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ORIGINAL SIGNED BY
HUDSON L. BOYD

DICROTOPHOS

Task 3: Environmental Fate Profile

Contract No. 68-01-5830

Final Report

October 7, 1981

SUBMITTED TO:

Environmental Protection Agency
Arlington, Virginia 22202

SUBMITTED BY:

Enviro Control, Inc.
The Dynamac Building
11140 Rockville Pike
Rockville, MD 20852

A Subsidiary of the Dynamac Corporation

DICROTOPHOS

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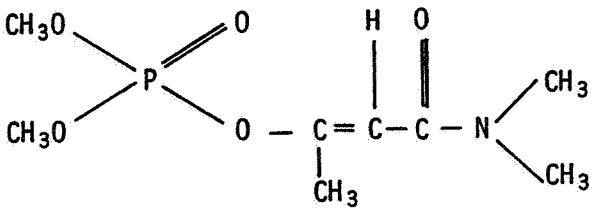
Task 3

DICROTOPHOS, BIDRIN, C 709, CARBICRON,
EKTAFOS, SD 3562



Dimethyl phosphate ester of 3-hydroxy-
N,N-dimethyl-cis-crotonamide

Environmental Fate Profile

The submitted data are insufficient to assess the environmental fate of dicrotophos.

Dicrotophos is rapidly degraded (half-lives of 3-15 days) in soils ranging in texture from sandy loam to clay (Osgerby and Clarke, 00013470; Osgerby and Woodburn, 00028571). Degradation is largely microbially mediated with technical dicrotophos being metabolized about twice as fast as granular formulations.

Dissipation of dicrotophos from a clay loam field site was also rapid (Elgar and MacDonald, 00013512). The half-life of a 5% ai granular formulation applied at 2, 4, or 8 lb/A was <1 week and complete dissipation occurred within 8 weeks of application.

Summary of Major Data Gaps

The major data gaps for this chemical are: hydrolysis studies; photodegradation studies in water, on soil, and in air; aerobic and anaerobic soil metabolism; leaching, laboratory volatility, and field volatility studies; terrestrial and long-term field dissipation studies; confined and field rotational crop accumulation studies, laboratory fish accumulation studies, and field studies of accumulation in non-target aquatic organisms.

Label Restrictions

At present there are no label restrictions regarding the environmental chemistry of dicrotophos.

References

Elgar, K.E., and I.A. MacDonald. 1966. Analysis of crops for residues of Bidrin and its metabolites. J. Sci. Food Agric. 17:500-505. (00013512)

Osgerby, J.M., and D. Clarke. 1965. Project Progress Report PPR FD/5/65: The stability of Bidrin in soil:Project F 18. (Unpublished study received Jan. 28, 1966; prepared by Shell Research, Ltd., submitted by Shell Chemical Co., Washington, D.C.; CDL:000834-AM). (00013470)

Osgerby, J.M., and A.T. Woodburn. 1965. Project Progress Report PPR FD 48/65:The adsorption and decomposition of Bidrin and Azodrin in soil: Project F 18. (Unpublished report prepared by Shell Research, Ltd.). (00028571)