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# Project 02

CS 475

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## My Own Choice Quantity

For my own agent, also known as choice quantity, I just went with what was off the top of my head being Warios. These exist in the environment based on how many deer there are + 1, where if 3 deer can exist then there is a possibility of 4 Warios as they represent tourists to the park. I tried following the same capacity size variable equation as the one set in the deer example.

## Table of values

Month	Temp	Precipitation	Height in CM	Num of Deer	Num of Warios
1	11.48	10.82	5.08	3	2
2	15.83	13.99	3.556	2	3
3	23.01	11.59	1.397	1	2
4	21.58	12.32	1.397	0	1
5	23.82	8.77	1.397	0	0
6	26.04	5.96	1.397	0	1
7	21.91	2.81	1.397	0	0
8	23.46	2.87	1.397	0	1
9	14.19	2.07	1.397	0	0
10	3.72	3.19	2.159	0	1
11	-0.55	4.42	20.9804	0	0
12	0.79	9.77	28.3972	1	1
13	3.88	10.85	45.6184	2	2
14	8.57	11.23	67.9704	3	3
15	23.97	11.67	77.6478	4	4
16	23.56	12.6	67.4878	5	5
17	27.54	7.74	54.7878	6	6
18	27.82	5.54	37.0078	7	7
19	23.34	4.65	19.2278	8	8
20	16.13	2.29	1.4478	7	9
21	12.98	2.28	0	6	8
22	6.59	4.32	0	5	7
23	2.42	4.86	6.3246	4	6
24	8.24	10.23	19.177	3	5
25	2.92	13.04	30.6578	4	4
26	12.97	11.14	46.2534	5	5
27	15.01	13.45	33.8836	6	6
28	27.75	10.64	16.8148	7	7
29	21.44	6.63	0	6	8
30	25.82	3.7	0	5	7
31	20.51	4.64	0	4	6
32	22.90	2.61	0	3	5
33	10.09	1.36	0	2	4

34	6.31	3.8	2.6162	1	3
35	4.96	6.12	18.5928	1	2
36	5.17	6.71	42.0624	2	1
37	7.01	12.97	61.3156	3	2
38	17.47	13.68	76.2508	4	3
39	16.03	13.75	63.6778	5	4
40	24.97	10.66	48.768	6	5
41	28.38	7.22	33.528	7	6
42	25.62	6.97	13.208	8	7
43	27.07	2.08	0	7	8
44	15.42	2.78	0	6	7
45	11.02	1.95	0	5	6
46	12.77	3.11	0	4	5
47	6.57	6.88	0	3	4
48	4.15	10.25	16.256	2	3
49	6.57	12.5	41.5544	3	2
50	14.73	14.44	56.134	4	3
51	18.24	11.66	44.2468	5	4
52	28.42	12.92	29.083	6	5
53	22.37	10.08	11.303	7	6
54	27.86	5.17	0	6	7
55	24.74	1.88	0	5	6
56	21.61	0.43	0	4	5
57	12.09	0.11	0	3	4
58	4.23	1.86	0	2	3
59	5.45	5.11	10.6172	1	2
60	1.15	10.18	31.2928	2	1
61	3.29	9.75	45.1358	3	2
62	12.63	13.84	66.675	4	3
63	23.82	14.54	56.9976	5	4
64	25.46	10.78	41.7576	6	5
65	29.06	8.03	23.9776	7	6
66	24.00	4.38	6.1976	8	7
67	24.35	1.74	0	7	8
68	14.57	2.13	0	6	7
69	8.52	2.38	0	5	6
70	3.97	3.74	0	4	5
71	0.09	7.25	10.287	3	4
72	-0.15	8.64	17.9832	4	3

## Graph of the following data

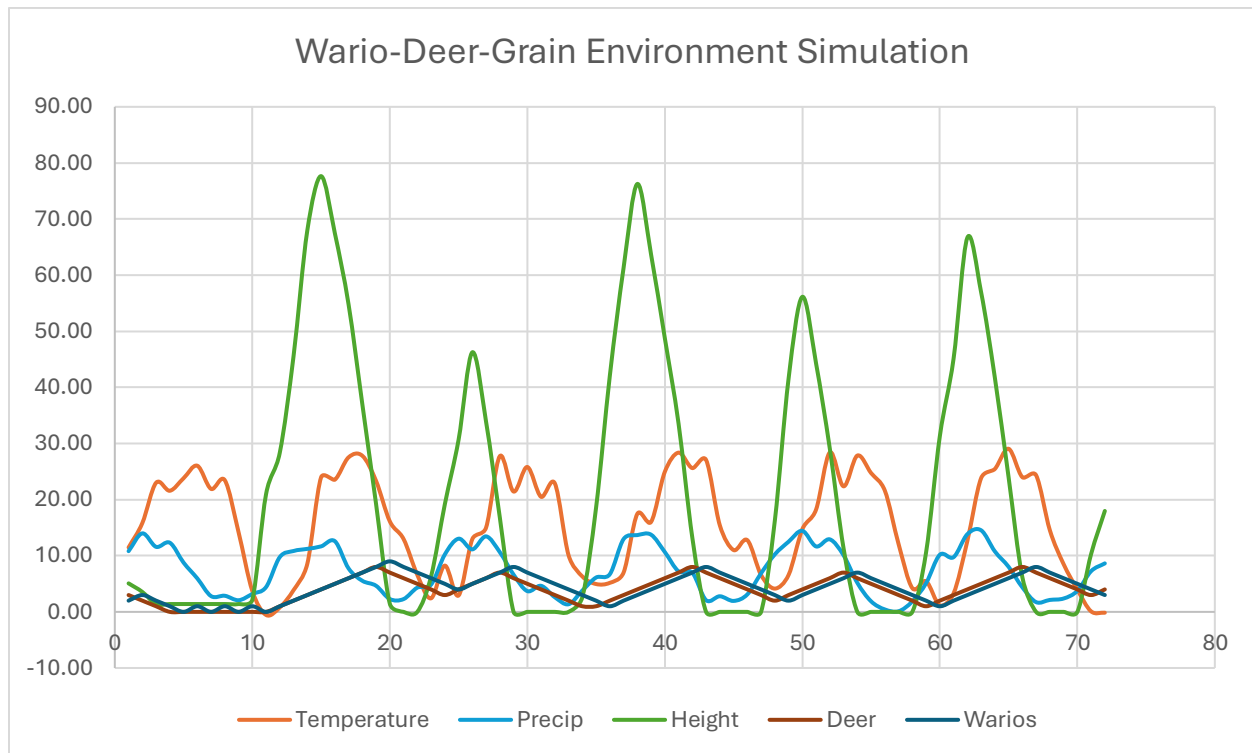


Figure 1.) Temperature is measured in Celsius, Height is measured in CM.

## Commentary on Graph Results

One specific oddity with the results was that as the temperature fell within each year the height of the grain would increase drastically. However, the amount of precipitation increasing lead to larger sized grains throughout the year. Where higher temperatures would mean lower precipitation.

With that being said, the results for the other variables within the graph were as to be expected. The taller the grains were in height the more amount of deer there were in the environment. When the height decreased to 0 the deer would also end up decreasing in population as well. As the deer decreased in population, so did the amount of Warios within the simulation.

The simulation is accurate to the real world, because the larger precipitation means there is more water for the plants to take in. Where the amount of water would lead to larger plants height. As there is a larger plant height, there makes more deer out in the wild. As precipitation decreased, the amount of plants would decrease as well, which would affect the population of deer to lessen as well.