

Gwynn

### VERC PROPOSAL ABSTRACT FORM

Date: October 15, 1993 Submitted by: B.Gump & K. Haight  
Cooperators: K. Streigler, G. Sawyer Ostrom

Project Leader Name

Proposal to be submitted to: CALRAB

Funding Agency Name

Project Title: Fate of Sulfur Applied to Raisin Grapes

New:  Continuation:  Budget Estimate: \$ 8,680

Deadline: October 15, 1993

Please type directly on this form or use Deadline: October 15, 1993is f6rmat when inputing into your computer file. Thank you.

### STATEMENT OF PROPOSED RESEARCH

(Problem & It's Significance, Objectives, Plans & Procedures, Budget Info)

It is our purpose to follow the use of sulfur used as a fungicide at usual application levels and times for control of powdery mildew to determine what sulfur residues remain on the grapes themselves or on raisins produced from those grapes. This project is directed towards the improvement of our knowledge regarding potential residues in commercial products containing raisins. The ultimate goal is improved raisin quality through optimized viticultural practices.

It has been suggested that application of sulfur to raisin grapes can lead to high levels of residues on raisins produced from those grapes. Where raisins are used in other foods, especially in foods consumed by children and young adults, this perception is a potential problem for the industry. There is also concern that current application levels could cause excessive amounts of sulfur to be contributed to the general vineyard environment. Both of these considerations imply that sulfur application levels should be decreased. Sulfur, however, is an extremely effective and inexpensive product used in the

(continued other side)

Please submit this abstract to the following Advisory Board Sub-Committee(s):

- Raisin Sub-Committee
- Enology & Wine Grape Sub-Committee
- Table Grape Sub-Committee

c:\verc\crslufur.pro

powdery mildew battle. Sulfur's mode of action is to prevent formation of spores on the surface of the fruit when applied before the fungus is allowed to develop. To date only limited research has addressed actual levels of sulfur residues produced by applications during the growing season.

This proposal will involve following a typical raisin vineyard and its sulfur applications during the growing season. The final goal will be to know the fate of sulfur applications in this vineyard.

We propose to analyze grape leaves, fruit, and the soil in the vineyard after each application on a regular basis to follow what happens to the applied sulfur. In addition, we will also evaluate dried raisins and processed raisins produced from this vineyard for their sulfur residues.

This study will be conducted in an 8-acre block of drip irrigated Thompson Seedless grapes. The vines are own-rooted and cane pruned. The block generally has significant mildew pressure.

Following typical cultural practices wettable sulfur will be applied early at 10 to 14 day intervals, starting at 6 inches of shoot growth up to about June 1. Sulfur Dust will then be applied at 7 to 10 day intervals, again following industry practice, until harvest. Throughout the growing season, the block will be monitored frequently for mildew infestation.