Introduction

The 9th Symposium on Pesticide Formulations and Application Systems - International Aspects was held in Atlanta, Georgia on 9 & 10 November 1988.

The International Aspect of the 9th Symposium was based on a concept of environmental concerns having no domestic boundaries. An environmental insult in one location may eventually manifest consequences of that insult in a distant area with quite different effects. Agriculture, by its very nature, is deeply seated in the environmental flow and all inputs for agricultural production have opportunity to become insults. The extensive land surface area dedicated to agriculture, forestry and recreational uses requires increasingly greater chemical inputs of pesticide and nutrients for management. The agricultural chemical industry must continue to develop more selective materials and more accurate means for their application. More efficacious formulations can potentially lessen the amount of active ingredient required for target control and thus reduce the load on diffusion and bio-degradation.

Since 1980, when the first of this series of symposia was held under the sponsorship of ASTM Committee E-35 on Pesticides and conducted by members of its Sub-Committee E-35.22 on Pesticide Formulations and Applications Systems, the successive annual symposia have maintained the goal of providing an open forum in which industry, academia and government have all participated voluntarily to present research papers and to exchange ideas which contribute to the effective and responsible use of pesticides. Each year the program has covered a wide variety of topics which represent the diversity of volunteer authors.

The collection of twenty-four papers published in this volume are varied but interrelated. They are presented in five categories; some papers could have been placed in more than one category and, here, an arbitrary selection has been made. The categories are:

- 1. International Aspects
- 2. Formulation Efficacy
- Formulation Testing
- 4. Application Systems: Devices
- 5. Application Systems: Deposition Studies

These papers are written with varying levels of technical depth. Some information is generic, which can provide

those new to a particular subject with entry insight. Other information is quite specific and will serve to raise the level of research and application in that area. This volume will be a useful reference for those involved in the formulation, manufacture, application and registration of agricultural chemicals.

Just as this publication adds to the collected works of previous symposia, it would be fitting that the work presented herein might also inspire the reader to further advance the collective effort with a contribution of their own to continue progress in this vital technology.

The Symposium Committee gratefully acknowledges the extra effort of authors, reviewers and ASTM personnel that has made this publication possible.

James L. Hazen BASF Corporation Research Triangle Park, NC 27709 Symposium Chairman and Editor

David A. Hovde
DeSoto, Incorporated
Fort Worth, Texas
Symposium Co-Chairman and Editor

1988 Symposium Committee Members

Norm Akesson University of California Davis, CA

Loren Bode University of Illinois Urbana, IL

Wolf Brenner
E.I.DuPont de Nemours & Co.
Wilmington, DE

Chip Collins Stepan Company Winder, GA

Jim Hazen
BASF Corporation
Research Triangle Park, NC

Rich Houghton Rohm and Haas Spring House, PA

Dave Hovde
Petrochemicals/Desoto
Fort Worth, TX

Masoud Salyani University of Florida Lake Alfred, FL

Martin Siegel Ciba-Geigy Corporation Greensboro, NC

Steve Turner Henkel Corporation Morristown, NJ