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Expert Says DDT Weakens in Nature

—An expert on pesticides and their residues testified at the state DDT hearings Thursday that in any situation in nature DDT will break down and not become a permanent fixture of the environment.

But, according to Dr. Paul E. Porter of the Shell Development Co. and now a visiting scientist in England, the periods of breakdown and loss of DDT

from various substances has a wide range of time periods — two-thirds of it can be gone from a "live" soil in two weeks or 20 per cent of it can disappear per year from soil.

"I know of no natural situation in which DDT is not degraded," Porter said.

Porter was challenged only moderately by Victor J. Yannacone, attorney for the petitioners who want to ban DDT in the state. At the end of less than three hours of testimony, Yannacone thanked Porter for coming (from England) and never did cross-examine the witness.

The hearings will resume Monday.

AS FREDRIK WAISS, attorney for the National Agricultural Chemicals Assn., questioned Porter, the scientist emphasized that in many cases the build-up of DDT will not be indefinite, but will reach a plateau.

In the atmosphere, DDT is subject to the action of sunlight and oxygen and is broken down into a less toxic DDE and other compounds.

Porter added that the DDT breakdown in air could be more rapid than it was on a glass surface, where half of it is lost in 12 days when in sunlight.

WHEN APPLIED to crops, the loss of DDT is accounted for by evaporation, the plant metabolic process, and rain. In this

case, it would take 30 to 40 days for the complete loss of DDT.

The first step in the breakdown of DDT is to form a relative called DDE. This form of the chemical is less toxic than DDT.

On reference to its action in soils, Porter said that DDT is tightly bound to soil particles and not readily moved by water. If it is moved, it is by "physical dislodgement," he said.

In water, like streams and lakes, DDT is extremely insoluble and Porter said that it tends to absorb into any organic matter. Thus it will collect in the mud (of a lake) which is high in organic matter.

HOWEVER, PORTER continued, its breakdown in mud will be rapid.

As for the breakdown of DDT in fish, Porter said it has been demonstrated that a degradation does take place, although in fish it is very slow.

Porter was questioned at length on the presence of plastic agents known as PCBs that interfere with gas chromatography readings on DDT. This was a carry-over from Wednesday's cross-examination of a department head from the Wisconsin Alumni Research Foundation (WARF).

Porter said in answer to a question on WARF's capability: "We have the highest regard for their capability. It is one of the few commercial laboratories where we have work carried out for us."