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## **EFFECTS OF PERIODIC INCREASE OF PREY POPULATION IN A PREDATOR-PREY MODEL**

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### **Abstract**

We started from a prey-predator model, where a periodic variation in the number of prey and predators is possible, without perturbation. We followed the line that periodically we carried out an overpopulation of prey. In general it is expected that this fact will increase the populations both of prey and of predator. We try to understand the way in which the overpopulation of prey can change the average number of prey and predators. In terms of application, such increase of the population of prey is usually a less expensive solution for supporting the ecological diversity.

*Key words:* predator-prey model, perturbed dynamics, species coexistence

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