change in the deer population, by DPA	62
Table 37. Percent of landowners aware that MNDNR offers technical and financial assistance for deer depredation problems, by DPA, and acres owned.....	63
Table 38. Percent of landowners that allow hunting on their property, by DPA, and acres owned	64
Table 39. Percent of landowners that leased their property for deer hunting, by DPA.	65
Table 40. Percent of landowners imposing different harvest restrictions on their property, by DPA	66
Table 41. Percent of landowners reporting hunting deer during the last three years, and those that do not hunt, by DPA	67
Table 42. Landowners' time spent hunting on different land ownership types, by DPA.....	68
Table 43. Percent of hunting landowners that would shoot an antlerless deer, by DPA	69

Table 44. Mean number of years that hunting landowners have been hunting deer in Minnesota, by DPA	70
Table 45. Landowners' mean level of agreement with statements about the MNDNR, by DPA.....	71
Table 46. Landowners' mean stated importance for factors to consider in making deer population goals, by DPA	72
Table 47. Percent of landowners that set out food for deer to consume, by DPA	73
Table 48. Percent of landowners that set out minerals for deer to consume, by DPA.....	74
APPENDIX A. Hunter Questionnaire	75
APPENDIX B. Landowner Questionnaire	78

Statement of Purpose and Scope

The MNDNR sets white-tailed deer (*Odocoileus virginianus*) population goals for Deer Permit Areas (DPAs) in accordance with the [Minnesota Deer Management Plan](#). Deer population [goal setting](#) is a public engagement process that occurs in partnership between MNDNR, individual stakeholders and stakeholder groups, and in consultation with sovereign tribal governments that share a geography with the state. Decisions made about deer population goals dictate the management strategy for DPAs for the goal period. A deer population goal for a DPA may be to increase the population by 25% over 10 years, from the time the goal is set. Annual harvest within a DPA, and estimates derived from the Minnesota Deer Population Model, inform management designation in reference to the population goal over time. Many pieces of information go into decisions about deer population goals, including area wildlife manager's expert opinion, trends in harvest, disease management concerns, and the preferences of stakeholders, among many others.

The MNDNR periodically conducts opinion surveys of deer hunters and landowners to assess preferences for deer populations, experiences with deer hunting, and impacts of deer populations on property to inform the deer population goal setting process. Data presented in this report are of one such investigation. Results of this study directly inform decision making for deer population goals during the winter of 2021.

Results of this study are representative of the populations of deer hunters and landowners surveyed, and may differ substantially from results of self-selected public input processes, as a function of the scientific study design. The values in these reports are the average for all individuals within a given population of interest (e.g., hunters and landowners in a deer permit area), not just respondents to the survey.

Data Collection Process

We surveyed deer hunters and landowners during the winter and spring of 2020 using a mixed mode design that included two solicitations. Selected participants received a letter directing them to complete a questionnaire online, and non-respondents received a paper copy of the survey with a postage-paid self-addressed return envelope. Copies of these questionnaires are found in Appendices A and B of this report and cover a range of topics related to deer populations, deer hunting, property damage from deer, and deer management.

Deer Hunters

We randomly selected individuals with a valid firearms deer hunting license aged 18 years and older within DPAs to receive a goal setting survey. The number of hunters selected in each DPA was determined by estimating the minimum sample size needed to make statistically valid inference about the population at the DPA level at 90% confidence. Participants may not be residents of the DPA, but have indicated that a given DPA is the primary location where they hunt deer.

Landowners

We randomly selected individual land parcels within a DPA from all parcels greater than or equal to 2 acres in size to receive a goal setting survey, considering owners of multiple parcels in a DPA. Participant contact information associated with parcel ownership derived from county tax records. Stratification occurred by quantiles of parcels by acres to ensure a representative coverage of land use types and interests. Land acres strata were 2-19, 20-79, 80-319, and ≥ 320 acres respectively. Similar to hunters, the number of landowners selected for each DPA was proportional to the total number of landowners in the DPA and after determining the minimum sample size needed for statistically valid inference at the DPA scale with 90% confidence.

Block 14: Border Uplands/St. Louis Moraines

Goal setting Block 14 (Border Uplands/St. Louis Moraines) includes deer permit areas: 119, 132, 171, 173, 176, 177, 178, 179, 181, and 199 in the northeast part of the state (Figure 1).

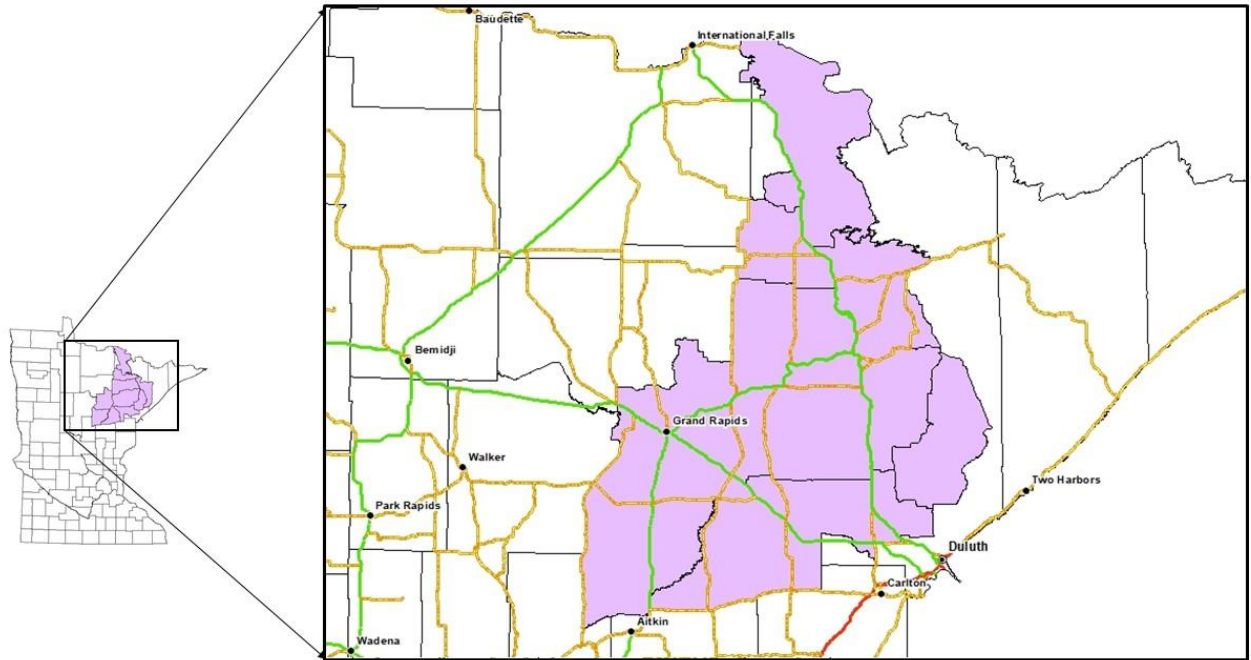


Figure 1. Goal setting Block 14 DPA boundaries

Response Rates and Weighting

Hunters

After accounting for undeliverable mail, the adjusted response rate for the Block 14 hunter sample was 45%. Response rates by DPA ranged from a low of 37% for DPA 199, to a high of 52% for DPA 119. A summary of response rates by DPA is located in Table 1.

We weighted responses in proportion to quantiles derived from the population of aged 18+ firearms deer hunters in Minnesota, during the 2019 hunting season. Respondents (mean=50) were on average older than the population (mean=46) from which the sample was drawn. To attend to this, we estimated population estimates according to the weight schedule presented in Table 2. Weights apply to the population rather than the block level, under an assumption that there is no correlation between age and preferred hunt location.

Landowners

After accounting for undeliverable mail, the adjusted response rate for the Block 14 landowner sample was 44%. Response rates by DPA ranged from a low of 33% for DPA 199, to a high of 48% for DPA 171 and DPA 179. A summary of response rates by DPA is located in Table 3.

We drew samples of landowners equally within four strata (2-19, 20-70, 80-319, and 320+) corresponding to parcel acres to ensure representation of small, medium, and large landholders, and thus, the potential array of interests associated with different land uses. We calculated weights within Block to generate estimates representative of the population according to the schedule presented in Table 4.

Table 1. Response rates for hunter samples, by DPA

DPA	Initial Sample	Undeliverable	Respondents	Adjusted sample	Raw response rate	Adjusted response rate
119	502	16	251	486	0.50	0.52
132	504	12	237	492	0.47	0.48
171	529	10	220	519	0.42	0.42
173	536	15	256	521	0.48	0.49
176	529	19	246	510	0.47	0.48
177	512	10	205	502	0.40	0.41
178	540	13	257	527	0.48	0.49
179	527	9	201	518	0.38	0.39
181	530	12	230	518	0.43	0.44
199	403	7	145	396	0.36	0.37
Block average	5112	123	2248	4989	0.44	0.45

Table 2. Population and sample proportions by age quantile, and weights

Age Quantile	Population Proportion	Sample Proportion	Weight*
18-32	.25	.16	1.599
33-45	.25	.21	1.204
45-58	.25	.28	0.9019
59+	.25	.36	0.6962

*Weight = $1/(\text{Sample Proportion}/\text{Population Proportion})$

Table 3. Response rates for landowner samples, by DPA

DPA	Initial Sample	Undeliverable	Respondents	Adjusted sample	Raw response rate	Adjusted response rate
119	421	24	180	397	0.43	0.45
132	412	18	181	394	0.44	0.46
171	433	16	200	417	0.46	0.48
173	475	23	202	452	0.43	0.45
176	467	27	188	440	0.40	0.43
177	466	41	184	425	0.39	0.43
178	507	31	198	476	0.39	0.42
179	400	10	188	390	0.47	0.48
181	489	23	197	466	0.40	0.42
199	389	11	125	378	0.32	0.33
Block average	4459	224	1843	4235	0.41	0.44

Table 4. Population and sample proportions by acres strata, and weights

Acres strata	Population proportion	Sample proportion	Weight*
2-19	.52	.34	1.533
20-79	.34	.35	0.974
80-319	.13	.27	0.487
320+	.01	.04	0.269

*Weight = $1/(\text{Sample Proportion}/\text{Population Proportion})$

Summary of Deer Population Preferences

On average, deer hunters preferred a moderate or large increase in the deer population, with mean estimates ranging from a 31% increase for DPAs 177 and 179, to a 72% increase for DPA 119. Landowners, on average, preferred either a small or moderate increase in the deer population, with estimates ranging from 4% for DPA 179 to 25% for DPA 119. Figure 2 contains mean estimates with 95% confidence intervals of hunters' and landowners' preferred percent change in the deer population in the DPA where they hunt or their land is located respectively. We coded individuals that preferred no change in the population with a value of zero for this analysis.

Figures 3 through 12 contain DPA level estimates for the percent of hunters and landowners that preferred to see future deer populations decrease, stay the same, or increase. A clear majority of hunters expressed a preference for an increase in the deer population in the DPA where they hunt. The percent of landowners expressing a preference for a decrease in the deer population was a small minority for all DPAs.

Figure 2. Landowners' and hunters' mean desired percent change in the deer population, by DPA

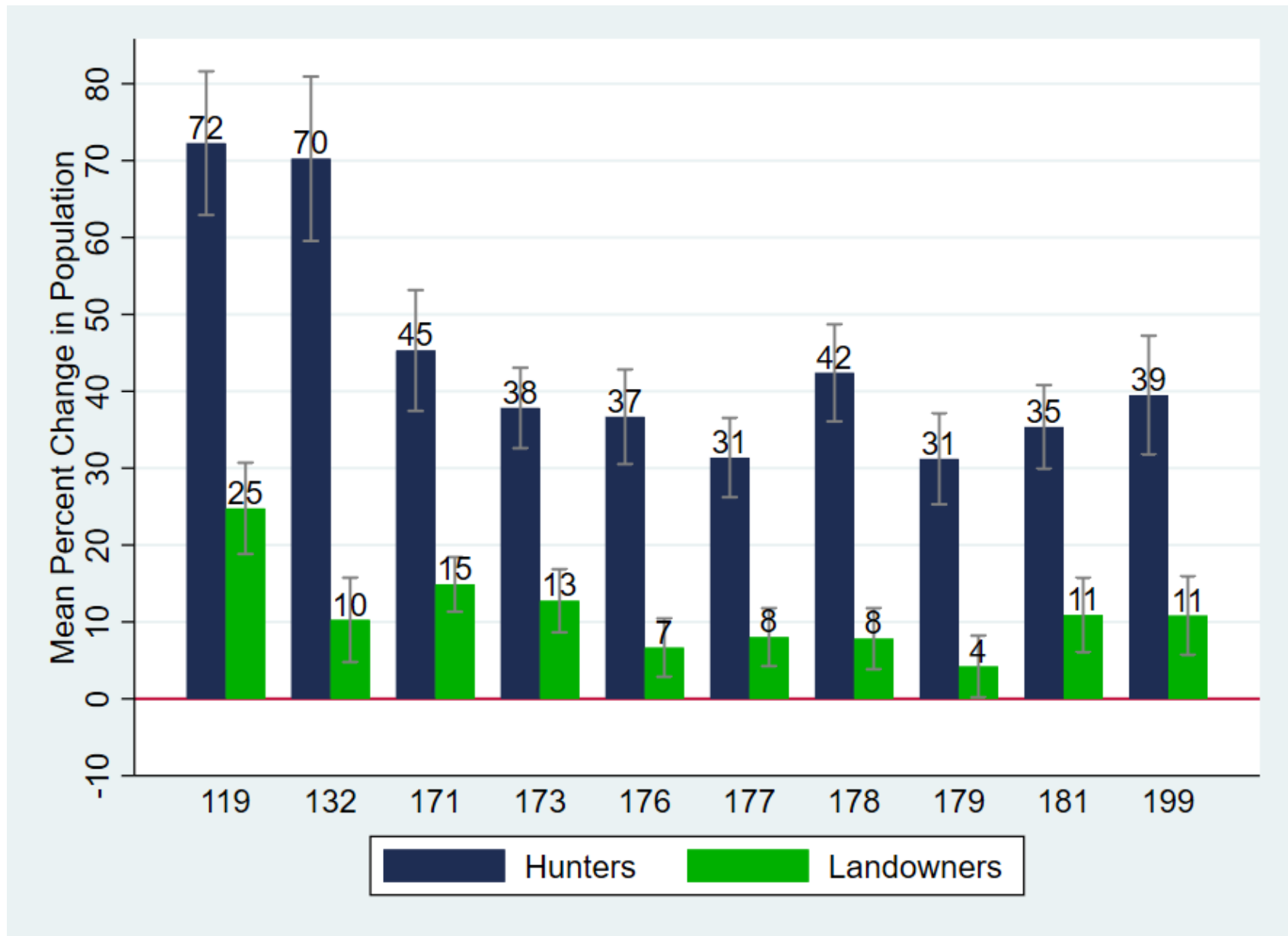


Figure 3. Deer permit area 119 deer hunters' and landowners' preference for future deer population

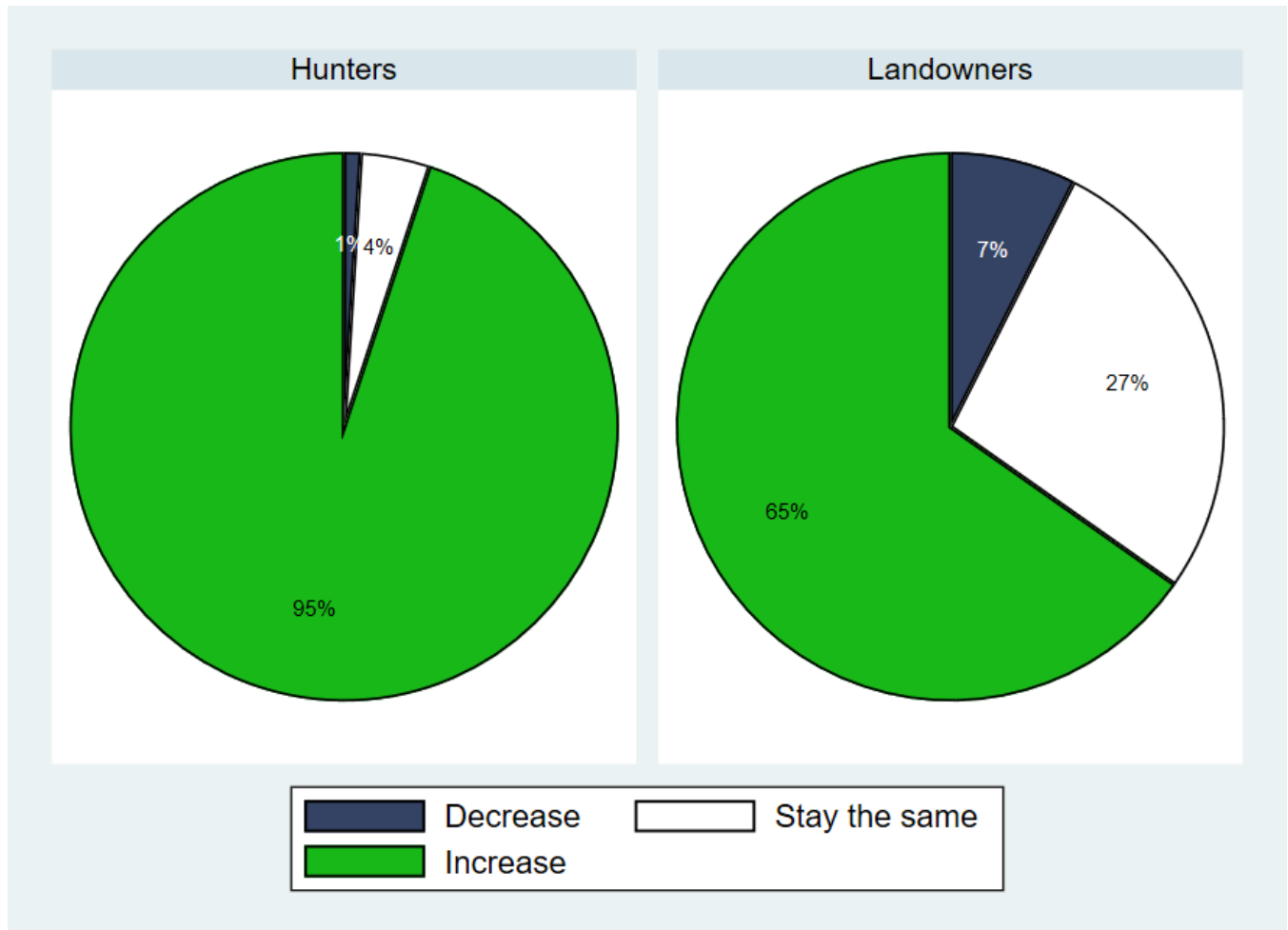


Figure 4. Deer permit area 132 landowners' and hunters' preference for future deer population

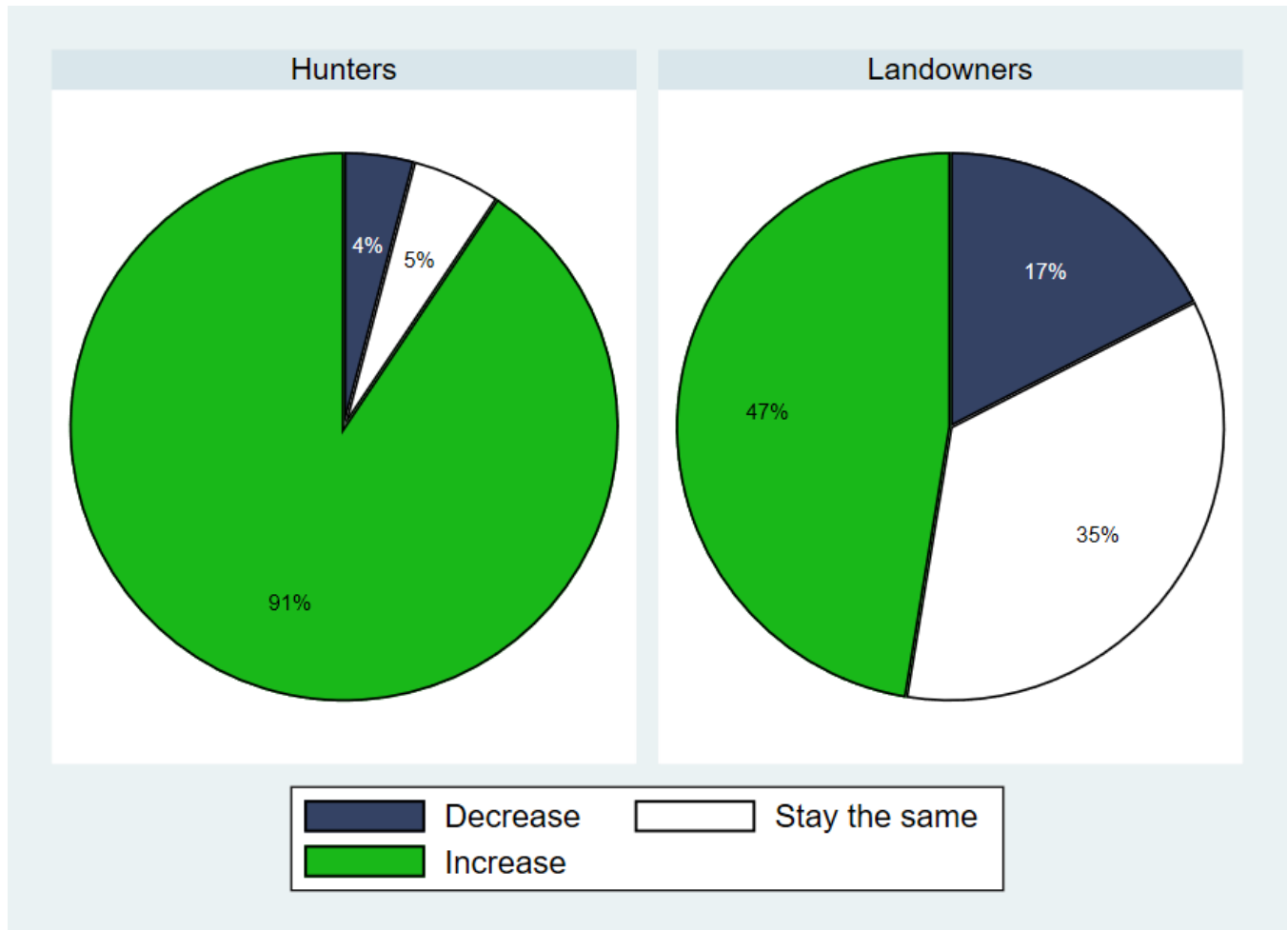


Figure 5. Deer permit area 171 landowners' and hunters' preference for future deer population

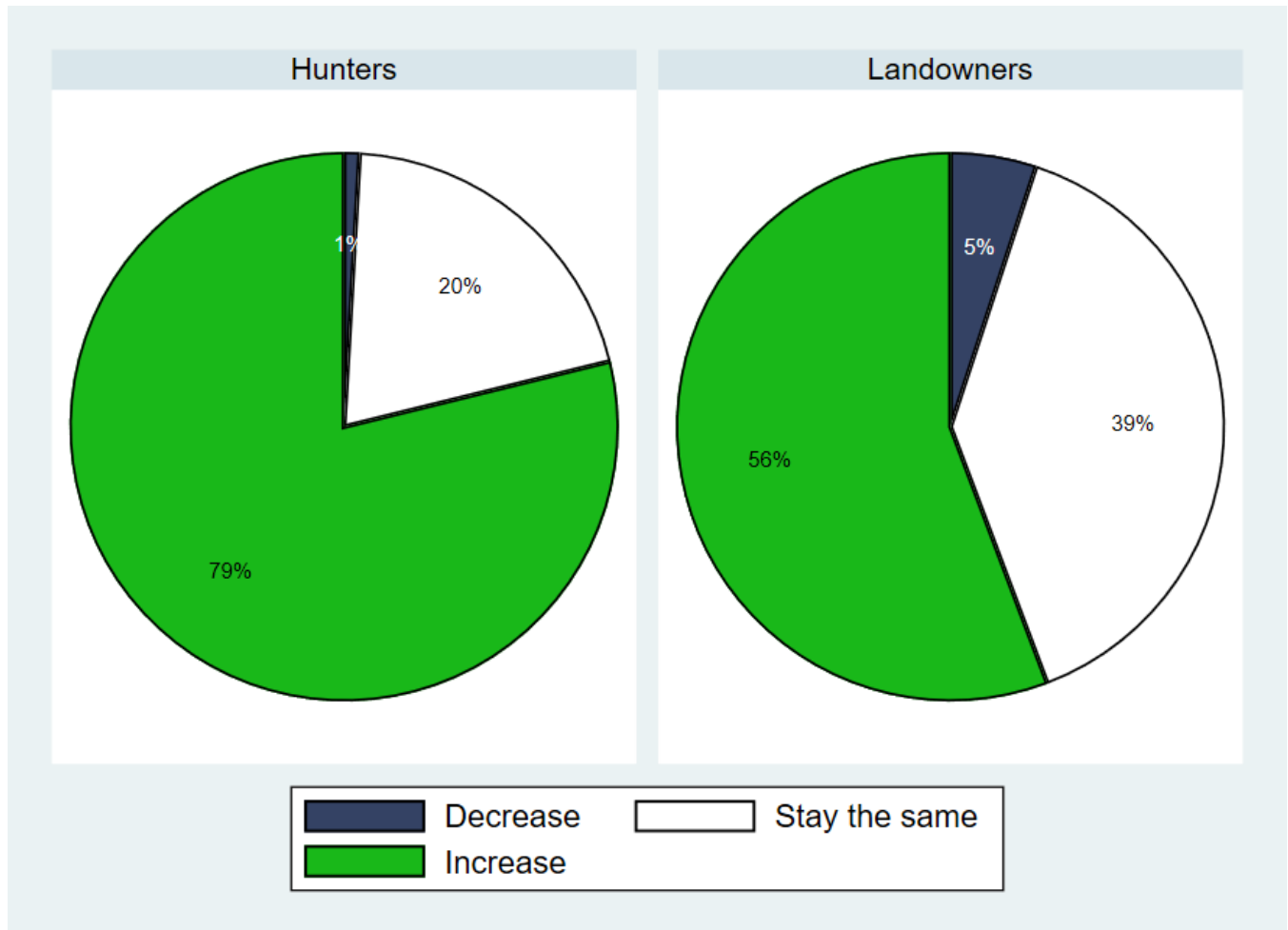


Figure 6. Deer permit area 173 landowners' and hunters' preference for future deer population

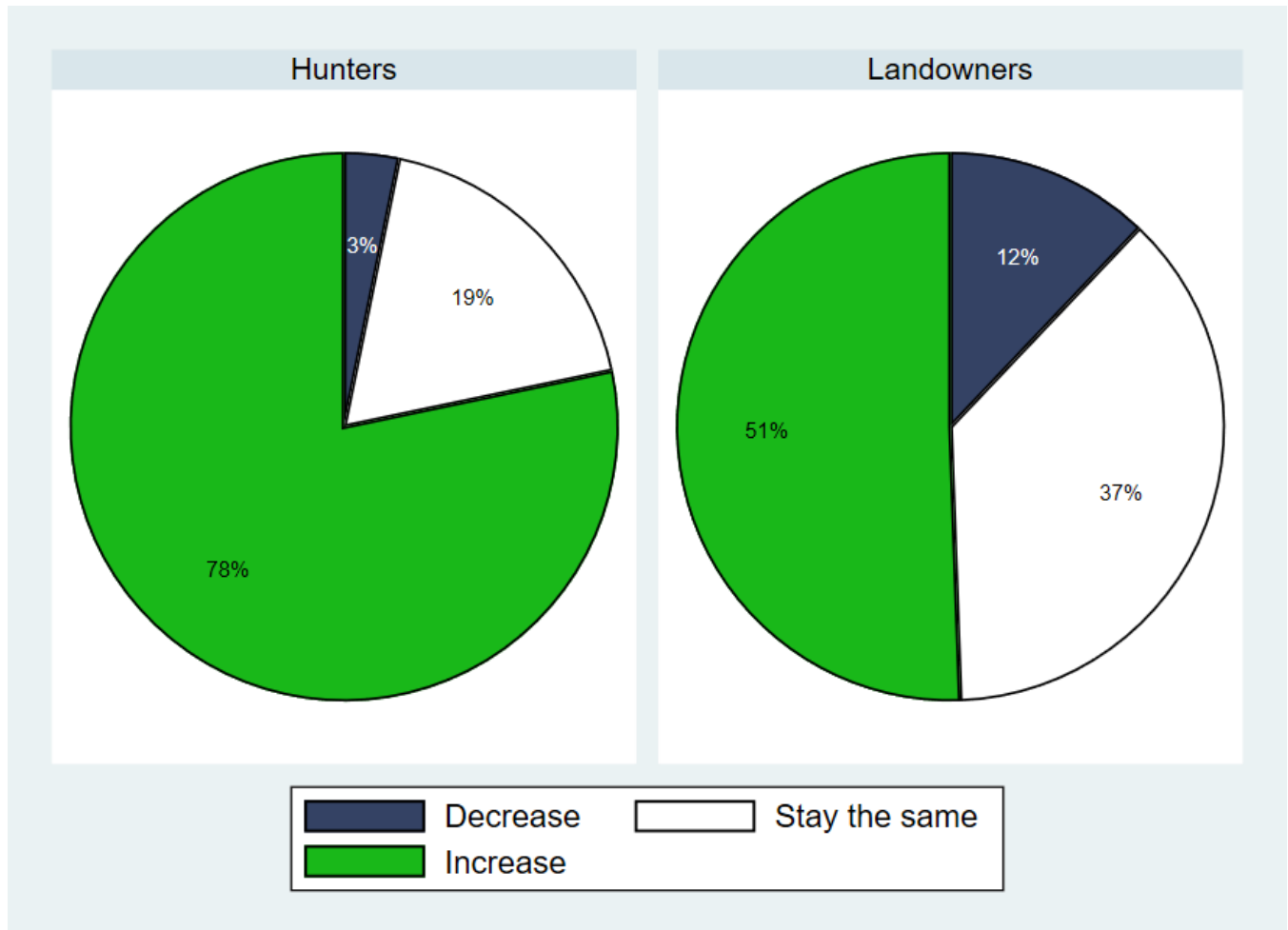


Figure 7. Deer permit area 176 landowners' and hunters' preference for future deer population

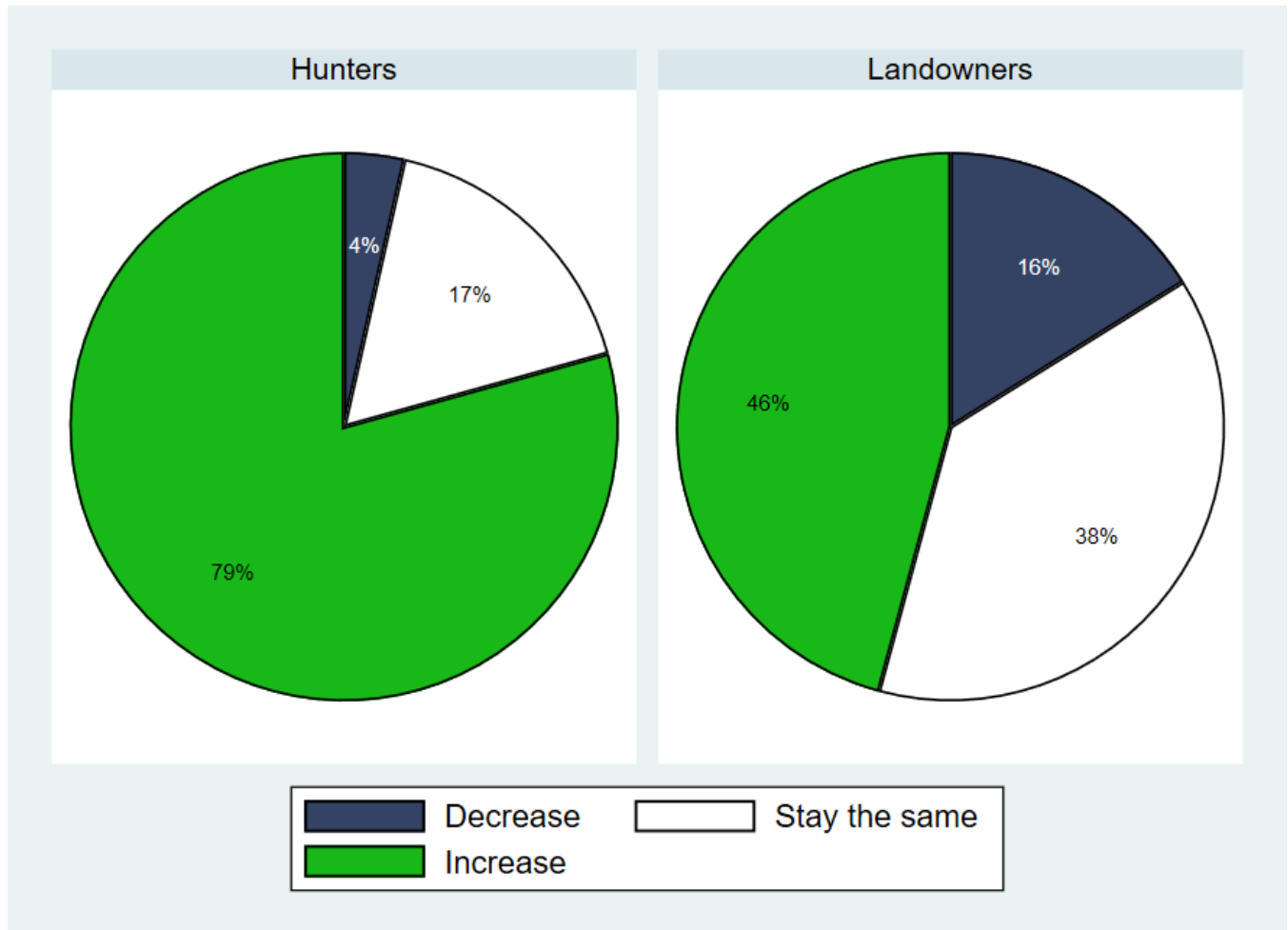


Figure 8. Deer permit area 177 landowners' and hunters' preference for future deer population

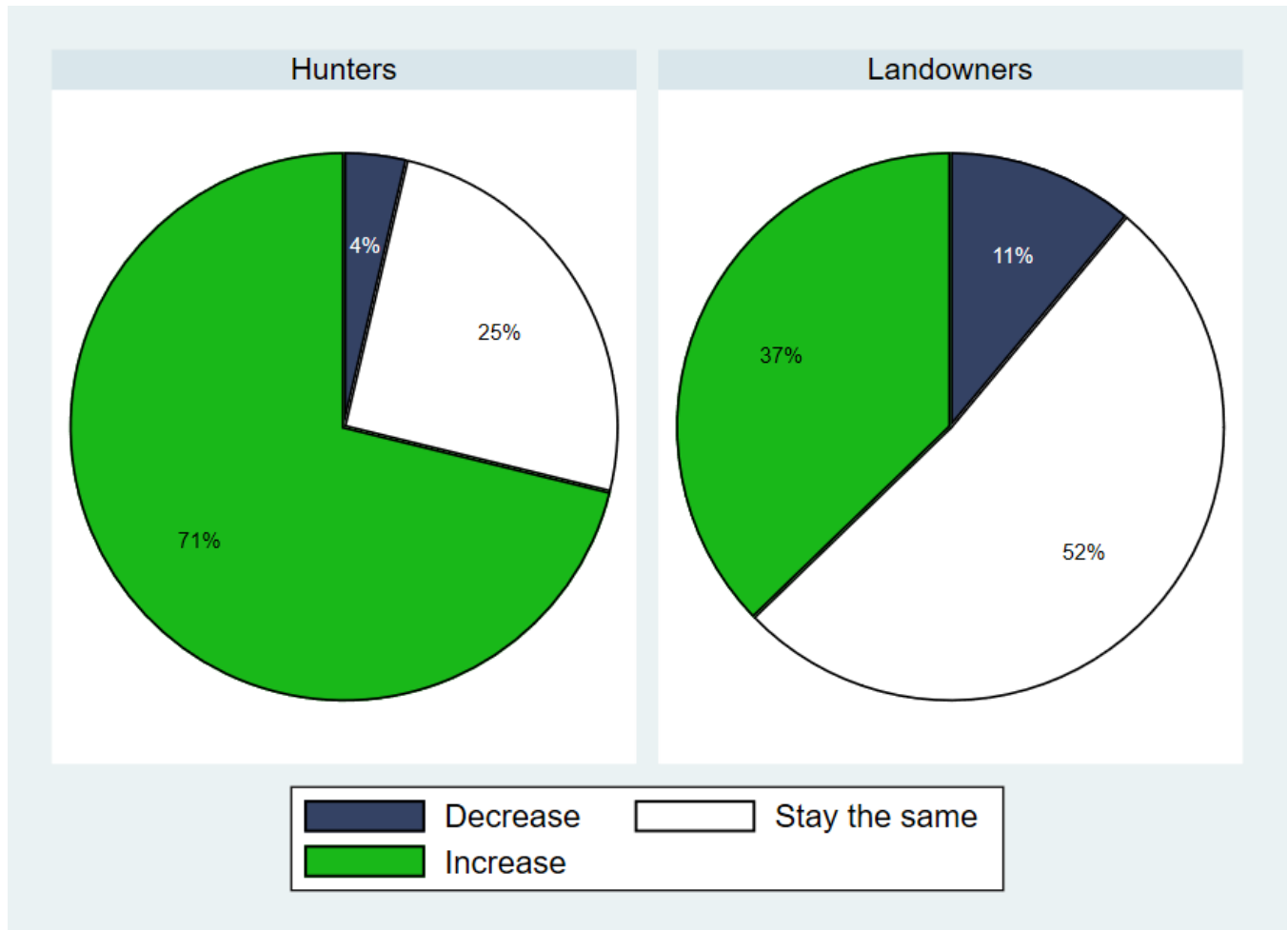


Figure 9. Deer permit area 178 landowners' and hunters' preference for future deer population



Figure 10. Deer permit area 179 landowners' and hunters' preference for future deer population

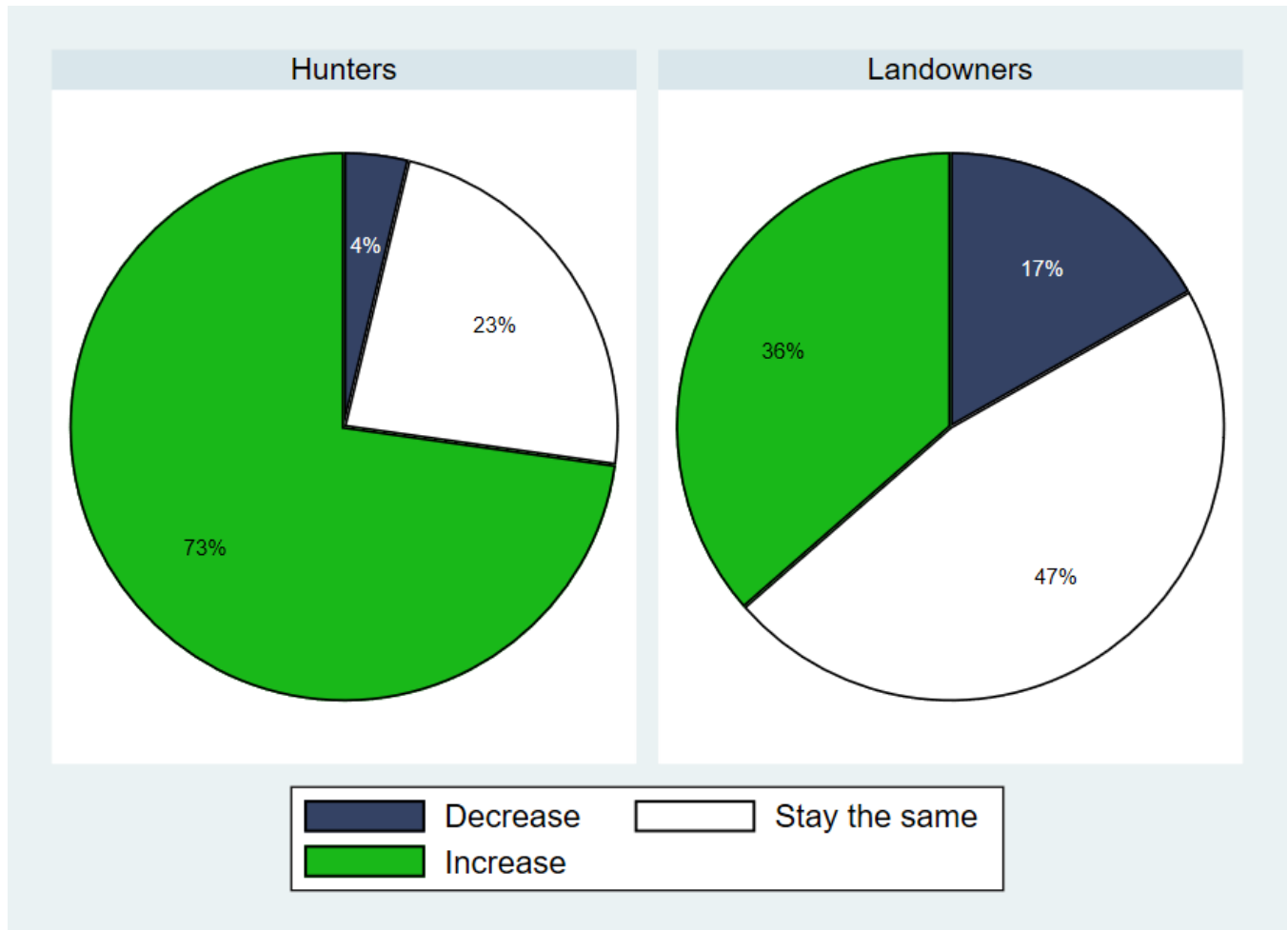
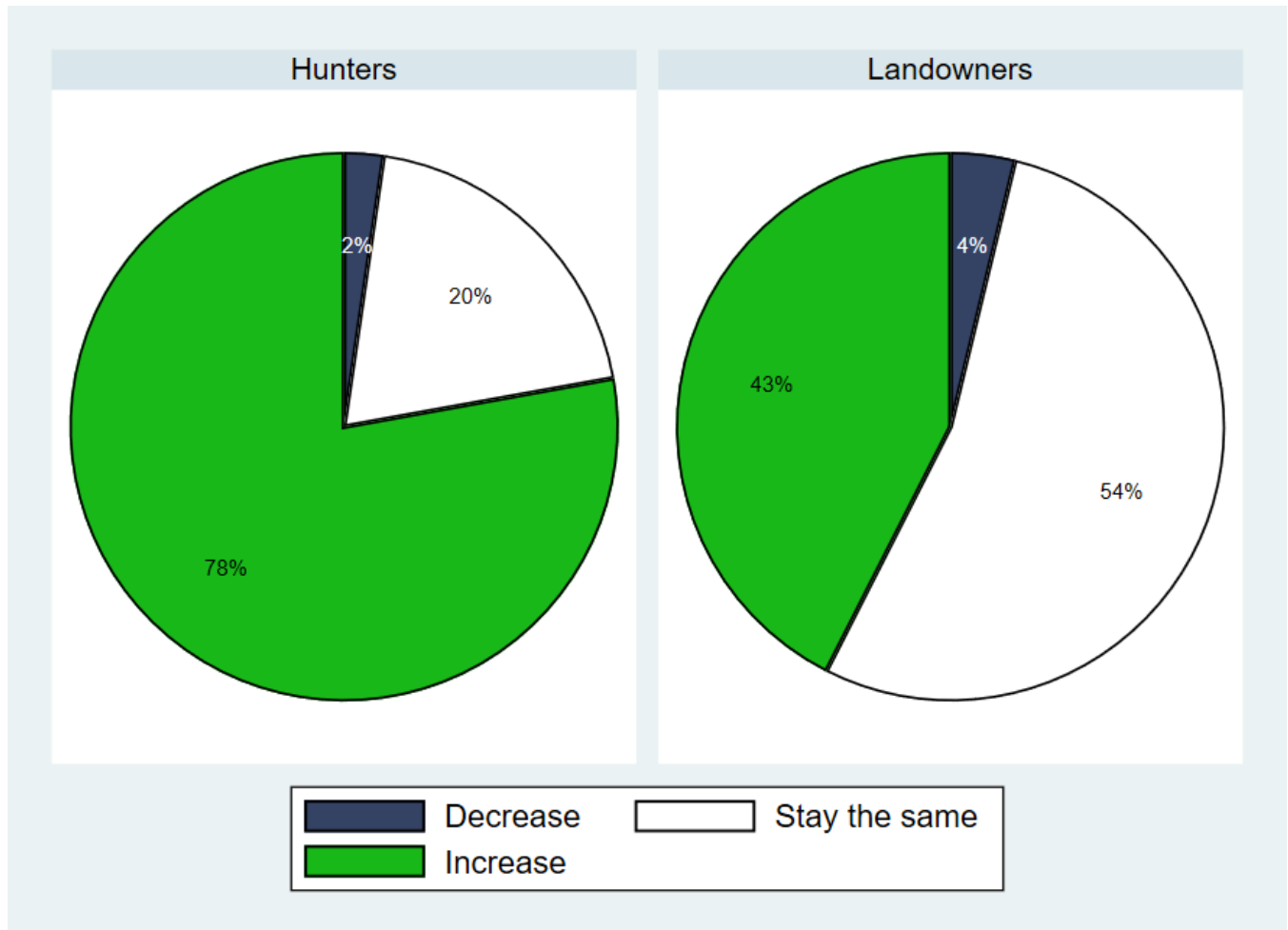


Figure 11. Deer permit area 181 landowners' and hunters' preference for future deer population



Figure 12. Deer permit area 199 landowners' and hunters' preference for future deer population



Hunters

We asked hunters to report their recent deer hunting activity. The vast majority (>90%) of hunters reported having hunted deer during the last three years (Table 5). Among these hunters, around 26% reported that they hunted during the archery season in 2019, while 14% participated in muzzleloader season, and nearly all reported hunting during the firearms season (Table 6). Around a quarter of hunters reported spending all of their time hunting on private land that they own, while 3% Block 14 hunters reported spending all of their hunting time on land that they lease, 23% on private land that they do not own, and 33% public land respectively (Table 7). Roughly half of hunters reported that there were restrictions on antlerless harvest in place on land they hunted in 2019 (Table 8).

Half of hunters reported they were either slightly dissatisfied, or very dissatisfied with their most recent deer hunting season in Minnesota (Table 9). On average, hunters disagreed with statements about their satisfaction with the number and quality of bucks, the total number of deer they saw, the number of antlerless deer they saw, and whether they heard about or saw legal bucks while hunting (Table 10).

Hunters evaluated the trend in the deer population over the last 5 years in the DPA where they hunt, their satisfaction with the deer population in the DPA where they hunt, and their likelihood to harvest an antlerless deer given the opportunity. Roughly, 70% of hunters reported seeing fewer deer compared to 5 years ago (Table 11). Sixty-seven percent of Block 14 hunters reported feeling either slightly dissatisfied or very dissatisfied with the deer population in the DPA where they hunt (Table 12). A clear majority (78%) of hunters reported that they would shoot an antlerless deer given the opportunity (Table 13).

We asked hunters to rate the importance of several competing priorities MNDNR could consider when setting deer population goals. Among these priorities, Block 14 hunters rated herd health, deer hunting heritage and tradition, and the impacts of severe winters the highest (Table 14).

Hunters evaluated the current deer population in the DPA where they hunt, on a scale of much too low to much too high. Most hunters (68%) felt that the current population where they hunt is either too low, or much too low (Table 15).

When asked if hunters prefer to see the deer population decrease, stay the same, or increase, 80% reported a preference for an increase (Table 16). On average, hunters in Block 14 wish to see a 45% increase in the deer population (Table 17). Outliers in open-ended responses to the question measuring preferred percent change in the deer population (e.g., +10,000%) were excluded from analysis if they were ± 3 standard deviations from the grand mean for the block, corresponding to a 99.7% confidence interval around the point estimate. A majority of hunters in Block 14 (63%) supported establishing regulations to increase the proportion of adult bucks in the DPA where they hunt (Table 18).

We asked hunters how long they have been hunting deer in Minnesota, whether they place feed or minerals out for deer to consume, and if they belong to a deer hunting organization. On average, Block 14 deer hunters have been hunting in Minnesota for 29 years (Table 19). Roughly, 11% of hunters reported that they set out feed for deer (Table 20), while 33% reported placing minerals for deer to consume (Table 21). Around 10% of Block 14 hunters reported that they belong to a deer hunting organization (Table 22).

Hunters reported their agreement with statements about their trust in the MNDNR on a scale where 1 = strongly disagree, 3 = neither, and 5 = strongly agree. On average, hunters reported moderate amounts of trust with mean values falling between 3.1 and 3.5 (Table 23).

Table 5. Percent of respondents reporting hunting deer during the last three years, by DPA

DPA	2017	2018	2019	Did not hunt
119	93	94	97	1
132	88	86	96	1
171	95	91	96	3
173	94	96	98	0
176	91	95	98	1
177	90	89	97	1
178	90	93	96	2
179	90	94	97	1
181	92	93	98	2
199	91	90	99	1
Block average	91	92	97	1

Table 6. Percent of 2019 deer hunters participating in deer hunting seasons, by DPA

DPA	Archery	Firearm	Muzzleloader
119	21	99	22
132	21	97	10
171	27	99	19
173	21	100	14
176	32	99	15
177	16	98	9
178	28	99	14
179	30	99	9
181	37	98	12
199	24	99	12
Block average	26	99	14

Table 7. Percent of deer hunters' time spent hunting on different land ownership types, by DPA

Question	Response	119	132	171	173	176	177	178	179	181	199	Avg.
Private land that I own	None	39	64	42	36	35	29	27	30	35	35	37
	Some	31	18	14	11	18	12	18	18	19	18	18
	Most	17	10	13	15	25	24	24	19	21	17	19
	All	13	8	31	38	22	36	31	33	25	30	27
Private land that I lease for hunting	None	89	85	91	96	88	85	91	82	89	92	89
	Some	4	4	3	1	8	5	3	10	7	4	5
	Most	5	2	2	1	2	6	1	4	3	0	3
	All	2	9	4	1	1	4	5	3	1	4	3
Private land that I do not own or lease	None	57	61	40	42	43	39	40	37	32	26	42
	Some	22	22	21	21	30	15	19	27	20	22	22
	Most	10	6	17	11	10	19	15	10	17	16	13
	All	12	10	22	26	17	27	26	26	30	36	23
Public land	None	6	7	23	24	13	23	27	21	21	36	19
	Some	26	14	26	29	30	37	33	30	30	22	27
	Most	25	17	20	15	21	17	20	27	19	26	20
	All	43	62	32	32	36	23	20	22	29	16	33

values are the percent of respondents reporting each category

Table 8. Percent of deer hunters hunting on properties with different harvest restrictions above and beyond state regulations, by DPA

DPA	Antlerless harvest is restricted, but hunters can take any legal buck	Buck harvest is restricted to large antlered bucks, but hunters can take any antlerless deer	Buck harvest is restricted to large antlered bucks, and antlerless harvest is also restricted	No restrictions on the type of deer that can be harvested	Other
119	70	0	4	19	6
132	75	1	2	20	3
171	18	1	1	75	6
173	62	3	2	30	3
176	71	1	2	25	1
177	20	4	1	72	4
178	70	1	4	24	2
179	16	1	0	81	3
181	53	0	4	37	6
199	67	1	3	26	4
Block average	54	1	2	39	3

values are the percent of respondents reporting each category

Table 9. Deer hunters' satisfaction with their most recent deer hunting season, by DPA

DPA	Very dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Very satisfied
119	37	26	7	19	11
132	48	22	10	11	8
171	30	20	9	22	19
173	27	21	8	26	17
176	29	27	14	14	16
177	21	18	13	25	22
178	30	22	7	22	18
179	16	22	9	27	22
181	19	18	14	25	23
199	17	19	15	24	25
Block average	28	22	11	22	18

values are the percent of respondents reporting each category

Table 10. Deer hunters' agreement with elements of their satisfaction with their most recent deer hunting season, by DPA

I was satisfied with the...	Response	119	132	171	173	176	177	178	179	181	199	Avg.
Number of legal bucks	Strongly disagree	69	75	55	50	68	46	57	46	44	45	56
	Slightly disagree	17	15	20	24	13	24	21	24	24	21	20
	Neither	5	5	8	8	6	12	7	7	9	14	8
	Slightly agree	7	3	11	13	9	14	12	16	14	13	11
	Strongly agree	3	2	5	5	4	5	4	8	8	6	5
Quality of bucks	Strongly disagree	62	71	49	51	58	41	51	42	43	42	52
	Slightly disagree	18	15	21	17	18	21	20	24	22	21	19
	Neither	9	8	13	11	8	14	12	11	13	19	11
	Slightly agree	7	6	12	15	11	18	13	16	13	12	12
	Strongly agree	4	0	5	6	4	6	4	7	9	6	5

Table 10. Continued.

I was satisfied with the...	Response	119	132	171	173	176	177	178	179	181	199	Avg.
I heard about or saw legal bucks while hunting	Strongly disagree	43	54	37	30	39	28	41	31	26	30	36
	Slightly disagree	14	15	17	13	14	15	14	13	13	12	14
	Neither	8	9	9	16	11	13	8	9	6	10	10
	Slightly agree	22	14	24	28	26	33	25	32	37	35	27
	Strongly agree	12	9	13	14	10	12	13	17	17	14	13
The number of antlerless deer I saw	Strongly disagree	45	56	35	25	31	24	33	21	25	24	33
	Slightly disagree	16	17	22	18	20	21	18	20	18	20	19
	Neither	13	7	8	13	9	14	11	8	10	11	10
	Slightly agree	16	11	22	19	26	27	24	33	22	28	22
	Strongly agree	10	8	13	24	14	14	14	18	24	16	16

Table 10. Continued

I was satisfied with the...	Response	119	132	171	173	176	177	178	179	181	199	Avg.
The number of deer I saw while hunting	Strongly disagree	45	56	35	25	31	24	33	21	25	24	33
	Slightly disagree	16	17	22	18	20	21	18	20	18	20	19
	Neither	13	7	8	13	9	14	11	8	10	11	10
	Slightly agree	16	11	22	19	26	27	24	33	22	28	22
	Strongly agree	10	8	13	24	14	14	14	18	24	16	16

values are the percent of respondents reporting each category

Table 11. Deer hunters' perceived change in the deer population over last 5 years, by DPA

DPA	Many fewer deer	Slightly fewer deer	About the same	Slightly more deer	Many more deer
119	61	17	14	6	2
132	76	14	6	2	2
171	43	28	19	7	3
173	37	31	22	9	2
176	44	26	20	8	2
177	36	21	31	9	3
178	46	24	17	8	4
179	33	29	25	10	3
181	41	28	19	7	4
199	37	25	26	11	1
Block average	46	24	19	8	3

values are the percent of respondents reporting each category

Table 12. Deer hunters' satisfaction with the deer population where they hunt, by DPA

DPA	Very dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Very satisfied
119	63	20	5	9	3
132	70	19	4	5	2
171	40	24	15	16	5
173	33	30	9	20	8
176	35	35	10	14	6
177	28	27	16	24	5
178	37	34	6	17	6
179	27	24	14	21	13
181	30	30	10	23	7
199	32	26	13	25	4
Block average	40	27	10	17	6

values are the percent of respondents reporting each category

Table 13. Percent of deer hunters that would shoot an antlerless deer, by DPA

DPA	Yes	No
119	57	43
132	68	32
171	82	18
173	87	13
176	80	20
177	80	20
178	83	17
179	83	17
181	83	17
199	80	20
Block average	78	22

values are the percent of respondents reporting each category

Table 14. Deer hunters' mean stated importance for factors to consider in making deer population goals, by DPA

Item	119	132	171	173	176	177	178	179	181	199	Avg.
Amount of deer mortality during an average winter	3.9	3.6	3.6	3.8	3.8	3.6	3.7	3.7	3.8	3.8	3.7
Amount of deer mortality during a severe winter	4.2	4.1	4.0	4.1	4.2	4.1	4.2	4.1	4.2	4.3	4.2
Potential health risks to the deer herd	3.8	3.9	4.1	4.0	3.9	3.9	3.9	4.0	4.1	3.9	3.9
Public health (human-deer diseases)	3.3	3.4	3.7	3.7	3.6	3.7	3.4	3.7	3.6	3.5	3.5
Amount of crop damage from deer	1.9	2.1	2.5	2.5	2.2	2.4	2.3	2.4	2.5	2.4	2.4
Number of deer vehicle collisions	2.6	2.9	3.1	3.1	3.0	3.0	3.0	3.2	3.2	3.1	3.1
Deer over-browsing of forests	2.2	2.6	2.7	2.8	2.6	2.7	2.6	2.7	2.8	2.6	2.6
Impacts of deer on other wildlife species	2.4	2.6	2.8	2.8	2.6	2.7	2.6	2.8	2.7	2.8	2.6
Deer hunting heritage and tradition	4.2	4.1	4.1	4.2	4.2	3.9	3.9	4.1	4.1	4.1	4.1
Hunter satisfaction with deer numbers	3.8	3.8	3.8	3.9	3.7	3.6	3.8	3.8	3.7	3.8	3.8
*Public satisfaction with deer numbers	3.2	3.3	3.3	3.5	3.1	3.1	3.0	3.4	3.0	3.1	3.2
Impact of deer hunting on the local economy	3.7	3.5	3.7	3.7	3.4	3.5	3.5	3.7	3.5	3.6	3.7
Quality of bucks (antler size)	3.2	3.0	3.3	3.6	3.0	3.1	3.2	3.4	3.3	3.2	3.3
Damage to gardens and landscaping	1.8	1.9	2.1	2.2	2.1	2.2	2.2	2.3	2.3	2.3	2.3
The ratio of bucks to does	3.5	3.5	3.6	3.7	3.5	3.6	3.5	3.6	3.6	3.9	3.7

*this item was accidentally omitted from the online version, results are for mailed responses only
responses measured on a unipolar scale, where 1 = not at all important, and 5 = very important

Table 15. Deer hunters' perception of the deer population in the DPA where they hunt, by DPA

DPA	Much too low	Too low	About right	Too high	Much too high
119	57	31	10	1	1
132	55	30	11	4	1
171	26	42	30	0	1
173	18	49	29	4	1
176	24	43	30	3	0
177	19	40	39	2	0
178	23	43	28	5	2
179	14	38	43	2	2
181	21	42	31	6	0
199	20	46	32	2	0
Block average	28	40	28	3	1

values are the percent of respondents reporting each category

Table 16. Deer hunters' preference for future deer populations, by DPA

DPA	Decrease	Stay the Same	Increase
119	1	4	95
132	4	5	91
171	1	21	79
173	3	18	78
176	4	17	79
177	4	25	71
178	3	19	79
179	4	23	73
181	3	20	77
199	2	80	78
Block average	3	17	80

values are the percent of respondents reporting each category

Table 17. Deer hunters' mean preferred percent change in the deer population, by DPA

DPA	Mean percent change	Median percent change	Minimum	Maximum
119	73	50	-50	400
132	70	50	-300	400
171	45	33	-75	400
173	38	30	-50	300
176	37	25	-100	400
177	31	25	-30	200
178	42	30	-60	274
179	31	25	-50	300
181	36	25	-50	250
199	39	30	-25	300
Block average	45	30	-300	400

Table 18. Deer hunters' support for regulations to increase proportion of antlered bucks in the area they hunt, by DPA

DPA	Strongly oppose	Slightly oppose	Neither	Slightly support	Strongly support
119	6	6	22	24	41
132	12	2	24	22	40
171	6	9	24	29	31
173	5	6	25	33	31
176	8	11	18	33	31
177	9	5	21	33	29
178	6	7	20	34	32
179	10	7	29	32	22
181	5	7	25	28	34
199	9	7	25	30	29
Block average	8	7	23	30	33

values are the percent of respondents reporting each category

Table 19. Mean number of years that deer hunters have been hunting deer in Minnesota, by DPA

DPA	Mean
119	30
132	29
171	30
173	27
176	31
177	30
178	28
179	30
181	29
199	28
Block average	29

Table 20. Percent of deer hunters that set out food for deer to consume, by DPA

DPA	Yes	No
119	8	93
132	7	93
171	4	96
173	8	92
176	18	82
177	11	89
178	12	88
179	12	88
181	13	87
199	17	83
Block average	11	89

values are the percent of respondents reporting each category

Table 21. Percent of deer hunters that set out minerals for deer to consume, by DPA

DPA	Yes	No
119	33	67
132	33	67
171	14	86
173	30	70
176	44	56
177	33	67
178	39	61
179	31	69
181	33	67
199	37	63
Block average	33	67

values are the percent of respondents reporting each category

Table 22. Percent of deer hunters that belong to a deer hunting organization, by DPA

DPA	Yes	No
119	11	89
132	8	92
171	13	87
173	11	89
176	14	86
177	10	90
178	10	90
179	8	92
181	4	96
199	10	90
Block average	10	90

values are the percent of respondents reporting each category

Table 23. Deer hunters' mean level of agreement with statements about the MNDNR, by DPA

	119	132	171	173	176	177	178	179	181	199	Avg.
The MNDNR does a good job managing deer in MN	2.9	2.8	3.0	3.2	3.0	3.1	2.9	3.4	3.1	3.5	3.0
When deciding about deer management in MN, the MNDNR will be open and honest in the things they say and do	3.1	3.1	3.1	3.3	3.2	3.2	3.1	3.5	3.4	3.5	3.2
The MNDNR can be trusted to make decisions about deer management that are good for the resource	3.1	3.1	3.1	3.2	3.2	3.1	3.1	3.4	3.4	3.5	3.2
The MNDNR will make decisions about deer management in a way that is fair	3.1	3.1	3.2	3.3	3.3	3.2	3.2	3.5	3.5	3.5	3.3
The MNDNR has deer managers and biologists who are well-trained for their jobs	3.5	3.4	3.4	3.6	3.5	3.6	3.4	3.9	3.6	3.7	3.5
The MNDNR listens to the concerns of deer hunters	2.9	2.9	3.0	3.1	3.0	3.1	3.0	3.3	3.2	3.3	3.1

responses measured on a bipolar scale, where 1 = strongly disagree, 3=neither, and 5 = strongly agree

Landowners

Landowners reported the number of acres that they own or lease within a DPA. On average, Block 14 landowners reported owning 56 acres. Too few individuals in Block 14 DPAs reported leasing property to make estimates for the average acres leased (Table 24). Roughly, 29% of landowners reported having agricultural land use on their property. Of these landowners, only 9% reported experiencing damage from deer. Too few landowners reported experiencing damage to agriculture to estimate severity (Table 25). Most landowners (74%) reported owning land in forest. Of these individuals, 7% reported having experienced damage from deer. Too few landowners experienced damage to forest land use to estimate severity (Table 26). Around 75% of landowners reported having residential land use on their property, and 21% experienced damage from deer. Landowners experiencing damage from deer to residential land use reported damage that was minor/negligible (51%), moderate (38%), and severe/very severe (11%) (Table 27).

Landowners assessed the damage they have experienced from deer compared to five years ago, and the change they have observed in the deer population on their property. Of landowners that have owned their property for five years or longer, the majority (57%) indicated that the amount of damage they have experienced from deer has remained about the same (Table 28). A near majority of landowners (48%) reported seeing fewer deer on their property compared to five years ago, while 27% reported seeing about the same number, and 25% reported seeing more (Table 29).

Only 24% of landowners reported feeling satisfied or very satisfied with the deer population on their land, while 31% were neutral, and 45% either dissatisfied or very dissatisfied (Table 30). Hunting landowners reported higher levels dissatisfaction (54%) than non-hunting landowners (22%), while non-hunters were more likely to report neutrality regarding their satisfaction with the deer population on their land (Table 31). Less than half of landowners (43%) indicated that the population of deer on their land was “about right,” compared to too low (42%) or too high (15%) (Table 32). Non-hunting landowners (66%) were more likely to hold a belief that the current population on their property was “about right” than hunting landowners (33%). Similarly, a higher percentage of hunting landowners (55%) than non-hunting landowners (12%) expressed a belief that the current deer population on their property was too low (Table 33).

When asked what they would like to see happen with future deer populations on their land, a plurality (46%) of Block 14 landowners preferred to see an increase, compared to 41% that would like to see the deer population stay the same, and 13% a decrease (Table 34). A higher proportion of non-hunting landowners preferred stability in the deer population (65%) than hunting landowners (30%). Conversely, more hunting landowners indicated a preference for increase (61%) than non-hunting landowners (14%) (Table 35). Landowners mean preferred change in the deer population was an 11% increase (Table 36). Outliers in open-ended responses to the question measuring preferred percent change in the deer population (e.g., +10,000%) were excluded from analysis if they were ± 3 standard deviations from the grand mean for the block, corresponding to a 99.7% confidence interval around the point estimate.

We asked landowners if they were aware that MNDNR offers technical assistance for deer damage issues, if they allow hunting on their property, if they lease any of their property for deer hunting, and if they impose any deer harvest restrictions on their property. Regardless of the number of acres a landowner owned, around a third were aware that MNDNR offers technical assistance for deer depredation issues (Table 37). The proportion of landowners allowing hunting on their property increased with the amount of land they owned, where roughly 42% of landowners with 2-19 acres allowed hunting on their property. This is compared to 89% who own 320 acres or more (Table 38). Very few (~2%) of landowners lease their land for deer hunting (Table 39). The majority of landowners (67%) did not impose any restrictions on the deer that hunters could take on their property (Table 40).

We asked landowners several questions about their deer hunting activity. Slightly more than half of Block 14 landowners reported hunting deer in each of 2017, 2018, and 2019 respectively. Roughly, 10% indicated that they hunt deer but did not hunt during one of those three years, and 29% indicated that they do not hunt deer at all (Table 41). Among deer hunting landowners, 42% reported doing all of their hunting on private land that they own, while 2%, 10% and 11% of landowners reported doing all of their hunting on land that they lease, private land that they do not own, and public land, respectively (Table 42). Around three-quarters of landowners indicated that they would shoot an antlerless deer given the opportunity (Table 43), and landowners have been hunting deer in Minnesota for an average of 38 years (Table 44).

Landowners rated their agreement with five statements about their trust in the MNDNR on scale from 1 = strongly disagree, to strongly agree, and a mid-point of neither. Landowners, on average, were neutral regarding their trust in the MNDNR. Mean values ranged from 3.3 to 3.6 for trust items (Table 45).

Respondents were asked to rate the importance of several priorities MNDNR could consider when setting deer population goals. Responses were recorded on a scale where 1 = not at all important, and 5 = very important. Among the items evaluated, landowners placed the highest importance on winter severity and public health as issues to consider when setting deer population goals (Table 46).

We asked landowners if they place food or minerals out for deer to consume. A small number of landowners (15%) reported feeding deer (Table 47). However, a larger proportion (31%) of landowner indicated that they place minerals out for deer to consume (Table 48).

Table 24. Mean acres owned and leased by landowners, by DPA

DPA	Acres Owned			Acres Leased*		
	Mean	Min	Max	Mean	Min	Max
119	75	2	1720			
132	34	2	954			
171	64	2	1240			
173	66	2	1688			
176	51	2	506			
177	62	2	500			
178	66	2	720			
179	54	2	1575			
181	54	2	756			
199	42	2	400			
Block average	56	2	1720			

*too few individuals reported leasing land to estimate

Table 25. Percent of landowners with agriculture on their land, percent experiencing damage from deer, and severity of damage, by DPA

Agriculture	Own or lease		Experience damage		Severity of Damage*		
DPA	Yes	No	Yes	No	Minor/ Negligible	Moderate	Severe/Very Severe
119	18	82	9	91			
132	20	80	14	86			
171	36	64	7	93			
173	38	62	15	85			
176	21	79	6	94			
177	29	71	5	95			
178	35	65	10	90			
179	42	28	12	88			
181	28	72	11	89			
199	26	74	4	96			
Block average	29	71	9	91			

values are the percent of respondents reporting each category

*too few respondents reported experiencing damage, and prevented analysis of this question

Table 26. Percent of landowners with forest on their land, percent experiencing damage from deer, and severity of damage, by DPA

Forest	Own or lease		Experience damage		Severity of Damage*		
DPA	Yes	No	Yes	No	Minor/ Negligible	Moderate	Severe/Very Severe
119	78	22	7	93			
132	71	29	11	89			
171	71	29	1	99			
173	74	26	4	96			
176	80	20	6	94			
177	77	23	4	96			
178	75	25	8	92			
179	75	25	12	88			
181	69	31	12	88			
199	67	33	5	95			
Block average	74	26	7	93			

values are the percent of respondents reporting each category

*too few respondents reported experiencing damage, and prevented analysis of this question

Table 27. Percent of landowners with residential land use on their land, percent experiencing damage from deer, and severity of damage, by DPA

Residential DPA	Own or lease		Experience damage		Severity of Damage		
	Yes	No	Yes	No	Minor/ Negligible	Moderate	Severe/Very Severe
119	61	39	9	91	15	70	15
132	80	20	31	69	33	52	16
171	71	29	12	88	60	40	0
173	67	33	16	84	68	27	6
176	79	21	22	78	51	44	5
177	73	27	19	81	63	25	12
178	78	22	21	80	66	19	15
179	82	18	20	80	56	29	15
181	79	21	30	70	50	41	9
199	78	22	20	80	54	33	13
Block average	75	25	21	79	51	38	11

values are the percent of respondents reporting each category

Table 28. Landowners' perceived trend in damage from deer over 5 years, by DPA

DPA	Much less damage	Slightly less damage	About the same damage	Slightly more damage	Much more damage
119	33	6	54	4	3
132	25	10	54	8	4
171	24	7	64	5	0
173	26	5	62	4	3
176	20	7	59	11	3
177	25	6	62	4	3
178	22	11	58	7	3
179	21	10	60	4	5
181	29	10	47	10	4
199	30	8	51	7	4
Block average	25	8	57	6	3

values are the percent of respondents reporting each category

Table 29. Landowners' perceived trend in the deer population over the last 5 years, by DPA

DPA	Many fewer deer	Slightly fewer deer	About the same number of deer	Slightly more deer	Many more deer
119	48	20	14	12	7
132	34	21	23	13	10
171	30	25	30	12	3
173	22	29	28	12	9
176	23	23	23	22	9
177	24	24	28	13	11
178	18	18	35	16	14
179	14	20	32	23	10
181	26	14	26	23	11
199	18	28	36	12	6
Block average	26	22	27	16	9

values are the percent of respondents reporting each category

Table 30. Landowners' satisfaction with the current deer population in the area of their property, by DPA

DPA	Very dissatisfied	Slightly dissatisfied	Neutral	Slightly satisfied	Very satisfied
119	44	14	27	6	9
132	33	23	23	9	12
171	24	23	33	11	10
173	21	24	33	10	12
176	17	24	37	10	12
177	21	15	32	15	17
178	16	24	30	12	18
179	16	23	26	15	21
181	25	16	35	14	9
199	17	20	36	11	15
Block average	24	21	31	11	13

values are the percent of respondents reporting each category

Table 31. Landowners' satisfaction with the deer population on their land, by DPA and hunting status

DPA	Non-hunting Landowners			Hunting Landowners		
	Dissatisfied	Neutral	Satisfied	Dissatisfied	Neutral	Satisfied
119	23	46	31	71	19	9
132	32	35	33	71	16	13
171	11	51	38	61	25	14
173	10	58	32	55	26	20
176	28	40	32	46	35	19
177	13	48	39	45	24	31
178	26	47	27	47	22	30
179	27	35	38	44	22	34
181	22	62	16	49	24	27
199	17	57	27	52	22	26
Block average	22	47	31	54	24	22

values are the percent of respondents reporting each category

Table 32. Landowners' perception of the deer population on their land, by DPA

DPA	Much too low	Too low	About right	Too high	Much too high
119	36	26	32	3	2
132	22	21	37	15	5
171	16	35	43	5	1
173	17	30	40	12	2
176	11	30	40	16	3
177	11	23	51	11	3
178	9	26	46	17	2
179	8	25	48	14	5
181	16	21	43	18	2
199	12	23	58	5	2
Block average	16	26	43	12	3

values are the percent of respondents reporting each category

Table 33. Landowners' perception of the deer population on their land, by DPA and hunting status

DPA	Non-hunting Landowners			Hunting Landowners		
	Too low/much too low	About right	Too high/much too high	Too low/much too low	About right	Too high/much too high
119	20	68	12	76	20	3
132	11	59	30	64	23	13
171	17	74	9	65	31	4
173	13	66	21	56	32	11
176	14	52	34	52	34	14
177	5	76	19	45	41	13
178	12	58	30	46	39	14
179	13	62	25	42	41	17
181	9	68	23	48	33	19
199	9	84	7	53	42	4
Block average	12	66	22	55	33	12

values are the percent of respondents reporting each category

Table 34. Landowners' preference for future deer populations, by DPA

DPA	Decrease	Stay the Same	Increase
119	7	27	65
132	17	35	47
171	5	39	56
173	12	37	51
176	16	38	46
177	11	52	37
178	16	42	42
179	17	47	36
181	17	43	41
199	4	54	43
Block average	13	41	46

values are the percent of respondents reporting each category

Table 35. Landowners' preference for future deer populations, by DPA and hunting status

DPA	Non-hunting Landowners			Hunting Landowners		
	Decrease	Stay the same	Increase	Decrease	Stay the same	Increase
119	11	66	23	6	15	80
132	27	54	19	12	23	65
171	11	78	12	3	24	73
173	19	64	17	10	30	60
176	28	60	12	11	28	61
177	19	70	11	8	44	47
178	32	54	14	8	36	57
179	25	60	15	14	41	46
181	26	65	9	13	34	53
199	7	84	9	2	32	66
Block average	21	65	14	9	30	61

values are the percent of respondents reporting each category

Table 36. Landowners' mean preferred percent change in the deer population, by DPA

DPA	Mean percent change	Median percent change	Minimum	Maximum
119	25	5	-90	100
132	10	0	-90	100
171	15	4	-50	100
173	13	0	-100	100
176	7	0	-90	100
177	8	0	-75	100
178	8	0	-78	100
179	4	0	-100	100
181	11	0	-99	100
199	11	0	-100	100
Block average	11	0	-100	100

Table 37. Percent of landowners aware that MNDNR offers technical and financial assistance for deer depredation problems, by DPA, and acres owned

DPA	2-19 acres	20-79 acres	80-319 acres	320+ acres	Average
119	39	32	31	33	35
132	20	26	31	-	23
171	27	32	31	25	29
173	23	25	29	32	25
176	28	29	23	33	28
177	28	36	43	29	33
178	24	27	25	18	25
179	35	25	43	40	33
181	30	23	39	33	29
199	16	31	31	50	22
Block average	27	28	33	29	28

values are the percent of respondents reporting each category

Table 38. Percent of landowners that allow hunting on their property, by DPA, and acres owned

DPA	2-19 acres	20-79 acres	80-319 acres	320+ acres	Average
119	40	79	64	100	59
132	42	73	75	-	53
171	44	83	86	88	65
173	47	75	86	86	64
176	36	66	79	100	53
177	37	75	80	100	58
178	43	63	76	88	56
179	37	71	94	67	55
181	54	75	79	100	65
199	39	66	81	100	52
Block average	42	73	80	89	58

values are the percent of respondents reporting each category

Table 39. Percent of landowners that leased their property for deer hunting, by DPA.

DPA	Yes	No
119	4	96
132	3	97
171	0	100
173	0	100
176	0	100
177	2	98
178	0	100
179	4	96
181	1	99
199	3	97
Block average	2	98

values are the percent of respondents reporting each category

Table 40. Percent of landowners imposing different harvest restrictions on their property, by DPA

DPA	Antlerless harvest is restricted, but hunters can take any legal buck	Buck harvest is restricted to large antlered bucks, but hunters can take any antlerless deer	Buck harvest is restricted to large antlered bucks, and antlerless harvest is also restricted	No restrictions on the type of deer that can be harvested	Other
119	25	3	10	52	10
132	20	0	5	57	17
171	8	6	5	77	4
173	6	7	8	72	8
176	15	1	9	67	9
177	4	6	10	69	12
178	9	7	7	62	15
179	7	5	3	77	8
181	14	8	6	64	8
199	18	0	5	69	7
Block average	12	5	7	67	10

values are the percent of respondents reporting each category

Table 41. Percent of landowners reporting hunting deer during the last three years, and those that do not hunt, by DPA

DPA	2017	2018	2019	Did not hunt these years	Do not hunt
119	62	60	59	12	24
132	51	50	49	9	38
171	64	63	63	6	28
173	69	67	61	8	21
176	52	52	49	15	29
177	56	53	52	14	26
178	56	56	51	8	31
179	59	57	57	9	28
181	59	59	60	8	28
199	44	42	40	14	36
Block average	57	56	55	10	29

values are the percent of respondents reporting each category

Table 42. Landowners' time spent hunting on different land ownership types, by DPA

	Response	119	132	171	173	176	177	178	179	181	199	Avg.
Private land that I own	None	16	18	14	9	19	17	12	16	13	29	15
	Some	26	34	20	16	21	17	22	17	17	17	21
	Most	18	24	20	21	22	20	21	24	20	27	22
	All	39	25	46	54	38	46	45	42	51	28	42
Private land that I lease for hunting	None	92	90	99	93	95	92	94	89	98	96	93
	Some	0	6	0	2	3	8	5	3	0	0	3
	Most	7	3	0	2	3	8	0	2	2	0	3
	All	1	1	1	2	0	2	0	6	0	4	2
Private land that I do not own or lease	None	58	59	64	70	62	55	68	50	61	45	60
	Some	30	24	21	11	17	27	21	29	19	25	22
	Most	3	10	10	6	11	3	8	11	7	6	8
	All	9	8	5	13	10	14	2	10	12	23	10
Public land	None	24	31	37	45	27	48	38	28	47	49	37
	Some	27	27	34	34	40	30	36	48	27	27	33
	Most	34	26	22	14	19	17	13	15	15	15	19
	All	14	17	8	7	14	5	13	10	11	10	11

values are the percent of respondents reporting each category

Table 43. Percent of hunting landowners that would shoot an antlerless deer, by DPA

DPA	Yes	No
119	64	36
132	69	31
171	76	24
173	80	20
176	66	34
177	75	25
178	78	22
179	82	18
181	78	22
199	68	32
Block average	74	26

values are the percent of respondents reporting each category

Table 44. Mean number of years that hunting landowners have been hunting deer in Minnesota, by DPA

DPA	Mean
119	41
132	37
171	41
173	37
176	38
177	40
178	40
179	36
181	35
199	36
Block average	38

Table 45. Landowners' mean level of agreement with statements about the MNDNR, by DPA

	119	132	171	173	176	177	178	179	181	199	Avg.
The MNDNR does a good job managing deer in MN	3.0	3.0	3.2	3.2	3.1	3.3	3.1	3.2	3.2	3.5	3.2
When deciding about deer management in MN, the MNDNR will be open and honest in the things they say and do	3.2	3.4	3.3	3.4	3.5	3.3	3.3	3.5	3.5	3.6	3.4
The MNDNR can be trusted to make decisions about deer management that are good for the resource	3.2	3.3	3.2	3.4	3.3	3.3	3.1	3.4	3.4	3.6	3.3
The MNDNR will make decisions about deer management in a way that is fair	3.3	3.4	3.3	3.4	3.3	3.4	3.3	3.4	3.4	3.7	3.4
The MNDNR has deer managers and biologists who are well-trained for their jobs	3.6	3.7	3.6	3.6	3.5	3.7	3.4	3.6	3.7	3.7	3.6
The MNDNR listens to the concerns of landowners	3.0	3.2	3.2	3.2	3.3	3.3	3.1	3.2	3.4	3.5	3.3

responses measured on a bipolar scale, where 1 = strongly disagree, 3=neither, and 5 = strongly agree

Table 46. Landowners' mean stated importance for factors to consider in making deer population goals, by DPA

	119	132	171	173	176	177	178	179	181	199	Avg.
Amount of deer mortality during an average winter	3.7	3.7	3.7	3.8	3.7	3.7	3.7	3.9	3.8	3.8	3.8
Amount of deer mortality during a severe winter	4.2	4.1	4.1	4.2	4.1	4.2	4.1	4.2	4.2	4.1	4.1
Potential health risks to the deer herd	4.0	4.0	4.0	4.0	4.0	4.1	4.0	4.1	4.2	4.2	4.1
Public health (human-deer diseases)	3.7	3.8	3.9	4.0	3.7	3.7	3.7	3.9	4.0	4.1	3.9
Amount of crop damage from deer	2.8	3.1	3.0	3.0	3.0	2.9	3.2	3.2	3.2	3.2	3.1
Number of deer vehicle collisions	3.2	3.6	3.5	3.5	3.6	3.3	3.6	3.7	3.8	3.6	3.5
Deer over-browsing of forests	3.0	3.2	3.1	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.2
Impacts of deer on other wildlife species	3.0	3.1	2.9	3.2	3.1	3.0	3.0	3.2	3.3	3.2	3.1
Deer hunting heritage and tradition	3.9	3.7	3.7	3.9	3.7	3.8	3.8	3.8	3.8	3.8	3.8
Hunter satisfaction with deer numbers	3.7	3.4	3.5	3.7	3.4	3.4	3.4	3.5	3.5	3.5	3.5
Public satisfaction with deer numbers	3.3	3.1	3.1	3.2	3.2	3.1	3.1	3.2	3.2	3.3	3.2
Impact of deer hunting on the local economy	3.6	3.4	3.6	3.8	3.5	3.4	3.4	3.6	3.5	3.5	3.6
Quality of bucks (antler size)	2.9	2.9	3.0	3.3	2.9	2.8	2.9	3.0	2.8	3.0	3.0
Damage to gardens and landscaping	2.5	3.1	2.7	2.8	3.0	2.6	3.0	2.9	3.0	3.0	2.9
The ratio of bucks to does	3.5	3.4	3.3	3.6	3.5	3.3	3.5	3.6	3.6	3.5	3.5

responses measured on a unipolar scale, where 1 = not at all important, and 5 = very important

Table 47. Percent of landowners that set out food for deer to consume, by DPA

DPA	Yes	No
119	15	85
132	19	81
171	8	92
173	12	88
176	22	78
177	18	82
178	13	87
179	18	82
181	15	85
199	12	88
Block average	15	85

values are the percent of respondents reporting each category

Table 48. Percent of landowners that set out minerals for deer to consume, by DPA

DPA	Yes	No
119	39	61
132	30	70
171	21	79
173	19	81
176	36	61
177	41	59
178	34	66
179	30	70
181	34	66
199	20	80
Block average	31	69

values are the percent of respondents reporting each category

APPENDIX A. Hunter Questionnaire

Q1. For each of the last three years, please check the years that you hunted deer in Minnesota, or if you did not hunt deer during these years. *(Check all that apply).*

_____2017 _____2018 _____2019 _____I hunt deer, but didn't hunt these years *(Please skip to Q9).*

Q2. Which of the following seasons did you hunt in Minnesota in 2019? *(Check all that apply).*

_____Archery _____Firearm _____Muzzleloader

Q3. How much of your deer hunting did you do on each of the following types of land during your most recent deer hunting season? *(Circle one number for each).*

	None	Some	Most	All
Private land that I own	1	2	3	4
Private land that I lease for hunting	1	2	3	4
Private land that I do not own or lease	1	2	3	4
Public land	1	2	3	4

Q4. Were there any deer harvest restrictions, other than state regulations, on the property you hunted during your most recent deer hunting season? *(Check only one)*

- ☐ Antlerless harvest is restricted, but hunters can take any legal buck
- ☐ Buck harvest is restricted to large antlered bucks, but hunters can take any antlerless deer
- ☐ Buck harvest is restricted to large antlered bucks, and antlerless harvest is also restricted
- ☐ No restrictions on the type of deer that can be harvested
- ☐ Other (please explain): _____

Q5. Overall, how satisfied were you with your most recent deer hunting season? *(Circle one number).*

Very dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Very satisfied
1	2	3	4	5

Q6. How much do you agree or disagree with the following statements about your most recent deer hunting season? *(Circle one number for each).*

	Strongly disagree	Slightly disagree	Neither	Slightly agree	Strongly agree
I was satisfied with the number of legal bucks I saw	1	2	3	4	5
I was satisfied with the quality of bucks I saw	1	2	3	4	5
I heard about or saw legal bucks while hunting	1	2	3	4	5
I was satisfied with the number of antlerless deer I saw	1	2	3	4	5
I was satisfied with the number of deer I saw while hunting	1	2	3	4	5

Q7. Compared to 5 years ago, what trend have you seen in the deer population in the permit area where you hunt most often? (Circle one number). *If you weren't hunting this area 5 years ago, please skip to Q8.*

Many fewer deer	Slightly fewer deer	About the same number of deer	Slightly more deer	Many more deer
1	2	3	4	5

Q8. Overall, how satisfied are you with the current deer population in the permit area where you hunt most often? (Circle one number).

Very dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Very satisfied
1	2	3	4	5

Q9. Will you shoot an antlerless deer given the opportunity?

_____ Yes _____ No

Q10. Please rate the importance of the following factors used in making deer population goals. (Circle one number for each).

	Not at all important	A little important	Moderately important	Important	Very important
Amount of deer mortality during an <u>average</u> winter	1	2	3	4	5
Amount of deer mortality during a <u>severe</u> winter	1	2	3	4	5
Potential health risks to the deer herd	1	2	3	4	5
Public health (human-deer diseases)	1	2	3	4	5
Amount of crop damage from deer	1	2	3	4	5
Number of deer-vehicle collisions	1	2	3	4	5
Deer-over browsing of forests	1	2	3	4	5
Impacts of deer on other wildlife species	1	2	3	4	5
Deer hunting heritage and tradition	1	2	3	4	5
Hunter satisfaction with deer numbers	1	2	3	4	5
Public satisfaction with deer numbers	1	2	3	4	5
Impact of deer hunting on the local economy	1	2	3	4	5
Quality of bucks (e.g., Antler size)	1	2	3	4	5
Damage to gardens and landscaping	1	2	3	4	5
The ratio of bucks to does	1	2	3	4	5
Other (please specify):	1	2	3	4	5

Q11. Do you think the deer population where you hunt most often is: (Circle one number)

Much too low	Too low	About right	Too high	Much too high
1	2	3	4	5

Q12. What would you like to happen to deer population levels in the area where you hunt most often in the next 5 years? (*Check one*).

_____ **Decrease** _____ **Stay the same** _____ **Increase**

Q12a. If you would like the deer population in the area you hunt most often to increase or decrease, what percent would you like it to change? (e.g., 25%) →

Increase or Decrease by _____ %

Q13. How much would you support or oppose a regulation that would increase the proportion of antlered bucks in the deer permit area where you hunt most often? (*Circle one number*)

Strongly oppose	Slightly oppose	Neither	Slightly support	Strongly support
1	2	3	4	5

Q14. Including 2019, how many years have you been hunting deer in Minnesota? _____ **Years**

Q15. Do you deliberately set out food for wild deer to consume (e.g., deer feeder)? ***Do not report food plots.***

_____ **Yes** _____ **No**

Q16. Do you deliberately set out minerals for wild deer to consume (e.g., salt blocks)?

_____ **Yes** _____ **No**

Q17. Are you a member of a deer hunting organization (e.g., Minnesota Deer Hunters Association)?

_____ **Yes** _____ **No**

Q18. How much do you agree or disagree with the following statements about the Minnesota Department of Natural Resources (MNDNR)? (*Circle one number for each*).

	Strongly disagree	Slightly disagree	Neither	Slightly agree	Strongly agree
The MNDNR does a good job of managing deer in Minnesota	1	2	3	4	5
When deciding about deer management in MN, the MNDNR will be open and honest in the things they say and do	1	2	3	4	5
The MNDNR can be trusted to make decisions about deer management that are good for the resource	1	2	3	4	5
The MNDNR will make decisions about deer management in a way that is fair	1	2	3	4	5
The MNDNR has deer managers and biologists who are well-trained for their jobs	1	2	3	4	5
The MNDNR listens to the concerns of deer hunters	1	2	3	4	5

APPENDIX B. Landowner Questionnaire

Q1. How many total acres did you own and/or lease at the end of 2019?

_____ **Acres owned** _____ **Acres leased**

Q2. Did you own or lease any land that was in the following land uses in 2019, and did deer cause any damage to those land uses in 2019? (*Check all that apply*).

Land use	Owned or leased		Experienced damage	
Agriculture	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Forest	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Residential	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

← If you did not own or lease any of the following in 2019 please skip to Q6.

Q3. How would you describe the total amount of damage from deer that you experienced in 2019? (*Circle one*).

Negligible	Minor	Moderate	Severe	Very Severe
1	2	3	4	5

Q4. How would you compare the total amount of damage from deer you experienced in 2019 to what you experienced 5 years ago? (*Circle one*). If you did not own or lease land 5 years ago, please skip to Q6.

Much less damage	Slightly less damage	About the same damage	Slightly more damage	Much more damage
1	2	3	4	5

Q5. Over the past 5 years, what trend have you seen in the deer population in the area of your property? (*Circle one*).

Many fewer deer	Slightly fewer deer	About the same number of deer	Slightly more deer	Many more deer
1	2	3	4	5

Q6. How satisfied are you with the current deer population in the area of your property? (*Circle one*).

Very dissatisfied	Slightly dissatisfied	Neutral	Slightly satisfied	Very satisfied
1	2	3	4	5

Q7. Do you think the deer population where you own land is: (*Circle one*)

Much too low	Too low	About right	Too high	Much too high
1	2	3	4	5

Q8. What would you like to happen to deer population levels in the area of your property in the next 5 years? (*Check one*).

_____ **Decrease** _____ **Stay the same** _____ **Increase**

Q8a. If you would like the deer population in the area of your property to increase or decrease, what percent would you like it to change? (e.g., 25%) →

Increase or Decrease by _____ %

Q9. Are you aware that MNDNR offers technical and financial assistance to landowners for deer depredation problems?

_____ **Yes** _____ **No**

Q10. Did you allow hunting on your property during the 2019 deer seasons?

_____ **Yes** _____ **No (Please skip to Q13).**

Q11. Do you lease any of your property for deer hunting?

_____ **Yes** _____ **No**

Q12. Did you personally impose any deer harvest restrictions, other than state regulations on your property in 2019? *(Check one).*

- ☐ Antlerless harvest is restricted, but hunters can take any legal buck
- ☐ Buck harvest is restricted to large antlered bucks, but hunters can take any antlerless deer
- ☐ Buck harvest is restricted to large antlered bucks, and antlerless harvest is also restricted
- ☐ No restrictions on the type of deer that can be harvested
- ☐ Other (please explain): _____

Q13. For each of the last three years, please check the years that you hunted deer in Minnesota, or indicate if you are not a deer hunter. *(Check all that apply).*

_____ **2017** _____ **2018** _____ **2019** _____ I hunt deer, but didn't hunt these years **(Please skip to Q15).**

_____ I do not hunt deer at all **(Please skip to Q17).**

Q14. How much of your deer hunting did you do on each of the following types of land during your most recent deer hunting season? *(Circle one for each).*

	None	Some	Most	All
Private land that I own	1	2	3	4
Private land that I lease for hunting	1	2	3	4
Private land that I do not own or lease	1	2	3	4
Public land	1	2	3	4

Q15. Will you shoot an antlerless deer given the opportunity? _____ **Yes** _____ **No**

Q16. Including 2019, how many years have you been hunting deer in Minnesota? _____ **Years**

Q17. How much do you agree or disagree with the following statements about the Minnesota Department of Natural Resources (MNDNR)? (*Circle one for each*).

	Strongly disagree	Slightly disagree	Neither	Slightly agree	Strongly agree
The MNDNR does a good job of managing deer in Minnesota	1	2	3	4	5
When deciding about deer management in MN, the MNDNR will be open and honest in the things they say and do	1	2	3	4	5
The MNDNR can be trusted to make decisions about deer management that are good for the resource	1	2	3	4	5
The MNDNR will make decisions about deer management in a way that is fair	1	2	3	4	5
The MNDNR has deer managers and biologists who are well-trained for their jobs	1	2	3	4	5
The MNDNR listens to the concerns of landowners	1	2	3	4	5

Q18. Please rate the importance of the following factors used in making deer population goals. (*Circle one number for each*).

	Not at all important	A little important	Moderately important	Important	Very important
Amount of deer mortality during an average winter	1	2	3	4	5
Amount of deer mortality during a severe winter	1	2	3	4	5
Potential health risks to the deer herd	1	2	3	4	5
Public health (human-deer diseases)	1	2	3	4	5
Amount of crop damage from deer	1	2	3	4	5
Number of deer-vehicle collisions	1	2	3	4	5
Deer over-browsing of forests	1	2	3	4	5
Impacts of deer on other wildlife species	1	2	3	4	5
Deer hunting heritage and tradition	1	2	3	4	5
Hunter satisfaction with deer numbers	1	2	3	4	5
Public satisfaction with deer numbers	1	2	3	4	5
Impact of deer hunting on the local economy	1	2	3	4	5
Quality of bucks (e.g., Antler size)	1	2	3	4	5
Damage to gardens and landscaping	1	2	3	4	5
The ratio of bucks to does	1	2	3	4	5
Other (please specify):	1	2	3	4	5

Q19. Do you deliberately set out food for wild deer to consume (e.g., deer feeder)? ***Do not report food plots.***

_____ Yes _____ No

Q20. Do you deliberately set out minerals for wild deer to consume (e.g., salt blocks)?

_____ Yes _____ No