



TruResponse[®]

TRIAL DATA

Refirma[™] HydraGuard[™] Application Rate and Method in Citrus

CITRUS 

July, 2025

OBJECTIVE

Evaluate the effects of the rate and application method of Refirma[™] HydraGuard[™] applications on the yield and quality of citrus fruit during winter stress.

OVERVIEW

- Plants in the field can be exposed to many kinds of abiotic stress including severe cold which can inhibit the normal growth and activity of a plant leading to decreases in yield and quality of a crop.
- 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: CITRUS

Year: 2023-24

Number of Trials: 3

Location: United States - Central California

Data Source: Field studies were conducted by third-party, independent researcher

Treatments:

- Untreated Control (UTC)
- Refirma HydraGuard soil applications; 3 applications at either a low or standard rate
- Refirma HydraGuard foliar application; 1-3 applications at standard rate depending on temperatures
- Soil or foliar applied competitor products

Cultivar: Tango or Murcott

Cropping Conditions: Trial conformed to local cropping practices.

Application Rate: 32 or 42 fl oz/ac

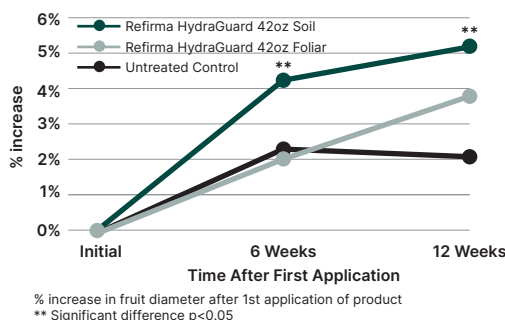
Application Method: Foliar applications made with mist blower; soil applications applied as a drench.

Application Timing: Foliar application made before expected freezing temperatures. Soil applications made on regular basis during cold season.

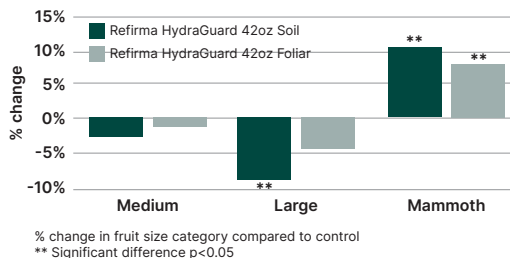
RESULTS

Performance in Citrus

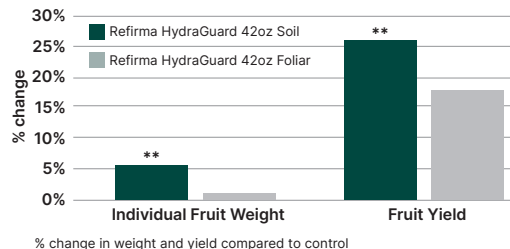
Fruit Diameter Increase



Citrus Size Classes



Fruit Weight and Yield



SUMMARY

- Soil applied Refirma HydraGuard increased fruit diameter shifting the harvest into more of the larger, heavier fruits and producing higher overall yields.
- Foliar applications of Refirma HydraGuard produced similar results to the soils applications although the effects were not quite as large.

5%
INCREASE IN
FRUIT DIAMETER

9%
INCREASE IN
MAMMOTH
SIZED FRUIT

.17^{oz}/FRUIT
INCREASE IN
INDIVIDUAL
FRUIT WEIGHT

2.8^T/AC
INCREASE IN
OVERALL FRUIT
YIELD

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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.

For more information, go to cropnutrition.com