

UNIVERSITY OF HAWAII AT MĀNOA

College of Tropical Agriculture and Human Resources

Department of Plant and Environmental Protection Sciences

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Jill Bloom
Special Review and Reregistration Division (7508P)
Office of Pesticide Programs
Environmental Protection Agency
1200 Pennsylvania Ave., NW.
Washington, DC 20460-0001

Subject: **Docket ID Number EPA-HQ-OPP-2004-0202**

Comments in Response to *Pentachloronitrobenzene (PCNB) Reregistration Eligibility Decision; Notice of Availability and Third Extension of Comment Period*

The following comments are being submitted in response to the August 2, 2006 *Federal Register* notice regarding EPA's Interim Reregistration Decision for the fungicide Pentachloronitrobenzene (PCNB). These comments are being submitted on behalf of the Western Integrated Pest Management Center and provide input on the use of PCNB in Hawai'i.

In Hawai'i, PCNB has been regularly recommended for the management of Rhizoctonia diseases (damping off, wire stemming) on labeled crops. *Rhizoctonia solani* is a soilborne fungus that survives for indefinite periods of time. Efficacy has also been noted against three additional diseases which are difficult to manage: club root (*Plasmodiophora brassicae*) of **crucifers**, sclerotium diseases (*Sclerotium rolfsii*) and white mold (*Sclerotinia sclerotiorum*). These three fungal pathogens are significant causes of crop loss not only for **food crop** growers but also for the **turf and ornamental industries**. At least one of these three pathogens is a pest on almost every crop grown.

PCNB is valuable to growers of commercial ornamentals who select PCNB because it is very effective and inexpensive. Growers of **potted orchids** who struggle with infestations of *Rhizoctonia solani* use PCNB. In **potted flowering plant nurseries**, growers of Ixora, Chrysanthemum and other plants use also PCNB to control *Rhizoctonia solani*. Growers of temperate **flower crops** use PCNB for very bad infestations of *Sclerotinia sclerotiorum*.

Although newer chemistries (i.e., azoxystrobin) are available and are listed as effective against Rhizoctonia diseases, they are considered at risk to the development of resistance. Continued use of PCNB allows for another tool in the management of pesticide resistance (PCNB carries a low resistance risk).

3050 Maile Way, Gilmore Hall 310, Honolulu, Hawai'i 96822

Telephone: (808) 956-7076, Facsimile: (808) 956-2428, E-mail: peps@ctahr.hawaii.edu, Web: www2.ctahr.hawaii.edu

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Among **turfgrass** fungicides, PCNB is unique in that it lasts for long periods in soils. This is probably the main reason it is such an effective snow mold fungicide. One of the first studies on PCNB degradation showed that it breaks down very slowly in sandy loam soil, with 20 percent of the active ingredient remaining after 10 months. A later study conducted at the University of California found that the degradation rate of PCNB varied with soil type. The half-life of PCNB was 4.7 months in a sandy loam soil, 7.6 months in clay and 9.7 months in soil with high organic matter (peat/muck). Research has also demonstrated that PCNB breaks down much faster under saturated conditions (soil that is submerged in water) than in soils that are moist but aerated. (References: <http://www.gcsaa.org/gcm/2000/dec00/12snowmold.html>.)

Comments were contributed by extension agents and a diagnostician of the College of Tropical Agriculture and Human Resources.

Comments submitted by:



Mike Kawate
Pesticide Registration Specialist
Voice: 808-956-6008
mike@hpirs.stjohn.hawaii.edu



Cathy Tarutani
Educational Specialist
Voice: 808-956-2004
cathy@hpirs.stjohn.hawaii.edu