

Cucurbits Vegetables Crop Protection Guide



Bayer provides solutions to help you grow high-quality cucurbits, increase yield potential and continuously improve the marketability of your crop.

| <div><div></div><div>BAYER</div></div> | | | | | | | | | | |
|--|---|--|----------------------|---|---|---|------------------|-------------|-----------------------|--|
| Product | Features and Benefits | Key Pests / Diseases Controlled | WAMLEGS Mixing Order | Maximum Applications per Crop Season | Use Rate & Application T | Chemical Class Group No. | Rainfast (hours) | REI (hours) | PHI (days) | |
| BIOLOGICALS | <div><div>MINUJET</div><div><ul style="list-style-type: none">Uses multiple modes of action to provide broad spectrum suppression against soil borne diseasesExcellent mixing characteristicsLow use rate and concentrated packaging for less bulk and wasteOMRI-certified</div></div> | Rhizoctonia damping off and root rot (<i>Rhizoctonia solani</i>)*, fusarium root rot*, phytophthora blight*, pythium root rot* | L | N/A | 0.5 to 2.8 L/ha (0.2 to 1.1 L/ac.) | FRAC Group BM02 (<i>Bacillus subtilis</i> strain QST 713) | N/A | 4 | 0 | |
| | <div><div><div>SERENADE</div><div>OPTI</div></div><div><ul style="list-style-type: none">Provides protection against foliar fungal diseases through multiple sites of action with a flexible applicationOMRI-certified</div></div> | Downy mildew*, powdery mildew* | W | N/A | Downy mildew: 0.6 to 1.7 kg/ha (0.24 to 0.69 kg/ac.) Powdery mildew: 1.7 to 3.3 kg/ha (0.69 to 1.34 kg/ac.) Begin application soon after emergence or transplant and when conditions are conducive to disease development. Repeat as necessary on a 7 to 10 day interval. | FRAC Group BM02 (<i>Bacillus subtilis</i> strain QST 713) | 2 | 4 | 0 | |
| FUNGICIDES | <div><div><div>Luna</div><div>SENSATION</div></div><div><ul style="list-style-type: none">Highly effective fungicide with preventative properties to help protect against disease and increase yield potentialBest used in a preventative program</div></div> | Powdery mildew | L | Maximum 1,980 mL/ha (801 mL/ac.) per year | 300 to 400 mL/ha (121 to 162 mL/ac.)** Begin fungicide applications preventatively, when conditions are favourable for disease. Continue as needed on a 7- to 14-day interval. When disease pressure is severe use the higher rates. | Group 7 & 11 (fluopyram, trifloxystrobin) | 2 | 12 | 0 | |
| | <div><div><div>PROLINE</div></div><div><ul style="list-style-type: none">Proline® fungicide delivers the proven defense of prothioconazole (Group 3), offering exceptional yields and outstanding disease protectionFlexible and cost-effective tool to manage economically important diseases in cucurbit vegetables</div></div> | Fusarium wilt, fusarium blight, gummy stem blight, powdery mildew | L | Maximum allowed per crop season: 1.26 L/ha (510 mL/ac.). Up to 1 soil application and 2 foliar applications at the high rate, or 1 soil application and 4 foliar applications per year at the low rate. | Fusarium wilt, fusarium blight, gummy stem blight: 420 mL/ha (170 mL/ac.) Apply Proline fungicide at planting via drip/drench equipment. Follow with foliar treatments during the season. Powdery mildew: Foliar application – 210 to 420 mL/ha (85 to 170 mL/ac.) For powdery mildew control apply Proline when the earliest sign of disease is first noticed, repeat at 5 to 10 day intervals. A non-ionic surfactant is recommended when Proline fungicide is used as a foliar spray at 0.125% v/v Ground application only. | Group 3 (prothioconazole) | 2 | 24 | 7 | |
| INSECTICIDE/NEMATOCIDE/MITICIDE | <div><div><div>MOVENTO</div></div><div><ul style="list-style-type: none">Travels up and down the entire plant to protect leaves, roots and new growthControls pests that products with only contact or translaminar activity often missLong residual control provides extremely effective activity on hard-to-control pestsSystemic insecticide, active primarily through ingestion by immature insect life stages</div></div> | Aphids, whiteflies | L | Maximum allowed per crop season: 730 mL/ha (295 mL/ac.) | 220 to 365 mL/ha (89 to 148 mL/ac.) Movento® insecticide must be tank-mixed with a spray adjuvant such as a non-ionic surfactant or a horticultural oil. Ground application only. Minimum interval between applications: 7 days. | Group 23 (spirotetramat) | 1 | 12 | 1 | |
| | <div><div><div>o.b.e.r.o.n</div></div><div><ul style="list-style-type: none">Controls all economically important species of mites at all growth stages – eggs, nymphs and adults (females only)Provides excellent control of mites and poses minimal risk to beneficial insects when used as directed, making it a great miticide choice that fits well in IPM systems</div></div> | Two-spotted spider mites, whiteflies (including silverleaf, sweet potato and greenhouse) | L | Maximum 3 applications per season. Maximum 1.8 L/ha (729 mL/ac.) per year. | 500 to 600 mL/ha (202 to 243 mL/ac.) Minimum of 7 days between applications | Group 23 (spiromesifen) | When dry | 12 | 1 | |
| | <div><div><div>SIVANTO</div><div>prime</div></div><div><ul style="list-style-type: none">Fast acting. Provides quick knockdown and residual control of target pests while helping safeguard beneficial insectsProvides quick feeding cessationTranslaminar and local systemic movement allows targeting of insects feeding on the underside of leaves</div></div> | Aphids, leafhoppers, whiteflies | L | Maximum allowed per crop season: 2,000 mL/ha (810 mL/ac.) | Foliar Application*** Aphids, leafhoppers: 500 to 750 mL/ha (202 to 304 mL/ac.) Whiteflies: 750 to 1,000 mL/ha (304 to 405 mL/ac.) Minimum interval between applications: 7 days Minimum application volumes: 100 L/ha (40 L/ac.) Ground application only.**** Soil Application Aphids, leafhoppers, whiteflies: 750 to 1,000 mL/10,000 plants. Plant population per hectare cannot exceed 26,650 when application rate used is 750 mL/10,000 plants, or 20,000 plants per hectare when application rate used is 1,000 mL/10,000 plants. Application should be made with sufficient water to ensure incorporation into the root zone. | Group 4D (flupyradifurone) | 1 | 12 | Foliar: 1 Soil: 21 | |
| | <div><div><div>VELUM</div><div>PRIME</div></div><div><ul style="list-style-type: none">With a unique mode of action and Group for protection against nematodes, Velum Prime® nematocide helps increase your crop's yield potentialAlso offers powdery mildew suppression</div></div> | Soil-dwelling, root-feeding nematodes (juveniles, adults)*, powdery mildew* | L | Maximum of 2 applications per year. Do not apply more than 500 g fluopyram/ha per year, regardless of formulation or method of application (soil or foliar). | 500 mL/ha (202 mL/ac.) Apply specified dosage in the following methods: Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment. Minimum 5-day interval between soil applications. | Group 7 (fluopyram) | N/A | 12 | 0 | |

* Suppression
 ** A mild yellowing on leaf margins is sometimes seen following application of Luna Sensation in cucurbits.
 *** Certain varieties of muskmelon have been shown to be sensitive to foliar application of Sivanto Prime insecticide potentially resulting in significant leaf necrosis. Do not make foliar applications of Sivanto Prime Insecticide on muskmelon.
 **** Avoid application of Sivanto Prime during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to the evening when most bees are not foraging.

RECOMMENDED APPLICATION TIMING

| | Product | Registration No. | Pests | Planting | 1 st True Leaf | Vine Development | Flowering | Fruitset | Pre-Harvest |
|---------------------------------|------------------------------------|------------------|--|----------|---------------------------|------------------|-----------|----------|-------------|
| BIOLOGICALS | MINUET [®] | 33651 | Rhizoctonia damping off and root rot (Rhizoctonia solani)*, fusarium root rot*, phytophthora blight*, pythium root rot* | 1 | | | | | |
| | SERENADE ^{OPTI} | 31666 | Downy mildew*, powdery mildew* | | | | | | |
| FUNGICIDES | Luna SENSATION [®] | 32107 | Powdery mildew | | | | | | |
| | PROLINE | 28359 | Soil application: fusarium wilt, fusarium blight, gummy stem blight Foliar application: fusarium wilt, fusarium blight, gummy stem blight, powdery mildew | | | | | | |
| INSECTICIDE/NEMATOCIDE/MITICIDE | MOVENTO [®] | 28953 | Aphids, whiteflies | | | | | | |
| | o.b.e.r.o.n [®] | 28905 | Two-spotted spider mites, whiteflies (including silverleaf, sweet potato and greenhouse) | | | | | 2 | |
| | SIVANTO ^{prime} | 31452 | Aphids, leafhoppers, whiteflies | | | 3 | | | |
| | VELUM ^{PRIME} | 32108 | Soil-dwelling, root-feeding nematodes (juveniles, adults)*, powdery mildew* | | | | | | |

¹ Optimal application timing for Minuet biological fungicide is at planting or early in the season.

² To prevent potential harm to bee brood, avoid application of Oberon miticide/insecticide during crop flowering period or when flowering weeds are present.

³ Avoid application of Sivanto Prime insecticide during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to the evening when most bees are not foraging.

* Suppression only

 BIOLOGICALS  FUNGICIDES  INSECTICIDE/NEMATOCIDE/MITICIDE



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