



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

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OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: 7501-20 - Thiram Registration Standard Followup  
Accession Nos. 264021, 264146 (No MRID No.)  
RCB Nos. 1302, 1303, 2336 MRIDs 161985 and 162142


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THRU: Charles L. Trichilo, Chief  
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In response to the Registration Standard for thiram, tetramethylthioperoxydicarbonicdithioamide or tetramethylthiuram disulfide, Gustafson, Inc. has submitted product chemistry data for Registration No. 7501-20. A Preliminary Report on <sup>14</sup>C-Thiram Uptake From Seed Treatments is submitted by the Thiram Task Force and Gustafson has submitted the proposed residue chemistry program for seed treatment uses.

## Residue Chemistry Data

### Plant Metabolism

A preliminary report is submitted describing a radiolabeled metabolism study on the uptake of thiram in soybeans, cotton, and wheat plants from seed treated with thiram at 1X and at 5X. The report describes steps and techniques used to isolate and identify the radioactive residues. One metabolite was isolated and characterized as a beta-glycoside and no evidence for free dithiocarbamate, thiram, or thiram degradate has been found.

### Conclusion

No conclusion can be drawn on the adequacy of the plant metabolism study until the completed study is submitted. As stated by R.S. Quick in a conference with Gustafson and UCB Chemicals April 14, 1987, the uptake of radioactivity into the stem and leaf parts of the plants shows that the seed treatment uses of thiram are food uses.

### Residue Data

A program is proposed for conducting residue chemistry studies for the seed treatment uses of thiram. Studies are proposed the crops representing a large percent of the total use of thiram, representative of crop groups and the economic value to the crop group. These crops are wheat, corn, beans, peas, soybeans, lettuce, beets, sugar beets, cotton, and safflower as representatives of the crop groups cereals, forage crops, legumes, leafy vegetables, root and bulb vegetables, and oilseeds. Field trial summaries for each crop are submitted.

The company states that other crop groups represent such low volume of usage as to qualify as minor use crops; residues are expected to be below the level of sensitivity for the analytical method; and that based on the Agency's position

regarding captan, the data to be generated can be translated to the remaining crops.

Comments/Conclusions

1. RCB feels that a representative crop from each of the crop groups should be tested. Those not proposed are bulb vegetables, brassica vegetables, cucurbits, fruiting vegetables, grasses, and nongrass animal feeds (alfalfa). Thus, residue studies for a crop from each of these groups should be added to the residue program.
2. The analytical method to be used and its sensitivity have not been submitted and therefore no comment can be made on its adequacy. The Registration Standard requires a specific method for enforcement and confirmation of thiram and any metabolites of concern.
3. The registrants should be reminded that storage stability of thiram residues in the crops will be needed for the same conditions under which actual samples are stored before analysis.
4. The Agency's position on captan seed treatment was that six crop studies would be sufficient only if no residues were found.
5. With regard to the Field Trial Summaries, we recommend additional geographic areas for certain crops and have a few additional comments as follows:
  - Beans, dry - Michigan, Colorado, Nebraska
  - Beans, succulent, Tennessee/North Carolina, Virginia
  - Lettuce - Texas/Arkansas, Colorado, Washington
  - Corn, field - New York separate from Alabama/Georgia/South Carolina
  - Corn, sweet - The raw agricultural commodity (RAC) for the grain is kernels plus cob with husks removed.
  - Cotton - If Delta means Louisiana and Mississippi, geographic representation is adequate. Cotton forage is also a RAC. Its feed use can be label restricted if the registrant so chooses.
  - Soybeans - The RACs are seed, forage, hay, and straw.
  - Sugar Beets - Nebraska, Michigan, Washington, Wyoming.
  - Wheat - The RACs are grain, forage, hay and straw.
6. The registrant should be reminded that should residues occur on the RACs, processing studies will be needed.