# Pesticide Formulations and Application Systems Fifth Volume

Spicer/Kaneko editors



# PESTICIDE FORMULATIONS AND APPLICATION SYSTEMS: FIFTH VOLUME

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## Foreword

The Fifth Symposium on Pesticide Formulations and Application Systems was held in Kansas City, Missouri, on 7-8 November 1984. ASTM Committee E-35 on Pesticides sponsored the event. Larry D. Spicer, Rhone-Poulenc Chemical Company, served as symposium chairman, and Thomas M. Kaneko, BASF Wyandotte Corporation (retired), served as symposium cochairman. Both men have edited this publication.

# Related ASTM Publications

- Pesticide Formulations and Application Systems: Fourth Symposium, STP 875 (1985), 04-875000-48
- Pesticide Formulations and Application Systems: Third Symposium, STP 828 (1983), 04-828000-48
- Pesticide Formulations and Application Systems: Second Conference, STP 795 (1983), 04-795000-48
- Pesticide Tank Mix Applications: First Conference, STP 764 (1982), 04-764000-48

# A Note of Appreciation to Reviewers

The quality of the papers that appear in this publication reflects not only the obvious efforts of the authors but also the unheralded, though essential, work of the reviewers. On behalf of ASTM we acknowledge with appreciation their dedication to high professional standards and their sacrifice of time and effort.

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# Overview

The Fifth Symposium on Pesticide Formulations and Application Systems was held on 7-8 November 1984 in Kansas City, Missouri. Like the previous four symposia in this series, it was sponsored by ASTM Committee E-35 on Pesticides and organized by Subcommittee E35.22 on Pesticide Formulations and Application Systems. The goals of this series are as follows:

- 1. Provide an open forum for presentations, discussions, and state-of-theart review, covering the area of pesticide formulations, application systems, and related topics.
- 2. Allow for exchanges of ideas and discussions of problems confronted by manufacturers, shippers, applicators, and regulatory agencies.
- 3. Include a wide variety of topics in each symposium, such as formulating and testing procedures, container selection, storage stability, equipment and application techniques, and their relationships to pest control efficiency.
- 4. Discuss advances in overall techniques to improve the quality and yield of crops.

Of the 29 papers given at the symposium, 15 are presented in this volume. These are divided into two sections: General Topics and Use of Spray Drop Size Analyzers.

As was done for earlier symposia, the program was designed to appeal to the entire audience, which consisted of representatives of industry, academia, regulatory agencies, and research institutions.

This Special Technical Publication gives the reader a state-of-the-art overview of pesticide formulations and application systems. The subject matter covered by the papers reported herein indicates the broad scope of the symposium. This volume is expected to serve as a useful reference for anyone involved in the formulation, manufacture, distribution, and application of pesticides.