

Rabbits tend to have a higher survival ability in the simulated ecosystem compared to foxes. This is evidenced by the sustained presence of rabbits throughout the simulation, even with the introduction of predators. The size of the field, rate of grass growth, and fox k value (maximum cycles without food) all affect the stability and dynamics of the ecosystem. Larger field sizes provide more resources and space for both rabbits and foxes, potentially leading to more stable populations. Faster grass growth rates can sustain larger populations of rabbits, and while this also indirectly helps the foxes, especially given their ability to survive for k number of cycles without food, the rabbits still have a better survival rate. However, if the foxes had a higher k -value, they may survive long enough to gain even more of an advantage. This simulation result reflects a real ecosystem where there are more prey than predator, because while fluctuations in populations are expected and natural, maintaining a balance where both species coexist without one driving the other to extinction requires careful management of environmental factors and population dynamics, in this case the size of the field and growth rate of the grass.