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Light Management in Orchards, Dormant Considerations

Kevin R. Day, Tulare County Tree Fruit Advisor

One of the goals of an efficient orchard system is uniform light distribution throughout the tree canopy. An emphasis is often placed on the role of summer pruning in developing, maintaining and improving this relationship, but the importance of dormant pruning should also be considered.

The dormant season allows growers the opportunity to encounter a different perspective on tree structure, limb placement and number, and tree height. A great deal of information can be gained by observing how much of a shadow a dormant tree casts when its leaves are absent. In some instances just the scaffold structure of the tree – in the dead of winter – has the capacity to shade a large percentage of the orchard floor. This can translate into severe shading problems in the next season.

Such problems are most apparent in older plum and apricot orchards, but can also occur in peach and nectarine orchards.

Much of the time these problems are most easily fixed by complete removal of several large secondary or tertiary scaffolds. This action has several benefits including, 1) immediate improvement of light penetration to the middle and lower parts of the tree, 2) reduction in growing points for interior watersprouts and suckers, and 3) reduction in per tree dormant pruning costs. Other tree responses can include a reduction in fruit set and subsequent thinning requirements – which can be either good or bad depending on the season, and improvement in shoot and spur vigor in the middle and lower parts of the tree.

Plan to spend some time in the orchard thinking about these concepts prior to making your dormant pruning decisions. Steps taken now toward improving tree structure and light distribution will go a long way toward benefiting tree performance next season.

A New Technique in Plant Nutrition – Shoot Sampling

Kevin R. Day, Tree Fruit Advisor

For the past several years, UC Extension Specialist Scott Johnson has been working on a “Sand Tank” trial in which full-sized peach, nectarine and plum trees are grown in controlled nutrient environments. One of the outgrowths of this project is the development of a new sampling method to help better determine the nutrient status of fruit trees. Instead of sampling leaves in June or July, Scott has been taking fruiting shoot samples during the dormant season. One of the major advantages of this new method is that nutrient status can be determined going into the season rather than during the season when it is often too late to help the current crop. This method also allows growers a tool that can help gauge the effectiveness of previous fertilizer applications. Nutrients that show promise using this evaluative method so far include nitrogen, phosphorous, zinc and boron. Preliminary usage guidelines for these elements are currently being developed.

Scott will be talking briefly about this at the Winter Tree Fruit Meeting on December 1, 2004 in Dinuba. He will also be working with a group of growers on a nutritional survey and further field-testing of this procedure. Please show up at the Winter Meeting if you are interested in being part of this work.

Updated Cost Studies Available

We have been in the process of updating the peach, nectarine and plum costs studies. At the time of this writing only the peach study has been finished, but by the time you receive this newsletter both the plum and nectarine should be finished too. The studies are available free on the web at <http://coststudies.ucdavis.edu>.

Electronic Orchard Notes and Email Updates

Thank you to all who have requested to be placed on this list. If you have not yet signed up, please send me an email requesting that you be added. The purpose of this list is to get information to you in a quicker and timelier fashion. You will also receive more frequent updates and links to other web sites. My email address is: krday@ucdavis.edu.

WINTER TREE FRUIT MEETING

Wednesday, December 1, 2004

Dinuba Memorial Hall, 249 South Alta Avenue, Dinuba CA

8:00 – 8:30 AM **Registration**

8:30 – 8:40 **Introduction**

8:40 – 9:00 **Biology and Epidemiology of Sour Rot in Stone Fruit**
Themis Michailides, Department of Plant Pathology, UC Davis

9:00 – 9:20 **Oddball Disorders and Injuries**
Harry Andris, Farm Advisor, UCCE Fresno County

9:20 – 9:40 **Does Sustainable Tree Fruit Management Rely on Biological Control or Sustainable Insecticides**
Kent Daane, Biological Control Specialist, Department of Insect Biology, UC Berkeley

9:40 – 10:00 **Ag Waivers – How Does It Affect You**
Larry Schwankl, Irrigation Specialist, Department of Hydrologic Science, UC Davis

10:00 – 10:20 **Rest Breaking and Additional Research in Sweet Cherry**
Steve Southwick, Pomology Specialist, Department of Pomology, UC Davis

10:20 – 10:50 **Break**

10:50 – 11:10 **Understanding the Factors Affecting Time of Harvest and Fruit Size**
Why Fruit Matured Early and Fruit Sizes Tended to be Smaller in 2004
Ted DeJong, Department of Pomology, UC Davis

11:10 – 11:30 **Reduced Height Orchards: Developing and Maintaining Tree Structure and Size**
Kevin Day, Farm Advisor, UCCE Tulare County

11:30 – 11:50 **Using Water Stress and Mechanical Topping to Reduce Labor Costs**
Scott Johnson, Pomology Specialist, Department of Pomology, UC Davis

Noon **Lunch, Catered by Stan Kalender**

Winter Tree Fruit Meeting Registration Form – December 1, 2004-10-25

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Cost: \$20 per person/includes lunch and proceedings. Preregister no later than **Wednesday, November 24, 2004.**

For registration information contact: JoAnn Coviello (559) 646-6525.

For program information contact: Kevin Day at (559) 685-3309 extension 211.

Note: Payment will be accepted at the door, but no guarantee of lunch

Name(s) _____

Address _____

Amount _____

Make check payable to: **UC Regents**

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Orchard Notes

Winter Tree Fruit Meeting
Wednesday, December 1, 2004

Kevin R. Day
Tree Fruit Advisor

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