REGULATORY BULLETIN 165

KENTUCKY ECONOMIC POISONS REPORT, 1960

MAY 12 1961



Tobacco Hornworm At Work

University of Kentucky
Agricultural Experiment Station
Lexington

FEED AND FERTILIZER DEPARTMENT

KENTUCKY AGRICULTURAL EXPERIMENT STATION

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Prepared by Bruce Poundstone and W. J. Huffman

Analytical data by the Laboratory Staff

COMPANIES LICENSED UNDER KENTUCKY ECONOMIC POISONS LAW IN 1959

Abbott Laboratories, 1400 Sheridan Road, North Chicago, Ill. Accessory Sales Corporation, P.O. Box 4221, Fort Lauderdale, Fla. Aceline Products Corporation, Box 236, Rochester 1, N.Y. Acme Quality Paints, Inc., 8250 St. Aubin Avenue, Detroit 11, Mich. Aero-Master, Inc., 325 West Pacific Avenue, St. Louis 19, Mo. "Ag" Supply Company, Old Clarksville Road, Hopkinsville, Ky. Agricultural Specialties, 12200 Denton Drive, Dallas 34, Tex. Airkem, Incorporated, 241 East 44th Street, New York 17, N.Y. Airosol Company, Inc., 525 North 11th Street, Neodesha, Kan. Alco Chemical Company, 19027 Pioneer Boulevard, Artesia, Calif. Allen-Crowl Company, 1559 Allentown Road - Box 627, Lima Ohio Allied Chem. Corp., Plastics & Coal Div., 40 Rector St., New York 6, N.Y. Allied Chemical Corporation, Gen. Chem. Div., 40 Rector Street, New York 6, N.Y. Allied Drug Products Company, 16th & Gulf Streets, Chattanooga 1, Tenn. American Agricultural Chemical Company, P.O. Box 464, London, Ky. Amchem Products, Ambler, Pa. American Cyanamid Company, P.O. Box 383, Princeton, N.J. American Exterminator, Inc., 817 Race Street, Cincinnati, Ohio American Lace Paper Company, 4425 N. Port Washington Road, Milwaukee 12, Wis. American-Marietta Company, 901 N. Greenwood Avenue, Kankakee, III. American Mothproofing Company, 2510 Hampton Avenue, St. Louis 10, Mo. American Scientific Laboratories, P.O. Box 1288, Madison 1, Wis. American Sterilizer Company, 2424 West 23rd Street, Erie, Pa. Armour Fertilizer Works, 5184 Broerman Avenue, Cincinnati 17, Ohio Arnold Laboratories, P.O. Box 111, 206 Spring Street, New Castle, Ind. Arnott Chemical & Exterminating Co., 249 Masachusetts Ave., Indianapolis, Ind. Associated Sales & Supply Company, 5137 Southwest Avenue, St. Louis 10, Mo. James Austin Company, P.O. Box 387, Mars, Penn. Auto Chlor System, 746 Poplar, Memphis, Tenn. Avon Products, Inc., 30 Rockefeller Plaza, New York 20, N.Y. B. T. Babbitt, Inc., 20 Broadway, Albany 1, N.Y. Baird & McGuire, Inc., South Street, Holbrook, Mass. W. H. Barber Company, 3650 South Homan Avenue, Chicago 32, Ill. Barco Manufacturing Company, 340 Main Street, Worchester 8, Mass. Bauer & Black, Div. of the Kendall Co., 309 W. Jackson Blvd., Chicago 6, Ill. Ben Venue Laboratories, Inc., 270 Northfield Road, Bedford, Ohio Berlou Manufacturing Company, 421 Monroe Street, Marion, Ohio Big Four Feed & Implement Company, Maple & Cemetery Streets, Scottsville, Ky. Bird & Sons, Inc., Washington Street, East Walpole, Mass. Bissell, Incorporated, Grand Rapids 1, Mich. Black Leaf Products Company, 6147 N. Broadway, Chicago, Ill. Black Panther Company, Inc., P.O. Box 690, Stanford, N.C. Bleach Products Company, Inc., 517 Russell Street, Charleston, West Va. Bluegrass Plant Foods, Inc., 447 North Main, Cynthiana, Ky. Bohlender Plant Chemicals, Inc., Tipp City, Ohio Bonide Chemical Company, 382 N. Genesee Street, Utica 4, N.Y. The Bourbon Company, P.O. Box 466, Lexington, Ky. Boyer Chemical Company, 1161 Church Street, Evanston, Ill. Boyle-Midway, Inc., 22 East 40th Street, New York 16, N.Y. E. L. Bruce Company, P.O. Box 397, Memphis 1, Tenn. Brulin & Company, Inc., 2939-45 Columbia Avenue, Indianapolis 7, Ind. Burley Belt Plant Food Works, Route 4, Lexington, Ky. California Chemical Company, Lucas & Ortho Way, Richmond 4, Calif. Carajon Chemical Company, 426-432 W. Main Street, Fremont, Mich. Carbola Chemical Company, Inc., Natural Bridge, N.Y. Carbolineum Wood Preserving Co., 6683 North 40th Street, Milwaukee 3, Wis. Carson Chemicals, Inc., P.O. Box 288, New Castle, Ind. Cato Oil & Grease Company, N. Eastern, Oklahoma City, Okla. Cedar Hill Formulate Company, 234 Steele Street, New Britain, Conn. Cenol Company, Inc., 3240 West Chicago Avenue, Chicago 51, Ill. Center Chemical Company, P.O. Box 1888, Atlanta, Ga. Chambers-Godfrey Manufacturing Company, 302-04 Broadway, Martin, Tenn. Chapman Chemical Company, 60 N. Third Street, Memphis 1, Tenn.

Chase Products Company, 20th & Gardner Road, Broadview, Ill. Chemagro Corporation, P.O. Box 4913, Kansas City 20, Mo. Chemical Corporation of America, Monroe St. Sta., Tallahassee, Fla. Chemical Formulators, Inc., P.O. Box 26, Nitro, West Va. Chemistry Hall Laboratories, Inc., P.O. Box 255, Bradenton, Fla. Chemley Products Company, 5744 North Western Avenue, Chicago 45, Ill. Chemway Corporation, Fairfield Road, Wayne, N.J. Chestnut & Anderson Feed & Supply, East Ninth Street, Hopkinsville, Ky. Chipman Chemical Company, Inc., Bound Brook, N.J. John Clarke & Company, Inc., 420 Lexington Avenue, New York 17, N.Y. Clean Home Products, Inc., 2805 Locust Street, St. Louis 3, Mo. W. A. Cleary Corporation, P.O. Box 749, New Brunswick, N.J. Click Chemical Corporation, 601 South Columbus Avenue, Mount Vernon, N.Y. Colgate-Palmolive Company, 300 Park Avenue, New York 22, N.Y. Colonial Products, Inc., 6207 Georgia Avenue, West Palm Beach, Fla. Columbian Hog & Cattle Powder Company, 1457 Genesee Street, Kansas City, Mo. Comet Manufacturing Company, 688 Spring Street, N.W., Atlanta 8, Ga. Commercial Chemical Company, Box 202, Louisville 18, Kentucky Commercial Solvents Corporation, 1331 South 1st Street, Terre Haute, Ind. Commonwealth Fertilizer Company, Inc., P.O. Box 388, Russellville, Ky. Common Sense Manufacturing Company, Inc., 1392 Niagara St., Buffalo 13, N.Y. Continental Chemiste Corporation, 2256 West Odgen Avenue, Chicago 12, Ill. Cook Chemical Company, 2550 Summit, Kansas City, Mo. Wm. Cooper & Nephews, Inc., 1909 North Clifton, Chicago 14, Ill. Cooperative Fertilizer Serv., Inc., Camp Taylor Station, Louisville 13, Ky. Cooperative Seed & Farm Supply Service, Seventh & Main Streets, Richmond. Va. G. N. Coughlan, 29 Spring Street, West Orange, N.J. Cowles Chemical Company, 7016 Euclid Avenue, Cleveland 3, Ohio S. L. Cowley & Sons Manufacturing Company, 708 West McAlester, Hugo, Okla. Crawford Industries, Inc., 215 Seneca St., 0il City, Penn. Cre-O-Tox Chemical Products Company, 2670 Broad Avenue, Memphis, Tenn. Cumberland Manufacturing Company, 501 25th Avenue, N., Nashville, Tenn. Cutter Laboratories, Fourth & Parker Streets, Berkeley 10, Calif. The d-CON Company, Inc., 1450 Broadway, New York 18, N.Y. Dacus Drug Company, Inc., Box 241, Tupelo, Miss. Dameron Enterprises, 427 S. 20th Street, Louisville, Ky. Darling & Company, 4201 South Ashland Avenue, Chicago 8, Ill. Darworth, Incorporated, P.O. Box 308, Simsbury, Conn. Daubert Chemical Company, 4700 South Central Avenue, Chicago 38, Ill. Davis Brothers Company, 205 West Main Street, Greenfield, Ind. Davison Chemical Div., W. R. Grace & Co., 54th Avenue, N., Nashville 9, Tenn. Davison Chemical Co., Div. W. R. Grace & Co., 101 N. Charles St., Baltimore 3, Md. DeKalb Agricultural Association, Inc., 310 North Fifth Street, DeKalb, Ill. DeSoto Chemical Company, Inc., North DeSoto Avenue, Arcadia, Fla. Dettelbach Insecticide Company, 4103 Peachtree Road, N.E., Atlanta 19, Ga. Diamond Alkali Company, 300 Union Commerce Bldg., Cleveland 14, Ohio The Dill Company, Washington Street & McKinley Avenue, Norristown, Pa. J. A. Ditman, P.O. Box 186, Laurel, Md. Dixi Chemical Company, P.O. Box 1711 Chattanooga, Tenn. Donaldson Company, Inc., 666 Pelham Boulevard, St. Paul 14, Minn. The Dow Chemical Company, Midland, Mich. The Drackett Products Co., 5020 Spring Grove Avenue, Cincinnati 32, Ohio Eagle Chemical Company, P.O. Box 8127, Chattanooga, Tenn. E. I. du Pont de Nemours & Company, 6054 DuPont Building, Wilmington 98, Del. Economics Laboratory, 914 Guardian Building, St. Paul 1, Minn. Elanco Products Company, 740 South Alabama Street, Indianapolis 6, Ind. Electrolux Corporation, 500 Fifth Avenue, New York 36, N.Y. Emery Industries, Inc., 4200 Carew Tower, Cincinnati 2, Ohio Empire Laboratories, 700 Marietta Street, N.W., Atlanta, Empire Manufacturing Company 1110 Grand Avenue, Kansas City Mo. Henry A. Enrich & Company, Inc., Six East 32nd Street, New York 16, N.Y. Erbrich Products Company, 1120 East 32nd Street, Indianapolis, Ind. J. C. Everett Company, Inc., 35 East Second Street, Maysville, Ky. Fairfield Chemicals, 100 North Niagara, Middleport, N.Y. Far-Best Corporation, 6715 McKinley Avenue, Los Angeles 1, Calif.

Federal Chemical Company, 646 Starks Building, Louisville 2, Ky. Federal Chemical Company, Inc., 2701 Winthrop Avenue, Indianapolis 5, Ind. Alex C. Fergusson Company, 44 East Oregon Avenue, Philadelphia, Penn. Fly-Cord, Inc., P.O. Box 2006, Savannah, Ga. Food Machinery & Chemical Corp., 161 East 42nd St., New York 17, N.Y. Fox Hardware, 19 East Center Street, Madisonville, Ky. The Frank Tea & Spice Company, 538 East Fifth Street, Cincinnati 2, Ohio Franklin Research Company, 5134 Lancaster Avenue, Philadelphia 31, Penn. Frontier Chemical Company, Box 545, Wichita, Kan.
The Fuller Brush Company, 88 Long Hill Street, East Hartford 8, Conn. Furst-McNess Company, 120 East Clark Street, Freeport, Ill. Gamble-Skogmo, Inc., 15 North Eighth Street, Minneapolis 3, Minn. Garden Hose Spray Company, Inc., 7 Upland Road, Cambridge, 40 Mass. Gaston Johnston Corporation, 24-64 45th Street, Long Island City 3, N.Y. Gaylord Container Div., Crown Zellerbach Corp., 143 Arsenal St., St. Louis 14, Mo. Geigy Agricultural Chemicals, P.O. Box 430, Yonkers, N.Y. Glamorene, Inc., 175 Entin Road, Clifton, N.J The Glidden Company, 900 Union Commerce Building, Cleveland 14, Ohio Globe Laboratories, 116 Commerce Street, Fort Worth 2, Texas H. Clay Glover Company, Inc., 1001 Franklin Avenue, Garden City, N.Y. Good-Life Chemicals, Inc., 310 South First Street, Effington, Ill. The Great Atlantic & Pacific Tea Company, 3041 Wilson Avenue, Louisville, Ky. Great Lakes Chemical Corporation, 753 Warner Building, Washington 4, D.C. Greever's, Incorporated, Chilhowie, Va. Earl Grissmer Company, P.O. Box 20092, Indianapolis 20, Ind. Guarantee Pest Control Company, 23 N., 31-West Bypass, Bowling Green, Ky. Gulf Oil Corporation, P.O. Box 2140, Houston 1, Tex. J. M. Harris & Company, Inc., P.O. Box 411, Roanoke, Va. P. F. Harris Manufacturing Company, 101 West Eighth, North Little Rock, Ark. Harris Products Company, Inc., P.O. Box 4, Miami Beach 39, Fla. Harrison Oil Company, P.O. Box 5585, Milwaukee 11, Wis. Hart Products Company, Hardyville, Ky. Hartz Mountain Products Corporation, 36 Cooper Square, New York 3, N.Y. Haver-Lockhart Laboratories, 1951 Broadway, Kansas City 41, Mo. Health-Mor, Incorporated, 203 North Wabash Avenue, Chicago 1, III. Heller Laboratories, Inc., Calumet Avenue & 40th Street, Chicago 53, Ill. Hess & Clark, Inc., Seventh & Orange Streets, Ashland, Ohio Hexol, Incorporated, 1500 - 17th Street, San Francisco 7, Calif. Hillenmeyer Nurseries, Route #6, Lexington, Ky. Hillyard Sales Company (Eastern), P.O. Box 909, St. Joseph 1, Mo. The Hilo Company, Lexington & Revere Ave., Bethpage, Long Island, N.Y. Hinton & Company, 67 Murray Street, New York, N.Y. J. I. Holcomb Manufacturing Co., 1601 Barth Avenue, Indianapolis 7, Ind. Hollywood Termite Control, Inc., 938 N. Eastern Avenue, Los Angeles 63, Calif. Hooker Chemical Corporation, 666 5th Avenue, New York 19, N.Y. Hopkins Agricultural Chemical Company, 124 S. Dickinson St., Madison 1, Wis. Hot Shot Quality Products, Inc., 701 N. Main St., Memphis, Tenn House of Houston, Inc., 1450 Broadway, New York 18, N.Y. The House of Twain, Inc., 609 N. LaSalle Street, Chicago 10, Ill. Sam Houston Company, P. O. Box 662, Talladega, Ala. The Huge Company, Inc., 884-886 Hodiamont Avenue, St. Louis 12, Mo. Hulman & Company Laboratories, 900 Wabash Avenue, Terre Haute, Ind. Humco Laboratory, Inc., 1008 Whitaker Street, Texarkana, Tex. Hutson Chemical Company, Railroad Avenue, Murray, Ky. Hydroponic Chemical Company, Copley 21, Ohio Hy-G Corporation, 130 Russ Street, San Francisco 3, Calif. Imperial Chemical Company, West 6th & Grass Streets, Shenandoah, Iowa Indiana Farm Bureau Coop. Assn., 47 S. Pennsylvania St., Indianapolis 9, Ind. Industrial Fumigant, 923 State Line, Kansas City, Mo. Insect-O-Lite Company, Inc., 1925 Queen City Avenue, Cincinnati 14, Ohio International Distributors, Inc., 725 South Fifth Street, Memphis, Tenn. International Minerals & Chemical Corporation, P.O. Box 67, Lockland 15, Ohio International Pest Control, Inc., 635 7th Avenue, Marion, Ohio Irwin-Willert Company, 4044 Park Avenue, St. Louis 10, Mo. J. & J. Chemical Company, Inc., P.O. Box 3411, Houston 36, Texas

Jewel Tea Company, Inc., 1955 West North Avenue, Melrose Park, Ill. Raymond Johns Distributing Company, 1506 W. Main Street, Louisville, Ky. S. C. Johnson & Sons, Inc., 1525 Howe Street, Racine, Wis. H. D. Jones, 312 West Main Street, Glasgow, Ky. Eck Jones, Route #1, Central City, Ky. The K-R-O Company, 191 North Limestone Street, Springfield, Ohio Carl Kaster Company, 516 W. Main Street, Louisville 2, Ky. The Keever Starch Company, 538 East Town Street, Columbus 15, Ohio Kentucky Chemical & Supply Company, 256 West Vine Street, Lexington, Ky. Kentucky Fertilizer Works, 222 Cook Street, Winchester, Ky. Kil, Inc., P.O. Box 262, Pennington, N.J. Kildeer Corporation, P.O. Box 73, Upper Sandusky, Ohio King Chemical Company, 2342 South Lauderdale, Memphis 6, Tenn. Klenzade Products, Inc., P.O. Box 1020, Beloit, Wis. H. Kohnstamm & Company, Inc., 161 Avenue of the Americas, New York 13, N.Y. Koppers Company, Inc., 430 Park Avenue, New York 22, N.Y. H. B. Fred Kuhls, 6413 Third Avenue, Brooklyn 20, N.Y. Lamb Products Company, 3728 Hilltop Lane, Nashville, Tenn. Lang Brothers, 213 Broadway, Paducah, Ky. LaSalle Chemical Company, 3601 South Racine, Chicago 9, Ill. Lebanon Chemical Corporation, P.O. Box 532, Lebanon, Penn. Dr. L. D. LeGear, Inc., 4161 Beck Avenue, St. Louis 16, Mo. LeHigh Chemical Company, Inc., 8511 Grade Lane, Louisville 14, Ky. Lehn & Fink Products Corporation, 445 Park Avenue, New York 22, N.Y. Lester Laboratories, Inc., P.O. Box 4897, Atlanta 2, Ga. The Lewy Chemical Company, 1 East 43rd Street, New York 17, N.Y. O. E. Linck Company, Inc., Route 46 & Valley Road, Clifton, N.J. Little Dixie Chemical Company, 414-416 South Oak Street, Huntsville, Mo. Andy Lotshaw Company, 1474 West Hubbard Street, Chicago 22, Ill. Louisiana Fortifying & Mixing Plant, Abbeville, Louisiana Louisville Chemical Company, 601 East Jefferson Street, Louisville, Ky. Louden Machinery Company, Fairfield, Iowa McCormick & Company, Inc., 414 Light Street, Baltimore 2, Md. McKesson & Robbins, Inc., P.O. Box 548, Bridgeport, Conn. McKnight-Keaton Grocery Company, Prosperity Street, Sikeston, Mo. McLaughlin Gormley King Company, 1715 Fifth Street, S.E., Minneapolis 14, Mo. L. C. McLoney & Sons, 316-7 South Church Street, Cynthiana, Ky. The Mabex Company, Umbria & Lemonte Streets, Philadelphia 27, Penn. Magic Manufacturing Company, Charleston, West Va. Mallinckrodt Chemical Works, 3600 North Second Street, St. Louis 7, Mo. Maloney Chemical Company, 1520 N. Irwin Avenue, Green Bay, Wis. Mariah Rodenticide Company, Inc., Hi-Way 41, North, Vincennes, Ind. Masury-Young Company, 76 Roland Street, Boston 29, Mass. Charles R. Mehle Insecticides, 2712 Baker Avenue, Cincinnati 11, Ohio Merck & Company, Inc., Rahway, N.J. Michigan Chemical Corporation, 500 N. Bankson Street, St. Louis, Mich. Midland Laboratories, 210-220 Jones Street, Dubuque, Iowa Midwest American Aerovap, 1125 University, Des Moines 14, Iowa Midwest Oil Company, 2500 Minnehaha Avenue, Minneapolis 4, Minn. Miles Laboratories, Inc., 1127 Myrtle Street, Elkhart, Ind. Miller Products Company, 607 Del Monte Way, St. Louis 12, Mo. Dumas Milner Corporation, Northside Station, Jackson, Miss Minnesota Paints, Inc., 1101 South Third Street, Minneapolis 15, Minn. Monsanto Chemical Company, 800 N. Lindbergh Boulevard, St. Louis 66, Mo. Montgomery Ward & Company, Inc., 10th & Washington Sts., Chicago Heights, Ill. Moorman Manufacturing Company, Quincy, Ill. Morton Chemical Company, Agricultural Division, Woodstock, Ill. Motomco, Incorporated, 89 Terminal Avenue, Clark, N.J. Multi-Clean Products, Inc., 2277 Ford Parkway, St. Paul 16, Minn. Muncie Laboratories, 405 East Main Street, Muncie, Ind. Murphy Chemical Company, 695 Grand Avenue, Ridgefield, N.J. Murphy Products Company, 556 Dodge Street, Burlington, Wis. Edgar A. Murray Company, Electronic Road, Clinton Corners, N. Y. Mutual Products Company, 509 N. Fourth Street, Minneapolis, Minn. Myzon Laboratories, 3129 West 47th Street, Chicago 32, Ill. Naphthalene Products Company, P.O. Box 6328, Tarrant, Ala. Nash & Kinsella Laboratories, Inc., 3741 Washington Blvd., St. Louis 8, Mo.

NALCO Chemical Company, 6216 West 66th Street, Chicago 38, Ill. Universal Milking Machine Div. Nat. Coop., Inc., First Ave. at College, Albert Lea, Minn. National Laboratories, Inc., 4934 Lewis Avenue, Toledo 13, Ohio National Paint & Oil Company, 207 North Second Street, Nashville, Tenn. H. W. Naylor Company, Morris, N.Y. Niagara Chemical Div. Food Mach. & Chem. Corp., 100 Niagara St., Middleport, N.Y. Nip-Co Manufacturing, Inc., 200 Main Street, New Rochelle, N.Y. Northern Industries, Inc., 407 E. Michigan Street, Milwaukee 2, Wis. Nott Manufacturing Company, Inc., 200 South Water Street, Poughkeepsie, N.Y. Nuodex Products Company, 110 E. 42nd Street, New York 17, N.Y. Nu-Way Products Company, P.O. Box 42, West Memphis, Ark. Vince B. Nyhan Company, 1300 South Canal Street, Chicago 7, Ill. Odor-Aire, Inc., 330 North Mosley, Wichita, Kan. Ohio Valley Fertilizer Company, Box 799, Maysville, Ky. Olin Mathieson Chemical Corp., Matheson Building, Baltimore 3, Md. Olin Mathieson Chemical Corporation, P.O. Box 991, Little Rock, Ark. One-Spot Company, Jessup, Md. Paper Products, Inc., 18554 South Susana Road, Long Beach 5, Calif. Parke, Davis & Company, Jos. Campau at the River, Detroit 32, Mich. PAX Company, P.O. Box 2310, Salt Lake City 10, Utah Paxton Enterprises, Box 728, Palacios, Tex. S. B. Penick & Company, 100 Church Street, New York 8, N.Y. Penn-Champ Oil Corporation, P.O. Box 191, Butler, Penn. Pennsalt Chemical Corporation, 3 Penn Center Plaza, Philadelphia 2, Penn. Pennsalt of Washington, 2901 Taylor Way, Tacoma 1, Wash. Pennsylvania Engineering Co., 1109-21 North Howard Street, Philadelphia 23, Penn. Pennsylvania Refining Company, Butler Savings & Trust Bldg., Butler, Penn. Penola Oil Company, 15 West 51st Street, New York 19, N.Y. Perk Products Company, 1338 Lewis Street, Nashville, Tenn. L. Perrigo Company, Bridge & Brady Streets, Allegan, Mich. Pest Guard Products, Inc., 731 West Davis, Dallas 8, Tex. Pet Chemicals, Inc., 1038 N.W., 21st Street Terrace, Miami, Fla. Pfnastiehl Detergent Chemicals, Inc., 2843 W. 19th St., Chicago 23, Ill. The Pfeiffer Company, 3965 Laclede Avenue, St. Louis 8, Mo. Chas. Pfizer & Company, Inc., 11 Bartlett Street, Brooklyn 6, N.Y. Phelan-Faust Paint Manufacturing Co., 932 Loughborough Avenue, St. Louis 11, Mo. Phelps Dodge Refining Corporation, 300 Park Avenue, New York 22, N.Y. Phoenix Closet Accessories, Inc., 101 N.J.R.R. Avenue, Newark, New Jersey Piatt & Smillie Chemical, Inc., 3419 Gratiot Street, St. Louis 3, Mo. The Piper Company, Inc., 2152 Yale Avenue, St. Louis 17, Mo. Pitman-Moore Company, Div. Allied Labs. P.O. Box 1656, Indianapolis 6, Ind. Pittsburgh Chemical Laboratory, Century Bldg., 130 7th St., Pittsburgh 22, Penn. Pittsburgh Plate Glass Company, New Albany Road, Moorestown, N.J. Plantabbs Corporation, 1105 Maryland Avenue, Baltimore 1, Md. Planters Chemical Corporation, 3111 Virginia Beach Blvd., Norfolk, Va. Plasti-Kote, Inc., 9801 Harvard Avenue, Cleveland, Ohio Plough, Inc., 3022 Jackson Avenue, Memphis, Tenn. Porter Paint Company, 1320 Cedar Street, Louisville, Ky. B. G. Pratt Company, 204 21st Street, Paterson, N.J. Pratt Laboratories, Inc., P.O. Box 602, Danville, Ky. Pratt & Lambert, Inc., 75 Tonawanda Street, Buffalo 7, N.Y. Prentiss Drug & Chemical Company, 101 West 31st Street, New York 1, N.Y. Private Brands, Inc., 300 South Third Street, Kansas City, Kan. The Proctor & Gamble Company, P.O. Box 599, Cincinnati.1, Ohio Protection Products Manufacturing Co., 2305 Superior Avenue, Kalamazoo, Mich. The John Puhl Products Company, 1450 Broadway, New York 18, N.Y. Purex Corporation, Ltd., 9300 Rayo Avenue, South Gate, Calif. Pyrrole Chemical Corporation, 817 Spring Lane, Portsmouth, Ohio Ralston Purina Company, 835 South Eighth Street, St. Louis, Mo. Rat-Now Products, Inc., Route #1, Columbus, Ind. The W. T. Rawleigh Company, 223-225 East Main Street, Freeport, Ill. W. G. Reardon Laboratories, Inc., 330 N. Main Street, Port Chester, N.Y. Reasor-Hill Corporation, P.O. Box 36, Jacksonville, Ark.

Reefer-Galler, Inc., 521 Fifth Avenue, New York 17, N.Y. Reilly Tar & Chemical Corp., 1615 Merchant Bank Bldg., Indianapolis 4, Ind. Rex Research Corporation, 600 Montrose Avenue, Toledo 7, Ohio Rexall Drug Company, 8480 Beverly Boulevard, Los Angeles 54, Calif. Ricketts Drug Company, 416 Main Street, Carrollton, Ky. Rigo Manufacturing Company, Inc., 638 Benton Avenue, Nashville, Tenn. Riley Brothers, Inc., 209 North Main Street, Burlington, Iowa Riverdale Chemical Company, 17th & Hanover Streets, Chicago Heights, Ill. Robeson Preservo Company, 208 Merchant Street, Port Huron, Mich. G. S. Robins & Company, 126 Chouteau Avenue, St. Louis 2, Mo. Rodent Control Fund, P.O. Box 395, State College, Miss. W. T. Rogers Company, P.O. Box 2095, Madison, Wis. Rohm & Haas Company, 222 W. Washington Square, Philadelphia 5, Penn. Rokeby Chemical Company, Second Street at St. Clair Marietta, Ohio Roman Cleanser Company, 2700 E. McNichols Road, Detroit 12, Mich. Ross Formulators, Clendenin, West Va. Rotenone Products Company, 110 Eaton Place, East Orange, N.J.
Royal Appliance Manufacturing Company, 1975 E. 61st Street, Cleveland 3, Ohio
I. D. Russell Company, Laboratories, 2463 Harrison Street, Kansas City, Mo. Sabine Chemical Company, P.O. Box 1206, Port Arthur, Tex. Dr. Salsbury's Laboratories, 500 Gilbert St., Charles City, Iowa The Sanfax Company, P.O. Box 604, Atlanta, Georgia Sapo Elixir Chemical Company, 9870 Big Bend Blvd., Kirkwood 22, Mo. Saywell Laboratories, 2004 St. Clair Avenue, Cleveland 14, Ohio Scott Industries, 311 Bellevue, Jackson, Tenn. O. M. Scott & Sons Company, Marysville, Ohio Seaboard Sea Company, 701 South Front Street, Philadelphia 47, Penn. Sears, Roebuck & Company, 925 South Homan Avenue, Dept. 671, Chicago 7, Ill. Sennewald Drug Company, Inc., 2723 Chouteau Avenue, St. Louis 3, Mo. Senoret Chemical Company, 610 Gratiot Street, St. Louis 2, Mo. Septi-San Manufacturing Company, 720 East High Street, Farmer City, Ill. John Sexton & Company, P.O. Box JS, Chicago 90, III. Shaker Seed & Feed Company, P.O. Box 6, South Union, Ky. Shell Chemical Company, 110 West 51st Street, New York 20, N.Y. Shell Oil Company, 50 West 50th Street, New York 20, N.Y. Sherman Laboratories, 5031 Grandy Avenue, Detroit 11, Mich. Shulton, Inc., 697 Route 46, Clifton, N.J. Sinclair Manufacturing Company, 6120 N. Detroit Avenue, Toledo 12, Ohio Smith Chemical Company, 1113 Clark Avenue, Ames, Iowa Smith-Douglas Company, P.O. Box 419, Norfolk, Va. Sno-Wash Distributors, 1523 Obryne Street, Henderson, Ky. Sohio Laboratories, 1823 Midland Building, Cleveland 5, Ohio Southern Agricultural Insecticides, Inc., P.O. Box 218, Palmetto, Fla. Southwestern Drug Company, 1451 Madison Avenue, Memphis 4, Tenn. Sputnik Fly Killer Company, 5120 East Florence Avenue, Bell, Calif. Stalfort Pressure Pak, Inc., 2012 Hammonds Ferry Road, Baltimore 27, Md. Standard Oil Company, Inc., 430 West Bloom Street, Louisville, Ky. Standard Packaging Company, 200 East 42nd Street, New York 17, N.Y. Stanley Home Products, Inc., 42 Arnold Street, Westfield, Mass. Sta-Pine Products, Inc., Box 27, Quitman, La. Stark Brothers Nurseries & Orchards Company, Louisiana, Mich. Stauffer Chemical Company, 555 5th Avenue, New York 17, N.Y. Stearn's Electric Paste Company, 8 South Dearborn Street, Chicago 3, Ill. The Sterling Company, Inc., 2801-05 Locust Street, St. Louis 3, Mo. Sterwin Chemicals, Inc., 1450 Broadway, New York 18, N.Y. Stim-U-Plant Laboratories, Inc., 2077 Parkwood Avenue, Columbus 21, Ohio J. Strickland & Company, 1400 Ragan, Memphis, Tenn. Stull's Chemical, Inc., 3400 Nacogdoches Road, San Antonio, Tex. Sun Oil Company, 1608 Walnut Street, Philadelphia 3, Penn. W. R. Sweeney Manufacturing, Inc., 340 South Main, Salisbury, Mo. Swift & Company, Agricultural Chemical Division, National Stock Yards, Ill. Syncro-Mist Controls, Inc., 270 Madison Avenue, New York 16, N.Y. Tabtrol Company, 7003 Deerfield Road, Baltimore 3, Md. Ray H. Tanck, Inc., Middleton, Wis. The Taylor-Reed Corporation, Glenbrook, Conn.

Tennessee Copper Company, 617-29 Grant Bldg, Atlanta 1, Ga. Tennessee Corporation, Lockland Station, Cincinnati 15, Ohio L. Teweles Seed Company, 222 South Third Street, Milwaukee, Wis. Texas Refining Corporation, P.O. Box 711, Fort Worth, Tex. Texize Chemicals, Inc., 215 Lawyers Bldg., Greenville, S.C. Thompson Chemicals Corporation, 3600 Monon Street, Los Angeles, Calif. Thompson-Hayward Chemical Company, 2915 Southwest Blvd., Kansas City 8, Mo. Tidy House Products Company, 604 West Thomas, Senandoah, Iowa Tobacco States Chemical Company, P.O. Box 479, Lexington, Ky. Tom-Cat Products Company, 208 Front Street, Jonesboro, Ark. Toxite Laboratories, Inc., Box 29241, Cumberland, Ind. Trylon Products Corporation, 2750 N. Wolcott Avenue, Chicago 14, Ill. Tull Chemical Company, P. O. Box 246, Oxford, Ala. Turco Products, Inc., 24600 Main Street, Wilmington, Calif. Tykor Products, Div. of Borden Company, 350 Madison Avenue, New York 17, N.Y. Union Carbide Corporation, 270 Park Avenue, New York 17, N.Y. Union Carbide Consumer Products Company, 270 Park Avenue, New York 17, N.Y. Unit Chemical Corporation, 4161 Redwood Avenue, Los Angeles 66, Calif. United Cooperatives, Inc., 111 Glamorgan Street, Alliance, Ohio United States Borax & Chem. Corporation, 530 Shatto Place, Los Angeles 5, Calif. United States Rubber Company, 1230 Avenue of the Americas, New York 20, N.Y. Utterback Chemical Company, 4132 Wheeler Avenue, Louisville, Ky. Van Brode Milling Company, Inc., 20 Cameron Street, Clinton, Mass. R. T. Vanderbilt Company, Inc., 230 Park Avenue, New York 17, N.Y. Vaporette, Inc., 2416 South Harwood, Dallas 15, Tex. Vaughan's Seed Company, 601 West Jackson, Chicago 6, Ill. Vestal Laboratories, Inc., 4963 Manchester, St. Louis 10, Mo. Victrylite Candle Company, P.O. Box 890, Oshkosh, Wis. Virginia-Carolina Chemical Corporation, Murray Road, St. Bernard Sta., Cincinnati 17, Ohio Virginia-Carclina Chemical Corporation. 401 East Main Street, Richmond, Va. Virginia Smelting Company, West Norfolk, Va. Walgreen Laboratories, 4300 Peterson Avenue, Chicago 46, Ill. Watkins Products, Inc., 150 Liberty Street, Winona, Minn.
Weco Products Company, 20 North Wacker Drive, Chicago 6, Ill.
Weedez Corporation, 812 Board of Trade Building, Kansas City, Mo. The Weevil-Cide Company, 1323 Union Avenue, Kansas City, Mo. Weil-Elliott Chemical Company, Inc., 401 N. 37th Street, Louisville 12, Ky. S. C. Wells & Company, One Church Street, LeRoy, N.Y. West Disinfecting Company, 42-16 West Street, Long Island City 1, N.Y. Westchester Veterinary Products, 180 Mamaroneck Avenue, White Plains, N.Y. Whitmire Research Laboratories, Inc., 339 S. Vandeventer, St. Louis 10, Mo. Winston Sales Company, 4100 West Grand Avenue, Chicago, Ill. Wisconsin Chemical Products Company, 5117-19 N. 32nd Street, Milwaukee 9, Wis. Wood Treating Chemical Company, 5137 Southwest Avenue, St. Louis 10, Mo. Woodlets, Inc., 2048 Niagara Street, Buffalo 7, N.Y. Woolfolk Chemical Works, Ltd., East Main Street, Fort Valley, Ga. Worden Manufacturing Company, P. O. Box 525, Grand Island, Neb. Wyandotte Chemicals Corporation, 1609 Biddle Avenue, Wyandotte, Mich. Wyeth Laboratories, P.O. Box 8299, Philadelphia 1, Penn. Yopp Seed Company, 300 South Second Street, Paducah, Ky. Zep Manufacturing Corporation, 1310 Seaboard Ind. Blvd., N.W. Atlanta 1, Ga.

INTRODUCTION

This bulletin contains results of analyses of official pesticide samples secured during the period January 1, 1960, through December 31, 1960. Of the 346 samples reported, 85 were found to be deficient. Thirty four samples represented products not registered, as required by the Kentucky Economic Poisons Law, at the time of sampling.

LABELING REQUIREMENTS

Chemicals that require registration under the act 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 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.

These label requirements provide the public with information as to the uses of and the precautions to be taken in the use of all economic poisons sold in Kentucky.

The name and address of the manufacturer or registrant must appear on the label. The net weight or measure of the contents of any bottle or package must be stated on the label, and also the name, brand or trade-mark under which the article is sold.

PURPOSE OF THE PESTICIDE LAW

The Kentucky Economics Poisons Law, though designed primarily to protect the purchaser or user of pesticide products, also indirectly benefits the dealers in these products and the general public, even though they may not be directly involved in the purchase or use of pesticide chemicals.

Because of the labeling requirements for economic poisons, any individual entirely unconnected with the purchase and distribution of pesticides can be protected knowing that in case of emergency the information shown on the label on the pesticide container may be of extreme importance. Likewise, every housewife who purchases fresh fruits and vegetables from the local grocer is indirectly protected by the labeling of pesticide products because the directions for use indicate safe rates of application which will not leave a dangerous residue of pesticides on fresh fruits and vegetables.

Under the act a manufacturer is required to submit claims he wishes to make for his products in advance of the sale. If the composition of an article is such as to warrant the proposed claims and if the labeling complies with the requirements of the law, the product can be registered. In light of this, dealers not only operate in an orderly market from the standpoint of uniform labeling requirements but by virtue of the authority provided the Director of the Kentucky Agricultural Experiment Station to review proposed claims under the act, the dealer further has reason to believe products are adequate for the purpose intended. This undoubtedly tends to keep in-effective and worthless items of this kind off the market.

FIELD INSPECTION

In order to adequately enforce the provision of the act, five field inspectors are charged with the important job of bringing the various aspects of the Kentucky Economic Poisons Law to manufacturers, dealers and the general public.

Field inspectors are authorized to collect samples of economic poisons and devices and to enter into any car, warehouse, store, etc., supposed to contain economic

poisons or devices, for the purpose of inspection or sampling. Field inspectors 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 and 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.

FERTILIZER-PESTICIDE MIXTURES

An important group of speciality products are the products in which a pesticide, 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. For this reason, upon advice of the Departments of Agronomy, Entomology and Botany, and Horticulture, the Director of the Kentucky Agricultural Experiment Station has restricted the sale of such fertilizer-pesticide mixtures to specific crops and at definite rates of application. The use of these products is based on scientific experimental evidence. Uses and recommendations will be varied as new evidence is brought to light.

Several fertilizer-insecticide mixtures are made and sold exclusively for use on lawns and other turf as distinguished from application to agricultural crops. Requirements for the registration of this group of fertilizer-pesticide mixtures are less severe and many formulations are acceptable for registration in Kentucky. Additional information regarding fertilizer-pesticide mixtures may be obtained by writing to the Department of Feed and Fertilizer, Kentucky Agricultural Experiment Station.

LABORATORY ANALYSIS

The field inspection staff regularly samples the various pesticide products offered for sale in Kentucky. These samples are forwarded to the laboratories of the Feed and Fertilizer Department at Lexington for chemical analysis.

One of the most important aspects of the pesticide program is the function of the laboratory in analyzing pesticide products to determine whether or not the contents of a given package equal the guarantee stated by the manufacturer. The complexity of the newer pesticide chemicals is such that special equipment is required to give speedy and reproducible results in the hands of trained personnel.

Usually the materials that are used as pesticides contain, in addition to the active ingredients, one or more components which are chemically similar but which are worthless with respect to insecticidal activity. Often other materials such as solvents. diluents and other agents may prevent an accurate analysis. The separation of the component to be analyzed from materials which would interfere with the analysis is often a long, tedious process.

Through the years scientists have developed many techniques which give results equivalent to those obtained by gravimetric analysis -- that is, weighing the component obtained from a given amount of the material. Often methods of analysis utilizing newer techniques are superior to gravimetric methods. The use of these new methods calls for a wide variety of equipment permitting more thorough coverage of the pesticides offered for sale in the state. Some of the finest equipment available is employed in the analysis of pesticide products by the Feed and Fertilizer Department.

The chemists of the Department of Feed and Fertilizer employed in the analysis of pesticide products must of necessity be well trained and must have a high sense of scientific honesty in the evaluation of their methods and techniques. Kentucky pesticide chemists cooperate with chemists in other states and with the government in the search for better and more accurate methods.

If the laboratory report shows the composition of the product notably at variance from the guaranteed content, a stop sale is issued. The material may then be returned to the manufacturer or otherwise disposed of.

CONTROL OFFICIALS ASSOCIATION

Serving as a nerve center for the administration of pesticide laws in the country is the Association of American Pesticide Control Officials, Inc. This organization, composed of state and federal control officials, supplies information and advice concerning the regulations and operations of pesticide laws in the country with an eye to more effective operation and uniform service among the states.

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 346 samples analyzed during the year from January 1, 1960, through December 31, 1960, 85 samples were found to be deficient in one or more of the active ingredients guaranteed. This represents about twenty-five percent of the number of samples secured. Thirty four 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 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 PESTICIDES IN FERTILIZER

Registrant Product	Guaranteed	Found	Remarks
Active Ingredient	%	%	
AMERICAN AGRICULTURAL CHEMICAL COMPANY			
5-10-10 Muriate with 0.41 Aldrin Aldrin	0.41	0.46	XP
5-10-10 Muriate with 0.45 Aldrin			
Aldrin	0.45	0.43	P
6-6-18 Sulfate with 0.15 Aldrin Aldrin	0.15	0.11	D
6-12-12 Muriate with 0.36 Aldrin	0.13	0.11	
Aldrin	0.36	0.29	P
10-6-4 Muriate with 0.375 Dieldrin	0.375	0.34	P
Dieldrin	0.373	0.34	•
Dieldrin	0.375	0.20	D
ARMOUR AGRICULTURAL CHEMICAL COMPANY 5-10-5 Muriate with 0.1875 Dieldrin			
Dieldrin	0.1875	0.12	D
5-10-5 Muriate with 0.1875 Dieldrin			
Dieldrin	0.1875	0.15	P
5-10-5 Sulfate with 0.1875 Dieldrin Dieldrin	0.1875	0.22	MP
5-10-15 Sulfate with 0.15 Aldrin			
Aldrin	0.15	0.32	P
BLUEGRASS PLANT FOODS, INC.			
4-12-8 Muriate with 0.313 Aldrin			
Aldrin	0.313	0.30	P
4-12-8 Muriate with 0.313 Aldrin	0.313	0.21	D
Aldrin	0.313	0.21	В.
Aldrin	0.50	0.44	P
5-15-0 with 0.294 Aldrin	0.004	0.30	.
Aldrin	0.294	0.29	MP
Aldrin	0.313	0.32	P
5-15-0 with 0.313 Aldrin			
Aldrin	0.313	0.24	D
Aldrin	0.313	0.18	D
6-6-18 Sulfate with 0.15 Aldrin			
Aldrin	0.15	0.14	P
6-6-18 Sulfate with 0.20 Aldrin Aldrin	0.20	0.19	P
6-6-18 Sulfate with 0.20 Aldrin			
Aldrin	0.20	0.19	P
6-12-18 Sulfate with 0.15 Aldrin Aldrin	0.15	0.26	P
10-10-10 Muriate with 0.30 Aldrin	0.13	0.20	
Aldrin	0.30	0.29	P
BUDIEV BEIT DIANT FOOD HORVE			
BURLEY BELT PLANT FOOD WORKS 4-16-4 with 0.312 Aldrin			
Aldrin	0.312	0.12	D
4-16-4 Sulfate with 0.312 Aldrin	0.210	0.07	
Aldrin	0.312	0.24	D
Aldrin	0.313	0.51	P

ANALYSES OF PESTICIDES IN FERTILIZER (Con't)

Registrant Product	Guaranteed	Found	Remarks
Active Ingredient	%	round %	Kemarks
DIDLEY BETT DIAME BOOD HODES (G I.)			
BURLEY BELT PLANT FOOD WORKS (Con't) 4-16-4 Sulfate with 0.313 Aldrin			
Aldrin	0.313	0.36	P
6-6-18 Sulfate with 0.156 Aldrin			
Aldrin	0.156	0.10	MD
6-6-18 Sulfate with 0.60 Aldrin Aldrin	0.60	0.13	D
6-8-6 Sulfate with 0.60 Aldrin	0.00	0.13	D
Aldrin	0.60	0.20	D
8-10-15 Sulfate with 0.15 Aldrin Aldrin	0.15	0.11	
Alulin	0.15	0.11	D
COMMONWEALTH FERTILIZER COMPANY			
4-12-8 Muriate with 0.50 Aldrin			
Aldrin	0.50	0.27	D
Aldrin	0.30	0.22	D
COOPERATIVE FERTILIZER SERVICE			
4-12-4 Sulfate with 0.25 Heptachlor Heptachlor	0.25	0.21	ъ
4-12-4 Sulfate with 0.25 Heptachlor	0.23	0.21	P
Heptachlor	0.25	0.21	P
4-12-4 Sulfate with 0.25 Heptachlor	0.05		
Heptachlor4-12-4 Sulfate with 0.25 Heptachlor	0.25	0.21	P
Heptachlor	0.25	0.21	P
4-12-4 Sulfate with 0.25 Heptachlor			
Heptachlor4-16-4 Sulfate with 0.31 Aldrin	0.25	0.23	P
Aldrin	0.31	0.31	P
4-16-4 Sulfate with 0.31 Aldrin			
Aldrin	0.31	0.34	P
10-10-10 Muriate with 0.40 Heptachlor Heptachlor	0.40	0.32	P
Acp country () () () () () () () () () (0.40	0.32	•
DAVISON CHEMICAL CO. DIV. W. R. GRACE & CO.			
4-12-8 Muriate with 0.50 Aldrin	0.50	0.50	
Aldrin5-10-15 Sulfate with 0.25 Aldrin	0.50	0.50	P
Aldrin	0.25	0.24	XP
5-10-15 Sulfate with 0.50 Aldrin			
Aldrin5-10-15 Sulfate with 0.50 Aldrin	0.50	0.57	P
Aldrin	0.50	0.38	D
FEDERAL CHEMICAL COMPANY 4-12-8 Muriate with 0.1875 Aldrin			
Aldrin	0.1875	0.16	P
5-10-15 Sulfate with 0.15 Heptachlor			
Heptachlor	0.15	0.20	P
5-10-15 Sulfate with 0.15 Heptachlor Heptachlor	0.15	0.12	
5-10-15 Sulfate with 0.50 Heptachlor	0.13	0.12	D
Heptachlor	0.50	0.51	XP
5-10-15 Sulfate with 0.50 Heptachlor	0.50	0.00	
Heptachlor	0.50	0.23	D

ANALYSES OF PESTICIDES IN FERTILIZER (Con't)

Registrant Product	Guaranteed	Found	Remarks
Active Ingredient	%	7.	
FEDERAL CHEMICAL COMPANY (Con't)			
6-12-12 Muriate with 0.50 Heptachlor		0.50	WD.
Heptachlor	0.50	0.52	XP
6-12-12 Muriate with 0.50 Heptachlor Heptachlor	0.50	0.50	XP
Heptachiof	0.50		
GLASGOW FERTILIZER COMPANY			
5-10-15 Sulfate with 0.33 Aldrin	0.22	0.18	D
Aldrin	0.33	0.10	J
HUTSON CHEMICAL COMPANY			
4-12-8 Muriate with 1.00 Aldrin			_
Aldrin	1.00	0.88	Р
4-12-8 Muriate with 1.00 Aldrin Aldrin	1.00	0.82	P
4-12-8 Muriate with 1.00 Aldrin	1.00		
Aldrin	1.00	0.79	D
5-10-15 Sulfate with 1.00 Aldrin		0.70	D
Aldrin	1.00	0.78	D
INTERNATIONAL MINERALS & CHEMICAL CORP.			
4-12-8 with 0.20 Aldrin			
Aldrin	0.20	0.16	P
4-12-8 with 0.20 Aldrin	0.20	0.15	D
Aldrin	0.20	0.13	
Aldrin	0.20	0.23	P
5-10-15 with 0.20 Aldrin			
Aldrin	0.20	0.18	Р
5-20-20 Muriate with 0.33 Aldrin	0.33	0.17	D
Aldrin	0.33	0.17	
Aldrin	0.20	0.15	XD
KENTUCKY FERTILIZER WORKS			
5-10-5 Muriate with 0.25 Aldrin Aldrin	0.25	0.21	P
5-10-5 Muriate with 0.25 Aldrin			
Aldrin	0.25	0.25	P
5-10-5 Muriate with 0.25 Aldrin	0.25	0.20	Р
Aldrin5-10-5 Muriate with 0.50 Aldrin	0.25	0.20	•
Aldrin	0.50	0.12	XD
5-10-15 Sulfate with 0.125 Aldrin			
Aldrin	0.125	0.14	MP
6-8-6 Sulfate with 0.25 Aldrin	0.25	0.18	D
Aldrin	0.23	0.10	
OHIO VALLEY FERTILIZER, INC.			
4-16-4 Sulfate with 0.313 Aldrin		0.00	
Aldrin	0.313	0.22	D
5-10-20 Sulfate Aldrin	None	0.14	М
8-10-15 Sulfate with 0.15 Aldrin			
Aldrin	0.15	0.20	MP
10-10-10 Muriate	N	0.21	М
Aldrin	None	0.21	M

ANALYSES OF PESTICIDES IN FERTILIZER (Con't)

Registrant Product	Guaranteed	Found	Remarks
Active Ingredient	%	%	
SWIFT AND COMPANY			
6-10-4 Muriate with 0.25 Chlordane			
Chlordane	0.25	0.29	P
6-10-4 Muriate with 0.25 Chlordane. Chlordane	0.25	0.24	P
TENNESSEE CORPORATION 5-10-10 Sulfate with 0.20 Aldrin			
Aldrin	0.20	0.17	MXP
VIRGINIA-CAROLINA CHEMICAL CORP.			
4-12-8 Muriate with 0.167 Aldrin			
Aldrin	0.167	0.13	D
4-12-8 Muriate with 0.50 Aldrin	0.50	0.62	P
5-10-15 Sulfate with 0.075 Aldrin			
Aldrin	0.075	0.10	XP
Aldrin	0.30	0.73	P
5-10-15 Sulfate with 0.30 Aldrin		0.16	
Aldrin	0.30	0.16	D
Aldrin	0.30	0.08	D
ANALYSES OF PRODUC	TS CONTAINING ALI	DRIN*	
Registrant	A1c	lrin	
Product	Guaranteed	Found	Remarks
Active Ingredient	%	%	
ASSOCIATED SALES & SUPPLY CO.			
Check Pest Aldrin Concentrate	42 0	41.1	
GHECK FEST AIGITH CONCENTRALE	42.8	41.1	XP
	42.0	41.1	XP
BLUEGRASS SUPPLY COMPANY	22.8	24.3	XP XP
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc			
BLUEGRASS SUPPLY COMPANY	22.8	24.3	XP
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc Do Test-it Aldrin Spray	22.8 22.8	24.3 23.3	XP XP
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc Do Test-it Aldrin Spray CALIFORNIA SPRAY CHEMICAL CORPORATION	22.8 22.8	24.3 23.3	XP XP
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc Do Test-it Aldrin Spray	22.8 22.8 42.6	24.3 23.3 43.9	XP XP XP
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc. Do Test-it Aldrin Spray. CALIFORNIA SPRAY CHEMICAL CORPORATION Ortho Aldrin 25 Granules. Ortho Aldrin Spray.	22.8 22.8 42.6	24.3 23.3 43.9	XP XP XP
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc. Do	22.8 22.8 42.6	24.3 23.3 43.9	XP XP XP
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc. Do	22.8 22.8 42.6	24.3 23.3 43.9	XP XP XP
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc. Do	22.8 22.8 42.6 25.0 42.6	24.3 23.3 43.9 25.3 42.4	XP XP XP P P
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc. Do	22.8 22.8 42.6 25.0 42.6	24.3 23.3 43.9 25.3 42.4	XP XP XP P P
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc. Do	22.8 22.8 42.6 25.0 42.6	24.3 23.3 43.9 25.3 42.4	XP XP XP P P
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc Do Test-it Aldrin Spray CALIFORNIA SPRAY CHEMICAL CORPORATION Ortho Aldrin 25 Granules Ortho Aldrin Spray NIAGARA CHEMICAL DIV. FOOD MACHINERY & CHEMICAL CORPORATION Aldrin 4 Fertilizer Miscible Aldrin Miscible STAUFFER CHEMICAL COMPANY Aldrin 20 Granular	22.8 22.8 42.6 25.0 42.6	24.3 23.3 43.9 25.3 42.4	XP XP XP P P
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc Do Test-it Aldrin Spray CALIFORNIA SPRAY CHEMICAL CORPORATION Ortho Aldrin 25 Granules Ortho Aldrin Spray NIAGARA CHEMICAL DIV. FOOD MACHINERY & CHEMICAL CORPORATION Aldrin 4 Fertilizer Miscible Aldrin Miscible STAUFFER CHEMICAL COMPANY	22.8 22.8 42.6 25.0 42.6	24.3 23.3 43.9 25.3 42.4	XP XP XP P P
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc. Do Test-it Aldrin Spray. CALIFORNIA SPRAY CHEMICAL CORPORATION Ortho Aldrin 25 Granules. Ortho Aldrin Spray. NIAGARA CHEMICAL DIV. FOOD MACHINERY & CHEMICAL CORPORATION Aldrin 4 Fertilizer Miscible. Aldrin Miscible. STAUFFER CHEMICAL COMPANY Aldrin 20 Granular. TENNESSEE CORPORATION 40% Aldrin.	22.8 22.8 42.6 25.0 42.6 40.5 23.3	24.3 23.3 43.9 25.3 42.4 39.8 24.1	XP XP XP P P
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc. Do Test-it Aldrin Spray CALIFORNIA SPRAY CHEMICAL CORPORATION Ortho Aldrin 25 Granules Ortho Aldrin Spray NIAGARA CHEMICAL DIV. FOOD MACHINERY & CHEMICAL CORPORATION Aldrin 4 Fertilizer Miscible Aldrin Miscible STAUFFER CHEMICAL COMPANY Aldrin 20 Granular TENNESSEE CORPORATION 40% Aldrin TOBACCO STATES CHEMICAL COMPANY	22.8 22.8 42.6 25.0 42.6 40.5 23.3 20.0	24.3 23.3 43.9 25.3 42.4 39.8 24.1 23.8	XP XP XP XP P P
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc. Do Test-it Aldrin Spray CALIFORNIA SPRAY CHEMICAL CORPORATION Ortho Aldrin 25 Granules Ortho Aldrin Spray NIAGARA CHEMICAL DIV. FOOD MACHINERY & CHEMICAL CORPORATION Aldrin 4 Fertilizer Miscible Aldrin Miscible STAUFFER CHEMICAL COMPANY Aldrin 20 Granular TENNESSEE CORPORATION 40% Aldrin TOBACCO STATES CHEMICAL COMPANY Tobacco States 2# Aldrin Equiv	22.8 22.8 42.6 25.0 42.6 40.5 23.3 20.0	24.3 23.3 43.9 25.3 42.4 39.8 24.1	XP XP XP P P
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc. Do Test-it Aldrin Spray CALIFORNIA SPRAY CHEMICAL CORPORATION Ortho Aldrin 25 Granules Ortho Aldrin Spray NIAGARA CHEMICAL DIV. FOOD MACHINERY & CHEMICAL CORPORATION Aldrin 4 Fertilizer Miscible Aldrin Miscible STAUFFER CHEMICAL COMPANY Aldrin 20 Granular TENNESSEE CORPORATION 40% Aldrin TOBACCO STATES CHEMICAL COMPANY Tobacco States 2# Aldrin Equiv Tobacco States 4# Aldrin Equiv	22.8 22.8 42.6 25.0 42.6 40.5 23.3 20.0	24.3 23.3 43.9 25.3 42.4 39.8 24.1 23.8 40.4	XP XP XP XP P P
BLUEGRASS SUPPLY COMPANY Test-it Aldrin Emulsion Conc. Do	22.8 22.8 42.6 25.0 42.6 40.5 23.3 20.0 40.0	24.3 23.3 43.9 25.3 42.4 39.8 24.1 23.8 40.4	XP XP XP XP P P

ANALYSES OF PRODUCTS CONTAINING ALDRIN* (Con't)

Registrant		Aldrin	
Product	Guaranteed	Found	Remarks
Active Ingredient	%	%	
Active ingredient			
NITED COOPERATIVES, INC.			
Unico Aldrin Dust (Granules)	20.0	19.9	P
Unico Emulsifiable Concentrate	23.4	24.6	P
Do	23.4	24.9	P
Do	23.4	23.2	P
ро	23.4	23.0	P
Do	23.4	24.0	P
VEIL-ELLIOTT CHEMICAL COMPANY			
Ken-Ko Aldrin Spray	23.0	24.3	P
Ken-Ko 25% Aldrin Granules	25.0	25.5	P
See page for Aldrin in Fertilizer			
ANALYSES OF PRODUCTS CONTA OF BENZENE HEXACI		ISOMER	
Registrant		Isomer of BHC	
Product	Guaranteed	Found	Remarks
Active Ingredient	%	%	
CALIFORNIA SPRAY-CHEMICAL CORP.			P
Ortho Isotox Transplanter Solution	5.00	6.	
Do	5.00	6.75	P
Isotox 5% Lindane	5.00	7.54	P
GLOBE LABORATORIES			
Globe Lindane Concentrate	11.14	12.80	P
B. G. PRATT COMPANY	5.00	5.01	P
Pratt's 5% Lindane Insect Spray	5.00		
THOMPSON-HAYWARD CHEMICAL COMPANY		10.07	P
Tri-6 120-W 12% Gamma Isomer of BHC	12.00	12.07	r
TOBACCO STATES CHEMICAL COMPANY			
20% Lindane Transplanter Solution	20.00	22.4	P
Tobacco States No. 2 Transplanter Sol	10.00	10.96	P
Tobacco States No. 2 Transplanter Sol	10.00	10.57	P
DoLindane 5% No. 1 Transplanter Solution	5.00	5.48	P
ANALYSES OF PRODUCTS	CONTAINING	COPPER	
Registrant		Copper	
Product	Guaranteed	Found	Remark
Active Ingredient	%	%	
COOPERATIVE SEED & FARM SUPPLY			
Southern States Copper Sulfate			
Copper as Metallic	25.2	25.3	P
ANALYSES OF PRODUCTS CO	ONTAINING DIE	ZT.DRTN*	
ANALISES OF FRODUCIS CO	JAMES DE LE CONTROL DE LA CONT		
Registrant	Cummenteed	Dieldrin Found	Remark
Product	Guaranteed	%	ACIMAL N
Active Ingredient	%	10	
AG SUPPLY COMPANY Dieldrin Termite Control	18.6	19.5	P

ANALYSES OF PRODUCTS CONTAINING DIELDRIN* (Con't)

Registrant	Dieldrin		
Product	Guaranteed	Found	Remarks
Active Ingredient	%	%	
CALIFORNIA SPRAY CHEMICAL CORPORATION	17.0	10.0	_
Ortho Dieldrin Spray		18.8	P P
Ortho Dieldrin 1.5 Spray		19.1	
Do		20.4	P
Do	18.6	19.5	P
SCIENCE PRODUCTS COMPANY			
Dieldrin EC-15	18.6	20.5	XP
OMANIAND OWNATOAL COMPANY	,		
STAUFFER CHEMICAL COMPANY Dieldrin Granular 10	. 10.0	12.9	XP
Breiter Grandfar Territoria			
TOBACCO STATES CHEMICAL COMPANY			
1.5 lb. Dieldrin Emulsion Concentrate		17.8	P
Do		18.0	P
Do		18.9	P
Do	. 18.6	19.5	P
Do	. 18.6	14.8	D
Plant Bed & Lawn Saver	. 2.50	3.13	P
UNITED COOPERATIVES INC.			
Unico Dieldrin Emulsifiable Concentrate	. 18.0	18.5	P
Do		17.7	P
Do		17.8	P
Do		18.2	P
Unico 5% Dieldrin Granular Dust		5.69	P
Do		6.82	P
Do		5.86	P
Do		5.36	P
Do		5.76	P
DO:		50	
WEIL-ELLIOTT CHEMICAL COMPANY			
Ken-Ko 10% Granular Dieldrin		10.03	P
Ken-Ko Dieldrin Spray	. 18.6	18.1	P
WOOLFOLK CHEMICAL WORKS, LTD.			
Security Dieldrin Solution Emul. Conc	. 17.8	18.8	XP
*See page for Dieldrin in Fertilizer			

ANALYSES OF PRODUCTS CONTAINING ENDRIN

Registrant		Endrin	
Product	Guaranteed	Found	Remarks
Active Ingredient	%	7,	
AG SUPPLY COMPANY			
Endrin Tobacco Spray	19.5	19.8	XP
GENERAL CHEMICAL DIV. ALLIED CHEMICAL & DYE			
Orchard Brand EM-1.6	. 19.8	19.8	P
CHESTNUT-ANDERSON FEED & SUPPLY			
Little River Endrin Miscible	. 19.5	18.0	D
UNITED COOPERATIVES, INC.			
Endrin Emulsifiable Concentrate	18.9	19.1	_ P
WEIL-ELLIOTT CHEMICAL COMPANY			
Ken-Ko Endrin 1.6E	19.0	17.9	D

ANALYSES OF PRODUCTS CONTAINING FERBAM

Registrant	- F	erbam	
Product	Guaranteed	Found	Remarks
Active Ingredient	%	%	
CALIFORNIA SPRAY-CHEMICAL CORP.			
Ortho Ferbam 76 Fungicide	76.0	73.9	P
T DUDOUT C DE MINOUES C COMPANY			
E. I. DUPONT & DE NEMOURS & COMPANY DuPont Fermate	76.0	75.4	P
balone retmater			
TOBACCO STATES CHEMICAL COMPANY	10 5	11.7	P
Tobacco States 15% Fermate Dust	10.5	11.7	r
WOOLFOLK CHEMICAL COMPANY			
Security Ferbam Dust	11.4	11.6	Р
ANALYSES OF PRODUCTS CO	ONTAINING FUMARI	N	
Registrant	Fum	arin	
Product	Guaranteed	Found	Remarks
Active Ingredient	7.	7,	
S. C. WELLS & COMPANY			
Rough on Rats, Ready Mixed Bait	0.025	0.022	P
ANALYSES OF PRODUCTS CONT	PAINING MALATHIO	N	
Registrant Product	Guaranteed	thion Found	Remarks
Active Ingredient	%	%	Kemer Ke
AMERICAN CYANAMID COMPANY Malathion 57% Emul. Insecticide	57.0	56.5	P
AMSCO CHEMICAL COMPANY			
Hot Shot Fly Bait	2.00	2.52	P
BOULD WINIAN INC			
BOYLE-MIDWAY, INC. Antrol 50% Malathion	50.0	50.4	P
CALIFORNIA SPRAY-CHEMICAL CORP.	25.0	16.4	D
Ortho Malathion 25 Wettable	25.0 25.0	16.2	D D
Ortho Fly Killer Dry Bait	2.00	1.56	D
Do	2.00	2.24	P
Ortho Malathion 50 Spray	50.0	46.1	D
Do	50.0	47.9	P
Ortho Malathion 5 Emulsive	55.0	52.4	P
CARROLA CHENTCAL COMPANY			
CARBOLA CHEMICAL COMPANY Carbola Fly Bait Malathion	2.00	1.72	P
Carrotte All Ball Markette Control of the Control o			
CHEMICAL FORMULATORS, INC.	FO C	20.0	770
Chemform Evergreen Brand Spray Conc	50.0	39.2	XD
CHESTNUT-ANDERSON FEED & SUPPLY, INC.			
Little River Garden Spray Malathion	55.0	47.7	D
WILLIAM COOPER & NEPHEWS, INC.			
Cooper 4% Malathion Dust	4.00	3.44	XD
Do	4.00	3.37	XD
Kilathon Emulsifiable Conc	50.0	44.5	D

ANALYSES OF PRODUCTS CONTAINING MALATHION (Con't)

Product	trant	Malathion			
COOPERATIVE SEED & FARM SUPPLY SERVICE Statesman Louse & Flea Powder		Guaranteed	Found	Remarks	
Statesman Louse & Flea Powder	Active Ingredient	%	%		
Statesman Louse & Flea Powder	DAMETIC COOR C DAMA CURRENT CORRECTOR				
S7, Malathion Dust.		5.00	4 32	D	
Do				P P	
Statesman Louse & Flea Powder				P	
Farnam Malanox Residual Bait Spray Concentrate				D	
Farnam Malanox Residual Bait Spray Concentrate	PAPNAM COMPANY				
Spray Concentrate					
Globe Malathion Compound		50.0	43.5	XD	
Clobe Malathion Compound	I A ROPATOR IES				
McCullough's 50% Malathion Emuls. Conc 50.0 43.2 NIAGARA CHEMICAL DIVISION Niagara Malathion 25 Wettable 25.0 21.4 RALSTON PURINA COMPANY Purina Malathion Spray. 57.0 55.8 RIGO MANUFACTURING COMPANY Kill-Ko Malathion 50% Emulsifiable. 50.0 45.6 Kill-Ko Fly Bait. 2.00 2.03 Kill-Ko Malathion 50% Emulsifiable. 50.0 4.56 Kill-Ko Malathion 50% Emulsifiable. 50.0 4.56 Kill-Ko Malathion 50% Emulsifiable. 50.0 4.56 Kill-Ko Malathion 50% Emulsifiable. 50.0 46.1 I. D. RUSSELL CO. LABORATORIES Russell 56% Malathion. 56.0 53.0 Do 56.0 51.4 SWIFT & COMPANY, PLANT FOOD DIVISION End-0-Pest Garden Spray. 50.0 42.1 TOBACCO STATES CHEMICAL COMPANY 57% Malathion Emulsifiable Conc. 57.0 53.5 Tobacco States FJV Bait. 2.00 1.41 Tobacco States FJW Bait. 2.00 1.41 Tobacco States FJW Malathion. 57.0 57.2 5% Malathion Ready Mixed Dust. 5.00 4.32 50% Malathion Emulsion Conc. 50.0 56.6 Do 50.0 47.7 Tobacco States 5% Malathion. 5.00 4.48 UNITED COOPERATIVES, INC. Unico Malathion 51 Spray. 51.3 47.5 Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray. 51.3 48.6 Unico Malathion Spray Powder. 25.0 23.8 Unico Malathion Spray Powder. 25.0 23.8 Unico Malathion Spray Powder. 25.0 22.4 Malathion Wettable Powder. 25.0 22.4		50.0	52.3	P	
McCullough's 50% Malathion Emuls. Conc 50.0 43.2 NIAGARA CHEMICAL DIVISION Niagara Malathion 25 Wettable 25.0 21.4 RALSTON PURINA COMPANY Purina Malathion Spray. 57.0 55.8 RIGO MANUFACTURING COMPANY Kill-Ko Malathion 50% Emulsifiable. 50.0 45.6 Kill-Ko Fly Bait. 2.00 2.03 Kill-Ko Malathion 57 Dust. 5.00 4.56 Kill-Ko Malathion 50% Emulsifiable. 50.0 4.56 Kill-Ko Malathion 50% Emulsifiable. 50.0 4.56 Kill-Ko Malathion 50% Emulsifiable. 50.0 50.0 46.1 I. D. RUSSELL CO. LABORATORIES Russell 56% Malathion. 56.0 53.0 Do. 56.0 51.4 SWIFT & COMPANY, PLANT FOOD DIVISION End-0-Pest Garden Spray. 50.0 42.1 TOBACCO STATES CHEMICAL COMPANY 57% Malathion Emulsifiable Conc. 57.0 53.5 Tobacco States Fly Bait. 2.00 1.41 Tobacco States Fly Bait. 2.00 1.41 Tobacco States Fly Bait. 50.0 4.32 50% Malathion Ready Mixed Dust. 5.00 4.32 50% Malathion Emulsion Conc. 50.0 56.6 Do. 50.0 56.6	AS MCCULLOUGH SEED COMPANY				
Niagara Malathion 25 Wettable		50.0	43.2	XD	
Niagara Malathion 25 Wettable	DA CHEMICAI DIVICION				
RALSTON PURINA COMPANY Purina Malathion Spray		25.0	21.4	D	
Purina Malathion Spray. 57.0 55.8 RIGO MANUFACTURING COMPANY Kill-Ko Malathion 50% Emulsifiable 50.0 45.6 Kill-Ko Fly Bait 2.00 2.03 Kill-Ko Malathion 57% Dust 5.00 4.56 Kill-Ko Malathion 50% Emulsifiable 50.0 46.1 I. D. RUSSELL CO. LABORATORIES Russell 56% Malathion 50% Emulsifiable 56.0 53.0 Do 56.0 51.4 SWIFT & COMPANY, PLANT FOOD DIVISION End-O-Pest Garden Spray 50.0 42.1 TOBACCO STATES CHEMICAL COMPANY 57% Malathion Emulsifiable Conc 57.0 53.5 Tobacco States Fly Bait 2.00 1.41 Tobacco States Fly Bait 50.0 4.32 50% Malathion Ready Mixed Dust 50.0 4.32 50% Malathion Emulsion Conc 50.0 4.32 50% Malathion Emulsion Conc 50.0 4.77 Tobacco States 5% Malathion 50.0 4.77 Tobacco States 5% Malathion 50.0 4.78 UNITED COOPERATIVES, INC Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray 51.3 47.5 Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray 51.3 48.6 Unico Malathion Spray Powder 5.0 23.8 Unico Malathion Spray Powder 5.0 23.8 Unico Malathion Spray Powder 5.0 22.4 Malathion Wettable Powder 5.0 21.2					
RIGO MANUFACTURING COMPANY Kill-Ko Malathion 50% Emulsifiable 50.0 2.03 Kill-Ko Malathion 50% Dust 5.00 4.56 Kill-Ko Malathion 5% Dust 5.00 4.56 Kill-Ko Malathion 5% Dust 50.0 4.56 Kill-Ko Malathion 50% Emulsifiable 50.0 46.1 I. D. RUSSELL CO. LABORATORIES Russell 56% Malathion 56.0 53.0 56.0 51.4		F7.0	FF 0		
Kill-Ko Malathion 50% Emulsifiable	Purina Malathion Spray	57.0	55.8	P	
Kill-Ko Fly Bait					
Kill-Ko Malathion 5% Dust.				D	
Kill-Ko Malathion 50% Emulsifiable				P	
I. D. RUSSELL CO. LABORATORIES Russell 56% Malathion		5.00		P	
Russell 56% Malathion	Kill-Ko Malathion 50% Emulsifiable	50.0	46.1	D	
Do. 56.0 51.4 SWIFT & COMPANY, PLANT FOOD DIVISION	RUSSELL CO. LABORATORIES				
SWIFT & COMPANY, PLANT FOOD DIVISION	Russell 56% Malathion	56.0	53.0	P	
End-O-Pest Garden Spray. 50.0 42.1 TOBACCO STATES CHEMICAL COMPANY 57% Malathion Emulsifiable Conc. 57.0 53.5 Tobacco States Fly Bait. 2.00 1.41 Tobacco States 57% Malathion. 57.0 57.2 5% Malathion Ready Mixed Dust. 5.00 4.32 50% Malathion Emulsion Conc. 50.0 56.6 Do. 50.0 47.7 Tobacco States 5% Malathion. 5.00 44.48 UNITED COOPERATIVES, INC. Unico Malathion 51 Spray. 51.3 47.5 Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray. 51.3 48.6 Unico Malathion Spray Powder 25.0 23.8 Unico Malathion 51 Spray. 51.3 49.8 Unico Malathion Spray Powder 25.0 22.4 Malathion Wettable Powder 25.0 22.4 Malathion Wettable Powder 25.0 21.2	Do	56.0	51.4	D	
TOBACCO STATES CHEMICAL COMPANY 57% Malathion Emulsifiable Conc. 57.0 53.5 Tobacco States Fly Bait. 2.00 1.41 Tobacco States 57% Malathion. 57.0 57.2 5% Malathion Ready Mixed Dust 5.00 4.32 50% Malathion Emulsion Conc. 50.0 56.6 Do. 50.0 47.7 Tobacco States 5% Malathion. 5.00 47.7 Tobacco States 5% Malathion. 5.00 4.48 UNITED COOPERATIVES, INC. Unico Malathion 51 Spray. 51.3 47.5 Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray. 51.3 48.6 Unico Malathion Spray Powder 25.0 23.8 Unico Malathion Spray Powder 25.0 23.8 Unico Malathion Spray Powder 25.0 22.4 Malathion Wettable Powder 25.0 22.4 Malathion Wettable Powder 25.0 21.2	& COMPANY, PLANT FOOD DIVISION				
57% Malathion Emulsifiable Conc. 57.0 53.5 Tobacco States Fly Bait. 2.00 1.41 Tobacco States 57% Malathion. 57.0 57.2 5% Malathion Ready Mixed Dust. 5.00 4.32 50% Malathion Emulsion Conc. 50.0 56.6 Do. 50.0 47.7 Tobacco States 5% Malathion. 5.00 4.48 UNITED COOPERATIVES, INC. Unico Malathion 51 Spray. 51.3 47.3 Do. 51.3 47.5 47.5 Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray. 51.3 48.6 Unico Malathion Spray Powder 25.0 23.8 Unico Malathion Spray Powder 25.0 22.4 Malathion Wettable Powder 25.0 22.4 Malathion Wettable Powder 25.0 21.2	End-O-Pest Garden Spray	50.0	42.1	D	
57% Malathion Emulsifiable Conc. 57.0 53.5 Tobacco States Fly Bait. 2.00 1.41 Tobacco States 57% Malathion. 57.0 57.2 5% Malathion Ready Mixed Dust. 5.00 4.32 50% Malathion Emulsion Conc. 50.0 56.6 Do. 50.0 47.7 Tobacco States 5% Malathion. 5.00 4.48 UNITED COOPERATIVES, INC. Unico Malathion 51 Spray. 51.3 47.3 Do. 51.3 47.5 47.5 Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray. 51.3 48.6 Unico Malathion Spray Powder 25.0 23.8 Unico Malathion Spray Powder 25.0 22.4 Malathion Wettable Powder 25.0 22.4 Malathion Wettable Powder 25.0 21.2	CO STATES CHEMICAL COMPANY				
Tobacco States Fly Bait		57.0	53.5	D	
Tobacco States 57% Malathion. 57.0 57.2 5% Malathion Ready Mixed Dust. 5.00 4.32 50% Malathion Emulsion Conc. 50.0 56.6 Do. 50.0 47.7 Tobacco States 5% Malathion. 5.00 4.48 UNITED COOPERATIVES, INC. Unico Malathion 51 Spray. 51.3 47.5 Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray. 51.3 48.6 Unico Malathion Spray Powder. 25.0 23.8 Unico Malathion 51 Spray. 51.3 49.8 Unico Malathion Spray Powder. 25.0 22.4 Malathion Wettable Powder. 25.0 21.2				D	
5% Malathion Ready Mixed Dust 5.00 4.32 50% Malathion Emulsion Conc 50.0 56.6 Do 50.0 47.7 Tobacco States 5% Malathion 5.00 4.48 UNITED COOPERATIVES, INC. Unico Malathion 51 Spray 51.3 47.3 Do 51.3 47.5 47.5 Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray 51.3 48.6 Unico Malathion Spray Powder 25.0 23.8 Unico Malathion 51 Spray 51.3 49.8 Unico Malathion Spray Powder 25.0 22.4 Malathion Wettable Powder 25.0 22.4 Malathion Wettable Powder 25.0 21.2				P	
50% Malathion Emulsion Conc 50.0 56.6 Do. 50.0 47.7 Tobacco States 5% Malathion 5.00 4.48 UNITED COOPERATIVES, INC. Unico Malathion 51 Spray 51.3 47.3 Do. 51.3 47.5 Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray 51.3 48.6 Unico Malathion Spray Powder 25.0 23.8 Unico Malathion 51 Spray 51.3 49.8 Unico Malathion Spray Powder 25.0 22.4 Malathion Wettable Powder 25.0 21.2				D	
Do				P	
Tobacco States 5% Malathion. 5.00 4.48 UNITED COOPERATIVES, INC. Unico Malathion 51 Spray. 51.3 47.5 Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray. 51.3 48.6 Unico Malathion Spray Powder. 25.0 23.8 Unico Malathion 51 Spray. 51.3 49.8 Unico Malathion Spray Powder. 25.0 22.4 Malathion Wettable Powder. 25.0 21.2				P	
Unico Malathion 51 Spray. 51.3 47.3 Do	Tobacco States 5% Malathion			D	
Unico Malathion 51 Spray 51.3 47.3 Do	D COOPERATIVES, INC.				
Do		51.3	47.3	D	
Unico Malathion Flea & Poultry Mite Powder 5.00 5.40 Malathion 51 Spray 51.3 48.6 Unico Malathion Spray Powder 25.0 23.8 Unico Malathion 51 Spray 51.3 49.8 Unico Malathion Spray Powder 25.0 22.4 Malathion Wettable Powder 25.0 21.2				D	
Malathion 51 Spray 51.3 48.6 Unico Malathion Spray Powder 25.0 23.8 Unico Malathion 51 Spray 51.3 49.8 Unico Malathion Spray Powder 25.0 22.4 Malathion Wettable Powder 25.0 21.2				P	
Unico Malathion Spray Powder 25.0 23.8 Unico Malathion 51 Spray 51.3 49.8 Unico Malathion Spray Powder 25.0 22.4 Malathion Wettable Powder 25.0 21.2				D	
Unico Malathion 51 Spray 51.3 49.8 Unico Malathion Spray Powder 25.0 22.4 Malathion Wettable Powder 25.0 21.2				P	
Unico Malathion Spray Powder				P	
Malathion Wettable Powder 25.0 21.2				D	
WEIL-ELLIOTT CHEMICAL COMPANY				D	
HELD THE TOTAL OUT THE TENT	ELLITOTT CHEMICAL COMPANY				
Ken-Ko 50% Malathion Emul. Conc 50.0 43.7		50.0	43.7	D	
Do				P	
Do				D	

ANALYSES OF PRODUCTS CONTAINING MALATHION (Con't)

Mala	thion	
		Remarks
		ACCEPANT OF THE PROPERTY OF TH
/0	/6	
55.0		D
5.00	4.04	D
THING METHOYVCH	r OR	
		Remark
/6	76	
50.0		P
5.00	5.00	P
25.00	22.5	D
FO 0	50.5	P
		P
50.0	30.0	
50.0	50.0	P
50.0	51.0	P
50.0	487	P
		P
30.0		
7.50 7.50	7.60 7.70	P P P
		Remarl
		Remat.
/6	/6	
5.25	5.62	XP
5.25	4.78	XP
- 0-	1. 1.1	ъ.
5.25	4.41	D
5.25	4.41	D
5.25	4.41 4.72	D XP
5.25	4.72	XP
5.25 5.25	4.72 5.37	XP P
5.25	4.72 5.37 5.18	XP P P
5.25 5.25	4.72 5.37	XP P P P
5.25 5.25 5.25	4.72 5.37 5.18	XP P P
5.25 5.25 5.25 5.25 5.25	4.72 5.37 5.18 5.28	XP P P P
5.25 5.25 5.25 5.25 5.25	4.72 5.37 5.18 5.28	XP P P P
	Sodium H Guaranteed % 55.0 5.00 INING METHOXYCH Methor Guaranteed % 50.0 50.0 50.0 50.0 50.0 50.0 50.0 5	\$ % 55.0

ANALYSES OF PRODUCTS CONTAINING SODIUM HYPOCHLORITE (Con't)

Registrant	Sodium Hyp	Sodium Hypochlorite	
Product	Guaranteed	Found	Remark
Active Ingredient	%	%	
CUMBERLAND MANUFACTURING COMPANY			
Bri-Tex Bleach			
Do	5.25	4.78	P
Do	5.25	4.48	D
Do	5.25	3.67	D
Do	5.25	4.54	D
ERBRICH PRODUCTS COMPANY			
Time Saver Laundry Bleach	5.25	,	
	3.23	4.56	D
THE GREAT A & P TEA COMPANY			
Bright Sail Laundry Bleach	5.25	5.31	D
Do	5.25	5.23	P
	51.25	3.23	P
HAFNER GROCER COMPANY			
Chloro-San Household Bleach	5.25	5.40	XP
MAGIC MANUFACTURING COMPANY			
Magic Household Placeh			
Magic Household Bleach	5.25	5.52	P
Do	5.25	5.22	P
THE MIAMI PRODUCTS & CHEMICAL COMPANY			
White Way Bleach	5.25	4 21	
	5.25	4.31	XD
NU-WAY PRODUCTS, INC.			
Nu-Way Professional Type Bleach	5.25	4.76	
Do	5.25	5.12	P P
IOTH DUTY PROPUSED			
OHN PUHL PRODUCTS COMPANY			
Fleecy White Bleach	5.25	5.36	P
PUREX CORPORATION			
Purex Bleach			
Do	5.25	5.26	P
Do	5.25	5.17	P
Do	5.25	5.49	P
Do	5.25	4.40	D
Do	5.25	5.51	P
Fleecy White Bleach	5.25	5.26	P
Do	5.25	5.34	P
OMAN CLEANGED CONTINUE			
OMAN CLEANSER COMPANY			
Roman Cleanser Bleach	5.25	4.97	P
Do	5.25	5.21	P
Do	5.25	4.72	P
APO ELIXIR CHEMICAL COMPANY			
Sapo Brand Bleach			
5-Fo Brand Bleach	5.25	3.33	D
INCLAIR MANUFACTURING COMPANY			
White Monday	5.25	5 06	
Do	5.25	5.86	XP
Do		5.46	XP
Sunrae	5.25	4.95	XP
	5.25	4.09	XD

ANALYSES OF PRODUCTS CONTAINING SODIUM HYPOCHLORITE (Con't)

Registrant	Sodium Hypochlorite Guaranteed Found		Remarks
Product Active Ingredient	%	%	
Active Highedient			
TEXIZE CHEMICALS, INC.		, 7,	n
Texize Bleach	5.25	4.74	P
Do	5.25	5.55	P
Do	5.25	4.48	D
Do	5.25	5.34	P
TRU-WAY CONSUMER PRODUCTS		E 70	XP
Tru-Way Bleach	5.25	5.78	At
ANALYSES OF PRODUCTS	CONTAINING 2,4-D		
Registrant	2,4-D Acid E	quivalent	
Product	Guaranteed	Found	Remark
Active Ingredient	%	%	
AG SUPPLY COMPANY	22.1	22.5	P
Ag Lawn Weed Killer	22.1		
THE DOW CHEMICAL COMPANY	27. 22	37.3	P
Dow Esteron 44	37.0^{2}		
Do	37.02	38.2	P
Do	37.0 ²	36.6	P
E. I. DUPONT DE NEMOURS & COMPANY, INC.			
DuPont Lawn Weed Killer	11.5 ¹	12.3	P
MONSANTO CHEMICAL COMPANY	9		
2,4-D Isopropyl Ester Weed Killer	38. 0 ²	39.2	P
REASOR-HILL CORPORATION			
R-H-Weed Rhap LV-4	45.03	39.7	D
R-H-Weed Rhap A-4	41.01	36.4	D
Do	41.01	36.5	D
RIVERDALE CHEMICAL COMPANY			
Riverdale 2,4-D Granules	20.03	18.1	P
Weedestroy 4 Ester	45.44	39.6	D
SWIFT & COMPANY AGRICULTURAL CHEMICAL DIV.			
Swift's Gold Bear 44 Ester Weed			
Control	38.64	39.3	P
UNITED COOPERATIVES, INC.	1		
Unico 2,4-D Amine Weed Killer	40.71	38.3	P
Do	41.11	40.0	P
Unico Lawn Weed Killer	41.1	38.1	P
Unico 2,4-D Ester Weed Killer	38.24	37.6	P
Unico 2,4-D Ester Weed Killer	38.24	38.4	P
Do	38.24	39.1	P
Do	38.24	39.8	P
Do	18.77	37.0	CHARLES OF THE PARTY AND ADDRESS.

Derived from Dimethylamine salt.
 Derived from Isopropyl ester.
 Derived from Iso-octyl ester.
 Derived from Butyl ester.

ANALYSES OF PRODUCTS CONTAINING 2,4,5-T

Registrant	2,4,5-T Acid Equivalent			
Product	Guaranteed	Found	Remarks	
Active Ingredient	%	%		
DOW CHEMICAL COMPANY				
Dow Esteron 245 Brush & Weed Killer	42.5 ¹	40.9	P	
Dow Esteron 245 O.S	42.5 ¹	41.3	P	
RIVERDALE CHEMICAL COMPANY				
Weedestroy 2,4,5-T	32.62	32.1	P	
2,4,5-T Low Volatile Ester	43.63	43.0	P	
UNITED COOPERATIVES, INC.				
2,4,5-T Lo-V Ester Brush Killer	43.04	40.4	P	
Do	43.04	38.2	D	
Do	43.04	40.5	P	

- Derived from Propylene glycol butyl ether ester.
 Derived from Butyl ester.
 Derived from Iso-octyl ester.
 Derived from Butoxy-ethoxy-propanol ester.

ANALYSES OF PRODUCTS CONTAINING 2,4-D & 2,4,5-T

Registrant	2,4-D & 2,4,5-T Acid Equivalent		
Product	Guaranteed	Found	Remarks
Active Ingredient	7,	%	
BLACK LEAF COMPANY			
Lawn Weed Killer			
2,4-D	9.801	9.60	P
2,4,5-T	4.001	3.50	P
CALIFORNIA SPRAY CHEMICAL CORPORATION Ortho Weed-B-Gon			
2,4-D	10.005	10.30	P
2,4,5-T	5.005	4.40	P
Do			
2,4-D	10.005	9.10	P
2,4,5-T	5.00 ⁵	4.80	P
THE DOW CHEMICAL COMPANY			
Dow Esteron Brush Killer O.S.			
2,4-D	22.92	23.4	P
2,4,5-T	22.82	19.4	D
Do			
2,4-D	22.92	20.4	P
2,4,5-T	22.82	18.8	D
MONSANTO CHEMICAL COMPANY			
Butyl Ester Brush Killer			
2,4-D	21.94	21.6	P
2,4,5-T	21.94	19.8	P
RIVERDALE CHEMICAL COMPANY Brush Killer 2 Ester			
2,4-D	22.04	15.7	D
	22.04	15.0	מ
2,4,5-T	22.0	15.0	П

ANALYSES OF PRODUCTS CONTAINING 2,4-D & 2,4,5-T (Con't)

Registrant Product Active Ingredient	2,4-D & 2,4,5-T Guaranteed %	Acid Equivalent Found %	Remarks
THOMPSON-HAYWARD CHEMICAL COMPANY			
T-H Ded-Weed 50-50		00.6	n
2,4-D	22.03	22.6	P
2,4,5-T	22.03	22.2	P
UNITED COOPERATIVES, INC.			
Brush Killer	1/1	2/ 6	P
2,4-D	23.4 ⁴	24.6 11.0	P P
2,4,5-T	11.74	11.0	r
1. Derived from Iso-octyl ester.			
2. Derived from Propylene glycol butyl ethe	r esters.		
3. Derived from Akyl esters.			
4. Derived from Butyl ester.			
5. Derived from Tetrahydrofurfuryl ester.			

ANALYSES OF PRODUCTS CONTAINING VAPAM

Registrant	Vapam		
Product	Guaranteed	Found	Remarks
Active Ingredient	%	%	
E. I. DUPONT DE NEMOURS & CO.			
DuPont VPM Soil Fumigant	32.7	31.1	P
Do	31.0	36.6	Р
STAUFFER CHEMICAL COMPANY			
Vapam Soil Fumigant Solution	32.7	32.6	P
Do	32.7	32.5	P
Do	32.7	35.3	P
Do	32.7	33.8	P
Do	32.7	35.1	P
Do	32.7	34.8	P
Do	32.7	34.1	P
Do	32.7	34.5	P
	32.7	33.5	P
Do	32.7	35.3	P
Do	32.7	32.8	P

ANALYSES OF PRODUCTS CONTAINING WARFARIN

Registrant	Warfarin		
Product	Guaranteed	Found	Remarks
Active Ingredient	%	%	
BLACK PANTHER COMPANY Black Panther Rat & Mouse Killer	0.025	0.027	P
BOYLE-MIDWAY, INC. Black Flag - Rat & Mouse Killer Do	0.025 0.025	0.030 0.029	P P
CALE CHEMICAL COMPANY Kilz Rat & Mouse Killer	0.025	0.025	P
CALIFORNIA SPRAY-CHEMICAL CORPORATION Ortho Pelleted Rat & Mouse Bait	0.025	0.028	P

ANALYSES OF PRODUCTS CONTAINING WARFARIN (Con't)

Registrant	Warfa	Warfarin	
Product	Guaranteed	Found	Remarl
Active Ingredient	7,	%	
COLONIAL BRODUCTIC CO. THE			
COLONIAL PRODUCTS CO., INC.			
Colonial-42 with Warfarin	. 0.025	0.022	P
WILLIAM COOPER & NEPHEWS, INC.			
Cooper Rat & Mouse Killer	0.005		
occper hat a mouse killer	. 0.025	0.021	P
THE D-CON COMPANY, INC.			
D-Con Mouse Prufe	. 0.054	0.054	
Do	. 0.054	0.055	P
d-CON	. 0.025	0.033	P
	. 0.025	0.024	P
DIAMOND BLACK LEAF COMPANY			
Warf Pellets Rat Bait	. 0.025	0.028	P
GUARANTEE PEST CONTROL COMPANY			
Guarantee Warfarin Rat Bait	0.025	0.028	P
I M HADDIC CO THO			
J. M. HARRIS & CO., INC.			
Rat Dragon	0.025	0.026	P
IESS & CLARK			
Warfarat APL	0.005		
martatat Albininininininininininininininininininin	0.025	0.025	P
AMB PRODUCTS COMPANY			
Lam-Kill Rat & Mouse Killer	0.025		
was a mouse Killel	0.025	0.022	P
R. LEGEAR, INC.			
Warfarin Rat & Mouse Bait	0.025	0.005	
	0.025	0.025	P
ERK PRODUCTS COMPANY			
Perk's (Blam)	0.025	0.023	XP
	0.025	0.023	AP
HE PIPER CO., INC.			
Paket Warfarin	0.025	0.027	P
		0.027	P
IGO MANUFACTURING COMPANY			
Kill-Ko Warfarin Rat Bait	0.025	0.030	P
Kill-Ko Warfarin Mouse Bait	0.038	0.033	P
Kill-Ko Rat Bait Pellets	0.025	0.025	P
		0.025	r
. D. RUSSELL COMPANY LABORATORIES			
Russell Rakil	0.025	0.024	P
NITED COOPERATIVES, INC.			
Unico Warfarin Rodenticide	0.50	0.42	P
Do	0.50	0.46	P
Warfarin Pellets	0.025	0.027	P
Unico "Ready to Use" Warfarin Pellets.	0.025	0.032	P
ANALYSES OF PRODUCT	S CONTAINING ZINEB		
egistrant	Zine	b	
Product Active Ingredient	Guaranteed	Found	Remarks
	%	%	CONTRACTOR OF THE PROPERTY OF THE PARTY OF T

Registrant	Zineb		
Product Active Ingredient	Guaranteed %	Found %	Remarks
COOPERATIVE SEED & FARM SUPPLY, INC.			
Statesman Z Dust	5.20	5.49	P
Do	5.20	6.28	P

ANALYSES OF PRODUCTS CONTAINING MIXTURES OF PESTICIDES

Registrant Product Active Ingredient	Guaranteed %	Found %	Remarks
COOPERATIVE SEED & FARM SUPPLY SERVICE			
Statesman MZ 5-5-2 Dust		*	P
Technical Methoxychlor	5.00		
Zineb	5.20	5.37	P
TOBACCO STATES CHEMICAL COMPANY			
Strawberry Insect Dust			
DDT	5.00	*	P
Malathion	5.00	4.00	D

^{*} Product not analyzed for this ingredient.

KENTUCKY ECONOMIC POISON LAW

An act concerning regulation of the manufacture, sale, transportation, distribution and use of economic poisons and devices including fungicides, rodenticides and herbicides.

217.540 Definitions for KRS 217.540 to 217.640. As used in KRS 217.540 to 217.640, unless the context requires otherwise:

(1) "Economic poison" means any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any insects, rodents, fungi, bacteria, weeds or other form of plant or animal life or viruses (except viruses on or in living man or other animals) which the Director shall declare to be a pest;

(2) "Device" means any instrument or contrivance intended for trapping, destroying, repelling or mitigating insects or rodents or destroying, repelling or mitigating fungi, bacteria or weeds, or such other pests as may be designated by the Director, but not including simple mechanical devices such as rat traps or equipment used for the application of economic poisons when sold separately therefrom;

(3) "Insecticide" means any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any insects which may be present in any environment whatsoever:

(4) "Fungicide" means any substance or mixture of substances intended for pre-

venting, destroying, repelling or mitigating any fungi or plant disease;

(5) "Rodenticide" means any substance or mixture of substances intended for preventing, destroying, repelling or mitigating rodents or any other vertebrate animal which the Director shall declare to be a pest;

(6) "Herbicide" means any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any weed;

(7) "Weed" means any plant which grows where not wanted;

(8) "Insect" means any of the numerous small invertebrate animals generally having the body more or less obviously segmented, for the most part belonging to the class Insecta, comprising six-legged, usually winged forms as for example, beetles, bugs, bees, flies and to other allied classes of arthropods whose members are wingless and usually have more than six legs, as for example, spiders, mites, ticks, centipedes, and wood lice, also nematoues and other worms, or any other invertebrates which are destructive, constitute a liability, and may be classed as pests;

(9) "Fungi" means all non-chlorophyll bearing thallophytes (that is, all nonchlorophyll bearing plants of a lower order than mosses and liverworts) as for example, rusts, smuts, mildews, molds, yeasts, bacteria and viruses, except those on or in living

man or other animals;

- (10) "Ingredient statement" or "guaranteed analysis statement" means either (1) a statement of the name and percentage of each active ingredient, together with the total percentage of the inert ingredients, in the economic poisons; and in addition, in case the economic poisons contain arsenic in any form, a statement of the percentage of total and water soluble arsenic, each stated as elemental (metallic) arsenic; or (2) a statement of the name of each active ingredient in the descending order of percentages, together with the name of each and total percentage of the inert ingredients, if any there be, in the economic poison (except option one shall apply if the preparation is highly toxic to man, determined as provided in KRS 217.580), and in case the economic poisons contain arsenic in any form a statement of the percentage of total and water soluble arsenic, each stated as elemental (metallic) arsenic;
- (11) "Active ingredient" means an ingredient which will prevent, destroy, repel or mitigate insects, fungi, rodents, weeds or other pests;

"Inert ingredient" means an ingredient which is not an active ingredient. (12)

- (13) "Antidote" means the most practical immediate treatment in case of poisoning and includes first aid treatment;
- (14) "Person" means any individual, partnership, association, corporation or organized group of persons whether incorporated or not;
 - "Director" means the Director of the Kentucky Agricultural Experiment Station;
- (16) "Registrant" means the person registering any economic poison pursuant to the provisions of KRS 217.540 to 217.640;
- (17) "Label" means the written, printed or graphic matter on or attached to, the economic poison or device, or the immediate container thereof, and the outside container or wrapper of the retail package, if any there be, of the economic poison or device;

(18) "Labeling" means all labels and other written, printed or graphic matter:

(a) Upon the economic poison or device or any of its containers or wrappers;

(b) Accompanying the economic poison or device at any time;

(c) To which reference is made on the label or in literature accompanying the economic poison or device, except when accurate, non-misleading reference is made to current official publications of the Kentucky Agricultural Experiment Station, the College of Agriculture of the University of Kentucky, the Department of Agriculture, Labor and Statistics, the Department of Health, or similar Federal institutions or other official agencies of this state or other states when such agencies are authorized to conduct research in the field of economic poisons;

(19) "Adulterated" means any economic poison the strength or purity of which falls below the professed standard or quality as expressed on labeling or under which it is sold, or any substance of which has been substituted wholly or in part, or any valuable

constituent of which has been wholly, or in part, abstracted;

(20) "Misbranded" shall mean any economic poison or device:

(a) The labeling of which bears any statement, design or graphic representation relative thereto or to its ingredients which is false or misleading in any particular;

(b) Which is an imitation of or is offered for sale under the name of another economic poison;

(c) The labeling of which bears any false reference to registration under KRS

217.540 to 217.640;

(d) The accompanying label of which does not contain directions for use which are necessary and, if complied with, adequate for the protection of the public;

(e) The label of which does not contain a warning or caution statement which may be mecessary and, if complied with, adequate to prevent injury to living man and other

vertebrate animals, vegetation, and useful invertebrate animals; (f) The label of which does not bear an ingredient statement or guaranteed analysis statement on that part of the immediate container and on the outside container or wrapper, if there be one, through which the ingredient statement or guaranteed analysis statement on the immediate container cannot be clearly read, of the retail package which is pre-

sented or displayed under customary conditions of purchase;

(g) In which any word, statement, or other information required by or under the authority of KRS 217.540 to 217.640 to appear on the labeling is not prominently placed thereon with such conspicuousness (as compared with other words, statements, designs or graphic matter in the labeling) and in such terms as to render it likely to be read and understood by the ordinary individual under customary conditions of purchase and use; or

(h) Which, in the case of insecticide, fungicide or herbicide, when used as directed or in accordance with commonly recognized safe practice, shall be injurious to living man or other vertebrate animals or vegetation, to which it is applied, or to the person applying such economic poison, excepting pests and weeds. (1956 c. 218, 1;

effective July 1, 1956)

217.550 Prohibitions relating to the distribution, sale or transportation of economic poisons. It shall be unlawful for any person to distribute, sell or offer for sale within the state or deliver for transportation or transport in intrastate commerce or between points within this state through any point outside this state any of

the following:

(1) Any economic poison which is not registered pursuant to the provisions of KRS 217.570, or any economic poison if any of the claims made for it or any of the directions for its use differ in substances from the representation made in connection with its registration, or if the composition of an economic poison differs from its composition as represented in connection with its registration; provided, that in the discretion of the Director, a change in the labeling or formula of an economic poison may be made, within a registration period, without requiring a re-registration of the product;

(2) Any economic poison, except in the registrant's or the manufacturer's broken immediate container, unless there is affixed to the container, and to the outside container or wrapper of the retail package, if there be one, through which the required information on the immediate container cannot be clearly read, a label bearing:

(a) The name and address of the manufacturer, registrant or person for whom manufactured;

(b) The name, brand or trade-mark under which said article is sold; and

(c) The net weight or measure of the content subject, however to such reasonable

variations as the Director may permit;

(3) Any economic poison which contains any substance or substances in quantities highly toxic to man, determined as provided in KRS 217.580, unless the label shall bear, in addition to any other matter required by KRS 217.540 to 217.640:

(a) The skull and crossbones;

(b) The word "poison" prominently in red, on a background of distinctly contrast color; and

(c) A statement of an antidote for the economic poison;

(4) The economic poisons commonly known as lead arsenate, basic lead arsenate, calcium arsenate, magnesium arsenate, zinc arsenate, zinc arsenite, sodium fluoride, sodium fluosilicate, and barium fluosilicate unless they have been distinctly colored or discolored as provided by regulations issued in accordance with KRS 217.540 to 217.640, or any other white powder economic poison which the Director, after investigation of and after public hearing on the necessity for such action for the protection of the public health and the feasibility of such coloration or discoloration, shall by regulation, require to be distinctly colored or discolored; unless it has been so colored or discolored; provided, that the Director may exempt any economic poison, to the extent that it is intended for a particular use or uses, from the coloring or discoloring required or authorized by this subsection if he determines that such coloring or discoloring for such use or uses is not necessary for the protection of the public health;

(5) Any economic poison which is adulterated or misbranded, or any device which is

misbranded. (1956, c. 218, 2; effective July 1, 1956)

217.560 Unlawful practices. It shall be unlawful:

(1) For any person to detach, alter, deface, or destroy, in whole or in part, any label or labeling provided for in KRS 217.540 to 217.640 or the rules and regulations promulgated hereunder, or to add any substance to, or take any substance from an economic

poison in a manner that may defeat the purposes of KRS 217.540 to 217.640;

(2) For any person to use for his own advantage or to reveal, other than to the Director, or officials or e ployees of the state or officials or employees of the United States Department of Agriculture, or other Federal agencies, or to the courts in response to a subpoena, or to physicians, and in emergencies to pharmacists and other qualified persons for use in the preparation of antidotes, in accordance with such directions as the Director may prescribe, any information relative to formulas of products acquired by authority of KRS 217.570;

(3) For any person to oppose or interfere in any way with the Director or his duly authorized agents in carrying out the duties imposed by KRS 217.540 to 217.640 (1956)

c. 218, 3; effective July 1, 1956)

217.570 Registration of economic poisons; renewal.

(1) Every economic poison which is distributed, sold or offered for sale within this state or delivered for transportation or transported in intrastate commerce or between points within the state through any point outside this state shall be registered with the Director. The Director may register and permit the sale of any such economic poison which has been duly registered without protest under the provisions of the Federal Insecticide, Fungicide and Rodenticide Act, but products so registered shall be subject to the inspection fees provided for herein, and to all other provisions of KRS 217.540 to 217.640. All registration of products shall expire on the thirty-first day of December following date of issuance, unless such registration shall be renewed annually, in which event expiration date shall be extended for each year of renewal registration, or until otherwise termintaed; provided that:

(a) Products which have the same formula, and are manufactured by the same person, the labeling of which contains the same claims, and the labels of which bear a designation identifying the rroduct as the same economic poison may be registered as a single economic poison; additional names and labels shall be added by supplement statements during the

current period of registration.

(b) Within the discretion of the Director, or his authorized representative, a change in the labeling or formulas of an economic poison may be made within the current period of registration, without requiring a re-registration of the product, provided the name of the item is not changed.

(2) The registrant shall file with the Director, a statement containing:

(a) The name and address of the registrant and the name and address of the person whose name will appear on the label, if other than the registrant;

(b) The name of the economic poison;

(c) A complete copy of the labeling accompanying the economic poison and a state-

ment of all claims made and to be made for it including directions for use; and

(d) If requested by the Director, a full description of the tests made and results thereof upon which the claims are based. In the case of renewal of registration, a statement shall be required only with respect to information which is different from that

furnished when the economic poison was registered or last re-registered;

(3) The registrant, before selling or offering for sale any economic poison in this state, shall register each brand or grade of such economic poison with the Director upon forms furnished by the Director, and for the purposes of defraying expenses connected with the enforcement of KRS 217.540 to 217.640, shall pay to the Director an annual inspection fee of five dollars for each and every brand or grade to be offered for sale in this state provided, however, that any registrant may register annually any number of brands after the payment of annual fees aggregating fifty dollars. There shall be issued to the registrant by the Director a license entitling the registrant to sell all duly registered brands in this state until the expiration of the license;

(4) The Director, whenever he deems it necessary in the administration of KRS 217.540 to 217.640, may require the submission of the complete formula of any economic poison. If it appears to the Director that the composition of the article is such as to warrant the proposed claims for it and if the article and its labeling and other material required to be submitted comply with the requirements of KRS 217.540 to 217.640, he shall

register the article;

(5) If it does not appear to the Director that the article is such as to warrant the proposed claims for it or if the article and its labeling and other material required to be submitted do not comply with the provisions of KRS 217.540 to 217.640, he shall notify the registrant of the manner in which the article, labeling, or other material required to be submitted fail to comply with KRS 217.540 to 217.640, so as to afford the registrant an opportunity to make the necessary corrections;

(6) If, upon receipt of such notice, the registrant insists that such corrections are not necessary and requests in writing that the article be registered, the commissioner shall register the article under protest, and such registration shall be accompanied by a warning in writing to the registrant of the apparent failure of the article to comply

with the provisions of KRS 217.540 to 217.640;

(7) The Director is authorized and empowered to refuse to register, or to cancel the registration of, any brand of economic poison as herein provided, upon satisfactory proof that the registrant has been guilty of fraudulent and deceptive practices in evasions or attempted evasions of the provisions of KRS 217.540 to 217.640 or any rules and regulations promulgated thereunder; provided, that no registration shall be revoked or refused until the registrant shall have been given a hearing by the Director;

(8) Notwithstanding any other provisions of KRS 217.540 to 217.640, registration is not required in the case of an economic poison shipeed from one plant within this state to another plant within this state operated by the same person. (1956, c. 218,

5; effective July 1, 1956)

217.580 Authority of Director.

(1) The Director is authorized, after opportunity for a hearing:

(a) To declare as a pest any form of plant or invertebrate animal life or virus which is injurious to plants, animals, articles or substances;

(b) To determine whether economic poisons are highly toxic to man;(c) To determine standards of coloring or discoloring for economic poisons and to subject economic poisons to the requirements for coloration or discoloration imposed by KRS 217.540 to 217.640;

(2) The Director is further authorized:

(a) To effect the collection and examination of samples of economic poisons and devices to determine compliance with the requirements of KRS 217.540 to 217.640; and he shall have the authority at all reasonable hours to enter into any car, warehouse, store, building, boat, vessel or place supposed to contain economic poisons or devices, for the purpose of inspection or sampling, and to procure samples for analysis or examination from any lot, package or parcel of economic poison, or any device;

(b) To publish from time to time, in such forms as he may deem proper, reports of the results of the analyses based on official samples of economic poisons sold within

the state;

(c) After due public hearing, to make, promulgate, alter, change, rescind such rules and regulations relating to the sale and distribution of economic poisons as he may find necessary to carry into effect the full intent and meaning of KRS 217.540 to 217.640;

(d) To cooperate with, and enter into agreements with, any other agency of this state, the United States Department of Agriculture, and any other state or agency thereof for the purpose of carrying out the provisions of KRS 217.540 to 217.640 and securing uniformity of regulations. (1956, c. 218, 6; effective July 1, 1956)

217.590 Violation of KRS 217.540 to 217.640, duties of Director relating to;

penalties.

(1) If it shall appear from examination or evidence that any of the provisions of KRS 217.540 to 217.640 or the rules and regulations issued thereunder have been violated, the Director may cause notice of such violations to be given to the registrant, distributor and processor, from whom any samples or evidence was taken. Any party so notified shall be given an opportunity to be heard under such rules and regulations as may be prescribed by the Director. If it appears after such hearing that there have been a sufficient number of violations of KRS 217.540 to 217.640 or the rules and regulations issued thereunder, the Director may certify the facts to the Commonwealth's attorney or the county attorney for the county in which the violation shall have occurred and furnish that officer with a copy of the results of any examination of such sample duly authenticated by the officer making the examination. It shall be the duty of every such attorney to whom the Director shall report any violation of KRS 217.540 to 217.640 to cause proceedings to be prosecuted without delay for the fines and penalties in such cases. Any person convicted of violating any provisions of KRS 217.540 to 217.640 or the rules and regulations issued thereunder shall be adjudged guilty of a misdemeanor and shall be subject to a penalty of not less than twenty-five dollars nor more than five hundred dollars;

(2) Nothing in this section shall be construed as requiring the Director to report minor violations for the institution of proceedings under KRS 217.540 to 217.640 whenever the Director believes that the public interest will be adequately served in the circumstances by a suitable written notice or warning. (1956, c. 218, 7; effective July 1,

1956)

217.600 When penalties not applicable. The penalties provided for violations of

KRS 217.550 shall not apply to:

(1) Any carrier, while lawfully engaged in transporting an economic poison within this state, if such carrier shall, upon request, permit the Director or his designated agent to copy all records showing the transactions in and movements of the articles;

(2) Public officials of this state and of the federal government engaged in the

performance of their official duties;

(3) The manufacturer or shipper of an economic poison for experimental use only:

(a) By or under the supervision of an agency of this state or of the federal govern-

ment authorized by law to conduct research in the field of economic poisons; or

(b) By others if the economic poison is not sold and if the container thereof is plainly and conspicuously marked "For experimental use only - Not to be sold," together with the manufacturer's name and address' provided, however, that if a written permit has been obtained from the Director, economic poisons may be sold for experimental purposes subject to such restrictions and conditions as may be set forth in the permit;

(4) Any preparation, drug or chemical intended to be used or sold solely for medicinal use or for toilet purposes. (1956, c. 218, 8; effective July 1, 1956)

217.610 Director to issue written "stop sale, use or removal" order; when; appeal. It shall be the duty of the Director to issue and enforce a written or printed "stop sale, use or removal" order to the owner or custodian of any lot of economic poison and to hold at a designated place when the Director finds said economic poison is being offered or exposed for sale in violation of any of the provisions of KRS 217.540 to 217.640 until the law has been complied with and said economic poison is released in writing to the Director or said violation has been otherwise legally disposed of by written authority; provided, that the owner or custodian of such economic poison shall have the right to appeal from such order to a court of competent jurisdiction in the county where the said economic poison or poisons are found, praying for a judgment as to the jurisdiction of said order, and for the discharge of such economic poison from the order prohibiting the sale in accordance with the findings of the court; and provided further that the provisions of this paragraph shall not be construed as limiting the right of the enforcement officer to proceed as authorized by other provisions of KRS 217.540 to 217.640. The Director shall release the economic poison so withdrawn when the requirements of the provisions of KRS 217.540 to 217.640 have been complied with and upon payment of all costs and expenses incurred in connection with the withdrawal. (1956, c. 218, 9; effective July 1, 1956)

217.620 Seizure of economic poison; when. Any lot of economic poison not in compliance with the provisions of KRS 217.540 to 217.640 shall be subject to seizure on complaint of the Director to a court of competent jurisdiction in the county in which said economic poison is located. In the event the court finds the said economic poison

to be in violation of KRS 217.540 to 217.640 and orders the condemnation of said economic poison, it shall be disposed of in any manner consistent with the quality of the economic poison and the laws of the state, provided, that in no instance shall the disposition of said economic poison be ordered by the court without first giving the claimant an opportunity to apply to the court for release of said economic poison or for permission to process or relabel said product to bring it into compliance with KRS 217.540 to 217.640. (1956, c. 218, 10; effective July 1, 1956)

217.630 Authority vested in Director may be executed by employees of Agricultural Experiment Station. All authority vested in the Director by virtue of the provisions of KRS 217.540 to 217.640 may, with like force and effect, be executed by such employees of the Kentucky Agricultural Experiment Station as the Director may from time to time designate for said purpose. (1956, c. 218, 11; effective July 1, 1956)

217.640 Jurisdiction vested in Director; repealing clause. Jurisdiction in all matters pertaining to the distribution, sale and transportation of economic poisons is by KRS 217.540 to 217.640 vested exclusively in the Director and all acts and parts of acts inconsistent with KRS 217.540 to 217.640 are hereby expressly repealed including the provisions of Sections 217.010 and 217.400 of the Kentucky Revised Statutes which cover economic poisons subject to KRS 217.540 to 217.640. (1956, c. 218, 13; effective July 1, 1956)