

Vegetable ~~Matters of~~ Facts

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Celery

Septoria on Celery

Control of Septoria

- **Avoid use of excessive nitrogen**
- **Use Healthy seed :**
 - Heat treated seed with hot water at 48°C for 30 min
 - Use fungicide seed treatment with 0.2% Thiram at 30°C for 24hr
- **Control disease in seed bed**
 - Remove volunteer plants
 - Use tolerant varieties (there are no resistance varieties available)
 - Use at least a one year rotation



What is Septoria late blight

Septoria leaf spot or late blight is caused by the fungus *Septoria apiicola*. It is most pronounced during extended periods of leaf wetness.

What does Septoria look like?

Initially it develops as small brown spots on older outer leaves. These spots quickly turn dark brown to black and several small lesions may join to form a larger spot. Septoria can be seed transmitted but once in the field, it can be spread by water splash (irrigation or rain), farm machinery and field workers.

Critical weather conditions for Septoria are; cool misty nights, heavy dews, dull days, summer showers, and autumn rains. Currently grower's management options for controlling Septoria late blight are weekly (7-day) fungicide sprays.

Septoria (late blight) on celery crop

Evaluation of a disease forecasting model to manage late blight (*Septoria*) in Celery (VG-04016)

Currently DPI Victoria is conducting trials to evaluate the TomCast forecasting model for *Septoria* late blight in celery. TomCast is a weather based disease predictive model which can be used to improve timing of fungicide application. In North America celery sprayed by the TomCast disease predictive model has resulted in the reduction of one to three sprays per crop, without loss of quality or yield.

How it works?

A weather station in the field records temperature and leaf wetness information, which is fed into the TomCast model. When a designated threshold is reached a spray is applied. Crops are sprayed only when conditions are conducive to the disease rather than on a weekly (calendar) basis.

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Slobodan Vujovic, Private Bag 15, Ferntree Gully Delivery Centre 3156; Fax (03) 9800 3521.

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For more information please contact your local VegCheque officer.

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The TomCast Model

Where the model is used to time fungicide sprays for Late Blight in commercial crops, a threshold of 20 Disease Severity Values (DSV's) are accumulated prior to commencement of spraying with chlorothalonil. The DSV's are the hours of leaf wetness in a temperature range. Daily DSV's are calculated at 1100hrs, and added till a spray threshold is reached.

- For example 4 days at 19°C and 6 hours of leaf wetness (4x1=4 DSV), 5 days at 22°C and 8 hours leaf wetness (5x2=10 DSV) and 2 days at 23°C and 15 hours of leaf wetness (2x3=6 DSV) would result in a DSV of 20 and a spray should be applied.

Mean temperature °C	Leaf wetness periods (hr)				
13-17	0-6	7-15	16-20	21+	
18-20	0-3	4-8	9-15	16-22	23+
21-25	0-2	3-5	6-12	13-20	21+
26-29	0-3	4-8	9-15	16-22	23+
DSV	0	1	2	3	4

DSV = Disease Severity Values (scored 0-4).
 0 = conditions unfavourable for spore formation.
 4 = conditions highly favourable for spore formation.

Weather station used to collect temperature and leaf wetness information



For more information please contact:

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Useful Websites for more information:

<http://www.ipm.ucdavis.edu/DISEASE/DATABASE/celeryblight>.

<http://www.ipm.ucdavis.edu/PMG/r104100111.html>

<http://www.gov.on.ca/OMAFRA/english/crops/facts>

Check us out and view our other fact sheets at:

<http://www.dpi.vic.gov.au/agvic/ihd/projects/vchq.htm>

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