ON THE STABILITY OF A HOST – DELAYED COMMENSAL SPECIES PAIR WITH LIMITED RESOURCES

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Abstract

In this paper a mathematical model of commensalism between two species (S_1 & S_2) with limited resources with delayed commensal is investigated. The commensal species (S_1),in spite of the limitation of its natural resources flourishes drawing strength from the host species(S_2).This model is characterized by a pair of first order non-linear coupled differential equations. All the four equilibrium points of the model are identified and the criteria for the stability are discussed.