

The paradox of pesticides was observed experimentally, which says that pesticides may dramatically increase the population of a pest when the pest has a natural predator. Here we use a mathematical model to study the paradox. We find that the timing for the application of pesticides is crucial for the resurgence or non-resurgence of the pests. In particular, regularly applying pesticides is not a good idea as also observed in experiments [3,7]. In fact, the best time to apply pesticides is when the pest population is reasonably high.