

Rutgers University, New Jersey Agricultural Experiment Station

2013 Tomato Disease Forecasting Report

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| | Northern New Jersey | | | | | | Central New Jersey | | | | | | Southern New Jersey | | | | | | | |
|------|---------------------|-------|---------------|-------|-----------|-------|--------------------|-------|-------------|-------|---------------|-------|---------------------|-------|-----------|-------|-----------------|-------|----------|-------|
| | Pequest | | Basking Ridge | | Pittstown | | Farmingdale | | Cream Ridge | | New Brunswick | | Mt. Holly | | Hammonton | | Upper Deerfield | | Woodbine | |
| Date | Daily | Total | Daily | Total | Daily | Total | Daily | Total | Daily | Total | Daily | Total | Daily | Total | Daily | Total | Daily | Total | Daily | Total |
| 5/9 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 4 | 1 | 2 | 1 | 5 | 1 | 2 | 1 | 2 | 1 | 3 | 0 | 0 |
| 5/10 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 4 | 0 | 2 | 1 | 6 | 1 | 3 | 1 | 3 | 1 | 4 | 0 | 0 |
| 5/11 | 1 | 2 | 1 | 1 | 1 | 3 | 1 | 5 | 1 | 3 | 2 | 8 | 1 | 4 | 1 | 4 | 1 | 5 | 1 | 1 |
| 5/12 | 0 | 2 | 2 | 3 | 0 | 3 | 2 | 7 | 2 | 5 | 0 | 8 | 1 | 5 | 1 | 5 | 1 | 6 | 1 | 2 |
| 5/13 | 0 | 2 | 0 | 3 | 0 | 3 | 0 | 7 | 0 | 5 | 0 | 8 | 0 | 5 | 0 | 5 | 0 | 6 | 0 | 2 |

Welcome to the new 2013 tomato disease forecasting report!

Disease severity values (DSVs) for early blight, septoria leaf spot, and tomato anthracnose development are determined daily based on leaf wetness (due to rainfall, dew) and air temperature. On a daily basis DSV values can range from 0 to 4 where 0 = no chance for disease development to 4 = high chance for disease development. DSVs are accumulated during the production season. Fungicide applications are based on an individually determined DSV threshold. The first fungicide application for the control of these three diseases is not warranted until 35 DSVs have accumulated from your transplanting date. After that, growers can base fungicide applications on different DSV thresholds. Growers who want to take a conservative approach to disease management might choose a DSV threshold of 15 or 18, thus the next fungicide application would be warranted when the total DSV value reached either 50 (35 + 15) or 53 (35 + 18) for their location. Growers taking a more liberal approach to disease management might chose a DSV threshold of 20 or 25, then fungicide applications would be warranted when the total DSV at their location reaches 55 (35 + 20) or 60 (35 + 25). In all cases, the very next fungicide application would then be warranted when the next accumulated DSV threshold was met. For example, in the case where a

grower would chose the 15 DSV threshold, fungicide applications would be warranted when the DSV threshold reached 35, 50, 65, 80, 95 and so forth. Thus, the timing of fungicide applications are based on accumulated weather (leaf wetness and air temperature) events and not on a calendar basis. It's important to remember that daily and accumulated DSVs can increase very slowly (i.e., during hot, dry weather) or very quickly (i.e., during wet, raining weather) and growers will need to pay careful attention to the report. Growers who are interested in using this model, also known as Tom-Cast, should chose the location above that is closest in proximity to their farming operation and should regularly check the Cornell NEWA website (<http://newa.cornell.edu/>) where this information is compiled from. Click on Pests Forecasts from the menu, select your weather station, and click on tomato diseases, set accumulation start date and a table of daily and total DSVs will be generated. Tomato growers can also track the DSVs for Late blight development by clicking on the Tomato Late Blight Blitecast model.