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MĀNOA

May 9, 2016

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Pesticide Re-evaluation Division (7508P)  
Office of Pesticide Programs  
Environmental Protection Agency  
1200 Pennsylvania Ave., NW.  
Washington, DC 20460-0001

Subject: **Docket ID Number EPA-HQ-OPP-2011-0855**

*Comments in Response to Paraquat Dichloride; Proposed Interim Mitigation Decision; Notice of Availability*

The following comments are being submitted in response to the March 9, 2016 *Federal Register* notice regarding EPA's proposed interim mitigation decision for the herbicide paraquat dichloride. These comments are being submitted on behalf of the Western Integrated Pest Management Center and provide input on the use of paraquat dichloride on **macadamia nuts** and other food crops in Hawai'i.

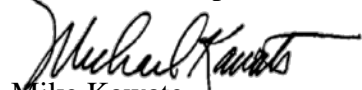
Separate comments were received from a macadamia nut grower and the Hawai'i Macadamia Nut Association (HMNA). Their comments are appended to this letter (attachments 1 and 2, below). In addition, comments were received from a grower of various food crops. Paraquat dichloride is applied to some of his crops: **watermelon, tomato, bell pepper** and **cucumber**. The grower's comments are generally consistent with informal reactions we have received.

The grower reported applying paraquat dichloride without incident for 15 years. In most circumstances, applicators are not applying more than 10 acres of a paraquat product in one day. Almost all of the applications are made under shielded or hooded application. Currently, smaller shielded equipment is used to direct the paraquat specifically where it is needed, thus this grower reduces the total amount of product put into the environment and the total amount of acres treated in one year. It would be a problematic for this operation if each applicator were required to be licensed. The result of a requirement to have licensed applicators for paraquat applications would be fewer shielded or hooded applications and more broadcast applications. The grower offers the suggestion that, if EPA must require a licensed applicators for paraquat, that exceptions be made for shielded or hooded applications. Alternatively or additionally, the suggestion is to require a

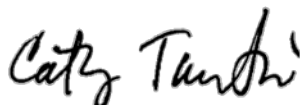
certified applicator after the application reaches a threshold, for example where an applicator treats 10 acres or more in one day.

The grower supports the requirements of additional annual training for paraquat applicators and a closed mixing system.

Comments compiled and submitted by:



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**Attachment 1: Comments from a Hawai'i macadamia nut grower**

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## EPA PARAQUAT MITIGATION PROPOSALS

The EPA is proposing a number of measures to reduce injuries related to paraquat.

Several of these measures will have a negative impact on the macadamia nut industry and should be modified. Since I've entered the industry in 1992, I have never heard of any health incidents concerning paraquat usage. Common sense, training, and adherence to proper protocol should reduce many of the health incidents. These are some of the points I feel should be considered.

1. Training Materials (Section 3B)
  - a. The injury and fatality incidents listed in this docket should be included in the training, especially citing the transfer to soda or juice containers, etc.
  - b. Training could be part of the Worker Protection training requirements.
  - c. Training could be done annually or every other year as a refresher.
2. Prohibition of applications with hand held equipment. (Section 3C)
  - a. We apply paraquat with an ATV mounted spot sprayer. The sprayer pump is rated up to 60psi, the hose from the sprayer to the spray gun is rated to 125 psi. Properly maintained, it poses no threat of bursting or leaking.
  - b. These spot sprayers are used around our small replanted macadamia seedling. We aren't able to use Glyphosate in these areas due to the damage cause by using a systemic on young trees.
  - c. Glufosinate may be an alternative, but the cost is at least three to four times greater. Also, the Glufosinate label states "May be fatal if absorbed through the skin".
3. Close System requirement (Section3D)
  - a. Cost for a close system will represent a sizeable burden for the small macadamia growers whose profit margins are limited, as it is now.
  - b. Requires a pressurized water system which may not be available out in the orchards.
4. Restrict use to certified applicators. (Section3E)
  - a. All of our Paraquat applications are made by operators under the supervision of a certified applicator.
  - b. The operators are given detailed written and oral instructions on the mixing and application of the paraquat, along with the PPE's necessary.
  - c. A paraquat specific training course would be more applicable and practical than a certified applicators course which many would not be able to pass.



# HAWAII MACADAMIA NUT ASSOCIATION

Wednesday, April 27, 16

Ms. Cathy Tarutani  
UH Manoa Extension Pesticide Program  
[cathy@hpris.stjohn.hawaii.edu](mailto:cathy@hpris.stjohn.hawaii.edu)

Dear Cathy,

Please accept the following comments from the Hawaii Macadamia Nut Association regarding the Proposed Risk Mitigation Measures for Paraquat.

The Hawaii Macadamia Nut Association represents over 18,000 acres of macadamia orchards and approximately 650 individual growers. The largest single grower of macadamia in the State encompasses some 7,000 acres, the next largest is 4,000 acres, then several at or just above 1,000 acres. The reason for defining this fact of the industry is that of the hundreds of orchard growers in the State, a vast majority are small independent farms often between five and twenty acres. While the largest growers are mechanized the small farms are managed by hand application of fertilizers and pesticides. Often these farms are on rocky or sloped lands that do not allow for mechanized operations and or spray applications.

With that preface, I would like to represent that the proposed prohibition of application from hand held equipment is overly burdensome and damaging to our members and industry, (Section 3C). While we appreciate the effort to mitigate risk with the application of paraquat, there are alternatives to the outright prohibition of hand application. We propose that label restrictions include that chemical resistant clothing, such as Tyvek suits or better, be required when applying paraquat solutions by hand held equipment. We believe that proper PPE can be employed to protect the applicator in the case of catastrophic failure of the back pack or spray hoses and guns.

We respectfully ask that hand held applications of paraquat continue to be allowed with contingent restrictive language to protecting the applicator to potential leaks or spillage.

Regarding the closed system for transferring paraquat to the tank or application equipment, (Section 3D). Again, this appears overly burdensome to both large and small orchard operators. Much of the mixing for the large orchards is "in the field" and the closed system appears to require pressurized air or fluid powered transfer. This is not available in the field or on many of our small farms. In regard to the hand



# HAWAII MACADAMIA NUT ASSOCIATION

application equipment and the loading of paraquat into the hand held equipment back packs or ATV tanks we suggest that the dispensing packing for paraquat be modified to include an inclusive measuring devise on the container. This is commonly used in other chemical products where one would squeeze the plastic container and product rises in a capillary tube to the graduated measuring container. From there the hand held mixer/applicator can then pour the correct amount straight into the hand held equipment. This would by-pass the current method of pouring paraquat from a 2.5 gallon jug into a measuring cup, then picking up the cup and pouring into the back pack. The transfer of paraquat from large containers for a single hand held tank is prone to potential spills. Further to that we would like to see that paraquat be packaged in one quart sizes for hand held applicators. These one quart containers would all be equipped with the integrated measuring sub-container to allow for a safer transfer of product to the tank.

In regards to restricting the use of paraquat to certified applicators only,(Section 3E) this would be very difficult for our larger farms that employ many workers. All applicators in those operations are under the direct supervision of a Certified RUP license holder. The operators are instructed in proper use, safety and PPE to wear when applying paraquat. Rather than require all applicators obtain an RUP license we believe that more specific paraquat training program be developed to train these operators. This could fall under the Section 3B suggested changes. We have no opposition to that Section of the proposed risk mitigation measures.

In summary, the HMNA and its growers greatly need all the tools available to them to grow and produce the best quality macadamia nuts. By restricting the use of these tools, like paraquat, especially to our hand held applicator farmers would be overly burdensome. We respectfully ask that the EPA take these suggested modifications into mind.

Sincerely,

A handwritten signature in black ink, appearing to read "John C. Cross". The signature is fluid and cursive, with a large initial "J" and "C".

John C. Cross  
HMNA President