In silico pest and pathogen control strategies: changes in the agricultural landscape

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Because insect pest populations are known to be strongly influenced by local landscape characteristics, experimenting with crop protection strategies involves modifying the landscape, e.g. crop rotations, field size and geometry... The quality and distribution of resources used by a given species can be very heterogeneous in space and time. I will present spatially explicit models to describe the emergence and movement of pests and/or pathogen. Then we will see how the landscape can be modified to optimize populations, in particular for the cabbage maggot and/or the potato wireworm and/or powdery mildew.

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