

2016 Downy Mildew Control Strategy for Cucumber Crops

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Infosheet

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DOWNY MILDEW MANAGEMENT TIPS

- Use only the fungicides listed in Table 1, *Cucumber Downy Mildew Control*, on page 2.
- Under high risk conditions, or when downy mildew is identified in the Great Lakes Region, use the most efficacious product first.
- Always rotate between fungicides from different chemical families. Do not make sequential applications of any one fungicide.
- Use a minimum spray volume of 30-60 gallons per acre.
- Apply a preventative fungicide **before** a rainfall event
- Apply a preventative fungicide **prior** to overhead irrigation.

Cucumbers – Early Crop

Maintain a preventative fungicide program, based on the risk conditions described below, until the final harvest. Do not stop spraying or lengthen the spray intervals before harvest is complete. Destroy the crop by discing or plowing the crop residue into the soil immediately after harvest. Do not rely on a burn-down herbicide to destroy the crop, as this practice may actually increase the level of disease present in the field.

Cucumbers – Late Crop

Be prepared to begin the preventative fungicide program soon after crop emergence. Use the targeted downy mildew fungicides listed in Table 1, *Cucurbit Downy Mildew Control*, on page 2. Banded applications on small plants greatly reduces the cost of the fungicide program. Use broad spectrum products in rotation with the targeted fungicides only if the risk of infection is considered low, or at the tail end of harvest.

Downy Mildew Risk Assessment:

Any of the following conditions indicate a high risk of downy mildew infection:

- Downy mildew has been identified in the Great Lakes Region
- Forecasts predict strong weather fronts originating in the Southern US.
- Prolonged periods of cool, wet weather.
- Cooler night-time temperatures and heavy dew fall followed by warm, windy days.
- Extended periods of leaf wetness due to dew, rain or overhead irrigation.

Under High Risk Conditions

Start applications immediately, regardless of crop stage.
Maintain a 5-7 day spray interval.
Use only targeted downy mildew fungicides.
Consider a banded application on small plants.

Under Low Risk Conditions

Start applications no later than vine development.
Maintain a 7-day spray interval.
Rotate between broad spectrum and targeted downy mildew fungicides.

Table 1. Cucumber Downy Mildew Control					
Group Name (Group #)	Common Name	Trade Name	Rate per Hectare (Rate per Acre)	Pre Harvest Interval	Notes
Broadspectrum Preventative Fungicides Begin applications no later than vine development.					
dithiocarbamate (group M3)	mancozeb	Dithane Rainshield	1.1–3.25 kg (0.4–1.3 kg)	14	24-hour re-entry interval.
		Penncozeb 75DF Raincoat			
		Manzate Pro-Stick	2.25–3.25 kg (0.9–1.3 kg)		
chloronitrile (group M5)	chlorothalonil	Bravo ZN	4.8 L (1.9 L)	2	48-hour re-entry interval.
Downy Mildew–Targeted Preventative Fungicides Begin applications when weather conditions favour downy mildew or if downy mildew is identified anywhere in the Great Lakes region.					
QiL (group 21)	cyazofamid	Torrent 400SC	150–200 mL (61–81 mL)	1	Tank mix with an NIS or Organosilicone surfactant. Do not make sequential applications. 12-hour re-entry interval.
QxI (group 45) Carboxylic acid amide (group 40)	ametoctradin/dimethomorph	Zampro	0.8-1 L (0.3-0.4 L)	1	Use of a spreading/penetrating adjuvant may improve performance. See label for crop rotation restrictions and re-entry intervals.
Carboxylic acid amide (group 40)	mandipropamid	Orondis Ultra A	400-600 mL (162-243 mL)	0	Orondis Ultra is a co-pack. Product A is for suppression only and must be tank-mixed with Bravo 500. Under heavy disease pressure, use a higher rate of product B. Do not make sequential applications. Do not use for more than 33% of the total foliar fungicide applications. 12-hour re-entry interval.
OSBP inhibition (group U15)	oxathiapiprolin	Orondis Ultra B	87.5-350 mL (35-141 mL)	0	

Downy mildew must be managed preventatively. **Do not wait for symptoms to appear before initiating a fungicide program.** Apply registered downy mildew fungicides based on the risk of infection.

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