

2018 Research Report

Management and extent of *Phytophthora* fruit rots in Essex County, 2018

Prepared for the Ontario Tomato Research Committee (OTRI)
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Research Team:

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- Grower cooperators (requested to remain anonymous)
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Study	Page
Fungicide strip trials	2-3
<i>Phytophthora capsici</i> survey	4-8

Highlights/Summary:

- The objectives of this research were to a) complete strip trials to evaluate management options for *Phytophthora* fruit rot with two affected grower cooperators, and b) determine the extent of *Phytophthora capsici*, the causal agent of *Phytophthora* fruit rot and crown and root rot, in Essex County.
- *Strip trials*: two strip trials were completed at commercial tomato fields in Essex County infested with *P. capsici*. The fungicide programs consisted of five application beginning at fruit set (Orondis Ultra + Phostrol, Zampro + Phostrol, Torrent + Phostrol, Orondis Ultra, Zampro). In the second treatment, the foliar program was supplemented with an in-furrow application of Presidio + Revus. At Site 1, fruit rot yield was very low (0.5% in the control) and there were no differences among treatments. At Site 2, rot yield was more than 8% of total yield in the control. Both fungicide programs reduced rot yield by an average of 61%, which was equivalent to a reduction of 2.3 tons/acre. There was no advantage of the in-furrow + foliar program compared to foliar only program. The foliar fungicide program tested adds a significant cost to tomato disease management, since none of these fungicide control early blight, Septoria leaf spot, or anthracnose. Now that we have identified a program that works, future research could work toward ways to modify the program (fewer applications) to achieve the same result.
- *Survey*: Fourteen fields were surveyed for fruit with symptoms of *Phytophthora* fruit rot. *P. capsici* was detected in 87% of fruit and 93% of fields sampled. Symptoms included buckeye rot, soft rot, and white sporulation. *P. capsici* is widespread in the Essex County processing tomato production region.

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