

US EPA ARCHIVE DOCUMENT

DP Barcode : D178905
 PC Code No : 109701
 EEB Out :

To: Linda DeLuise
 Reregistration Branch
 Special Review and Reregistration Division (H7508W)

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

Attached, please find the EEB review of...

Reg./File # : 109701
 Chemical Name : Permethrin
 Type Product : Insecticide
 Product Name : _____
 Company Name : _____
 Purpose : Reregistration data - avian reproduction data

 Action Code : 627 Date Due : 09/01/92
 Reviewer : William A. Erickson

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)	423229-01	Y	72-3(D)			123-1(A)		
71-4(B)	423229-02	Y	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)						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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Permethrin: avian reproduction studies

FROM: Anthony F. Maciorowski, Chief *A.F. Maciorowski*
Ecological Effects Branch *11/19/93*
Environmental Fate and Effects Division (H7507C)

TO: Linda DeLuise
Reregistration Branch
Special Review and Reregistration Division (H7508W)

As part of the reregistration process for permethrin, FMC Corporation, Philadelphia, PA submitted the following studies:

Beavers, J.B., J.W. Foster, S.P. Lynn, and M. Jaber. 1992. Permethrin: a one-generation reproduction study with the northern bobwhite (*Colinus virginianus*). Project No. 104-166. Conducted by Wildlife International Ltd., Easton, MD. MRID No. 423229-01.

Beavers, J.B., J.W. Foster, S.P. Lynn, and M. Jaber. 1992. Permethrin: a one-generation reproduction study with the mallard (*Anas platyrhynchos*). Project No. 104-167. Conducted by Wildlife International Ltd., Easton, MD. MRID No. 423229-02.

These studies were evaluated by EEB and classified as follows:

Gdn No.	Test Species	%AI	Results	MRID No.	Fulfills Data Req
71-4a,b	Bobwhite Quail	95.2	LOEC > 500 ppm NOEC = 500 ppm	423229-01	Yes
	Mallard		LOEC = 500 ppm NOEC = 125 ppm	423229-02	Yes

The guideline requirements for avian reproduction, quail (71-4a) and avian reproduction, duck (71-4b) are fulfilled. Although the effects were not significant, there were indications that 500 ppm permethrin in the diet of mallard reduced food consumption and began affecting egg laying after 18 weeks of dietary exposure.



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At typical single maximum applications of $\leq 0.1-0.4$ pounds of active ingredient per acre, depending on use site, maximum residues on foliage would not be expected to exceed 96 ppm. The maximum application rate for permethrin is 0.5 pounds active ingredient per acre in chrysanthemums, which would produce an expected residue level of approximately 120 ppm on short grasses. Providing application rates for permethrin do not exceed 0.5 pounds of active ingredient per acre, EEB does not anticipate any significant adverse avian reproductive effects.

If you have any questions, please contact Bill Erickson at 305-5400 or Henry Craven at 305-5320.