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OFFICE OF PESTICIDES AND TOXIC SUBSTANCES

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Memorandum

SUBJECT: PP#5E1648 and FAP#5H5097. Diquat in water,  
irrigated crops and fish. Amendment of 8/19/80.

FROM: *R.B. Perfetti*  
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TO: R. Mountfort, Product Manager No. 23  
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and

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Hazard Evaluation Division

THRU: Willa Y. Garner, Acting Chief *WY*  
Residue Chemistry Branch, HED (TS-769)

Richard D. Schmitt, Deputy Branch Chief  
Residue Chemistry Branch, HED (TS-769) *R.D. Schmitt*

This amendment consists of a revised Section B attempting to resolve RCB reservations discussed in our memo's of 8/16/1976, D. Duffy and 1/14/77, 3/6/78, and 4/19/78, J.G. Cummings.

We have reviewed the revised label and regulations and find them unacceptable for resolution of the outstanding deficiencies in the petitions. The following are label directions and regulations which we would consider adequate for a favorable recommendation from RCB.

The label directions should be proposed as follows:

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Diquat is to be used only in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, streams, and rivers which are slow-moving or quiescent and which are under the Corps of Engineers' Aquatic Plant Control Program.

The Corps of Engineers or contractors directly under their control are responsible for guaranteeing that the following restrictions can be observed after treatment:

- 1.) Water is not to be used for animal consumption, swimming, spraying, domestic purposes or for irrigation for 14 days after treatment or until approved analysis shows that the water does not contain more than 0.01 ppm of diquat dibromide (calculated as the cation).
- 2.) The application rate is not to exceed 4 lb active ingredient/acre.
- 3.) No applications are to be made in areas where commercial fish processing is practiced.
- 4.) Before application, coordination and approval of local and state authorities must be obtained, either by letter or agreement or issuance of special permits for such use.

The additional information "Weed species submersed weeds etc." should follow.

A second label allowing use on aquatic sites completely under the control of the user should be proposed as follows:

It is a violation of Federal law to use this product in a manner inconsistent with its label.

For application only to ponds, lakes and drainage ditches where there is little or no out-flow of water and which are totally under the control of the user.

Diquat is to be applied at a maximum rate of 4 lb active ingredient/acre. Treated water should not be used for animal consumption, swimming, spraying, irrigation or domestic purposes for 14 days after treatment. Diquat is not to be used on aquatic sites in Florida. The additional information "Weed species submersed weeds etc." should follow.

The food additive tolerance regulation should be proposed as follows:

- A.) A tolerance of 0.01 ppm is proposed for residues of the herbicide diquat (6,7-dihydrodipyrido (1,2-a:2',1'-C) pyrazidinium) derived from application of the dibromide salt in potable water resulting from the application of the pesticide for control of aquatic weeds in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, streams and rivers which are slow moving or quiescent in programs of the Corps of Engineers, U.S. Department of Defense. The Corps of Engineers or contractors under their direct control will make certain that the treated water will not be used for animal consumption, swimming, spraying, domestic purposes or for irrigation for 14 days post treatment or until approved analysis shows that the water does not contain more than 0.01 ppm of diquat (calculated as the cation) and that no treatments will be made where commercial processing of fish is practiced.

- B.) A tolerance of 0.01 ppm is proposed for residues of the herbicide diquat (6,7-dihydrodipyrido (1,2-a:2',1'-C) pyrazidiinium) derived from application of the dibromide salt in potable water resulting from the application of the pesticide for control of aquatic weeds in ponds, lakes, and drainage ditches where there is little or no out-flow of water and which are totally under the control of the user. The applicator will make certain that treated water will not be used for animal consumption, swimming, spraying, irrigation or domestic purposes for 14 days post treatment and that diquat will not be used on aquatic sites in Florida.

The pesticide tolerance regulations should be proposed as follows:

- a.) Section a) will be for the present sugarcane and, if any, future terrestrial tolerances.
- b.) Tolerances are proposed for residues of the herbicide diquat (6,7-dihydrodipyrido (1,2-a:2',1'-C) pyrazidiinium) derived from the application of the dibromide salt to ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, streams and rivers which are slow-moving or quiescent in programs of the Corps of Engineers, U.S. Department of Defense and to ponds, lakes and drainage ditches only where there is little or no out-flow of water and which are totally under the control of the user at 0.1 ppm in or on forage legumes, forage grasses, fish and shellfish and at 0.02 ppm in or on the crop groupings citrus fruits, cucurbits, fruiting vegetables, grain crops, leafy vegetables, nuts, pome fruits, root crop vegetables, seed and pod vegetables, small fruits, stone fruits, and the individual raw agricultural commodities avocados, cottonseed, sugarcane and hops. Where tolerances are established at higher levels from other uses of diquat on the subject crops, the higher tolerance applies also to residues from the aquatic uses cited above.

The petitioner should be informed that we will need revised Sections B and F incorporating the restrictions and proposals discussed above before any favorable recommendation for these tolerances could be made by RCB.