

Pesticide Formulations and Application Systems:

A New Century for
Agricultural Formulations

TWENTY FIRST VOLUME

JANE C. MUENINGHOFF, ALAN K. VIETS,
ROGER A. DOWNER, EDITORS



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Jane C. Mueninghoff, Alan K. Viets, and Roger A. Downer, editors

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Foreword

This publication, *Pesticide Formulations and Application Systems: A New Century for Agricultural Formulations*, Twenty First Volume, contains selected papers presented at the symposium of the same name held in Orlando, Florida, on 24–26 October 2000. The symposium was sponsored by Committees E-35 and E-35.22 on Pesticide Formulations and Application Systems. The symposium chair was Jane C. Mueninghoff, Huntsman Corporation. The symposium co-chairs were Alan K. Viets, Bayer Corporaton and Roger A. Downer, Ohio State University.

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Overview

The Twenty First Symposium on Pesticide Formulations and Applications Systems was held October 24 and 25, 2001 in Orlando, Florida. Not only was this event the twenty first symposium sponsored by the ASTM E35.22 subcommittee, it was the first symposium of the new century. Hence, the theme was chosen was "A New Century for Agricultural Formulations." The symposium program emphasized the external factors affecting the global growth of the agricultural industry as well as new options available for formulating and delivering agricultural products to meet this global growth. The twenty first symposium was a valuable forum for formulators, researchers, applicators, and marketers to share ideas, opinions, and knowledge on a variety of important topics.

Invited speakers tackled the complicated subjects of 1) the effect of biotechnology on the food industry and consumer and government response to changes in how our food supply is generated; 2) recent trends in pesticide formulations in Japan and the Asia-Pacific region; and 3) recent regulatory actions of the United States Environmental Protection Agency. While these papers are not included in this book, extensive interest and discussion was generated by these presentations.

Papers from the technical sessions covering efficacy, methodology, formulation strategy, formulation ingredients, regulatory issues and application, and spray drift can be found in this publication.

Efficacy

This session was intended to present studies relating to efficacy enhancement of pesticide products. The presentations and papers found in this book cover the effects of adjuvants, surfactants, and inorganic cations on pesticide activity.

Methods

Techniques and methodology for determining the stability and efficacy of pesticide formulations are important tools not to be overlooked by the developer of agricultural products. This session addressed various issues of methodology, including new techniques under consideration in Europe.

Formulation Strategy

Procedures used by formulators to develop pesticide and adjuvant products are ever changing and progressing in order to decrease development time and improve optimization steps. Four papers from this session are in this STP, covering various statistical design techniques and other formulating options.

Formulation Ingredients

The development and application of inert ingredients for agricultural formulations are areas of high interest to symposium attendees. Inert ingredients can improve formulation stability, efficacy, and

handling. These effects are discussed in six papers from the two sessions on formulation ingredients. Some of the inerts discussed are new to agricultural use, while others are completely new chemistry or new applications for known chemistry.

Regulatory Issues

Actions taken by governmental authorities can have broad impact not just on pesticide active ingredients, but on inert ingredients and formulation additives as well. While only one of the papers from this session is included in this book, the topic of environmental strategies for nonylphenol ethoxylates is certainly of great interest to formulators around the world.

Application and Spray Drift

Another key component of a successful agricultural product is its application in the field. This session concentrated on spray drift characteristics, testing, measurement, and distribution. Each paper in this area discusses useful measurement techniques and effects on pesticide efficacy.

Jane C. Mueninghoff
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