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### Project 3: Functional Decomposition

I chose to add in a topical quantity, virus. The way my virus works is that if there are too many deer, more than 4, a random amount of deer are killed. The virus also dies off if there are more virus than deer. The random amount is chosen between 0 and the amount of virus.

I think my viruses were effective in wiping out the deer. It's evident in how the number of deer don't have a nice pyramid effect going across the graph. I increased the amount of grain that grows per month to 13.0 and the number of deer really start looking different which shows that my viruses are doing their job in this system.

The other pieces of the graph seem to be working as intended, there's a cyclical effect of the temperature, precipitation, and the height of the grass. As the temperature and precipitation increase, the height of the grain increases, which causes the number of deer to increase, which eventually causes the number of viral diseases to occur.



