

Economics of Plant Diseases and Disease Management with Application to Field Tomatoes

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Linked models are integrated to represent field production, pathogen transmission between fields, effects of disease, and effects of disease management practices. External stochastic factors affect crop production and yield quantity and quality along with revenues, costs, and profit. The models are used to predict probabilistic outcomes for current production practices as well as to predict effects of alternative practices. Predicted value of new technology and practices are derived; at the field level, regionally, nationally, and internationally. Needed adaptations in markets and policy can be identified.