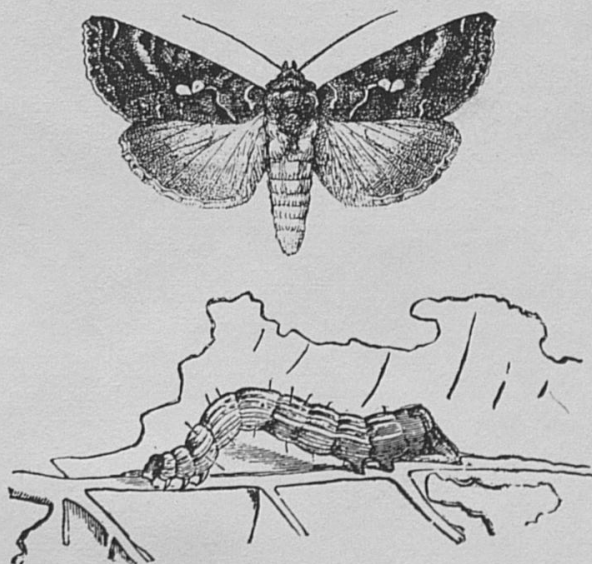


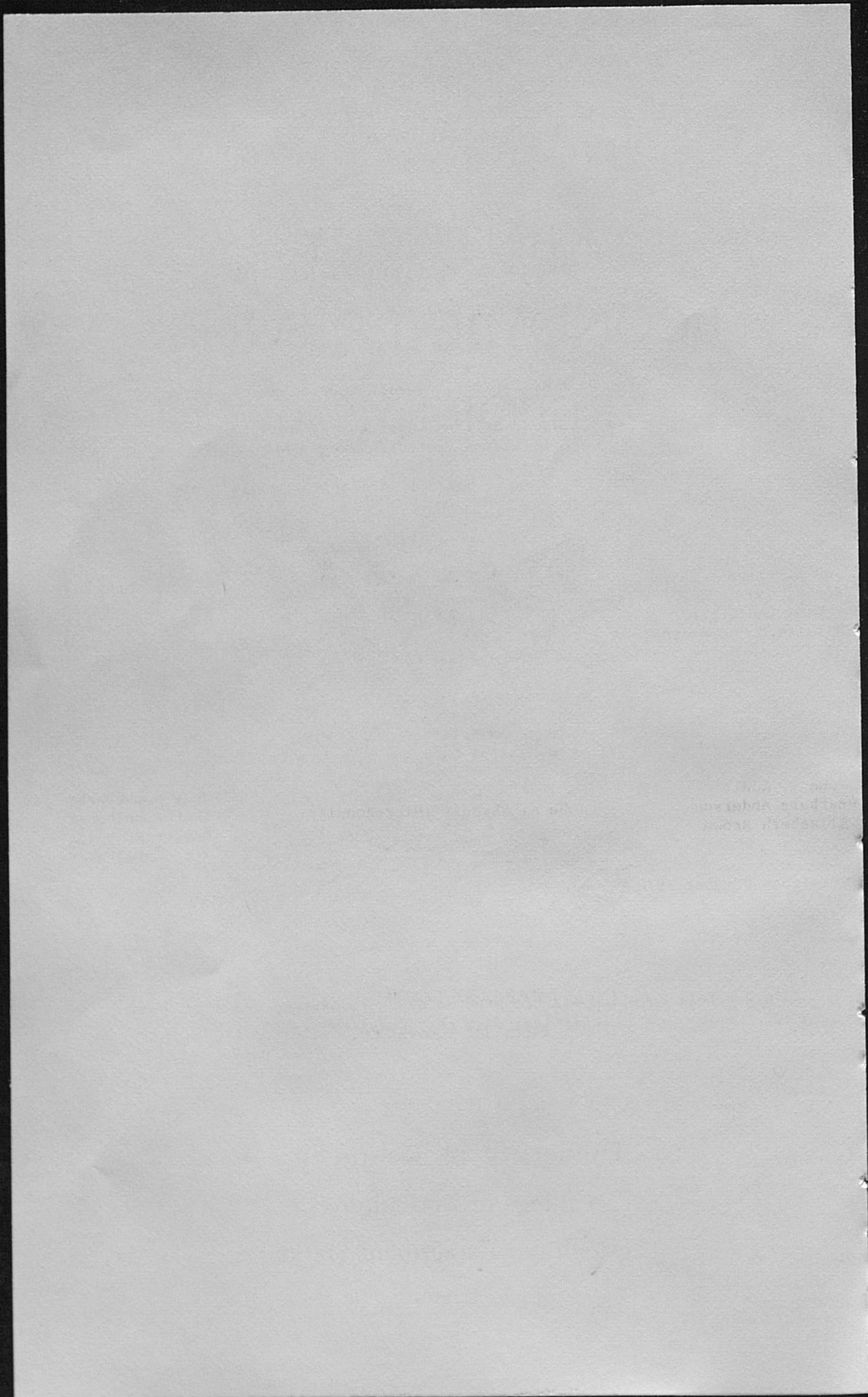
Regulatory Bulletin 208

KENTUCKY
ECONOMIC POISONS
REPORT, 1970



CABBAGE LOOPER
Moth and Caterpillar

University of Kentucky
College of Agriculture
Agricultural Experiment Station
Lexington



DIVISION OF REGULATORY SERVICES
KENTUCKY AGRICULTURAL EXPERIMENT STATION

Bruce Poundstone, Director
Paul R. Caudill, Assistant Director
W. J. Huffman, Coordinator
Fertilizer & Pesticide Programs
Neville Hulette, Auditor

FIELD STAFF

Joe B. Brown
Ben W. Cox
Eugene Vanderpool
William K. Robertson

Wilson M. Routt
Wallace L. King

E. Hugh Ray
Claude E. Hensley
Elmer Cottongim
Samuel D. Whitehead

LABORATORY STAFF

Valva C. Midkiff, Chief Chemist
and Coordinator Chemical Laboratories

John T. Adair
*Barbara Anderson
Elizabeth Brown

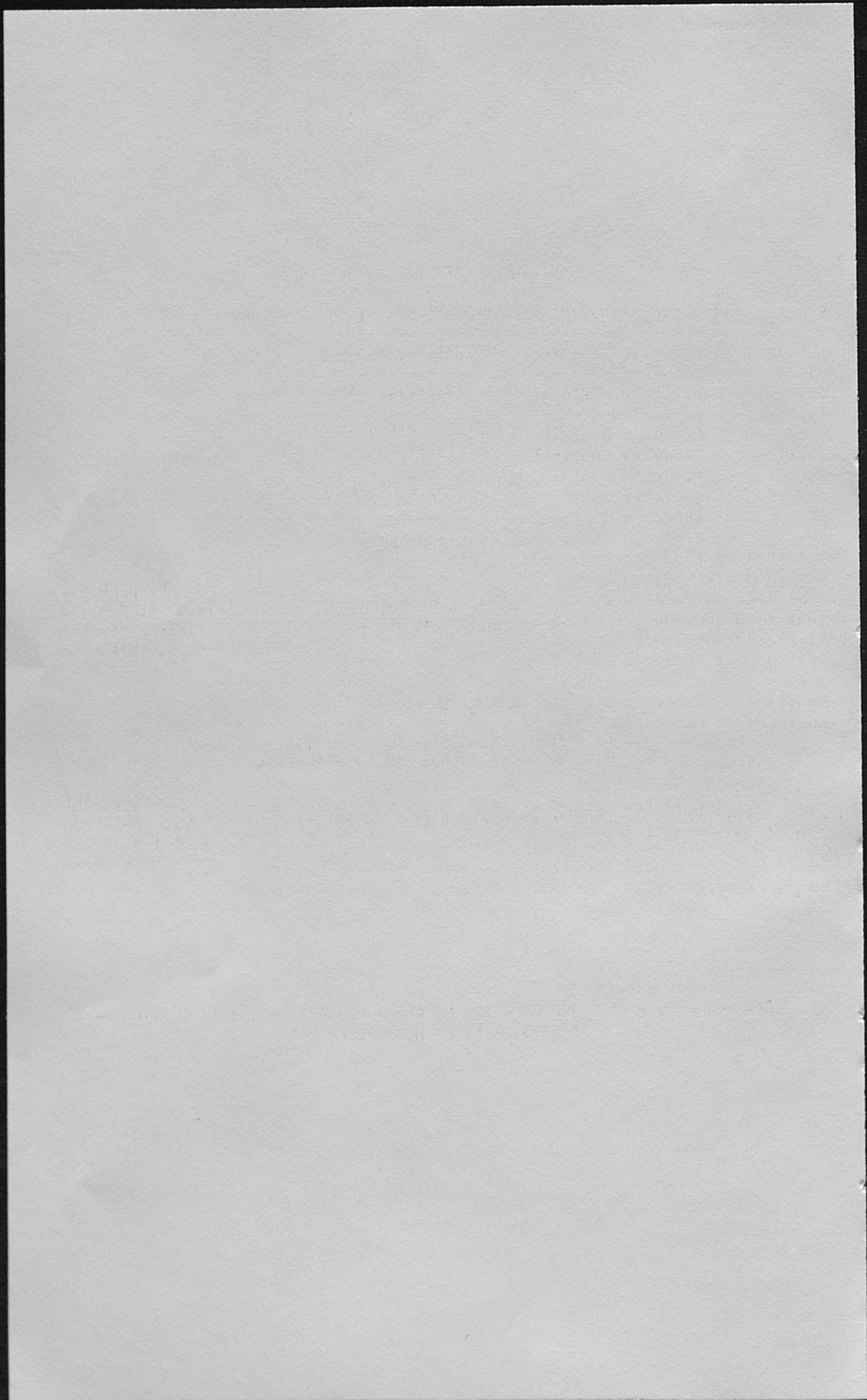
John A. Shrader (Microscopist)

Judy Dombrowski
Norma Holbrook
Robert N. Price
Sue Witt

*Resigned October 1970

* * * * *

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



CONTENTS

Companies Represented by Samples Reported in This Bulletin-----	6
Introduction-----	9
Labeling Requirements-----	9
Field Inspection-----	9
Pesticide-Fertilizer Mixtures-----	9
Explanation of Tables-----	10
Analyses of Products Containing Aldrin-----	11
Analyses of Products Containing Atrazine-----	11
Analyses of Products Containing Carbaryl-----	11
Analyses of Products Containing Ciodrin-----	13
Analyses of Products Containing DDVP-----	13
Analyses of Products Containing Diazinon-----	14
Analyses of Products Containing Dieldrin-----	14
Analyses of Products Containing Endosulfan-----	14
Analyses of Products Containing Malathion-----	15
Analyses of Products Containing Maliec Hydrozide-----	15
Analyses of Products Containing Methoxychlor-----	16
Analyses of Products Containing Paraquat-----	17
Analyses of Products Containing Methyl Parathion-----	17
Analyses of Products Containing Parathion-----	18
Analyses of Rat Baits-----	18
Analyses of Products Containing Fumarin-----	18
Analyses of Products Containing Pival-----	18
Analyses of Products Containing Prolin-----	19
Analyses of Products Containing Warfarin-----	22
Analyses of Products Containing Rotenone-----	23
Analyses of Products Containing Sodium Hypochlorite-----	23
Analyses of Products Containing Toxaphene-----	25
Analyses of Products Containing Mixtures of Pesticides-----	26
Analyses of Aldrin in Fertilizer-----	29

NOTE - The cover picture is a slightly enlarged drawing of the Eyed Cabbage Looper and Caterpillar.

COMPANIES REPRESENTED BY SAMPLES REPORTED IN THIS BULLETIN

Ag Supply Company
Industrial Drive
Hopkinsville, Kentucky 42240

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

Anchor Serum Company
2621 Belt Highway
St. Joseph, Missouri 64502

The Ansul Company
One Stanton Street
Marinette, Wisconsin 54143

Bacon Products, Inc.
Box 8127
Chattanooga, Tennessee 37411

Black Leaf Products
6147 North Broadway
Chicago, Illinois 60626

Blue Chemical Company
Box 305
Harner, North Carolina 27529

Borden, Inc., Chemical Div.
P. O. Box 419
Norfolk, Virginia 23501

The Bourbon Company
P. O. Box 466
Lexington, Kentucky 40501

Burnett Tractor Company
Route 4
Fulton, Kentucky 42041

Camp Chemical Company, Inc.
Second Avenue & 13th
Brooklyn, New York 11215

C & M Marketing Company
Box 4032, Maple Sta.
Dearborn, Michigan 48126

Central Soya Feed Division
300 Ft. Wayne Bank Building
Fort Wayne, Indiana 46802

Chevron Chemical Company
940 Hensley Street
Richmond, California 94804

Wm. Cooper & Nephews, Inc.
1909 North Clifton
Chicago, Illinois 60614

Crystal Chemical Company
1525 N. Post Oak Road
Houston, Texas 77055

The D-Con Company, Inc.
90 Park Avenue
New York, New York 10016

DeLaval Separator Company
350 Dutchess Turnpike
Poughkeepsie, New York 12602

Diversey Chemical Company
212 W. Monroe Street
Chicago, Illinois 60606

E. I. DuPont De Nemours & Company
6054 DuPont Building
Wilmington, Delaware 19898

Economics Laboratories
Osborn Building
St. Paul, Minnesota

Everlab Company, Inc.
11636 Administration
St. Louis, Missouri 63141

E-Z Flo Chemical Company
Div. Grower Service Corporation
P. O. Box 808
Lansing, Michigan 48903

Fairmont Chemical Company
117 Blanchard Street
Newark, New Jersey 07105

Farmland Industries
3315 N. Oak Trafficway
Kansas City, Missouri 64116

Farnam Companies, Inc.
Box 2151
Phoenix, Arizona 85001

Frazier Supply Company, Inc.
505 West Main Street
Glasgow, Kentucky 42141

Frontier Chemicals, Inc.
119 E. Sopert Street
St. Louis, Missouri 63111

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

Geigy Agricultural Chemicals
Ardsley, New York 10502

Globe Laboratories
Division of Cha. Pfizer & Co.
P. O. Box 4309
Fort Worth, Texas 76101

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

W. R. Grace & Company
Agri. Chemical Group
100 N. Main Street
Memphis, Tennessee 38103

Hat-Ra Chemical Company
1100 N. Adams Street
Henderson, Kentucky 42420

Hess & Clark
7th & Orange Streets
Ashland, Ohio 44805

Indiana Farm Bureau Coop. Ass'n.
47 S. Pennsylvania
Indianapolis, Indiana 46204

S. C. Johnson & Son, Inc.
1525 Howe Street
Racine, Wisconsin 53403

Jones Chemicals, Inc.
100 Sunny Sol. Blvd.
Caledonia, N. Y. 14423

Carl Kaster
516 West Main Street
Louisville, Kentucky 40202

Lamb Products Company
Box 2741 - Arcade Station
Nashville, Tennessee 37219

LeGear Laboratories, Inc.
4161 Beck Avenue
St. Louis, Missouri 63116

Lehigh Chemical Company
3511 Grade Lane
Louisville, Kentucky 40214

Louisiana Fortifying & Mixing Plant
Meyer & Fairmount
Abbeville, Louisiana 70510

Louisville Chemical Company
601 E. Jefferson Street
Louisville, Kentucky 40202

Mariah Rodenticide Company, Inc.
RFD 1 Hi-Way 41 N.
Vincennes, Indiana 47591

McCormick & Company, Inc.
11350 McCormick Road
Cockeysville, Maryland 21030

Meyer-Blanke Company
5432 Highland Park Drive
St. Louis, Missouri 63110

Niagara Chemical Division
FMC Corporation
201 Lovejoy Avenue
South Haven, Michigan 49090

Novel Wash Company
4045 Garfield Avenue
St. Louis, Missouri 63113

Pennwalt Chemical Corporation
3 Parkway
Philadelphia, Pennsylvania 19102

Chas. Pfizer & Company, Inc.
235 East 42nd Street
New York, New York 10017

Perk Products Company
1338 Lewis Street
Nashville, Tennessee 37210

The Piper Company, Inc.
2152 Yale Avenue
St. Louis, Missouri 63143

Ralston Purian Company
835 S. Eighth Street
St. Louis, Missouri 63199

Rigo Manufacturing Company
638 Benton Avenue
Nashville, Tennessee 37202

I. D. Russell Company Laboratories
2463 Harrison Box 1
Kansas City, Missouri 64141

Senoret Chemical Company
631 Leffingwell Avenue
St. Louis, Missouri 63122

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

Sep-Ko Chemicals, Inc.
3900 Jackson Street N. E.
Minneapolis, Minnesota 55421

Shell Chemical Company
2401 Grow Canyon Road
San Ramon, California 94583

Starbar Inc. Division
Thuron Industries Inc.
12200 Denton Drive
Dallas, Texas 75234

Stauffer Chemical Company
P. O. Box 10
Dayton, New Jersey 08810

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

Union Carbide Corporation
270 Park Avenue
New York, New York 10017

Uniroyal Chemical Division
Amity Road
Bethany, Connecticut 06526

United Cooperatives, Inc.
111 Glamorgan Street
Alliance, Ohio 44601

USS Agri-Chemicals, Inc.
Box 1685
Atlanta, Georgia 30301

Vineland Laboratories, Inc.
Vineland, New Jersey 08360

West Chemical Products, Inc.
42 West Street
Long Island City, New York 11104

Woolfolk Chemical Works, Ltd.
East Main Street
Fort Valley, Georgia 31030

INTRODUCTION

During the period January 1 through December 31, 1970, 270 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 Federal registration number.

The label of the product must also contain a guaranteed analysis 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 descending 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, etc. supposed to contain economic poisons or devices, 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.

Field inspectors are in a position to explain the various aspects of the Kentucky Economic Poisons Law so that dealers and users of pesticide products will have an understanding of this act.

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. Because of the nature of these products, special regulations are employed in their registration. For example, an insecticide incorporated into a fertilizer is manufactured usually to be applied to the ground and, therefore, will be effective only against certain soil-inhabiting pests. Another inherent restriction in the use of these products may be in the method or in the time of application of either of the component parts of the product.

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, 125 samples were found to be deficient in one or more of the active ingredients guaranteed. Seventeen products were not registered when the sample was taken, and three samples were mislabeled.

The symbols in the right hand column of each table except pesticide-fertilizer mixtures 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.

ANALYSES OF PRODUCTS CONTAINING ALDRIN

Registrant Product	Aldrin		Remarks
	Guarantee %	Found %	
E-Z FLO CHEMICAL COMPANY 20% Granular Aldrin	20.00	19.50	P
W. R. GRACE & COMPANY NACO Aldrin 4-EF	42.42	51.20	P
SHELL CHEMICAL COMPANY Aldrin 20% Granules	20.00	20.90	P
Do	20.00	19.50	P
Do	20.00	19.30	P
Do	20.00	20.60	P
Do	20.00	20.40	P
Do	20.00	19.90	P
USS AGRI-CHEMICALS INC. Armargard Aldrin 20% Granules	20.00	<u>18.30</u>	<u>D</u>

ANALYSES OF PRODUCTS CONTAINING ATRAZINE

Registrant Product	Atrazine		Remarks
	Guarantee %	Found %	
GEIGY CHEMICAL CORPORATION AAtrex 4L	40.80	45.00	P

ANALYSES OF PRODUCTS CONTAINING CARBARYL

Registrant Product	Carbaryl		Remarks
	Guarantee %	Found %	
"AG" SUPPLY COMPANY Sevin-5-Dust	5.00	4.76	P
Do	5.00	4.87	P
BLUE CHEMICAL COMPANY, INC. Thor Brand 5% Sevin Dust	5.00	4.34	P
BORDEN CHEMICAL DIV. BORDEN INC. NUTRO Insect Killer with Sevin	50.00	50.60	P

ANALYSES OF PRODUCTS CONTAINING CARBARYL (Cont'd.)

Registrant Product	Carbaryl		Remarks
	Guarantee %	Found %	
CHEVRON CHEMICAL COMPANY			
Ortho Sevin 5 Dust	5.00	5.30	P
Ortho Sevin 50 Wettable	50.00	50.38	P
E-Z FLO CHEMICAL COMPANY			
E-Z Flo Sevin 5 Dust	5.00	4.78	P
E-Z Flo Sevin 50 W	50.00	54.00	P
FARMLAND INDUSTRIES, INC.			
Coop. 5% Sevin Dust	5.00	5.35	P
W. R. GRACE & COMPANY			
NACO 5% Sevin Dust	5.00	5.04	P
LOUISVILLE CHEMICAL COMPANY			
Creal-O-Sevin 5 Dust	5.00	6.20	P
RIGO MANUFACTURING COMPANY			
Kill-Ko 5% Sevin Vegetable Dust	5.00	5.05	P
Do	5.00	5.90	P
Do	5.00	5.41	P
Do	5.00	5.89	P
Do	5.00	6.00	P
TOBACCO STATES CHEMICAL COMPANY			
Tobacco States 13/4 Bean Dust	1.75	1.81	P
Do	1.75	1.42	D
Tobacco States Vegetable Dust	5.00	4.97	P
Do	5.00	5.60	P
Tobacco States 10% Sevin Dust	10.00	9.80	P
UNION CARBIDE CORPORATION			
Sevimol 4 Carbaryl Insecticide	40.38	43.20	P
Do	40.38	43.00	P
Sevin 50-W Insecticide	50.00	48.80	P
UNITED COOPERATIVES, INC.			
Unico Sevin Dust	3.00	2.87	P
Do	3.00	3.17	P
WOOLFOLK CHEMICAL WORKS, LTD.			
Security Sevin Bean Dust	1.75	1.57	P
Security 5% Sevin Garden Dust	5.00	5.49	P

ANALYSES OF PRODUCTS CONTAINING CIODRIN

Registrant Product	Ciodrin		Remarks
	Guarantee %	Found %	
CHEVRON CHEMICAL COMPANY Ortho Ciodrin Dairy Spray	2.00	1.90	P
SHELL CHEMICAL COMPANY 3% Ciodrin	3.00	2.80	P
Do	3.00	2.80	P
Do	3.00	2.60	P
Do	3.00	2.90	P
Do	3.00	2.80	P
UNITED COOPERATIVES, INC. Unico 1% Ciodrin Insecticide	1.00	1.20	P
Do	1.00	1.10	P
Do	1.00	1.40	P
Unico Stock Spray Concentrate	12.60	12.70	P
Do	12.60	12.80	P

ANALYSES OF PRODUCTS CONTAINING DDVP

Registrant Product	DDVP		Remarks
	Guarantee %	Found %	
CHAS. PFIZER & COMPANY INC. Pfizer Fly Bait	0.10	0.13	P
RIGO MANUFACTURING COMPANY Kill-Ko Sugar Base Fly Bait	0.46	0.51	P
Do	0.46	0.40	P
Do	0.46	0.42	P
STARBAR INC. DIV. THURON INDUSTRIES, INC. Starbar Golden Malrin Sugar Bait	0.10	0.14	P
Do	0.10	0.12	P

ANALYSES OF PRODUCTS CONTAINING DIAZINON

Registrant Product	Diazinon		Remarks
	Guarantee %	Found %	
GEIGY AGRICULTURAL CHEMICALS			
Diazinon 14 G	14.30	14.60	P
Do	14.30	14.20	P
Do	14.30	15.40	P
Do	14.30	15.10	P
Do	14.30	14.80	P
Do	14.30	16.30	P
Diazinon 4 E	47.50	47.80	P
Diazinon Ag 500 Insecticide	48.00	49.10	P
Do	48.00	49.10	P
Do	48.00	48.70	P
Do	48.00	48.60	P
Do	48.00	49.00	P
Do	48.00	49.30	P

ANALYSES OF PRODUCTS CONTAINING DIELDRIN

Registrant Product	Dieldrin		Remarks
	Guarantee %	Found %	
TOBACCO STATES CHEMICAL COMPANY			
Plant Bed & Lawn Saver	2.50	2.30	P

ANALYSES OF PRODUCTS CONTAINING ENDOSULFAN

Registrant Product	Endosulfan		Remarks
	Guarantee %	Found %	
"AG" SUPPLY COMPANY			
Thiodan Tobacco Spray	24.00	23.90	P
Do	24.00	24.80	P
Do	24.00	24.30	P
Do	24.00	23.80	P
Do	24.00	24.20	P
E-Z FLO CHEMICAL COMPANY			
Thiodan 2 EC	24.00	25.50	P
Do	24.00	25.60	P
Do	24.00	24.60	P
NIAGARA CHEMICAL DIV. FMC CORP.			
Thiodan Miscible Insecticide	24.00	25.30	P

ANALYSES OF PRODUCTS CONTAINING ENDOSULFAN (Cont'd.)

Registrant Product	Endosulfan		Remarks
	Guarantee %	Found %	
TOBACCO STATES CHEMICAL COMPANY INC.			
Tobacco States Thiodan 2 E. C.	24.00	24.20	P
Do	24.00	23.40	P
Do	24.00	23.80	P
UNITED COOPERATIVES, INC.			
Unico Thiodan E. C.	22.80	23.10	P
Do	22.80	24.00	P
WOOLFOLK CHEMICAL WORKS, LTD.			
Security Thiodan E. C.	22.30	22.80	P

ANALYSES OF PRODUCTS CONTAINING MALATHION

Registrant Product	Malathion		Remarks
	Guarantee %	Found %	
ALLIED MILLS INC.			
Wayne Malathion Dust	4.00	3.70	P
E-Z FLO CHEMICAL COMPANY			
E-Z Flo Malathion 5 E Emulsifiable	56.50	<u>54.00</u>	<u>D</u>
RIGO MANUFACTURING COMPANY			
Kill-Ko Cythion Premium Grade Malathion	50.00	55.20	P
TOBACCO STATES CHEMICAL COMPANY, INC.			
Tobacco States 50% Malathion E. C.	50.00	51.00	P
UNITED COOPERATIVES INC.			
Unico Malathion Spray Dust	25.00	<u>18.80</u>	<u>D</u>
WOOLFOLK CHEMICAL WORKS, LTD.			
Security 5% Malathion Dust	5.00	4.50	P

ANALYSES OF PRODUCTS CONTAINING MALIEC HYDRAZIDE

Registrant Product	Maliec Hydrazide		Remarks
	Guarantee %	Found %	
THE ANSUL COMPANY			
Super Sucker-Stuff	20.00	20.00	P

ANALYSES OF PRODUCTS CONTAINING MALIEC HYDRAZIDE (Cont'd.)

Registrant Product	Maliec Hydrazide		Remarks
	Guarantee %	Found %	
THE ANSUL COMPANY (Cont'd.)			
Sucker-Stuff	30.00	30.20	P
Do	30.00	31.80	P
Do	30.00	31.30	P
Do	30.00	31.90	P
BORDEN CHEMICAL DIV., BORDEN INC.			
Sucker Stymie	30.00	<u>27.40</u>	D
CRYSTAL CHEMICAL COMPANY			
Sucker Ban	30.00	35.50	P
Do	30.00	35.90	P
Do	30.00	35.30	P
FAIRMONT CHEMICAL COMPANY, INC.			
Desprout	30.00	34.20	P
TOBACCO STATES CHEMICAL COMPANY, INC.			
Tobacco States Sucker Stuff	30.00	30.40	P
Do	30.00	31.20	P
UNIROYAL CHEMICAL - DIVISION OF UNIROYAL INC.			
Royal MH-30 with Sorbatran	15.00	14.40	P
Do	15.00	14.90	P
Do	15.00	14.90	P
Do	15.00	15.00	P
Do	15.00	15.10	P
Do	15.00	15.20	P
MH-30	30.00	30.40	P
Do	30.00	30.70	P
Do	30.00	30.90	P

ANALYSES OF PRODUCTS CONTAINING METHOXYCHLOR

Registrant Product	Methoxychlor		Remarks
	Guarantee %	Found %	
"AG" SUPPLY COMPANY			
50% Methoxychlor Wettable Powder	50.00	50.60	P
E. I. DUPONT DE NEMOURS & COMPANY, INC.			
DuPont Marlate 2-MR Methoxychlor	24.00	23.30	P
DuPont Dairy Cattle Insecticide	50.00	50.00	P
DuPont Marlate 50 Methoxychlor	50.00	51.50	P
Do	50.00	50.20	P

ANALYSES OF PRODUCTS CONTAINING METHOXYCHLOR (Cont'd.)

Registrant Product	Methoxychlor		Remarks
	Guarantee %	Found %	
E. I. DUPONT DE NEMOURS & COMPANY, INC. (Cont'd.)			
DuPont Marlate 50 Methoxychlor	50.00	48.90	P
Do	50.00	51.50	P
THE FARNAM COMPANY			
Farnam Methanox Plus	21.00	22.00	X
GEIGY AGRICULTURAL CHEMICALS			
Methoxychlor "50" Insecticide	50.00	50.30	P
TOBACCO STATES CHEMICAL COMPANY, INC.			
Tobacco States 24% Methoxychlor E. C.	24.00	24.80	P
Tobacco States 50% Methoxychlor W. P.	50.00	50.00	P
UNITED COOPERATIVES, INC.			
Unico 50% Methoxychlor W. P.	50.00	50.30	P
Unico Methoxychlor E. C.	23.80	23.60	P

ANALYSES OF PRODUCTS CONTAINING PARAQUAT

Registrant Product	Paraquat		Remarks
	Guarantee %	Found %	
CHEVRON CHEMICAL COMPANY			
Paraquat CL Weed & Grass Killer	29.10	29.20	P

ANALYSES OF PRODUCTS CONTAINING METHYL PARATHION

Registrant Product	Methyl Parathion		Remarks
	Guarantee %	Found %	
STAUFFER CHEMICAL COMPANY			
Methyl Parathion 4-E	44.60	45.50	P
Do	44.60	44.40	P
UNITED COOPERATIVES, INC.			
Unico Methyl Parathion-4	45.40	45.30	X

ANALYSES OF PRODUCTS CONTAINING PARATHION

Registrant Product	Parathion		Remarks
	Guarantee %	Found %	
STAUFFER CHEMICAL COMPANY			
Parathion 15-WP	15.00	15.00	P
Parathion 4-E	46.50	46.00	P
WOOLFOLK CHEMICAL WORKS, LTD.			
Security 15% Parathion Wettable	15.00	14.40	P

RAT BAIT
(PRODUCTS CONTAINING FUMARIN, PIVAL, PROLIN, WARFARIN)

Registrant Product	Fumarin		Remarks
	Guarantee %	Found %	
LEHIGH CHEMICAL COMPANY, INC.			
Expel	0.025	0.020	P

Registrant Product	Pival		Remarks
	Guarantee %	Found %	
LOUISIANA FORTIFYING & MIXING PLANT			
Pival Concentrate	0.50	0.54	P
RALSTON PURINA COMPANY			
Purina Mouse-Kill	0.025	0.020	P
Do	0.025	0.019	<u>D</u>
Do	0.025	0.012	<u>D</u>
Purina Rat Control	0.0275	0.013	<u>DX</u>
Purina Rat-Kill	0.0275	0.023	P
Do	0.0275	0.024	P
Do	0.0275	0.024	P
Do	0.0275	0.023	P
Do	0.0275	0.025	P
Do	0.0275	0.022	P
Do	0.0275	0.024	P
Do	0.0275	0.027	P
Purina Rat-Kill Soluble	0.14	0.209	P
Do	0.14	0.198	P

RAT BAITS (Cont'd.)
(PRODUCTS CONTAINING FUMARIN, PIVAL, PROLIN, WARFARIN)

Registrant Product	Prolin		Remarks
	Guarantee %	Found %	
ALLIED MILLS, INC.			
Wayne Rat & Mouse Killer			
Warfarin	0.025	0.026	P
Sulfaquinoxaline	0.025	0.028	P
Do			
Do	0.025	0.026	P
Do	0.025	0.028	P
BACON PRODUCTS COMPANY, INC.			
Eagle-7 Prolin Rat Bait			
Warfarin	0.025	0.024	P
Sulfaquinoxaline	0.025	0.027	P
Do			
Do	0.025	0.028	P
Do	0.025	0.023	P
Do			
Do	0.025	0.026	P
Do	0.025	0.027	P
BLACK LEAF PRODUCTS COMPANY			
Warf - Pelletized			
Warfarin	0.025	0.024	P
Sulfaquinoxaline	0.025	0.029	P
CAMP CHEMICAL COMPANY, INC.			
X-Rat			
Warfarin	0.025	0.024	P
Sulfaquinoxaline	0.025	0.021	P
CENTRAL SOYA FEED DIVISION			
Master Mix Prolin Rat Bait			
Warfarin	0.025	0.028	P
Sulfaquinoxaline	0.025	0.027	P
Do			
Do	0.025	0.023	P
Do	0.025	0.029	P
CHEVRON CHEMICAL COMPANY			
Ortho Pelleted Rat & Mice Bait			
Warfarin	0.025	0.024	P
Sulfaquinoxaline	0.025	0.033	P
WM. COOPER & NEPHEWS INC.			
Cooper Rat & Mouse Killer			
Warfarin	0.025	0.025	P
Sulfaquinoxaline	0.025	0.032	P
Do			
Do	0.025	0.025	
Do	0.025	0.030	P

RAT BAITs (Cont'd.)
(PRODUCTS CONTAINING FUMARIN, PIVAL, PROLIN, WARFARIN)

Registrant Product	Prolin		Remarks
	Guarantee %	Found %	
EVERLAB COMPANY, INC.			
Final with Dexide Rat & Mouse Bait			
Warfarin	0.025	0.030	P
Sulfaquinoxaline	0.025	0.030	P
FARMLAND INDUSTRIES			
Coop Prolin Dry Meal Rat Bait			
Warfarin	0.025	0.023	P
Sulfaquinoxaline	0.025	0.032	P
GOOD-LIFE CHEMICALS, INC.			
Rat Dume			
Warfarin	0.025	0.021	P
Sulfaquinoxaline	0.025	0.025	P
Do			
Do	0.025	0.023	
Do	0.025	0.026	P
S. C. JOHNSON & SON, INC.			
Raid Mouse Killer			
Warfarin	0.025	0.022	P
Sulfaquinoxaline	0.025	0.031	P
Do			
Do	0.025	0.024	P
Do	0.025	0.032	P
Do			
Do	0.025	0.023	P
Do	0.025	0.031	P
Do			
Do	0.025	0.024	P
Do	0.025	0.027	P
Do			
Do	0.025	0.024	P
Do	0.025	0.034	P
Do			
Do	0.025	0.023	
Do	0.025	0.031	P
LAMB PRODUCTS COMPANY			
Lam-Kill Prolin Rat & Mouse Killer			
Warfarin	0.025	0.022	P
Sulfaquinoxaline	0.025	0.023	P
Do			
Do	0.025	0.027	P
Do	0.025	0.026	P
Do			
Do	0.025	0.026	
Do	0.025	0.026	P
LEGEAR LABORATORIES, INC.			
LeGear Prolin Mouse Bait			
Warfarin	0.025	0.029	P
Sulfaquinoxaline	0.025	0.027	P

RAT BAITS (Cont'd.)
(PRODUCTS CONTAINING FUMARIN, PIVAL, PROLIN, WARFARIN)

Registrant Product	Prolin		Remarks
	Guarantee %	Found %	
LEGEAR LABORATORIES, INC. (Cont'd.)			
LeGear Prolin Mouse Bait			
Warfarin	0.025	0.028	P
Sulfaquinoxaline	0.025	0.031	P
Do			
Do	0.025	0.023	P
Do	0.025	0.029	P
MARIAH RODENTICIDE COMPANY, INC.			
Mar-Co Rat & Mice Killer			
Warfarin	0.025	0.017	D
Sulfaquinoxaline	0.025	0.020	P
THE PIPER COMPANY, INC.			
Paket Mouse & Rat Bait			
Warfarin	0.025	0.031	P
Sulfaquinoxaline	0.025	0.037	P
Do			
Do	0.025	0.028	P
Do	0.025	0.025	P
RIGO MANUFACTURING COMPANY			
Kill-Ko Prolin Rat Bait			
Warfarin	0.025	0.021	P
Sulfaquinoxaline	0.025	0.030	P
Do			
Do	0.025	0.021	P
Do	0.025	0.029	P
Do			
Do	0.025	0.027	P
Do	0.025	0.026	P
I. D. RUSSELL COMPANY LABORATORIES			
RaKil-Prolin			
Warfarin	0.025	0.022	X
Sulfaquinoxaline	0.025	0.031	X
UNITED COOPERATIVES, INC.			
Unico Prolin Rat & Mouse Killer			
Warfarin	0.025	0.030	P
Sulfaquinoxaline	0.025	0.030	P
Do			
Do	0.025	0.027	P
Do	0.025	0.029	P
Do			
Do	0.025	0.028	P
Do	0.025	0.030	P
Do			
Do	0.025	0.028	P
Do	0.025	0.032	P

RAT BAITS (Cont'd.)
(PRODUCTS CONTAINING FUMARIN, PIVAL, PROLIN, WARFARIN)

Registrant Product	Prolin		Remarks
	Guarantee %	Found %	
UNITED COOPERATIVES, INC. (Cont'd.)			
Unico Prolin Rat & Mouse Killer			
Warfarin	0.025	0.028	P
Sulfaquinoxaline	0.025	0.032	P
Do			
Do	0.025	0.031	P
Do	0.025	0.029	P
Do			
Do	0.025	0.034	P
Do	0.025	0.031	P
Do			
Do	0.025	0.026	P
Do	0.025	0.033	P
Do			
Do	0.025	0.028	P
Do	0.025	0.030	P
VINELAND LABORATORIES, INC.			
Warfet			
Warfarin	0.025	0.021	P
Sulfaquinoxaline	0.025	0.030	P

Registrant Product	Warfarin		Remarks
	Guarantee %	Found %	
D-CON COMPANY, INC.			
D-Con Pellets	0.025	0.026	P
Do	0.025	0.025	P
D-Con Warficide	0.127	0.105	P
FRASIER SUPPLY COMPANY, INC.			
Rat & Mouse Killer	0.025	<u>0.009</u>	<u>D</u>
HESS & CLARK, DIV. OF RICHARDSON-MERRELL INC.			
Warfarat Crumbles	0.025	0.021	P
INDIANA FARM BUREAU COOPERATIVE ASSOC., INC.			
Co-op Rat and Mouse Killer	0.025	0.022	P
LEHIGH CHEMICAL COMPANY, INC.			
Expel Kills Rats & Mice	0.025	0.020	P
PERK'S PRODUCTS COMPANY			
Perk's Rat Bait	0.025	0.027	P

RAT BAITs (Cont'd.)
(PRODUCTS CONTAINING FUMARIN, PIVAL, PROLIN, WARFARIN)

Registrant Product	Warfarin		Remarks
	Guarantee %	Found %	
RIGO MANUFACTURING COMPANY Kill-Ko Mouse & Rat Bait	0.038	0.030	P
SENORET CHEMICAL COMPANY Teno Mouse & Rat Killer	0.025	<u>0.019</u>	<u>D</u>
STARBAR, INC. DIV. OF THURON INDUSTRIES, INC. Starbar Trax Rat & Mouse Bait	0.025	<u>0.017</u>	<u>DX</u>

ANALYSES OF PRODUCTS CONTAINING ROTENONE

Registrant Product	Rotenone		Remarks
	Guarantee %	Found %	
BLACK LEAF PRODUCTS COMPANY Black Leaf 1% Rotenone Garden Dust	1.00	1.06	P
Do	1.00	<u>0.74</u>	<u>DX</u>
THE BOURBON COMPANY Kylex Flea Powder	1.00	0.82	P
Do	1.00	<u>0.62</u>	<u>D</u>
HESS & CLARK DIVISION OF RICHARDSON-MERRELL, INC. Hess & Clark Louse Killer	0.50	0.52	P
MCCORMICK & COMPANY, INC. Bee Brand Flea Killer	1.00	0.82	P
TOBACCO STATES CHEMICAL COMPANY, INC. Rotenone .75% Garden Dust	0.75	<u>0.51</u>	<u>D</u>
1% Rotenone Garden Dust	1.00	0.95	P
Do	1.00	1.19	P
Cattle Grub Dust	1.50	1.41	P

ANALYSES OF PRODUCTS CONTAINING SODIUM HYPOCHLORITE

Registrant Product	Sodium Hypochlorite		Remarks
	Guarantee %	Found %	
BURNETT TRACTOR COMPANY Sodium Hypochlorite Solution	8.00	7.50	P

ANALYSES OF PRODUCTS CONTAINING SODIUM HYPOCHLORITE

Registrant Product	Sodium Hypochlorite		Remarks
	Guarantee %	Found %	
BURNETT TRACTOR COMPANY			
Sodium Hypochlorite Solution	8.00	9.90	P
Do	8.00	13.10	P
Do	15.00	<u>11.40</u>	<u>DX</u>
Do	15.00	<u>8.00</u>	<u>DX</u>
C & M MARKETING COMPANY			
Squire	5.25	6.10	P
THE DELAVAL SEPARATOR COMPANY			
DeLaval Chlorine Sanitizer	6.00	5.93	P
Do	6.00	6.04	P
Do	6.00	<u>5.30</u>	<u>D</u>
Do	6.00	<u>2.20</u>	<u>D</u>
Do	6.00	<u>0.70</u>	<u>D</u>
Do	6.00	<u>1.39</u>	<u>D</u>
DIVERSEY CHEMICAL COMPANY			
Diversey-DIBAC	9.35	<u>6.80</u>	<u>D</u>
ECONOMIC LABORATORIES INC.			
Klenzale X-4	6.40	<u>4.60</u>	<u>D</u>
Liquid Bactericide X-4	6.40	<u>4.20</u>	<u>D</u>
Do	6.40	<u>4.80</u>	<u>D</u>
FRONTIER CHEMICAL INC.			
Chlor-San Bactericide 12	10.02	<u>8.50</u>	<u>D</u>
Do	10.02	<u>10.50</u>	<u>P</u>
Do	10.02	<u>6.41</u>	<u>D</u>
HAT-RA CHEMICAL COMPANY			
Snow-Glo Bleach	10.00	<u>7.10</u>	<u>D</u>
Do	10.00	<u>8.70</u>	<u>D</u>
Do	10.00	9.80	P
Do	10.00	11.00	P
Do	10.00	9.52	P
Do	15.00	<u>12.91</u>	<u>D</u>
JONES CHEMICALS, INC.			
Sodium Hypochlorite	15.00	<u>8.40</u>	<u>D</u>
CARL KASTER COMPANY			
Hy-Chlor Sodium Hypochlorite Solution	15.00	<u>9.41</u>	<u>D</u>
Do	15.00	<u>5.93</u>	<u>D</u>
MEYER - BLANKE COMPANY			
Em-Bee CL-8 Sodium Hypochlorite Solution	8.40	8.90	P
Do	8.40	<u>7.20</u>	<u>D</u>
PENNWALT CHEMICAL CORPORATION			
B-K Liquid Bactericide	5.25	5.30	P
Do	5.25	4.90	P

ANALYSES OF PRODUCTS CONTAINING SODIUM HYPOCHLORITE (Cont'd.)

Registrant Product	Sodium Hypochlorite		Remarks
	Guarantee %	Found %	
NOVEL WASH COMPANY INC. Novel Wash Bleach	5.25	5.21	P
SEP-KO CHEMICALS Monoklor Sanitizing Solution	6.40	<u>5.10</u>	<u>D</u>
Do	6.40	<u>5.45</u>	<u>D</u>
Do	6.40	<u>3.15</u>	<u>D</u>
WEST CHEMICAL PRODUCTS Liquid Chlorine	8.00	<u>0.99</u>	<u>D</u>

ANALYSES OF PRODUCTS CONTAINING TOXAPHENE

Registrant Product	Toxaphene		Remarks
	Guarantee %	Found %	
"AG" SUPPLY COMPANY Toxaphene Emulsion	59.00	59.50	P
BORDEN CHEMICAL DIVISION, BORDEN INC. Toxaphene 6 Lb.	60.00	60.00	P
CHEVRON CHEMICAL COMPANY Ortho Toxaphene 6 Emulsive	58.00	58.40	P
Do	58.00	60.00	P
E-Z FLO CHEMICAL COMPANY Toxaphene EC	59.00	60.80	P
W. R. GRACE & COMPANY Toxaphene 6 EC	59.30	58.90	P
STAUFFER CHEMICAL COMPANY Stauffer Toxaphene 6-EH	58.90	61.00	P
UNITED COOPERATIVES INC. Toxaphene Livestock Spray Concentrate	59.00	60.00	P
Do	59.00	59.30	P
WOOLFOLK CHEMICAL WORKS, LTD. Security Toxaphene 20% Dust	20.00	<u>18.60</u>	<u>D</u>

ANALYSES OF PRODUCTS CONTAINING MIXTURES OF PESTICIDES

Registrant Product	Guarantee %	Found %	Remarks
"AG" SUPPLY COMPANY			
"Ag" Triple Action Vegetable Dust	2.00	1.92	P
Carbaryl	1.00	<u>trace</u>	<u>D</u>
Rotenone	5.00	4.50	P
Zineb			
Do	2.00	2.63	P
Do	1.00	0.94	P
Do	5.00	4.90	P
ANCHOR SERUM COMPANY			
Anchor Dairy Dust			
Malathion	4.00	4.00	X
Methoxychlor	5.00	5.50	X
BORDEN CHEMICAL DIVISION, BORDEN INC.			
Smith-Douglass Thiodan-Malathion 1-1 EC			
Endosulfan	12.42	12.00	P
Malathion	12.42	14.10	P
Do			
Do	12.42	12.40	P
Do	12.42	14.70	P
Do			
Do	12.42	12.60	P
Do	12.42	14.50	P
E-Z FLO CHEMICAL COMPANY			
Alfalfa Weevil Spray			
Malathion	23.37	23.30	P
Methoxychlor	25.90	25.80	P
GEIGY AGRICULTURAL CHEMICALS			
Geigy Alfa-Tox			
Diazinon	10.00	10.90	P
Methoxychlor	20.00	19.00	P
Do			
Do	10.00	11.50	P
Do	20.00	20.70	P
Do			
Do	10.00	10.20	P
Do	20.00	20.60	P
Do			
Do	10.00	10.20	P
Do	20.00	20.30	P
Do			
Do	10.00	10.50	P
Do	20.00	20.30	P
GLOBE LABORATORIES DIV. CHAS. PFIZER & CO., INC.			
Globe Dairy Cattle Dust			
Malathion	4.00	<u>3.10</u>	<u>D</u>
Methoxychlor	5.00	5.30	P

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

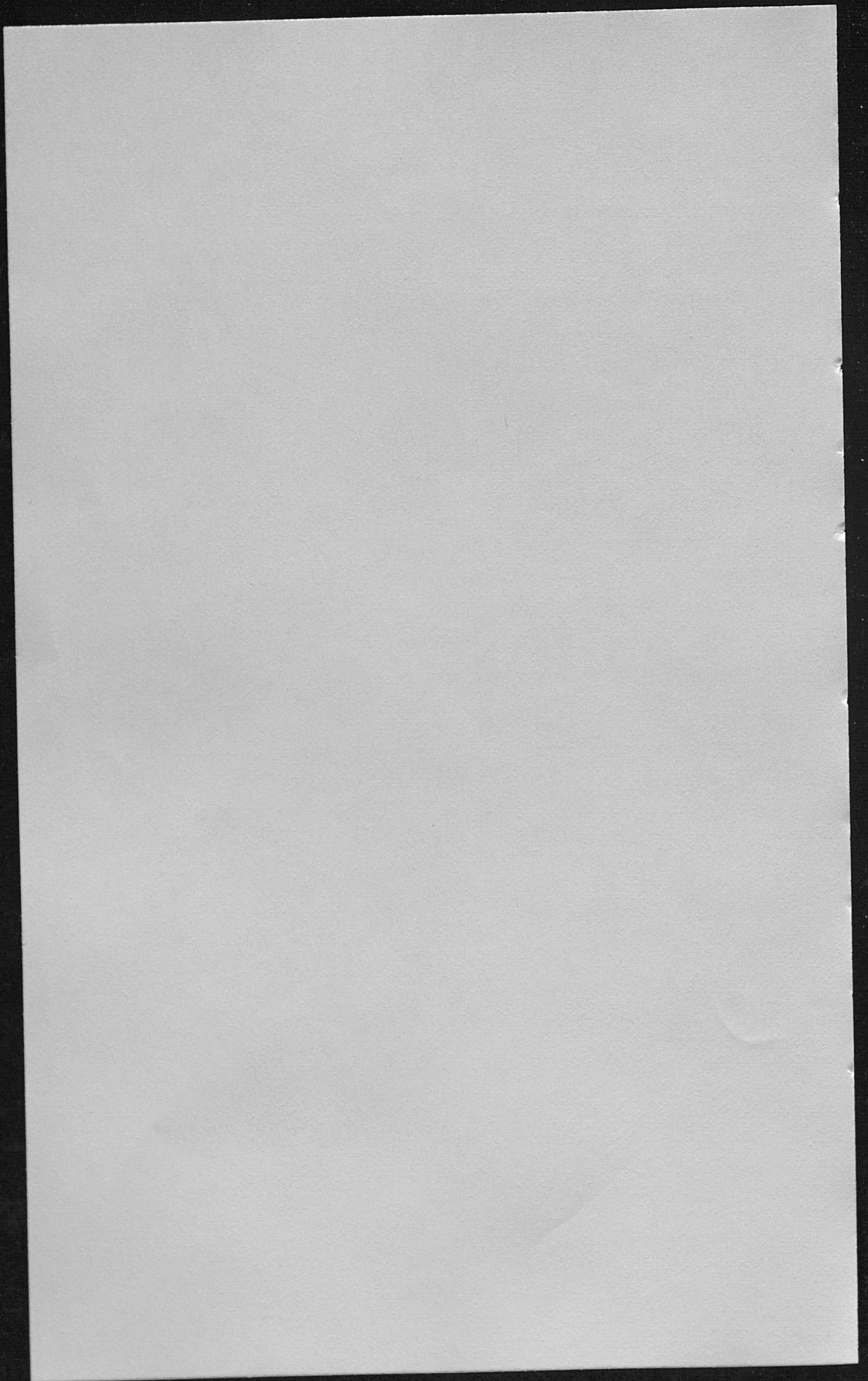
Registrant Product	Guarantee %	Found %	Remarks
W. R. GRACE & COMPANY			
Naco Malathion-Methoxychlor-2-2 EC			
Malathion	22.73	24.10	P
Methoxychlor	22.73	22.90	P
LEGEAR LABORATORIES			
Back Rubber Concentrate & Liquid Grub Killer			
Rotenone	5.00	5.90	X
Other Cube Extractives	8.00	*	
Pine Oil	10.00	*	
NIAGARA CHEMICAL DIV. FMC CORP.			
Golden Leaf Tobacco Spray			
Endosulfan	12.20	11.70	P
Malathion	12.20	13.90	P
Do			
Do	12.20	12.90	P
Do	12.20	14.20	P
Do			
Do	12.20	11.70	P
Do	12.20	12.00	P
Do			
Do	12.20	12.40	P
Do	12.20	13.60	P
Do			
Do	12.20	12.20	P
Do	12.20	13.80	P
Do			
Do	12.20	11.80	P
Do	12.20	12.30	P
CHAS. PFIZER & COMPANY, INC.			
Pfizer Dairy Cattle Dust			
Malathion	4.00	4.90	P
Methoxychlor	5.00	5.30	P
Al-Tox-Toxaphene-Malathion Levestock Spray			
Malathion	4.30	5.30	P
Toxaphene	43.00	46.70	P
ADA Lice Powder			
Rotenone	0.50	0.46	P
Other Cube Resins	1.00	*	
Sulfur	89.00	91.50	P
RALSTON PURINA COMPANY			
Purina Poultry Dusting Powder			
Carbaryl	5.00	4.80	P
Sulfur	10.00	11.00	P
Purina Lice & Grub Killer			
Rotenone	1.67	1.45	P
Other Cube Resins	2.83	*	
Sulfur	50.00	54.00	P

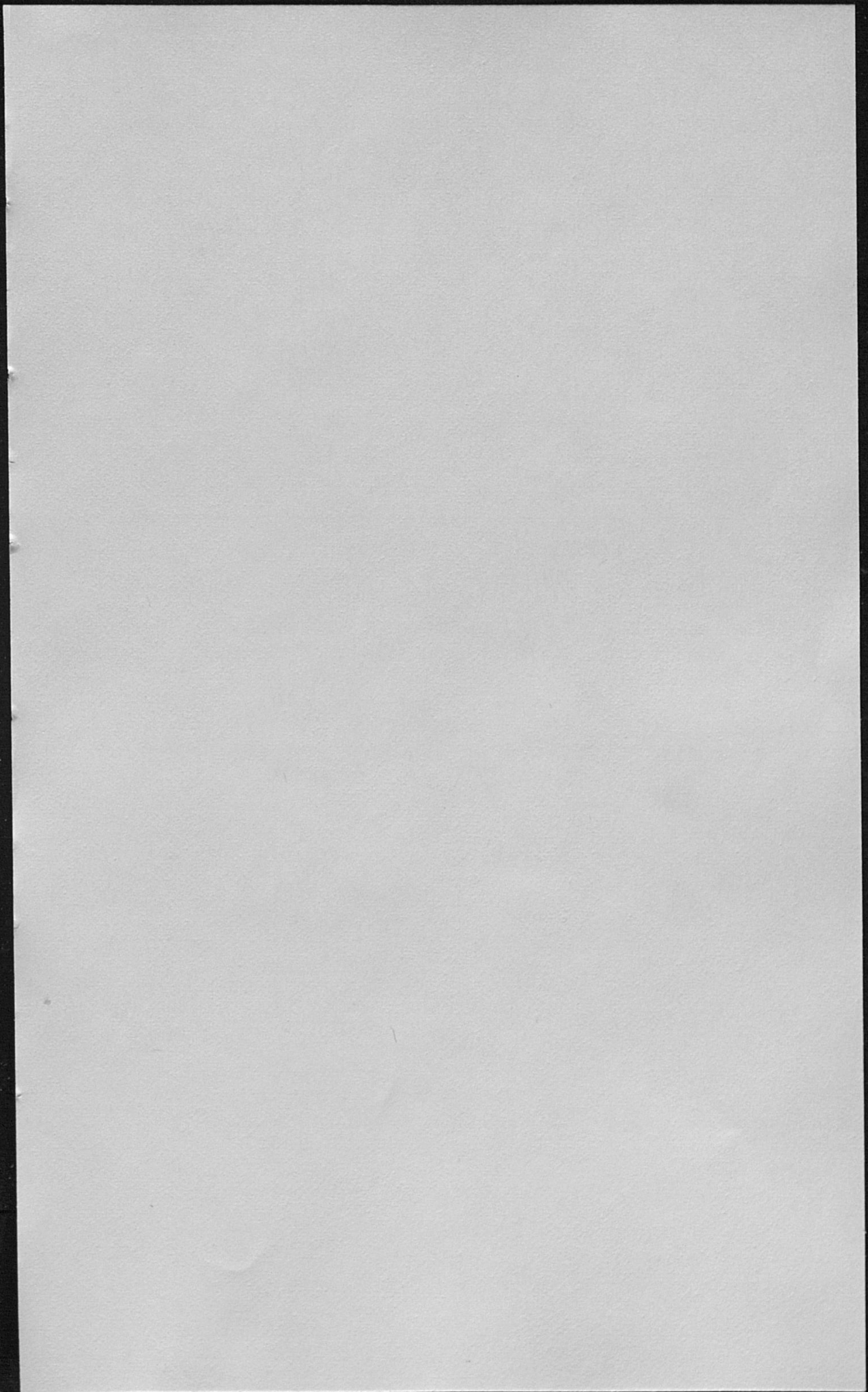
ANALYSES OF PRODUCTS CONTAINING MIXTURES OF PESTICIDES (Cont'd.)

Registrant Product	Guarantee %	Found %	Remarks
RIGO MANUFACTURING COMPANY			
Kill-Ko 3 in 1 Garden Dust			
Endosulfan	4.00	5.00	P
Zineb	6.50	6.80	P
TOBACCO STATES CHEMICAL COMPANY			
Tobacco States Blight & Insect Dust			
Malathion	4.00	3.50	P
Methoxychlor	3.00	3.90	P
Captan	5.00	4.75	P
Six X Tobacco Spray			
Endosulfan	14.88	15.40	P
Malathion	22.32	23.50	P
Piperonal Butoxide	0.75	*	
Pyretherine	0.075	*	
Do			
Do	14.88	15.00	P
Do	22.32	23.50	P
Do	0.75	*	
Do	0.075	*	
Do			
Do	14.88	15.20	P
Do	22.32	23.60	P
Do	0.75	*	
Do	0.075	*	
UNITED COOPERATIVES INC.			
Sevin Zineb 3-5.2 Dust			
Carbaryl	3.00	2.97	P
Zineb	5.20	*	

Results of Analyses of Insecticides in Fertilizers. An Asterisk Indicates a Deficiency.
An "M" Indicates Misbranded.

SAMPLE NUMBER	GRADE	ELEMENT	GUARANTEE	FOUND
BURLEY BELT FERTILIZER COMPANY, LEXINGTON, KY.				
26003	4-16- 4	ALDRIN	0.3100	0.3100
GRO GREEN PAYNES, MIDWAY, KENTUCKY				
27125	6- 6- 9	ALDRIN	0.0400	0.0400
27307	7- 5- 9	ALDRIN	0.0570	0.0730
27308	5 6- 6	ALDRIN	0.0480	0.0590
GULF OIL CORP., AGRI.CHEM. DIV., KANSAS CITY, MO.				
26061	6-24-24	ALDRIN	1.0000	0.6400*
26460	6-24-24	ALDRIN	1.0000	0.7400*
NORTH AMERICAN FERTILIZER COMPANY, LOUISVILLE, KY.				
26070	9- 9-17	ALDRIN	0.1500	0.2200
OHIO VALLEY FERTILIZER, INC., MAYSVILLE, KENTUCKY				
26687	10-10-20	ALDRIN	0.1200	0.1700
SOUTHERN STATES HORSE CAVE COOP., HORSE CAVE, KY.				
27142	5-30-16	ALDRIN	0.0900	0.0300*
27145	11-15-16	ALDRIN	0.0800	0.1200M





4M---4-71