Brian Laccone
CS 475
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Project 3

My own choice quantity for this project was Bigfoot. Bigfoot lives in the same world where the grain grows and the deer frolic. Of course, Bigfoot eats deer but he is also a very sophisticated creature and is a proficient farmer. He knows the value of keeping a balanced ecosystem. When the deer population is more than the grain height (inches) per month, bigfoot will eat one deer and grow 3 inches in grain height. When the grain height (inches) is higher than the amount of deer per month, bigfoot will eat 3 inches of grain height and raise a single deer. Bigfoot tries to take care of the land he lives in and will continue to try and balance out the grain height and deer population.

Table of Results

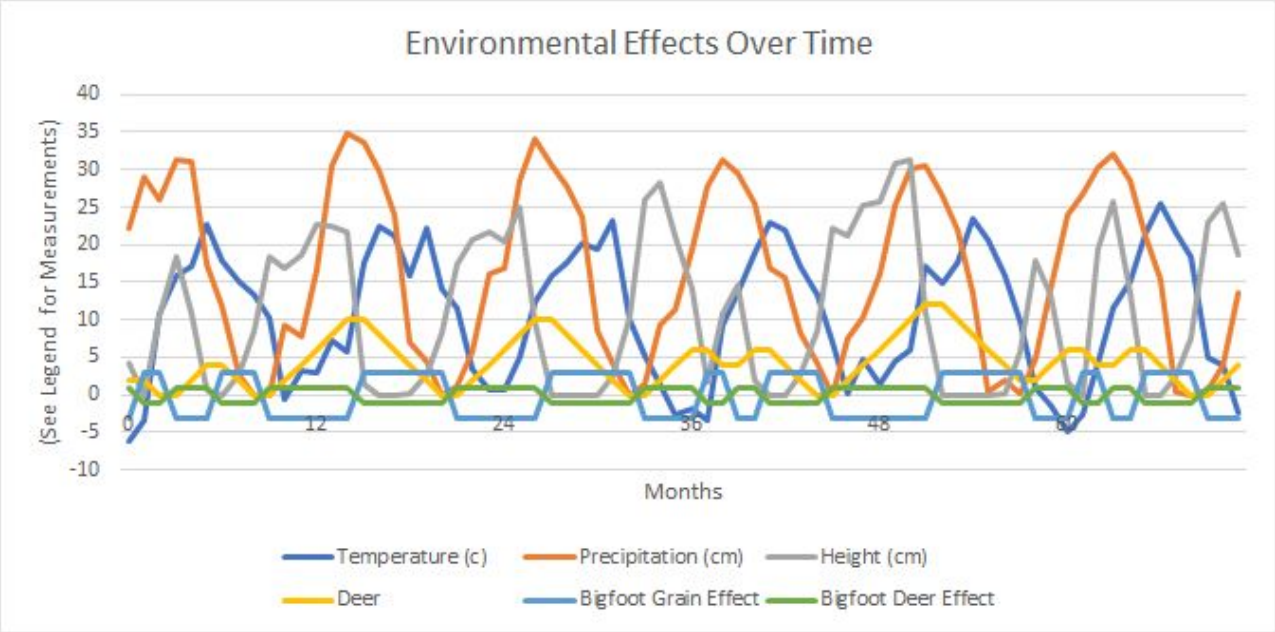
Months	Temperature (C)	Precipitation (cm)	Height (cm)	Deer	Bigfoot Grain Effect	Bigfoot Deer Effect
0	-6.28	22.23	4.29	2	-3	1
1	-3.41	29.06	0	2	3	-1
2	10.84	25.97	10.47	0	3	-1
3	15.8	31.33	18.39	0	-3	1
4	17.06	31.09	10.88	2	-3	1
5	22.65	17.5	0.72	4	-3	1
6	17.97	11.9	0	4	3	-1
7	15.01	2.79	2.79	2	3	-1
8	13.36	0	8.44	0	3	-1
9	10.29	0	18.52	0	-3	1
10	-0.54	9.18	16.95	2	-3	1

11	3.26	7.75	18.77	4	-3	1
12	2.85	16.69	22.71	6	-3	1
13	7.28	30.57	22.48	8	-3	1
14	5.62	34.82	21.64	10	-3	1
15	17.64	33.62	1.39	10	3	-1
16	22.44	29.7	0	8	3	-1
17	21.24	23.99	0	6	3	-1
18	15.84	7.01	0.18	4	3	-1
19	22.23	4.56	2.72	2	3	-1
20	13.98	0	8.19	0	3	-1
21	11.61	1.22	17.37	0	-3	1
22	3.58	5.67	20.6	2	-3	1
23	0.71	16.21	21.79	4	-3	1
24	0.62	16.83	20.37	6	-3	1
25	4.9	28.54	25.01	8	-3	1
26	12.3	34.02	9.68	10	-3	1
27	15.8	30.58	0	10	3	-1
28	17.63	27.83	0	8	3	-1
29	20.13	23.72	0	6	3	-1
30	19.45	8.51	0.01	4	3	-1
31	23.18	4.26	2.55	2	3	-1
32	10.12	0	10.26	0	3	-1
33	5.23	1.49	26.09	0	-3	1
34	1.33	9.25	28.38	2	-3	1

35	-2.57	11.31	21.25	4	-3	1
36	-1.8	19.31	13.98	6	-3	1
37	-3.3	27.81	1.62	6	3	-1
38	9.19	31.38	10.9	4	3	-1
39	13.71	29.64	14.66	4	-3	1
40	19	25.62	1.98	6	-3	1
41	22.89	16.99	0	6	3	-1
42	21.93	15.66	0	4	3	-1
43	17.21	8.23	2.61	2	3	-1
44	13.22	4.19	8.52	0	3	-1
45	6.98	0	22.21	0	-3	1
46	0.05	7.46	21.18	2	-3	1
47	4.69	10.36	25.3	4	-3	1
48	1.42	16.09	25.81	6	-3	1
49	4.54	25.22	30.88	8	-3	1
50	5.96	30.03	31.35	10	-3	1
51	17.19	30.49	11.13	12	-3	1
52	14.94	26.44	0	12	3	-1
53	17.76	22.06	0	10	3	-1
54	23.55	13.52	0	8	3	-1
55	20.68	0.46	0	6	3	-1
56	15.76	1.97	0.14	4	3	-1
57	9.74	0.13	5.72	2	3	-1
58	0.93	4.74	17.82	2	-3	1

59	-1.34	14.07	13.3	4	-3	1
60	-4.96	23.9	1.75	6	-3	1
61	-2.59	26.72	0	6	3	-1
62	4.1	30.3	19.5	4	3	-1
63	11.56	32.1	25.73	4	-3	1
64	15.15	28.66	13.51	6	-3	1
65	21.46	21.25	0	6	3	-1
66	25.4	15.45	0	4	3	-1
67	21.79	0.43	2.54	2	3	-1
68	18.36	0	7.63	0	3	-1
69	4.98	0.72	23.09	0	-3	1
70	3.98	4	25.39	2	-3	1
71	-2.47	13.47	18.69	4	-3	1

Graph of Results



Commentary on Results

Since bigfoot was more of a conservation animal, the results of the graph were not drastically changed. My attempt was to see if including bigfoot would help balance out the deer and grain height a little more than without him. Bigfoot did balance things slightly by raising the values of the under performing variable. The deer population did have a very interesting pattern on the graph. There was three big jumps and drops that were almost identical as well as two smaller jumps and drops around 36 and 65 months that were also very similar. The height of the grain had a consistent up and down flow for the whole time but it had much more random spikes and jumps.The bigfoot effect did a pretty balanced job of saving and eating both of the values. He didn't spend a large amount of time on trying to save one value and eating the other to try an balance it. The biggest evidence for bigfoot's presence being visible, is that the lows of both the deer and grain height did not last very long. Bigfoot did his best to try and balance out the waves of the deer/grain height battle but I believe that his presence didn't do a good enough job of balancing the two data points. The two points seemed to have higher plateaus when bigfoot was around but all in all the graph did the same motion as without him being there.