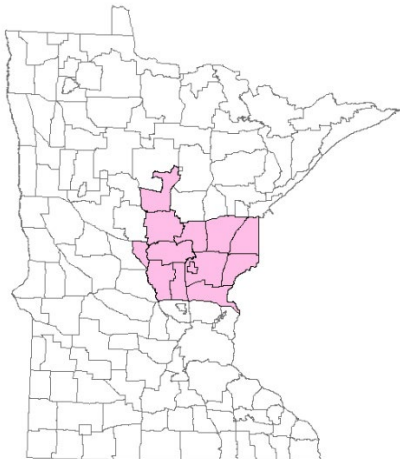




Fish and Wildlife Division

Deer Goal Setting Attitude Survey Report

Block 4: East Central Uplands



Contents

Deer Goal Setting Attitude Survey Report	1
Statement of Purpose and Scope of Data	6
Data Collection Process	6
Hunters	6
Landowners	6
Block 4: East Central Uplands	7
Figure 1. Goal setting Block 4 DPA boundaries	7
Response Rates and Weighting	8
Hunters	8
Landowners	8
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 acre 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 152 deer hunters’ and landowners’ preference for future deer population...	15
Figure 4. Deer permit area 155 landowners’ and hunters’ preference for future deer population	16
Figure 5. Deer permit area 156 hunters’ preference for future deer population.....	17
Figure 6. Deer permit area 157 landowners’ and hunters’ preference for future deer population	18
Figure 7. Deer permit area 159 landowners’ and hunters’ preference for future deer population	19
Figure 8. Deer permit area 172 hunters’ preference for future deer population.....	20
Figure 9. Deer permit area 183 hunters’ preference for future deer population.....	21
Figure 10. Deer permit area 221 hunters’ preference for future deer population.....	22

Figure 11. Deer permit area 222 hunters’ preference for future deer population.....	23
Figure 12. Deer permit area 225 hunters’ preference for future deer population.....	24
Figure 13. Deer permit area 248 hunters’ preference for future deer population.....	25
Figure 13. Deer permit area 249 hunters’ preference for future deer population.....	26
Figure 13. Deer permit area 604 hunters’ preference for future deer population.....	27
Hunters	28
Table 5. Percent of respondents reporting hunting deer during the last three years, by DPA.....	30
Table 6. Percent of 2019 deer hunters participating in deer hunting seasons, by DPA.....	31
Table 7. Percent of respondents effort spent hunting deer on hunting different types of land during their most recent deer hunting season, by DPA	32
Table 8. Deer hunters’ satisfaction with their most recent deer hunting season, by DPA	33
Table 9a. Deer hunters’ agreement with the statement “I was satisfied with the number of legal bucks” during their most recent deer hunting season, by DPA	34
Table 9b. Deer hunters’ agreement with the statement “I was satisfied with the quality of bucks” during their most recent deer hunting season, by DPA	35
Table 9c. Deer hunters’ agreement with the statement “I heard about or saw bucks while hunting” during their most recent deer hunting season, by DPA	36
Table 9d. Deer hunters’ agreement with the statement “I was satisfied with the number of antlerless deer I saw” during their most recent deer hunting season, by DPA	37
Table 9e. Deer hunters’ agreement with the statement “I was satisfied with the number of deer I saw while hunting” during their most recent deer hunting season, by DPA	38
Table 10. Deer hunters’ perceived change in the deer population over last 5 years, by DPA.....	39
Table 11. Deer hunters’ satisfaction with the deer population where they hunt, by DPA.....	40
Table 12. Percent of deer hunters that would shoot an antlerless deer, by DPA.....	41
Table 13. Deer hunters’ mean stated importance for factors to consider in making deer population goals, by DPA	42
Table 14. Deer hunters’ perception of the deer population in the DPA where they hunt, by DPA.....	43
Table 15. Deer hunters’ preference for future deer populations, by DPA.....	44

Table 16. Deer hunters’ mean preferred percent change in the deer population, by DPA.....	45
Table 17. Deer hunters’ support for regulations to increase proportion of antlered bucks in the area they hunt, by DPA.....	46
Table 18. Mean number of years that deer hunters have been hunting deer in Minnesota, by DPA.....	47
Table 19. Percent of deer hunters that set out food for deer to consume, by DPA.....	48
Table 20. Percent of deer hunters that set out minerals for deer to consume, by DPA.....	49
Table 21. Percent of deer hunters that belong to a deer hunting organization, by DPA.....	50
Table 22. Deer hunters’ mean level of agreement with statements about the MNDNR, by DPA.....	51
Landowners	52
Table 23. Mean acres owned and leased by landowners, by DPA.....	54
Table 24. Percent of landowners with agriculture on their land, percent experiencing damage from deer, and severity of damage, by DPA.....	55
Table 25. Percent of landowners with forest on their land, percent experiencing damage from deer, and severity of damage, by DPA.....	56
Table 26. Percent of landowners with residential land use on their land, percent experiencing damage from deer, and severity of damage, by DPA	57
Table 27. Landowners’ perceived trend in damage from deer over 5 years, by DPA.....	58
Table 28. Landowners’ perceived trend in the deer population over the last 5 years, by DPA.....	59
Table 29. Landowners’ satisfaction with the current deer population in the area of their property, by DPA	60
Table 30. Landowners’ satisfaction with the deer population on their land, by DPA and hunting status..	61
Table 31. Landowners’ perception of the deer population on their land, by DPA	62
Table 32. Landowners’ perception of the deer population on their land, by DPA and hunting status	63
Table 33. Landowners’ preference for future deer populations, by DPA	64
Table 34. Landowners’ preference for future deer populations, by DPA and hunting status	65
Table 35. Landowners’ mean preferred percent change in the deer population, by DPA	66
Table 36. Percent of landowners aware that MNDNR offers technical and financial assistance for deer depredation problems, by DPA, and acres owned.....	67

Table 37. Percent of landowners that allow hunting on their property, by DPA, and acres owned	68
Table 38. Percent of landowners that leased their property for deer hunting, by DPA.	69
Table 39. Percent of landowners imposing different harvest restrictions on their property, by DPA	70
Table 40. Percent of landowners reporting hunting deer during the last three years, and those that do not hunt, by DPA	71
Table 41. Landowners' time spent hunting on different land ownership types, by DPA.....	72
Table 42. Percent of hunting landowners that would shoot an antlerless deer, by DPA	73
Table 43. Mean number of years that hunting landowners have been hunting deer in Minnesota, by DPA	74
Table 44. Landowners' mean level of agreement with statements about the MNDNR, by DPA.....	75
Table 45. Landowners' mean stated importance for factors to consider in making deer population goals, by DPA	76
Table 46. Percent of landowners that set out food for deer to consume, by DPA	77
Table 47. Percent of landowners that set out minerals for deer to consume, by DPA.....	78
Appendix A.	79
Hunter Questionnaire.....	79
Landowner Questionnaire.....	83

Statement of Purpose and Scope of Data

The Minnesota Department of Natural Resources (MNDNR) periodically conducts surveys of deer hunters and landowners to assess preferences for deer populations, experiences with deer hunting, and impacts of deer populations on private property to inform the deer population goal setting process. This report details one such effort. Results of this study help inform decision making for deer populations. We randomly selected a subset of landowners and hunters for each Deer Permit Area (DPA) from county tax parcel records, and MNDNR deer license information respectively for participation. Therefore, the results of this study are representative of the stakeholder group, and may differ substantially from results of self-selected public input processes, as a function of the scientific study design. The values in this report are estimates of the average for all individuals within a given population of interest (e.g., hunters in a deer permit area), not just respondents to the survey.

Data Collection Process

We conducted our surveys of hunters and landowners using a mixed mode design that included three solicitations. We sent selected participants a letter directing them to complete a questionnaire online. Non-respondents received a second letter requesting their participation, followed by 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.

Hunters

Within a DPA, we randomly selected hunters from the list of all firearm deer license holders in the given year to receive a goal setting survey. We only included adults over the age of 18 at the time the sample was drawn. 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 the given DPA is the primary location where they hunt deer.

Landowners

Within a deer permit area, we randomly selected individual parcels from all parcels greater than or equal to 2 acres in size for inclusion. 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 4: East Central Uplands

The data presented herein are from a statistically representative survey of Minnesota deer hunters and landowners in goal setting Block 4 (East Central Uplands). This area includes deer permit areas: 152, 155, 156, 157, 159, 172, 183, 221, 222, 225, 248, 249 and 604 in the east central part of the state (Figure 1). DPA 152 is Mille Lacs Wildlife Management Area.

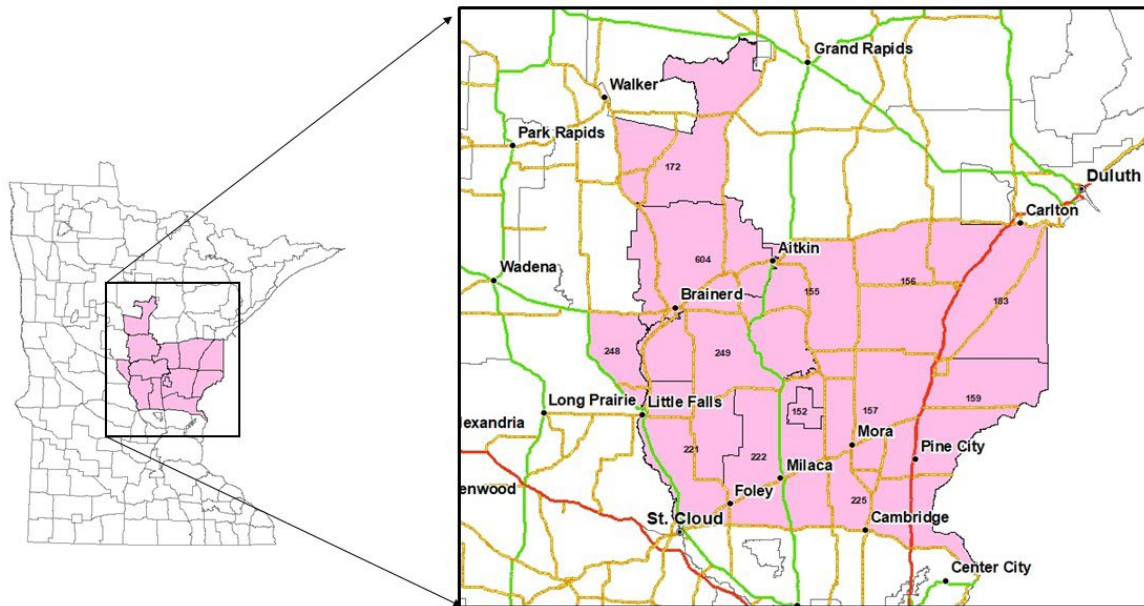


Figure 1. Goal setting Block 4 DPA boundaries

Response Rates and Weighting

Hunters

After accounting for undeliverable mail, the adjusted response rate for the Block 4 hunter sample was 42%. Response rates by DPA ranged from a low of 37% for DPA 152, to a high of 49% for DPA 172. 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 2021 hunting season. We made population estimates according to the weight schedule presented in Table 2 to address observed differences in age between respondents and the population. 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 4 landowner sample was 51%. Response rates by DPA ranged from a low of 44% for DPA 221, to a high of 55% for DPA 604. 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 the 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
152	436	20	153	416	0.35	0.37
155	547	20	217	527	0.40	0.41
156	555	17	233	538	0.42	0.43
157	560	21	230	539	0.41	0.43
159	553	17	222	536	0.40	0.41
172	556	32	258	524	0.46	0.49
183	553	14	241	539	0.44	0.45
221	541	23	244	518	0.45	0.47
222	552	25	213	527	0.39	0.40
225	556	14	212	542	0.38	0.39
248	520	15	205	505	0.39	0.41
249	550	11	222	539	0.40	0.41
604	557	18	226	539	0.41	0.42
Block Average	7036	247	2876	6789	0.41	0.42

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

Age Quantile	Population Proportion	Sample Proportion	Weight*
18-32	.2624	.1599	1.6410
33-45	.2538	.2107	1.2046
45-58	.2492	.2721	0.9158
59+	.2346	.3574	0.6564

*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
152	-	-	-	-	-	-
155	511	15	253	496	0.50	0.51
156	521	17	263	504	0.50	0.52
157	530	18	245	512	0.46	0.48
159	514	30	241	484	0.47	0.50
172	490	5	263	485	0.54	0.54
183	512	15	265	497	0.52	0.53
221	531	4	232	527	0.44	0.44
222	512	32	245	480	0.48	0.51
225	534	10	255	524	0.48	0.49
248	466	7	236	459	0.51	0.51
249	522	10	248	512	0.48	0.48
604	520	9	282	511	0.54	0.55
Block Average	6163	172	3028	5991	0.49	0.51

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

Acres strata	Population proportion	Sample proportion	Weight*
2-19	.5377	.2685	2.0026
20-79	.2894	.2834	1.0211
80-319	.1469	.2896	0.5072
320+	.0261	.1585	0.1646

*Weight = 1/(Sample Proportion/Population Proportion)

Summary of Deer Population Preferences

Figure 2 contains estimates of Goal Block 4 deer hunter and landowner preferences for change in the deer population where they hunt or their property is located respectively. Values are an estimate of the mean preferred percent change to the deer population by DPA, and its 95% confidence interval. Landowners reported a preference for stability (DPAs 221 and 222) or a very small increase (DPAs 225, 248, 249 and 604) in the deer population in roughly half of Block 4 DPAs. Landowners in the remaining DPAs (155-183) reported a preference for increases ranging from 10-19%. Deer hunters, on average, and regardless of DPA, preferred a small to moderate increase in the deer population. Estimates for deer hunters' preference for change to the deer population ranged from +6% for DPA 221 to +38% for DPA 172. Figures 3 through 13 contain DPA level estimates for the percent of hunters and landowners that preferred to see the deer population either decrease, stay the same, or increase.

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

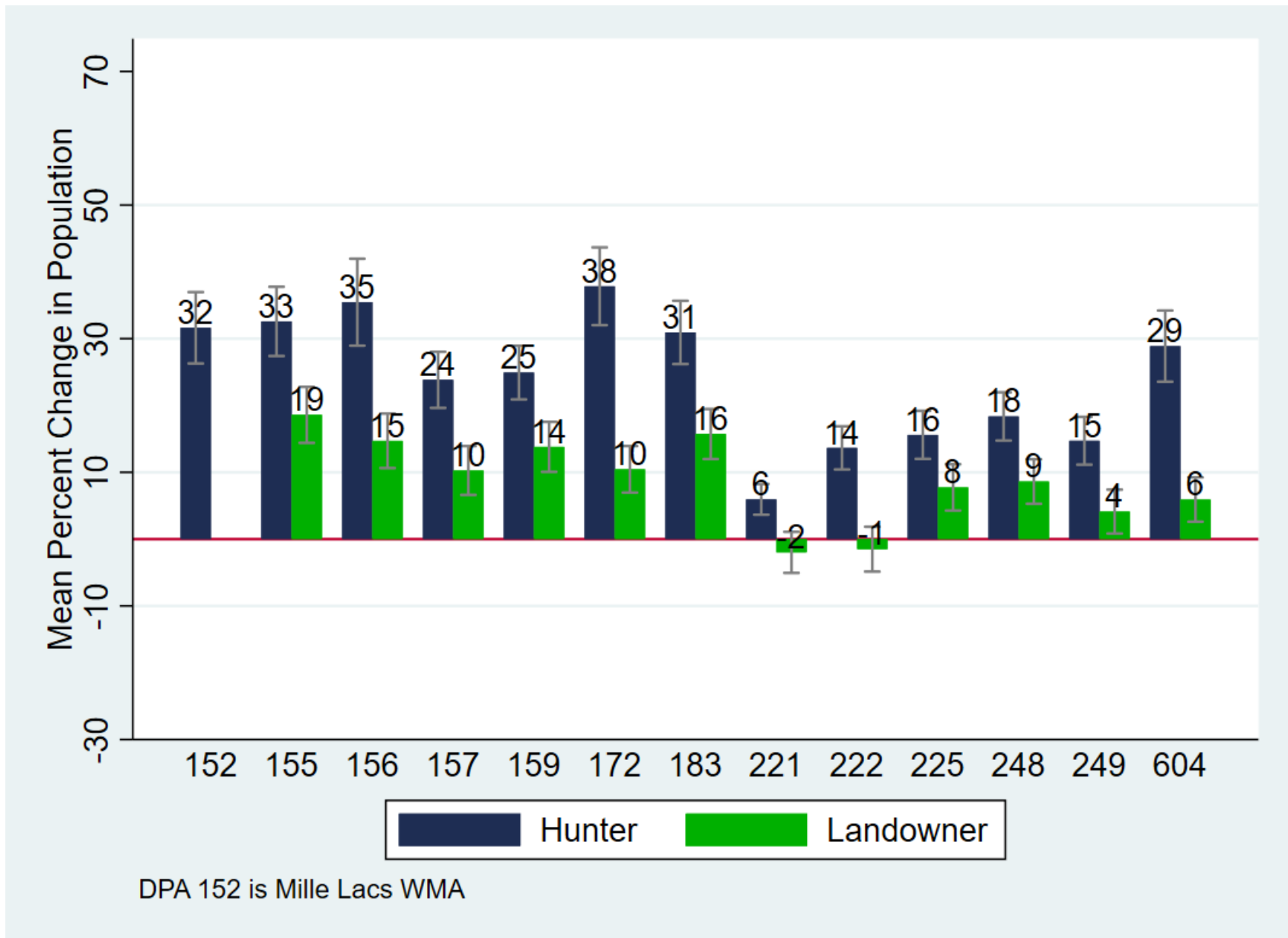


Figure 3. Deer permit area 152 deer hunters' and landowners' preference for future deer population

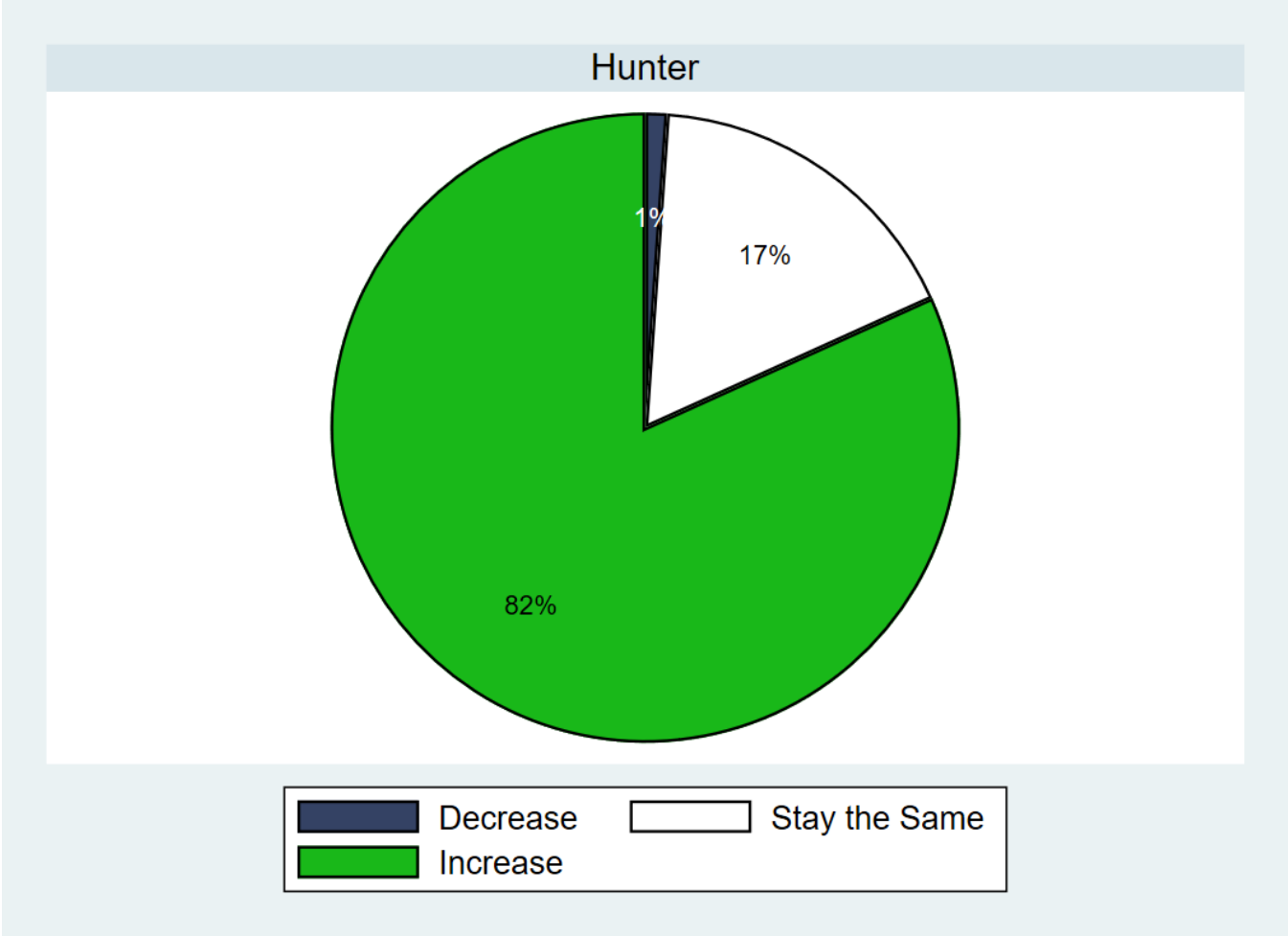


Figure 4. Deer permit area 155 landowners' and hunters' preference for future deer population

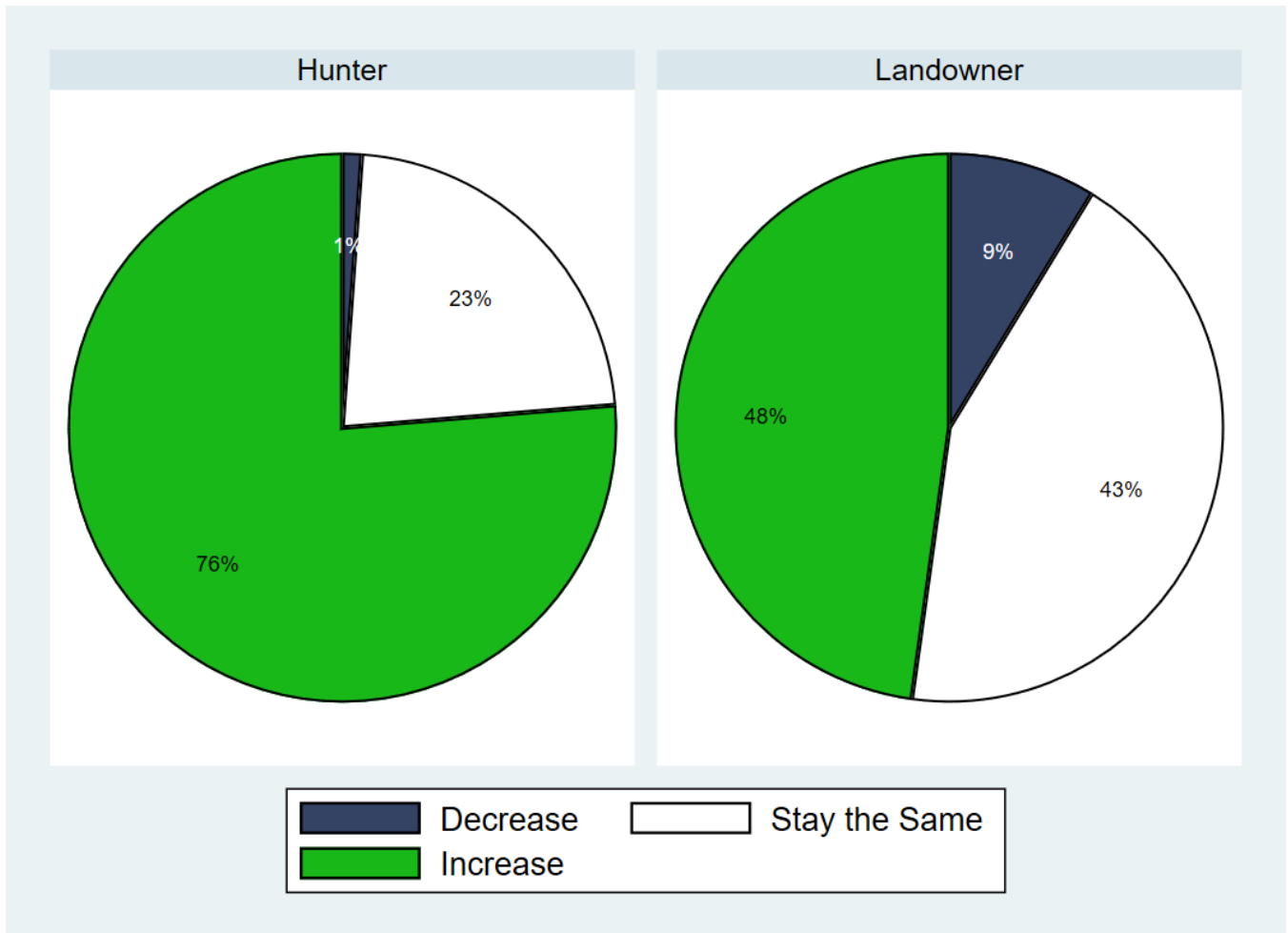


Figure 5. Deer permit area 156 hunters' preference for future deer population

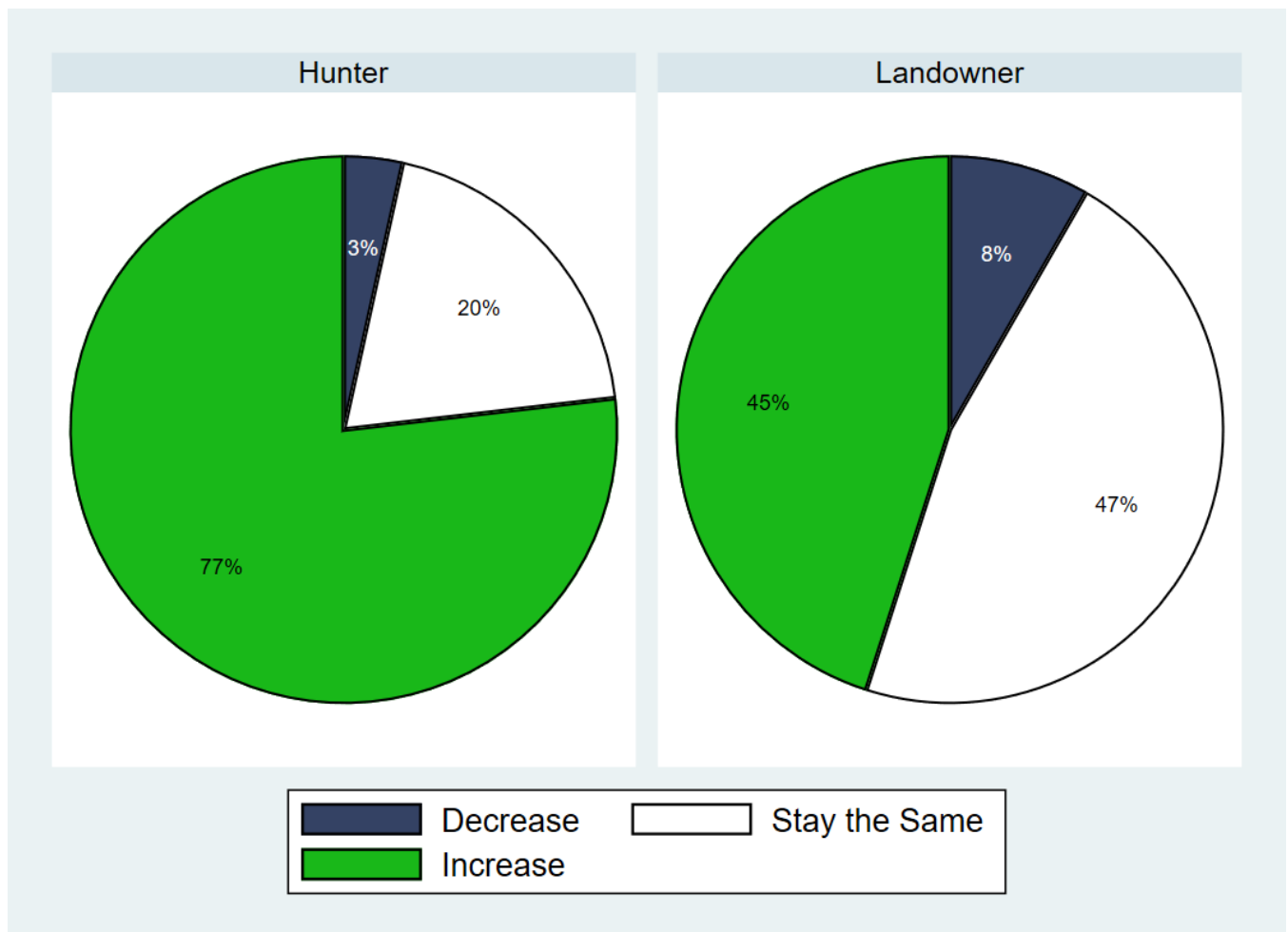


Figure 6. Deer permit area 157 landowners' and hunters' preference for future deer population

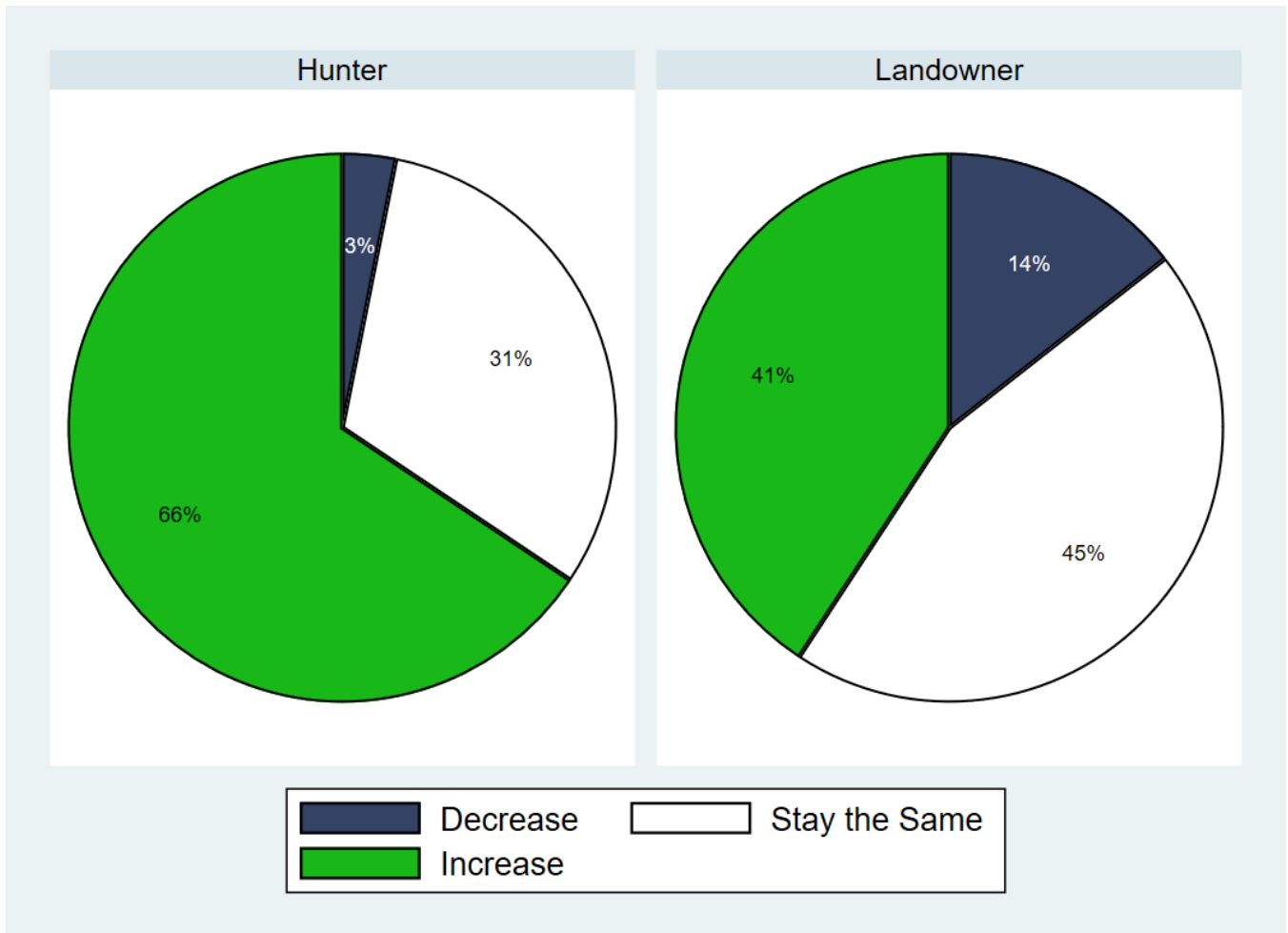


Figure 7. Deer permit area 159 landowners' and hunters' preference for future deer population

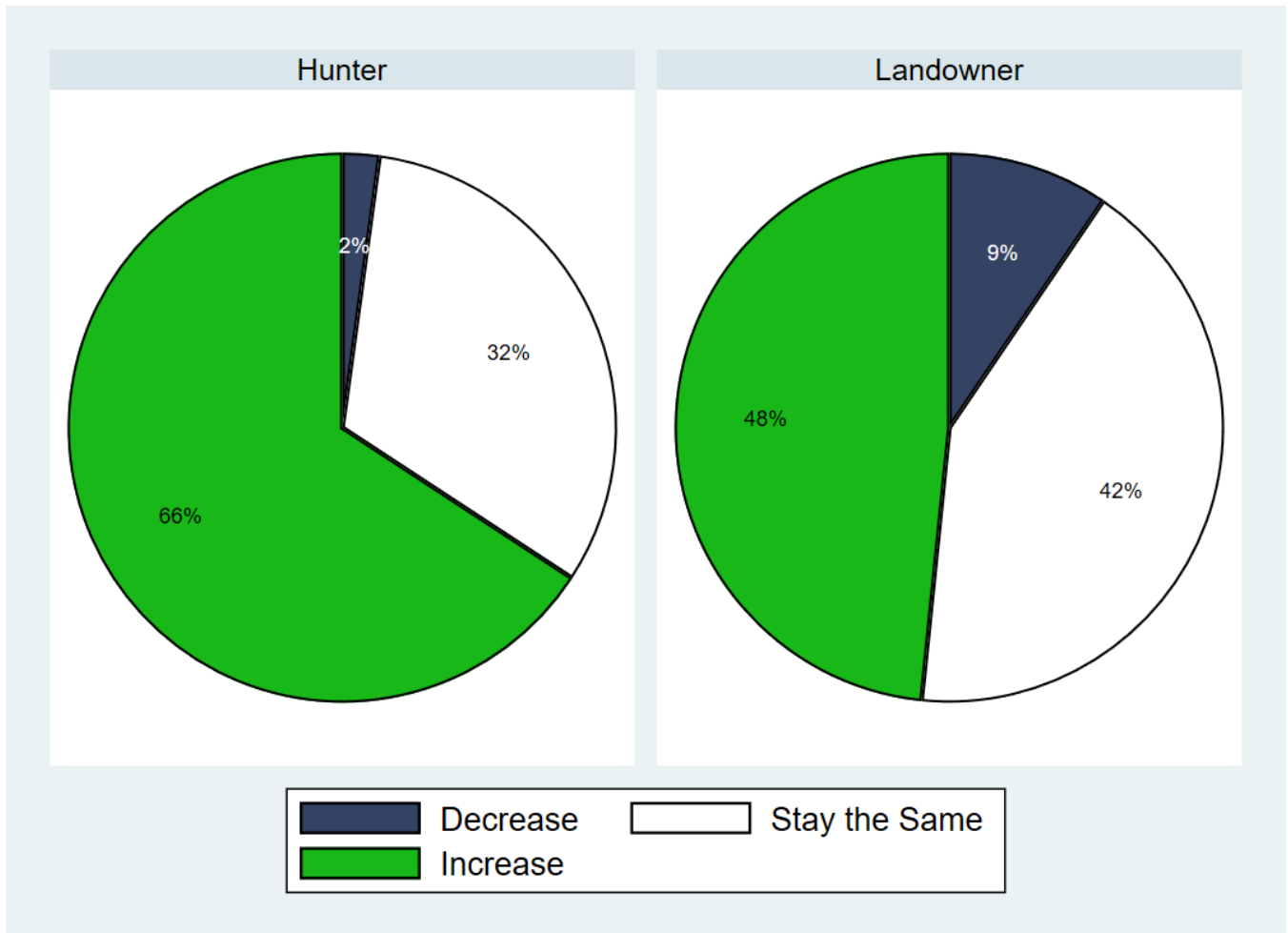


Figure 8. Deer permit area 172 hunters' preference for future deer population

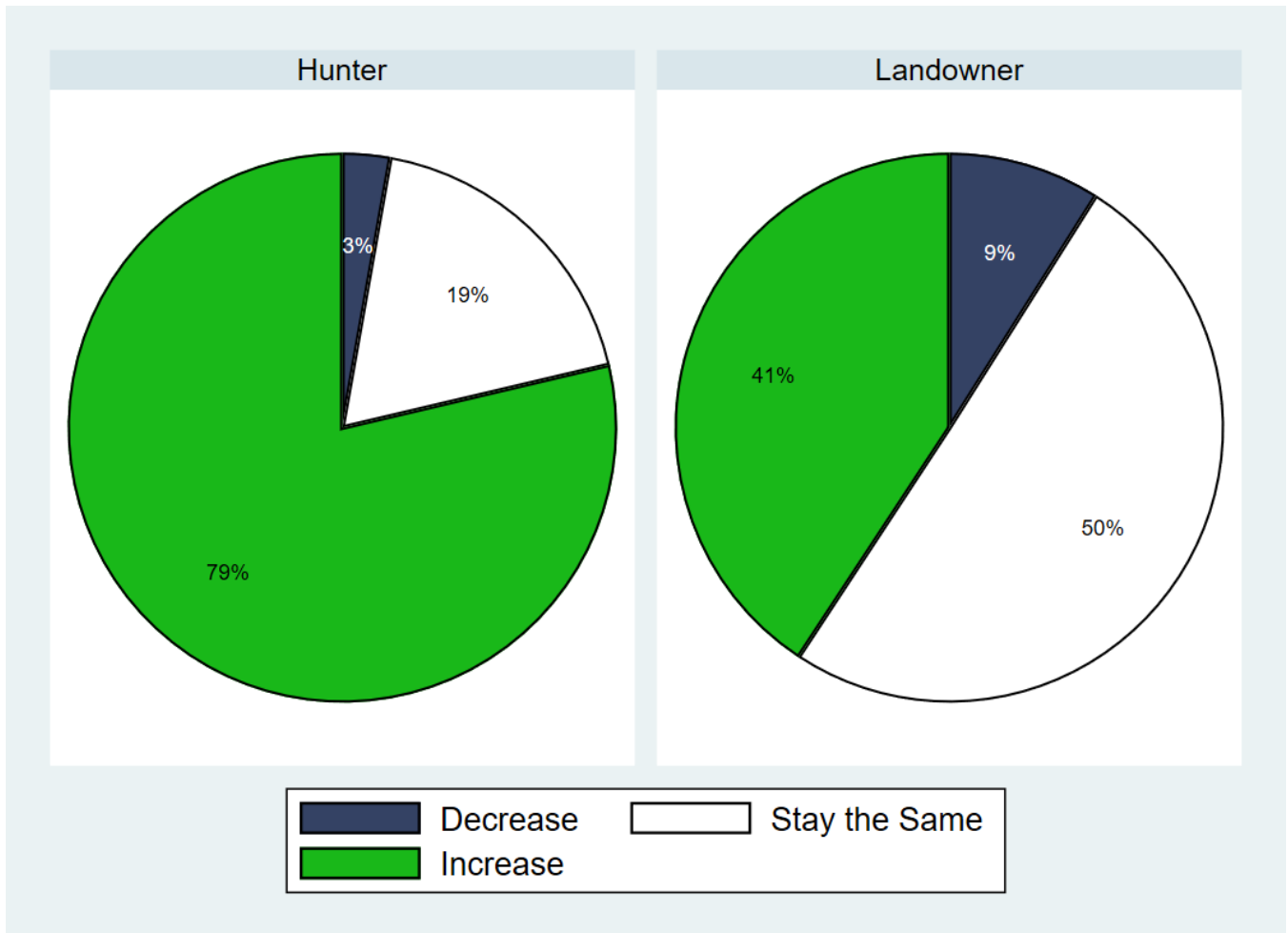


Figure 9. Deer permit area 183 hunters' preference for future deer population

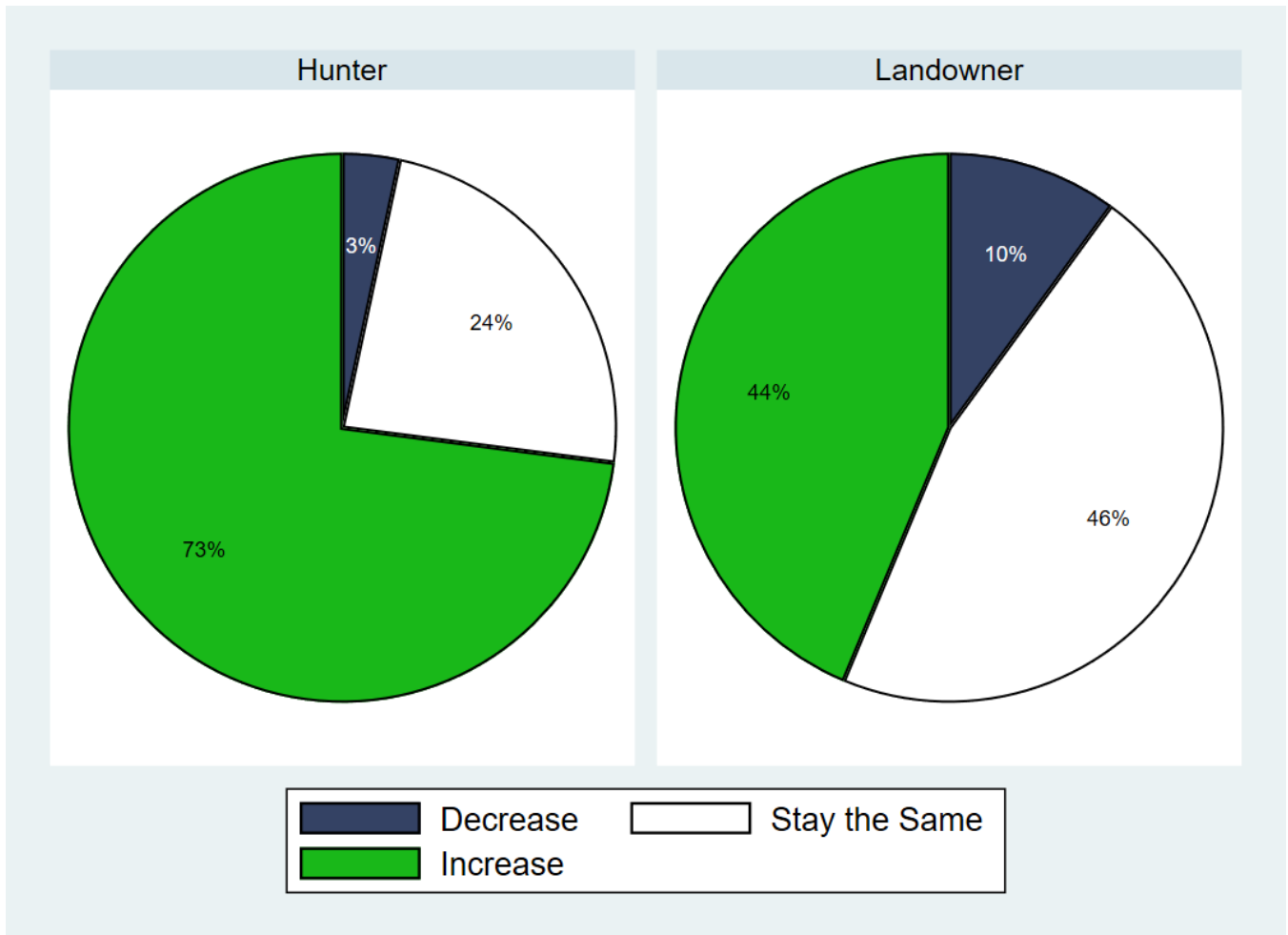


Figure 10. Deer permit area 221 hunters' preference for future deer population

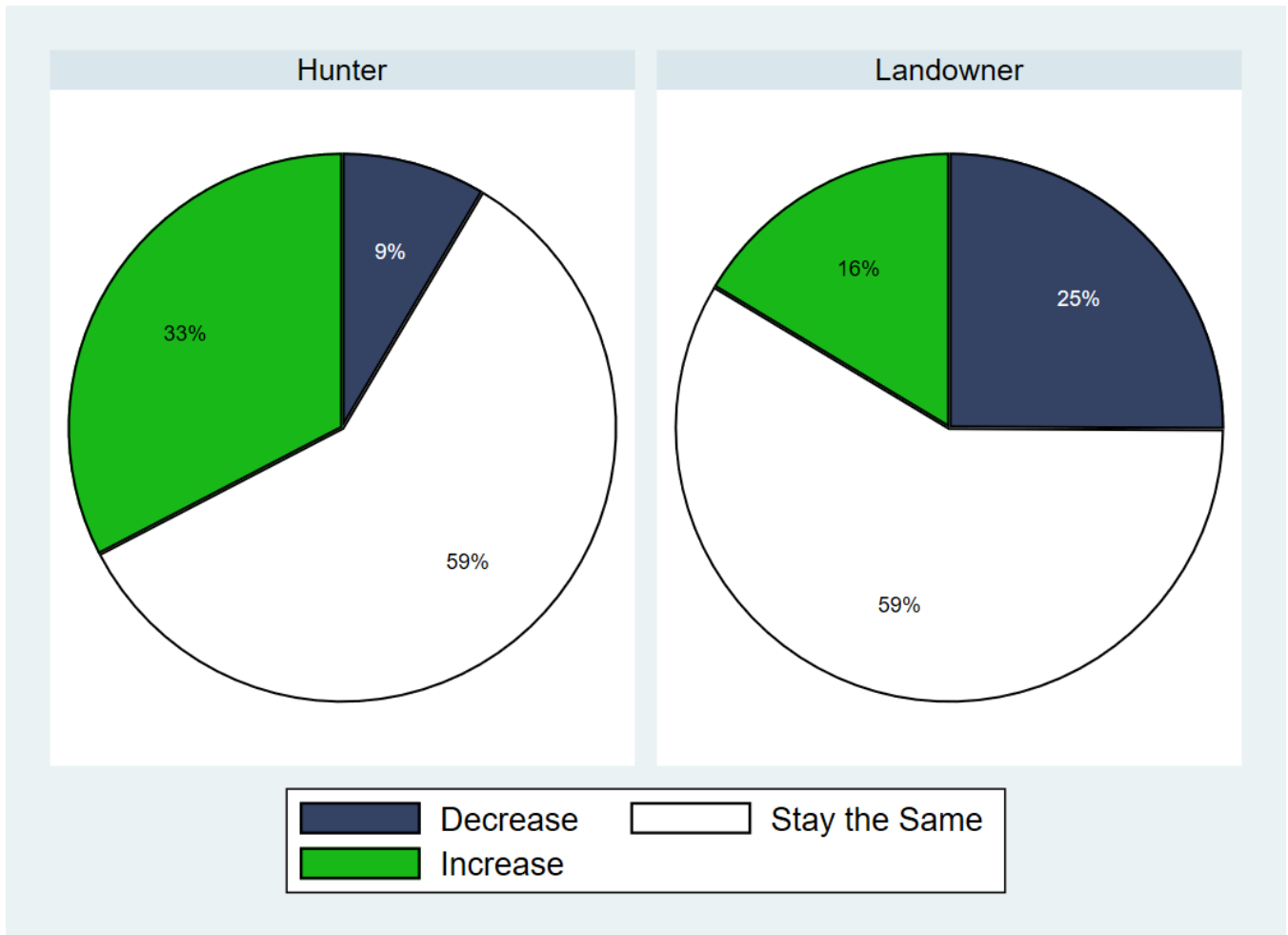


Figure 11. Deer permit area 222 hunters' preference for future deer population

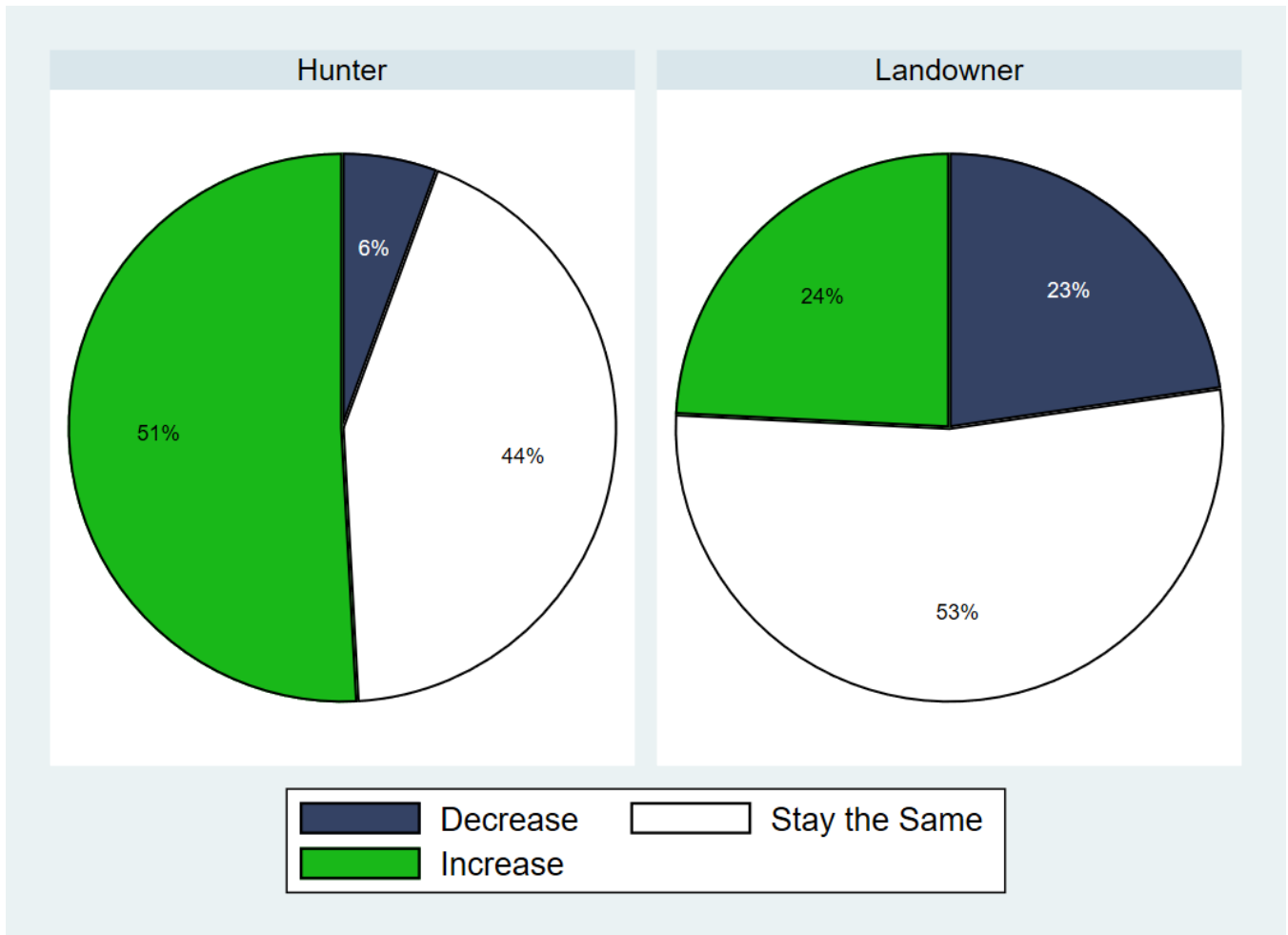


Figure 12. Deer permit area 225 hunters' preference for future deer population

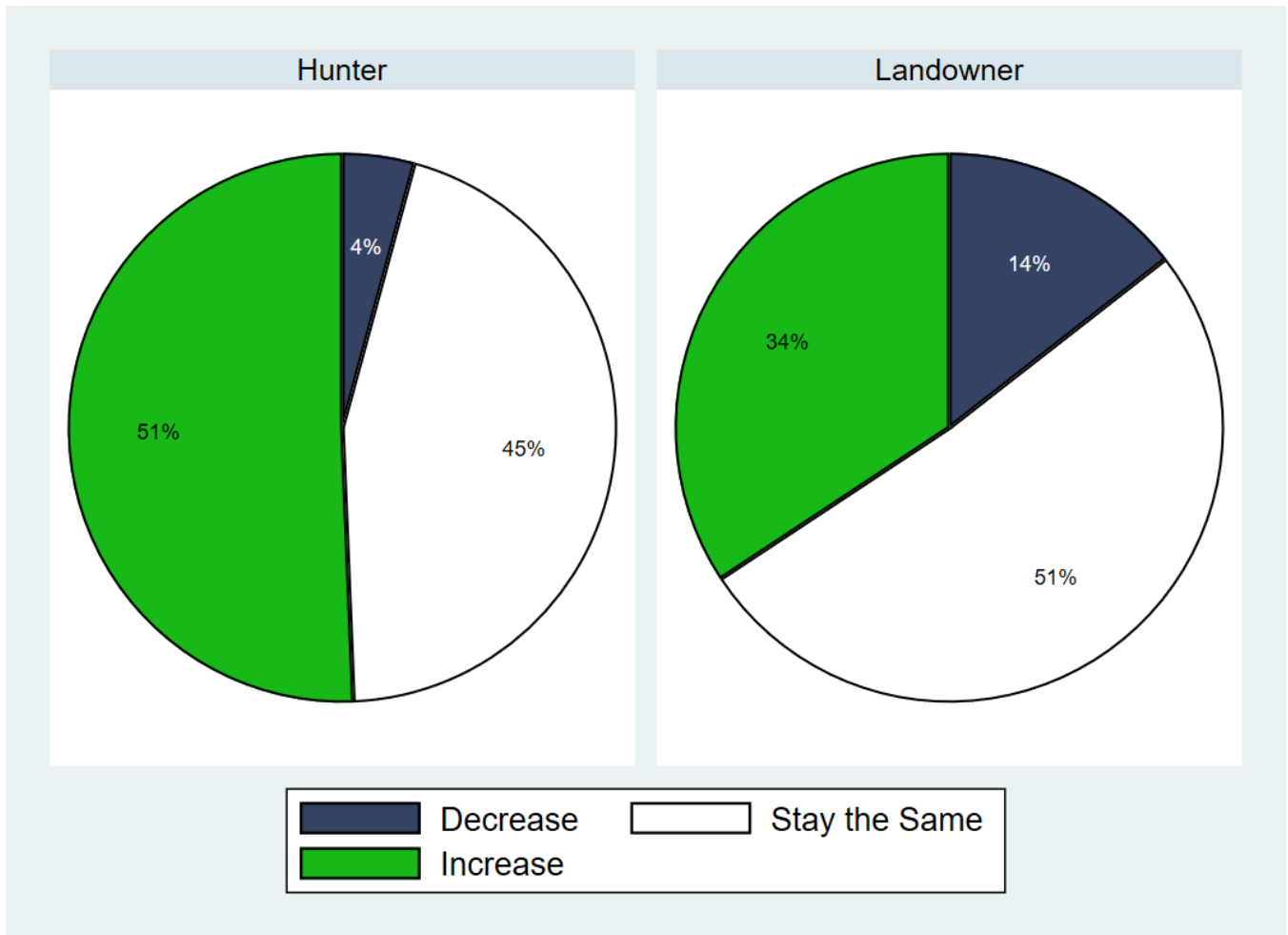


Figure 13. Deer permit area 248 hunters' preference for future deer population

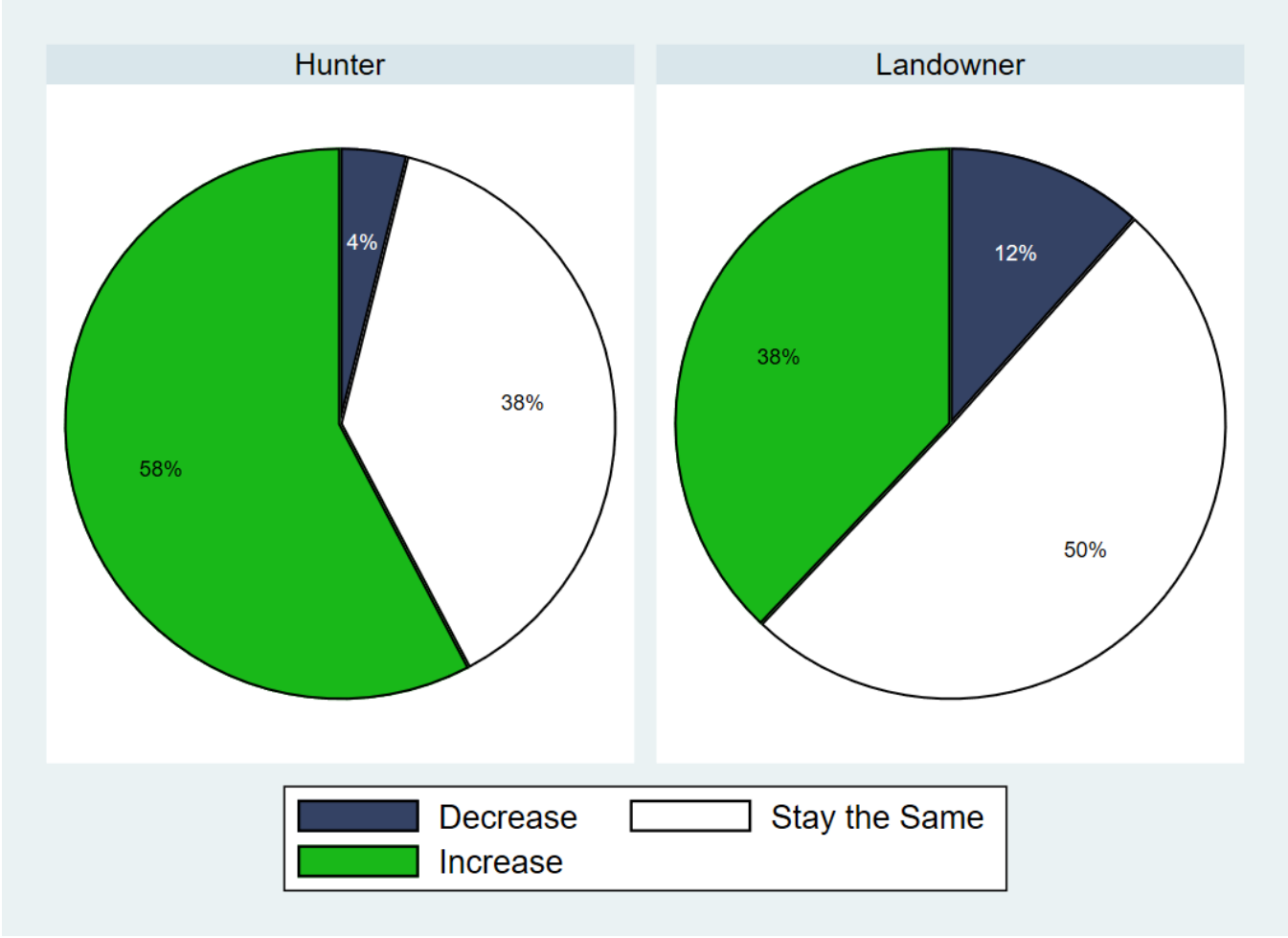


Figure 13. Deer permit area 249 hunters' preference for future deer population

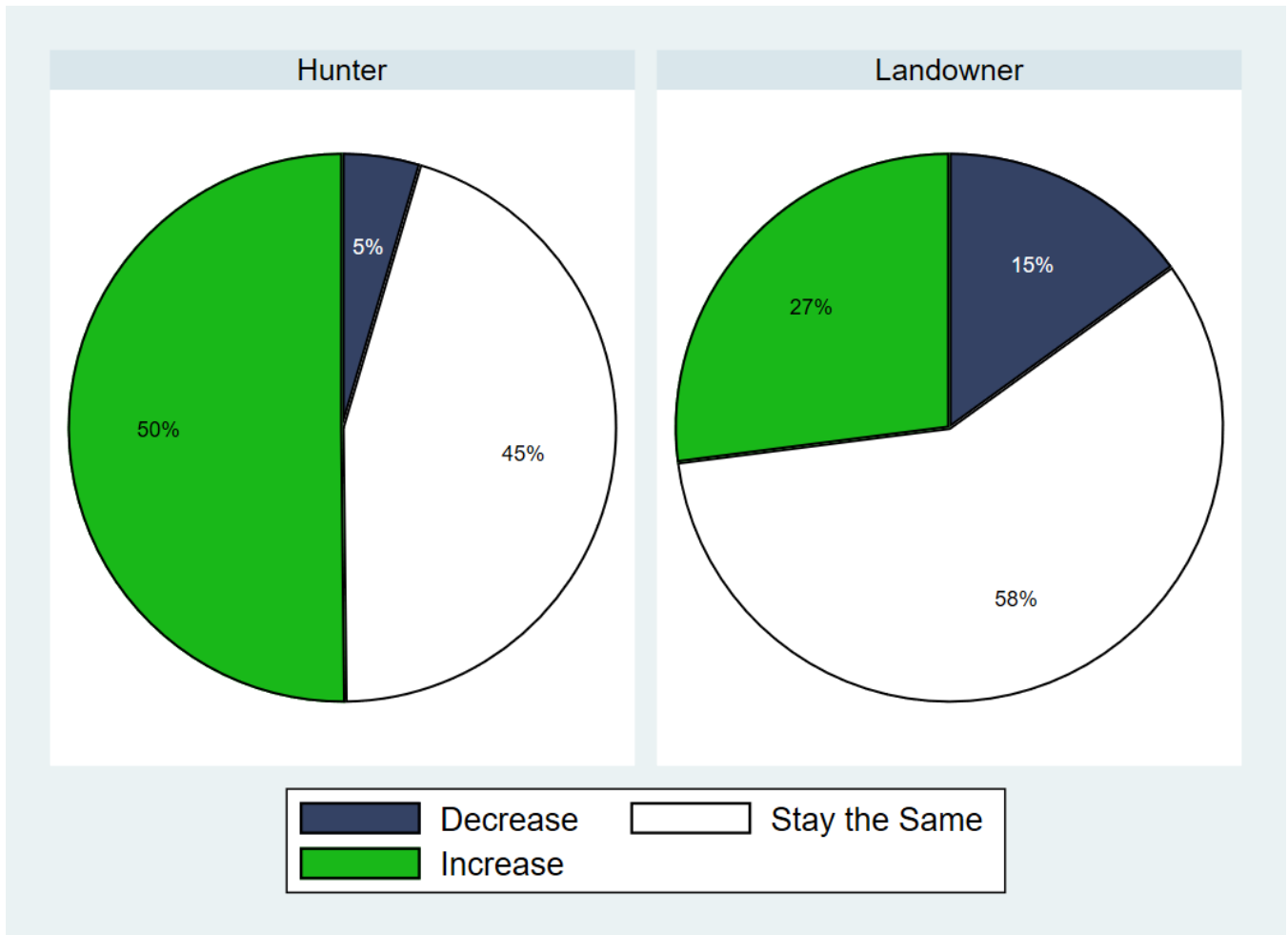
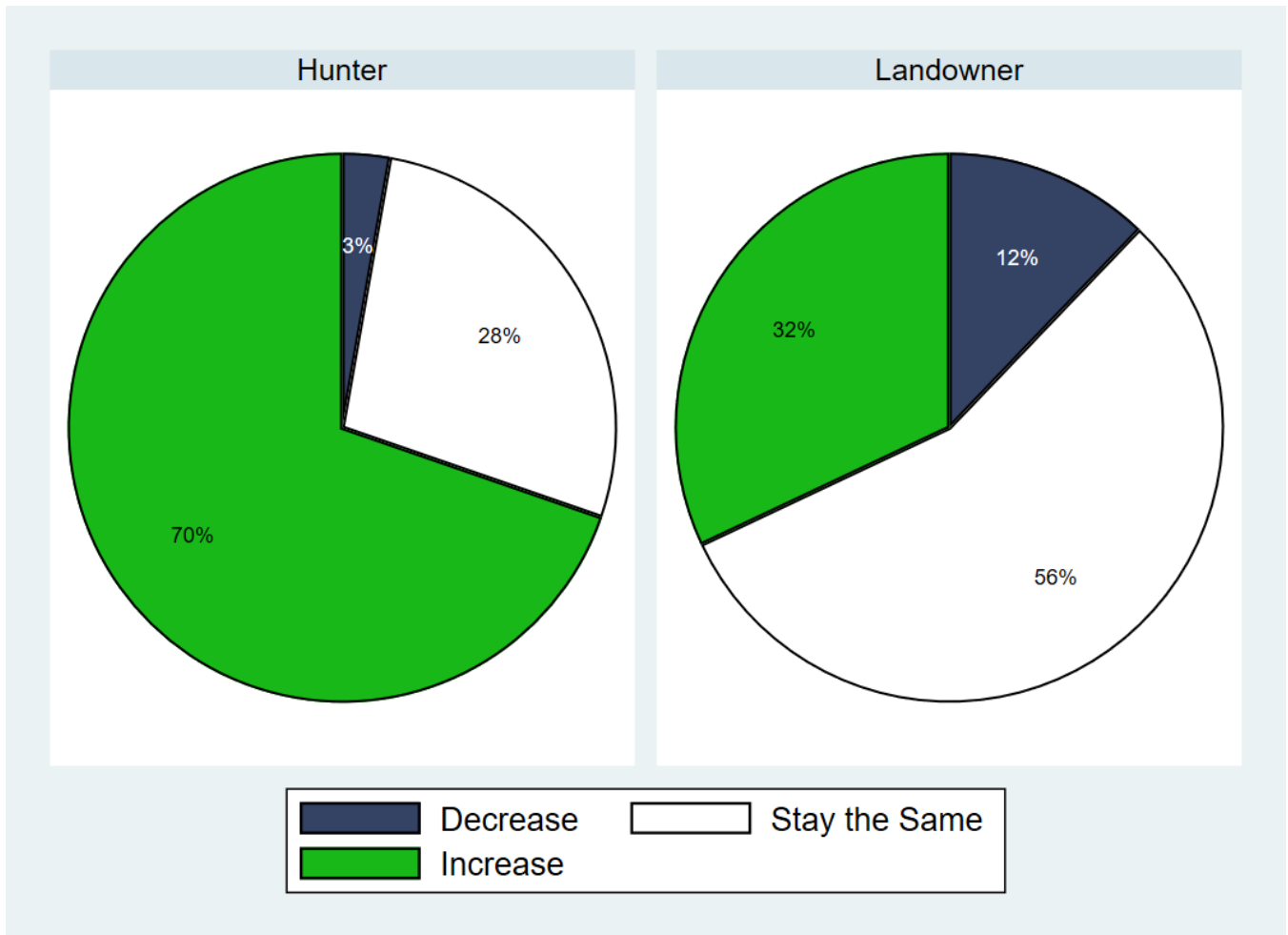


Figure 13. Deer permit area 604 hunters' preference for future deer population



Hunters

We asked hunters to report their recent deer hunting activity. The vast majority (>88%) of hunters reported having hunted deer during the last three years, and 95% in 2021 (Table 5). Among these hunters, around 25% reported that they hunted during the archery season in 2021, while 10% participated in muzzleloader season, and 88% reported hunting during the firearms season A (Table 6). Fewer Block 4 hunters reported hunting during firearm season B (12%), and very few participated in the early antlerless season (9%). Slightly less than half (45%) of Block 4 hunters reported spending all of their time hunting on private land that they own, while 14% reported spending most of their time hunting on private land that they own, 9% some of their time, and 32% reporting none. Hardly any Block 4 hunters reported spending time hunting on land that they lease (92% reported none). Less than half (39%) of hunters reported hunting all of the time on private land that they do not own. Twenty-two percent of hunters reported spending all of their deer hunting time on public land (Table 7).

Around a third (31%) of hunters reported feeling either “very dissatisfied” or “slightly dissatisfied” with their most recent deer hunting season. Conversely, 59% reported feeling either “slightly satisfied” or “very satisfied” (Table 8). Hunters also reported their agreements with statements about their satisfaction elements of their most recent deer hunting season (Table 9a-9e). Respondents reported the greatest agreement (54%) with the statement “I heard about or saw legal bucks while hunting”, and “the number of antlerless deer I saw while hunting” (54%). A majority (59%) disagreed that they were satisfied with the number of legal bucks.

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. Half of hunters reported seeing either slightly fewer or many fewer deer compared to 5 years ago (Table 10). Hunters’ reported nearly equal satisfaction (41%) and dissatisfaction (44%) of the population in the DPA where they hunt (Table 11). A clear majority (85%) of hunters reported that they would shoot an antlerless deer given the opportunity (Table 12).

Hunters rated the importance of several competing priorities MNDNR could consider when setting deer population goals on scale where 1= not at all important and 5 = very important. Among these priorities, Block 4 hunters rated “deer hunting heritage and tradition” (M = 4.0), “amount of deer mortality during a severe winter” (M = 3.9), and “potential health risks to the deer herd” (M = 3.8) (Table 13).

Hunters evaluated the current deer population in the DPA where they hunt, on a scale of much too low to much too high. Nearly half (49%) of hunters felt that the current population where they hunt is too low, while 45% believed it was about right, and 6% believed it was either too high or much too high (Table 14).

When asked if hunters prefer to see the deer population decrease, stay the same, or increase; 63% reported a preference for an increase (Table 15). This compares to 33% that reported a preference for the population to stay the same, and 4% that preferred a decrease. On average, hunters in Block 4 wish to see a 24% increase in the deer population (Table 16). A majority of hunters in Block 4 (60%) supported establishing regulations to increase the proportion of adult bucks in the DPA where they hunt (Table 17).

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 4 deer

hunters have been hunting in Minnesota for 26 years (Table 18). Most hunters in goal setting Block 4 do not place food (83%) or minerals (70%) out for deer to consume (Tables 19 and 20 respectively). Around 8% of Block 4 hunters reported that they belong to a deer hunting organization (Table 21).

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 22).

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

DPA	2019	2020	2021	Did not hunt
152	91	91	95	3
155	89	90	96	1
156	88	87	98	2
157	84	90	96	1
159	86	84	95	1
172	88	89	96	1
183	88	90	97	1
221	92	92	99	1
222	86	84	97	1
225	85	86	96	2
248	86	90	97	2
249	92	95	98	1
604	92	90	96	1
Block average	88	89	97	1

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

DPA	Archery	Firearm A	Firearm B	Muzzleloader	Early Antlerless
152	21	89	14	8	1
155	17	93	7	7	1
156	22	90	8	6	0
157	26	86	9	14	1
159	24	89	8	8	1
172	24	94	11	7	2
183	24	92	9	8	1
221	29	85	14	13	14
222	24	86	16	14	1
225	28	87	18	5	2
248	29	85	14	12	1
249	27	87	10	10	3
604	32	86	14	12	14
Block average	25	88	12	10	3

Table 7. Percent of respondents effort spent hunting deer on hunting different types of land during their most recent deer hunting season, by DPA

	Response	152	155	156	157	159	172	183	221	222	225	248	249	604	Avg.
Private land that I own	None	70	29	22	27	27	45	32	28	35	27	33	30	30	32
	Some	9	7	11	12	10	12	6	12	6	8	8	7	8	9
	Most	7	12	17	12	13	16	12	13	16	19	6	15	23	14
	All	14	52	50	49	49	27	50	46	44	46	52	48	39	45
Private land that I lease for hunting	None	96	95	98	90	93	95	95	89	94	86	92	92	86	92
	Some	4	3	0	4	2	2	1	1	1	6	4	2	2	2
	Most	0	0	0	2	3	1	1	3	2	3	1	3	9	2
	All	0	2	2	4	1	2	3	7	5	5	3	4	4	3
Private land that I do not own or lease	None	58	36	36	29	36	47	47	22	29	26	27	28	25	33
	Some	21	18	15	13	13	24	13	11	15	16	13	14	18	15
	Most	10	14	10	11	14	12	5	17	14	13	14	9	14	12
	All	11	33	40	47	38	17	35	49	43	45	46	49	43	39
Public land	None	6	41	48	54	47	10	48	62	68	64	53	48	29	43
	Some	14	23	28	21	23	23	19	27	20	26	23	31	32	24
	Most	15	12	10	14	10	16	10	6	4	4	13	9	18	11
	All	65	24	14	12	20	51	24	5	8	6	10	12	20	22

Table 8. Deer hunters' satisfaction with their most recent deer hunting season, by DPA

DPA	Very dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Very satisfied
152	13	21	13	32	20
155	16	27	14	23	20
156	18	20	15	27	21
157	14	14	13	29	29
159	12	15	15	32	26
172	26	21	9	29	15
183	19	20	9	31	21
221	4	11	5	37	44
222	8	16	8	30	38
225	9	17	11	27	37
248	9	18	7	34	32
249	8	17	10	37	29
604	17	22	11	29	21
Block average	13	18	11	31	28

values are the percent of respondents reporting each category

Table 9a. Deer hunters' agreement with the statement "I was satisfied with the number of legal bucks" during their most recent deer hunting season, by DPA

	Strongly disagree	Slightly disagree	Neither	Slightly agree	Strongly agree
152	34	20	19	22	5
155	47	28	9	11	5
156	38	29	14	15	4
157	36	20	12	22	10
159	34	29	11	17	9
172	53	22	10	13	3
183	46	24	10	13	7
221	14	23	16	33	14
222	24	18	15	28	14
225	22	27	14	21	16
248	32	22	14	20	13
249	32	24	12	24	9
604	44	25	8	14	9
Block average	35	24	12	20	9

values are the percent of respondents reporting each category

Table 9b. Deer hunters' agreement with the statement "I was satisfied with the quality of bucks" during their most recent deer hunting season, by DPA

	Strongly disagree	Slightly disagree	Neither	Slightly agree	Strongly agree
152	33	14	22	25	6
155	45	24	14	14	4
156	40	28	13	15	4
157	38	16	15	23	9
159	35	23	17	18	8
172	50	24	13	9	5
183	49	19	15	12	6
221	15	29	17	28	11
222	22	21	15	28	14
225	26	27	13	21	13
248	25	24	15	26	10
249	32	23	19	21	5
604	47	22	13	13	6
Block average	35	23	15	19	8

values are the percent of respondents reporting each category

Table 9c. Deer hunters' agreement with the statement "I heard about or saw bucks while hunting" during their most recent deer hunting season, by DPA

	Strongly disagree	Slightly disagree	Neither	Slightly agree	Strongly agree
152	21	12	12	34	21
155	29	15	12	29	15
156	23	22	11	30	14
157	15	16	8	35	26
159	18	14	14	30	23
172	35	18	14	20	13
183	31	19	12	22	16
221	5	4	12	45	33
222	12	8	13	32	34
225	11	15	12	33	29
248	16	12	9	38	26
249	18	14	15	34	19
604	23	15	11	32	21
Block average	20	14	12	32	22

values are the percent of respondents reporting each category

Table 9d. Deer hunters' agreement with the statement "I was satisfied with the number of antlerless deer I saw" during their most recent deer hunting season, by DPA

	Strongly disagree	Slightly disagree	Neither	Slightly agree	Strongly agree
152	24	24	9	28	15
155	30	24	14	23	9
156	21	27	10	20	21
157	11	19	16	27	27
159	16	18	12	27	27
172	26	22	13	27	11
183	22	20	8	28	22
221	6	10	11	35	39
222	12	11	10	28	39
225	10	10	11	36	33
248	13	15	12	31	29
249	10	14	12	34	30
604	26	20	8	27	18
Block average	17	18	11	29	25

values are the percent of respondents reporting each category

Table 9e. Deer hunters' agreement with the statement "I was satisfied with the number of deer I saw while hunting" during their most recent deer hunting season, by DPA

	Strongly disagree	Slightly disagree	Neither	Slightly agree	Strongly agree
152	29	29	8	22	11
155	41	27	7	18	7
156	31	27	10	19	13
157	18	23	12	27	20
159	20	25	15	22	18
172	38	22	14	19	7
183	31	25	9	20	15
221	9	12	8	40	31
222	12	16	12	31	29
225	12	17	13	30	28
248	19	18	15	27	21
249	14	17	15	34	19
604	34	21	8	26	9
Block average	23	21	11	26	18

values are the percent of respondents reporting each category

Table 10. 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
152	32	24	28	16	1
155	46	22	27	5	0
156	35	26	29	6	4
157	28	25	28	14	5
159	24	27	27	16	6
172	46	23	24	5	2
183	34	24	23	16	3
221	6	11	35	35	12
222	10	22	34	25	10
225	15	24	41	16	4
248	16	23	38	16	6
249	15	28	30	19	8
604	43	24	23	8	2
Block average	27	23	30	15	5

values are the percent of respondents reporting each category

Table 11. Deer hunters' satisfaction with the deer population where they hunt, by DPA

DPA	Very dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Very satisfied
152	23	27	17	21	11
155	32	30	13	18	7
156	23	34	14	23	7
157	18	28	11	28	14
159	14	29	20	23	13
172	35	33	10	17	5
183	24	26	16	22	12
221	4	13	15	42	25
222	7	20	21	29	23
225	7	21	17	32	23
248	14	22	13	37	14
249	10	27	14	32	17
604	29	29	11	23	9
Block average	18	26	15	27	14

values are the percent of respondents reporting each category

Table 12. Percent of deer hunters that would shoot an antlerless deer, by DPA

DPA	Yes	No
152	80	20
155	85	15
156	77	23
157	83	17
159	84	16
172	86	14
183	80	20
221	91	10
222	83	17
225	89	11
248	84	16
249	90	10
604	90	10
Block average	85	15

values are the percent of respondents reporting each category

Table 13. Deer hunters' mean stated importance for factors to consider in making deer population goals, by DPA

Item	152	155	156	157	159	172	183	221	222	225	248	249	604	Avg.
Amount of deer mortality during an average winter	3.7	3.5	3.6	3.7	3.6	3.5	3.7	3.6	3.6	3.4	3.6	3.6	3.6	3.6
Amount of deer mortality during a severe winter	4.0	3.7	4.0	3.9	3.9	3.9	4.0	3.9	3.9	3.8	4.0	3.8	3.9	3.9
Potential health risks to the deer herd	4.1	3.6	3.8	4.0	3.9	3.8	3.9	3.9	3.9	3.8	3.8	3.8	3.7	3.8
Public health (human-deer diseases)	3.6	3.2	3.4	3.6	3.5	3.4	3.3	3.5	3.4	3.3	3.3	3.4	3.2	3.4
Amount of crop damage from deer	2.7	2.4	2.5	2.7	2.5	2.4	2.3	2.9	2.7	2.8	2.7	2.8	2.2	2.6
Number of deer vehicle collisions	3.3	3.1	2.9	3.2	3.1	3.0	2.9	3.3	3.4	3.2	3.2	3.3	3.0	3.1
Deer over-browsing of forests	2.8	2.7	2.7	2.8	2.9	2.8	2.7	2.9	2.7	2.8	2.7	2.8	2.5	2.7
Impacts of deer on other wildlife species	2.8	2.6	2.6	2.7	2.8	2.7	2.6	2.8	2.7	2.7	2.7	2.8	2.4	2.7
Deer hunting heritage and tradition	4.1	3.8	4.0	3.9	3.9	4.1	3.9	3.9	4.0	3.9	4.0	4.0	4.0	4.0
Hunter satisfaction with deer numbers	3.8	3.6	3.7	3.7	3.7	3.9	3.6	3.5	3.6	3.6	3.6	3.7	3.8	3.7
Public satisfaction with deer numbers	3.4	2.8	2.9	3.0	2.8	3.2	2.9	3.0	3.0	2.9	2.9	3.0	3.1	3.0
Impact of deer hunting on the local economy	3.6	3.4	3.5	3.5	3.4	3.7	3.5	3.3	3.4	3.5	3.5	3.5	3.5	3.5
Quality of bucks (antler size)	3.4	3.2	3.5	3.6	3.5	3.3	3.4	3.6	3.5	3.7	3.5	3.5	3.5	3.5
Damage to gardens and landscaping	2.1	2.1	2.1	2.3	2.0	2.0	2.1	2.4	2.3	2.2	2.2	2.4	2.1	2.2
The ratio of bucks to does	3.5	3.4	3.6	3.6	3.5	3.5	3.5	3.7	3.5	3.6	3.5	3.5	3.5	3.5

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

Table 14. 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
152	16	46	35	3	0
155	23	43	33	1	0
156	18	46	31	4	1
157	11	41	42	6	0
159	7	43	46	2	2
172	23	48	26	2	1
183	18	37	39	5	1
221	1	14	70	12	2
222	4	26	61	7	2
225	4	31	58	5	1
248	8	36	52	4	2
249	5	31	57	5	3
604	16	42	37	4	0
Block average	12	37	45	5	1

values are the percent of respondents reporting each category

Table 15. Deer hunters' preference for future deer populations, by DPA

DPA	Decrease	Stay the Same	Increase
152	1	17	82
155	1	23	76
156	3	20	77
157	3	3	66
159	2	32	66
172	3	19	79
183	3	24	73
221	9	59	33
222	6	43	51
225	4	45	51
248	4	38	58
249	5	45	50
604	3	28	70
Block average	4	33	63

values are the percent of respondents reporting each category

Table 16. Deer hunters' mean preferred percent change in the deer population, by DPA

DPA	Mean percent change	Median percent change	Minimum	Maximum
152	31.6	25	-25	300
155	32.5	25	-72	300
156	35.5	25	-50	500
157	23.8	20	-50	300
159	24.9	24	-50	200
172	37.8	30	-50	500
183	30.9	25	-50	200
221	5.9	0	-50	100
222	13.6	0	-80	100
225	15.6	0	-50	250
248	18.4	20	-50	200
249	14.7	0	-75	200
604	28.9	25	-60	400
Block average	23.9	20	-80	500

Table 17. 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
152	1	10	29	34	27
155	5	6	37	28	25
156	4	8	25	33	30
157	6	9	23	29	33
159	5	8	25	35	27
172	5	4	27	30	35
183	5	11	24	29	32
221	7	13	24	27	29
222	10	13	23	28	26
225	5	10	25	30	30
248	6	7	26	29	32
249	8	10	27	31	25
604	5	10	22	29	33
Block average	6	9	26	30	30

values are the percent of respondents reporting each category

Table 18. Mean number of years that deer hunters have been hunting deer in Minnesota, by DPA

DPA	Mean
152	26.0
155	28.6
156	26.6
157	24.5
159	28.1
172	26.8
183	26.3
221	23.2
222	26.2
225	24.0
248	24.9
249	25.0
604	25.9
Block average	25.8

Table 19. Percent of deer hunters that set out food for deer to consume, by DPA

DPA	Yes	No	Live in CWD management or control zone
152	6	90	4
155	3	84	13
156	7	87	7
157	6	84	10
159	6	83	11
172	3	87	4
183	4	92	4
221	9	84	7
222	7	87	6
225	5	84	11
248	6	84	10
249	6	79	15
604	0	50	50
Block average	5	83	12

values are the percent of respondents reporting each category

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

DPA	Yes	No	Live in CWD management or control zone
152	10	86	4
155	12	73	15
156	24	69	7
157	22	68	11
159	26	64	10
172	13	77	9
183	30	68	1
221	20	73	7
222	21	72	7
225	21	69	11
248	12	77	11
249	12	73	15
604	5	47	49
Block average	18	70	12

values are the percent of respondents reporting each category

Table 21. Percent of deer hunters that belong to a deer hunting organization, by DPA

DPA	Yes	No
152	6	94
155	6	95
156	9	91
157	8	92
159	7	93
172	6	94
183	12	88
221	7	93
222	5	95
225	14	86
248	11	89
249	5	95
604	10	90
Block average	8	92

values are the percent of respondents reporting each category

Table 22. Deer hunters' mean level of agreement with statements about the MNDNR, by DPA

	152	155	156	157	159	172	183	221	222	225	248	249	604	Avg.
The MNDNR does a good job managing deer in MN	3.4	3.1	3.1	3.3	3.3	3.0	3.1	3.3	3.4	3.2	3.2	3.3	3.0	3.2
When deciding about deer management in MN, the MNDNR will be open and honest in the things they say and do	3.5	3.2	3.2	3.4	3.4	3.2	3.3	3.2	3.3	3.1	3.2	3.3	3.2	3.3
The MNDNR can be trusted to make decisions about deer management that are good for the resource	3.5	3.2	3.2	3.4	3.3	3.2	3.3	3.2	3.3	3.2	3.2	3.3	3.2	3.3
The MNDNR will make decisions about deer management in a way that is fair	3.4	3.4	3.3	3.4	3.4	3.2	3.3	3.4	3.3	3.2	3.2	3.4	3.2	3.3
The MNDNR has deer managers and biologists who are well-trained for their jobs	3.7	3.6	3.5	3.6	3.5	3.6	3.5	3.5	3.5	3.4	3.5	3.6	3.5	3.5
The MNDNR listens to the concerns of deer hunters	3.3	3.1	3.1	3.2	3.2	3.1	3.1	3.1	3.2	3.1	3.1	3.1	3.1	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 4 landowners reported owning 146 acres. Among individuals in Block 4 DPAs, that reported leasing property the average lease was 133 acres (Table 23). Forty percent of landowners reported having agricultural land use on their property. Of these landowners, only 9% reported experiencing damage from deer (Table 24). A majority of landowners (54%) reported owning land in forest. Of these individuals, 30% reported having experienced damage from deer. The severity of damage experienced by landowners was mostly minor/negligible (77%). Seventy-one percent of landowners reported having residential land use on their property, and 18% experienced damage from deer. Landowners experiencing damage from deer to residential land use reported damage that was minor/negligible (53%), moderate (36%), and severe/very severe (10%) (Table 26).

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 (60%) indicated that the amount of damage they have experienced from deer has remained about the same (Table 27). Landowners' perception of the trend in the deer population over the last 5 years split between those perceiving fewer (37%), about the same amount (35%), and more deer (27%) (Table 28).

Only 28% of landowners reported feeling satisfied or very satisfied with the deer population on their land, while 39% were neutral, and 33% either dissatisfied or very dissatisfied (Table 29). Hunting landowners reported slightly higher levels of dissatisfaction (40%) than non-hunting landowners (21%), while non-hunters were more likely to report neutrality regarding their satisfaction with the deer population on their land (Table 30). Over half of landowners (54%) indicated that the population of deer on their land was "about right," compared to too low (32%) or too high (14%) (Table 31). Non-hunting landowners (57%) were more likely to hold a belief that the current population on their property was "about right" than hunting landowners (48%). Similarly, a higher percentage of hunting landowners (40%) than non-hunting landowners (16%) expressed a belief that the current deer population on their property was too low (Table 32).

When asked what they would like to see happen with future deer populations on their land, a majority (50%) of Block 4 landowners preferred to see the deer population stay the same, compared to 37% that would like to see the deer population increase, and 13% decrease (Table 33). A higher proportion of hunting landowners preferred an increase in the deer population (47%) than non-hunting landowners (17%) (Table 34). Landowners mean preferred change in the deer population was a 9% increase (Table 35).

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. Between a quarter and a third of landowners reported awareness that that MNDNR offers technical assistance for deer depredation issues, and the proportion increased with the number of acres owned (Table 36). The proportion of landowners allowing hunting on their property increased with the amount of land they owned, where roughly 40% of landowners with 2-19 acres allowed hunting on their property. This compares to 92% who own 320 acres or more (Table 37). Very few (1%)

of landowners lease their land for deer hunting (Table 38). The majority of landowners (74%) did not impose any restrictions on the deer that hunters could take on their property (Table 39).

We asked landowners several questions about their deer hunting activity. Over a third of Block 4 landowners reported hunting deer in each of 2019, 2020, and 2021 respectively. Roughly, 9% indicated that they hunt deer but did not hunt during one of those three years, and 34% indicated that they do not hunt deer at all (Table 40). Among deer hunting landowners, 59% reported doing all of their hunting on private land that they own, while 1%, 10% and 7% 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 41). Around 77% of landowners indicated that they would shoot an antlerless deer given the opportunity (Table 42), and landowners have been hunting deer in Minnesota for an average of 33 years (Table 43).

Landowners rated their agreement with five statements about their trust in the MNDNR on scale from 1 = strongly disagree, to 5 = strongly agree, and a mid-point 3 = of neither. Landowners, on average, placed moderate trust in the MNDNR. Mean values ranged from 3.2 to 3.5 for trust items (Table 44).

Respondents rated 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 “potential health risks to the deer herd” (M = 4.0), and “amount of deer mortality during a severe winter” (M = 3.9) as issues to consider when setting deer population goals (Table 45).

We asked landowners if they place food or minerals out for deer to consume. A small number of landowners (6%) reported feeding deer (Table 46), while 16% reported placing minerals out for deer to consume (Table 47).

Table 23. Mean acres owned and leased by landowners, by DPA

DPA	Acres Owned			Acres Leased*		
	Mean	Min	Max	Mean	Min	Max
152	-	-	-	-	-	-
155	111.8	2	12800	73.4	5	640
156	163.4	2.5	7760	317.8	20	2000
157	202.7	2	8051	124.4	1.5	405
159	120.7	2	12300	196.6	20	2000
172	87.4	2	5501	172	36	400
183	108.7	2	4800	86.6	40	450
221	359.2	2.7	23002	129.2	4	630
222	144.3	2	14750	102.2	14	500
225	180.1	2	17002	171.3	5	800
248	142.1	2	6020	144.2	15	900
249	154.9	2.4	15200	129.2	15	850
604	73.3	2	11600	83.0	1	1200
Block average	146.5	2	23002	133.3	1	2000

*among those reporting having leased 1 acre or more

Table 24. 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*		
	Yes	No	Yes	No	Minor/ Negligible	Moderate	Severe/Very Severe
152	-	-	-	-	-	-	-
155	32	68	4	96			
156	49	51	11	89			
157	53	47	9	91			
159	33	67	9	91			
172	16	84	2	98			
183	28	72	7	93			
221	62	38	18	82			
222	57	43	18	82			
225	57	43	12	88			
248	41	59	7	93			
249	46	54	14	93			
604	20	80	5	86			
Block average	40	60	9	91			

values are the percent of respondents reporting each category

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

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

Forest DPA	Own or lease		Experience damage		Severity of Damage		
	Yes	No	Yes	No	Minor/ Negligible	Moderate	Severe/Very Severe
152	-	-	-	-	-	-	-
155	56	44	27	73	80	20	0
156	60	40	26	74	81	13	6
157	56	44	36	64	73	15	13
159	58	42	32	68	79	14	7
172	61	39	31	69	77	16	7
183	57	43	21	79	83	10	7
221	50	50	29	71	59	29	13
222	55	45	31	69	69	23	8
225	47	53	39	61	86	11	3
248	46	53	28	72	87	12	1
249	49	51	35	65	76	19	4
604	48	52	31	69	73	21	6
Block average	54	46	30	70	77	17	6

values are the percent of respondents reporting each category

Table 26. 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
152	-	-	-	-	-	-	-
155	74	26	15	85	57	43	0
156	71	29	15	85	59	27	13
157	75	25	17	83	61	24	15
159	64	36	10	90	36	37	27
172	68	32	16	84	58	29	13
183	71	29	14	86	50	45	4
221	68	33	18	82	35	39	25
222	69	31	27	73	58	37	6
225	73	27	19	81	72	18	10
248	69	31	19	81	58	35	7
249	72	28	21	79	40	54	7
604	76	24	20	80	43	46	11
Block average	71	29	18	82	53	36	10

values are the percent of respondents reporting each category

Table 27. 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
152	-	-	-	-	-
155	32	9	52	7	0
156	24	7	62	5	2
157	18	8	59	8	7
159	25	8	63	2	2
172	15	10	70	3	1
183	29	7	55	7	2
221	22	6	50	14	9
222	19	7	52	15	7
225	19	11	60	8	2
248	22	11	57	6	3
249	14	3	66	7	9
604	18	7	64	7	4
Block average	21	8	60	7	4

values are the percent of respondents reporting each category

Table 28. 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
152	-	-	-	-	-
155	32	25	29	13	1
156	25	30	24	16	4
157	17	23	28	24	8
159	18	27	29	17	9
172	23	19	39	14	5
183	19	21	34	20	5
221	5	7	31	32	25
222	8	13	32	26	21
225	11	19	45	17	8
248	10	21	42	22	5
249	6	23	38	19	14
604	21	15	43	16	5
Block average	17	20	35	19	8

values are the percent of respondents reporting each category

Table 29. 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
152	-	-	-	-	-
155	22	23	32	9	14
156	22	23	32	15	8
157	12	22	41	11	15
159	15	22	33	13	18
172	11	21	37	14	17
183	14	25	36	10	15
221	7	8	50	15	20
222	10	18	35	15	21
225	8	20	45	15	12
248	9	23	41	10	17
249	8	17	43	10	22
604	13	20	41	10	15
Block average	13	20	39	12	16

values are the percent of respondents reporting each category

Table 30. 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
152	-	-	-	-	-	-
155	18	54	29	60	20	20
156	23	52	25	54	54	22
157	25	53	21	39	33	28
159	24	43	33	44	28	29
172	18	52	31	40	30	30
183	15	53	29	51	56	24
221	17	58	24	15	32	40
222	31	41	28	28	33	40
225	25	56	19	30	38	32
248	19	58	23	39	33	28
249	18	52	30	28	39	33
604	23	50	26	42	34	25
Block average	21	52	26	40	31	29

values are the percent of respondents reporting each category

Table 31. Landowners' perception of the deer population on their land, by DPA

DPA	Much too low	Too low	About right	Too high	Much too high
152	-	-	-	-	-
155	16	29	46	8	1
156	13	29	51	4	3
157	8	26	49	16	2
159	7	34	49	8	2
172	8	29	53	8	2
183	10	30	49	11	0
221	3	9	59	26	4
222	5	15	56	18	6
225	6	20	58	13	2
248	6	26	55	12	1
249	4	16	65	11	4
604	4	22	62	11	1
Block average	8	24	54	12	2

values are the percent of respondents reporting each category

Table 32. 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
152	-	-	-	-	-	-
155	10	76	13	67	30	6
156	17	73	10	52	42	6
157	18	64	18	43	39	18
159	27	56	17	48	45	7
172	19	70	12	47	45	8
183	19	72	9	50	38	12
221	12	58	30	12	58	30
222	8	54	38	25	57	18
225	19	56	25	32	59	10
248	17	68	16	40	49	11
249	16	72	12	21	65	16
604	9	71	19	41	54	5
Block average	16	57	18	40	48	12

values are the percent of respondents reporting each category

Table 33. Landowners' preference for future deer populations, by DPA

DPA	Decrease	Stay the Same	Increase
152	-	-	-
155	9	43	48
156	8	47	45
157	14	45	41
159	9	42	49
172	9	50	41
183	10	47	43
221	25	59	16
222	23	53	24
225	14	51	34
248	12	50	38
249	15	58	27
604	12	56	32
Block average	13	50	37

values are the percent of respondents reporting each category

Table 34. 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
152	-	-	-	-	-	-
155	15	77	8	5	25	69
156	15	72	13	5	37	58
157	17	57	26	13	37	50
159	15	54	30	6	35	58
172	13	66	21	7	43	49
183	9	72	19	10	34	56
221	26	67	8	25	55	21
222	40	48	13	16	55	29
225	24	53	23	8	50	42
248	14	67	17	10	41	49
249	13	77	10	16	51	34
604	20	64	16	5	49	47
Block average	18	64	17	10	43	47

values are the percent of respondents reporting each category

Table 35. Landowners' mean preferred percent change in the deer population, by DPA

DPA	Mean percent change	Median percent change	Minimum	Maximum
152	-	-	-	-
155	19.3	0	-90	100
156	14.6	0	-80	100
157	10.1	0	-75	100
159	13.8	0	-100	100
172	10.5	0	-75	100
183	15.6	0	-75	100
221	-2.3	0	-80	100
222	-1.5	0	-95	100
225	7.7	0	-75	100
248	8.6	0	-75	100
249	3.9	0	-100	100
604	6.0	0	-100	100
Block average	9.1	0	-100	100

Table 36. 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
152	-	-	-	-	-
155	21	36	42	43	29
156	25	40	33	47	32
157	24	34	46	27	31
159	36	22	41	55	34
172	18	22	27	17	20
183	33	31	36	24	33
221	31	16	27	33	25
222	21	20	21	21	21
225	25	24	20	32	24
248	26	31	34	64	29
249	17	33	30	27	24
604	17	28	43	36	22
Block average	24	28	33	34	27

values are the percent of respondents reporting each category

Table 37. 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
152	-	-	-	-	-
155	45	75	89	93	61
156	54	80	84	98	71
157	31	77	78	92	56
159	42	73	81	87	59
172	41	74	83	82	64
183	49	77	86	94	59
221	39	73	82	95	58
222	46	80	89	91	66
225	42	69	87	85	58
248	37	81	86	100	56
249	40	86	90	88	64
604	27	59	75	89	39
Block average	40	75	85	92	58

values are the percent of respondents reporting each category

*too few respondents in the 320+ strata to calculate

Table 38. Percent of landowners that leased their property for deer hunting, by DPA.

DPA	Yes	No
152	-	-
155	1	99
156	0	100
157	3	97
159	2	98
172	0	100
183	1	99
221	1	99
222	2	98
225	2	98
248	1	99
249	0	100
604	1	99
Block average	1	99

values are the percent of respondents reporting each category

Table 39. 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
152	-	-	-	-	-
155	6	5	8	77	4
156	5	8	5	73	9
157	5	10	7	67	11
159	6	10	5	73	7
172	7	2	5	77	9
183	3	7	9	66	14
221	1	13	2	77	6
222	2	5	4	82	7
225	2	9	6	69	14
248	6	7	5	71	7
249	0	13	6	69	11
604	3	8	4	77	8
Block average	4	8	6	74	9

values are the percent of respondents reporting each category

Table 40. Percent of landowners reporting hunting deer during the last three years, and those that do not hunt, by DPA

DPA	2019	2020	2021	Did not hunt these years	Do not hunt
152	-	-	-	-	-
155	54	54	55	10	34
156	59	58	58	7	29
157	51	50	51	6	38
159	54	51	51	9	33
172	55	55	52	10	31
183	56	54	54	10	30
221	62	61	60	3	31
222	64	62	59	6	26
225	47	50	46	7	41
248	52	52	51	12	32
249	58	56	54	10	27
604	40	40	37	11	47
Block average	54	53	52	9	34

values are the percent of respondents reporting each category

Table 41. Landowners' time spent hunting on different land ownership types, by DPA

	Response	152	155	156	157	159	172	183	221	222	225	248	249	604	Avg.
Private land that I own	None	-	9	3	14	16	19	10	13	12	12	9	10	15	12
	Some	-	10	12	11	5	13	11	19	12	19	11	12	9	12
	Most	-	25	22	20	13	21	20	13	14	11	18	13	17	18
	All	-	56	63	55	65	47	59	55	62	58	62	65	58	59
Private land that I lease for hunting	None	-	92	96	96	97	97	94	92	93	93	94	96	87	94
	Some	-	4	3	0	0	0	0	6	4	2	3	1	4	2
	Most	-	3	1	4	2	2	4	2	0	3	3	3	1	2
	All	-	1	0	0	0	1	2	0	2	1	0	0	8	1
Private land that I do not own or lease	None	-	54	59	57	66	66	69	51	58	53	57	62	62	60
	Some	-	28	24	18	13	16	20	20	13	16	21	15	24	19
	Most	-	14	11	8	14	5	7	11	12	18	12	17	2	11
	All	-	4	6	18	6	13	4	18	17	13	10	6	12	10
Public land	None	-	47	57	67	70	42	59	76	77	73	66	64	49	61
	Some	-	29	36	24	17	35	27	15	13	16	17	19	35	24
	Most	-	15	4	8	7	14	8	8	6	4	6	7	4	8
	All	-	9	4	0	6	9	7	2	4	7	12	10	12	7

values are the percent of respondents reporting each category

Table 42. Percent of hunting landowners that would shoot an antlerless deer, by DPA

DPA	Yes	No
152	-	-
155	72	28
156	77	23
157	77	23
159	72	28
172	76	24
183	73	27
221	90	10
222	88	12
225	77	23
248	78	22
249	80	20
604	67	32
Block average	77	23

values are the percent of respondents reporting each category

Table 43. Mean number of years that hunting landowners have been hunting deer in Minnesota, by DPA

DPA	Mean
152	-
155	41.0
156	34.9
157	34.8
159	34.6
172	33.9
183	33.2
221	32.6
222	32.5
225	31.3
248	35.4
249	35.4
604	35.7
Block average	32.9

Table 44. Landowners' mean level of agreement with statements about the MNDNR, by DPA

	152	155	156	157	159	172	183	221	222	225	248	249	604	Avg.
The MNDNR does a good job managing deer in MN	-	3.2	3.2	3.3	3.3	3.2	3.5	3.4	3.3	3.4	3.4	3.3	3.3	3.3
When deciding about deer management in MN, the MNDNR will be open and honest in the things they say and do	-	3.4	3.2	3.3	3.5	3.3	3.5	3.3	3.4	3.4	3.3	3.3	3.4	3.4
The MNDNR can be trusted to make decisions about deer management that are good for the resource	-	3.3	3.2	3.3	3.4	3.3	3.5	3.3	3.2	3.4	3.3	3.2	3.4	3.3
The MNDNR will make decisions about deer management in a way that is fair	-	3.3	3.2	3.3	3.4	3.4	3.6	3.4	3.4	3.5	3.3	3.4	3.5	3.4
The MNDNR has deer managers and biologists who are well-trained for their jobs	-	3.6	3.5	3.5	3.6	3.6	3.8	3.5	3.5	3.7	3.5	3.4	3.6	3.6
The MNDNR listens to the concerns of landowners	-	3.2	3.2	3.2	3.3	3.3	3.5	3.3	3.2	3.4	3.2	3.2	3.4	3.3

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

Table 45. Landowners' mean stated importance for factors to consider in making deer population goals, by DPA

	152	155	156	157	159	172	183	221	222	225	248	249	604	Avg.
Amount of deer mortality during an average winter	-	3.7	3.6	3.6	3.5	3.7	3.6	3.5	3.5	3.5	3.6	3.5	3.5	3.6
Amount of deer mortality during a severe winter	-	4.0	4.0	3.8	3.8	4.0	4.0	3.8	3.9	3.8	4.0	3.8	3.9	3.9
Potential health risks to the deer herd	-	4.0	3.9	4.0	3.9	4.1	4.1	3.8	4.1	4.0	4.0	3.9	3.9	4.0
Public health (human-deer diseases)	-	3.7	3.6	3.7	3.6	3.8	3.8	3.7	3.7	3.6	3.8	3.7	3.8	3.7
Amount of crop damage from deer	-	3.0	3.1	3.2	3.0	3.1	3.3	3.2	3.2	3.1	3.1	3.1	3.1	3.1
Number of deer vehicle collisions	-	3.5	3.4	3.6	3.4	3.7	3.6	3.7	3.7	3.5	3.5	3.6	3.6	3.6
Deer over-browsing of forests	-	3.2	3.0	3.1	2.9	3.2	3.3	3.3	3.1	3.0	3.1	3.0	3.1	3.1
Impacts of deer on other wildlife species	-	3.0	2.9	3.0	2.9	3.1	3.2	3.0	2.9	2.9	2.8	2.8	3.0	3.0
Deer hunting heritage and tradition	-	3.9	3.8	3.7	3.7	3.6	3.9	3.7	3.8	3.6	3.7	3.7	3.5	3.7
Hunter satisfaction with deer numbers	-	3.7	3.6	3.4	3.4	3.3	3.6	3.5	3.5	3.3	3.4	3.4	3.2	3.4
Public satisfaction with deer numbers	-	3.3	3.1	3.0	3.0	3.1	3.2	3.1	3.2	3.1	3.1	2.9	3.0	3.1
Impact of deer hunting on the local economy	-	3.7	3.6	3.3	3.3	3.4	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.4
Quality of bucks (antler size)	-	3.2	3.2	3.1	3.1	3.0	3.2	3.1	3.0	3.1	3.1	3.1	2.9	3.1
Damage to gardens and landscaping	-	2.8	2.8	2.9	2.6	2.8	2.8	2.8	2.8	2.9	2.8	2.9	2.8	2.8
The ratio of bucks to does	-	3.4	3.4	3.3	3.4	3.4	3.5	3.3	3.5	3.3	3.3	3.3	3.4	3.4

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

Table 46. Percent of landowners that set out food for deer to consume, by DPA

DPA	Yes	No	Live in CWD management or control zone
152	-	-	-
155	3	88	9
156	7	88	6
157	5	85	10
159	5	86	8
172	6	85	9
183	9	87	4
221	7	92	1
222	11	82	7
225	7	87	6
248	5	89	6
249	5	86	10
604	3	76	21
Block average	6	85	9

values are the percent of respondents reporting each category

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

DPA	Yes	No	Live in CWD management or control zone
152	-	-	-
155	7	84	9
156	26	69	5
157	20	71	9
159	22	71	7
172	9	83	8
183	29	67	4
221	13	86	1
222	18	74	8
225	20	75	5
248	12	82	6
249	12	78	10
604	6	71	20
Block average	16	73	8

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).*

_____ 2019 _____ 2020 _____ 2021 _____ I hunt deer, but didn't hunt these years *(Please skip to Q8).*

Q2. Which of the following seasons did you hunt during the year that you hunted deer most recently? *(Check all that apply).*

_____ Archery _____ Firearm A _____ Firearm B _____ Muzzleloader _____ Early antlerless

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. 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

Q5. 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

Q6. 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 Q7.*

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

Q7. 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

Q8. Will you shoot an antlerless deer given the opportunity?

_____ Yes _____ No

Q9. 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

Q10. 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

Q11. 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

Q11a. 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 _____ %

Q12. 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

Q13. Including 2021, how many years have you been hunting deer in Minnesota? _____ Years

Q14. Do you deliberately set out food for wild deer to consume (e.g., deer feeder)? **Do not report food plots.**

_____ Yes _____ No _____ I hunt or live in a CWD management or control zone or surveillance area

Q15. Do you deliberately set out minerals for wild deer to consume (e.g., salt blocks)?

_____ Yes _____ No _____ I hunt or live in a CWD management or control zone or surveillance area

Q16. Are you a member of a deer hunting organization (e.g., Minnesota Deer Hunters Association)?

_____ Yes _____ No

Q17. 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

Landowner Questionnaire

Q1. How many total acres did you own and/or lease at the end of 2021?

_____ Acres owned _____ Acres leased

Q2. Did you own or lease any land that was in the following land uses in 2021, and did deer cause any damage to those land uses in 2021? (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 2021 please skip to Q6.

Q3. How would you describe the total amount of damage from deer that you experienced in 2021? (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 2021 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 in the area of your property 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 2021 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 2021? (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).

_____ 2019 _____ 2020 _____ 2021 _____ 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 deer 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 2021, 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