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A spatio-temporal model of blossom blight

Fireblight is a bacterial disease of apple and pear trees that can wipe out an entire orchard in one season. We present a model for fireblight during blooming season. It consists of two semi-linear PDEs that describe pathogen dispersal, which are coupled in each point of the domain to two ODEs that describe the host flowers. Numerical simulations suggest the existence of Travelling Waves which we then set out to prove using upper and lower solutions and a fix-point argument.