KENTUCKY ECONOMIC POISONS REPORT, 1973



University of Kentucky
College of Agriculture
Agricultural Experiment Station
Division of Regulatory Services
Lexington

DIVISION OF REGULATORY SERVICES

KENTUCKY AGRICULTURAL EXPERIMENT STATION

H. F. Massey, Director

Walter Graham, Assistant Director

W. J. Huffman, Coordinator Fertilizer & Pesticide Programs

Neville Hulette, Auditor

FIELD STAFF

Bén W. Cox Eugene Vanderpool William K. Robertson E. Hugh Ray
Wilson M. Routt
Wallace L. King
Noel Johnston

Claude E. Hensley Elmer Cottongim Samuel D. Whitehead

LABORATORY STAFF

Valva C. Midkiff, Chief Chemist and Coordinator Chemical Laboratories

John T. Adair*
Elizabeth Brown
Debra Morris
Ellen Denniston

John A. Shrader (Microscopist) Alan P. Thio Patrick O'Neill Charles Miller David Tompkins

Judy Dombrowski** Norma Holbrook Robert N. Price Sue Herald

* * * * * * * * * * * *

This report compiled and prepared by W. J. Huffman Analytical data by Laboratory Staff

* Retired 7-1-73

** Resigned 5-4-73

CONTENTS

Introduct	cion	1		•		•		•	•	•	•	•	•		•	•			•		4
Labeling	Rec	quiremen	its		•	•			•	•	•	•	•	•	•	•					4
Field Ins																					
Pesticide																					
Explanati																					
Companies	Re Re	epresent	ed	by	Sa	mp1	es	Rep	ort	ed	in	thi	s	Bull	Let:	in	•		•		5
Analyses	of	Product	S	Con	tai	ning	3 (Carb	ary	1	•	•			•	•		•			7
Analyses																					
Analyses	of	Product	s	Con	tai	ning	g 1	DDVP	•	•	•	•	•		•			•	•		8
Analyses	of	Product	s	Con	tai	ning	g 1	Diaz	ino	n	•	•		•	•	•		•		•	8
Analyses	of	Product	s	Con	tai	ning	g I	Diph	ena	mid		•									9
Analyses	of	Product	s	Con	tai	ning	g 1	Endo	su1	fan	١.	•									9
Analyses	of	Product	s	Con	tai	ning	g (Guth	ion	1.											10
Analyses	of	Product	s	Con	tai	ning	g l	Mala	thi	on		•	•								10
Analyses	of	Product	s	Con	tai	ning	3 1	Meth	y1	Par	ath	ior	١.	•	•	•		•			11
Analyses	of	Product	s	Con	tai	ning	g 1	Meth	oxy	ch1	or	•					•	•			12
Analyses	of	Product	s	Con	tai	ning	g 1	Para	thi	on	•		•				•				12
Analyses	of	Product	s	Con	tai	ning	g 1	Ronn	e1	•	•	•				•					12
Analyses																					
Analyses																					
Analyses	of	Product	s	Con	tai	ning	3 1	Mixt	ure	s c	f P	est	ic	ides	3.					•	14

INTRODUCTION

During the period January 1 through December 31, 1973, 144 pesticide samples were analyzed.

LABELING REQUIREMENTS

Chemicals that require registration under the Kentucky Economic Poisons Law must bear a label stating directions for use, which, if complied with, are considered adequate for the protection of the public. With few exceptions, the label must contain a warning or caution statement, designed to prevent injury to man and other vertebrate animals, vegetation, or other useful living things. The front or display side of the label should also bear the statement "Keep Out Of Reach Of Children". If the product is shipped in interstate commerce, the label should bear the EPA registration number.

The label of the product must also contain an active ingredient statement which shows either the name and percentage of each active ingredient together with the total percentage of the inert ingredients, or the names of each active ingredient in the desending order of their percentages together with the name of each and the total percentage of the inert ingredients. The ingredient statement of any product may be of either form, except in the case of compounds which are highly toxic to man. The ingredient statement for products containing highly toxic compounds must list the name and percentage of each active ingredient. Highly toxic materials may also be required to be colored or discolored for the protection of the public health.

The label provides the public with information on the uses of, and the precautions to be taken in using all economic poisons sold in Kentucky. The name and address of the manufacturer or distributor, the net weight or measure of the contents of any package or bottle, and the brand or trademark under which the product is sold must appear on the label.

FIELD INSPECTION

In order to adequately enforce the provision of the act, field inspectors are authorized to collect samples of economic poisons and devices and to enter any car, warehouse, store, or other place where economic poisons or devices may be stored for the purpose of inspection or sampling. They are also authorized to issue and enforce a written or printed stop sale or removal order on a lot of economic poison when the material being offered for sale is in violation of any of the provisions of the Kentucky Economic Poisons Law. They are authorized to hold this material at a designated place.

PESTICIDE-FERTILIZER MIXTURES

An important group of specialty products are the products in which an insecticide, herbicide, or other economic poison is incorporated into a fertilizer. These products must be registered under the economic poisons law and the fertilizer law and the labeling must meet the requirements of both laws.

EXPLANATION OF TABLES

The following tables are compiled by active ingredient. Manufacturers are listed alphabetically above their respective products. The examinations reported are official samples of pesticide products offered for sale in Kentucky.

Of the samples reported, 13 samples were found to be deficient in one or more of the active ingredients guaranteed. Seven products were not registered when the sample was taken.

The symbols in the right hand column of each table have the following meaning:

- P (Passed) denotes the amount of active ingredient found was not significantly at variance from the amount guaranteed.
- D (Deficient) denotes the amount of active ingredient found was significantly below the amount guaranteed.
- X (Not registered) denotes the product was not registered in Kentucky at the time the sample was taken.
- M (Mislabeled) denotes the product did not meet the label requirements in all respects.

COMPANIES REPRESENTED BY SAMPLES REPORTED IN THIS BULLETIN

"Ag" Supply Company Industrial Drive Hopkinsville, KY 42240

Allied Mills, Inc. P.O. Box 459 Libertyville, IL 60048

Babson Bros., Co. 2100 South York Road Oak Brook, IL 60521

Bacon Products Co. 1605 Shepherd Rd. Chattanooga, TN 37411

BASF Wyandotte Corp. 1609 Biddle Avenue Wyandotte, MI 48192

Central Soya Feed Division 113 W. Berry St. Fort Wayne, IN 46802

Chemagro Corporation Box 4913 Kansas City, MO 64120

Chevron Chemical Company 940 Hensley Street Richmond, CA 94804 Ciba-Geigy Corp. Box 11422 Greensboro, NC 27409

Diversey Chemical Company 1855 So. Mt. Prospect Des Plaines, IL 60018

The Dow Chemical Company 2030 Dow Center Midland, MI 48640

Dragon Chemical Co. 7033 Walrond Drive Roanoke, VA 24019

E. I. DuPont De Nemours & Co. 7056 DuPont Building Wilmington, DE 19898

E-Z-Flo Chemical Company 701 Kaderly Drive Columbus, OH 43228

FRM Chemical Inc. 520 S. Clay - Box 9903 St. Louis, MO 63122

Good-Life Chemical, Inc. Good-Life Drive Effingham, IL 62401

COMPANIES REPRESENTED BY SAMPLES REPORTED IN THIS BULLETIN (Cont'd.)

W. R. Grace & Company Agri. Chemical Group 100 N. Main St. Memphis, TN 38103

W. T. Grant Company 1515 Broadway New York, NY 10036

Heritage House Products 300 Lake Road Medina, OH 44256

Happy Jack Inc. Box 475 Snow Hill, NC 28580

Eck Jones Route #1 Central City, KY 42330

Niagara Chemical Division FMC Corporation 100 Niagara St. Middleport, NY 14105

Pfizer, Inc. 235 East 42nd Street New York, NY 10017

Ralston Purina Company Checkerboard Square St. Louis, MO 63188

Rigo Chemical Company 638 Benton Avenue Nashville, TN 37202

Shell Chemical Company 2401 Crow Canyon Road San Ramon, CA 94583 Sherwin Williams Chemicals 101 Prospect Avenue NW Cleveland, OH 44101

Smith-Douglas Div. Borden Inc. Box 419 Norfolk, VA 23501

Stauffer Chemical Company P.O. Box 10 Dayton, NJ 08810

Thompson-Hayward Chemical Co. 5200 Speaker Road Kansas City, KS 66106

Tobacco States Chemical Company P.O. Box 479
Lexington, KY* 40501

Tuco Division of UpJohn Company 7171 Portage Road Kalamazoo, MI 49001

Union Carbide Corporation 270 Park Avenue New York, NY 10017

Universal Cooperatives, Inc. 111 Glamorgan Street Alliance, OH 44601

Woolfold Chemical Works, Ltd. East Main Street Fort Valley, GA 31030

Yale Chemical Company Box 715 Nashville, TN 37202

ANALYSES OF PRODUCTS CONTAINING CARBARYL

Registrant	Carbai	-1-1		
Product	Guarantee	Found		
	%	%	Remarks	
"AG" SUPPLY COMPANY				
Sevin 5 Dust	5.00	F 10	_	
Do Dasc	5.00	5.10 5.10	P P	
ЪС	3.00	3.10	Р	
CHEVRON CHEMICAL COMPANY				
Sevin 5 Dust	5.00	5.60	P	
DRAGON CHEMICAL CORPORATION				
Dragon 1 3/4% Sevin Dust	1.75	1.74	P	
Blagon 1 37 4% Bevin Base	1.75	1.74	r	
W. R. GRACE & COMPANY				
Naco 5% Seven Dust	5.00	4.95	P	
Do	5.00	5.20	P	
W. T. GRANT COMPANY				
Grants 50% Sevin Spray	50.00	55.50	Р	
	55.00	33.30		
HAPPY JACK, INC.				
Happy Jack Flea-Tick Powder	5.00	6.04	X	
ECK JONES				
Jones Bug Dust	5.00	5.09	P	
NIAGARA CHEMICAL DIVISION				
Niagara Sevin 50	50.00	49.03	P	
RIGO CHEMICAL COMPANY				
Kill-Ko 5% Sevin Vegetable Dust	5.00	5.08	P	
Kill-Ko 80% Sevin Wettable	80.00	68.00	D	
SHERWIN-WILLIAMS CHEMICALS				
Acme Sevin 50W	50.00	51.20	P	
TOBACCO STATES CHEMICAL COMPANY				
5% Sevin Vegetable Dust	5.00	5.24	P	
Do	5.00	5.40	P	
Flea Beetle Dust	5.00	5.50	P	
Do	5.00	5.30	P	
INTON CAPPINE CORPORATION				
UNION CARBIDE CORPORATION Sevin 50W	50.00	51.90	P	
Do	50.00	49.60	P	
Sevin Sprayable	80.00	84.00	P	
SSVIII SPIAJABIE	00.00	04.00	•	
UNIVERSAL COOPERATIVE				
Unico Sevin Dust	3.00	3.40	P	
Do	3.00	3.40	P	
WOOLFOLK CHEMICAL WORKS, LTD.				
Security Sevin Garden Dust	5.00	5.10	P	
occurry bevin Garden bust	3.00	3.10	r	

REGULATORY BULLETIN 215

ANALYSES OF PRODUCTS CONTAINING CIODRIN

Registrant	Ciodr	Ciodrin			
Product	Guarantee %	Found %	Remarks		
ALLIED MILLS INC.					
Wayne Daisy & Livestock Spray Con.	14.40	15.10	P		
RALSTON PURINA COMPANY					
Purina Lice & Fly Killer	3.00	3.16	P		
SHELL CHEMICAL COMPANY					
3% Ciodrin Insecticide	3.00	2.84	P		
Do	3.00	3.03	P		
TOBACCO STATES CHEMICAL CO., INC.					
Ciodrin	12.37	12.91	P		
UNIVERSAL COOPERATIVES INC.					
Unico 1% Ciodrin Bulk Rubber Sol.	1.00	1.14	P		
Unico Stock Spray Con.	12.60	14.20	P		

ANALYSES OF PRODUCTS CONTAINING DDVP

Registrant	DDVI		
Product	Guarantee %	Found %	Remarks
BACON PRODUCTS CO., INC.	0.16	0.07	
Flifo Fly Bait	0.46	0.37	X
CENTRAL SOYA FEED DIVISION			
Sugar Fly Bait	0.46	0.00	<u>D</u>
RIGO CHEMICAL COMPANY			
Kill-Ko Fly Bait	0.46	0.46	P
Do	0.46	0.31	<u>D</u>

ANALYSES OF PRODUCTS CONTAINING DIAZINON

Registrant	Diazin	Diazinon			
Product	Guarantee %	Found %	Remarks		
CIBA-GEIGY CORP.					
Diazinon 14 G	14.30	16.90	P		
Do	14.30	16.80	P		

ANALYSES OF PRODUCTS CONTAINING DIAZINON (Cont'd.)

Registrant	Diazin		
Product	Guarantee %	Found %	Remarks
CIBA-GEIGY CORP. (Cont'd.)			
Diazinon 14 G	14.30	16.50	P
Do	14.30	16.50	P
Diazinon AG 500	48.00	49.65	P
Do	48.00	46.00	P
Do	48.00	48.00	P
Do	48.00	49.00	P
Do	48.00	48.00	P

ANALYSES OF PRODUCTS CONTAINING DIPHENAMID

Registrant	Diphena			
Product	Guarantee %	Found %	Remarks	
E-Z-FLO CHEMICAL COMPANY				
Enide 50W	50.00	53.10	х	
TUCO DIVISION, THE UPJOHN COMPANY				
Enide 50W	50.00	52.22	P	
Do	50.00	52.80	P	
Do	50.00	53.30	P	
Do	50.00	54.30	P	
Do	50.00	54.20	P	
Do	50.00	52.00	P	

ANALYSES OF PRODUCTS CONTAINING ENDOSULFAN

Registrant	Endosul		
Product	Guarantee %	Found %	Remarks
"AG" SUPPLY COMPANY			
Thiodan Tobacco Spray	24.00	24.90	P
TOBACCO STATES CHEMICAL CO., INC.			
Thiodan 2	24.00	23.49	P
UNIVERSAL COOPERATIVES, INC.			
Unico Thiodan	22.80	22.62	P

REGULATORY BULLETIN 215

ANALYSES OF PRODUCTS CONTAINING GUTHION

Deadatrant	Guthion			
Registrant Product	Guarantee %	Found %	Remarks	
CHEMAGRO CORPORATION Guthion 2L Guthion 50% Do	22.20 50.00 50.00	19.60 49.60 52.60	XD P P	
HERITAGE HOUSE PRODUCTS Fruit, Nut & Vegetable Spray	12.40	12.20	P	

ANALYSES OF PRODUCTS CONTAINING MALATHION

Registrant	Malathion			
Product	Guarantee	Found		
Trouber	%	%	Remarks	
'AG" SUPPLY COMPANY				
Malathion Emulsive	50.00	50.00	P	
CHEVRON CHEMICAL COMPANY		, ,,	P	
Ortho Malathion 5 Dust	5.00	4.40 4.80	P	
Do	5.00	55.86	P	
Malathion 5 Emulsive XB	55.00	55.86	r	
DRAGON CHEMICAL CORPORATION		5.80	x	
5% Malathion Dust	5.00	2.00	Λ.	
E-Z-FLO CHEMICAL COMPANY		61.15	P	
E-Z-Flo Malathion 5E	57.00	01.13	•	
W. R. GRACE & COMPANY		57.50	P	
Naco Malathion 5EC	56.50		D	
Do	56.50	53.81	<u> </u>	
NIAGARA CHEMICAL DIVISION, FMC CORP.	25.00	25.40	Р	
Malathion 25 Wettable	25.00	23.40	•	
PFIZER, INC., AGRICULTURAL DIV.	F7 00	60.89	P	
Pfizer Malathion Compound	57.00	60.89	•	
RALSTON PURINA COMPANY		4.00	P	
Purina Hog & Cattle Dusting Powder	4.00	57.98	p	
Purina Malathion Spray	57.00	57.98	·	
RIGO CHEMICAL COMPANY	5.00	6.30	P	
Kill-Ko 5% Cythion Dust	5.00	56.00	P	
Kill-Ko 50% Cythion	50.00	50.00	P	
Do	50.00		P	
Do	50.00	50.50		

ANALYSES OF PRODUCTS CONTAINING MALATHION (Cont'd.)

Registrant	Malath		
Product	Guarantee %	Found %	Remarks
SMITH DOUGLASS, DIV. OF BORDEN CHEMICAL			
Cythion	56.22	55.09	P
STAUFFER CHEMICAL COMPANY			
Cythion 5E	56.38	56.77	D
Do	56.38	57.28	P P
	30.30	37.20	r
TOBACCO STATES CHEMICAL CO., INC.			
5% Malathion Ready Mixed Dust	5.00	5.00	P
Do	5.00	4.70	P
50% Malathion	50.00	53.90	P
Do	50.00	48.90	P
Do	50.00	50.50	P
Do	50.00	48.90	P
UNIVERSAL COOPERATIVES, INC.			
Unico 5% Malathion Dust	5.00	4.80	P
Unico Malathion W. P.	25.00	26.20	P
Do	25.00	22.90	
Unico Malathion 51 Spray	51.30	50.60	$\frac{D}{P}$
Unico Malathion 5 E. C.	57.00	59.91	P
Do	57.00	57.20	P
WOOLFOLK CHEMICAL WORKS, LTD.			
Security 25% Malathion W. P.	25.00	24.80	x
Security Malathion 5-E	56.10	58.60	P

ANALYSES OF PRODUCTS CONTAINING METHYL PARATHION

Registrant	Methyl Par		
Product	Guarantee %	Found %	Remarks
STAUFFER CHEMICAL COMPANY			
Methyl Parathion 4-E	45.42	44.23	P
Do	45.42	43.71	<u>D</u>

REGULATORY BULLETIN 215

ANALYSES OF PRODUCTS CONTAINING METHOXYCHLOR

Parietrant	Methoxychlor			
Registrant Product	Guarantee	Found		
Tioudet	%	%	Remarks	
THE STREET STREET STREET				
E. I. DU PONT DE NEMOURS & COMPANY, INC.	50.00	51.50	P	
DuPont Marlate 50	50.00	51.50	P	
Do	50.00	51.40	P	
Do	50.00			
RIGO CHEMICAL COMPANY Kill-Ko Methoxychlor Dairy Kattle Dust	10.00	11.20	x	
TOBACCO STATES CHEMICAL COMPANY		7 00	P	
7 1/2% Methoxy Garden Dust	7.50	7.80	P	
24% Methoxychlor E. C.	24.00	23.90 25.30	P	
Do	24.00	30.40	P	
Do	24.00	52.10	P	
50% Methoxychlor W. P.	50.00			
Do	50.00	48.00	<u>D</u>	
UNIVERSAL COOPERATIVES, INC.				
Unico Methoxychlor E. C.	23.80	25.50	P	
Unico 50% Methoxychlor W. P.	50.00	52.00	P	

ANALYSES OF PRODUCTS CONTAINING PARATHION

	Parathion		
Registrant Product	Guarantee %	Found %	Remarks
WOOLFOLK CHEMICAL WORKS, LTD. Security 15% Parathion W. P.	15.00	14.77	P

ANALYSES OF PRODUCTS CONTAINING RONNEL

	Ronnel			
Registrant Product	Guarantee %	Found %	Remarks	
"AG" SUPPLY COMPANY Hog Lice Granules	5.00	4.56	P	
THE DOW CHEMICAL COMPANY Korlan 24E	24.00	23.74	P	

ANALYSES OF PRODUCTS CONTAINING RONNEL (Cont'd.)

Registrant Product	Ronnel			
	Guarantee %	Found %	Remarks	
GOOD-LIFE CHEMICALS, INC. Hog Lice Killer	5.00	5.13	P	
TOBACCO STATES CHEMICAL COMPANY 5% Ronnel Granular Do	5.00 5.00	3.77 3.65	<u>D</u>	
UNIVERSAL COOPERATIVES, INC. Lice-X	5.00	5.15	P	

ANALYSES OF PRODUCTS CONTAINING SODIUM HYPOCHLORITE

Registrant	_Sodium Hypochlorite			
Product	Guarantee %	Found %	Remarks	
BABSON BROS. COMPANY				
Surge Zinicin Chlorinated Sanitizer	10.50	9.50	<u>D</u>	
BASF WYANDOTTE CORP.				
Sodium Hypochlorite	5.25	4.40	<u>D</u>	
DIVERSEY CHEMICALS DIV., DIVERSEY CORP.				
DIBAC	8.50	7.20	<u>D</u>	
FRM-CHEMICAL, INC.				
FRM-Chlor	8.40	8.90	P	
ALE CHEMICAL COMPANY				
Yale Hypochlorite	5.00	4.70	P	

ANALYSES OF PRODUCTS CONTAINING SUPRACIDE

Registrant Product	Suprac	Supracide	
	Guarantee %	Found %	Remarks
IBA-GEIGY CORP.			
Supracide 2E	24.40	26.30	P
Do	24.40	25.90	P
Do	24.40	25.40	P
Do	24.40	26.70	P
Do	24.40	25.30	P
Do	24.40	25.80	P
Do	24.40	25.30	P

REGULATORY BULLETIN 215

ANALYSES OF PRODUCTS CONTAINING MIXTURES OF PESTICIDES

Registrant Product	Guarantee	Found	
	%	%	Remarks
"AG" SUPPLY COMPANY			
Burley Leaf Tobacco Spray		10.01	ъ
Endosulfan	12.20	12.01	P P
Malathion	12.20	12.86	Р
CIBA-GEIGY CORPORATION			
Alfa-Tox			_
Methoxychlor Methoxychlor	20.00	22.30	P
Diazinon	10.00	10.50	P
Do			_
рэ	20.00	19.60	P
Do	10.00	11.20	P
Do		10.00	_
Do	20.00	19.90	P
Do	10.00	10.80	P
Do			
Do	20.00	20.20	P
Do	10.00	10.70	P
Do			
Do	20.00	20.10	P
Do	10.00	11.50	P
DRAGON CHEMICAL CORPORATION			
Blue Dragon Garden Dust			
Carbaryl	2.00	2.00	P
Sulfur	10.00		
TI D GDAGE C COMPANY			
W. R. GRACE & COMPANY			
Dual Tobacco Spray	12.30	12.03	P
Endosulfan	12.30	12.59	P
Malathion	12.30		
NIAGARA CHEMICAL DIVISION			
Golden Leaf Tobacco Spray Special	11 (0	11.90	P
Endosulfan	11.60	12.10	P
Malathion	11.60	12.10	1
Do	11.60	12.60	P
Do	11.60		P
Do	11.60	11.80	r
Golden Leaf Tobacco Spray	10.00	12.00	P
Endosulfan	12.20	12.00 13.00	P
Malathion	12.20	13.00	•
PFIZER, INC. AGRICULTURAL DIV.			
Pfizer Cattle Dust			_
Methoxychlor	5.00	4.88	P
Malathion	4.00	4.36	Р
RALSTON PURINA COMPANY			
Puring Poultry Dusting Powder			
Purina Poultry Dusting Powder Carbaryl	5.00	4.86	P

ANALYSES OF PRODUCTS CONTAINING MIXTURES OF PESTICIDES (Cont'd.)

Registrant Product			
Product	Guarantee %	Found	
	76	%	Remarks
SMITH-DOUGLASS FARM CHEMICALS			
Thiodan-Malathion 1-1 E. C.			
Endosulfan	12.42	12.51	P
Malathion	12.42	13.57	P P
	12.72	13.57	r
THOMPSON-HAYWARD CHEMICAL COMPANY			
Clean Sweep Tobacco Spray			
Endosulfan	12.20	11.63	P
Malathion	12.20	12.66	P
Do			•
Do	12.20	11.75	P
Do	12.20	12.58	P
TOBACCO STATES CHEMICAL COMPANY			
Tobacco States To-Bacco Spray			
Endosulfan	12.20	12.34	P
Malathion	12.20	13.10	P
Six X Tobacco Spray			
Endosulfan	14.88	15.11	P
Malathion	22.32	23.62	P
Piperonyl Butoxide	.75		
Pyrethrins	.07		
Do			
Do	14.88	16.18	P
Do	22.32	23.90	P
Do	.75		
Do	.07		
2-M Alfalfa Spray			
Malathion	22.73	24.90	P
Methoxychlor	22.73	22.50	P
WOOLFOLK CHEMICAL WORKS, LTD.			
5% Sevin - 1% Parathion Tobacco Dust			
Sevin	5.00	5.11	P
Parathion	1.00		P

The College of Agriculture is an Equal Opportunity Organization authorized to provide research, educational information and other services only to individuals and institutions that function without regard to race, color, sex or national origin.