

Environmental Contaminants in Food

December 1979

NTIS order #PB80-153265

**Environmental
Contaminants
in Food**



CONGRESS OF THE UNITED STATES
Office of Technology Assessment
WASHINGTON, D. C. 20540

Library of Congress Catalog Card Number **79-600207**

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 Stock No. 052-003-00724-0

FOREWORD

This report presents the major findings of an OTA assessment of Federal and State efforts to deal with the environmental contamination of food. Undertaken at the request of the House Committee on Interstate and Foreign Commerce, the study examines both regulatory approaches and monitoring strategies for coping with contaminated food.

The assessment is concerned with chemical and radioactive contaminants that inadvertently find their way into the human food supply. To bring the scope of inquiry within manageable bounds, we excluded naturally occurring toxins such as fungal and microbial toxins.

The Office of Technology Assessment was assisted by two advisory panels of scientists and representatives of public interest groups, agriculture, the chemical industry, fisheries, and State and foreign governments. The Food and Drug Administration, the Department of Agriculture, and the Environmental Protection Agency each designated staff members to attend panel meetings, provide background information, and review draft reports. Background papers were commissioned concerning the scientific aspects of detecting and regulating environmental contaminants in food. The Congressional Research Service provided five analyses of previous food contamination episodes. Reviews of the draft report were provided by the advisory panels, Federal agencies, and a number of interested individuals not previously involved with the assessment.

Because this assessment addresses concerns of American citizens as well as policy makers and scientists, the summary of the report is also being published as a separate document. The summary provides the interested citizen with an informative and clear overview of this complex problem. Copies of the summary can be obtained free of charge from the office of Technology Assessment, U.S. Congress, Washington, D.C. 20510.



JOHN H. GIBBONS
Director

Tolerance Advisory Panel

James Anderson

Manager for Material Safety
Allied Chemical Corporation

Louise Burke

Executive Director
Consumer Council of Virginia Foundation
Consumer Council of Virginia, Inc.

Kenneth Crump

Department of Mathematics and Statistics
Louisiana Tech University

Donald Epp

Department of Agricultural Economics and
Rural Sociology
Pennsylvania State University

Frederick Halbert

Dairy Farmer
Delton, Mich.

Joseph Highland

Chairman
Toxic Chemicals Program
Environmental Defense Fund

Robert Jackson

Assistant State Health Commissioner
Director, Office of Health Protection and
Environmental Management
Virginia State Health Department

Kazuo K. Kimura

School of Medicine
Wright State University

Marvin Legator

Director
Division of Environmental Toxicology
Department of Preventive Medicine and
Community Health
University of Texas Medical Branch

David Lindsay

Technical Secretary
Steering Group on Food Surveillance
Ministry of Agriculture, Fisheries, and
Food
United Kingdom

Roy Mart in

Director
Science and Technology
National Fisheries Institute, Inc.

Richard Merrill

School of Law
University of Virginia

Joseph Rosen

Department of Food Science
Rutgers University

John Rust

Professor Emeritus
Pharmacology/Radiology
University of Chicago

Gary Van Gelder

College of Veterinary Medicine
University of Missouri

John Van Ryzin

RAND Corporation

George Whitehead

Deputy Director
Office for Consumer Affairs
Michigan Department of Agriculture

Monitoring Advisory Panel

Raymond Allred

Director
Environmental Conservation Research
Continental Oil Company

Richard Anderson

Chairman
Statistics Department
University of Kentucky

John Bourke

Director
Analytical Division
Food Science Department
Cornell University

Vaughan Bowen

Woods Hole Oceanographic Institute

Shirley Briggs

Executive Director
Rachel Carson Trust for the Living
Environment, Inc.

Leon Chesnin

Department of Agronomy
University of Nebraska

William Cooper

Professor
Department of Zoology
College of Natural Science
Michigan State University

John Davies

Chairman
Department of Epidemiology and Public
Health
School of Medicine
University of Miami

Blake Early

Environmental Action, Inc.

Edward Elkins

Director
Chemistry Division
Washington Research Laboratory
National Food Processors' Association

Ronald J. Hingle

Administrator
Food and Drug Control Unit
Bureau of Environmental Services
Louisiana Office of Health Services and
Environmental Quality

S. Roy Koirtiyohann

Environmental Trace Substances Center
University of Missouri

Charles Krister

Retired Manager
Biochemicals Department
E. I. DuPont de Nemours and Company

John Laseter

Director
Center for Bio-Organic Studies
University of New Orleans

John Martin

Moss Landing Marine Laboratories

Rebecca Sharitz

Savannah River Ecology Laboratories
University of Georgia

Gerald Ward

Department of Animal Science
Colorado State University

Food and Renewable Resources Program Staff

Joyce C. Lashof, Assistant Director
Health and Life Sciences Division
J. B. Cordaro, Program Manager*
Walter Parham, Program Manager

Catherine Woteki, Project Director
Robert Smith, Research Assistant

Chris Elf ring, OTA Congressional Fellow

Administrative Staff

Phyllis Balan Elizabeth Galloway Ogechee Koffler

Contractors

Lloyd W. Hazleton, Technical Advisor to Tolerance Panel
Robert Huggett, Technical Advisor to Monitoring Panel
Samuel Iker, Editor

OTA Publishing Staff

John C. Holmes, Publishing Officer
Kathie S. Boss Joanne Heming

Food Advisory Committee

Martin E. Abel, Chairmen
Senior Vice President
Schnittker Associates

Johanna Dwyer, Co-Chairman
Director
Frances Stern Nutrition Center

David Call
Dean, College of Agricultural
and Life Sciences
Cornell University

Cy Carpenter
President
Minnesota Farmers Union

Eliot Coleman
Director
Coolidge Center for the
Study of Agriculture

Almeta Edwards Fleming
Social Program Coordinator
Florence County, S.C.

Lorne Greene
Chairman of the Board
American Freedom From
Hunger Foundation

Richard L. Hall
Vice President, Science and
Technology
McCormick & Company, Inc.

Laura Heuser
Member, Board of Directors
Agricultural Council of America

Arnold Mayer
Legislative Representative
Amalgamated Meat Cutters and
Butcher Workmen of North
America

Max Milner
Executive Director
American Institute of Nutrition

Robert O. Nesheim
Vice President, Science and
Technology
The Quaker oats Company

Kathleen O'Reilly
Director
Consumer Federation of America

R. Dennis Rouse
Dean, School of Agriculture
Auburn University

Lauren Seth
Agricultural Consultant

Thomas Sporleder
Professor of Agricultural
Economics
Texas A&M University

Sylvan Wittwer
Director and Assistant Dean
College of Agriculture and
Natural Resources
Michigan State University

*Resigned June 16, 1979, and continued to serve under contract to assessment completion.