

**Comments in Response to Risk Mitigation Options for EBDC Fungicide Use on Papayas in Hawaii**

Date: June 23, 2005

To: [Rick Melnicoe](#)  
WIPMC Director

From: [Cathy Tarutani](#)  
American-affiliated Pacific Islands (API) Comment Coordinator  
University of Hawaii  
Honolulu, HI 96822

Rick,

The [forwarded message below](#) is apparently an exchange that occurred subsequent to a [reply](#) I sent to Dr. Michell (and cc'd you) on June 8.

Cathy

[Cathy Tarutani](#)  
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Date: June 20, 2005

To: [Richard Michell](#)  
USEPA

From: [Wayne Nishijima](#)  
University of Hawaii

CC: [Cathy Tarutani](#)  
[M. Nishina](#)  
University of Hawaii

Subject: Papaya EBDC

Rich,

I'm not sure how to answer your question but any increase in the REI from 24 hours will affect growers. The longer it is increased the more growers it will affect. My question is how much is the hazard is reduced to the worker by extending the REI from, say 24 hrs to 48 hrs.

My understanding is that the exposure hazard of the EBDC fungicides is very minimal once the spray dries. If increasing the REI is necessary to maintain registration, then I can see the growers being able to live with a 48 hr REI. EBDC fungicides are applied once every 2 to 4 weeks

depending on weather. Harvesting is done weekly so that is the field activity that would be affected the most. Harvesting is the field activity that is done the most frequently (weekly). Field activities and estimated frequency are:

- harvesting: weekly; some may harvest twice a week during summer
- fertilizing: once every 30 to 45 days
- weed control (herbicide application): once every 2 to 3 months
- trim leaves & thin fruits: once every 4 to 6 months

The fertilizing, weed control and trim leaves & fruit thinning operations will not be affected much since those activities are not done every week. However, the harvesting will definitely be affected, especially during the summer months when fruits tend to ripen on the tree faster. I hope this answers your questions. If not let me know and I can try to answer them.

[Wayne Nishijima](#)

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Date: June 20, 2005

From: [Richard Michell](#), Ph.D.  
USEPA

To: [Wayne Nishijima](#)  
University of Hawaii

Dear Dr. Nishijima:

I noticed your response to the [EBDC docket](#) earlier this year. I am working with the risk assessors on risk mitigation options for EBDC fungicide use on papayas. They are interested in knowing if the REI could be increased and what the maximum acceptable REI could be on papayas.

What can you suggest and what worker activities typically follow EBDC applications?

Thanks,  
[Richard Michell](#), Ph.D.  
Plant Pathologist-Nematologist  
BEAD, USEPA  
Phone: (703) 308-8119  
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June 8, 2005

## Macadamia Nuts

These opinions are the educated guesses of two macadamia growers who do not spray nonsystemic fungicides. Therefore, there is no real "typical" application rate. They represent two large macadamia producers and can be considered indicative of growing practices in Hawai'i.

1. The first grower has not used fungicides for over 15 years and has no plans to do so in the future.

This estimate is based on the practice of using 500gpa for the application of Saf-T-Side for scale control. For mature trees, this grower estimates he would need at least 300 to 400gpa for fungicide application to be somewhat effective. Realistically, it comes down to the effectiveness of the orchard sprayer in being able to achieve consistent spray penetration through the tree canopy.

2. The second grower does not use fungicides on macadamia and has no reason to unless there is an extreme or unique circumstance where a new disease or serious outbreak occurs. Over the past 21 years, this company has not used any fungicides on macadamia other than on small trial plots.

Their observations show that canopy coverage is very poor at low gallonages of less than 100 gpa on very young trees due to dense foliage. Increasing the gallonage could improve coverage but not satisfactorily due to difficulty in penetrating the canopy. That's the reason non-systemic pesticides (fungicides, insecticides) are not effective on macadamia.

In his opinion, 500 gpa would work for nonsystemics if the portion of the tree that needs to be covered is the trunk, and lower branches. This same gallonage will not provide the necessary protection or control if the pest is within and throughout the canopy. That's reality for an evergreen tree like macadamia.

## Coffee

Fungicide application in coffee is infrequent in Hawai'i.

Growers report typical application rates of 30 gpa for small canopy situations and 50 gpa when the canopy is full. 100 gpa is the educated guess of the required maximum application rate.

### Response submitted by:

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June 8, 2005