

1048-37-120

Yun Kang* (yun.kang@asu.edu), **Dieter Armbruster** and **Yang Kuang**. *Dynamics of plant-herbivore models with monotone plant growth rate.*

The impact of monotone plant growth models in general plant-herbivore models on the dynamics of the plant-herbivore interaction is studied. It is shown that all monotone growth models generate a unique interior equilibrium. We investigate the uniform persistence of monotone growth models with a single nonzero equilibrium of the plant population. Such models lead to noise sensitive bursting which is identified as a dynamical mechanism for almost periodic outbreaks of the herbivore infestation. Monotone and non-monotone plant growth models are contrasted with respect to bistability and crises of chaotic attractors. (Received February 02, 2009)