Field Evaluation of Decision Support System (DSS) for *Phytophthora infestans* (Mont.) de Bary on Tomatoes

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Abstract

Phytophthora infestans (Mont.) de Bary is the causal pathogen of late blight, a major biological limiting factor of potato and tomato crops. In order to help track outbreaks, the website USAblight.org was created to establish a communication basis for growers and researchers. The website includes access to a Decision Support System (DSS) which serves as a virtual aid for fungicide application management. To validate the system, a split plot tomato field trial was set up with cultivars Mountain Fresh Plus (susceptible) and Legend (moderately resistant). The study will compare the use of weekly fungicide application to applications based on DSS recommendations. The study started on June 9, 2015, and late blight was reported in the field on July 16, 2015. One less spray has been used on the DSS treatment than on the weekly spray treatment thus far. The data will be used to calculate the Area Under Disease Progress Curve (AUDPC) and harvests are planned for later in the season to compare yields among treatments.