



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

MAY 31 1988

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: ID# IA-880002
ID# MO-880003
[RCB:#3792,-93]
[MRID: None]

FROM: William L. Anthony
Residue Chemistry Branch
Hazard Evaluation Division
Division (TS-769C)

THRU: Ed Zager, Section Head
Special Registration Section II
Residue Chemistry Branch
Hazard Evaluation Division (TS-769C)

TO: Richard Mountfort, PM # 23
Insecticide-Rodenticide Branch
Registration Division (TS-767C)

Trifluralin: 24(c) on crambe grown for
seed in the States of Iowa & Missouri.

William L. Anthony
E. Zager

The Elanco Products Co.[Division of Eli Lilly & Co.] requests a Special Local Needs permit for use of TREFLAN®-E.C.[EPA Reg.# 1471-35], TREFLAN®-M.T.F.,[EPA Reg. # 1471-116], and TREFLAN®-5[EPA Reg. #1471-120] for weed control on Crambe abyssinca, grown for seed production in the States of Iowa and Missouri.

Background

Crambe and rape both belong to the mustard family, cruciferae. Both are rich sources of erucic acid [Cis-13-Docosenic acid]. Crambe contains 50% to 60% of the latter. Crambe is an erect annual herb with numerous branches growing to a height of 60 to 90 cm and maturing in 80 to 90 days. The seed is the only part of the plant that is harvested. The remainder of the plant is left in the field and incorporated into the soil.

Industrial Uses

The oil is used for industrial purposes mainly as a lubricant and in the manufacture of synthetic rubber and corrosion inhibitors. Recently crambe oil as been approved as a replacement for PCB in electric transformers.

Animal Feed Uses

The defatted crambe seed meal has value as a protein supplement in livestock feeds. The meal has been approved by FDA for use in beef cattle rations up to 5% of daily uptake. It has not been approved for non-ruminant rations because of the presence of glucosinolates which are associated with unpalatability and goitrogenicity. The endogenous enzyme, thioglucosidase, breaks down the glucosinolates to form harmful products. The presence of glucosinolates precludes the use of either seed meal (i.e., crambe or rape) for human consumption.††

Trifluralin & Proposed Use

The active ingredient [ai] in TREFLAN® is trifluralin, a herbicide [, , , - Trifluoro 2,6-dinitro-N,N-dipropyl-p-toluidine]. Tolerance has been established for numerous R.A.C.'s, including rape seed, rape straw, safflower seed, and sunflower seed.

TREFLAN®-5 contains five(5) lb. of trifluralin/gal.

TREFLAN®- M.T.F.™ contains four(4) lb of trifluralin/gal.

TREFLAN®-E.C. contains four(4) lb of trifluralin/gal.

Application will be pre-plant:

for areas receiving less than 20" average annual rainfall,

TREFLAN®-5 is applicable ranging from 0.8 pt to 1.2 pt [0.50 lb to 0.75 lb ai]/A.
TREFLAN®-EC or TREFLAN®-M.T.F.™ are applicable ranging from 1.0 pt to 1.5 pt [0.50 lb to 0.75 lb ai]/A.

for areas receiving more than 20" average annual rainfall,

TREFLAN®-5 is applicable ranging from 0.8 pt to 1.6 pt [0.50 lb to 1.0 lb ai]/A.
TREFLAN®-EC or TREFLAN®-M.T.F.™ are applicable ranging from 1.0 pt to 2.0 pt [0.50 lb to 1.0 lb ai]/A.

This study calls for the production of 125 acres of crambe seed in Missouri and approximately 300 acres of crambe seed in Iowa. Based on the proposed acreage, it would be anticipated that a maximum of 45 lb of the ai, trifluralin, would be required.

Restrictions

Crambe, to be grown for seed only, will have the following restrictions: (1) Trifluralin may be applied to crambe grown for seed production only and (2) Do not graze or harvest forage or seed for livestock feed.

††

See Cultural Practices, which includes two memos from the Department of Agronomy, Iowa State University, Ames, Iowa and the U.S. Department of Agriculture Cooperative Extension Service(1986). Also see Bailey's Industrial Oil & Fat Products, (ed) Daniel Swarn, Vol.I, 4th Ed.(1979),p.422.

2

RCB considers the proposed restrictions to be practical and the use to a non-food use.

Conclusion and Recommendation

Given the limited volume of the applied pesticide and the limited importance of the crop as feed, RCB concludes that the proposed use of trifluralin for the control of the crambe plant grown for seed only, to be a non-food use. We have no objection to the proposed use.

CC: Reeviewer;SF,trifluralin[TREFLAN®];Sec.24(c)File;ISB/PMSD;RF;Non-Food File; Circulation.

RDI: E.Zager,Sec.Head,5/31/88;R.Schmitt,5/31/88.

TS-769: RCB/HED;W.Anthony;wa;CM-2;Rm.812;X557-4351;5/31/88.