

A MATHEMATICAL MODEL OF TWO COMPETING ECO-SYSTEMS WITH RESERVE AND HARVESTING FOR ONE OF THE SPECIES

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Abstract

In the present investigation we study a two Species competition model incorporating (i) A constant number of Species S1 are provided with reserve without participating in competition and (ii) The same species S1 harvested at a constant rate. The model is characterized by a couple of first order non-linear ordinary differential equations. All the six equilibrium points of the model are identified and stability criteria of three S2 washedout states and one typical co-existence state are discussed.

Key Words: Reserve, Harvesting, Non-linear system, trajectories.

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