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

APR 4 1989

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP8F3646/FAP8H5558. Sethoxydim on Sugar Beet Roots. DEB No. 5076, 5077. No MRID No. Protocol Dated 1/30/89.

FROM: R. W. Cook, Chemist
Petition Tolerance Section I
Dietary Exposure Branch
Health Effects Division (H7509C)

THRU: R. S. Quick, Section Head
Tolerance Petition Section I
Dietary Exposure Branch
Health Effect Division (H7509C)

TO: R. J. Taylor, PM 25
Fungicide-Herbicide Branch
Registration Division (H7505C)

and

Toxicology Branch II - Herbicide, Fungicide and Antimicrobial Support
Health Effects Division (H7509C)

The petitioner has submitted a protocol for a sugarbeet processing study. A processing study was requested in our previous review. The protocol, consists of flow diagram and stepwise discussion of commercial sugarbeet processing, and a proposal to use the sethoxydim metabolite DME to spike untreated sugarbeets for processing. A total of 300 pounds of sugarbeets would be needed to duplicate the commercial process.

The flow diagram and stepwise discussion thereof cannot be considered a protocol except in a very general sense.

The petitioner should submit a description of the pilot plant process to be followed in this experiment, so that comparison to commercial practice may be made. The protocol should focus on the residues which may occur in the food items of concern, specifically dried sugarbeet pulp, refined sugar and sugarbeet molasses. The protocol should clearly describe the point in the refining process these particular residue samples are obtained. The experiment should include information regarding relative amounts of various samples, ie, how much dried pulp, refined sugar and molasses is obtained from a given amount in this experiment, as compared to commercial practice. The petitioner may wish to submit a detailed protocol prior to initiating this study.

In regard to the petitioners proposal to use "spiked" or fortified untreated sugarbeets for processing, we would not consider such a study adequate for our purposes. Fortified untreated samples are only useful in processing studies when the residue has been clearly demonstrated to be a surface residue on the raw agricultural commodity. When a residue has been shown to be systemic and mobile through the plant, processing studies must be conducted on field-treated samples. Further, the processing study should examine the total toxic residue as regulated. That is, information on DME-OH is also needed, to determine if this metabolite concentrates in processed feed items.

The petitioner contends that sugar beets with residues at or near 1 ppm are unobtainable. We note that previously submitted residue data showed 0.40 ppm DME + <0.05 ppm DME-OH; processing of sugarbeets containing such residues would be appropriate. Field samples which have received exaggerated application rates (generally no more than 5X) may also be used in processing studies to determine the extent of concentration in processed food items.

Recommendations:

We recommend against the proposals submitted in this instance. We recommend that the petitioner submit an adequate protocol which addresses the above discussion, and utilizes sugarbeets bearing finite detectable residues as a result of field treatment with sethoxydim, possibly from exaggerated application rates.

cc: 8F3648/8H5558, RWCook, RF, Circ (7), PMSD/ISB
H7509C:TPSI:RWCook:vg:4/3/89
RDI: R.S.Quick, 3/30/89; R.D.Schmitt, 3/30/89