Mosaic BIOSCIENCES

TruResponse™

TRIAL DATA

GRAPES

PRB9™ Application Rate and Timing in Table Grapes

December, 2023

OBJECTIVE

Evaluate the effects of the timing and rate of PRB9™ 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.
- Osmoregulants are substances produced by plants that assist plants in tolerating environ mental stresses by stabilizing proteins and enzymes and ensuring proper water flow into the plant cells during stress events.
- PRB9 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

Year: 2023

Location: Central California

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

Treatments:

1. Grower Standard
2. PRB9 applied at 32 oz/ac either three times or four times during the growing season
3. PRB9 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/A

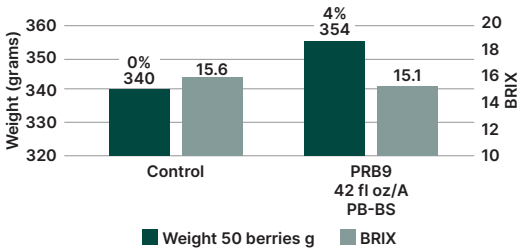
Application Method: Foliar applications made with a Stihl mist blower applied at 100 gal/A

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

RESULTS

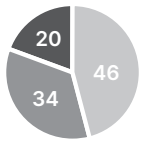
Performance in Table Grapes

Berry Weight and BRIX



% value is % increase in yield compared to untreated control PB-BS: 2 applications at pre-bloom and berry sizing

Berry Size

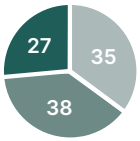


Grower Standard

% small

% medium

% large



PRB9 42oz/ac (2 applications)

% small

% medium

% large

SUMMARY

- PRB9 increased yield, berry weight and reduced the percentage of small berries under all rates and application combinations.
- PRB9 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 PRB9 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. The rain caused 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

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.

For more information, go to **cropnutrition.com**