

US EPA ARCHIVE DOCUMENT

EEB FILE
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099101

DP Barcode : D189838, D189839
PC Code No : 099101
EEB Out : JL 30 1993

To: SUSAN LEWIS
Product Manager 21
Registration Division (H7505C)

From: Anthony F. Maciorowski, Chief
Ecological Effects Branch/EFED (H7507C)

Attached, please find the EEB review of...

Reg./File # : _____
Chemical Name : BENOMYL
Type Product : _____
Product Name : _____
Company Name : DUPONT
Purpose : REVIEW MODE OF ACTION INFORMATION FROM DUPONT
EVALUATE AS IT PERTAINS TO THE CROP INCIDENTS RELATING TO
BENOMYL DF
Action Code : 405 Date Due : 8-1-93
Reviewer : RICK PETRIE Date In EEB: 4-6-93

EEB Guideline/MRID Summary Table: The review in this package contains an evaluation of the following:

GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT
71-1(A)			72-2(A)			72-7(A)		
71-1(B)			72-2(B)			72-7(B)		
71-2(A)			72-3(A)			122-1(A)		
71-2(B)			72-3(B)			122-1(B)		
71-3			72-3(C)			122-2		
71-4(A)			72-3(D)			123-1(A)		
71-4(B)			72-3(E)			123-1(B)		
71-5(A)			72-3(F)			123-2		
71-5(B)			72-4(A)			124-1		
72-1(A)			72-4(B)			124-2		
72-1(B)			72-5			141-1		
72-1(C)			72-6			141-2		
72-1(D)			LETTER	42717801		141-5		

Y=Acceptable (Study satisfied Guideline)/Concur
P=Partial (Study partially fulfilled Guideline but additional information is needed)
S=Supplemental (Study provided useful information but Guideline was not satisfied)
N=Unacceptable (Study was rejected)/Nonconcur



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

JUL 30 1993

D189838, D189839

MEMORANDUM

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

SUBJECT: Review of Mode-of-action Study For Benomyl

FROM: Anthony F. Maciorowski, Chief *A. Maciorowski*
Ecological Effects Branch
Environmental Fate and Effects Division (H7507C)

TO: Susan Lewis, PM-21
Fungicide/Herbicide Branch
Registration Division (H7505C)

The Ecological Effects Branch has reviewed the mode-of-action information submitted by DuPont in a letter to K. Bouve (PMSD/OPP) on 3/23/93. This information package contains only summary pages. No raw data, test protocols or standard operating procedures were attached for scientific review. Therefore, a formal scientific review was not conducted. The EEB does not routinely require the conduct of mode-of-action studies.

The reason for selection of onion and dieffenbachia as test plants was not explained. Based on tests with these two plants, Dupont has concluded on page 198: "The mechanism by which benomyl inhibits fungal growth is not operable in plants". The Office of Pesticide Programs currently uses 10 species as indicator plants, and we find this number to be inadequate for extrapolation to 17,000 cultivated and native plant species in the U.S.

The conclusion reached by Dupont from these cell studies may be true with regard to cell expansion and mitosis in the onion and dieffenbachia cultivars tested, however, it appears that this or another mechanism is operable when certain sensitive plants emerge through benomyl treated soil (ie. review of literature for Benlate 50WP, 12/08/92, memorandum from EEB to K. Bouve). Based on this literature, some varieties of cabbage, cauliflower, and others can have phytotoxic responses to benomyl.

If you have any questions regarding this report, please contact Richard Petrie at 305-7358, CM-2, room 1030L.

cc: Kate Bouve



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DP BARCODE: D189838

CASE: 284574
SUBMISSION: S438225

DATA PACKAGE RECORD
BEAN SHEET

DATE: 04/02/93
Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: MISCELLANEOUS ACTION: 405 6(A) (2) ADVERSE DATA
CHEMICALS: ** UNKNOWN **
ID#: 284574
COMPANY: E. I. DU PONT DE NEMOURS AND CO, INC.
PRODUCT MANAGER: 21 SUSAN LEWIS 703-305-6900 ROOM: CM2 229
PM TEAM REVIEWER: CARL GRABLE 703-305-7392 ROOM: CM2 223
RECEIVED DATE: 03/25/93 DUE OUT DATE: 06/03/93

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 189838 EXPEDITE: N DATE SENT: 04/02/93 DATE RET.: / /
CHEMICAL: Unknown
DP TYPE: 001 Submission Related Data Package
ADMIN DUE DATE: 04/27/93 CSF: N LABEL: N
ASSIGNED TO DATE IN DATE OUT
DIV : EFED 4/16/93 / /
BRAN: EEB 4/16/93 / /
SECT: / / / /
REVR : / / / /
CONTR: / / / /

* * * DATA REVIEW INSTRUCTIONS * * *

ATTN: Rick Petrie. Please review mode of action info from
DuPont re: benomyl. MRID# 427178-01.

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
189837	OREB	04/02/93	04/27/93	Y	N	N

DP BARCODE: D189839

CASE: 284574
SUBMISSION: S438225

DATA PACKAGE RECORD
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Page 1 of 1

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ATTN: Kevin Poff. Please review mode of action info from
DuPont re: benomyl. MRID# 427178-01.

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
189837	CREB	04/02/93	04/27/93	Y	N	N
189838	EEB	04/02/93	04/27/93	Y	N	N