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*A Dynamical Systems Approach to Mitigating Honey Bee Disease*

Honey bee colonies have been in steady decline over the past few decades. This decline is thought to be caused by a number of factors which act together to create hostile conditions for honey bees. Here, we use dynamical systems to study the influence of disease and seasonality on honey bee colonies and use the predictions from the models to inform prevention strategies. We analyze stability of healthy colonies, conditions for invasion, and the stabilizing effects of feedback loops in these models.