

Prey dormancy model

$$\frac{dR}{dt} = Q + \alpha \sin(\omega t) - cRA - lR$$

$$\frac{dA}{dt} = e_r cRA(1 - \alpha_{ii}A) - \delta(R)A + \rho(R)D - f_aAP - m_a$$

$$\frac{dD}{dt} = \delta(R)A - \rho(R)D - f_dDP - m_dD$$

$$\frac{dP}{dt} = e_a f_a AP + e_d f_d DP - m_p P$$

$$\delta(R) = \delta_{max} \exp(-R)$$

$$\rho(R) = \rho_{max}(1 - \exp(-R))$$