INTRAGUILD PREDATION MODEL (IGP) WITH DISEASE

AIMI NURAIDA BINTI ALI HASSAN

UNIVERSITI TEKNOLOGI MALAYSIA
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AIMI NURAIDA BINTI ALI HASSAN

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Universiti Teknologi Malaysia

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ABSTRACT

Intraguild Predation (IGP) classified as killing and eating among potential competitors. Intraguild Predation is ubiquitous interaction, differing from competition or predation. The purpose of this study is to investigate the effects of disease on the susceptible prey. Here we analyze the LotkaVolterra competition model and Intraguild Predation model. In order to keep the model simple, an assumption has been made that is no any migration or immigration for the intraguild predator and intraguild prey. We also analyze using the SI model, the simplest epidemiological model. We analyzed the entire model by finding the stability of the equilibrium points by using Routh – Hurwitz criteria. Numerical example is used to show the stability of the equilibrium point by using the MAPLE software.
ABSTRAK