



THE SCOOP

on fruits and nuts in Stanislaus County

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

A handwritten signature in blue ink that reads 'Roger'.

Roger Duncan
Pomology/Viticulture
Advisor



North San Joaquin Valley Cling Peach Day

Sponsored by the University of California Cooperative Extension
and the Cling Peach Board

Stanislaus County Ag Canter, Harvest Hall
Service & Crows Landing Roads, Modesto

Thursday, December 12, 2013

8:30 Registration

9:00 Program Begins

Advances in Monitoring for Oriental Fruit Moth in Pheromone-Treated Orchards

Roger Duncan, UCCE Stanislaus County

Brown Marmorated Stink Bug – It's Here...

Maxwell Norton, UCCE Merced

Cling Peach Board Activities Update

Ginny Hair and Sarb Johl, Cling Peach Board

Cling Peach Business Meeting & Board Member Nominations:

J. D. Allen, Cling Peach Board

Recycling Pesticide & Fertilizer Containers

Bill Graves, Green Planet Plastics

Discussion and Cutout Demonstration of Cling Peach Varieties

Tom Gradziel, UC Davis

12:00 Lunch – Sponsored by the Cling Peach Board

1.5 hours of continuing education credits pending,
including 0.5 hours of laws and regulations

3800 Cornucopia Way, Suite A, Modesto, CA 95358 (209) 525-6800, FAX (209) 525-6840, e-mail - raduncan@ucdavis.edu, website: cestanislaus.ucdavis.edu

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Begin Bacterial Spot Management Now

Almond growers and pest control advisors who attended our July bacterial spot field day in Manteca saw how devastating this new disease can be. A map passed around at that field day showed two hot spots for the disease in our area. The most severely affected area was between Highway 120 and the Stanislaus River in the Manteca/Ripon/Escalon area. The second area was south of Turlock in the Delhi / Ballico area.

Although we will be implementing some field trials this year, all of the information we currently have on control is from Australia where this disease has virtually eliminated the Fritz variety in that country. The strategy for control is a two part program; reduce the amount of inoculum from the previous year and then protect the nuts and leaves from infection in the spring. The following is our suggested program if you had a bacterial spot problem in 2013.

- Spray 15-20 pounds per acre of zinc sulfate now to burn off leaves. This may help reduce inoculum for next year.
- Apply copper after leaf fall and prior to significant storms.
- Remove as many mummies as possible during the winter. Infected mummies are likely a major source of bacterial spot inoculum (and NOW too).
- Apply a second copper application in a delayed dormant spray (early February).
- Apply Mancozeb after bloom to protect new leaf and nut growth.

We aren't sure if it is necessary to do all of these things every year. For instance, I am not sure how important it will be to burn the leaves off with zinc because we don't know what role leaf infections play in

California. Leaf infections appear to be important in Australia where it rains periodically during the season. Our limited experience here suggests that leaf infections may play a minor role in California. Also, copper sulfate will do a pretty good job burning leaves off by itself so maybe zinc is not necessary. If you have Fritz but have not had bacterial spot, maybe you can get by with only a delayed dormant copper application or a single Mancozeb spray in the spring. In my opinion, if you had a bacterial spot problem this year, it may be best to start with a "Cadillac" program now and then we can determine later where we can cut back. Bacterial spot is primarily a disease of Fritz and Ne Plus, so I don't know if it is important to spray the other varieties in the same orchard. We have seen the problem to a lesser extent on Padre and experience in Australia suggests that Price is moderately susceptible. Maybe a less intensive program would be adequate with these varieties. Nonpareil, Carmel and many other pollinizer varieties seem to be pretty resistant to the bacteria and shouldn't require treatment for bacterial spot.

New Rulings for Piece-Rate Paid Employees

Gregory Billikopf, Labor Management Farm Advisor, UCCE Stanislaus

When hourly paid workers take their legally authorized and permitted California IWC mandated rest breaks, it is the *employer* who pays for these rest breaks. Up to now, when employees were paid by production or piece-rate and took a break, it was the *employees* who ended up paying for it—as they ceased to earn while taking these breaks. This explains why workers paid by

the hour have no trouble stretching their break time. It also explains why some piece-rate paid workers historically have skipped theirs.

As it turns out, recent 2013 California rulings now require that employers pay for these rest breaks. Farm Bureau associate counsel and labor law specialist Carl Borden explains that now “employers in California must pay employees, in addition to their piece-rate earnings, at least minimum wage for all non-piece-producing work time” (*Ag Alert*, 4 September 2013, p. 19). I believe it is in the employer’s interest to pay for the time used in breaks (e.g., see *Labor Management in Agriculture*, 2nd edition, 2003, p. 105). Besides the employee good-will earned, I suspect that the cost of these paid breaks will be more than made up for by savings related to increased productivity and reduced instances of workplace illness and injury.

In addition to these rest breaks, according to Robert P. Roy, general counsel for the Ventura County Agricultural Association, other non-productive periods that need to be compensated include “heat illness prevention cool-down breaks, required daily exercises, donning and doffing required safety clothing or equipment, travel time between fields, company-controlled standby or waiting time and company meetings such as for safety training or job training.” There are at least three general options for complying with these new rulings. From my corner, only the first two options are beneficial while the third hurts both the farm enterprise and the

people they employ. Properly designed piece-rate pay systems are vital in helping California agriculture compete internationally. Whatever approach is used needs to protect effectively designed incentive pay systems.

I. Add a separate wage for rest periods

Keep track of non-productive time (such as break periods) and pay an additional wage rate equal to or greater than the minimum wage. For instance, if employees earn two ten minute breaks a day, add at least one third of an hour at the minimum wage level for that day. In order to take full advantage of these rest breaks, make sure that employees take them and are not just paid for them. This pay approach is particularly useful for compensating employees for non-break related non-productive time periods (e.g. employee training, company-mandated downtime).

II. Add a separate productivity equivalent for rest periods

Employees take their breaks, but are paid proportionally to what they would have earned if they had kept working on a piece-rate basis. This option means that very highly productive employees earn more for their rest periods than slower ones. (Everyone, of course, must earn at least a minimum wage equivalent for this time.) It is as if the farm employer told the workers: “While you take your rest period you can pretend you are out there working, except you are actually taking a break.” Once again, it is imperative that employees take these break periods. Research I have

conducted shows that many workers are weary of showing employers what they really can do under piece rate. They fear that pay rates will be reduced if they earn too much. This approach of paying a productivity equivalent for rest periods helps employers drive the message that increased productivity is a win for both employees and management. This pay approach would not be sustainable, however, for compensation of other non-productive time, nor would it be sustainable if rest periods were longer.

III. Hourly wage plus production bonus

On the surface, this seems like the simplest way to deal with the new regulations. Farm employers would pay by the hour (at least the minimum wage) and add a production bonus over that. Over the years I have known numerous farm employers who have implemented such an hourly wage plus production bonus. The long term results tend to be disastrous. The faster workers end up subsidizing the slow ones. Few employers have done the math, and even fewer have designed such pay schemes on purpose: to try and punish their best employees (see, *Designing an Effective Piece Rate*, 2008, <http://nature.berkeley.edu/ucce50/ag-labor/7research/7calag06.htm>). Option III is not sustainable and will increase worker dissatisfaction.

Concluding thoughts

I believe that piece-rate pay, when properly designed, has the potential for greatly increased productivity with resulting benefits for both employer and employee. Multiple principles need to be carefully balanced in order to maintain such a

system. Any competitive advantages that may be obtained through an incentive pay system, such as piece-rate pay, may be easily lost through unintended side effects. This is why I am often weary of changes brought about by rule of law. I feel that paying for a short break through either Option I or II may well help farm employers attract and retain good workers and motivate performance. For short rest breaks, I have a preference for Option II, proportional payment related to employee productivity. Two advantages are (1) rewarding particularly fast and effective employees and (2) overcoming historical worker perceptions about piece-rate pay. For heat illness prevention cool-down breaks, for longer breaks, and for other types of non-productive time compensation, I prefer Option I - adding a separate wage to the piece-rate pay earnings. Despite the apparent ease in bookkeeping associated with Option III - payment of a base hourly wage plus a productivity bonus - I believe that this option will create worker discontent, especially among the more productive workers. Under this system, the greater the employee productivity, the less workers are paid for their efforts.

Gregorio Billikopf is a labor management farm advisor for the University of California.

He may be reached at:

gebillikopf@ucdavis.edu

Update on Minimal Pruning Trial

The long-term pruning trial in Eastern Stanislaus County has finished its 14th season and the results haven't changed much through the years. Yield in 2013, although lower than average for this orchard, were similar for all pruning treatments. In the early years of this experiment, unpruned trees tended to have higher yields than annually pruned trees but now the yields are pretty similar no matter how they are pruned. Carmel seems to have benefitted more than Nonpareil from minimal pruning, although differences are pretty modest.

Results and Conclusions from the Pruning Experiment so far:

- In most years Nonpareil yields are similar whether they are pruned or not. Cumulatively, untrained & unpruned Nonpareil trees have yielded 1379 pounds more than conventionally trained & pruned trees through the 14th leaf.
- In most years, Carmel yields are a little higher in the untrained and unpruned trees. Cumulatively, untrained & unpruned Carmel trees have yielded

3304 pounds more than conventionally pruned trees.

- 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.
- Pruning (or not pruning) has not affected kernel size.
- It does not appear that pruning leads to better nut removal at harvest.
- Unpruned trees are not taller than pruned trees.
- Trees that were not trained or were trained to multiple scaffolds were more prone to scaffold failure and tree blow over (young trees), especially in widely spaced trees. For this reason, I would prefer to select good scaffolds and develop a framework of the trees for the first year or two before pruning is stopped. Scaffold selection is less important when trees are planted 16 feet apart or closer.
- It appears that pruning is not necessary to improve or maintain almond yield, at least through the first half of an orchard's life.
- Trees still need occasional pruning for equipment access and tractor driver safety. Broken and diseased limbs should also be removed.

Current and Cumulative Yield of Nonpareil and Carmel Almonds in Long Term Pruning Trial.

(End of 14th Season)

Pruning Strategies	Nonpareil		Carmel	
	2013 Yield (lb. / acre)*	Cumulative Yield	2013 Yield (lb. / acre)*	Cumulative Yield
Trained to 3 scaffolds; annual conventional pruning	2908 a	32,246	1995 a	27,615
Trained to multiple scaffolds; Three pruning cuts each year	2812 a	31,581	2127 a	29,207
Trained to 3 scaffolds; unpruned since 2 nd season**	2811 a	33,481	2029 a	29,564
No scaffold selection; No annual pruning**	2942 a	33,625	2083 a	30,919

*Yield data for Nonpareil and Carmel are statistically similar across all pruning treatments, in 2013.

**"Unpruned" trees have had branches removed that interfered with cultural practices.



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SAVE THE DATE:

- ◆ **Nitrogen Workshop for Certified Crop Advisors**
January 14-15, 2014. Stanislaus County Ag Center, Modesto
- ◆ **North San Joaquin Valley Almond Day**
February 6, 2014. San Joaquin County Ag Center, Stockton

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UNIVERSITY OF CALIFORNIA
COOPERATIVE EXTENSION
3800 Cornucopia Way, Suite A
Modesto, CA 95358
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