

ADVANCING MATURITY OF RAISIN GRAPES USING ALBION METALOSATE POTASSIUM FOLIAR SPRAY

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Raisin Grapes 2009 to 2011

The advancement of raisin grape (Thompson Seedless, Fiesta, Selma Pete) maturity by spraying potassium (K) during fruit ripening was evaluated for 3 seasons. All vineyard sites selected for research had adequate K content in tissue sampled at bloom and veraison. K sprays were not applied to correct deficiency but rather to increase K in fruit during a period of high demand.

In 2009, three Thompson Seedless vineyards were selected for research. Metalosate potassium (3 pounds K per gallon) was applied at timings: 1: veraison; 2: mid-July (14° to 16°brix); 3: early August (16° to 18° brix). The Metalosate was applied at a rate of 1.5 lbs K/acre. A fourth treatment was included that split application applying 0.5 lbs K/acre for a season total of 1.5 lbs. K/acre.

In 2009 it was discovered that K foliar sprays increased the K content of the fruit, and, in turn, a flux of boron into fruit occurred – increasing the boron content. Therefore, 2010 research addressed the question – will adding B to the K spray improve maturity results. The result was that the addition of boron did not improve the results.

Research in 2011 was expanded to include Fiesta and Selma Pete in addition to Thompson Seedless. Treatments were chosen to better define the most effective time of application and the most efficacious rate of K. There were three times of application treatments: 12° brix; 14° brix; 16°brix. There were also three rates evaluated: 1.5 lbs K/acre; 3 lbs K/acre; 6 lbs K/acre.

Results

Research from 2009-2011 demonstrated an overall increase in maturity ranging from 1o to 2o brix. This increase in sugar represents about 7 to 10 days advancement in maturity. This difference can result in a significant increase in profits for the grower if he is able to get the grapes dried prior to fall rains which can result in significant increases in drying costs.

The Metalosate potassium should be applied late during ripening when fruit reaches 14° to 18° brix. Spray concentrations should be applied at 1.5 lbs. K/acre (2 quarts Metalosate potassium/acre). Applying less than this may not be effective, and applying more per acre does not improve the maturity response.

For more information in this research project or information regarding the Metalosate products please contact your local Albion Plant Nutrition representative.



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