



# PENNSYLVANIA VEGETABLE MARKETING & RESEARCH PROGRAM

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## *Pennsylvania Vegetable IPM Special Update*

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*The information supplied in these Updates is from Penn State Extension Specialists and Educators.*

*These Updates are a service of the Pennsylvania Vegetable Marketing and Research Program which, in cooperation with the Pennsylvania Vegetable Growers Association, supports vegetable research at Penn State University and other institutions.*

### VEGETABLE DISEASE UPDATES

*Dr. Beth Gugino, Extension Vegetable Pathologist, Penn State University*

#### MULTIPLE REPORTS OF LATE BLIGHT ON TOMATO IN CENTRAL AND WESTERN PA

Over the past few days there have been an increasing number of confirmed reports and suspected outbreaks of late blight primarily in tomatoes in both commercial production and home gardens especially where there have been limited or no fungicide applied. These reports are from Erie, Mercer, Indiana, Centre and Clinton Counties.

As we head towards fall, with cooler night temperatures and longer dew periods, conditions are going to become increasingly favorable for late blight. The preferred temperatures range is from 50 to 75°F. Keep in mind that even if the temperatures reach into the upper 80's and conditions are sunny during the day, the disease will continue to progress under cooler night temperatures.

Please thoroughly scout your fields especially higher risk areas such as lower lying areas, areas that are more shaded or where late blight has been a problem in the past. The symptoms include pale green or water-soaked and gray in color on the leaves, petioles and stems. Under humid conditions, white sporulation (fuzzy growth) can develop especially on the underside of the leaves although it can also develop on the upper surface under favorable conditions. When released, these spores can spread the pathogen to near-by plants. When dried out, the lesions appear necrotic and brown to black in color.



*Late blight sporulating on the upper surface of a tomato leaf however, sporulation is most common on the lower leaf surface. Photo: Beth K. Gugino.*

A number of conventional fungicides are very effective for managing late blight if managed preventatively. Initiating a fungicide program after symptoms are observed can be challenging when conditions are favorable. However, on tomato, chlorothalonil can even be effective if applied on a weekly preventative schedule and good coverage is obtained. Late blight specific fungicides would include products such as but not limited to, Previcur Flex (FRAC 28), Ranman (21), Zampro (45+40) or Orondis Opti (U15+M5). See the [2019 Mid-Atlantic Commercial Vegetable Production Recommendations](#) and [2019 Fungicide Resistance Management Guidelines for Vegetable Crops](#) for additional recommendations on both tomato and potato. These products should be tank mixed with a protectant for fungicide resistance management and alternated/rotated between different FRAC codes. For organic growers, copper-based programs tend to be most effective. Another possible option would be to alternate between Regalia and Actinovate both tank mixed with a copper-based fungicide. These products are most effective when applied preventatively and regularly when conditions favor disease. Good spray coverage is essential.

Remember that late blight is a community disease! If you suspect late blight please contact your local Penn State Extension Office, the [Penn State Plant Disease Clinic](#) or me at [bkgugino@psu.edu](mailto:bkgugino@psu.edu) or 814-865-7328 for confirmation. Updates via audio-messages will be left on the 1-800-PENN-IPM hotline as well as posted at the produce auction information displays. For the most current map of confirmed late blight outbreaks please visit <http://usablight.org>.