Uploaded to VFC Website

~ November 2012 ~

This Document has been provided to you courtesy of Veterans-For-Change!

Feel free to pass to any veteran who might be able to use this information!

For thousands more files like this and hundreds of links to useful information, and hundreds of "Frequently Asked Questions, please go to:

Veterans-For-Change

Veterans-For-Change is a 501(c)(3) Non-Profit Corporation
Tax ID #27-3820181

If Veteran's don't help Veteran's, who will?

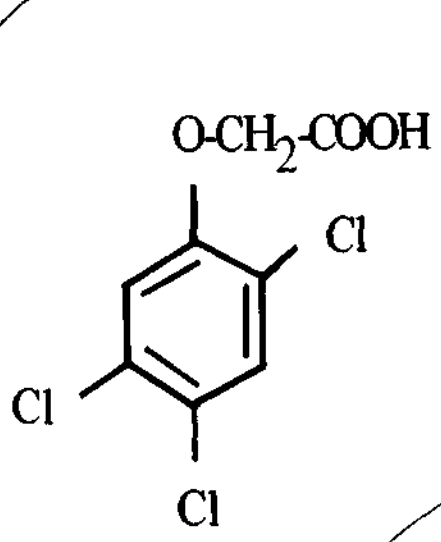
We appreciate all donations to continue to provide information and services to Veterans and their families.

https://www.paypal.com/cgi-bin/webscr?cmd=_s-xclick&hosted_button_id=WGT2M5UTB9A78

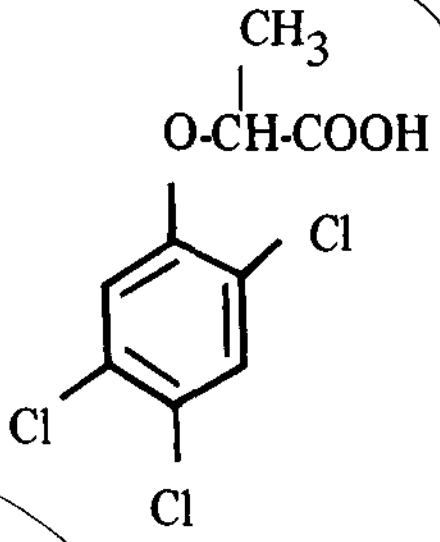
Note: VFC is not liable for source information in this document, it is merely provided as a courtesy to our members.

Item ID Number	03926 ☐ **Not Scanned**
Author	Diaz-Colon, J.D.
Corporate Author	The Texas Agricultural Experiment Station, College Stati
Report/Article Title	Selected Bibliography of the Phenoxy Herbicides: I. Fate in the Environment
Journal/Book Title	
Year	1976
Month/Day	December
Color	☐
Number of Images	65
Description Notes	MP-1303

MP-1303
December 1976



2, 4, 5-T

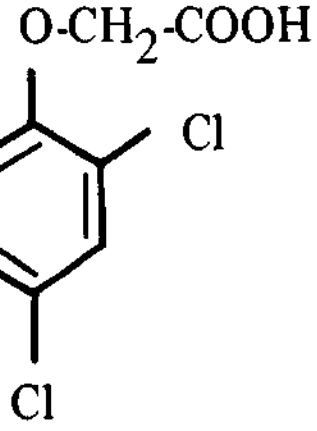


Silvex

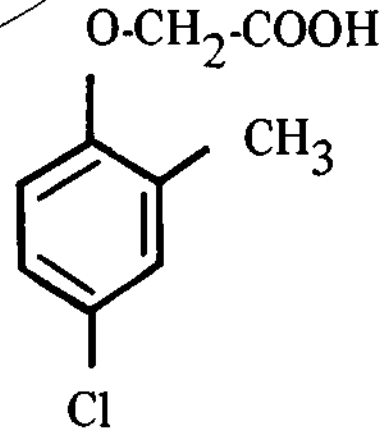
Selected Bibliography of the Phenoxy Herbicides

I. Fate in the Environment

2, 4-D



MCPA



The Texas Agricultural Experiment Station · J. E. Miller, Director · College Station, Texas · Texas A&M University System
In cooperation with Agricultural Research Service, U. S. Department of Agriculture

CONTENTS

Mention of a trademark or proprietary product does not constitute a guarantee or warranty of the product by The Texas Agricultural Experiment Station or the U. S. Department of Agriculture and does not imply its approval to the exclusion of other products that also may be suitable.

All programs and information of The Texas Agricultural Experiment Station are available to everyone without regard to race, color, religion, sex, age, or national origin.

SELECTED BIBLIOGRAPHY OF THE PHENOXY HERBICIDES

I. Fate in the Environment

J. D. Diaz-Colon and R. W. Bovey*

* Respectively, agricultural research technician and research agronomist, Agricultural Research Service, U.S. Department of Agriculture, and The Texas Agricultural Experiment Station (Department of Range Science).

Introduction

The phenoxy herbicides have been used to control broad-leaved weeds in crops, water sources, forests, pastures, rangeland, and urban and industrial sites for over 25 years. The herbicides 2,4-D and 2,4,5-T, however, in recent years have received notoriety mainly as a result of their use as defoliants in the controversial Vietnam War. Although many new herbicides have become available in the past 15 years, the phenoxy herbicides remain indispensable tools for many agricultural uses because of their efficiency, economics, and safety. The principal hazard of the phenoxys is injury to valuable vegetation from improper application. Because of their widespread usage in agriculture, the phenoxys have probably received more laboratory and field research than any other class of herbicides. Many of the research investigations on the fate of the phenoxy herbicides are reported in this bibliography. Future bibliographies on the phenoxy herbicides are planned which will include toxicology, chlorodioxin impurities, physiological effects on higher plants, effects on microorganisms, ecological effects, methods of extraction and analysis, and history. A few references on chlorophenols and other related chemicals will be included in the bibliographies where appropriate.

References are listed in alphabetical order according to author. A subject index and a list of the abbreviated and complete names of the sources are also provided. For references published in other languages than English, the abbreviated form of the language is provided after the title. If the English abstract for the references was available from Pesticide Abstracts (Health Aspects of Pesticides) or Weed Abstracts, they are included after the listed reference.

List of Abbreviated Sources

Acta Agric. Scand.	Acta Agriculturae Scandinavica (Stockholm, Sweden)
Acta Pharmacol. Toxicol.	Acta Pharmacologica et Toxicologica (Copenhagen, Denmark)
Acta Vet. Scand.	Acta Veterinaria Scandinavica (Copenhagen, Denmark)
Advan. Agron.	Advances in Agronomy (New York, N.Y.)
Advan. Appl. Microbiol.	Advances in Applied Microbiology (New York, N.Y.)
Advan. Chem. Ser.	Advances in Chemistry Series (Washington, D.C.)
Agric. Aviat.	Agricultural Aviation (The Hague, Netherlands)
Agric. Biol. Chem.	Agricultural and Biological Chemistry (Tokyo, Japan)
Agric. Sci. Rev.	Agricultural Science Review (Washington, D.C.)
Agrokhimiya	Agrokhimiya (Moscow, USSR)
Agron. J.	Agronomy Journal (Madison, Wis.)
Am. Chem. Soc., Abstr. Pap., Nat. Meet., Pestic. Chem. Sec.	American Chemical Society, Abstracts of Papers of the National Meetings, Pesticides Chemistry Section (Washington, D.C.)
Am. Inst. Chem. Eng., Symp. Ser.	American Institute of Chemical Engineering, Symposium Series (New York, N.Y.)
Am. Potatoe J.	American Potatoe Journal (New Brunswick, N.J.)
Anal. Instrum.	Analysis Instrumentation. Proceedings of the Annual Analysis Instrumentation Symposium (Pittsburgh, Pa.)
Andhra Agric. J.	Andhra Agricultural Journal (Bapatla, India)
Ann. App. Biol.	Annals of Applied Biology (London, England)
Ann. N.Y. Acad. Sci.	Annals of the New York Academy of Science (New York, N.Y.)
Ann. Zool.-Ecol. Anim.	Annales de Zoologie-Ecologie Animale (Paris, France)
Annu. Rev. Microbiol.	Annual Review of Microbiology (Palo Alto, Calif.)
Annu. Rev. Plant Physiol.	Annual Review of Plant Physiology (Palo Alto, Calif.)
Anz. Schaedlingskd. Pflanzenschutz	Anzeiger fuer Schaedlingskunde und Pflanzenschutz (Berlin, Germany)

Appl. Microbiol.	Applied Microbiology (Baltimore, Md.)
Arch. Biochem. Biophys.	Archives of Biochemistry and Biophysics (New York, N.Y.)
Arch. Environ. Contam. Toxicol.	Archives of Environmental Contamination and Toxicology (New York, N.Y.)
Arch. Environ. Health	Archives of Environmental Health (Chicago, Ill.)
Arch. Exp. Pathol. Pharmacol.	Archives of Experimental Pathology and Pharmacology (Berlin, Germany)
Arch. Int. Pharmacodyn. Ther.	Archives Internationales de Pharmacodynamic et de Therapie (Ghent,Belgium)
Arch. Microbiol.	Archives of Microbiology (Berlin, Germany)
Arch. Toxikol.	Archiv fuer Toxikologie (Berlin, Germany)
Arch. Vet. Ital.	Archivio Veterinario Italiano (Milan, Italy)
Ark. Agric. Exp. Stn., South. Coop. Ser. Bull.	Arkansas Agricultural Experiment Station, Southern Cooperative Series Bulletin (Fayetteville, Ark.)
Aust. For.	Australian Forestry (Perth, Australia)
Bacteriol. Proc.	Bacteriological Proceedings (Ann Arbor, Mich.)
Bacteriol. Rev.	Bacteriological Reviews (Baltimore, Md.)
Biochem. J.	Biochemical Journal, The (London, England)
Biol. Abstr.	Biological Abstracts (Philadelphia, Pa.)
Biol. Conserv.	Biological Conservation (Essex, England)
BioScience	BioScience (Washington, D.C.)
Bodenkultur	Bodenkultur (Vienna, Austria)
Bot. Gaz.	Botanical Gazette (Chicago, Ill.)
Br. Ecol. Soc. Symp.	British Ecological Society Symposium (Swansea, England)
Bratisl. Lek. Listy	Bratislavske Lekarske Listy (Bratislava, Czechoslovakia)
Bull. Coll. Agric., Utsunomiya Univ.	Bulletin of the College of Agriculture, Utsunomiya University (Utsunomiya, Japan)

Bull. Environ. Contam. Toxicol.	Bulletin of Environmental Contamination and Toxicology (New York, N.Y.)
Calif. Agric.	California Agriculture (Berkeley, Calif.)
Can. J. Agric. Sci.	Canadian Journal of Agricultural Science (Ottawa, Canada)
Can. J. Microbiol.	Canadian Journal of Microbiology (Ottawa, Canada)
Can. J. Plant Sci.	Canadian Journal of Plant Science (Ottawa, Canada)
Can. J. Soil Sci.	Canadian Journal of Soil Science (Ottawa, Canada)
Chem.-Biol. Interact.	Chemico-Biological Interactions (Amsterdam, Netherlands)
Chem. Can.	Chemistry in Canada (Ottawa, Canada)
Chem. Eng. Sci.	Chemical Engineering Science (Oxford, England)
Chem. Pharm. Bull.	Chemical and Pharmaceutical Bulletin (Tokyo, Japan)
Chimia	Chimia (Aarau, Switzerland)
Comp. Biochem. Physiol.	Comparative Biochemistry and Physiology (Oxford, England)
Contrib. Boyce Thompson Inst.	Contributions from Boyce Thompson Institute (Yonkers, N.Y.)
Crop Sci.	Crop Science (Madison, Wis.)
Crops Soils	Crops and Soils (Madison, Wis.)
Dev. Ind. Microbiol.	Developments in Industrial Microbiology (Washington, D.C.)
Diss. Abstr. Int.	Dissertation Abstracts International (Ann Arbor, Mich.)
Down Earth	Down to Earth (Midland, Mich.)
Eksp. Vod. Toksikol., Mater. Vses. Simp.	Eksperimental'naya Vodnaya Toksikologiya, Meterialy Vsesoyuznogo Simpoziuma (Riga, USSR)
Elelmiszervizsgalati Kozl.	Elelmiszervizsgalati Kozlemnyek (Budapest, Hungary)
Environ. Entomol.	Environmental Entomology (College Park, Md.)

Environ. Lett.	Environmental Letters (New York, N.Y.)
Environ. Physiol. Biochem.	Environmental Physiology and Biochemistry (Copenhagen, Denmark)
Environ. Sci. Technol.	Environmental Science and Technology (Washington, D.C.)
Environment	Environment (St. Louis, Mo.)
Experientia	Experientia (Basel, Switzerland)
Farm Ranch Home Q.	Farm Ranch Home Quarterly (Lincoln, Nebr.)
Fed. Proc., Fed. Am. Soc. Exp. Biol.	Federation Proceedings, Federation of American Societies for Experimental Biology (Washington, D.C.)
Fel'dsher Akush.	Fel'dsher i Akusherka (Moscow, USSR)
Food Cosmet. Toxicol.	Food and Cosmetics Toxicology (London, England)
Forstarchiv	Forstarchiv (Hanover, Germany)
Ga. Agric. Res.	Georgia Agricultural Research (Athens, Ga.)
Gig. Sanit.	Gigiena i Sanitariya (Moscow, USSR)
Gig. Tr. Prof. Zabol.	Gigiena Truda i Professional'nye Zabolevaniya (Moscow, USSR)
Health Aspects Pestic.	Health Aspects of Pesticides, Abstract Bulletin (Chamblee, Ga.)
Hilgardia	Hilgardia (Berkeley, Calif.)
Hyac. Control J.	Hyacynth Control Journal (Fort Lauderdale, Fla.)
Ind. Veg. Manage.	Industrial Vegetation Management (Dow Chemical Co., Midland, Mich.)
Indian J. Weed Sci.	Indian Journal Weed Science (Hissar, India)
Int. Biodeterior. Bull.	International Biodeterioration Bulletin (Birmingham, England)
Int. Rice Res. Inst., Annu. Rep.	International Rice Research Institute, Annual Report (Los Banos, Philippines)

Int. Sugar J.	International Sugar Journal (High Wycombe, England)
Izv. Akad. Nauk Kaz. SSR, Ser. Biol.	Izvestiya Akademii Nauk Kazakhskoi SSR, Seriya Biologicheskaya (Alma-Ata, USSR)
J. Agric. Food Chem.	Journal of Agriculture and Food Chemistry (Washington, D.C.)
J. Agric. Univ. P.R.	Journal of Agriculture of the University of Puerto Rico (Rio Piedras, Puerto Rico)
J. Am. Ind. Hyg. Assoc.	Journal American Industrial Hygiene Association (Cincinnati, Ohio)
J. Am. Water Works Assoc.	Journal of the American Water Works Association (New York, N.Y.)
J. Anim. Sci.	Journal of Animal Science (Champaign, Ill.)
J. Appl. Ecol., Suppl.	Journal of Applied Ecology, Supplement (Oxford, England)
J. Assoc. Off. Anal. Chem.	Journal of the Association of Official Analytical Chemists (Washington, D.C.)
J. Bacteriol.	Journal of Bacteriology (Baltimore, Md.)
J. Chem. Soc.	Journal of the Chemical Society (London, England)
J. Chromatogr.	Journal of Chromatography (Amsterdam, Netherlands)
J. Dairy Sci.	Journal of Dairy Science (Urbana, Ill.)
J. Environ. Qual.	Journal of Environmental Quality (Madison, Wis.)
J. Exp. Bot.	Journal of Experimental Botany (London, England)
J. For.	Journal of Forestry (Washington, D.C.)
J. Gen. Microbiol.	Journal of General Microbiology (Elstree, England)
J. Inst. Sewage Purif.	Journal of the Institute Sewage Purification (London, England)
J. Pediatr.	Journal of Pediatrics (St. Louis, Mo.)
J. Range Manage.	Journal of Range Management (Denver, Colo.)
J. S. Afr. Chem. Inst.	Journal of the South African Chemical Institute (Johannesburg, South Africa)

J. Sci. Food Agric.	Journal of the Science of Food and Agriculture (London, England)
J. Soil Sci.	Journal of Soil Science (London, England)
J. Taiwan Agric. Res.	Journal of Taiwan Agricultural Research (Taipei, Taiwan)
J. Water Pollut. Control Fed.	Journal of the Water Pollution Control Federation (Washington, D.C.)
Jpn. Agric. Res. Q.	Japan Agricultural Research Quarterly (Tokyo, Japan)
Khim. Sel'sk. Khoz.	Khimiya v Selskom Khoziastive (Moscow, USSR)
Klin. Wochenschr.	Klinische Wochenschrift (Berlin, Germany)
Latv. PSR Zinat. Akad. Vestis	Latvijas PSR Zinatnu Akademijas Vestis (Riga, USSR)
Life Sci., Part 2. Biochem., Gen. Mol. Biol.	Life Sciences. Part 2. Biochemistry, General and Molecular Biology (Oxford, England)
Meded. Fac. Landbouwwet., Rijksuniv. Gent	Mededelingen van de Faculteit Landbouwwetenschappen, Rijksuniversiteit Gent (Ghent, Belgium)
Mitt. Biol. Zentralanst. Land Forstwirtsch., Berlin-Dahlem	Mitteilungen aus der Biologischen Zentralanstalt fuer Land- und Forstwirtschaft, Berlin-Dahlem (Berlin-Dahlem, Germany)
Mitt. Dtsch. Landwirtsch.-Ges.	Mitteilungen der Deutschen Landwirtschafts-Gesellschaft (Frankfurt am Main, Germany)
North Cent. Weed Control Conf., Res. Rep.	North Central Weed Control Conference, Research Report (Omaha, Nebr.)
N. Dak. Farm Res.	North Dakota Farm Research (Fargo, N. Dak.)
N.J. Agric.	New Jersey Agriculture (New Brunswick, N.J.)
N.Y. Fish Game J.	New York Fish and Game Journal (Albany, N.Y.)
Nachrichtenbl. Dtsch. Pflanzenschutzdienstes	Nachrichtenblatt des Deutschen Pflanzenschutzdienstes (Brunswick, Germany)

Nature-London	Nature-London (London, England)
Naturwissenschaften	Naturwissenschaften, Die (Berlin, Germany)
Naunyn-Schmiedebergs Arch. Pharmakol. Exp. Pathol.	Naunyn-Schmiedebergs Archiv fuer Pharmakologie und Experimentelle Pathologie (Berlin, Germany)
Nippon Dojo Hiryogaku Zasshi	Nippon Dojo Hiryogaku Zasshi (Tokyo, Japan)
Nippon Noson Igakkai Zasshi	Nippon Noson Igakkai Zasshi (Tokyo, Japan)
Ohio Rep. Res. Dev.	Ohio Report on Research and Development (Wooster, Ohio)
Oreg. State Univ., Environ. Health Sci. Cent., Annu. Prog. Rep.	Oregon State University, Environmental Health Science Center, Annual Progress Report (Corvallis, Oreg.)
Pestic. Abstr.	Pesticides Abstracts (Washington, D.C.)
Pestic. Biochem. Physiol.	Pesticide Biochemistry and Physiology (New York, N.Y.)
Pestic. Monit. J.	Pesticides Monitoring Journal (Atlanta, Ga.)
Pestic. Sci.	Pesticide Science (London, England)
Physiol. Plant.	Physiologia Plantarum (Copenhagen, Denmark)
Phyton-ØYTON	Phyton-ØYTON (Buenos Aires, Argentina)
Phytopathology	Phytopathology (St. Paul, Minn.)
Plant Physiol.	Plant Physiology (Kutztown, Pa.)
Plant Soil	Plant and Soil (The Hague, Netherlands)
Planta	Planta (Berlin, Germany)
Poznan. Tow. Przyj. Nauk, Bull. Ser. B	Poznanskie Towarzystwo Przyjaciol Nauk, Bulletin, Serie B (Poznan, Poland)
Proc. Am. Soc. Hortic. Sci.	Proceedings of the American Society for Horticultural Science (St. Joseph, Mich.)
Proc. Ark. Acad. Sci.	Proceedings of the Arkansas Academy of Science (Fayettville, Ark.)

Proc. Biochem. Soc.	Proceedings of the Biochemical Society (London, England)
Proc. Br. Weed Control Conf.	Proceedings of the British Weed Control Conference (Droitwich, Worcestershire, England)
Proc. Calif. Weed Conf.	Proceedings of the California Weed Conference (Sacramento, Calif.)
Proc. Eur. Weed Res. Counc., Symp. Herbic.-Soil	Proceedings of the European Weed Research Council, Symposium on Herbicides-Soil (Oxford, England)
Proc. Int. Congr. Biochem.	Proceedings of the International Congress of Biochemistry (Bethesda, Md.)
Proc. North Cent. Weed Control Conf.	Proceedings of the North Central Weed Control Conference (Omaha, Nebr.)
Proc. Northeast. Weed Sci. Soc.	Proceedings of the Northeastern Weed Science Society (College Park, Md.)
Proc. R. Soc., Ser. B	Proceedings of the Royal Society, Series B (London, England)
Proc. Soil Sci. Soc. Am.	Proceedings of the Soil Science Society of America (Madison, Wis.)
Proc. South. Weed Sci. Soc.	Proceedings of the Southern Weed Science Society (Athens, Ga.)
Proc. Swed. Weed Conf.	Proceedings of the Swedish Weed Conference (Uppsala, Sweden)
Proc. Symp. Agric. Waste Water Calif.: Water Resour. Cent. Rep.	Proceedings of a Symposium on Agricultural Waste Waters. California: Water Resources Center Report (Davis, Calif.)
Proc. Univ. Otago Med. Sch.	Proceedings of the University of Otago Medical School (Dunedin, New Zealand)
Proc. West. Soc. Weed Sci.	Proceedings of the Western Society of Weed Science (Logan, Utah)
Rastit. Zasht.	Rastitelna Zashtita (Sofia, Bulgaria)
Recl. Med. Vet.	Recueil de Medicine Veterinaire (Paris, France)
Rep., Rothamsted Exp. Stn., Harpenden, England	Report, Rothamsted Experimental Station, Harpenden, England (Harpenden, England)

Res. Commun. Chem. Pathol. Pharmacol.	Research Communications of Chemical Pathology and Pharmacology (Westbury, N.Y.)
Residue Rev.	Residue Reviews (New York, N.Y.)
Rev. Ind. Agric. Tucuman	Revista Industrial y Agricola de Tucuman (San Miguel de Tucuman, Argentina)
Sangyo Igaku	Sangyo Igaku (Tokyo, Japan)
Schriftenr. Ver. Wasser-Boden-Lufthyg.	Schriftenreihe des Vereins fuer Wasser- Boden- und Lufthygiene (Berlin, Germany)
Science	Science (Washington, D.C.)
Search	Search (Sydney, Australia)
Simulation	Simulation (LaJolla, Calif.)
Soc. Appl. Bacteriol. Symp. Ser.	Society for Applied Bacteriology Symposium Series (London, England)
Soil Biol. Biochem.	Soil Biology and Biochemistry (Oxford, England)
Soil Sci.	Soil Science (Baltimore, Md.)
Soil Sci. Plant Nutr.	Soil Science and Plant Nutrition (Tokyo, Japan)
Soils Fert.	Soils and Fertilizers (Farnham Royal, England)
Sov. Plant Physiol.-Engl. Transl.	Soviet Plant Physiology - English Translation (New York, N.Y.)
Tex. Water Dev. Board, Rep.	Texas Water Development Board, Report (Austin, Tex.)
Tidsskr. Planteavl	Tidsskrift for Planteavl (Copenhagen, Denmark)
Toxicol. Appl. Pharmacol.	Toxicology and Applied Pharmacology (New York, N.Y.)
Trans. Am. Soc. Agric. Eng.	Transactions of the American Society of Agricultural Engineers (St. Joseph, Mich.)
U.S. Dep. Agric., Agric. Res. Serv., ARS	U.S. Department of Agriculture, Agricultural Research Service, Crops Research, ARS (Washington, D.C.)

U.S. Dep. Agric., Tech. Bull.	U.S. Department of Agriculture, Technical Bulletin (Washington, D.C.)
U.S. Dep. Agric., Yearb. Agric.	U.S. Department of Agriculture, Yearbook of Agriculture (Washington, D.C.)
U.S. Fish Wildl. Serv., Bur. Sp. Fish. Wildl., Spec. Sci. Rep., Wildl.	U.S. Fish and Wildlife Service, Bureau of Sports Fisheries and Wildlife, Special Scientific Report, Wildlife (Washington, D.C.)
U.S. Fish Wildl. Serv., Cir.	U.S. Fish and Wildlife Service, Circular (Washington, D.C.)
U.S. For. Serv., Pac. Northwest For. Range Exp. Stn., Gen. Tech. Rep., PNW	U.S. Forest Service, Pacific Northwest Forage and Range Experiment Station, USDA Forest Service, General Technical Report, PNW (Portland, Oreg.)
U.S. For. Serv., Pac. Southwest For. Range Exp. Stn., Res. Note	U.S. Forest Service, Pacific Southwest Forest and Range Experiment Station, Research Note (Berkeley, Calif.)
Var Foeda	Var Foeda (Stockholm, Sweden)
Versl. Landbouwkd. Onderz.	Verslagen van Landbouwkundige Onderzoekingen (Wageningen, Netherlands)
Vestsi Akad. Navuk B. SSR, Ser. Sel'skagaspad. Navuk	Vestsi Akademii Navuk Belaruskai SSR, Seryya Sel'skagaspadarchykh Navuk (Minsk, USSR)
Wasserwirtsch.-Wassertech.	Wasserwirtschaft-Wassertechnik (Berlin, Germany)
Water Res.	Water Research (Oxford, England)
Water Resour. Res.	Water Resources Research (Washington, D.C.)
Weed Abstr.	Weed Abstracts (Oxford, England)
Weed Res.	Weed Research (Oxford, England)
Weed Sci.	Weed Science (Champaign, Ill.)
Weed Sci. Soc. Am., Abstr., Meet.	Weed Science Society of America, Abstracts, Meetings (Champaign, Ill.)
Weeds	Weeds (Champaign, Ill.)

Weeds Today	Weeds Today (Minneapolis, Minn.)
Weeds Trees Turf	Weeds Trees and Turf (Cleveland, Ohio)
West. Soc. Weed Sci., Res. Prog. Rep.	Western Society of Weed Science, Research Progress Report (Logan, Utah)
Wien. Tieraerztl. Monatsschr.	Wiener Tieraerztliche Monatsschrift (Vienna, Austria)
Z. Jagdwiss.	Zeitschrift fuer Jagdwissenschaft (Hamburg, Germany)
Z. Pflanzenkr. (Pflanzenpathol.) Pflanzenschutz	Zeitschrift fuer Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz (Stuttgart, Germany)
Zentralbl. Bakteriol. Parasitenkd. Infektionskr. Abt. 2	Zentralblatt fuer Bakteriologie, Parasitenkunde und Infektionskrankheiten. Abteilung 2. (Jena, East Germany)
Zh. Eksp. Klin. Med.	Zhurnal Eksperimental'noi i Klinicheskoi Meditsiny (Yerevan, USSR)

Language Abbreviation

Ba - Bulgarian

Da - Danish

De - German

Es - Spanish

Fr - French

Hu - Hungarian

It - Italian

Ja - Japanese

Pl - Polish

Ru - Russian

Sk - Slovak

Sv - Swedish

Subject Index

2. Fungi - 9, 57, 62, 68, 88, 93, 106, 128, 129, 173, 174, 175, 176, 186, 193, 268, 325, 326, 341, 347, 352, 370, 400, 407, 460, 503, 510, 519, 557, 559

3. Algae - 407, 507, 508, 536

4. Microorganisms in General - 6, 8, 133, 183, 193, 218, 236, 237, 238, 255, 295, 325, 332, 371, 397, 418, 443, 465, 468, 496, 523, 527, 532, 534, 546

G. Animals

1. Mammals

a. Humans - 24, 41, 54, 55, 56, 92, 117, 178, 201, 202, 290, 337, 345, 366, 380, 422, 506

b. Other Mammals - 1, 17, 21, 33, 34, 51, 52, 53, 60, 61, 63, 85, 86, 94, 101, 102, 103, 104, 105, 112, 133, 143, 145, 156, 157, 158, 161, 162, 171, 172, 177, 186, 191, 192, 193, 213, 214, 215, 216, 226, 227, 231, 242, 250, 254, 260, 261, 262, 263, 264, 271, 283, 289, 291, 292, 293, 294, 296, 297, 298, 303, 304, 307, 313, 314, 319, 332, 337, 342, 344, 352, 353, 359, 361, 379, 393, 410, 411, 416, 478, 488, 509, 522, 558, 560, 563

2. Birds - 156, 159, 163, 185, 207, 350, 401, 428, 458, 472, 473, 474, 475

3. Aquatic - 19, 111, 162, 219, 245, 249, 254, 272, 278, 352, 358, 409, 417, 426, 427, 433, 438, 439, 440, 441, 448, 454, 467, 495, 502, 514, 520, 547, 548, 556, 560

4. Insects - 365

H. As Influenced by Light - 46, 47, 69, 119, 120, 121, 122, 123, 124, 125, 126, 127, 133, 254, 346, 352, 358, 368, 369, 382, 400, 402, 468, 512, 532, 562

I. As Influenced by Temperature - 46, 382, 486, 527

J. Miscellaneous - 254, 436, 528, 529

A

1. Ahlborg, U. G., J. E. Lindgren, and M. Mercier. 1974. Metabolism of pentachlorophenol. Arch. Toxicol. 32(4):271-281. Pestic. Abstr. 8(5):304, 1975.

2. Akamine, E. K. 1951. Persistence of 2,4-D toxicity in Hawaiian soils. Bot. Gaz. 112:313-318.

3. Aksenov, V. B. and I. V. Poluboyarinova. 1970. Hygienic study of the soil in connection with the use of 2,4-D herbicide. (Ru.) Gig. Sanit. 35(3):102-103. Health Aspects Pestic. 410, 1971.

4. Albright, R., N. Johnson, T. W. Sanderson, R. M. Farb, R. Melton, L. Fisher, G. R. Wells, W. R. Parsons, V. C. Scott, J. L. Speake, J. R. Stallworth, B. G. Moore, and A. W. Hayes. 1974. Pesticide residues in the top soil of five west Alabama counties. Bull. Environ. Contam. Toxicol. 12(3):378-384. [2,4,5-T; etc.]

5. Aldhous, J. R. 1967. 2,4-D residues in water following aerial spraying in a Scottish forest. Weed Res. 7:239-241.

6. Alexander, M. and M. I. H. Aleem. 1961. Effect of chemical structure on microbial decomposition of aromatic herbicides. J. Agric. Food Chem. 9(1):44-47. [2,4-D; MCPA; MCPB; 2,4,5-T; chlorophenols]

7. Alexander, M. 1964. Microbiology of pesticides and related hydrocarbons. P 15-42. In Principles and Applications in Aquatic Microbiology. H. Henkelekiass and N. C. Dondero (Eds.). John Wiley & Sons, Inc., New York, N.Y., 520 p. [2,4-D; MCPA; 2,4,5-T; 2,4-DB; 2,4-DP; etc.]

8. Alexander, M. 1965. Biodegradation: Problems of molecular recalcitrance and microbial fallibility. Advan. Appl. Microbiol. 7:35-80. [2-(2,4-DB; 2,4,5-T; 2-(2,4,5-TP); PCP; 2,4-D; etc.]

9. Alexander, M. 1965. Persistence and biological reactions of pesticides in soils. Proc. Soil Sci. Soc. Am. 29:1-7. [2,4,5-T; 2,4-D; chlorophenols; etc.]

10. Alexander, M. 1968. Degradation of pesticides by soil bacteria. P 270-289. In The Ecology of Soil Bacteria. T. R. G. Gray and D. Parkinson (Eds.). Liverpool University Press; Liverpool, England. [2,4-D]

11. Alexander, M. 1969. Microbial degradation and biological effects of pesticides in soil. P 209-240. In Soil Biology: Review and Research. United Nations Educational Scientific and Cultural Organization; Paris, France. [2,4-D; 2,4,5-T; 2,4-DP; MCPA; MCPB; silvex; 2,4-DB; 2,4,5-TP; etc.]

12. Alexander, M. 1971. Biochemical ecology of microorganisms. Annu. Rev. Microbiol. 25:361-392. Health Aspects Pestic. 6(1):1, 1973. [2,4-D; etc.]

13. Altom, J. D. and J. F. Stritzke. 1973. Degradation of dicamba, picloram, and four phenoxy herbicides in soils. Weed Sci. 21(6):556-560. Weed Abstr. 23(6):129, 1974. [2,4-D; dichlorprop; 2,4,5-T; silvex; etc.]

14. Aly, O. M. and S. D. Faust. 1964. Studies on the fate of 2,4-D and ester derivatives in natural surface waters. J. Agric. Food Chem. 12(6): 541-546.

15. Aly, O. M. and S. D. Faust. 1964. Study fate of 2,4-D in lakes and reservoirs. N.J. Agric. 46:12.

16. Andrusaitis, G. P. 1972. Environmental effects of pesticides. (Ru.) Latv. PSR Zinat. Akad. Vestis 4:44-49. Health Aspects Pestic. 6(3): 114, 1973. [2,4-D; etc.]

17. Anonymous. 1962. Residues of 2,4-D in milk from cows grazing on sprayed pastures. Mim., Boyce Thompson Institute for Plant Research, Inc.; Yonkers, New York. 12 p.

18. Anonymous. 1973. Pesticide residues. Herbicides. Int. Rice Res. Inst., Annu. Rep. for 1972. p 45-46. Weed Abstr. 23(8):182, 1974. [2,4-D; 2,4,5-T; etc.]

19. Anonymous. 1975. Great habitat for ducks -- Wildlife thrives in rice land. White River Journal (Des Arc, Arkansas); August 21, 1975. [2,4,5-T]

20. Anonymous. 1975. New analytical data supports safety of 2,4,5-T herbicide. News Release, Dow Chemical Co. (Midland, Michigan). 2 p.

21. Anonymous. 1975. The phenoxy herbicides. Council for Agricultural Science and Technology. Rep. No. 39. Headquarters Office: Department of Agronomy, Iowa State Univ.; Ames, Iowa 50010. 21 p. [2,4-D; 2,4,5-T; MCPA; silvex]

22. Anpalov, V. A. 1970. Investigating herbicide residues in soil and in strawberries. (Ru.) Khim. Sel'sk. Khoz. 8(10):474-477. Weed Abstr. 21(3):248, 1972. [2,4-D; sesone; 2,4-DEP; etc.]

23. Anpalov, V. A. 1974. Persistence of soil herbicides in leached-out chernozems of the Central Chernozem Belt. (Ru.) Khim. Sel'sk. Khoz. 12(9):53-55. Pestic. Abstr. 8(3):122, 1975. [2,4-D;sesone; etc.]

24. Armstrong, R. W., E. R. Eichner, D. E. Klein, W. F. Barthel, J. V. Bennett, V. Jonsson, H. Bruce, and L. E. Loveless. 1969. Pentachlorophenol poisoning in a nursery for newborn infants. II. Epidemiologic and toxicologic studies. J. Pediatr. 75(2):317-325.

25. Audus, L. J. 1949. The biological detoxication of 2,4-D in soil. Plant Soil 2(1):31-36.

26. Audus, L. J. 1950. Biological detoxication of 2,4-dichlorophenoxyacetic acid in soils: Isolation of an effective organism. Nature 166:356.

27. Audus, L. J. 1951. The biological detoxication of hormone herbicides in soil. Plant Soil 3(2):170-192. [2,4-D; 2,4,5-T; MCPA]

28. Audus, L. J. 1952. The decomposition of 2,4-dichlorophenoxyacetic acid and 2-methyl-4-chlorophenoxyacetic acid in the soil. J. Sci. Food Agric. 3:268-274.

29. Audus, L. J. and K. V. Symonds. 1955. Further studies on the breakdown of 2,4-D by a soil bacterium. Ann. Appl. Biol. 42:174-182.

30. Audus, L. J. 1960. Microbiological breakdown of herbicides in soil. P 1-19. In Herbicides and the Soil. E. K. Woodford and G. R. Sagar (Eds.). Blackwell Scientific Publications; Oxford, England. [2,4-D; MCPA; MCPB; 2,4,5-T; 2,4-DB]

31. Audus, L. J. 1964. Herbicide behavior in the soil. II. Interactions with soil microorganisms. P 163-206. In The Physiology and Biochemistry of Herbicides. L. J. Audus (Ed.). Academic Press; New York, N.Y. 555 p. [2,4-D; MCPA; 2,4,5-T; 2,4-DB; MCPB; 2,4-DP; 2,4-DEP; etc.]

32. Averitt, W. K. 1967. An evaluation of the persistence of 2,4-D amine in surface waters in the state of Louisiana. Proc. South. Weed Sci. Soc. 20:342-347.

B

33. Bache, C. A., D. D. Hardee, R. F. Holland, and D. J. Lisk. 1964. Absence of phenoxy acid herbicide residues in the milk of dairy cows at high feeding levels. J. Dairy Sci. 47:298-299. [2,4-D; 4-(2,4-DB); MCP]

34. Bache, C. A., D. J. Lisk, D. G. Wagner, and R. G. Warner. 1964. Elimination of 2-methyl-4-chlorophenoxyacetic acid and 4-(2-methyl-4-chlorophenoxybutyric)acid in the urine from cows. J. Dairy Sci. 47:93-95.

35. Bachelard, E. P. and M. E. Johnson. 1969. A study of the persistence of herbicides in soil. Aust. For. 33(1):19-24. Weed Abstr. 20(1): 58, 1971. [2,4,5-T; 2,4-D]

36. Bailey, G. W. 1966. Entry of biocides into water-courses. Proc. Symp. Agric. Waste Waters. Calif.: Water Resourc. Cent. Rep. 10:94-102. [2,4-D; 2,4,5-T; etc.]

37. Bailey, G. W., J. D. Pope, and D. R. Cochrane. 1968. The degradation, kinetics, and persistence of silvex under impound conditions. Weed Sci. Soc. Am., Abstr., 1968 Meet., p 43.

38. Bailey, G. W., A. D. Thruston, Jr., J. D. Pope,Jr., and D. R. Cochrane. 1970. The degradation kinetics of an ester of silvex and the persistence of silvex in water and sediment. Weed Sci. 18:413-419. Weed Abstr. 20(3):211, 1971.

39. Baluja, G., J. M. Franco, and M. A. Murado. 1973. Interference of phenoxyacetic acid derivatives in the estimation of monochloroacetic acid by the thioindigo method. Arch. Environ. Contam. Toxicol. 1(4): 375-380. Pestic. Abstr. 7(5):326, 1974. Pestic. Abstr. 8(5):330, 1975. [2,4-D; 2,4,5-T; MCPA]

40. Bamesberger, W. L. and D. F. Adams. 1966. An atmospheric survey for aerosol and gaseous 2,4-D compounds. Advan. Chem. Ser. 60:219-227. [2,4-D; 2,4,5-T; MCP; etc.]

41. Barthel, W. F., A. Curley, C. L. Thrasher, V. A. Sedlak, and R. Armstrong. 1969. Determination of pentachlorophenol in blood, urine, tissue, and clothing. J. Assoc. Off. Anal. Chem. 52(2):294-298.

42. Bartley, T. R. 1970. Abstract of progress report on herbicide monitoring. Proc. West. Soc. Weed Sci. 23:65-66. [2,4-D]

43. Bartley, T. R. and A. R. Hathrup. 1970. 2,4-D contamination and persistence in irrigation water. Proc. West. Soc. Weed Sci. 23:10-33.

44. Baskin, A. D. and E. A. Walker. 1953. The responses of tomato plants to vapors of 2,4-D and or 2,4,5-T formulations at normal and higher temperatures. Weeds 2:280-287.

45. Baur, J. R., R. W. Bovey, and J. D. Smith. 1969. Herbicide concentrations in live oak treated with mixtures of picloram and 2,4,5-T. Weed Sci. 17(4):567-570.

46. Baur, J. R., R. W. Bovey, and H. G. McCall. 1973. Thermal and ultraviolet loss of herbicides. Arch. Environ. Contam. Toxicol. 1(4):289-302. Pestic. Abstr. 7(5):277, 1974. [2,4,5-T; etc.]

47. Baur, J. R. and R. W. Bovey. 1974. Ultraviolet and volatility loss of herbicides. Arch. Environ. Contam. Toxicol. 2(3):275-288. Pestic. Abstr. 8(4):217, 1975. [2,4-D]

48. Begliomini, A. and A. Fravolini. 1973. Pesticide residues in animal feeds. IV. Chlorinated and phosphated pesticides in fish meals and in barley, corn and soybean flour of foreign origin. (It.) Arch. Vet. Ital. 24(5-6):183-190. Pestic. Abstr. 8(7):441, 1975. [2,4,5-T; 2,4-D; etc.]

49. Bell, G. R. 1957. Some morphological and biochemical characteristics of a soil bacterium which decomposes 2,4-D. Can. J. Microbiol. 3: 821-840.

50. Bell, G. R. 1960. Studies on a soil *Achromobacter* which degrades 2,4-D. Can. J. Microbiol. 6:325-337.

51. Belova, R. S. and L. A. Sokolova. 1971. Toxicological and hygienic evaluation of 2,4-D γ butyric acid in terms of food hygiene. (Ru.) Gig. Sanit. 36(11):36-39. Health Aspects Pestic. 5:233, 1972.

52. Berndt, W. O. and F. Koschier. 1973. The renal transport of 2,4-dichlorophenoxyacetic acid (2,4-D) and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) in vitro. Toxicol. Appl. Pharmacol. 25(3):441-442.

53. Berndt, W. O. and F. Koschier. 1973. In vitro uptake of 2,4-dichlorophenoxyacetic acid (2,4-D) and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) by renal cortical tissue of rabbits and rats. Toxicol. Appl. Pharmacol. 26(4):559-570. Pestic. Abstr. 7(4):257, 1974. Weed Abstr. 23(5):101, 1974.

54. Bevenue, A., T. J. Haley, and H. W. Klemmer. 1967. A note on the effects of a temporary exposure of an individual to pentachlorophenol. Bull. Environ. Contam. Toxicol. 2(5):293-296.

55. Bevenue, A., J. Wilson, L. J. Casarett, and H. W. Klemmer. 1967. A survey of pentachlorophenol content in human urine. Bull. Environ. Contam. Toxicol. 2(6):319-332.

56. Bevenue, A., M. L. Emerson, L. J. Casarett, and W. L. Yauger, Jr. 1968. A sensitive gas chromatographic method for the determination of pentachlorophenol in human blood. J. Chromatogr. 38:467-472.

57. Bever, W. M. and F. W. Slife. 1948. Effect of 2,4-D in culture medium on the growth of three pathogenic fungi. Phytopathology 38:1037-1038.

58. Biggar, J. W. 1970. Pesticide movement in soil water. P 107-119. In International Symposium on Pesticides in the Soil: Ecology, Degradation and Movement. Mich. State Univ., East Lansing, Mich. Weed Abstr. 21(3):255, 1972. [2,4-D]

59. Bisal, F. 1947. Residual effects of 2,4-D. Proc. North Cent. Weed Control Conf. 4:7-8.

60. Bjerke, E. L., J. L. Herman, P. W. Miller, and J. H. Wetters. 1971. A residue study of phenoxy herbicides in milk and cream. Am. Chem. Soc., Abstr. Pap., 162nd Nat. Meet., Pestic. Chem. Sec., Abstr. No. 57. [2,4-D; 2,4,5-T; MCPA; etc.]

61. Bjerke, E. L., J. L. Herman, P. W. Miller, and J. H. Wetters. 1972. Residue study of phenoxy herbicides in milk and cream. J. Agric. Food Chem. 20(5):963-967. Health Aspects Pestic. 6(1):10, 1973. Weed Abstr. 22(6):127, 1973. [2,4-D; 2,4,5-T; MCPA; silvex; etc.]

62. Bocks, S. M., J. R. Lindsay-Smith, and R. O. C. Norman. 1964. Hydroxylation of phenoxyacetic acid and anisole by *Aspergillus niger* (van Tiegh). Nature 201:398.

63. Boehme, C. and W. Grunow. 1974. Metabolism of 4-(2,4,5-trichlorophenoxy)-butyric acid in rats. (De.) Arch. Toxikol. 32(3):227-231. Biol. Abstr. 58(11):6882, 1974. Pestic. Abstr. 8(5):303, 1975.

64. Bollag, J. M., C. S. Helling, and M. Alexander. 1967. Metabolism of 4-chloro-2-methylphenoxyacetic acid by soil bacteria. Appl. Microbiol. 15(6):1393-1398.

65. Bollag, J. M., M. A. Loos, and M. Alexander. 1967. Enzymatic degradation of phenoxyalkanoate herbicides. Bacteriol. Proc., Abstr. A-42, p 8. [2,4-D; MCPA; 2,4-dichlorophenol; 2-methyl-4-chlorophenol]

66. Bollag, J. M., G. G. Briggs, J. E. Dawson, and M. Alexander. 1968. 2,4-D metabolism - enzymatic degradation of chlorocatechols. J. Agric. Food Chem. 16(5):829-833.

67. Bollag, J. M., C. S. Helling, and M. Alexander. 1968. 2,4-D metabolism - enzymatic hydroxylation of chlorinated phenols. J. Agric. Food Chem. 16(5):826-828.

68. Bollag, J. M. 1974. Biochemical transformation of pesticides by soil fungi. P 34-56. In Microbial Ecology. A. I. Laskin and H. Lechevalier (Eds.). CRC Press; Cleveland, Ohio. 191 p. [4-chlorophenoxyacetic acid; 4-chloro-2-hydroxyphenoxyacetic acid; 2-chlorophenoxyacetic acid; 2,4-D; 2,4-dichloro-5-hydroxyphenoxyacetic acid; 2,5-dichloro-4-hydroxyphenoxyacetic acid; phenoxybutyric acid; pentachlorophenol; etc.]

69. Boval, B. and J. M. Smith. 1973. Photodecomposition of 2,4-dichlorophenoxyacetic acid. Chem. Eng. Sci. 28(9):1661-1675. Pestic. Abstr. 7(8):492-493, 1973. [2,4-D; 2,4-DCP]

70. Bovey, R. W., F. R. Miller, and J. D. Diaz-Colon. 1968. Growth of crops in soils after herbicidal treatments for brush control in the tropics. Agron. J. 60:678-679. [2,4-D; 2,4,5-T; etc.]

71. Bovey, R. W. and J. R. Baur. 1972. Persistence of 2,4,5-T in grasslands of Texas. Bull. Environ. Contam. Toxicol. 8(4):229-233. Health Aspects Pestic. 6(6):294, 1973. Weed Abstr. 22(8):198, 1973.

72. Bovey, R. W., E. Burnett, C. Richardson, M. G. Merkle, J. R. Baur, and W. G. Knisel. 1974. Occurrence of 2,4,5-T and picloram in surface runoff water in the Blacklands of Texas. J. Environ. Qual. 3(1):61-64. Pestic. Abstr. 7(5):281, 1974. Weed Abstr. 23(9):217, 1974.

73. Bovey, R. W., E. Burnett, C. Richardson, J. R. Baur, M. G. Merkle, and D. E. Kissel. 1975. Occurrence of 2,4,5-T and picloram in subsurface water in the Blacklands of Texas. J. Environ. Qual. 4:103-106.

74. Brady, H. A. 1973. Persistence of foliar-applied 2,4,5-T in woody plants. Proc. South. Weed Sci. Soc. 26:282.

75. Bristol, D., L. Cook, M. Koterba, and D. C. Nelson. 1974. Determination of trace residues of 2,4-D and 2,4-dichlorophenol in potato tubers. Am. Chem. Soc., Abstr. Pap., 168th Nat. Meet., Pestic. Chem. Sec., Abstr. No. 44. Weed Abstr. 24(7):175, 1975.

76. Brooks, G. T. 1972. Pesticides in Britain. P 61-114. In Environmental Toxicology of Pesticides. F. Matsumura, G. M. Boush, and T. Misato (Eds.). Academic Press; New York, N.Y. [2,4-D; MCPA; MCPB; dichlorprop; 2,4,5-T; mecoprop; etc.]

77. Brown, E. and Y. A. Nishioka. 1967. Pesticides in water. Pesticides in selected western streams - a contribution to the National Program. Pestic. Monit. J. 1(2):37-46. [2,4-D; 2,4,5-T]

78. Brown, J. W. and J. W. Mitchell. 1948. Inactivation of 2,4-D in soil as affected by soil moisture, temperature, the addition of manure, and autoclaving. Bot. Gaz. 109:314-323.

79. Bruns, V. F., B. L. Carlile, and A. D. Kelley. 1973. Responses and residues in sugarbeets, soybeans, and corn irrigated with 2,4-D or silvex-treated water. U.S. Dep. Agric., Tech. Bull. No. 1476, 32 p. Weed Abstr. 24(2):34, 1975.

80. Buhler, D. R., M. E. Rasmusson, and H. S. Nakaue. 1973. Occurrence of hexachlorophene and pentachlorophenol in sewage and water. Environ. Sci. Technol. 7(10):929-934.

81. Burcar, P. J., R. L. Wershaw, M. C. Goldberg, and L. Kahn. 1967. Gas chromatographic study of the behavior of the isooctyl ester of 2,4-D under field conditions in North Park, Colorado. Anal. Instrum. 4: 215-224.

82. Burger, K., I. C. MacRae, and M. Alexander. 1962. Decomposition of phenoxyalkyl carboxylic acids. Proc. Soil Sci. Soc. Am. 26:243-246. [MCPA; 2,4-D; 2,4,5-T; 2,4,5-TB; 2,4-DP; 2,4-DB; MCPB]

83. Burschel, P. 1963. The behavior in the soil of pesticides important in forestry. (De.) Forstarchiv 34:221-233. [2,4-D; MCPA; 2,4,5-T; etc.]

84. Burt, E. O. 1957. Review of literature on brush control. Tech. Note No. 1. Prepared for Air Force Armament Center, Air Research and Development Command, U.S. Air Force; Eglin Air Force Base, Fla., 46 p. [2,4-D; 2,4,5-T; etc.]

85. Burton, J. A., T. H. Gardiner, and L. S. Schanker. 1974. Absorption of herbicides from the rat lung. Arch. Environ. Health 29(1):31-33. [2,4-D; 2,4,5-T; etc.]

86. Buslovich, S. Yu., I. V. Voinova, and M. G. Mil'china. 1973. Distribution of herbicidal chloro-phenoxy-acids in the body of albino rats. (Ru.) Gig. Tr. Prof. Zabol. 17(3):35-37. Pestic. Abstr. 7(1):32, 1974. Weed Abstr. 24(3):54, 1975. [2,4-D]

87. Byast, T. H. and R. J. Hance. 1975. Degradation of 2,4,5-T by South Vietnamese soils incubated in the laboratory. Bull. Environ. Contam. Toxicol. 14(1):71-76. [2,4,5-T]

88. Byrde, R. J. W. and D. Woodcock. 1957. Fungal detoxication. 2. The metabolism of some phenoxy-*n*-alkylcarboxylic acids by *Aspergillus niger*. Biochem. J. 65:682-686.

C

89. Canada Department of Agriculture, Research Station, Regina. 1971. Herbicide residues. P 262-265. In Research Branch Report Canada Department of Agriculture; Regina, Saskatchewan, Canada. Weed Abstr. 23(1): 21, 1974. [2,4-D]

90. Carey, A. E., G. B. Wiersma, H. Tai, and W. G. Mitchell. 1973. Organochlorine pesticide residues in soils and crops of the corn belt region, United States - 1970. Pestic. Monit. J. 6(4):369-376. Health Aspects Pestic. 6(9):474-475, 1973. [2,4-D; 2,4-DB; MCPB; 2,4,5-T]

91. Carringer, R. D. and J. B. Weber. 1974. Influence of iron hydrous oxides on the adsorption-desorption of selected herbicides by soil colloids. Proc. South. Weed Sci. Soc. 27:332. Weed Abstr. 24(7):177, 1975. [2,4-D]

92. Casarett, L. J., A. Bevenue, W. L. Yauger, Jr., and S. A. Whalen. 1969. Observations of pentachlorophenol in human blood and urine. J. Am. Ind. Hyg. Assoc. 30(4):360-366.

93. Catroux, G., J. C. Fournier, and G. Soulas. 1973. Introduction to the biodegradation of herbicides. (Fr.) Proc. Eur. Weed Res. Counc., Symp. Herbic.-Soil (1973) 141-150. Weed Abstr. 23(9):219, 1974. [2,4-D; 2,4-DB]

94. Chadwick, R. W. and J. J. Freal. 1972. Comparative acceleration of lindane metabolism to chlorophenols by pre-treatment of rats with lindane or with DDT and lindane. Food Cosmet. Toxicol. 10:789-795. [2,4,5-trichlorophenol; etc.]

95. Chandra-Singh, D. J. and I. V. Surba Rao. 1969. Residual effects of herbicides in soils. Andhra Agric. J. 16(4):112-119. Weed Abstr. 20 (1):58, 1971. [2,4-D; etc.]

96. Chang, W. L. 1973. Persistence of rice and cotton herbicides in soils. J. Taiwan Agric. Res. 22(2):111-118. Weed Abstr. 23(11):293, 1973. [MCPA]

97. Chkanikov, D. I., A. M. Makeyev, N. N. Pavlova, L. V. Grigor'eva, V. P. Dubovoy, and O. V. Klimov. 1975. Significance of metabolic studies on 2,4-D for the development of herbicide residue analytical methods. (Ru.) Khim. Sel'sk. Khoz. 13(1):58-63. Pestic. Abstr. 8(8):538, 1975.

98. Choi, J. and S. Aomine. 1972. Effects of soil on the activity of pentachlorophenol. Soil Sci. Plant Nutr. 18(6):255-260. Weed Abstr. 23 (7):152, 1972.

99. Chow, P. N. P. 1975. Absorption of herbicides by wheat as influenced by the phenoxy compound. J. Agric. Food Chem. 23(4):730-736. [2,4-D; MCPA; 2,4,5-T; silvex; etc.]

100. Chu, J. and E. J. Kirsch. 1973. Utilization of halophenols by a pentachlorophenol metabolizing bacterium. Dev. Ind. Microbiol. 14:264-273. Weed Abstr. 23(7):152, 1973. [2,3,4,6-tetrachlorophenol; 2,4,6-trichlorophenol]

101. Clark, D. E., J. E. Young, R. L. Younger, L. M. Hunt, and J. K. McLaran. 1964. The fate of 2,4-D in sheep. J. Agric. Food Chem. 12(1):43-45.

102. Clark, D. E., H. R. Crookshank, J. S. Palmer, and R. D. Radeleff. 1971. Tissue residues of chlorophenoxy herbicides in sheep and cattle. Am. Chem. Soc., Abstr. Pap., 161st Nat. Meet., Pestic. Chem. Sec., Abstr. No. 10. Weed Abstr. 20(6):438, 1971. [2,4,5-T; 2,4-D]

103. Clark, D. E., H. R. Crookshank, R. D. Radeleff, J. S. Palmer, and W. Binns. 1971. Chlorophenoxy acid residues in sheep and cattle. Am. Chem. Soc., Abstr. Pap., 162nd Nat. Meet., Pestic. Chem. Sec., Abstr. No. 32. Weed Abstr. 21(3):251, 1972. [2,4,5-T; 2,4-D]

104. Clark, D. E. and J. S. Palmer. 1971. Residual aspects of 2,4,5-T and an ester in sheep and cattle with observations on concomitant toxicological effects. J. Agric. Food Chem. 19(4):761-764. Weed Abstr. 21(3):252, 1972.

105. Clark, D. E., J. S. Palmer, R. D. Radeleff, H. R. Crookshank, and F. M. Farr. 1975. Residues of chlorophenoxy acid herbicides and their phenolic metabolites in tissues of sheep and cattle. J. Agric. Food Chem. 23(3):573-578. Pestic. Abstr. 8(8):536, 1975. [2,4-D; silvex; 2,4,5-T; 2,4,5-trichlorophenol]

106. Clifford, D. R. and D. Woodcock. 1964. Metabolism of phenoxyacetic acid by *Aspergillus niger* van Tiegh. Nature 203(4946):763.

107. Cochrane, D. R., J. D. Pope, Jr., H. P. Nicholson,and G. W. Bailey. 1967. The persistence of silvex in water and hydrosoil. Water Resour. Res. 3(2):517-523.

108. Cochrane, W. P. and J. B. Russell. 1974. Residues in wheat and soil treated with the mixed butyl esters of 2,4-D. Can. J. Plant Sci. 55:323-325. Pestic. Abstr. 8(6):340, 1975.

109. Cohen, J. M. and C. Pinkerton. 1966. Widespread translocation of pesticides by air transport and rain-out. Advan. Chem. Ser. 60: 163-176. [2,4-D; 2,4,5-T; etc.]

110. Commonwealth Bureau of Soils. 1958. Bibliography on the Fate and Decomposition of Organic Weedkillers in Soils (1948-1958). (Rothamsted Experimental Station; Harpenden, England.) 18 p. [2,4-D; MCPA; 2,4,5-TP; 2,4-DB; MCPB; 2,4-dichlorophenoxyethyl sulfate; 2,4-dichlorophenoxyethanol; PCP]

111. Cope, O. B. 1966. Contamination of the freshwater ecosystem by pesticides. J. Appl. Ecol. 3(Suppl):33-44. [2,4-D; 2,4,5-T; silvex]

112. Courtney, K. D. 1970. 2,4,5-T in the rat: Excretion pattern, serum levels, placental transport and metabolism. P 277-283. In Pesticides Symposium, Inter-American Conference on Toxicology and Occupational Medicine. W. B. Deichmann (Ed.). Halos and Associates, Inc., Miami, Fla.

113. Crafts, A. S. 1949. Toxicity of 2,4-D in California soils. Hilgardia 19(5):141-158.

114. Crafts, A. S. 1953. Herbicides. Annu. Rev. Plant Physiol. 4:253-282. [2,4-D; 2,4,5-T; MCPA; etc.]

115. Crafts, A. S. 1964. Herbicide behavior in the plant. P 75-110. In The Physiology and Biochemistry of Herbicides. L. J. Audus (Ed.). Academic Press, New York, N.Y. 555 p. [2,4-D; 2,4,5-T; etc.]

116. Crane, J. C., L. C. Erickson, and B. L. Brannaman. 1965. 2,4,5-T residues in apricot fruits. Proc. Am. Soc. Hortic. Sci. 87:123-127.

117. Cranmer, M. and J. Freal. 1970. Gas chromatographic analysis of pentachlorophenol in human urine by formation of alkyl ethers. Life Sci., Part 2. Biochem., Gen. Mol. Biol. 9(3):121-128.

118. Crockett, A. B., G. B. Wiersma, H. Tai, W. G. Mitchell, P. F. Sand, and A. E. Carey. 1974. Pesticide residue levels in soils and crops, FY-70 - National Soils Monitoring Program (II). Pestic. Monit. J. 8(2):69-97. Pestic. Abstr. 8(5):282-283, 1975. [2,4-D]

119. Crosby, D. G. and H. O. Tutass. 1966. Photodecomposition of 2,4-D. J. Agric. Food Chem. 14(6):596-601.

120. Crosby, D. G. 1969. Experimental approaches to pesticide photodecomposition. Residue Rev. 25:1-12. [2,4-D; etc.]

121. Crosby, D. G. and M. Y. Li. 1969. Herbicide photodecomposition. P 321-363. In Degradation of Herbicides. P. G. Kearney and D. D. Kaufman (Eds.). Marcel Dekker, Inc., New York, N.Y. 394 p. [2,4-D; 2,4-DB; 2,4,5-T; MCPA; etc.]

122. Crosby, D. G. and A. S. Wong. 1970. The effect of light on the phenoxy herbicides. Am. Chem. Soc., Abstr. Pap., 160th Nat. Meet., Pestic. Chem. Sec., Abstr. No. 22. Weed Abstr. 20(6):433, 1971.

123. Crosby, D. G. and M. Nakawa. 1971. Photodecomposition of 2,4-dichloro-4'-nitrodiphenylether (TOK). Am. Chem. Soc., Abstr. Pap., 162nd Nat. Meet., Pestic. Chem. Sec., Abstr. No. 30. Weed Abstr. 21(2):181, 1972. [2,4-dichlorophenol; etc.]

124. Crosby, D. G. and A. S. Wong. 1971. Photodecomposition of 2,4,5-T. Am. Chem. Soc., Abstr. Pap., 161st Nat. Meet., Pestic. Chem. Sec., Abstr. No. 72. [2,4,5-T; 2,4,5-trichlorophenol; 2,4-D; etc.]

125. Crosby, D. G. 1972. The photodecomposition of pesticides in water. Advan. Chem. Ser. 111:173-188. Weed Abstr. 22(8):197, 1973. [2,4-D; 4-chlorophenoxyacetic acid; PCP; etc.]

126. Crosby, D. G. and A. S. Wong. 1973. Photodecomposition of 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) in water. J. Agric. Food Chem. 21(6):1052-1054. Pestic. Abstr. 7(3):123, 1974. Weed Abstr. 24(3):54-55, 1975. [2,4,5-trichlorophenol; 2,4-D; etc.]

127. Crosby, D. G. and A. S. Wong. 1973. Photodecomposition of p-chlorophenoxyacetic acid. J. Agric. Food Chem. 21(6):1049-1052. Pestic. Abstr. 7(3):123, 1974. Weed Abstr. 24(4):80-81, 1975.

128. Cserjesi, A. J. 1972. Detoxification of chlorinated phenols. Int. Biodeterior. Bull. 8(4):135-138. Pestic. Abstr. 7(8):530, 1972. [PCP]

129. Cullimore, D. R. 1971. Interaction between herbicides and soil microorganisms. Residue Rev. 35:65-80. [2,4-D; MCPA; etc.]

D

130. Daly, R. W. and H. H. Funderburk, Jr. 1969. Degradation of 2,4-DBEE to 2,4-D in water. Weed Sci. Soc. Am., Abstr., 1969 Meet., Abstr. No. 85. Weed Abstr. 20(5):372, 1971.

131. Daly, R. W. 1972. Degradation of 2,4-DBEE in an aquatic environment. Diss. Abstr. Int. 32(7):3806B. Health Aspects Pestic. 5:494, 1972. Weed Abstr. 22(4):74, 1973.

132. Davis, F. S., R. E. Meyer, J. R. Baur, and R. W. Bovey. 1972. Herbicide concentrations in honey mesquite phloem. Weed Sci. 20(3):264-267. Weed Abstr. 22(4):71, 1973. [2,4,5-T]

133. Davis, F. S. 1973. 2,4,5-T. Am. Inst. Chem. Eng. Symp. Ser. 69(129): 269-278. [2,4-D; MCPA; silvex]

134. Davis, G. G. 1974. Fluometuron and 2,4,5-T residues in soil, sediment, runoff water, and percolation water. Diss. Abstr. Int. 34(11):5285B-5286B. Weed Abstr. 24(5):127, 1975.

135. Debelyi, A. S., E. V. Troshko, and G. P. Baginskaya. 1969. Detection of 2,4-D residues in the plant tissues of valerian *(Valeriana officinalis)*. (Ru.) Agrokhimiya 6(10):94-98. Health Aspects Pestic. 5:216, 1969. Weed Abstr. 20(3):206, 1971.

136. Debelyi, A. S. and E. V. Troshko. 1970. TCA residues in tissues of peppermint and rest-furrow. (Ru.) Khim. Sel'sk. Khoz. 8(10):780-782. Weed Abstr. 21(3):249, 1972. [2,4-D; etc.]

137. Deli, J. and G. F. Warren. 1971. Adsorption, desorption, and leaching of diphenamid in soils. Weed Sci. 19(1):67-69. Weed Abstr. 21(2): 176, 1972. [2,4-D; etc.]

138. DeMarco, J., J. M. Symonds, and G. G. Robeck. 1967. Behavior of synthetic organics in stratified impoundments. J. Am. Water Works Assoc. 59:965-976. [2,4-D; etc.]

139. Demint, R. J. and P. A. Frank. 1971. Effect of container composition on herbicide residues in water. Proc. West. Soc. Weed Sci. 24:27-30. Weed Abstr. 22(9):229, 1973. [2,4-D; etc.]

140. DeRose, H. R. 1946. Persistence of some plant growth-regulators when applied to the soil in herbicidal treatments. Bot. Gaz. 107:583-589. [2,4-D; MCPA; 2,4,5-T; etc.]

141. DeRose, H. R. and A. S. Newman. 1947. The comparison of the persistence of certain plant growth-regulators when applied to soil. Proc. Soil Sci. Soc. Am. 12:222-226. [2,4-D; MCPA; 2,4,5-T]

142. Dexter, A. G., F. W. Slife, and H. S. Butler. 1971. Detoxification of 2,4-D by several plant species. Weed Sci. 19(6):721-726. Weed Abstr. 22(5):93, 1974.

143. Donald, E. C., E. J. Young, R. L. Younger, L. M. Hunt, and J. K. McLaren. 1964. The fate of 2,4-dichlorophenoxyacetic acid in sheep. J. Agric. Food Chem. 12(1):43-45.

144. Dubovoi, V. P., D. I. Chkanikov, and A. M. Makeev. 1974. Certain characteristics of 2,4-D decarboxylation in plants. Sov. Plant Physiol. - Engl. Transl. 20(6):1073-1078. Pestic. Abstr. 8(9):602, 1976.

145. Duesberg, R. and L. Friederici. 1956. The influence of 2,4-D, amino capronic acid, T-vitamin Goetsch and WGH-SOLCO on the bone marrow growth in vitro. (De.) Arch. Exp. Pathol. Pharmacol. 228:347-360.

146. Dupuy, A. J. and J. A. Schulze. 1972. Selected water quality records for Texas surface waters, 1970 water year. Tex. Water Dev. Board, Rep. No. 149. Health Aspects Pestic. 6(5):241, 1973. [2,4-D; 2,4,5-T; silvex]

147. Duxbury, J. M., J. M. Tiedje, M. Alexander, and J. E. Dawson. 1970. 2,4-D metabolism: Enzymatic conversion of chloromaleylacetic acid to succinic acid. J. Agric. Food Chem. 18(2):199-201. Weed Abstr. 20(1):62, 1971.

E

148. Eames, A. J. 1950. Persistence of 2,4-D in plant tissues. Comments and Communications. Science 112:601-602.

149. Edwards, C. A. 1964. Effects of pesticide residues on soil invertebrates and plants. Br. Ecol. Soc. Symp. 5:239-261. [MCPA; 2,4-D; 2,4,5-T]

150. Edwards, C. A. 1973. Herbicides. P 107-108. In Persistent Pesticides in the Environment. CRC Press, Cleveland, Ohio. 79 p. Pestic. Abstr. 8(3):124, 1975. [2,4-D; 2,4,5-T; silvex; MCPA; etc.]

151. Edwards, C. A. 1975. Factors that affect the persistence of pesticides in plants and soils. P 39-56. In Pesticide Chemistry-3. Applied Chemistry Division, 3rd International Congress of Pesticide Chemistry Including the Symposium on Dispersion Dynamics of Pollutants in the Environment. Held at Helsinki, Finland; 3-9 July 1974. P. Varo (Ed.). Butterworths & Co. (Publishers) Ltd.; London, England. 299 p.

152. Edwards, W. M. and B. L. GLass. 1971. Methoxychlor and 2,4,5-T in lysimeter percolation and runoff water. Bull. Environ. Contam. Toxicol. 6(1):81-84. Weed Abstr. 21(3):252, 1972.

153. Eidel'nant, N. M. and V. I. Mostovaya. 1970. On the relationships between the external symptoms of abnormal growth of a plant and its content of intact 2,4-D. (Ru.) Khim. Sel'sk. Khoz. 8(9):694-697. Weed Abstr. 21(3):234, 1972.

154. Elrick, D. E. and A. H. Maclean. 1966. Movement, adsorption and degradation of 2,4-D in soil. Nature 212(5057):102-104.

155. Erickson, L. C., B. L. Brannaman, and C. W. Coggins, Jr. 1963. 2,4-D residues: Residues in stored lemons treated with various formulations of 2,4-D. J. Agric. Food Chem. 11(5):437-440.

156. Erne, K. 1966. Distribution and elimination of chlorinated phenoxyacetic acids in animals. Acta Vet. Scand. 7:240-256.

157. Erne, K. 1966. Studies on the animal metabolism of phenoxyacetic herbicides. Acta Vet. Scan. 7(3):264-271.

158. Erne, K. 1966. Studies on the analytical chemistry and toxicology of phenoxy herbicides. National Veterinary Institute; Stockholm, Sweden. 40 p. [2,4-D; MCPA; 2,4,5-T; 2,4-DP; MCPP; silvex; 2,4-DB; 2,4,5-TB; MCPB; etc.]

159. Erne, K. and N. E. Björklund. 1970. Nephrotoxic effects of phenoxyacetic herbicides. P 768-769. Summaries of Papers; 7th International Congress of Plant Protection. Paris, France; 21-25 September 1970. Weed Abstr. 20(5):373, 1971. [2,4-D; 2,4,5-T]

160. Erne, K. and U. von Haartman. 1973. Phenoxy herbicide residues in woodland berries and mushrooms. (Sv.) Var Foeda 25(8-9):146-154. Weed Abstr. 24(7):175-176, 1975. [2,4-D; 2,4,5-T]

161. Erne, K. 1973. Herbicides and wild animals - several recent findings: Starting point of the investigations-reindeer deaths in Lapland. Biol. Abstr. 58(12), Abstr. No. 69704. [2,4-D; 2,4,5-T]

162. Erne, K. 1974. Weed killers and wildlife - some recent results. (De.) Z. Jagdwiss. 20(1):68-70. Pestic. Abstr. 8(4):225, 1975. [2,4-D; 2,4,5-T]

163. Erne, K. and I. Sperber. 1974. Renal tubular transfer of phenoxyacetic acids in the chicken. Acta Pharmacol. Toxicol. 35(3):233-241. Pestic. Abstr. 8(9):582, 1976. [2-chlorophenoxyacetic acid; 4-chlorophenoxyacetic acid; 2,4-D; 2,4,5-T]

164. Evans, J. O. and D. R. Duseja. 1973. Herbicide contamination of surface runoff waters. Environmental Protection Technology Series. EPA-R2-73-266, U.S. Environmental Protection Agency, Office of Research and Monitoring; Washington, D.C. 100 p. [2,4-D; 2,4,5-T]

165. Evans, W. C. and B. S. W. Smith. 1954. The photochemical inactivation and microbial metabolism of the chlorophenoxyacetic acid herbicides. Biochem. J. 57:30. [2,4-D; etc.]

166. Evans, W. C. and P. Moss. 1957. The metabolism of the herbicide p-chlorophenoxyacetic acid by a soil microorganism - the formation of a β-chloromuconic acid on ring fission. Biochem. J. 65:8 P.

167. Evans, W. C. 1958. Metabolism of aromatic compounds by lower plants. The chlorophenoxyacetic acid herbicides. Vol. 10, p 474-476. In Encyclopedia of Plant Physiology. W. Ruhland (Ed.). [2,4-D; MCPA]

168. Evans, W. C., J. K. Guant, and J. I. Davies. 1961. The metabolism of the chlorophenoxyacetic acid herbicides by soil micro-organisms. Proc. Int. Congr. Biochem. 9:364-365. [4-chlorophenoxyacetic acid; 2,4-D; MCPA; 2,4-dichlorophenol; etc.]

169. Evans, W. C., B. S. W. Smith, H. N. Fernley, and J. I. Davies. 1971. Bacterial metabolism of 2,4-dichlorophenoxy-acetate. Biochem. J. 122:543-551.

170. Evans, W. F. 1971. A facility for the biological treatment of a complex chlorophenolic waste. Proc. Ark. Acad. Sci. 25:38-40. Pestic. Abstr. 7(1):5, 1974. Weed Abstr. 24(3):54, 1975. [2,4,5-T; 2,4-D]

F

171. Fang, S. C., M. L. Montgomery, and V. H. Freed. 1972. The metabolism and distribution of 2,4,5-T in female rats. Toxicol.Appl. Pharmacol. 22(2):317-318. Health Aspects Pestic. 6(5):272, 1973. Weed Abstr. 23(7):150, 1974.

172. Fang, S. C., E. Fallin, M. L. Montgomery, and V. H. Freed. 1973. The metabolism and distribution of 2,4,5-trichlorophenoxyacetic acid in female rats. Toxicol. Appl. Pharmacol. 24:555-563. Health Aspects Pestic. 6(9):505, 1973.

173. Faulkner, J. K. and D. Woodcock. 1961. Fungal detoxication. Part V. Metabolism of o- and p-chlorophenoxyacetic acids by *Aspergillus niger*. J. Chem. Soc., p 5397-5400.

174. Faulkner, J. K. and D. Woodcock. 1964. Metabolism of 2,4-D by *Aspergillus niger* van Tiegh. Nature 203(4947):865.

175. Faulkner, J. K. and D. Woodcock. 1965. Fungal detoxication. Part VII. Metabolism of 2,4-D and 4-chloro-2-methylphenoxyacetic acids by *Aspergillus niger*. J. Chem. Soc., Part I, p 1187-1191.

176. Faulkner, J. K. and D. Woodcock. 1966. Fungal detoxication. Part VIII. Metabolism of substituted 4-phenoxybutyric acids by *Aspergillus niger*. J. Chem. Soc., Sec. C, p 884-887. [4-(2-chlorophenoxy)butyric acid; 4-(2,4-dichlorophenoxybutyric acid; 4-(4-chlorophenoxy)butyric acid; 4-(3-chlorophenoxy)butyric acid; 2,4,5-T; 4-(4-chloro-2-methylphenoxy) butyric acid]

177. Fedorova, L. N. and R. S. Belova. 1974. Incorporation of 2,4-D in animal organs, routes and dynamics of excretion. (Ru.) Gig. Sanit. 39(2):105-107. Pestic. Abstr. 7(8):528, 1974.

178. Feldmann, R. J. and H. I. Maibach. 1974. Percutaneous penetration of some pesticides and herbicides in man. Toxicol. Appl. Pharmacol. 28(1):126-132. Weed Abstr. 23(12):314-315, 1974. [2,4-D; etc.]

179. Feltz, H. R., W. T. Sayers, and H. P. Nicholson. 1971. National monitoring program for the assessment of pesticide residues in water. Pestic. Monit. J. 5(1):54-62. [2,4-D; 2,4,5-T; silvex; etc.]

180. Fernley, H. N. and W. C. Evans. 1959. Metabolism of 2,4-dichlorophenoxyacetic acid by soil pseudomonas: Isolation of α-chloromuconic acid as an intermediate. Proc. Biochem. Soc. 73:22P.

181. Fitzgerald, C. H. and W. H. McComb. 1970. Damage to pine released from hardwood competition by 2,4-D. J. For. 68:164-165.

182. Fletcher, W. W., P. B. Dickenson, J. D. Forrest, and J. C. Raymond. 1957. The effect of soil-applications of certain substituted phenoxyacetic and phenoxybutyric acids on the growth and nodulation of *Trifolium repens sylvestre*. Phyton - ØYTON 9(1):41-46. [2,4-D; MCPA; 2,4,5-T; MCPB; 2,4-DB]

183. Flieg, O. 1952. Persistence of 2,4-D in the ground concerning microbial effects, mobility and withdrawal. (De.) Mitt. Biol. Zentralanst. Land Forstwirtsch.; Berlin-Dahlem; 74:133-135.

184. Foster, R. K. and R. B. McKercher. 1973. Laboratory incubation studies of chlorophenoxyacetic acids in chernozemic soils. Soil Biol. Biochem. 5(3):333-337. Health Aspects Pestic. 6(9):505, 1973. Weed Abstr. 23(3):60, 1974. [2,4,5-T; 2,4-D; MCPA]

185. Foster, T. S. 1974. Physiological and biological effects of pesticide residues in poultry. Residue Rev. 51:69-121. Weed Abstr. 23(11): 292, 1974. [2,4-D; 2,4-DB; dichlorprop; MCPA; MCPB; mecoprop; PCP; 2,4,5-T]

186. Foy, C. L. 1969. The chlorinated alifatic acids. P 207-253. In Degradation of Herbicides. P. C. Kearney and D. D. Kaufman (Eds.). Marcel Dekker, Inc., New York, N.Y. 394 p. [2,4,5-T; etc.]

187. Frank, P. A. and R. J. Demint. 1969. Dissipation rates of dalapon and 2,4-D in irrigation water. Weed Sci. Soc. Am., Abstr., 1969 Meet., Abstr. No. 86. Weed Abstr. 20(5):372, 1971.

188. Frank, P. A., R. J. Demint, and R. D. Comes. 1970. Herbicides in irrigation water following canal-bank treatment for weed control. Weed Sci. 18(6):687-692. Weed Abstr. 21(1):71, 1972. [2,4-D; etc.]

189. Frank, P. A. 1972. Herbicidal residues in aquatic environments. Advan. Chem. Ser. 111:135-148. [2,4-D; 2,4,5-T; silvex]

190. Frans, R. E., D. E. Davis, and J. B. Weber. 1972. Behaviour of specific herbicides in plants and soils. A summary of regional research accomplishments in the southern U.S. Ark. Agric. Exp. Stn., South. Coop. Ser. Bull. No. 167. 26 p. [2,4-D; 2,4,5-T; silvex; etc.]

191. Freal, J. J. and R. W. Chadwick. 1972. The metabolism of HCH isomers to chlorophenols and the effect of isomer pre-treatment on lindane metabolism in the rat. Am. Chem. Soc., Abstr. Pap., 163rd Nat. Meet., Abstr. No. 10. [2,4,5-trichlorophenols; etc.]

192. Freal, J. J. and R. W. Chadwick. 1973. Metabolism of hexachlorocyclohexane to chlorophenols and effect of isomer pre-treatment on lindane metabolism in rat. J. Agric. Food Chem. 21(3):424-427. Health Aspects Pestic. 6(8):437, 1973. [2,4,5-trichlorophenol; etc.]

193. Freed, V. H. and M. L. Montgomery. 1969. Metabolism of herbicides. Ann. N.Y. Acad. Sci. 160(1):133-139. [2,4-D; 2,4-DB; etc.]

194. Frissel, M. J. 1961. The adsorption of some organic compounds, especially herbicides, on clay minerals. Versl. Landbouwkd. Onderz. No. 67.3. 54 p. [MCPA; 2,4-D; 2,4,5-T; etc.]

195. Fryer, J. D. and K. Kirkland. 1970. Field experiments to investigate long-term effects of repeated applications of MCPA, tri-allate, simazine and linuron. Report after 6 years. Weed Res. 10:133-158. Health Aspects Pestic. 4:131, 1971. Weed Abstr. 20(4):287, 1971. [MCPA; etc.]

196. Funazaki, Z., N. Asenuma, and H. Otsuji. 1972. On the residues of herbicides in soil. Part I. On the residual amount of 2,4,5-T and Na-PCP in the soil of forest. (Ja.) Nippon Noson Igakkai Zasshi. 21(2):304-305. Health Aspects Pestic. 6(2):68, 1973. Weed Abstr. 23(6):129, 1974.

G

197. Gamar, Y. and J. K. Gaunt. 1971. Bacterial metabolism of 4-chloro-2-methylphenoxyacetate. Formation of glyoxylate by side-chain cleavage. Biochem. J. 122:527-531.

198. Gaunt, J. K. and W. C. Evans. 1961. Metabolism of 4-chloro-2-methylphenoxyacetic acid by a soil microorganism. Biochem. J. 79:25-26.

199. Gaunt, J. K. and W. C. Evans. 1971. Metabolism of 4-chloro-2-methylphenoxyacetate by a soil pseudomonas. Preliminary evidence for the metabolic pathway. Biochem. J. 122:519-526.

200. Gaunt, J. K. and W. C. Evans. 1971. Metabolism of 4-chloro-2-methylphenoxyacetate by a soil pseudomonas: Ring-fission, lactonizing and delactonizing enzymes. Biochem. J. 122:533-542.

201. Gehring, P. J., C. G. Kramer, B. A. Schwetz, J. Q. Rose, V. K. Rowe, and J. S. Zimmer. 1973. The fate of 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) following oral administration to man. Abstr. 12th Meet., Toxicol. Appl. Pharmacol. 25(3):441.

202. Gehring, P. J., C. G. Kramer, B. A. Schwetz, J. Q. Rose, and V. K. Rowe. 1973. The fate of 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) following oral administration to man. Toxicol. Appl. Pharmacol. 26: 352-361. Pestic. Abstr. 7(3):160, 1974. Weed Abstr. 23(6):128, 1974.

203. Glastonbury, H. A., M. D. Stevenson, and R. W. E. Ball. 1959. The persistence of 4-(2-methyl-4-chlorophenoxy)butyric acid in peas. Weeds 7:362-363.

204. Goodman, R. N. 1965. Effect of pesticides from land drainage in farm pond waters. P 129-133. In Research in Pesticides. C. O. Chichester (Ed.). Academic Press, New York, N.Y. 390 p. [2,4-D; etc.]

205. Goulding, R. L. 1972. Waste pesticide management. Oreg. State Univ., Environ. Health Sci. Cent., Annu. Prog. Rep., p 227-229. Health Aspects Pestic. 5(11):540, 1972. [2,4-D]

206. Green, R. S. and S. K. Love. 1967. Pesticides in water. Pestic. Monit. J. 1(1):13-16. [2,4-D; 2,4,5-T; etc.]

207. Grolleau, G., E. de Lavaur, and G. Siou. 1974. Effects of 2,4-D on the reproduction of quail and partridge after application of the product by spraying on eggs. (Fr.) Ann. Zool.-Ecol. Anim. 6(2):313-331. Pestic. Abstr. 8(2):84, 1975.

208. Grover, R., J. Maybank, and K. Yoshida. 1972. Droplet and vapour drift from butyl ester and dimethylamine salt of 2,4-D. Weed Sci. 20(4): 320-324. Weed Abstr. 22(11):289, 1973.

209. Grover, R. 1973. The adsorptive behaviour of acid and ester forms of 2,4-D on soils. Weed Res. 13(1):51-58. Health Aspects Pestic. 6(11):592, 1973. Weed Abstr. 23(2):42, 1974.

210. Grover, R. 1974. Herbicide entry into the atmospheric environment. Chem. Can. 26(7):36-38. Pestic. Abstr. 8(8):506, 1975. [2,4-D]

211. Grover, R. and B. McCashin. 1974. A nomograph for the conversion of 2,4-D ester concentrations in air from $\mu g/m^3$ to ppb_v and vice versa. Pestic. Monit. J. 8(3):213-215.

212. Grover, R. and A. E. Smith. 1974. Adsorption studies with the acid and dimethylamine forms of 2,4-D and dicamba. Can. J. Soil Sci. 54: 179-186. Pestic. Abstr. 7(12):770, 1974. Weed Abstr. 24(4):85, 1975.

213. Grunow, W., C. Boehme, and B. Budczies. 1971. Renal excretion of 2,4,5-T in the rat. (De.) Food Cosmet. Toxicol. 9(5):667-670. Health Aspects Pestic. 5:130, 1971.

214. Grunow, W. and C. Boehme. 1974. Metabolism of 2,4,5-T and 2,4-D in rats and mice. (De.) Arch. Toxikol. 32(3):217-225. Biol. Abstr. 58(11):6882, 1974. Pestic. Abstr. 8(5):303, 1975.

215. Gutenmann, W. H., D. D. Hardee, R. F. Holland, and D. J. Lisk. 1963. Disappearance of 4-(2,4-dichlorophenoxy)butyric acid herbicide in the dairy cow. J. Dairy Sci. 46:991-992.

216. Gutenmann, W. H., D. D. Hardee, R. F. Holland, and D. J. Lisk. 1963. Residue studies with 2,4-D herbicide in the dairy cow and in a natural and artificial rumen. J. Dairy Sci. 46:1287-1288.

217. Gutenmann, W. H. and D. J. Lisk. 1964. Conversion of 4-(2,4-DB) to 2,4-dichlorophenoxycrotonic acid (2,4-DC) and production of 2,4-D from 2,4-DC in soil. J. Agric. Food Chem. 12(4):322-323.

218. Gutenmann, W. H., M. A. Loos, M. Alexander, and D. J. Lisk. 1964. Beta oxidation of phenoxyalkanoic acids in soil. Proc. Soil Sci. Soc. Am. 28:205-207. [2,4-D; 4-(2,4-DB); 2,4-DCP; etc.]

219. Gutenmann, W. H. and D. J. Lisk. 1965. Conversion of 4-(2,4-DB) herbicides to 2,4-D in bluegill. N.Y. Fish Game J. 12(1):108-113.

220. Gzhegotskiy, M. I. and A. M. Moroz. 1972. Accumulation, circulation and stability of herbicides in the environment. (Ru.) Fel'dsher Akush. 37:6-9. Health Aspects Pestic. 6(1):8-9, 1973. [2,4,5-T; 2,4-D; etc.]

H

221. Haider, K., G. Jagnow, R. Kohnen, and S. U. Lim. 1974. Degradation of chlorinated benzenes, phenols and cyclohexane derivatives by benzene and phenol utilizing soil bacteria under aerobic conditions. (De.) Arch. Microbiol. 96(3):183-200. Pestic. Abstr. 7(8):515-516, 1974.

222. Hallam, N. D. and J. A. Sargent. 1970. The localization of 2,4-D in leaf tissue. Planta 94:291-295.

223. Hallmen, U. 1975. Translocation and complex formation of root-applied 2,4-D and picloram in susceptible and tolerant species. Physiol. Plant. 34(3):266-272.

224. Hamaker, J. W., C. A. I. Goring, and C. R. Youngson. 1966. Sorption and leaching of 4-amino-3,5,6-trichloropicolinic acid in soils. Advan. Chem. Ser. 60:23-37. [2,4-D; 2,4,5-T; etc.]

225. Hanks, R. W. 1946. Removal of 2,4-D and its calcium salt from six different soils by leaching. Bot. Gaz. 108:186-191.

226. Haque, R. 1972. Environmental chemodynamics binding of selected pesticides to protein and lipids. Oreg. State Univ., Environ. Health Sci. Cent., Annu. Prog. Rep., p 128-132. Health Aspects Pestic. 5(11):569, 1972. [2,4-D; etc.]

227. Haque, R., J. Deagen, and D. Schmedding. 1975. Binding of 2,4-dichloro- and 2,4,5-trichlorophenoxyacetic acids to bovine serum albumin. A proton magnetic resonance study. J. Agric. Food Chem. 23(4):763-766.

228. Harel, S. 1969. Modification of 2,4-D movement in bean petioles by light. Plant Physiol. 44:615-617.

229. Harrold, L. L. and W. M. Edwards. 1970. Watershed studies of agricultural pollution. Ohio Rep. Res. Dev., p 85-86. [2,4,5-T; etc.]

230. Hartley, G. S. 1964. Herbicide behavior in the soil. I. Physical factors and action through the soil. P 111-161. In The Physiology and Biochemistry of Herbicides. L. J. Audus (Ed.). Academic Press, New York, N.Y. 555 p. [2,4-D; MCPA; etc.]

231. Harvey, W. A. 1972. Effects of weed control on the environment. Weeds Trees Turf 11(1):14, 16, 40. [2,4-D; 2,4,5-T; silvex]

232. Helling, C. S., J. M. Bollag, and J. E. Dawson. 1968. Cleavage of ether-oxygen bond in phenoxyacetic acid by an *Arthrobacter* species. J. Agric. Food Chem. 16:538-539. [2,4-D; MCPA]

233. Helling, C. S. and B. C. Turner. 1968. Pesticide mobility. Determination by soil thin layer chromatography. Science 162:562-563. [2,4-D; MCPA; etc.]

234. Helling, C. S., P. C. Kearney, and M. Alexander. 1971. Behavior of pesticides in soils. Advan. Agron. 23:147-239. [2,4-D; 2,4,5-T; 2,4-DEP; MCPA; silvex; 2,4-DB; etc.]

235. Helling, C. S. 1971. Pesticide mobility in soils. I. Parameters of thin layer chromatography. II. Applications of thin layer chromatography. III. Influence of soil properties. Proc. Soil Sci. Soc. Am. 35(5):732-748. Weed Abstr. 21(4):334, 1972. [2,4-D; MCPA; 2,4,5-T; etc.]

236. Hemmett, R. B. and S. D. Faust. 1969. Biodegradation kinetics of 2,4-D by aquatic micro-organisms. Residue Rev. 29:191-207.

237. Hemmett, R. B. 1972. The biodegradation kinetics of selected phenoxyacetic acid herbicides and phenols by aquatic micro-organisms. Diss. Abstr. Int. 32(12):7097B. Health Aspects Pestic. 6(5):254, 1973. [2,4-D; 2-(2,4,5-TP); 2,4,5-T; MCPA; etc.]

238. Hemmett, R. B. and S. D. Faust. 1972. Biodegradation kinetics of selected phenoxyacetic herbicides by aquatic micro-organisms. Am. Chem. Soc., Abstr. Pap., 163rd Nat. Meet., Pestic. Chem. Sec., Abstr. No. 37. [2,4,5-TP; MCPA; 2,4-D; etc.]

239. Hendrickson, R. and W. R. Meagher. 1969. Spray residues of 2,4-D and 2,4,5-TP in pineapple orange peel. J. Agric. Food Chem. 17(3):601-603.

240. Hernandez, T. P. and G. F. Warren. 1950. Some factors affecting the rate of inactivation and leaching of 2,4-D in different soils. Proc. Am. Soc. Hortic. Sci. 56:287-293.

241. Hess, F. D., D. E. Bayer, and R. H. Falk. 1974. Herbicide dispersal patterns: I. As a function of leaf surface. Weed Sci. 22(4):394-401. Weed Abstr. 24(4):88, 1975. [MCPA]

242. Hinkle, S. D. 1973. Fetotoxic effects of pentachlorophenol in the golden syrian hamster. Toxicol. Appl. Pharmacol. 25(3):455.

243. Hinojo, J. M. and N. E. V. deRamallo. 1972. Contamination of irrigation water with hormonal herbicides. (Es.) Rev. Ind. Agric. Tucuman 49(2):1-8. Pestic. Abstr. 8(7):448, 1975. Weed Abstr. 23(8):180, 1974. [2,4-D]

244. Hirsch, P. and M. Alexander. 1960. Microbial decomposition of halogenated propionic and acetic acids. Can. J. Microbiol. 6:241-249. [2,4-D; etc.]

245. Hirst, E. and H. Bank. 1971. Striking the balance. Environment 13(9): 34-41. [2,4-D]

246. Hodgson, J. M. and H. D. Moore. 1972. Stomata variations in Canada thistle and response to herbicides. Weed Sci. 20(1):68-70. Weed Abstr. 22(8):190, 1973. [2,4-D]

247. Holley, R. W., F. P. Boyle, and D. B. Hand. 1950. Studies of the fate of radioactive 2,4-D in bean plants. Arch. Biochem. Biophys. 27: 143-151.

248. Holley, R. W. 1952. Studies of the fate of radioactive 2,4-D in bean plants. II. A water soluble transformation product of 2,4-D. Arch. Biochem. Biophys. 35:171-175.

249. Holmberg, B., S. Jensen, A. Larsson, K. Lewander, and M. Olsson. 1972. Metabolic effects of technical pentachlorophenol (PCP) on the eel *Anguilla anguilla* L. Comp. Biochem. Physiol. 43(1B):171-183. Weed Abstr. 23(7):150, 1972.

250. Hook, J. B., M. D. Bailie, J. T. Johnson, and P. J. Gehring. 1974. In vitro analysis of transport of 2,4,5-trichlorophenoxyacetic acid by rat and dog kidney. Food Cosmet. Toxicol. 12(2):209-218. Pestic. Abstr. 8(6):363-364, 1975.

251. Horowitz, M. 1971. Ecology of herbicides under irrigated subtropical conditions. P 101-115. In Fate of Pesticides in Environment. A. S. Tahori (Ed.). Gordon & Breach Science Publishers; London, England. [2,4-D; etc.]

252. Horvath, R. S. 1971. Microbial co-metabolism of 2,4,5-T. Bull. Environ. Contam. Toxicol. 5(6):537-541. Weed Abstr. 20(5):375, 1971.

253. Horvath, R. S. 1972. Microbial co-metabolism and the degradation of organic compounds in nature. Bacteriol. Rev. 36(2):146-155. Health Aspects Pestic. 6(4):193, 1973. [2,4,5-trichlorophenoxyacetate; 2,4-D; etc.]

254. House, W. B., L. H. Goodson, H. M. Gadberry, and K. W. Dockter. 1967. Herbicide residues and their persistence. P 208-231. In Assessment of Ecological Effects of Extensive or Repeated Use of Herbicides. Final Report. Processed for Defense Documentation, Defense Supply Agency. AD 824-314. U.S. Department of Commerce, National Bureau of Standards. [2,4-D; 2,4,5-T; 2,4-DCP; 2,4,5-TP; silvex; MCPA; etc.]

255. Hurle, K. and B. Rademacher. 1970. The effect of long-term treatment with DNOC and 2,4-D on their breakdown in soil. (De.) Weed Res. 10:159-164. Health Aspects Pestic. 4:131, 1971.

256. Hurle, K. 1973. Lag-phase studies with DNOC and 2,4-D in the soil. (De.) Proc. Eur. Weed Res. Counc., Symp. Herbic.-Soil. p 151-162. Weed Abstr. 23(9):219, 1974.

I

257. Ide, A., Y. Niki, F. Sakamoto, I. Watanabe, and H. Watanabe. 1972. Decomposition of pentachlorophenol in paddy soil. Agric. Biol. Chem. 36(11):1937-1944. Weed Abstr. 23(8):183, 1974.

258. Igleheart, J. L., D. W. Warrick, and J. D. Walstad. 1974. Residues of 2,4,5-T recovered from streams following helicopter application to Oklahoma forests. Proc. South. Weed Sci. Soc. 27:221. Weed Abstr. 24(5):124, 1975.

259. Isensee, A. R., W. C. Shaw, W. A. Gentner, C. R. Swanson, B. C. Turner, and E. A. Woolson. 1973. Revegetation following massive application of selected herbicides. Weed Sci. 21(5):409-412. Weed Abstr. 23(12):314, 1974. [2,4-D; etc.]

J

260. Jakobson, I. and S. Yllner. 1971. Metabolism of ^{14}C-pentachlorophenol in the mouse. Acta Pharmacol. Toxicol. 29(5-6):513-524. Health Aspects Pestic. 6(10):549.

261. Jensen, D. J., W. M. Gentry, and L. F. Berhenke. 1970. Residues of 2,4,5-T and 2,4,5-trichlorophenol in tissues of beef calves fed 2,4,5-T. Initial Report. Mim., Residue Research, Ag.-Organics Department; The Dow Chemical Co.; Midland, Mich.

262. Jensen, D. J., E. L. Bjerke, J. L. Herman, P. W. Miller, and L. F. Berhenke. 1971. A residue study of phenoxy herbicides in cattle and sheep tissues. Mim., Residue Research, Ag.-Organics Department, The Dow Chemical Co.; Midland, Mich. [2,4,5-T; 2,4-D; MCPA; 2,4,5-trichlorophenol; silvex; 2,4-dichlorophenol; 4-chloro-2-methyl phenol]

263. Jensen, D. J., E. L. Bjerke, J. L. Herman, P. W. Miller, and L. F. Berhenke. 1971. A residue study of phenoxy herbicides in bovine tissues. Am. Chem. Soc., Abstr. Pap., 162nd Nat. Meet., Pestic. Chem. Sec., Abstr. No. 56. [2,4-D; 2,4,5-T; silvex; MCPA]

264. Jensen, D. J. 1973. Investigation for bound residues in tissues from cattle fed 2,4,5-T. Am. Chem. Soc., Abstr. Pap., 165th Nat. Meet., Pestic. Chem. Sec., Abstr. No. 22.

265. Jensen, H. L. and H. I. Petersen. 1952. Detoxication of hormone herbicides by soil bacteria. Nature 170:39. [2,4-D; MCPA]

266. Jensen, H. L. and H. I. Petersen. 1952. Decomposition of hormone herbicides by bacteria. Acta Agric. Scand. 2:215-231. [2,4-D; MCPA]

267. Jensen, H. L. 1957. Decomposition of chloro-substituted aliphatic acids by soil bacteria. Can. J. Microbiol. 3:151-164. [2,4-D; etc.]

268. Jensen, H. L. 1957. Decomposition of chloro-organic acids by fungi. Nature 180:1416.

269. Johnson, J. E. 1971. The public health implications of widespread use of the phenoxy herbicides and picloram. BioScience 21(17):899-905. Weed Abstr. 21(3):251, 1972. [2,4-D; 2,4,5-T; MCPA; etc.]

270. Jyothi, V. 1972. Miscible displacement of 2,4-D herbicide during constant liquid flow velocity into initially dry soils. Diss. Abstr. Int. 32(12):6776B-6777B. Health Aspects Pestic. 6(7):349, 1973. Weed Abstr. 22(6):127, 1973.

K

271. Karapally, J. C., J. C. Saba, and Y. W. Lee. 1971. Metabolism of lindane-^{14}C in the rabbit: Ether-soluble urinary metabolites. Am. Chem. Soc., Abstr. Pap., 162nd Nat. Meet., Pestic. Chem. Sec., Abstr. No. 41. [2,4,5-trichlorophenol; etc.]

272. Katz, M., R. S. LeGore, D. Weitkamp, J. M. Cummins, D. Anderson, and D. R. May. 1972. Effects on freshwater fish. J. Water Pollut. Control. Fed. 44(6):1226-1250. Health Aspects Pestic. 6(8):407, 1973. [2,4-D; PCP; etc.]

273. Kaufman, D. D. 1970. Pesticide metabolism. P 73-86. In International Symposium on Pesticides in the Soil: Ecology, Degradation and Movement. Mich. State Univ.; East Lansing, Mich. Weed Abstr. 21(3):256, 1972. [2,4-D; 2,4-DB; 2,4-DEP; MCPA; 2,4,5-T; etc.]

274. Kaufman, D. D. 1971. Degradation of pesticide combinations. P 175-204. In Fate of Pesticides in Environment. A. S. Tahori (Ed.). Gordon & Breach Science Publishers; London, England. [2,4-D; MCPA; 2,4,5-T; 2,4-dichlorophenol; etc.]

275. Kearney, P. C. 1960. Metabolism of herbicides in soils. Advan. Chem. Ser. 60:250-262. [2,4-DB; etc.]

276. Kearney, P. C., D. D. Kaufman, and M. Alexander. 1967. Biochemistry of herbicide decomposition in soils. P 318-342. In Soil Biochemistry. A. D. McLaren and G. H. Peterson (Eds.). Marcel Dekker, Inc., New York, N.Y. [2,4-D; MCPA; 2,4,5-T; 2,4-DB; 2,4-DP; etc.]

277. Kearney, P. C. 1970. Herbicides in the environment. P 496-512. In FAO International Conference on Weed Control. Weed Sci. Soc. Am., Special Committee - Eds., Univ. Calif.; Davis, Calif. Weed Abstr. 20(6):436, 1971. [2,4-D; 2,4,5-T]

278. Kenaga, E. E. 1974. 2,4,5-T and derivatives: Toxicity and stability in the aquatic environment. Down Earth 30(3):19-25.

279. Ketchersid, M. L., O. H. Fletchall, P. W. Santelmann, and M. G. Merkle. 1970. Residues in sorghum treated with the isooctyl ester of 2,4-D. Pestic. Monit. J. 4(3):111-113.

280. Khan, S. U. 1973. Equilibrium and kinetic studies of the adsorption of 2,4-D and picloram on humic acid. Can. J. Soil Sci. 53(4):429-434. Pestic. Abstr. 7(5):277, 1974. Weed Abstr. 24(4):85, 1975.

281. Khan, S. U. 1973. Interaction of humic acid with chlorinated phenoxyacetic and benzoic acids. Environ. Lett. 4(2):141-148. Weed Abstr. 22(9):230, 1973. Pestic. Abstr. 7(4):218, 1974. [2,4-D]

282. Khan, S. U. 1974. Adsorption of 2,4-D from aqueous solution by fulvic acid-clay complex. Environ. Sci. Technol. 8(3):236-238. Weed Abstr. 24(4):84, 1975.

283. Khanna, S. and S. C. Fang. 1966. Metabolism of C^{14}-labeled 2,4-dichlorophenoxyacetic acid in rats. J. Agric. Food Chem. 14(5):500-503.

284. Kirkland, K. and J. D. Fryer. 1966. Pre-treatment of soil with MCPA as a factor affecting persistence of a subsequent application. Proc. Br. Weed Control Conf. 8:616-621.

285. Kirkland, K. 1967. Inactivation of MCPA in soil. Weed Res. 7:364-367.

286. Kirkland, K. and J. D. Fryer. 1972. Degradation of several herbicides in a soil previously treated with MCPA. Weed Res. 12(1):90-95. Weed Abstr. 22(4):74, 1973. [MCPB]

287. Kirkwood, R. C., N. M. Robertson, and J. E. Smith. 1966. Differential absorption as a factor influencing the selective toxicity of MCPA and MCPB. P 47-57. In FAO-IAEA Symposium on the Use of Isotopes in Weed Research. Vienna, Austria.

288. Kirsch, E. J. and J. E. Etzel. 1973. Microbial decomposition of pentachlorophenol. J. Water Pollut. Control Fed. 45(2):359-364. Health Aspects Pestic. 6(8):440-441, 1973. Weed Abstr. 23(7):152, 1974.

289. Klingman, D. L., C. H. Gordon, G. Yip, and H. R. Burchfield. 1966. Residues in the forage and in milk from cows grazing forage treated with esters of 2,4-D. Weeds 14(2):164-167.

290. Kohli, J. D., R. N. Khanna, B. N. Gupta, M. M. Dhar, J. S. Tandon, and K. P. Sircar. 1974. Absorption and excretion of 2,4,5-trichlorophenoxyacetic acid in man. Arch. Int. Pharmacodyn. Ther. 210:250-255. Pestic. Abstr. 8(3):144, 1975.

291. Kolberg, J., K. Helgeland, J. Jonsen, and O. Tjeltveit. 1970. Effect of a phenoxy herbicide on mammalian cell cultures. A time-lapse cinemicrographic study. Acta Pharmacol. Toxicol. (Suppl.) 28:57. Health Aspects Pestic. 6(10):549, 1973. [2,4-D]

292. Kolberg, J., K. Helgeland, J. Jonsen, and O. Tjeltveit. 1971. The herbicide 2,4-D. I. Effects on L cells. Acta Pharmacol. Toxicol. 29(1):81-86. Weed Abstr. 21(3):252, 1972.

293. Kolberg, J., K. Helgeland, and J. Jonsen. 1972. The herbicide 2,4-D. II. Triglyceride accumulation in L cells. Acta Pharmacol. Toxicol. 31(5-7):481-487. Health Aspects Pestic. 6(5):250, 1973. Weed Abstr. 23(7):150, 1974.

294. Kolberg, J., K. Helgeland, and J. Jonsen. 1973. Binding of 2,4-dichloro- and 2,4,5-trichlorophenoxyacetic acid to bovine serum albumin. Acta Pharmacol. Toxicol. 33(5-6):470-475.

295. Konnai, M., Y. Takeuchi, and T. Takematsu. 1974. Fundamental studies on residues and movement of forestry herbicides in soil. (Ja.) Bull. Coll. Agric., Utsunomiya Univ. 9(1):95-112. Weed Abstr. 23 (12):316, 1974. Pestic. Abstr. 8(7):450-451, 1975. [2,4,5-T; 2,4-D; MCP]

296. Koransky, W., G. Muench, G. Noack, J. Portig, S. Sodomann, and M. Wirsching. 1975. Biodegradation of α-hexachlorocyclohexane. V. Characterization of the major urinary metabolites. Naunyn-Schmiedebergs Arch. Pharmakol. Exp. Pathol. 288(1):65-78. Pestic. Abstr. 8(8):597, 1976. [2,4,5-trichlorophenol; 2,4,6-trichlorophenol; etc.]

297. Koschier, F. and W. O. Berndt. 1975. In vitro uptake of organic ions by renal cortical tissue of rats treated chronically with 2,4,5-T. Fed. Proc., Fed. Am. Soc. Exp. Biol. 34(3):246. Pestic. Abstr. 8(5):297-298, 1975.

298. Kosyan, Sh. A., V. Ye. Markosyan, L. S. Sarkisyan, and R. A. Manukyan. 1974. Toxicological characteristics of the new herbicide 2,4-D 3-nitro-4-hydroxybenzyl ester (NK-2). (Ru.) Zh. Eksp. Klin. Med. 14(3):14-18. Pestic. Abstr. 8(7):487, 1975.

299. Koudela, S. and V. Cielezky. 1972. Food hygienic problems involved in the use of herbicides and growth regulators. (Hu.) Elelmiszervizsgalati Kozl. 18(5-6):243-255. Health Aspects Pestic. 6(5):256, 1973. [2,4-D; 2,4,5-T; 2,4-DB]

300. Kramer, D. and G. Schmaland. 1974. Herbicide residues in water bodies: Problems of water economy as a consequence of the application of pesticides. (De.) Wasserwirtsch. Wassertech. 24(5):161-167. Pestic. Abstr. 7(11):714, 1974. [2,4-D]

301. Krammes, J. S. and D. B. Willets. 1964. Effect of 2,4-D and 2,4,5-T on water quality after a spraying treatment. U.S. For. Serv., Pac. Southwest For. Range Exp. Stn., Res. Note PSW-52. p 1-4.

302. Kries, H. 1947. Persistence of 2,4-D in soil in relation to content of water, organic matter, and lime. Bot. Gaz. 108:510-525.

303. Kuhn, E. and W. Stein. 1964. Experimental myotonia with 2,4-D administration in the rat. (De.) Klin. Wochenschr. 42:1215-1216.

304. Kuhn, E. and W. Stein. 1966. Model myotonia toward 2,4-D. Calcium absorption of the vesicles, its sarcoplasmatic reticulum among 2,4-D. (De.) Klin. Wochenschr. 44:700-702.

305. Kuo, E. C. Y. 1973. The reactions of picloram and 2,4-D with Montmorillonite clays and soils. Diss. Abstr. Int. 34(3):952B-953B. Weed Abstr. 23(9):221, 1973.

L

306. Lange, A. H., B. B. Fischer, and R. Hoover. 1971. Herbicide residues under different cultural practices. Calif. Agric. 25(2):13-14. Weed Abstr. 21(1):74, 1972. [2,4-D; etc.]

307. Langone, J. J. and H. Van Vunakis. 1975. Radioimmunoassay for dieldrin and aldrin. Res. Commun. Chem. Pathol. Pharmacol. 10(1):163-171. Pestic. Abstr. 8(5):333, 1975. [2,4-D; 2,4,5-T; PCP]

308. Lavy, T. L., F. W. Roeth, and C. R. Fenster. 1973. Degradation of 2,4-D and atrazine at three soil depths in the field. J. Environ. Qual. 2(1):132-137. Health Aspects Pestic. 6(10):535, 1973. Weed Abstr. 23(1):22, 1974.

309. Lavy, T. L. and C. R. Fenster. 1974. Herbicide breakdown in soil. Farm Ranch Home Q. 20(4):12-14. Pestic. Abstr. 8(5):277-278, 1975. [2,4-D; etc.]

310. Leidy, R. B., M. D. Jackson, W. A. Skroch, and T. J. Sheets. 1975. Residue studies with silvex in apples. Bull. Environ. Contam. Toxicol. 13(3):338-341.

311. Leng, M. 1970. Degradation of 2,4-D, 2,4,5-T and silvex in soil and water. Mim., The Dow Chemical Co.; Midland, Mich.

312. Linden, G., A. Müller, and P. Schicke. 1963. A study on the possible threat to the groundwater through the use of 2,4,5-T in diesel oil to control woody species. (De.) Z. Pflanzenkr. (Pflanzenpathol.) Pflanzenschutz 70(7):399-407.

313. Lindquist, N. G. and S. Ullberg. 1971. Distribution of herbicides 2,4,5-T and 2,4-D in pregnant mice. Accumulation in yolk sac epithelium. Experientia 27(12):1439-1441. Weed Abstr. 21(4):331, 1972.

314. Lindquist, N. G. 1974. An autoradiographic study on the distribution of the herbicide 4-chloro-2-methylphenoxyacetic acid in pregnant mice. Toxicol. Appl. Pharmacol. 30(2):227-236. Pestic. Abstr. 8(3): 160-161, 1975. [2,4-D; 2,4,5-T]

315. Lindstrom, F. T., L. Boersma, and H. Gardiner. 1968. 2,4-D diffusion in saturated soils: a mathematical theory. Crop Sci. 106(2):107-113.

316. Lindstrom, F. T., L. Boersma, and H. Gardiner. 1969. Letters to the Editor. Comment on the paper "2,4-D diffusion in saturated soils. A mathematical model", by Lindstrom, Boersma and Gardiner. Soil Sci. 107(1):72-73.

317. Lingens, F. 1973. Breakdown of herbicides and fungicides by soil microorganisms. (De.) Chimia 27(12):628-635. Pestic. Abstr. 7(5):306, 1974. [Phenoxyacetic acids; etc.]

318. Linscott, D. L., R. D. Hagin, and M. J. Wright. 1965. Effect on ensiling on the decomposition of several herbicides. Crop Sci. 5: 455-456. [2,4-D; 2,4-DB]

319. Lisk, D. J., W. H. Gutenmann, C. A. Bache, R. G. Warner, and D. G. Wagner. 1963. Elimination of 2,4-D in the urine of steers fed 4-(2,4-DB) or 2,4-D. J. Dairy Sci. 46:1435-1437.

320. Liu, L. C. and H. R. Cibes-Viade. 1973. Adsorption of fluometuron, prometryne, sencor, and 2,4-D by soils. J. Agric. Univ. P.R. 57(4): 286-293. Pestic. Abstr. 7(4):221, 1974. Weed Abstr. 23(10):256, 1974.

321. Loos, M. A., J. M. Bollag, and M. Alexander. 1967. Phenoxyacetate herbicide detoxication by bacterial enzymes. J. Agric. Food Chem. 15:858-860. [2,4-D; MCPA; 2-CPA; 4-CPA]

322. Loos, M. A., R. N. Roberts, and M. Alexander. 1967. Phenols as intermediates in the decomposition of phenoxyacetates by an *Arthrobacter* species. Can. J. Microbiol. 13:679-690. [2,4-D]

323. Loos, M. A., R. N. Roberts, and M. Alexander. 1967. Formation of 2,4-dichlorophenol and 2,4-dichloroanisole from 2,4-dichlorophenoxyacetate by *Arthrobacter* sp. Can. J. Microbiol. 13:691-699.

324. Loos, M. A. 1969. Degradation of phenoxyalkanoic acid herbicides by soil micro-organisms. J. S. Afr. Chem. Inst. 22 (Special Issue): S71-S78. Weed Abstr. 20(6):440, 1971. [2,4-D; MCPA; 2,4,5-T; 4-chlorophenoxyacetic acid; 4-chlorophenol; 2,4-dichlorophenol; 2-hydroxy-4-chlorophenoxyacetic acid; etc.]

325. Loos, M. A. 1969. Phenoxyalkanoic acids. P 1-49. In Degradation of Herbicides. P. C. Kearney and D. D. Kaufman (Eds.). Marcel Dekker, Inc., New York, N.Y. 394 p. [MCPA; MCPP; MCPB; 2,4-D; 2,4-DP; 2,4-DB; 2,4,5-T; silvex; 2,4,5-TB; sesone; etc.]

326. Loos, M. A. 1971. Metabolism of phenoxy herbicides by plants and soil micro-organisms. P 291-304. In Pesticide Terminal Residues. Papers from the International Symposium of Pesticide Terminal Residues, Tel-Aviv, Israel. A. S. Tahori (Ed.). Butterworth's Scientific Publications; London, England. Weed Abstr. 22(12):321, 1973. [2,4-D; MCPA; 2,4,5-T]

327. Loos, M. A. 1975. Indicator media for microorganisms degrading chlorinated pesticides. Can. J. Microbiol. 21(1):104-107. Pestic. Abstr. 8(5):308. [2,4-D; MCPA]

328. Loos, M. A. 1975. Phenoxyalkanoic acids. P 1-128. In Herbicides, Chemistry, Degradation, and Mode of Action. P. C. Kearney and D. D. Kaufman (Eds.). Marcel Dekker, Inc., New York, N.Y. 500 p.

329. Lumb, J. M. 1972. Cellular absorption of 2,4-D and other herbicides by leaf sections of tobacco and corn. Diss. Abstr. Int. 32(9): 5062B. Weed Abstr. 22(7):150, 1973.

330. Lutz, J. F., G. E. Byers, and T. J. Sheets. 1973. The persistence and movement of picloram and 2,4,5-T in soils. J. Environ. Qual. 2(4):485-488. Pestic. Abstr. 7(2):62, 1974. Weed Abstr. 23(6): 129-130, 1974.

331. Lyubenov, Ya. 1973. Pollution of waters and water basins by herbicides used in Bulgaria. (Bg.) Rastit. Zasht. 21(2):33-36. Pestic. Abstr. 7(8):503-504, 1973. [2,4-D]

332. Lyubenov, Ya. 1973. Effect of herbicides on cultivated plants and the quality of the obtained product. (Bg.) Rastit.Zasht. 21(3): 37-41. Pestic. Abstr. 7(12):802-803, 1974. [2,4-D; MCPB; 2,4,5-T; 2,4-DB; etc.]

M

333. MacRae, I. C. and M. Alexander. 1963. Metabolism of phenoxyalkyl carboxylic acids by a *Flavobacterium* species. J. Bacteriol. 86: 1231-1235. [4-(2,4-DB); 2,4-D; etc.]

334. MacRae, I. C., M. Alexander, and A. D. Rovira. 1963. The decomposition of 4-(2,4-dichlorophenoxy)butyric acid by *Flavobacterium* sp. J. Gen. Microbiol. 32:69-76.

335. MacRae, I. C. and M. Alexander. 1964. Use of gas chromatography for the demonstration of a pathway of phenoxy herbicide degradation. Agron. J. 56:91-92. [4-(2,4-dichlorophenoxy)butyric acid]

336. MacRae, I. C. and M. Alexander. 1965. Microbial degradation of selected herbicides in soil. J. Agric. Food Chem. 13(1):72-76. [2,4-D; MCPA; 2,4,5-T; 2,4-DB; etc.]

337. Maier-Bode, H. 1973. Residues and side-effects of herbicides in forest protection. (De.) Anz. Schaedlingskd. Pflanzenschutz 46(2):17-24. Pestic. Abstr. 7(2):57, 1974. [2,4,5-T; etc.]

338. Manigold, D. B. and J. A. Schulze. 1969. Pesticides in selected western streams - a progress report. Pesticides in Water. Pestic. Monit. J. 3(2):124-135. [2,4-D; etc.]

339. Marth, P. C. 1947. Effect of 2,4-D applications to the soil. U.S. Dep. Agric., Yearb. Agric. p 47-49.

340. Marth, P. C. and J. W. Mitchell. 1949. Comparative volatility of various forms of 2,4-D. Bot. Gaz. 110(4):632-636.

341. Martin, J. P. and J. O. Ervin. 1970. Decomposition and transformation of herbicides in soils. Proc. Calif. Weed Conf. 22:83-108. Weed Abstr. 21(1):72, 1972. [2,4-D]

342. Mason, R. W. 1972. The binding of some chlorophenoxy acids to bovine serum albumin in vitro. Proc. Univ. Otago Med. Sch. 50(3):61-63. Health Aspects Pestic. 6(8):443-444, 1973. Weed Abstr. 23(6):128, 1974. [MCPB; 2,4-DB; 2,4,5-T; etc.]

343. Mathur, M. K. and P. C. Raheja. 1973. Persistence of 2,4-D in arid zone soils. Indian J. Weed Sci. 5(1):28-32. Weed Abstr. 23(10):257, 1974.

344. Matlib, M. A., R. C. Kirkwood, and J. D. E. Patterson. 1971. Binding of certain substituted phenoxy-acids by bovine serum albumin. Weed Res. 11(2/3):190-192. Weed Abstr. 21(5):399, 1972. [MCPA; 2,4-D; 2,4,5-T]

345. Matsumura, A. 1970. The fate of 2,4,5-trichlorophenoxyacetic acid in man. Sangyo Igaku 12(9):20-25.

346. Matsumura, F. 1972. Biological effects of toxic pesticidal contaminants and terminal residues. P 525-548. In Environmental Toxicology of Pesticides. F. Matsumura, G. M. Boush, and T. Misato (Eds.). Academic Press, New York, N.Y. 637 p. [2,4-D; 2,4,5-T; etc.]

347. Matsumura, F. 1973. Degradation of pesticide residues in the environment. P 494-512. In Environmental Pollution by Pesticides. Plenum Press; London, England. Pestic. Abstr. 7(10):652, 1974. [2,4-D; MCP; 2,4,5-T; MCPA]

348. Maybank, J. and K. Yoshida. 1969. Delineation of herbicide-drift hazards on the Canadian prairies. Trans. Am. Soc. Agric. Eng. p 759-762. [2,4-D]

349. McCurdy, E. V. and E. S. Molberg. 1974. Effects of the continuous use of 2,4-D and MCPA on spring wheat production and weed populations. Can. J. Plant Sci. 54:241-245.

350. McGilvrey, F. B. and J. H. Steenis. 1963. Effects of alligatorweed control on wildlife. P 88. In Pesticide Wildlife Studies. A review of fish and wildlife service investigations during the calendar year. U.S. Fish Wildl. Ser., Cir. #199. [2,4,5-T; silvex]

351. McNew, G. L. 1972. Interrelationships between agricultural chemicals and environmental quality in perspective. J. Environ. Qual. 1(1): 18-22. [2,4-D; 2,4-dichlorophenol; etc.]

352. Menzie, C. M. 1969. 2,4-D and related compounds. P 109-122. In Metabolism of Pesticides. U.S. Fish. Wildl. Serv., Bur. Sp. Fish. Wildl., Spec. Sci. Rep. -- Wildl. No. 127. 487 p. [2,4-D; 2,4-DB; 4-(2,4-DB); MCPA; MCPB; 2,4,5-T; 2,4,5-TP; 2-CPA; 4-CPA; 4-(2-CPB); 4-(3-CPB); 4-(4-CPB); 3-(2,4,5-TB); 4-(2,4,5-TB); 2,4,6-T; phenoxyacetic acid]

353. Milhaud, G. and F. Riet Alvariza. 1970. Toxicology of phytohormones. (Fr.) Recl. Med. Vet. 146(4):345-357. Health Aspects Pestic. 4:346, 1971. Weed Abstr. 21(4):331, 1972. [2,4-D; MCPA; 2,4,5-T]

354. Miller, R. W. and S. D. Faust. 1971. Sorption of 2,4-D from aqueous solutions by organic clays. Am. Chem. Soc., Abstr. Pap., 161st Nat. Meet., Pestic. Chem. Sec., Abstr. No. 29. Weed Abstr. 21(1):75, 1972.

355. Miller, R. W. and S. D. Faust. 1972. Sorption from aqueous solutions by organic clays. I. 2,4-D by bentone 24. Advan. Chem. Ser. 111: 121-134. Weed Abstr. 22(8):198, 1973.

356. Miller, R. W. and S. D. Faust. 1972. Sorption form aqueous solution by organo-clays. II. Thermodynamics of 2,4-D sorption by various organo-clays. Environ. Lett. 2(4):183-194. Pestic. Abstr. 7(5): 279, 1974.

357. Miller, R. W. and S. D. Faust. 1973. Sorption from aqueous solution by organo-clay. III. The effect of pH on sorption of various phenols. Environ. Lett. 4(3):211-223. Health Aspects Pestic. 6(9):466, 1973. [2,4-D; 2,4-DCP; 2,4,5-TP; etc.]

358. Minear, R. A. and P. S. Pagoria. 1974. Organics. J. Water Pollut. Control Fed. 46(6):1058-1100. Pestic. Abstr. 8(7):490-491, 1975. [PCP; 2,4,5-T; etc.]

359. Mitchell, J. W., R. E. Hodgson, and C. F. Gaetjens. 1944. Tolerance of farm animals to feed containing 2,4-D. J. Anim. Sci. 5:226-232.

360. Montgomery, M. L., D. Klein, R. Goulding, and V. H. Freed. 1971. Biological degradation of pesticide wastes. P 117-125. In Fate of Pesticides in Environment. A. S. Tahori (Ed.). Gordon & Breach Science Publishers; London, England. 302 p. Health Aspects Pestic. 6(9):467, 1973. [2,4-D; 2,4-dichlorophenol]

361. Montgomery, M. 1972. Environmental chemodynamics - comparative metabolism of chemical toxicants. Oreg. State Univ., Environ. Health Sci. Cent., Annu. Prog. Rep. p 126-127. Health Aspects Pestic. 5(11):569, 1972. [2,4-D; etc.]

362. Montgomery, M. 1972. Residues of selected pesticides - their nature, distribution and persistence in plants, animals and the environment. Oreg. State Univ., Environ. Health Sci. Cent., Annu. Prog. Rep. p 233. Health Aspects Pestic. 5(11):540-541, 1972. [2,4-D; 2,4,5-T; etc.]

363. Morlock, B. 1972. U.S. herbicides may 'scar' Vietnamese for generations. Minnesota Daily 73(106):3 & 12; Feb 22, 1972. [2,4,5-T; 2,4-D]

364. Morton, H. L., E. D. Robison, and R. E. Meyer. 1967. Persistence of 2,4-D, 2,4,5-T, and dicamba in range forage grasses. Weeds 15:268-271.

365. Morton, H. L., J. O. Moffett, and R. D. Martin. 1974. Influence of water treated artificially with herbicides on honey bee colonies. Environ. Entomol. 3(5):808-812. [2,4,5-T; etc.]

366. Mounce, L. M. and E. P. Savage. 1973. The epidemiology of aerial application accidents in the High Plains, 1966-1969. Agric. Aviat. 15(4):1-6. [2,4-D; 2,4,5-T; etc.]

367. Mullison, W. R. 1949. The volatility of several salts and esters of 2,4-D as determined by the response of tomato, bean, and cotton plants. Proc. Am. Soc. Hortic. Sci. 53:281-290.

368. Munakata, K. and M. Kuwahaca. 1969. Photochemical degradation products of pentachlorophenol. Residue Rev. 25:13-23.

N

369. Nakagawa, M. and D. G. Crosby. 1974. Photonucleophilic reactions of nitrofen. J. Agric. Food Chem. 22(6):930-933. Pestic. Abstr. 8(4): 220, 1975. [2,4-dichlorophenol; etc.]

370. Nakajima, S., N. Naito, and T. Tani. 1973. Microbial transformation of 2,4-D and its analogues. Chem. Pharm. Bull. 21(3):671-673. Health Aspects Pestic. 6(9):487, 1973. Weed Abstr. 23(4):78, 1974. [2,4-D; 2,4,5-T; MCP]

371. Nalewaja, J. D., L. W. Mitich, and A. Dexter. 1971. Herbicides in North Dakota's environment. N. Dak. Farm Res. 28(4):25-28. [2,4,5-T; 2,4-D; MCPA]

372. Nelson, D. C., R. H. Smith, H. J. Klosterman, and M. Sayeed-Quiaishi. 1971. 2,4-D residues in tubers, texture and respiration of potatoes in storage. Am. Potato J. 48(10):366-373.

373. Nepochatov, A. P., A. M. Gulidov, and A. T. Zimovskaya. 1971. Residual activity of triazine derivatives on a deep chernozem soil. (Ru.) Khim. Sel'sk. Khoz. 9(1):42-45. Weed Abstr. 21(5):422, 1972. [2,4-D; etc.]

374. Neururer, H. 1972. Studies on the behaviour of herbicides in the soil. (De.) Bodenkultur 23(1;2):43-73 & 138-172. Weed Abstr. 22(5):98, 1973. [MCPA; MCPB; 2,4-DB; 2,4,5-T; 2,4,5-TP; 2,4-D; MCPP; 2,4-DP; etc.]

375. Newbold, C. 1975. Herbicides in aquatic systems. Biol. Conserv. 7: 97-118. [2,4-D; etc.]

376. Newman, A. S. and J. R. Thomas. 1949. Decomposition of 2,4-D in soil and liquid media. Proc. Soil Sci. Soc. Am. 14:160-164.

377. Newman, A. S., J. R. Thomas, and R. L. Walker. 1952. Disappearance of 2,4-D and 2,4,5-T from soil. Proc. Soil Sci. Soc. Am. 16(1):21-24.

378. Newman, A. S. and C. R. Downing. 1958. 3. Herbicides and the soil. J. Agric. Food Chem. 6:352-353. [2,4-D; 2,4,5-T; MCPA]

379. Newton, M. and L. A. Norris. 1968. Herbicide residues in blacktail deer from forests treated with 2,4,5-T and atrazine. Proc. West. Soc. Weed Sci. 22:32-34.

380. Nielsen, K., B. Kaempe, and J. Jensen-Holm. 1965. Fatal poisoning in man by 2,4-dichlorophenoxyacetic acid (2,4-D): Determination of the agent in forensic materials. Acta Pharmacol. Toxicol. 22:224-234.

381. Niemann, P. and G. Maas. 1972. Adsorption of pesticides on soil clay and humus colloids. (De.) Schriftenr. Ver. Wasser- Boden- Lufthyg. 37:155-165. Pestic. Abstr. 7(3):130, 1974. [2,4-D]

382. Nilsson, C. A., K. Andersson, C. Rappe, and S. O. Westermark. 1974. Chromatographic evidence for the formation of chloro-dioxins from chloro-2-phenoxyphenols. J. Chromatogr. 96(1):137-147. Pestic. Abstr. 8(7):437, 1975.

383. Norris, L. A. 1966. Degradation of 2,4-D and 2,4,5-T in forest litter. J. For. 64(7):475-476.

384. Norris, L. A. 1967. Chemical brush control and herbicide residues in the forest environment. P 103-123. In Herbicides and Vegetation Management in Forest Ranges and Non-crop Lands. Proceedings; Symposium; School of Forestry, Oreg. State Univ.; Corvallis, Oreg. [2,4-D; 2,4,5-T; etc.]

385. Norris, L. A. and D. Greiner. 1967. The degradation of 2,4-D in forest litter. Bull. Environ. Contam. Toxicol. 2:65-74.

386. Norris, L. A. 1968. Stream contamination by herbicides after fall rains on forest land. West. Soc. Weed Sci., Res. Prog. Rep. p 33-34. [2,4-D; 2,4,5-T]

387. Norris, L. A. 1969. Degradation of several herbicides in red alder forest floor material. West. Soc. Weed Sci., Res. Prog. Rep. p 21-22. Weed Abstr. 20(2):136, 1971. [2,4-D; 2,4,5-T; etc.]

388. Norris, L. A. 1969. Some chemical factors influencing the degradation of herbicides in floor material. West. Soc. Weed Sci., Res. Prog. Rep. p 22-24. Weed Abstr. 20(2):136, 1971. [2,4-D; 2,4,5-T; etc.]

389. Norris, L. A. 1969. Herbicide runoff from forest lands sprayed in summer. West. Soc. Weed Sci., Res. Prog. Rep. p 24-26. Weed Abstr. 20(2):133, 1971. [2,4-D; 2,4,5-T]

390. Norris, L. A. 1970. Degradation of herbicides in the forest floor. P 397-411. In Tree Growth and Forest Soils. C. T. Youngberg and C. B. Davey (Eds.). Oreg. State Univ. Press; Corvallis, Oreg. [2,4-D; 2,4-DP; etc.]

391. Norris, L. A. and D. G. Moore. 1970. The entry and fate of forest chemicals in streams. P 138-158. In Proceedings of a Symposium. Forest Land Uses and Stream Environment. A Continuing Education Book; Corvallis, Oreg. [2,4-D; 2,4,5-T; etc.]

392. Norris, L. A. 1971. The behavior of chemicals in the forest. P 90-106. In Pesticides, Pest Control and Safety on Forest Range Lands. Proceedings. Short Course for Pesticide Applicators. A Continuing Education Book; Corvallis, Oreg. [2,4-D; 2,4,5-T; etc.]

393. Norris, L. A. 1971. Chemical brush control: assessing the hazard. J. For. 69(10):715-720. [2,4-D; 2,4,5-T]

394. Norris, L. A. 1974. Behaviour of pesticides in plants. U.S. For. Serv., Pac. Northwest For. Range Exp. Stn., Gen. Tech. Rep., PNW-19. [2,4-D; etc.]

O

395. O'Connor, G. A. and P. J. Wierenga. 1973. The persistence of 2,4,5-T in greenhouse lysimeter studies. Proc. Soil Sci. Soc. Am. 37:398-400. Health Aspects Pestic. 6(10):540, 1973. Weed Abstr. 23(4):78, 1974.

396. O'Connor, G. A. and J. V. Anderson. 1974. Soil factors affecting the adsorption of 2,4,5-T. Proc. Soil Sci. Soc. Am. 38(3):433-436. Pestic. Abstr. 7(11):714, 1974. Weed Abstr. 23(12):316, 1974.

397. Okey, R. W. and R. H. Bogan. 1965. Apparent involvement of electronic mechanisms in limiting the microbial metabolism of pesticides. J. Water Pollut. Control Fed. 37(5):692-712. [2,4-D; 2,4-dichlorophenol; etc.]

398. Olberg, R. 1973. The question of residue levels after using 2,4,5-T salt for the control of raspberries in forest plantings (preliminary report). (De.) Nachrichtenbl. Dtsch. Pflanzenschutzdienstes 25(3): 41. Weed Abstr. 22(9):229, 1973.

399. Olberg, R., R. Oberdieck, and I. Wolff. 1974. Studies on 2,4,5-T residues in wild raspberries. (De.) Nachrichtenbl. Dtsch. Pflanzenschutzdienstes 26(5):66-69. Weed Abstr. 24(4):83, 1975.

P

400. Paris, D. F. and D. L. Lewis. 1973. Chemical and microbial degradation of ten selected pesticides in aquatic systems. Residue Rev. 45:95-124. Health Aspects Pestic. 6(11):590, 1973. Weed Abstr. 23(3):60, 1974. [2,4-D; etc.]

401. Parr, L. J., M. G. Gee, D. G. Land, D. Robinson, and R. F. Curtis. 1974. Chlorophenols from wood preservatives in broiler house litter. J. Sci. Food Agric. 25(7):835-841. Pestic. Abstr. 8(5):279, 1975.

402. Payne, M. G. and J. L. Fults. 1947. Some effects of ultraviolet light on 2,4-D and related compounds. Science 106(2741):37-39.

403. Penner, D. 1971. Herbicide residues in plant and soils. North Cent. Weed Control Conf., Res. Rep. 28:17-29. [2,4-D; etc.]

404. Petersen, E. J. 1971. The influence of the ensilage process on residues of phenoxyacetic acid in rye grass. (Da.) Tiddskr. Planteavl. 75:289-292. Weed Abstr. 21(5):415, 1972. [MCPA; 2,4-D; dichlorprop; mecoprop]

405. Petersen, J. 1970. Herbicide residues in plant products intended for fodder and foodstuff. Proc. Swed. Weed Conf. 11:19. Weed Abstr. 20(1):55, 1971. [MCPA]

406. Petri, L. R. 1972. Pesticides in Nebraska streams, 1968-1972. P 231-239. In Control of Agriculture - Related Pollution in the Great Plains. Seminar, July 24-25, 1972; Lincoln, Nebr. [2,4-D; 2,4,5-T; silvex]

407. Pfister, R. M. 1974. Interactions of halogenated pesticides and microorganisms: A review. P 1-33. In Microbial Ecology. A. I. Laskin and H. Lechevalier (Eds.). CRC Press; Cleveland, Ohio. 191 p. [2,4-D; 2,4,5-T; 2,3,5-trichlorophenol; MCPA; 4-chlorophenoxyacetic; 2,4-dichlorophenol; 4-chloro-2-methylphenol; etc.]

408. Pierce, R. H., Jr., C. E. Olney, and G. T. Felbeck, Jr. 1971. Pesticide adsorption, soils, sediments, humic acids, and soil lipids. Environ. Lett. 1(2):157-172. [2,4-D; 2,4,5-T; etc.]

409. Pimentel, D. 1971. Evolutionary and environmental impact of pesticides. BioScience 21(3):109. [2,4-D]

410. Piper, W. N., J. Q. Rose, and P. J. Gehring. 1972. Metabolism of 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) in rats. Toxicol. Appl. Pharmacol. 22(2):317-318. Health Aspects Pestic. 6(5):272, 1973. Weed Abstr. 23(7):150, 1974.

411. Piper, W. N., J. Q. Rose, M. L. Leng, and P. J. Gehring. 1973. The fate of 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) following oral administration to rats and dogs. Toxicol. Appl. Pharmacol. 26(3): 339-351. Pestic. Abstr. 7(3):159-160, 1974. Weed Abstr. 24(6): 149, 1975.

412. Pokornts, Ya. and Kh. Kulikova. 1974. Effects of pesticides on reservoir water. (Ru.) Gig. Sanit. 39(1):89-91. Pestic. Abstr. 7(8): 509, 1974. [Phenoxyacetic acids; etc.]

Q

413. Que Hee, S. S. and R. G. Sutherland. 1974. Volatilization of various esters and salts of 2,4-D. Weed Sci. 22(4):313-318. Pestic. Abstr. 7(12):779, 1974. Weed Abstr. 24(4):85, 1975.

414. Que Hee, S. S., R. G. Sutherland, and M. Vetter. 1975. GLC analysis of 2,4-D concentrations in air samples from central Saskatchewan in 1972. Environ. Sci. Technol. 9(1):62-66. Pestic. Abstr. 8(3): 168-169, 1975. Weed Abstr. 24(9):240, 1975.

415. Que Hee, S. S., R. G. Sutherland, K. S. McKinlay, and J. G. Saha. 1975. Factors affecting the volatility of DDT, dieldrin, and dimethylamine salt of (2,4-dichlorophenoxyacetic) acid (2,4-D) from leaf and glass surfaces. Bull. Environ. Contam. Toxicol. 13(3): 284-290. Pestic. Abstr. 8(7):442, 1975.

R

416. Raake, W. 1972. Effect of 4-chloro-2-methylphenoxyacetic acid (MCPA) on cattle and rats. (De.) Naunyn-Schmiedebergs Arch. Pharmakol. Exp. Pathol. 274:Suppl. R88. Pestic. Abstr. 7(1):19, 1974. Weed Abstr. 24(3):54, 1975.

417. Rawls, C. K. 1971. The accumulation and loss of field-applied butoxyethanol ester of 2,4-dichlorophenoxyacetic acid in eastern oysters, *Crassostrea virginica* and soft-shelled *Mya arenaria*. Hyac. Control J. 9(1):62-78. Weed Abstr. 22(9):229, 1973.

418. Raymond, D. D. and M. Alexander. 1972. Cleavage of the ether bond of phenylmethyl ethers by enzymes of *Arthrobacter* sp. Pestic. Biochem. Physiol. 2(3):270-277. Health Aspects Pestic. 6(4):202, 1973. [2,4-D; etc.]

419. Reid, J. J. 1960. Bacterial decomposition of herbicides. Proc. Northeast. Weed Sci. Soc. 14:19-30. [2,4-D]

420. Reinhardt, L. R. 1971. Weed control and environmental factors relating to the activity of chloroxuron and selected herbicides. Diss. Abstr. Int. 31(4):1655B-1656B. Weed Abstr. 20(6):441, 1971. [2,4-DB; etc.]

421. Richardson, R. G. and R. L. Amor. 1975. Effect of 2,4,5-T and picloram on the regeneration of blackberry (*Rubus procerus* P. J. Muell) from root segments. Weed Res. 15:227-231.

422. Rivers, J. B. 1972. Gas chromatographic determination of pentachlorophenol in human blood and urine. Bull. Environ. Contam. Toxicol. 8(5):294-296.

423. Robson, T. O. 1966. Some studies of the persistence of 2,4-D in natural surface waters in Britain. Proc. 8th Weed Control Conf. p 594-597.

424. Robson, T. O. 1968. Some studies of the persistence of 2,4-D in natural surface waters. Proc. 9th Brit. Weed Control Conf. p 404-408.

425. Robson, T. O. 1969. Problems of 2,4-D residues in surface water. Proc. Eur. Weed Res. Counc., Symp. Herbic.-Soil. p 141-142.

426. Rodgers, C. A. and D. L. Stalling. 1970. 2,4-D butoxyethanol ester uptake distribution and elimination in organs of rainbow trout, channel catfish and bluegills. Weed Sci. Soc. Am., Abstr., 1970 Meet. p 97. Weed Abstr. 21(3):251, 1972. [2,4-D; 2,4-DBEE]

427. Rodgers, C. A. and D. L. Stalling. 1972. Dynamics of an ester of 2,4-D in organs of three fish species. Weed Sci. 20(1):101-105. Weed Abstr. 22(5):97, 1973.

428. Rogers, C. G., Jr., R. H. Cagan, and M. R. Kare. 1974. Percutaneous absorption of several chemicals, some pesticides included, in the red-winged blackbird. Environ. Physiol. Biochem. 4(3):104-111. Pestic. Abstr. 8(1):35, 1975. [2,4-D; etc.]

429. Rogoff, M. H. and J. J. Reid. 1952. Persistence of weed control agents and effect on nitrification in field and garden soil. Bacteriol. Proc. (A2). p 13. [2,4-D]

430. Rogoff, M. H. and J. J. Reid. 1954. Biological decomposition of 2,4-dichlorophenoxyacetic acid. Bacteriol. Proc. (A16). p 21.

431. Rogoff, M. H. and J. J. Reid. 1956. Bacterial decomposition of 2,4-dichlorophenoxyacetic acid. J. Bacteriol. 71:303-307.

432. Rogoff, M. H. 1961. Oxidation of aromatic compounds by bacteria. Advan. Appl. Microbiol. 3:193-221. [2,4-D; MCPA]

433. Rudling, L. 1970. Determination of pentachlorophenol in organic tissues and water. Water Res. 4(8):533-537. Weed Abstr. 21(5):412, 1972.

S

434. Sanford, G. B. and T. R. Davidson. 1951. Effect of 2,4-dichlorophenoxyacetic acid vapour on tomato plants in a greenhouse. Can. J. Agric. Sci. 31:368-371.

435. Savory, B. M. 1973. Relative phytotoxicity of 2,4-D ester/ioxynil ester herbicides. Int. Sugar J. 75(1):195-199. Weed Abstr. 23(3): 58, 1974.

436. Saxena, S. K., L. Boersma, F. T. Lindstrom, and J. L. Young. 1974. The self-diffusion coefficients of ^{45}Ca and 2,4-dichlorophenoxyacetic acid. Soil Sci. 117(1):14-20. Weed Abstr. 23(9):219, 1974.

437. Schrader, E. 1971. Herbicides and soil. (De.) Mitt. Dtsch. Landwirtsch. Ges. 86(37):956-958. [MCPA; MCPB]

438. Schultz, D. P. 1972. Residues of 2,4-D in water, hydrosol, and three species of fish. Weed Sci. Soc. Am. Abstr., 1972 Meet. p 12-13. Weed Abstr. 23(8):181, 1974.

439. Schultz, D. P. 1973. Dynamics of a salt of 2,4-dichlorophenoxyacetic acid in fish, water and hydrosol. J. Agric. Food Chem. 21(2):186-192. Health Aspects Pestic. 6(6):322, 1973. Weed Abstr. 23(1):20, 1974.

440. Schultz, D. P. and E. W. Whitney. 1974. Monitoring 2,4-D residues at Loxahatchee National Wildlife Refuge. Pestic. Monit. J. 7(3/4):146-152. Pestic. Abstr. 7(8):501, 1974. Weed Abstr. 24(5):123, 1975.

441. Schultz, D. P. and P. D. Harman. 1974. Residues of 2,4-D in pond waters, mud, and fish, 1971. Pestic. Monit. J. 8(3):173-179.

442. Schulze, J. A., D. B. Manigold, and F. L. Andrews. 1973. Pesticides in selected western streams - 1968-71. Pestic. Monit. J. 7(1): 73-84. Pestic. Abstr. 7(2):66-67, 1974. Weed Abstr. 23(7):149, 1974. [2,4-D; 2,4,5-T; silvex; etc.]

443. Schwartz, H. G., Jr. 1967. Microbial degradation of pesticides in aqueous solutions. J. Water Pollut. Control Fed. 39(10)Part 1:1701-1714. [2,4-D; etc.]

444. Scott, D. C. and J. B. Weber. 1967. Herbicide phytotoxicity as influenced by adsorption. Soil Sci. 104(3):151-157. [2,4-D; etc.]

445. Scott, H. D. and J. F. Lutz. 1971. Release of herbicides from clay minerals as a function of water content. I. Kaolinite. Proc. Soil Sci. Soc. Am. 35(3):374-379. Weed Abstr. 21(2):176, 1972. [2,4-D]

446. Scott, H. D. 1972. Diffusion of selected herbicides in water and in soil to soybeans. Diss. Abstr. Int. 33(2):526B-527B. Health Aspects Pestic. 6(7):349, 1973. Weed Abstr. 22(9):224, 1973. [2,4-D]

447. Scott, H. D. and R. E. Phillips. 1972. Diffusion of selected herbicides in soil. Proc. Soil Sci. Soc. Am. 36(5):714-719. Health Aspects Pestic. 6(2):71, 1973. Weed Abstr. 23(1):21, 1974. [2,4-D; etc.]

448. Sears, H. S. and W. R. Meehan. 1971. Residues in fish, wildlife, and estuaries. Short-term effects of 2,4-D on aquatic organisms in the Nakwasina River watershed, southeastern Alaska. Pestic. Monit. J. 5(2):213-217. Weed Abstr. 21(5):417, 1972.

449. Seidel, K. 1974. Elimination of pentachlorophenol from water bodies by plants. (De.) Naturwissenschaften 61(2):81. Pestic. Abstr. 8(1): 43, 1975.

450. Sharpee, K. W. 1973. Microbial degradation of phenoxy herbicides in culture, soil, and aquatic ecosystems. Diss. Abstr. Int. 34(3): 954B. [2,4-D; 2,4,5-T; 2,4-DCP; 2,4,5-TCP]

451. Sharpee, K. W., J. M. Duxbury, and M. Alexander. 1973. 2,4-Dichlorophenoxyacetate metabolism by *Arthrobacter* sp.: accumulation of a chlorobutenolide. Appl. Microbiol. 26(3):445-447. Pestic. Abstr. 7(1):23, 1974. Weed Abstr. 23(7):153, 1973.

452. Shaw, W. C., J. L. Hilton, D. E. Moreland, and L. L. Jansen. 1960. The fate of herbicides in plants. P 119-133. In The Nature and Fate of Chemicals Applied to Soils, Plants and Animals. U.S. Dep. Agric., Agric. Res. Serv., ARS 20-9. [2,4-D; 2,4-DB; MCPA; etc.]

453. Shaw, W. C. and A. J. Loustalot. 1963. Revolution in weed science. Agric. Sci. Rev. p 38-47. [2,4-D; 2,4-DB; etc.]

454. Shcherbakov, Yu. A. and I. V. Poluboyarinova. 1970. Stability of the butyl ester of 2,4-D in water and its possible accumulation in aquatic organisms. (Ru.) Eksp. Vod. Toksikol., Mater. Vses. Simp. 1:32-35. Health Aspects Pestic. 5(11):536, 1972. Weed Abstr. 23(2):41, 1974.

455. Sheets, T. J. and L. Danieldson. 1960. Herbicides in soils. P 170-181. In The Nature and Fate of Chemicals Applied to Soils, Plants and Animals. U.S. Dep. Agric., Agric. Res. Serv., ARS 20-9. [2,4-D; 2,4-DP; 2,4-DB; silvex; 2,4,5-T; etc.]

456. Sheets, T. J. and J. F. Lutz. 1969. Movement of herbicides in runoff water. Paper; 8 p. Presented at the Dec. 1969 meeting of the American Society of Agricultural Engineers; Chicago, Ill. [2,4-D; 2,4,5-T]

457. Sheets, T. J., W. L. Rieck, and J. F. Lutz. 1972. Movement of 2,4-D, 2,4,5-T, and picloram in surface water. Proc., South. Weed Sci. Soc. 25:427.

458. Sheldon, M. G., W. H. Robison, R. A. Wilson, and M. H. Mohn. 1963. Canada geese: Feeding test with ^{14}C tagged 2,4-D. P 46. In Pesticide Wildlife Studies. A review of fish and wildlife service investigations during 1961 and 1962. U.S. Fish Wildl. Serv, Cir. #167.

459. Singh, D. J. C. and I. V. Subba Rao. 1971. Studies on residual persistence of herbicides in red soil. Indian J. Weed Sci. 3(2):112-119. Weed Abstr. 22(4):73, 1973. [2,4-D; MCPA]

460. Skryabin, G. K., L. A. Golovleva, B. P. Strekozov, and N. V. Pribud'ko. 1974. Microbiological transformation of herbicides under cooxidation conditions. (Ru.) Izv. Akad. Nauk. Kaz. SSR, Ser. Biol. 3:353-360. Pestic. Abstr. 8(1):38, 1975. [MCPA; 2,4-D]

461. Smith, A. E. 1972. Accumulation of 2,4-dichlorophenoxyacetic acid and 2,4,5-trichlorophenoxyacetic acid by parenchyma tissue as influenced by metabolic inhibitors and lecithin. Physiol. Plant. 27:338-341.

462. Smith, A. E. 1972. The hydrolysis of 2,4-dichlorophenoxyacetate esters to 2,4-dichlorophenoxyacetic acid in Saskatchewan soils. Weed Res. 12:364-372. Health Aspects Pestic. 6(6):304, 1973. Weed Abstr. 22 (10):258, 1973.

463. Smith, A. E. 1972. Lipid influence of 2,4-D transport and accumulation. Weed Sci. 20(1):46-48. Weed Abstr. 22(9):223, 1973. [2,4-D; 2,4,5-T]

464. Smith, A. E. 1972. Influence of calcium hydroxide and sulphur on 2,4-D degradation in soil. Soil Sci. 113(1):36-41.

465. Smith, A. E. 1973. Influence of 2,4-D and 2,4,5-T on in vitro digestion of forage samples. J. Range Manage. 26(4):272-274. Pestic. Abstr. 7(1):35, 1974.

466. Smith, A. E. 1976. The hydrolysis of herbicidal phenoxyalkanoic esters to phenoxyalkanoic acids in Saskatchewan soils. Weed Res. 16:19-22.

467. Smith, G. E. and B. G. Isom. 1967. Investigation of effects of large-scale applications of 2,4-D on aquatic fauna and water quality. Pestic. Monit. J. 1(3):16-21.

468. Soderquist, C. J. and D. G. Crosby. 1974. Dissipation of 4-chloro-2-methylphenoxyacetic acid (MCPA) in a rice field. Pestic. Sci. 6:17-33.

469. Sokolov, M. S. 1970. Determining the volatility and phytotoxicity of vapours of hormone herbicides. (Ru.) Khim. Sel'sk. Khoz. 8(3):212-214. [2,4-D; 2,4,5-T]

470. Sokolov, M. S., L. L. Knyr, B. P. Strekozov, V. D. Agarkov, A. P. Chubenko, and B. A. Kryzhko. 1974. Behavior of some herbicides during rice irrigation. (Ru.) Agrokhimiya 3:95-106. Weed Abstr. 24(7):177, 1975. [2,4-D; MCPA; etc.]

471. Sokolov, M. S., V. S. Rodkin, B. A. Kryzhko, B. P. Stekozov, and V. V. Izubenko. 1974. The application of herbicides by the low and ultra-low volume method. (Ru.) Khim. Sel'sk. Khoz. 12(4):300-303. Pestic. Abstr. 8(8):504, 1975. [2,4-D; 2,4-dichlorophenol; MCPA; etc.]

472. Somers, J. D., E. T. Moran, Jr., and B. S. Reinhart. 1973. Effect of external application of 2,4-D and picloram to the fertile egg on hatching success and early chick performance. Down Earth 29(3):15-17.

473. Somers, J. D., E. T. Moran, Jr., B. S. Reinhart, and G. R. Stephenson. 1974. Effect of external application of pesticides to the fertile egg on hatching success and early chick performance. 1. Pre-incubation spraying with DDT and commercial mixtures of 2,4-D, picloram and 2,4-D:2,4,5-T. Bull. Environ. Contam. Toxicol. 11(1):33-38. Weed Abstr. 23(9):217, 1974.

474. Somers, J. D., E. T. Moran, Jr., and B. S. Reinhart. 1974. Effect of external application of pesticides to the fertile egg on hatching success and early chick performance. 2. Commercial herbicide mixtures of 2,4-D with picloram or 2,4,5-T using the pheasant. Bull. Environ. Contam. Toxicol. 11(4):339-342. Weed Abstr. 23(11):292, 1974.

475. Somers, J. D., E. T. Moran, Jr., and B. S. Reinhart. 1974. Effect of external application of pesticides to the fertile egg on hatching success and early chick performance. 3. Consequences of combining 2,4-D with picloram and extremes in contamination. Bull. Environ. Contam. Toxicol. 11(6):511-516. Weed Abstr. 24(7):176, 1975.

476. Sopper, W. E., I. C. Reigner, and R. R. Johnson. 1966. Effect of phenoxy herbicides on riparian vegetation and water quality. Weeds Trees Turf. p 8-10.

477. Spicher, G. 1954. Contributions for the knowledge of the efficiency of 2,4-D decomposition *Flavobacterium peregrinum* St. et Sp. (De.) Zentralbl. Bakteriol. Parasitenkd. Infektionskr. Abt. 2, 108:225-231.

478. St. John, L. E., D. G. Wagner, and D. J. Lisk. 1964. Fate of atrazine, kuron, silvex and 2,4,5-T in the dairy cow. J. Dairy Sci. 47:1267-1270.

479. Stapp, C. and G. Spicher. 1954. Examination about the effect of 2,4-D in soil. IV. *Flavobacterium peregrinum n. sp.* and its ability for the reduction of hormones. (De.) Zentralbl. Bakteriol. Parasitenkd. Infektionskr. Abt. 2, 108:113-126.

480. Steen, R. C., I. R. Schultz, D. C. Zimmerman, and J. R. Fleeker. 1974. Absence of 3-(2,4-dichlorophenoxy)propionic acid in plants treated with 2,4-dichlorophenoxyacetic acid. Weed Res. 14(1):23-28. Pestic. Abstr. 7(8):538, 1974.

481. Steenson, T. I. and N. Walker. 1956. Observations on the bacterial oxidation of chloro-phenoxyacetic acids. Plant Soil 8(1):17-32. [2,4-D; MCPA; etc.]

482. Steenson, T. I. and N. Walker. 1957. The pathway of breakdown of 2,4-dichloro- and 4-chloro-2-methyl-phenoxyacetic acid by bacteria. J. Gen. Microbiol. 16:146-155.

483. Steenson, T. I. and N. Walker. 1958. Adaptive patterns in the bacterial oxidation of 2,4-dichloro- and 4-chloro-2-methyl-phenoxyacetic acid. J. Gen. Microbiol. 18:692-697.

484. Stevens, L. J., C. W. Collier, and D. W. Woodham. 1970. Monitoring pesticides in soils from areas of regular, limited, and no pesticide use. Pestic. Monit. J. 4(3):145-164. [2,4-D; 2,4,5-T; MCPA; etc.]

485. Stojanovic, B. J., M. V. Kennedy, and F. L. Shuman, Jr. 1972. Edaphic aspects of the disposal of unused pesticides, pesticide wastes, and pesticide containers. J. Environ. Qual. 1(1):54-62. [2,4-D; 2,4,5-T; etc.]

486. Stojanovic, B. J., F. Hutto, M. V. Kennedy, and F. L. Shuman, Jr. 1972. Mild thermal degradation of pesticides. J. Environ. Qual. 1(4):397-401. Health Aspects Pestic. 6(4):175, 1973. Weed Abstr. 22(8):197, 1973. [2,4-D; etc.]

487. Suffling, R., D. W. Smith, and G. Sirons. 1974. Lateral loss of picloram and 2,4-D from a forest podsol during rainstorms. Weed Res. 14:301-304. Pestic. Abstr. 8(8):514, 1975. Weed Abstr. 24(3):55, 1975.

488. Syarogin, V. V. 1973. Distribution of 2,4-D butyl esters in the organs and tissues of rabbits during experimental poisoning. (Ru.) Vestsi Akad. Navuk B. SSR, Ser. Sel'skagaspad. Navuk 4:121-123. Pestic. Abstr. 8(3):163, 1975.

489. Synek, M., M. Tibenska, and M. Veresikova. 1974. Contamination of groundwaters by dicotex (sodium salt of 2-methyl-4-chlorophenoxy-acetic acid). (Sk.) Bratisl. Lek. Listy 59(2):203-207. Weed Abstr. 24(5):124, 1975.

T

490. Taniguchi, G. 1975. Soil incorporation/biodegradation of herbicide orange. Vol. II. Meteorological and chemical studies of a proposed test site on the AFLC test range; Hill Air Force Base, Utah. [2,4-D; 2,4,5-T]

491. Tarrant, R. F. and L. A. Norris. 1967. Residues of herbicides and diesel oil carriers in forest waters: A review. P 94-102. In Herbicides and Vegetation Management in Forests, Ranges and Noncrop Lands. Proceedings; Symposium; School of Forestry, Oreg. State Univ.; Corvallis, Oreg. [2,4,5-T; 2,4-D]

492. Taylor, H. F. and R. I. Wain. 1962. Side-chain degradation of certain ω-phenoxyalkanecarboxylic acids by *Nocardia coeliaca* and other microorganisms isolated from soil. Proc. R. Soc. Ser. B156:172-186. [ε-(2,4,5-trichlorophenoxy)caproic acid]

493. Thiegs, B. J. 1962. Microbial decomposition of herbicides. Down Earth, Fall 1962. p 7-10. [2,4-D; MCPA; 2,4,5-T; 3-(2,4-DP); 3-(2,4,5-TP); 2-(2,4-DP); 2-(2,4,5-TP); etc.]

494. Thimann, K. V. 1974. Herbicides in Vietnam. Science 185(4147):207. Pestic. Abstr. 8(7):457, 1975. [2,4-D; 2,4,5-T; etc.]

495. Thomson, J. M. and J. D. S. Davie. 1974. Pesticide residues in the fauna of the Brisbane river estuary. Search 5(4):152. Pestic. Abstr. 7(11):712-713, 1974. [2,4-D; 2,4,5-T; etc.]

496. Thornton, H. G. 1955. Decomposition of chlorophenoxyacetic acid in soil. Rep., Rothamsted Exp. Stn.; Harpenden, England. p 66-67. [2,4-D; MCPA; ρ-chlorophenoxyacetic acid]

497. Tiedje, J. M. 1968. Metabolism of 2,4-dichlorophenoxyacetic acid by enzymes of an *Arthrobacter* sp. Ph.D. Thesis, Cornell Univ. 116 p.

498. Tiedje, J. M., G. G. Briggs, and M. Alexander. 1968. Phenoxyacetate detoxication by *Arthrobacter* sp. Bacteriol. Proc. (A32). p 6. [2,4-D; MCPA]

499. Tiedje, J. M. and M. Alexander. 1969. Enzymatic cleavage of the ether bond of 2,4-dichlorophenoxyacetate. J. Agric. Food Chem. 17(5):1080-1084.

500. Tiedje, J. M., J. M. Duxbury, M. Alexander, and J. E. Dawson. 1969. 2,4-D metabolism: pathway of degradation of chloro-catecholes by *Arthrobacter* sp. J. Agric. Food Chem. 17(5):1021-1026.

501. Tomati, U., D. Lippi, and W. Pietrosanti. 1970. An enzymatic complex capable of degrading 2,4-D. (Fr.) Meded. Fac. Landbouwwet., Rijksuniv. Gent 35(2):829-838. Weed Abstr. 21(1):75, 1972.

502. Tomkins, W. A. 1964. A pesticide study on the Westfield, Farmington and Connecticut river watersheds. Connecticut River Watershed Council Inc.; Greenfield, Mass.; July 1, 1963 - June 30, 1964. [2,4-D; 2,4,5-T; etc.]

503. Torstensson, N. T. L., J. Stark, and B. GÜransson. 1975. The effect of repeated applications of 2,4-D and MCPA on their breakdown in soil. Weed Res. 15:159-164.

504. Trichell, D. W., H. L. Morton, and M. G. Merkle. 1968. Loss of herbicides in runoff water. Weed Sci. 16(4):447-449. [2,4,5-T; etc.]

505. Tschirley, F. H. (Compiler). 1968. Research Report ... Response of tropical and subtropical woody plants to chemical treatments. USDA, ARS, CR-13-67. ARPA Order No. 424. Advanced Research Projects Agency. U.S. Department Defense. 197 p. [2,4-D; 2,4,5-T; etc.]

U

506. U.S. Department of Health, Education and Welfare. 1969. Report of the Secretary's Commission on Pesticides and their Relationship to Environmental Health. Part I & II. p 99-176. [MCPA; 2,4-D; 2,4,5-T; etc.]

V

507. Valentine, J. P. 1973. The influence of four algae on herbicide residues in water. Diss. Abstr. Int. 34(3):1251B-1252B. Weed Abstr. 23(9):219, 1973. [2,4-D]

508. Valentine, J. P. and S. W. Bingham. 1974. Influence of several algae on 2,4-D residues in water. Weed Sci. 22(4):358-363. Weed Abstr. 24(4):85, 1975.

509. Van Middelem, C. H. 1966. Fate and persistence of organic pesticides in the environment. Advan. Chem. Ser. 60:228-249. [2,4-D; 2,4,5-T]

510. Virag, A. 1959. The effect of chemical weed killers on some microscopic fungi. (Hu.) Soil Fert. 22:452. [MCP]

511. Vlitos, A. J. 1952. Biological activation of sodium 2-(2,4-dichlorophenoxy)ethyl sulfate by *Bacillus cereus* var. *mycoides*. Contrib. Boyce Thompson Inst. 16:435-438.

512. Von Rumker, R., E. W. Lawless, A. F. Meiners, K. A. Lawrence, G. L. Kelso, and F. Horay. 1975. Production, distribution, use and environmental impact potential of selected pesticides. P 225-231. In Office of Pesticide Programs, Office of Water and Hazardous Materials, EPA (EPA 540/1-74-001), Washington, D.C. [2,4-D; chlorophenols]

W

513. Waldron, A. C. 1973. Herbicide residues on strawberries: The effects of combinations of Dacthal and Sesone. Bull. Environ. Contam. Toxicol. 9(5):305-311. Health Aspects Pestic. 6(8):411, 1973. Weed Abstr. 23(11):292, 1974. [2,4-D; etc.]

514. Walker, C. R. 1971. The toxicological effects of herbicides and weed control on fish and other organisms in the aquatic ecosystem. Proc. Eur. Weed Res. Counc., 3rd International Symposium on Aquatic Weeds. p 119-127. Weed Abstr. 21(3):250, 1972. [2,4-D; 2,4-DBEE; silvex]

515. Walker, L. C., D. Purdom, and W. Spivey. 1961. Movement of 2,4,5-T in hardwood seedlings. Ga. Agric. Res. 2(4):12, 13, 16.

516. Walker, N. 1954. Preliminary observations on the decomposition of chlorophenols in soil. Plant Soil 5:194-204. [Chlorophenols; ρ-chlorophenoxyacetate]

517. Walker, N. 1957. The persistence in soil of bacteria adapted to the decomposition of hormone herbicides. Turf Sport 3:3-4. [2,4-D; MCPA]

518. Walker, N. and T. I. Steenson. 1957. Bacterial decomposition of herbicides. Rep., Rothamsted Exp. Stn.; Harpenden, England. [2,4-D; MCPA]

519. Walker, R. L. and A. S. Newman. 1956. Microbial decomposition of 2,4-dichlorophenoxyacetic acid. Appl. Microbiol. 4:201-206.

520. Wallen, G. H. 1963. 2,4-D and bluegill sunfish. P 28. In Pesticide Wildlife Studies. A review of fish and wildlife service investigations during 1961 and 1962. U.S. Fish Wildl. Serv., Cir. #167.

521. Warren, G. F. 1954. Rate of leaching and breakdown of several herbicides in different soils. Proc., North Cent. Weed Control Conf. 11: 5-6. [2,4-D; 2,4,5-T; silvex; etc.]

522. Washuettl, J. 1974. Pesticides in milk and milk products. (De.) Wien. Tieraerztl. Monatsschr. 61(2):44-51. Pestic. Abstr. 7(12): 779-780, 1974. [2,4-D; 2,4,5-T; etc.]

523. Watanabe, I. and S. Hayashi. 1972. Degradation of PCP in soil. Part I. Microbial depletion under dark and submerged conditions. (Ja.) Nippon Dojo Hiryogaku Zasshi 43(4):119-122. Weed Abstr. 24(4):84, 1975.

524. Watanabe, I. 1973. Decomposition of pesticides by soil microorganisms - special emphasis on the flooded soil condition. Jpn. Agric. Res. Q. 7(1):15-18. Pestic. Abstr. 7(1):11, 1974. [PCP; 2,4,5-trichlorophenol; etc.]

525. Watanabe, I. 1973. Isolation of pentachlorophenol decomposing bacteria from soil. Soil Sci. Plant Nutr. 19(2):109-116. Pestic. Abstr. 7 (10):692, 1974. Weed Abstr. 23(7):152, 1973.

526. Watson, J. R., A. M. Posner, and J. P. Quirk. 1973. Adsorption of the herbicide 2,4-D on goethite. J. Soil Sci. 24(4):503-511. Weed Abstr. 23(7):153, 1973.

527. Webb, W. L., H. J. Schroeder, Jr., and L. A. Norris. 1975. Pesticide residue dynamics in a forest ecosystem: a compartment model. Simulation 24(6):161-169. Pestic. Abstr. 8(9):573, 1976. [2,4,5-T; etc.]

528. Weber, J. B., P. W. Perry, and R. P. Upchurch. 1965. The influence of temperature and time on the adsorption of paraquat, diquat, 2,4-D and prometone by clays, charcoal, and an anion-exchange resin. Proc. Soil Sci. Soc. Am. 29(6):678-688.

529. Weber, J. B., T. M. Ward, and S. B. Weed. 1968. Adsorption and desorption of diquat, paraquat, prometone, and 2,4-D by charcoal and exchange resins. Proc. Soil Sci. Soc. Am. 32(2):197-200.

530. Weber, J. B. 1972. Interaction of organic pesticides with particulate matter in aquatic and soil systems. Advan. Chem. Ser. 111:55-120. [2,4-D; 2,4,5-T; MCPA; MCPB; silvex; etc.]

531. Weber, J. B., S. B. Weed, and T. J. Sheets. 1972. Pesticides, how they move and react in the soil. Crops Soils 25(1):14-17. [2,4-D; 2,4,5-T; etc.]

532. Weber, J. B., T. J. Monaco, and A. D. Worsham. 1973. What happens to herbicides in the environment? Weeds Today 4(1):16-17 & 22. [2,4-D; 2,4,5-T; etc.]

533. Webley, D. M., R. B. Duff, and V. C. Farmer. 1957. Formation of a β-hydroxy acid as an intermediate in the microbiological conversion of monochlorophenoxybutyric acids to the corresponding substituted acetic acids. Nature 179:1130-1131.

534. Webley, D. M., R. B. Duff, and V. C. Farmer. 1958. The influence of chemical structure on β-oxidation by soil *Nocardias*. J. Gen. Microbiol. 18:733-746. [MCPB; 2,4-DB]

535. Webley, D. M., R. B. Duff, and V. C. Farmer. 1959. Effect of substitution in the side-chain on β-oxidation of aryloxyalkylcarboxylic acids by *Nocardia opaca*. Nature 183:748-749. [DL γ-(4-chloro-2-methylphenoxy)-2-methylacetic acid]

536. Wedding, R. T. and G. E. Blackman. 1961. The uptake of growth substances. III. Influence of indoleacetic acid and other auxins on the uptake of 2,4-dichlorophenoxyacetic acid by *Chlorella*. J. Exp. Bot. 12:378-389.

537. Wedemeyer, G. 1966. Uptake of 2,4-dichlorophenoxyacetic acid by *Pseudomonas fluorescens*. Appl. Microbiol. 14(4):486-491.

538. Weibel, S. R., R. B. Weidner, J. M. Cohen, and A. G. Christianson. 1966. Pesticides and other contaminants in rainfall and runoff. J. Am. Water Works Assoc. 58:1075-1084. [2,4,5-T; etc.]

539. Weintraub, R. L., J. W. Brown, and J. N. Yeatman. 1950. Recovery of growth regulator from plants treated with 2,4-D. Science 111(2888): 493-494.

540. Weintraub, R. L. 1953. 2,4-D - Mechanisms of action. J. Agric. Food Chem. 1(3):250-254.

541. Weintraub, R. L., J. H. Reinhart, and R. A. Scherff. 1956. Role of entry, translocation, and metabolism in specificity of 2,4-D and related compounds. P 203-208. In Atomic Energy Commission Report No. TID-7512; A Conference on Radioactive Isotopes in Agriculture.

542. Wershaw, R. L., P. J. Burrac, and M. C. Goldberg. 1969. Interaction of pesticides with natural organic material. Environ. Sci. Technol. 3(3):271-273. [2,4,5-T; etc.]

543. Wershaw, R. L. and M. C. Goldberg. 1971. Interaction of organic pesticides with natural organic polyelectrolytes. Am. Chem. Soc., Abstr. Pap., 161st Nat. Meet., Pestic. Chem. Sec., Abstr. No. 31. [2,4-D; etc.]

544. Westlake, W. E. 1966. Pesticides as contaminants of agricultural waste waters. Proc. Symp. Agric. Waste Waters. Calif.: Water Resour. Cent. Rep. 10:90-93. [2,4-D]

545. Westlake, W. E. and F. A. Gunther. 1966. Occurrence and mode of introduction of pesticides in the environment. Advan. Chem. Ser. 60:110-121. [2,4-D; 2,4,5-T; etc.]

546. Whiteside, J. S. and M. Alexander. 1960. Measurement of microbiological effects of herbicides. Weeds 8:204-213. [2,4-D; 2,4,5-T; 2,4-DB; 2,4-DP; etc.]

547. Whitney, E. W., A. B. Montgomery, E. C. Martin, and E. O. Gangstad. 1973. The effects of a 2,4-D application on the biota and water quality in Currituck Sound, North Carolina. Hyac. Control J. 11: 13-17. Weed Abstr. 23(5):101, 1974.

548. Whitney, E. W., R. D. Estes, R. O. Smitherman, and E. O. Gangstad. 1974. Effects of silvex on aquatic biota. Hyac. Control J. 12: 20-24. Weed Abstr. 24(5):125, 1975.

549. Wiersma, G. B., P. F. Sand, and E. L. Cox. 1971. A sampling design to determine pesticide residue levels in soils of the conterminous United States. Pestic. Monit. J. 5(1):63-66. [2,4-D; 2,4,5-T; etc.]

550. Wiersma, G. B., H. Tai, and P. F. Sand. 1972. Pesticides in Soil - Pesticide residue levels in soils, FY 1969 - National Soils Monitoring Program. Pestic. Monit. J. 6(3):194-228. [2,4-D; 2,4-DB; dichlorprop; MCPA; silvex; 2,4,5-T; PCP; etc.]

551. Wierszyllowski, J., W. Fiszer, and M. Ugolik. 1973. Distribution of 2,4,5-trichlorophenoxyacetic acid-1-^{14}C in parthenocarpic fruits, pedicles and bracts. (Pl.) Poznanskie Towarzystwo Przyjaciol Nauk, Wydzial Nauk Rolniczch i Lesnych, Prace Komisji Nauk Rolniczych i Komisji Nauk Lesnych 35:367-373.

552. Wiese, A. F. and R. G. Davis. 1963. Herbicide movement in soil with various amounts of water. Weeds 12:101-103. [2,4-D; 2,4,5-T; etc.]

553. Wilson, R. G., Jr. 1975. Breakdown and movement of formulated 2,4-D compounds in soil-water systems. Ph.D. Diss., Washington State Univ. 85 p.

554. Winston, A. W., Jr. and P. M. Ritty. 1961. What happens to phenoxy herbicides when applied to a watershed area? Proc. Northeast. Weed Sci. Soc. 15:396-400. [2,4-D; 2,4,5-T; silvex]

555. Winston, A. W., Jr. and P. M. Ritty. 1972. What happens to a phenoxy herbicide when applied to a watershed area? Ind. Veg. Manage. 4 (1):12-14. [2,4-D; 2,4,5-T]

556. Wojtalik, T. A., T. F. Hall, and L. O. Hill. 1971. Monitoring ecological conditions associated with wide-scale applications of DMA 2,4-D to aquatic environments. Pestic. Monit. J. 4(4):184-203.

557. Wolf, D. C. 1974. Degradation of bromacil, terbacil, 2,4-D, and atrazine in soil and pure culture and their effect on microbial activity. Diss. Abstr. Int. 34(10):4783B-4784B. Pestic. Abstr. 7(8):525, 1974.

558. Wright, F. C., J. C. Riner, J. S. Palmer, and J. C. Schlinke. 1970. Metabolic and residue studies with 2-(2,4,5-trichlorophenoxy)-ethyl-2,2-dichloropropionate (Erbon) herbicide in sheep. J. Agric. Food Chem. 18(5):845-847. Weed Abstr. 20(4):282, 1971.

559. Wright, S. J. L. 1971. Degradation of herbicides by soil microorganisms. Soc. Appl. Bacteriol. Symp. Ser. 1:233-254. Health Aspects Pestic. 6(9):503-504. [2,4-D; MCPA; etc.]

Y

560. Young, A. L. 1974. Ecological studies on a herbicide equipment test area (TAC-52A) Eglin AFB Reservation, Florida. Tech. Rep. AFATL-TR-74-12. Air Force Armament Laboratory, Eglin Air Force Base, Fla. 141 p. [2,4,5-T]

Z

561. Zepp, R. G., N. L. Wolfe, G. L. Baughman, and J. A. Gordon. 1974. Dynamics of 2,4-D esters in the aquatic environment: hydrolysis and photodegradation. Am. Chem. Soc., Abstr. Pap., 167th Nat. Meet., Pestic. Chem. Sec., Abstr. No. 68. Weed Abstr. 24(4):84-85, 1975.

562. Zepp, R. G., N. L. Wolfe, J. A. Gordon, and G. L. Baughman. 1975. Dynamics of 2,4-D esters in surface waters - hydrolysis, photolysis, and vaporization. Environ. Sci. Technol. 9(13):1144-1149.

563. Zielinski, W. L., Jr. and L. Fishbein. 1967. Gas chromatographic measurement of disappearance rates of 2,4-D and 2,4,5-T acids and 2,4-D esters in mice. J. Agric. Food Chem. 15(5):841-844.

1.6M/12-76
The Texas Agricultural Experiment Station • J. E. Miller, Director •
College Station, Texas