

Mobile Fungicides for Managing Powdery Mildew, Downy Mildew, + Phytophthora Blight in Cucurbits

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Fungicide	FRAC Code	Diseases	Recommended Rate/A (labeled)	REI	PHI	Seasonal Limits
Vivando ^a	U6	Powdery mildew	15.4 fl oz	12 h	0 d	3 sprays
Proline ^c	3	Powdery mildew	5.7 fl oz	12 h	7 d	2 sprays
Procure ^c	3	Powdery mildew	8 fl oz (4-8)	12 h	0 d	40 fl oz
Luna Experience*	7 + 3	Powdery mildew	10-17 fl oz (6-17)	12 h	0 d	34 fl oz
Quintec ^{b, c}	13	Powdery mildew	6 fl oz (4-6)	12 h	3 d	24 fl oz
Torino ^c	U8	Powdery mildew	3.4 oz	4 h	0 d	2 sprays
Endura ^c	7	Powdery mildew	6.5 oz	12 h	0 d	4 sprays
Orondis Ultra ⁱ	49+40	Blight, Downy mildew	5.5 - 8.0 fl oz	12 h	0 d	4 sprays or 33% of applica- tions
Orondis Opti ⁱ	49+M5	Downy mildew	1.75 – 2.5 pt	12 h	0 d	
Orondis Gold ⁱ	49+4	Blight	2.4 - 19.2 fl oz	12 h	0 d	
Ridomil Gold SL ^j	4	Blight	1-2 pt to soil	48 h	5 d	2 pt
Ranman ^{a, d}	21	Blight, Downy mildew	2.75 fl oz (2.1-2.75)	12 h	0 d	6 sprays
Omega ^e	29	Blight, Downy mildew	0.75 – 1.5 pt	12 h	7/30	4-7 sprays
Zampro *	40+45	Blight, Downy mildew	14 fl oz	12 h	0 d	3 sprays
Gavel	22+M3	Blight, Downy mildew	1.5 – 2 lb	48 h	5 d	8 sprays
Tanos ^h	27+11	Blight, Downy mildew	8 oz	12 h	3 d	4 sprays
Forum ^{a, k}	40	Blight, (Not recommended now for DM due to resistance)	6 fl oz	12 h	0 d	5 sprays
Revus ^{a, c, k}	40	Blight, (Not recommended now for DM due to resistance)	8 fl oz	12 h	0 d	4 sprays (32 fl oz)
Presidio ^{g, k}	43	Blight, (Not recommended now for DM due to resistance)	4 fl oz (3 – 4)	12 h	2 d	2 sprays (new label)
K-Phite, etc. ^f	33	Blight	2.5 – 5 pt	4 h	0 d	7 sprays
Zing!	22+M5	Downy mildew	36 fl oz	12 h	0 d	8 sprays
Curzate ^h	27	Downy mildew	5 oz (3.2 - 5)	12 h	3 d	9 sprays

* Luna Experience and Zampro are NOT permitted used on Long Island.

- ^a Organosilicone and/or non-ionic surfactant recommended or required (Revus).
- ^b Quintec is labeled for use on non-edible-peel cucurbits (melon, pumpkin, winter squash, gourd). 10-14 day spray interval.
- ^c Limited use recommended because resistance could affect efficacy especially when applied often. No more than one application of Endura and Torino recommended; if to be included in fungicide program, early in powdery mildew development is best. Pristine not recommended now that Endura labeled on cucurbits.
- ^d Rate range applies for downy mildew; high rate for Phytophthora blight.
- ^e PHI is 30 days for cucumbers and melons; 7 days for other crops.
- ^f Other phosphorous acid fungicides include ProPhyt and Fosphite. Rate and seasonal limits vary a little among products. Recommended tank mixed with other fungicides. Note that there are also phosphate fertilizers, which are not fungicides.
- ^g New Presidio label has only 2, not sequential applications. Plant-back restriction for most non-labeled crops is 18-month.
- ^h Short residual; apply another fungicide within 5 days.
- ⁱ Make no more than 2 consecutive applications of any before rotating to a different fungicide. When at least 3 applications, Orondis fungicides can be no more than 33% of the applications, or a maximum of 4 applications per planting, whichever is fewer. Orondis Opti is labeled for several other diseases because it contains chlorothalonil. It is only recommended used for these diseases when downy mildew is also present. Orondis Gold 200 is labeled for application to soil for Phytophthora blight. Its use in a crop prohibits foliar application of Orondis fungicides for downy mildew.
- ^j Ridomil Gold SL is recommended for Phytophthora blight only on farms where Ridomil fungicides were not used over several preceding years on other labeled crops (ex. pepper) as resistance may have developed already. Apply to soil at planting and/or through drip.
- ^k Resistance has been found mostly in isolates from cucumber or this is suspected to be the case.

Tank-mix each of these fungicides with a protectant, with the exception of Zing! or Gavel, which are formulated with chlorothalonil or mancozeb. Need to tank-mix is specified in use directions on many labels.

Sulfur is a very effective, inexpensive product for powdery mildew, no efficacy for other diseases.

Oils (several botanical and mineral oils available) are also a good choice for powdery mildew only.

Chlorothalonil and copper have broad-spectrum activity. Copper also effective for bacterial diseases.

Mancozeb is recommended when only downy mildew is occurring.

Apply fungicides for a particular disease in alternation to manage resistance (in the use directions on many labels; typically 1 or 2 consecutive spray maximum) and to ensure effective control if resistance develops.

Previcur Flex, QoI fungicides*, and Ridomil fungicides are not recommended for downy mildew due to resistance and therefore are not in table. (*include Amistar, Cabrio, Quadris, Flint).

Fungicides classified as restricted use in NYS: Gavel, Omega, Presidio, Previcur Flex, Procure, and Zing!