Functional Decomposition
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Project 3
CS 575

#1 What your own-choice quantity was and how it fits into the simulation.
Hunter. Maybe the hunter should kill more deer by setting the standard line lower because the influence made by hunters is small according to these graphs. The two categories' number doesn't move anymore⋯⋯ But it also keep the amount of deer in a low level.
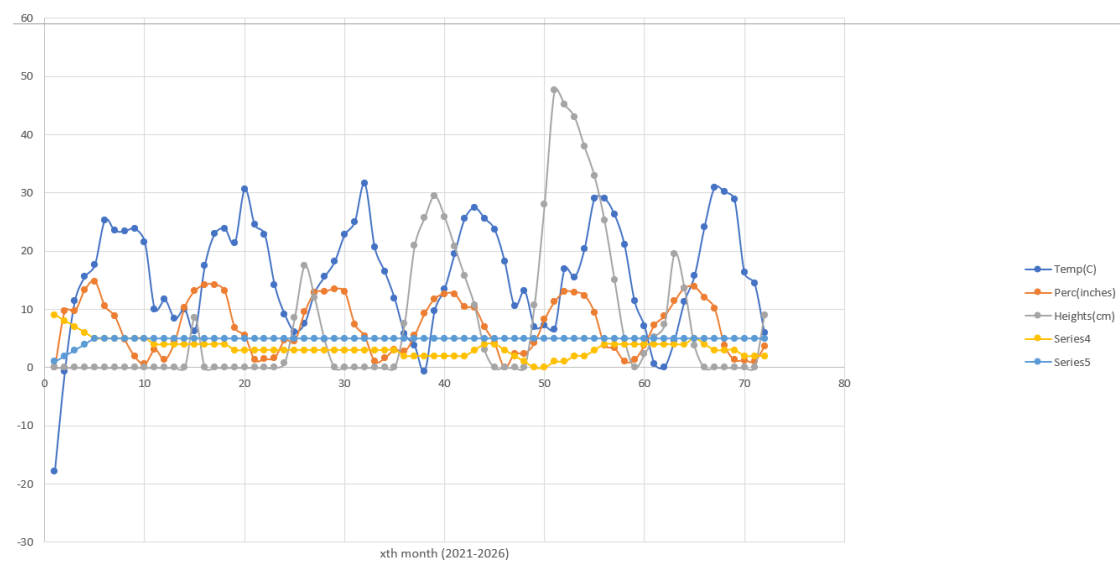

#2 Simulations for 2021 – 2026
Except pointed numbers, I tried to use hunter to kill exceed deer. The number under caught/ caught by hunters is the total number of deer that has been caught.

Year	Month	Temp	Prec	Height	Number of Deer	TotalBeenCaught.ByHun	Temp (C)	Heght(cm)
2021	1	0	0	0	9	1	-17.7778	0
	2	30.69	9.75	0	8	2	-0.72778	0
	3	52.55	9.67	0	7	3	11.41667	0
	4	60.09	13.33	0	6	4	15.60556	0
	5	63.73	14.79	0	5	5	17.62778	0
	6	77.58	10.58	0	5	5	25.32222	0
	7	74.34	8.79	0	5	5	23.52222	0
	8	74.19	4.79	0	5	5	23.43889	0
	9	75.02	1.87	0	5	5	23.9	0
	10	70.88	0.6	0	5	5	21.6	0
	11	50	3.06	0	4	5	10	0
	12	53.04	1.36	0	4	5	11.68889	0
2022	13	47.13	4.47	0	4	5	8.405556	0
	14	49.93	10.35	0	4	5	9.961111	0
	15	43.14	13.16	3.38	4	5	6.188889	8.5852
	16	63.4	14.23	0	4	5	17.44444	0
	17	73.42	14.25	0	4	5	23.01111	0
	18	75.05	13.14	0	4	5	23.91667	0
	19	70.5	6.87	0	3	5	21.38889	0
	20	87.2	5.48	0	3	5	30.66667	0
	21	76.13	1.3	0	3	5	24.51667	0
	22	73.24	1.48	0	3	5	22.91111	0
	23	57.41	1.68	0	3	5	14.11667	0
	24	48.46	4.69	0.32	3	5	9.144444	0.8128
2023	25	43.11	4.52	3.37	3	5	6.172222	8.5598
	26	45.65	9.54	6.9	3	5	7.583333	17.526
	27	55.18	12.84	4.73	3	5	12.87778	12.0142
	28	60.1	13.04	1.87	3	5	15.61111	4.7498
	29	64.77	13.51	0	3	5	18.20556	0
	30	73.06	13.03	0	3	5	22.81111	0
	31	77	7.46	0	3	5	25	0
	32	88.89	5.37	0	3	5	31.60556	0
	33	69.19	1.06	0	3	5	20.66111	0
	34	61.76	1.59	0	3	5	16.53333	0
	35	53.36	3.09	0	3	5	11.86667	0
	36	42.56	2.76	2.99	2	5	5.866667	7.5946

	Year	Month	Temp	Prec	Height	Number of Deer	TotalBeenCaught.ByHun	Temp (C)	Heght(cm)
8	2024	37	38.76	5.5	8.23	2	5	3.755556	20.9042
9		38	30.89	9.26	10.13	2	5	-0.61667	25.7302
0		39	49.57	11.8	11.62	2	5	9.761111	29.5148
1		40	56.33	12.67	10.2	2	5	13.51667	25.908
2		41	67.24	12.64	8.2	2	5	19.57778	20.828
3		42	78.02	10.38	6.2	2	5	25.56667	15.748
4		43	81.48	10.27	4.2	3	5	27.48889	10.668
5		44	78.16	6.93	1.2	4	5	25.64444	3.048
6		45	74.76	4.2	0	4	5	23.75556	0
7		46	64.92	0	0	3	5	18.28889	0
8		47	51.05	2.38	0	2	5	10.58333	0
9		48	55.62	2.39	0	1	5	13.12222	0
0	2025	49	44.55	4.23	4.24	0	5	6.972222	10.7696
1		50	44.99	8.24	11.05	0	5	7.216667	28.067
2		51	43.76	11.27	18.74	1	5	6.533333	47.5996
3		52	62.59	13	17.79	1	5	16.99444	45.1866
4		53	59.93	12.96	16.94	2	5	15.51667	43.0276
5		54	68.8	12.38	14.94	2	5	20.44444	37.9476
6		55	84.4	9.43	12.94	3	5	29.11111	32.8676
7		56	84.4	3.87	9.94	4	5	29.11111	25.2476
8		57	79.33	3.33	5.94	4	5	26.29444	15.0876
9		58	69.89	1.05	1.94	4	5	21.05	4.9276
0		59	52.64	1.31	0	4	5	11.46667	0
1		60	44.77	3.85	0.91	4	5	7.094444	2.3114
2	2026	61	33.08	7.3	2.09	4	5	0.6	5.3086
3		62	32.16	8.83	2.89	4	5	0.088889	7.3406
4		63	40.42	11.38	7.71	4	5	4.677778	19.5834
5		64	52.45	13.64	5.38	4	5	11.36111	13.6652
6		65	60.3	13.83	1.51	5	5	15.72222	3.8354
7		66	75.45	12.06	0	4	5	24.13889	0
8		67	87.71	10.19	0	3	5	30.95	0
9		68	86.41	3.86	0	3	5	30.22778	0
0		69	84.01	1.29	0	3	5	28.89444	0
1		70	61.32	1.28	0	2	5	16.28889	0
2		71	58.13	1.02	0	2	5	14.51667	0
3		72	42.73	3.62	3.56	2	5	5.961111	9.0424

#3 Tables, Graphs

xth month (2021-2026)

#4 comments

The Temp and Prec usually decrease after July and June and back in a new year. The height grows good at spring. However, once the number of deer grow, the height decreases rapidly even though the temp and prec still increasing. The humter also keeps the amount of deer in a low level.