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DDT Defendant Delights Pesticide's Fe

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He was a witness for the chemical industry in its defense of DDT, at the state Natural Resources Department's hearings on a petition to ban continued use of DDT in Wisconsin. But the petitioners found the testimony of Dr. Paul E. Potter today such a boost to their own case against the pesticide, that their attorney thanked him for coming, and didn't even bother to cross-examine him.

Potter, now an exchange scientist for the Shell Development Company at the Woodstock Educational Research Laboratory in Sittingbourne, England, has studied pesticide residues for the International Union of Pure and Applied Chemistry..

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He told the department, which today wound up its second week of hearings in the DDT "defense," of the methods by which DDT is broken down into other compounds in the air, in plants and in animals.

Sunlight and oxygen help to degrade DDT in the atmosphere into less toxic compounds, Porter said. Rain, evaporation and the metabolic processes within plants themselves break the pesticide down when applied to crops. The chemical leaves the soil at the rate of about 20 per cent a year, he said. And it *tends to attach itself to plants* and animals in the mud at the bottom of lakes and other bodies of water.

Degradation is fastest in the absence of oxygen, he noted, and oxygen is very low in such muddy bottoms.

(The world environment is full of oxygen, however, and it is this fact which disturbs anti-DDT scientists. They acknowledge that DDT is degraded, but not fast enough to prevent harm to fish and birds.)

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In mammals, Porter noted, the pesticide is partly converted to DDE, "which is reversibly stored in the fat," and eventually excreted. In birds, the chemist noted, the pesticide is also stored in the fat, but "I don't know what is actually excreted."

Other testimony from Porter this morning focused on the possible confusion of DDT and its breakdown products, with "PCB's," or plasticizing agents, in pesticide residue analyses.

He noted that PCB's sometimes interfere with the detection of DDT and its breakdown products in analyses with a gas chromatograph (the instrument used to plot such residues). But the PCB's can be separated out *under further analysis*, Porter said.

"The techniques are time-consuming, and are rarely used by commercial labs," Porter said, "because that would make them non-competitive." As a result, most DDT and PCB detection tests made by commercial labs are probably in error, he said.

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A chemist for one of these commercial labs, Francis B. Coon of the Wisconsin Alumni Research Foundation Institute, Inc., had insisted Wednesday that PCB's produced "peaks" on chromatograms similar to those of DDT and its relatives.

But under cross-examination by Victor J. Yannacone, attorney for the petitioners, Coon said he had not used a gas chromatograph for over a year, and in total, had done only about 100 of the 15,000 or so pesticide residue analyses made in the lab in the past few years. He also said he had not yet made further analyses to determine whether DDE residues detected in one fish had actually had PCB interference.

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Foes with Testimony on Residues

It is DDE which anti-DDT scientists have linked with upsets in the hormonal balance of several species of birds.)

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Yannacone pursued Coon's laboratory techniques doggedly, until he got from the chemist the admission that there was not enough PCB interference with his residue detections to warrant sending out a standard disclaimer to clients who had submitted samples for analysis.

Coon acknowledged that WARF Institute would be paid a fee for his appearance at the hearings, by the National Agricultural Chemicals Association, which is financing DDT's defense here. (A DDT-contaminated coho salmon submitted to WARF by the NACA was the source of Wednesday's debate over residue detections.)

Industry's ties with some elements in the scientific community are one of the issues in the Madison hearings. Shell Oil, employer of today's witness, Porter, is one of the largest manufacturer's of DDT. And at the end of today's testimony, Yannacone, re-establishing that fact, told Porter, "On behalf of the petitioners . . . we'd like to thank you for coming."

Another spokesman for the petitioners said later that Porter was "a splendid witness, who confirmed our position regarding the physical and chemical properties of DDT, its metabolites, and PCB's."

The hearings recessed until 9 a.m. Monday in room 1413 in the Hill Farmers State Office Building.

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