ONvegetables

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"In This Issue"

- Late blight alert – July 27th, 2017

LATE BLIGHT ALERT – JULY 27TH, 2017

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This information is updated from an earlier article by Janice LeBoeuf.

We have had multiple reports of late blight in conventionally managed tomato fields this week. Typically, this disease is well managed in tomatoes with a broadspectrum program including chlorothalonil. However, high disease pressure due to environmental conditions, combined with a dense leaf canopy and rapid growth may have resulted in poor spray coverage and reduced efficacy.

Commercial growers should scout often and ensure they are using fungicides with good late blight activity in their fungicide program. When late blight is in the area, spray intervals should be shortened.

Under continued high disease pressure, growers should consider adding a targeted late blight fungicide to the spray program. If late blight has been identified in a field, use a fungicide with curative and antisporulent activity, see the table below for late blight fungicides and their properties.

Cloudy and high humidity or wet conditions are favourable for late blight. The pathogen prefers cool temperatures. The disease is suppressed by hot, dry weather, but it can continue developing and spreading when suitable conditions return.

Scout fields often. Know the symptoms. Refer to the Tomato Late Blight Photo Gallery(https://onvegetables.com/2013/08/27/late-blight-photo-gallery/) and Late Blight Look-Alikes(https://onvegetables.com/2010/07/13/late-blight-look-alikes/) for photos of late blight and possible look-alikes on tomato.

Fungicide registrations for tomato:
Ratings are shown for late blight activity based on information from Dr. Tom Zitter, Dept. of Plant Pathology and Plant-Microbe Biology, Cornell University, Ithaca, NY or information from other sources listed at the end of the article (*).

Ratings:	**Activity** (capitalized indicating stronger activity)
0 = no effect or not labelled	**P, p** = protectant
+ = poor	**C, c** = curative
++ = OK to good	**A, a** = antisporulant
+++ = very good	

Bravo, Echo (chlorothalonil – group M5)– contact fungicides – have been very effective protectants in tomato	**P++**
Penncozeb, Manzate, Dithane, Polyram (mancozeb, metiram – group M3)– contact fungicides – have been very effective protectants in tomato	**P++**
Forum (dimethomorph – group 40)– translaminar – has some ability to move into the plant – must be tank-mixed with another late blight fungicide from a different chemical family – rotate chemistries	**P**, **c**, **A** use as preventative**++**
Cabrio EG (pyraclostrobin – group 11)– translaminar – has some ability to move into the plant – strobilurins generally rated lower than the other targetted late blight materials by researchers – preventative only – tank mix with stronger late blight product	**P**, **a+**
Orondis Ultra (mandipropamid/oxathiapiprolin – group 40/U15)– systemic	***P, c, A+++**
Presidio (fluopicolide – group 43)– translaminar, some "kickback" activity – must tank mix with Bravo	**P**, **C**, **A+++**
Reason 500 SC (fenamidone – group 11)– locally systemic and translaminar – has some ability to move into the plant – must be tank-mixed with mancozeb or Bravo 500	***P, a** not rated
Revus (mandipropamid – group 40)– translaminar, some "kickback" activity – has some ability to move into the plant – rotate chemistries and use in combination with protectants for resistance management	**P**, **c**, **a++**
Tanos 50 DF (famoxadone/cymoxanil – group 11/27)– translaminar, some "kickback" activity – has some ability to move into the plant – rotate chemistries and use in combination with protectants for resistance management	**P**, **C**, **a** use as preventative**++**
Torrent 400SC (cyazofamid – group 21)– protectant, contact (limited locally systemic) – should be tank-mixed with a non-ionic or organosilicone surfactant	**P++**
Zampro (ametoctradin/dimethomorph – group 45/40)– two active ingredients – protectant and systemic, translaminar – can move into the plant	***P, c, A** use as preventative **++**

Please report any occurrences so that we can keep the tomato community informed about its development and spread and so that we can collect samples to learn about the strains, fungicide sensitivity, and the biology of this evolving disease.

Contact OMAFRA if you suspect you have found late blight in Ontario. Those in the US can contact their state cooperative extension service or report online at http://www.usablight.org/. This helps us alert others of late blight in the region and if possible, we will try to collect samples for late blight researchers studying the disease.

Note: Organic producers may be interested in an article by Meg McGrath (Cornell University) on managing late blight in organically-produced tomato(http://vegetablemdonline.ppath.cornell.edu/NewsArticles/Tom_LB_OrganicMgt10.html). Note that crop protection products mentioned in her article relate to US registrations. Consult the Canadian labels and your organic certifier for registered products that can be used in organic production.

Tomato Late Blight Photo Gallery(https://onvegetables.com/2013/08/27/late-blight-photo-gallery/)

*Other references:
Late blight fungicide table: http://euroblight.net/control-strategies/late-blight-fungicide-table/
Late blight fungicides 2016: http://www.potatoreview.com/potato-review-fungicides/
Fungicides for late blight control in potatoes: http://msue.anr.msu.edu/news/fungicides_for_late_blight_control_in_potatoes