

1154-34-1428

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Jawarneh and **Ross Staffeldt**. *A Nutrient-Prey-Predator Model: Stability and Bifurcations*.

We consider a model of a nutrient-prey-predator system in a chemostat with general functional responses, using the input concentration of nutrient as the bifurcation parameter. We study changes in the existence and the stability of isolated equilibria, as well as changes in the global dynamics, as the nutrient concentration varies. The bifurcations of the system are analytically verified and we identify conditions under which an equilibrium undergoes a Hopf bifurcation and a limit cycle appears. (Received September 15, 2019)