UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: **Diflubenzuron. Outcome of the 2/22/94 Meeting of the HED Metabolism Committee.** Reregistration Case No. 0144. Chemical No. 108201. No MRID #. No DP Barcode. No CBRS #.

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TO: HED Metabolism Committee

Background

At the 11/5/93 meeting of the HED Metabolism Committee, the Committee concluded that for commodities where no PCA, CPU or PCAA were present, the toxicological endpoint for diflubenzuron per se should be used for risk calculations. For those commodities that contain PCA, CPU and PCAA, the Q_1^* for PCA should be used for to calculate the cancer risk from the sum of the three metabolites. Levels of PCA, CPU and PCAA in rac's will be estimated using information from available metabolism studies (see A.Rathman, 11/15/93, memo entitled "Outcome of the HED Metabolism Committee Meeting of 11/5/93).

CBRS used results from metabolism studies to determine the percent of TRR present as PCA or related compounds (CPU and PCAA). Then, using tolerance levels for diflubenzuron, and assuming 100% crop treated, total levels of PCA and related compounds were estimated. Using a Q_1^* for PCA of 0.059, as provided by Dr. Engler, and residue values for PCA as noted in Table 1, a potential upper bound cancer risk of 1.4×10^{-6} was calculated.

Discussion

Discussion concerned the possible in vivo conversion of DFB to PCA. Rat metabolism studies demonstrate that PCA is a rat metabolite, found at trace levels in the urine. However, DFB was not positive for carcinogenicity in TOX studies.

Further discussion focused on CBRS generating anticipated residues (i.e., taking into account per cent crop treated and field trial information) for DFB, and then recalculating the potential amount of PCA that could be present in various racs.

Conclusions

The HED Metabolism Committee will meet again to discuss DFB after the following two points have been addressed:

1. The Committee decided that in vivo conversion of DFB to PCA and related compounds needs to be addressed. Using data available from rate metabolism studies, TOX will be responsible for generating an estimate of in vivo conversion.

2. CBRS will obtain percent crop treated data from BEAD. Using this information and information obtained from magnitude of the residue studies, anticipated residues for DFB, based on 95% confidence limits, will be generated. Potential levels of PCA in racs will be calculated.

Results will be presented at a future meeting of the HED Metabolism Committee for consideration.

cc: S.F., circ., R.F., Reg Stnd File, S.Knizner, H.Spencer (TOX)
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