University *of* California
Agriculture and Natural Resources

Cooperative Extension
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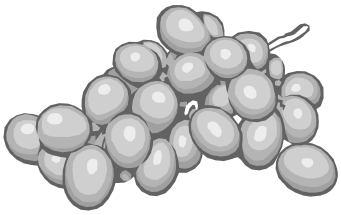
THE SCOOP

on fruits and nuts in Stanislaus County

U.S. Department of Agriculture, University of California, and Stanislaus County Board of Supervisors cooperating

Roger Duncan
Pomology/Viticulture Advisor



North San Joaquin Valley Peach Day

Sponsored by UC Cooperative Extension

& the Cling Peach Board

December 20, 2012
8:30 – Noon

Stanislaus County Agricultural Center, Harvest Hall
Service and Crows Landing Roads, Modesto

1.0 hour of Continuing Education Credit Pending

8:00 Registration, coffee, snacks & socializing

Labor Management in Tree Fruit
Gregorio Billikopf, UC Cooperative Extension Stanislaus County

Gopher & Squirrel Control
Roger Baldwin, UC IPM Program

10:20 Cling Peach Business Meeting
-Board Member Nominations
-Cling Peach Board Updates

Physiology of Pruning
Dr. Ted deJong, UC Davis Plant Science Department

Ideas About the 2012 Size Problems
Dr. Ted deJong, UC Davis Plant Science Department

Noon - Lunch hosted by the Cling Peach Board

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Update on Almond Minimal Pruning Experiment

Many Stanislaus County almond growers are aware of the experiment where we have been monitoring the long term effects of minimal pruning an almond orchard. The harvest of 2012 marked the end of the 13th growing season for this test orchard.

This season, yield of untrained and unpruned Nonpareil trees was virtually the same as trees that were initially trained to three scaffolds and have been pruned annually. Cumulatively, unpruned Nonpareil trees have yielded 1345 pounds more than annually pruned Nonpareil trees throughout the first thirteen years of the orchard's life.

In contrast, yield of untrained and unpruned Carmel trees was more than 500 pounds per acre higher than annually pruned Carmel trees this year. Unpruned Carmel trees have accumulated 3216 pounds per acre more than Carmel trees that have been pruned every year. Conservatively, the cost of pruning, stacking brush and shredding every year, plus the value of lost yield would have cost the grower over $7000 per acre to date.

Take a look at the table on the following page to see the 2012 yield and cumulative yield for all four pruning strategies for Nonpareil and Carmel. You will see that there are three "minimal" pruning strategies and they are compared against trees that were initially trained to the conventional three scaffolds (at least it was conventional in the year 2000) and have been pruned moderately each year. In the first minimal pruning strategy (#2 in the chart below), the trees were trained to three scaffolds after the first year and were pruned again the second year (same as in #1). They have not been pruned in the eleven years since then. These trees look surprisingly acceptable and have had the least amount of problems with scaffold failure in the trial. This is my favorite pruning strategy in this experiment because we reduced the risk of tree failure by establishing a strong foundation yet we saved eleven years of pruning costs and have benefited from high long-term yields.

In the second minimal pruning strategy (#3), we left four, five, sometimes even six scaffolds after the first year. The trees were also mechanically topped twice during the first growing season to make a bushier tree. Each year pruners have been allowed to make only three pruning cuts per tree. In the final strategy (#4), we did not select any scaffolds after the first year, but cut off all shoots low on the trunk that would interfere with a shaker. These trees have not been pruned at all for thirteen years except to remove limbs that interfere with farming practices. These trees are extremely bushy and many have limbs that snake around each other. These trees had more problems with scaffolds breaking during the development years (the trees were not tied). In spite of some scaffold breakage problems, these trees have maintained excellent yields so far.

Take home message: So far, I have not seen many problems with unpruned almond trees. Unpruned trees are the same height as annually pruned trees and don't appear to have any more foliar disease problems, although it may be difficult to judge disease severity in this trial. Untrained trees and trees trained to multiple scaffolds may have more mummies, but trees that are trained to three scaffolds do not have more mummies, whether they are pruned every year or not.

There are many reasons to prune an almond orchard, including removal of limbs that are diseased, interfere with farming operations or are dangerous to equipment operators. Orchards in windy areas may need more pruning to reduce tree leaning during the first few years. However, pruning is not necessary to sustain yield, at least in the moderately long term. This experiment is now past the "honeymoon" stage of the orchard. It will be interesting to see what happens during the last half of the orchard's life.

The Effect of Pruning on Current (2012) and Cumulative (Through 13th leaf) Yield (lb. per acre).				
	Nonpareil Yield		Carmel Yield	
	2012	Cumulative	2012	Cumulative
Training & Pruning Strategies				
1. Trained to 3 scaffolds initially; annual conventional pruning	4209	29,338	3126	25,620
2. Trained to 3 scaffolds initially; unpruned since 2nd season	4387	30,670	3508	27,535
3. Trained to multiple scaffolds; Three pruning cuts each year	3979	28,769	3308	27,080
4. No scaffold selection; No annual pruning	4220	30,683	3685	28,836

Educational Opportunities:

New Pomology Extension Course: Principles of Fruit and Nut Tree Growth, Cropping and Management

The University of California Cooperative Extension (UCCE) fruit and nut advisors, specialists and University of California, Davis (UCD) Plant Sciences faculty will present a two-week course from **February 25 through March 7, 2013** at the UC Davis Conference Center. This course covers the fundamentals of tree biology essential to making sound orchard management and business decisions, with a combination of lectures, hands-on exercises, and field demonstrations. The team of instructors – led by Dr. Ted DeJong, UCCE specialist and UCD professor of plant physiology – are experts in fruit and nut tree production with over 100 years of combined experience.

In the first week, participants will gather each morning at the UC Davis Conference Center for a mix of lectures, hands-on exercises and field demonstrations. The week will begin with presentations on the basics of 'how trees work' and the climatic and soil conditions ideal for growing tree fruit and nut crops. As the week progresses, we will cover a range of topics including how trees use water and nutrients, root growth and fruit development. Essential aspects of management are included in discussions of irrigation and fertilization scheduling, measuring fruit quality and harvest indices. Field exercises begin on the first afternoon when each student will have the opportunity to practice pruning and early tree training with the help of our instructors. Additional field exercises will include pruning for crop production, propagation and techniques for measuring tree water and nutrient status.

During the second week, students and instructors will embark on a four-day tour in fruit and nut growing regions of northern and central California. The field tour includes stops at commercial nurseries, packing houses, retail outlets, experimental plots, and private orchards.

This extension course is intended for growers, community college students, university students, and professionals working in tree fruit and nut production. Attendees will receive a certificate after completing the course. For more information visit the course website http://fruitandnuteducation.ucdavis.edu or contact Brooke Jacobs (530) 752-4354, fruitandnuteducation@ucdavis.edu.

Agritourism Intensive:

A class for farmers and ranchers offered by UC Cooperative Extension Merced County, Merced County Country Ventures, and the UC ANR Small Farm Program.

Are you considering agritourism or nature tourism on your farm or ranch? Would you like to build your agritourism or nature tourism business? This class is for you!

Local agritourism operators will share their own experiences and will be part of a supportive network of advisors as class participants plan and start new enterprises.

Participants will learn from experts in business planning, regulatory compliance, risk management, hospitality and cost-effective marketing, including social media.

The hands-on, interactive activities will guide participants as they assess their own farms or ranches for agritourism potential and start their own business, risk management and marketing plans.

Each participant will receive a free copy of the extensive handbook, “Agritourism and Nature Tourism in California”, which will be used as a text for the class.

Registration is open – Sign up today
Merced, Madera, Mariposa, Stanislaus and Tuolumne County farmers and ranchers are encouraged to sign up for the 3-session course. Registration is now open: **http://ucanr.edu/agtour.merced.12**

Dates: Mondays, Dec. 3, 2012, Jan. 7, 2013 and Tuesday, Feb. 12, 2013

Times: 9a.m. – 3p.m. each session (lunch provided)

Location: UCCE Merced County, 2145 Wardrobe Avenue, Merced, CA 95341
Cost: $50 for 3-session course – Space is limited, please register early

Information: Penny Leff, UC ANR Small Farm Program**,** paleff@ucdavis.edu, (530) 752-7779

CURRENT RESIDENT OR:

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