Early in the season, fast-growing grapevines put on new tissue daily. All that new foliage needs to be protected from powdery mildew. It’s important to begin the season with several applications of contact fungicides such as sulfur, copper or oil. However, contact fungicides only protect existing foliage. Following several contact sprays, use highly-systemic Rally® fungicide to protect existing foliage and foliage that is not present at the time of application.

Studies show that when myclobutanil (active ingredient in Rally) is applied to rapidly-expanding vines, it can reduce or control powdery mildew on new, unsprayed leaf and shoot tissue.

Upon application, Rally has significant xylem movement, meaning it moves outward toward leaf margins. When specifically applied to young stem tissue, Rally moves toward leaf tips and into newly-emerged leaves. That means emerging and expanding leaves are protected.

With Rally, you can be confident that powdery mildew is controlled on your fast-growing vines, even between applications. While good spray coverage is still critical for powdery mildew control in the field, this systemic movement contributes to a consistent, high level of mildew control.

**Rally Fungicide**

- PROTECTIVE and CURATIVE activity on powdery mildew
- The most systemic DMI in grapes
- Excellent field performance even in high-pressure years
- Most-widely used fungicide in California grapes (other than sulfur)
- Value-priced

Rally can be applied to the growing point... ...yet still provide some protection on tissue not present at the time of application.
**Quintec® Lasts 21 Days with Unique Class of Chemistry**

Including Quintec® fungicide in your mildew management program can help keep your grape bunches SQUEAKY CLEAN.

**Superior Bunch Protection**

Grape bunches – from bloom to bunch closure – are loaded with hard-to-reach areas, all potential sites for powdery mildew. Quintec can help. Quintec has the unique ability to redistribute across expanding leaf and berry tissues after application, forming a protective barrier as it moves. This continual redistribution process can protect parts of the leaves and bunches that may not have received direct spray coverage.

**21 Days, Excellent Efficacy**

Quintec is one of the few fungicides that can protect grapes from powdery mildew for up to 21 days. Even under high pressure – such as in spring 2010 and 2011 – growers reported excellent activity out to 21 days from Quintec.

The extended residual of Quintec has many advantages.

- Fewer fungicide applications during the year
- Helpful when large acreages need covering with limited spray rigs
- More application flexibility, especially when conditions do not allow immediate entry into a vineyard.

**Totally Unique Class of Chemistry**

If the fungicide rotation for powdery mildew does not include Quintec, then it might not be a rotation at all. Quintec is the only member of the quinoline class of chemistry and of FRAC Group 13. Its mode of action is one-of-a-kind and unique only to Quintec, making it an excellent rotational product with products from other fungicide classes, such as sterol inhibitors.
The UC Extension grape powdery mildew efficacy trials are held annually near Courtland (Sacramento County). Doug Gubler, UC Extension plant pathologist, UC Davis leads those trials. Complete results for past years can be found at http://plantpathology.ucdavis.edu.

In 2011, powdery mildew pressure was extremely high. According to the trial report, “By late June, heavy to severe mildew coverage was evident on untreated clusters. By the time of disease evaluation, disease severity in untreated plots in all trials reached 95-100%.”

Following are photos from that trial, taken August 3.
When building your program for the season, don’t start with the products. Instead, first consider the classes of fungicides available. Basic classes of fungicides include sulfur, contact fungicides, biologicals, sterol inhibitors, strobilurins and quinolines.

These classes possess different modes of action, meaning they attack and kill the fungus differently. Alternating products with different modes of action is the most effective method of resistance management. For example, a rotation that includes sulfur, Rally and Quintec would limit selection pressure to any one mode of action and help prevent the onset of resistance. No single site mode of action should be used in consecutive applications.

Following is a partial list of fungicides used for powdery mildew in grapes. More information is available on the Fungicide Resistance Action Committee website – www.frac.info
**Application Tips**

**Spray timing:** Quintec can be applied from before bloom through 14 days prior to harvest. It is important to protect the various fruit formation crop stages, including berry set, berry sizing and bunch closure. Applications of Quintec made during these stages will control powdery mildew and prevent it from affecting the quality of fruit.

Rally can be applied pre-bloom through 14 days prior to harvest. Early-season (pre-bloom, pre-capfall) applications of Rally, when shoot growth is rapid, can help stop overwintering and early-season infections.

All powdery mildew fungicides should be used on a preventative schedule and applied before visible symptoms appear.

**Spray interval:** Quintec and Rally should be applied on a 14-21 day schedule. Use shorter intervals when mildew pressure is highest.

**Spray volume:** Coverage is essential. As more foliage becomes present, spray volumes should increase.

**Rates:**
- **Quintec:**
  - 4 oz/A for 14-day interval
  - 6.0-6.6 oz/A for up to 21-days

- **Rally:**
  - 3-5 oz/A. 4 oz/A is recommended for most situations.

**REI/PHI:**
- **Quintec:** 12 hrs/14 days
- **Rally:** 24 hours/14 days

**Adjuvant:** With Quintec, add a nonionic surfactant at 0.125 v/v.

**Signal word:** Caution (both products)

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