



**DATE:** March 2, 2010  
**TO:** Korea Program Participants  
**FROM:** Jim Cranney  
**SUBJECT:** **REVISED Notice of Third Copper Spray Application**

Korean Program Participants:

CCQC IS RESENDING THIS NOTICE TO CLARIFY THAT MADERA COUNTY IS INCLUDED IN COUNTIES REQUIRED TO MAKE THE THIRD COPPER APPLICATION FOR EXPORTS TO KOREA.

Dr. Jim Adaskaveg, University of California Riverside, has informed CCQC that as of February 25, the risk-assessment, environmental model for Septoria spot of orange has reached the level two stage in Madera, Fresno, and Kern counties and the level three stage in Tulare County. **A third spray application of the copper-zinc-lime spray is now required and must be applied to all oranges grown in Madera, Fresno, Kern and Tulare Counties including Valencias and Navels for shipments of oranges by March 26, 2010.** The instructions are the same as for the first and second applications which are attached for your information. All orange blocks in Madera, Fresno, Kern, and Tulare County that will ship after **March 26, 2010** will need the third application to provide the necessary protection no matter how many days have elapsed since the second application. The third spray is not required at this time for all other counties.

Please keep in mind that the lapsed time between the second application to harvest is an indicator of infection risk. Any harvest less than or equal to approximately 65 days from the second treatment is at a moderate risk level, any harvest approximately 66-84 days from the second treatment is at a high-risk level, whereas a harvest that is more than 85 days from the second application is at an extremely high-risk level for Septoria spot. Do not try to use the third application date as a harvest deadline or as a cut-off date for harvesting and storing fruit destined for Korea. The longer the fruit is stored the greater the risk for Septoria.

The high rainfall this growing season should reduce the potential for phytotoxicity. An alternative treatment to the copper-zinc-lime treatments has **not** been registered but all possibilities are being explored. As mentioned above, a table is attached to review rates of each component of the treatment (copper, zinc, and lime).

If you have questions, please feel free to contact our office. This information has been posted to CCQC's website.

Sincerely,

A handwritten signature in black ink that reads "JRCranney Jr".

James R. Cranney, Jr.  
President  
California Citrus Quality Council

**NOTICE OF THIRD COPPER SPRAY APPLICATION FOR ORANGE EXPORTS TO KOREA**

A third spray application of the copper-zinc-lime spray is now required on all oranges (Navels and Valencias) grown in Madera, Fresno, Tulare, and Kern Counties and must be applied for shipments of oranges after March 26, 2010. The third spray is not required at this time for all other counties.

**TABLE 1**

**Second & Third Application 2009-10 Season  
Zinc-Copper-Lime Applications  
Fixed coppers (e.g., copper hydroxide and copper oxide)**

Application Volume		Metallic Zinc/100 gal	Metallic Copper/100 gal	Hydrated Lime/100 gal
400	gal/A	0.63-1 lb	0.41-0.75	0.5-1.0lb
600	gal/A	0.42-0.67 lb	0.28-0.5	0.33-0.67lb
800	gal/A	0.31-0.5 lb	0.21-0.38	0.25-0.5 lb
<b>Total*</b>	<b>lb/A</b>	<b>2.5-4</b>	<b>1.65-3</b>	<b>2-4 lbs</b>

\* - If the disease was observed or a positive NAVEK report was issued for Septoria spot in a grower lot last season, use a higher rate of each spray component (e.g., 4 lb metallic zinc, 3 lb metallic copper, and 4 lbs of lime per acre) within the range provided.

**TABLE 2**

**Second & Third Application 2009-10 Season  
Zinc-Copper Bordeaux Applications  
(Zinc monohydrate + Copper pentasulfate)**

Application Volume		Metallic Zinc/100 gal	Metallic Copper/100 gal	Hydrated Lime/100 gal
400	gal/A	0.83 lb	0.41-0.62 lb	5-17 lb
600	gal/A	0.55 lb	0.28-0.41 lb	3.3-11 lb
800	gal/A	0.41 lb	0.21-0.31 lb	2.5-8.4 lb
<b>Total*</b>	<b>lb/A</b>	<b>3.3</b>	<b>1.65-2.45</b>	<b>20-67</b>

\* - If the disease was observed or a positive NAVEK report was issued for Septoria spot in a grower lot last season, use a higher rate of each spray component (e.g., 3.34 lb metallic zinc, 2.45 lb metallic copper, and 67 lbs of lime per acre) within the range provided.