

DS3500 Fox Vs Rabbit Alife Simulation Analysis:

It seems the species most capable of surviving in our simulation was the Fox, but it was very feast or famine for them. It depends on the K value a lot. Many times, the simulation would only end up being Rabbits because the Foxes would be nowhere near rabbits when they appeared and would die out instantly. However, once they did find rabbits they multiplied incredibly quickly, and with a k value of approx. 10 the foxes often overtook the rabbits significantly in the end of our simulation. We tried to increase the grass regrowth rate but that just meant more food for our foxes. The size of the field increased the chance that foxes would find no rabbits at all to eat and die out of hunger. We did notice that turning Wrap to false was impactful, as the rabbits always spread so quickly that wrap was not as significant, but when wrap was false, the foxes had a harder time overpowering the rabbits.

In conclusion, at least given the situation's default settings, it seems that the Fox has the best chance of survival between the two, rapidly eating all the rabbits that reproduce until they're all gone, at which point all the foxes will die out as well.