

Pesticide Formulations and Delivery Systems:

The Continued
Evolution of
Agrochemicals

24th Volume
STP 1460

Editors:
G. Robert Goss
Gregory C. Volgas
Masoud Salyani



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of Agrochemicals,
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G. Robert Goss, Gregory C. Volgas, and Masoud Salyani, Editors

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Foreword

The 24th Symposium on Pesticide Formulations and Delivery Systems was held in Tampa, Florida on 21–23 October, 2003. ASTM Committee E35 on Pesticide and Alternative Control Agents was the sponsor. Symposium chairmen were Humberto Lopez, Syngenta Crop Protection, Greensboro, NC; Gregory Volgas, Helena Chemical Company, Memphis, TN; and Masoud Salyani, University of Florida, Lake Alfred, FL. Mr. Volgas and Mr. Salyani also acted as co-editors of this publication, along with G. Robert Goss, Oil-Dri Corporation, Chicago, IL.

Contents

Overview	vii
FORMULATIONS	
Rising to New Challenges in Formulating for Agriculture—GREGORY J. LINDNER	3
Benefits of a 2,4-D Acid Herbicide Formulation—GREGORY C. VOLGAS, ROBERT E. MACK, AND JOHNNIE R. ROBERTS	9
The Effect of Dispersant Solubility, Dispersant Dosage, Granule Diameter, and Dome Versus Radial Extrusion on Granule Spontaneity of Disintegration and Resistance to Attrition—TOM WINOWISKI, STU LEBE, AND JONAS GUSTAFSSON	15
Agricultural Granule Particle Size Considerations—G. R. GOSS	25
Fluorescence Imaging for Investigating the Efficiency of Formulations, Adjuvants, and Application Systems—HANS DE RUITER, ROB VAN DER SCHOOR, AND HENK JALINK	31
Improved Formulations through Synergistic Combinations based on Alkyl Glucosides—K. BERGSTRÖM AND I. M. JOHANSSON	41
New Value-Added Polymeric Dispersants and Uses Thereof in Agricultural Formulations—KOLAZI S. NARAYANAN, DOMINGO I. JON, AND JAYANTI PATEL	51
Applications of Ether Amine Surfactants in Agricultural Formulations: The Known and Unexplored—YABIN LEI	65

DELIVERY SYSTEMS

- Predicted Deposition Variability Due to Fluctuations in Release Height and Drop Size Distribution**—MILTON E. TESKE, HAROLD W. THISTLE, RICHARD C. REARDON, GERRY CORMIER, PETER AMIRALT, DAVID C. DAVIES, R. SCOTT CAMERON, GARY DORR, ANDREW J. HEWITT, JAMES R. BROWN, MONIQUE Y. LECLERC, AND ANANDAKUMAR KARIPOT 79
- Improving the Effectiveness of Aerial Pesticide Sprays**—D. B. SMITH, I. W. KIRK, AND J. B. ROSS 90
- Comparison of Abscission Spray Application Practices for Mechanical Harvesting of Oranges**—MUHAMMAD FAROOQ, MASOUD SALYANI, AND JODIE D. WHITNEY 105

ADJUVANTS

- Effect of Adjuvant on the Efficacy of Glyphosate Applied at Different Times of Day**—BRYAN G. YOUNG AND JULIE M. YOUNG 121
- A Novel Water Conditioning Adjuvant for Use with Formulated and Nonformulated Glyphosate**—DONALD PENNER, JAN MICHAEL, AND WILLIAM G. BROWN 128
- Evaluation of Some Adjuvants for Improving Glyphosate Efficacy**—SAMUNDER SINGH AND MEGH SINGH 134

Overview

The 24th Symposium on Pesticide Formulations and Delivery Systems held in Tampa, FL included 29 presentations. Of those 29 presentations, 14 papers reached publication in this peer-reviewed compilation. Individual papers can be also read in the Journal of ASTM International.

The world of pesticide formulations and delivery systems is continually evolving. Business, technological, environmental, and particularly regulatory pressures are forcing constant change. The paper by Lindner addresses some of these new challenges in formulating pesticides. From a business and technological aspect, the advent of GMOs (genetically modified organisms) brought great pressure to bear on the chemical aspects of pest control. For example, glyphosate is much more widely used today than in the past and papers by Young, Penner, and Singh address glyphosate efficacy.

In general, factors that are important to a chemical's efficacy as a pest control agent are the chemical itself, formulation, and delivery. The delivery can include liquids, solids, or even gases and the interaction of all of the above with the target organism is crucial. Volgas addresses increased mileage from an old chemical (2,4-D formulation) through a formulation change. Papers by Bergström (alkyl glucosides), Lei (ether amines), Narayanan (polymeric dispersants), Singh (glyphosate adjuvants), and Penner (water conditioners) all address liquid formulations and applications (either by the basic chemical formulation or as adjuvants blended in a spray tank). Solid formulations continue to maintain a presence, and papers by Winowiski (polymeric dispersants for WDGs) and Goss (granules) address aspects of these formulations. Finally, delivery and interactions of the pesticide with the target organism are discussed in papers by Teske (spray release height and drop size), Smith (aerial sprays), Farooq (abscission sprays), and de Ruiter (fluorescent imaging to assess efficiency).

The editors sincerely hope that the reader will enjoy this latest volume describing both changes and advances in the world of pesticide formulations and delivery systems.

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