Grape insecticide recommendations from FMC.

Count on FMC to provide reliable and consistent control of key pests in grapes. FMC insecticides, when used in spray programs, provide season-long control of economically important pests.

**Key benefits of Avaunt® insecticide:**

- Group 22 insecticide makes an excellent rotational partner with Altacor® insect control powered by Rynaxypyr® active.
- Registered by the EPA as a Reduced Risk product based on its excellent environmental profile.
- Long-lasting residual control.
- Low impact to bees once spray is dried, and no impact on predatory mites when wet or dry.
- Exceptional and lasting control of pests such as omnivorous leafrollers, grape leaffolders, western grapeleaf skeletonizers, light brown apple moths, European grapevine moths, raisin moths and katydid nymphs.
- Excellent crop protection: insects stop feeding in zero to four hours.
- Excellent tank stability under a wide range of spray-tank pH conditions (pH 5–9).

**Key benefits of Altacor insect control**

- Breakthrough mode of action (Group 28 insecticide).
- Excellent environmental profile.
- Long-lasting residual control.
- No mite flaring.
- Exceptional and lasting control of pests such as omnivorous leafrollers, grape leaffolders, western grapeleaf skeletonizers, climbing cutworms, light brown apple moths, European grapevine moths, raisin moths and katydid nymphs.
- Excellent crop protection: insects stop feeding in minutes.
- Works through ingestion, contact, ovicidal and ovi-larvicidal activity (adult response with some target pests).
- Minimal impact on beneficial pests; excellent fit with IPM programs.
- Application timing flexibility.
- Excellent mixing and compatibility with other products.
- Low-use rates 3–4.5 oz. product/A.
- No bee restrictions on label.
- No signal word.
- Excellent tank stability under a wide range of spray tank pH conditions (pH 1–9).
Grape insecticide recommendations:

**Pest**

Omnivorous leafrollers, grape leafrollers, western grapeleaf skeletonizers, leafhoppers (suppression), light brown apple moths\(^1\), European grapevine moths\(^2\) and katydid* nymphs\(^3\)

Omnivorous leafrollers, climbing cutworms, grape leafrollers, western grapeleaf skeletonizers, light brown apple moths\(^4\), raisin moths\(^5\), European grapevine moths and katydid* nymphs\(^6\)

**Product Recommendations**

**Avaunt\(^\circ\) insecticide labeled rates by grape pest:**
- 3.5–6.0 oz./A — Western grapeleaf skeletonizers, grape leafrollers
- 5.0–6.0 oz./A — **For suppression** of leafhoppers
- 5.0–6.0 oz./A — Omnivorous leafrollers\(^8\)
- 3.5–5.0 oz./A — **For suppression** of omnivorous leafrollers\(^8\)
- 5.0–6.0 oz./A — Light brown apple moths\(^1\), European grapevine moths\(^2\)
- 6.0 oz./A — Katydid* nymphs\(^3\)

**Altacor\(^\circ\) insect control powered by Rynaxypyr\(^\circ\) active labeled rates by grape pest:**
- 2.0–4.5 oz./A — Grape leafrollers
- 3.0–4.5 oz./A — Climbing cutworms, Western grapeleaf skeletonizers, European grapevine moths
- 2.5–4.5 oz./A — Omnivorous leafrollers\(^9\)
- 3.0–4.5 oz./A — Light brown apple moths\(^4\), raisin moths\(^5\) and katydid* nymphs\(^5\)

**Product** | **Preharvest interval** | **Re-entry interval**
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Avaunt\(^\circ\) insecticide | 7 days | 12 hours
Altacor\(^\circ\) insect control | 14 days | 4 hours

\(^1\) This Avaunt insecticide recommendation is made as permitted under FIFRA Section 2(ee) for control of light brown apple moths on grapes in California. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2014.

\(^2\) This Avaunt insecticide recommendation is made as permitted under FIFRA Section 2(ee) for control of European grapevine moths on grapes in California. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2016.

\(^3\) This Avaunt insecticide recommendation is made as permitted under FIFRA Section 2(ee) for control of katydid* nymphs on grapes in California. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2014.

\(^4\) This Altacor insecticide recommendation is made as permitted under FIFRA Section 2(ee) for control of light brown apple moths on grapes in California. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2014.

\(^5\) This Altacor insecticide recommendation is made as permitted under FIFRA Section 2(ee) for control of katydid* nymphs and raisin moths on grapes in California. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2014.

\(^6\) Significant ovicidal activity is observed at varying levels depending on pest species.

\(^7\) Disruption of adult insect behaviors in some pest species (e.g., tomato fruitworms): mate finding, mating, oviposition, feeding.

\(^8\) This Altacor insecticide recommendation is made as permitted under FIFRA Section 2(ee) for suppression of omnivorous leafrollers in grapes at a reduced rate of 3.5 to 5.0 ounces per acre in the states of California, Oregon and Washington. This 2(ee) expiration date is 12/31/2016.

\(^9\) This Altacor insect control recommendation is made as permitted under FIFRA Section 2(ee) for control of omnivorous leafrollers on grapes at 2.5 to 4.5 ounces per acre in the state of California. This recommendation has not been submitted to or approved by the EPA. The 2(ee) expiration date is 12/31/2016.

\(^{10}\) Make no more than two applications/season. Do not apply more than 12 oz./acre/crop. The minimum interval between sprays is 21 days. For best results, use an adjuvant to help increase coverage, penetration and, thus, performance.

\(^{11}\) Minimum interval between treatments is 7 days. Do not apply more than 9 oz./acre/crop/season.

\(^{*}\) Fork-tailed bush katydid (Scudderia furcata), Angular-winged katydid (Microcentrum retinerve).

Some products may not be registered for sale or use in all states. The EPA registered label for Avaunt insecticide contains the following statements: This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging (actively visiting) the treatment area. Some products may not be registered for sale or use in all states. The EPA registered label for Avaunt insecticide contains the following statements: This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging (actively visiting) the treatment area. As of November 1, 2017, the USEPA registrations for DuPont\(^\circ\) Altacor\(^\circ\) insect control and DuPont Avaunt\(^\circ\) insecticide were sold by E.I. du Pont de Nemours and Company to FMC Corporation. FMC, Altacor and Avaunt are trademarks of FMC Corporation or an affiliate. ©2018 FMC Corporation. All rights reserved. 17-FMC-0970 07/18