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Jo Ann Lee* (joann5@ufl.edu), **Susan E. Halbert**, **William O. Dawson**, **Cecile J. Robertson**, **James E. Keesling**, **Ross M. Ptacek** and **Burton H. Singer**. *Evaluating Insecticide Distribution to Protect New Citrus Plantings from Huanglongbing*. Preliminary report.

The citrus industry in Florida has dealt with the impact of the Huanglongbing (HLB), a vector-transmitted disease, since its local discovery in 2005. The primary vector of HLB is the Asian citrus psyllid, *Diaphorina citri* Kuwayama. Rapid spread of HLB has led to the need to replant blocks and keep them free from infection as long as possible. Using a spatially explicit simulation model for HLB transmission, we investigate the problem of how to optimally distribute pesticides in a planting if the goal is to minimize infection in certain regions. Our model suggests a strategy where the area surrounding the region to protect is sprayed more than that region. This is contrary to what is commonly practiced. Despite best practices, it is expected that all new plantings will eventually succumb to the disease so it is essential to understand how fruit output depends on disease progression. We will present some preliminary work on modeling the spread of pathogen through the tree. (Received January 29, 2019)