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**Comments in Response to the Notice of Availability of Certain Ethylenbisdithiocarbamates (EBDCs) and Ethylene Thiourea (ETU); Risk Assessments and Preliminary Risk Reduction Options: Hawaii Florists and Shippers**

Date: February 22, 2005

To: [Cathy Tarutani](#)

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From: [Eric S. Tanouye](#), President

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SUBJECT: [EPA Docket OPP-2004-0078](#) (EBDC: Mancozeb; Dithane(r), Maneb; and ETU)

Re-registration Review and FQPA Assessment Testimony made on or before  
February 22, 2005  
Regarding, Docket ID number OPP-2004-0078  
given to  
Environmental Protection Agency Washington, DC  
regarding  
ethylenbisdithiocarbamates known as "EBDCs"  
pesticides "mancozeb, maneb, metiram,  
plus a common degradate, ethylene thiourea, "ETU"  
by  
Hawaii Florists and Shippers Association  
Hilo, HI

Hawaii Florists and Shippers Association, Hilo, HI, requests opportunity to submit comments regarding EBDC/ETU re-registration review (and FQPA assessment comments). Hawaii Florists and Shippers Association, referred to as HFSA, is a statewide association founded in 1948. It has approximately 400 members on all Islands. Our membership is composed of breeders, propagators, growers, shippers, retailers, wholesalers, and all aspects of allied business which support agriculture/ornamentals here in Hawaii. In 2003, the Hawaii Agricultural Statistics Service summarizes that Floriculture/ Ornamentals reported approximately 98 million for the State. The major commodities were:

- Cut Flowers " Anthuriums, Tropicals, and Protea
- Orchids " Cuts and Potted
- Lei Products
- Potted Plants and Flowers
- Potted Foliage " Interior and Landscape Foliage
- All other Nursery Products " example: Bedding Plants, Plant Rentals

Hawaii's sub tropical climate conditions are conducive to a wide range of fungal diseases. A preventative fungicidal spray program is a key component to the overall success of all nursery operations. The value of Hawaii's tropical flower and foliage products is in the unique exotic

look and form and therefore requires a perfect plant performance. Here are a few following comments we would like to share with you regarding EBDC (Mancozeb; Dithane, Maneb).

#### **Comment #1: Mancozeb widely used Fungicide**

Mancozeb products are one of the most widely used fungicides for fungal leaf spots, flower rots, and root rots as they have a very broad spectrum of activity with very good to excellent control of many fungal diseases. They are effective against the hundreds of ascomycetes (*Fusarium*, *Botrytis*, *Septoria*, *Cercospora*, *Alternaria*/early blight, *Colletotrichum*/anthracnose, *Bipolaris* and *Helminthosporium* spp., *Didymella*/gummy stem, and many others) that cause many tropical diseases; and destructive oomycetes (*Pythium*/damping-off, *Phytophthora*/late blights/heart rots/damping-off, downy mildews, white rusts) that cause growers losses in the millions of dollars. Uncontrolled diseases can make the crop uneconomical to produce. A broad-spectrum fungicide is highly valuable because one application controls diseases caused by several different types of fungi and oomycetes. The grower saves on labor and these fungicides are relatively inexpensive. Both mancozeb and manebe also have limited effectiveness against some destructive bacterial diseases (tomato speck and spots), and quality-impacting organisms such as slime molds and algae (turf). Both mancozeb and manebe are important for fungicide rotation programs that are designed to mix the chemistries of fungicides. These programs prevent the rapid development of strains of fungi that are resistant to new highly effective fungicides. Pathogen strains resistant to mancozeb are extremely rare or have not been widely reported. Growers utilize moderate rates for protection purposes but through monitoring efforts, maximum rates are employed when disease pressure is high. Some of the Trade names used in Hawaii are: Dithane, Fore, Pentathlon, Protect, and Cleary's.

#### **Comment #2: Mancozeb conveniently used Fungicide**

Many growers time their spray applications to Fridays, the last working day of the week. This practice reduces worker contact and allows for weekend drying. According to EPA Worker Protection Standards, growers close individual greenhouses and post no entry signage following spray applications. These applications are generally on a 7-14 day interval depending on spray programs with other rotational fungicides. If protectant fungicide sprays exceed a 3 week interval, disease problems are exacerbated. Harvesting or delivery preparation of plants are usually done prior to the next scheduled spray application thereby extending the post application period.

#### **Comment #3: Mancozeb effectively used on a broad base of Fungi**

Target pests include: *Alternaria*, *Bipolaris*, *Botrytis*, *Calonectria*, *Colletotrichum*, *Exherohilum*, *Fusarium*, *Phyllosticta*, *Pseudocercospora* and *Cercospora*, Downy Mildew, *Rhizoctonia*, Rust, and Scab.

#### **Comment #4: Mancozeb will be difficult to replace with another as Broad Spectrum Fungicide**

There are no effective alternative fungicides that encompass Mancozeb's broad-spectrum activity, no fungal resistance problems, and industry acceptance as a cost-effective product. Alternative treatments are expensive, limit the number of applications due to resistance concerns, and typically not provide broad-spectrum control. These alternatives are usually targeted to a specific fungal organism. If a disease was NOT controlled and 90% of the crop was unmarketable, application of mancozeb/manebe could reduce disease levels by 30 to 75%. These chemicals are inhibitory by contact, thus spores that escape can germinate and cause disease. Many of the new fungicides have higher rates of efficacy, especially for those that are systemic. However, many of the highly effective systemic fungicides become ineffective as fungi become resistant to them after short periods (2-3 seasons or 5-7 applications).

**Comment #5: Mancozeb has not been reported as a threat to Worker Safety**

There have been no reported incidents to the Extension Service of worker reactions to Mancozeb applications. The benefits associated with Mancozeb fungicides is that it is cost effective, accepted as the industry standard for fungal protection, and its broad range of efficacy. Because of Hawaii's tropical climate, plants are susceptible to a wide array of fungal pathogens. Mancozeb fungicides have provided an effective pest management program with no reported resistance problems even after more than 40 years of usage.

**Comment #6: Mancozeb is conveniently available for large to small applicators**

Many of Hawaii's growers are smaller family farms and cannot utilize water-soluble packaging, which typically is utilized in 100-gallon tank mixes. Many nurseries have smaller spray tanks and backpack sprayers which make water-soluble packets more difficult to handle. Therefore, usage of WP and dry flowables are still an accepted and desirable formulation.

It is extremely important that re-registration be done, as stated above, but not limited to are comments we would like to submit, requesting that the Environmental Protection Agency (EPA) seriously review and consider re- registration of fungicide ethylenbisdithiocarbamates EBDCA® for the ornamental industry use. We feel that until we are conscious of an alternative, which is as good or better, we need to have access to this pesticide.

We thank you for the opportunity to submit our comments and if you have questions please contact us at Hawaii Florists and Shippers Association

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