



# WPHA

Western Plant Health Association

VIA ELECTRONIC MAIL: [dmccclure@waterboards.ca.gov](mailto:dmccclure@waterboards.ca.gov)

15 January 2010

Mr. Daniel McClure, P.E.  
Water Resource Control Engineer/Project Manager TMDL Unit  
Central Valley Regional Water Quality Control Board (CVWRQCB)  
11020 Sun Center Dr. #200  
Rancho Cordova, CA 95670

**RE: Phase-III Water Quality Criteria (WQC) Derivation Method Developed for Bifenthrin**

Dear Mr. McClure:

The Western Plant Health Association (WPHA) welcomes the opportunity to comment on the technical document authored by Amanda Palumbo, Ph.D., Tessa Fojut, Ph.D., and Ronald Tjeerdema, Ph.D., of the Environmental Toxicology Department, University of California at Davis, concerning their updated methodology for deriving freshwater water quality criteria for the protection of aquatic life that was previously developed (TenBrook et al. 2009); entitled “Bifenthrin Criteria Derivation - Draft.”

WPHA supports the more comprehensive technical comments provided by the major registrant of bifenthrin – FMC Corporation. WPHA represents the interests of fertilizer and crop protection manufacturers, distributors, formulators and retailers in California, Arizona, and Hawaii, and our members comprise more than ninety percent of all the companies marketing crop protection products in these states.

WPHA restates our previous concerns about the CVRWQCB embarking on a quickly and narrowly focused policy towards developing an excessively conservative WQC Method for 7 active ingredients to then be applied to listed “waterbodies” just within the Central Valley. In the interest of brevity, please refer to our previously submitted comment letter on diuron (dated & submitted on 4 December 2009) that had outlined our reasoning for objecting to this initiative, and had offered in its place our recommendation to closely monitor and adhere to US EPA’s national program to address issues you have raised over limited aquatic toxicity data from pesticides.

In accordance with the request for public comments, WPHA is providing the following items for your sincere consideration before finalization of this WQC Method for bifenthrin:

1. Pyrethroids bound to particulate matter or associated with dissolved organic matter are not biologically available to aquatic organisms and do not contribute to toxicity; only freely dissolved pyrethroids are bioavailable and toxic. In laboratory toxicity tests using water with minimal particulate or dissolved organic matter, nearly all the pyrethroid is bioavailable. In ambient water, only a small fraction – a few percent or less – of the total pyrethroid may be bioavailable. Compliance with bifenthrin water quality standards should therefore be based on concentrations of freely dissolved bifenthrin, not total bifenthrin.

Freely dissolved bifenthrin can be measured directly using solid phase micro-extraction (SPME), or estimated using an equilibrium partitioning model such as the one presented by Tenbrook et al. (2009).

2. The data selected by the UCD authors (Palumbo et al.) for derivation of the acute criterion for bifenthrin overlooked several relevant and reliable studies. Inclusion of these studies resulted in a recalculated acute criterion of 7ng/L. The UCD author's recommended acute criterion was 4ng/L. We request that the CVRWQCB reconsider and include the studies before finalization of the Method.
3. For derivation of chronic criteria, EC<sub>x</sub> values are preferable to maximum acceptable toxicant concentrations (MATCs). A MATC simply reflects a determination of statistical significance, regardless of biological significance or magnitude of effect. An EC<sub>x</sub> represents a specific magnitude of effect. Appropriate values of *x* have not yet been agreed upon, but they should be selected with biological significance in mind.

Thank you for your consideration of WPHA's comments concerning the updated methodology for deriving freshwater WQC for the protection of aquatic life authored by Dr. Palumbo et al. WPHA looks forward to reviewing your responses to our letter. We continue to welcome all opportunities to work with CVRWQCB on this and other important water quality issues.

Sincerely,



Nasser Dean  
Director, Environmental & Regulatory Affairs

cc via email: Ken Landau, Assistant Executive Officer  
Jerry Bruns, Environmental Program Manager  
Ronald Tjeerdema, Ph.D., University of California at Davis  
Tessa Fojut, Ph.D., University of California at Davis