

# CENTRAL VALLEY POSTHARVEST NEWSLETTER

COOPERATIVE EXTENSION

Kearney Agricultural Center, 9240 South Riverbend Avenue, Parlier, CA 93648

UNIVERSITY OF CALIFORNIA

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Carlos H. Crisosto

Editor

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### § Tips to reduce decay incidence for the 1998 Stone Fruit Season

Because of the rare and unique season that we are having, decay incidence has been observed more frequently than in many other seasons. The goal of this article is to help growers and packers reduce losses caused by decay. Please consider the following factors.

Carlos H. Crisosto, Editor

#### **TIPS TO REDUCE DECAY INCIDENCE FOR THE 1998 STONE FRUIT SEASON**

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1. ORCHARD. Historical and current preharvest disease type and incidence levels should be used to anticipate future preharvest and postharvest disease problems.
2. CULTIVAR. The cultivar should also be considered in this decision making process. The susceptibility to decay also varies according to species: apricot, cherry, nectarine, peach and plum. Be

aware of rapid softening between pickings.

3. DECAY PREDICTION. Unfortunately, decay prediction models for stone fruit have not been developed yet. A possible method of disease prediction might consist of prior to commercial harvest placing fruit of more advanced maturity into a plastic bag with wet paper to induce decay development. If decay develops rapidly, this may suggest that some lots of fruit receive additional preharvest fungicide application(s). Such information may also be useful as an indicator in segregating fruit after packing.
4. MATURITY. In a year like this, ground color changes are not well associated with other quality changes occurring during maturation and ripening at the tree. In most peach and nectarine cultivars ground color changes may occur more slowly than fruit softening. In some cases it may not even change. Thus, if we wait for ground color to approach yellow, fruit may already be too soft especially at the tips, shoulders or suture. Soft sutures and tips can also be a consequence of split pit occurring earlier in the year. Irrigation, thinning, and girdling practices can also increase this problem. We suggest that you talk to Kevin Day (phone 209-733-6485) or Scott

Johnson (phone 209-646-6547) about this problem. In the field, we advise tracking fruit firmness on the cheeks and weakest spot. Usually there is a 2-4 pound difference between the cheeks and the weakest spot on the fruit. Start harvest based on fruit firmness, and check fields daily. Get samples from the softest position in the canopy (i.e. west and bottom sides of trees). For further information consult *Maximum Maturity* by Crisosto et. al. in the 1997 CTFA research reports and (Central Valley Postharvest Newsletter (CVPNL), April 1996).

5. GRADING. The grading operation becomes even more important in a season with high potential for decay. Avoid placing any high-risk fruit in the box. This will help to assure a safe delivery, but it will also reduce pack out. Tighten tolerances on any defect that can contribute to decay (e.g. bruises, injuries, cracks, splits, etc.). A good lighting system over the fruit sorting areas can help point out problems, and may be especially useful this year (CVPNL, April 1996).
6. GENTLE HANDLING. Most decay organisms are wound-pathogens; thus, they develop quickly through broken skin. Consequently, any supervision to reduce rough handling during harvest, loading, transport, and packing will pay off (CVPNL, March 1994).
7. KEEP PICKING EQUIPMENT CLEAN. Maintaining bins and picking bags in clean condition will help reduce decay load (CVPNL, March 1994). Bins can be hydrocooled or washed before going back to the orchards if necessary. However, avoid dust accumulation on wet bins.
8. PREHARVEST SPRAYS. Preharvest

fungicide sprays near or even during harvest will help reduce decay. This may be especially beneficial for fruit in which cooling will be delayed, and on fruit coming from distant locations or subjected to rough hauling conditions. Be aware of the pre-harvest interval for fungicides for inking incidence CVPNL, July 1995.

9. IDENTIFY YOUR DECAY PROBLEM. So far this year we have observed both gray mold and brown rot problems. Although both are important, the effectiveness of certain fungicides in combating each disease is different (CVPNL, April 1996). Be sure that your fungicide programs are controlling both. The following are guidelines for fungicide efficacy.

Highly Active against Brown Rot and Gray Mold:

Rovral 50%WP, Ronilan 50WDG, Benlate 50WP, Topsin 75WP (Locally systemic)

Moderately Active against Brown Rot and Gray Mold:

Captan 50WP and 80WP (Contact)

Moderately Active against Brown Rot but Highly Active against Gray Mold:

Elevate 50WP, Vangard 75WP. (Contact)

Moderately Active against Gray Mold but Highly Active against Brown Rot:

Elite 45DF (Locally Systemic)

10. DELAYED COOLING. It is well known that delayed cooling will enhance fruit decay. Immediate cooling and postharvest fungicide application is essential in a year like this.

11. **POSTHARVEST FUNGICIDE APPLICATION.** Please look at our previous recommendations (CVPNL, April 1996 and July 1998). These recommendations are essential to protect fruit. Check residues frequently. There are private laboratories in the Fresno area that can perform residue analyses.

FUNGICIDE (a.i.)	RESIDUES (ppm)	TOLERANCE (ppm)
TOPSIN	1.0-1.5	15.0
ALLISAN	1.0-1.5	20.0
ROVRAL	1.5-2.0	20.0
MEDALLION	0.5-1.0	5.0
ELITE (preharvest)	0.5	1.0

Please keep in mind that Medallion is not registered in our export markets.

12. **PROPER TEMPERATURE MANAGEMENT.** Fast and uniform cooling is essential. If you are using hydrocooling as a pre-cooling system, be sure that the chlorine concentration is correct, (CVPNL, April 1996). Keep fruit temperature as close to 32F as possible during storage and transportation (CVPNL, July 1998). Pre-cooling before loading is necessary to assure low temperature during transportation. Use of center line loading will help assure low temperature during transportation. Insist that thermostats be set at approximately 33-34F during transport (CVPNL, July 1998). Warming during receiver handling will allow decay expression on susceptible lots sooner.

13. **KEEP RECORDS.** Keep records on decay susceptibility and softening rates for cultivars used in your operation.

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Please make a note of it!

**SUBSCRIPTION INFORMATION**

If you would like to be on the mailing list and receive a copy of the Central Valley Postharvest Newsletter through the mail, please contact:

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**CONTACT INFORMATION UPDATE!**

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