



# TruResponse™

## TRIAL DATA



## Refirma™ HydraGuard™ Application Rate and Timing in Table Grapes

GRAPES



July, 2025

### OBJECTIVE

Evaluate the effects of the timing and rate of Refirma™ HydraGuard™ applications on the yield and quality of Table Grapes.

### OVERVIEW

- Plants in the field can be exposed to many kinds of abiotic stress such as heat, drought and salinity. These stresses can inhibit the normal growth and activity of a plant leading to decreases in yield and quality of a crop.
- Osmoregulators are substances produced by plants that assist plants in tolerating environmental stresses by stabilizing proteins and enzymes and ensuring proper water flow into the plant cells during stress events.
- Refirma HydraGuard contains an osmolyte compound which increases resistance to abiotic stress and optimizes conditions for improved crop yield and plant performance.

### TRIAL DETAILS

**Crop:** TABLE GRAPES (*Vitis vinifera*)

**Year:** 2023 **Location:** US - Central California

**Data Source:** Field study was conducted by third-party, independent researcher

#### Treatments:

- Grower Standard
- Refirma HydraGuard applied at 32 oz/ac either three times or four times during the growing season
- Refirma HydraGuard applied either four 21 oz/ac applications or two 42 oz/ac applications

**Cultivar:** Krissy

**Cropping Conditions:** Trial conformed to local cropping practices. Established vines with conventional tillage

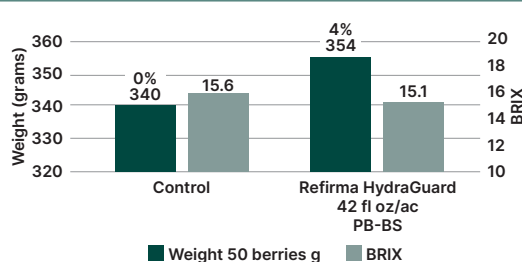
**Application Rate:** 21, 32 and 42 fl oz/ac

**Application Method:** Foliar applications made with a Stihl mist blower applied at 100 gal/ac

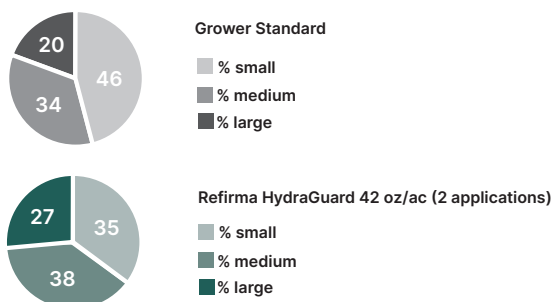
**Application Timing:** Applications at pre-bloom, petal fall, berry sizing and veraison

### RESULTS

#### Performance in Table Grapes Berry Weight and BRIX



#### Berry Size



### SUMMARY

- Refirma HydraGuard increased yield, berry weight and reduced the percentage of small berries under all rates and application combinations.
- Refirma HydraGuard applied twice, at pre-bloom and berry sizing, was the most effective treatment with the highest yields and the biggest shift in berry size from small to large size berries.
- Applications of Refirma HydraGuard did appear to delay fruit development with a higher percentage of green fruit and lower Brix levels. However a slight delay in harvest time should alleviate those issues.
- The trial experienced heavy rain in August due to a rare hurricane event causing swelling in cracking in the developing fruit which led to a lot of rot and lower yields than is typical for the region.

**4%**

INCREASE IN  
WEIGHT OF  
50 BERRIES

**11%**

DECREASE IN  
SMALL BERRIES

**7%**

INCREASE IN  
LARGE BERRIES

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Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

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