

Introduction

The Fifth Symposium on Test Methods for Vertebrate Pest Control and Management Materials was held in San Diego, California in March 1986 with William B. Jackson, Department of Biological Sciences, Bowling Green State University, as chairman. Eighteen of twenty-one important presentations at this meeting are contained in this volume. ASTM Committee E-35 on Pesticides and the Vertebrate Pest Conference Committee have sponsored this and the previous four symposia on the subject of test methods development for materials (chemical and non-chemical) used in controlling or managing vertebrate pests.

In any field of inquiry, communication is often the key to success in describing, defining, and solving problems. ASTM Committee E-35 is dedicated to increasing communication among producers, users, and researchers in the area of vertebrate control methods and materials. For this reason, standard test methods, good laboratory practice codes, calibration methods, and bias estimation, as well as agreed-upon definitions of terms and adoption of conventional statistical tests and data summarization, are examined and discussed by committee members. In addition, the symposia have been used as a forum by scientists and representatives from private industry, academic institutions, and government agencies to present scientific findings and ideas, thus broadening the knowledge base for all involved in the field. In the areas of safety, selectivity, cost, and efficacy, vertebrate control methods in use today and those being developed for the next generation will be shaped by this mode of communication forum.

A majority of the contributed papers in this volume are directed toward efficacy evaluation based on new or existing field test methods. Related techniques and newly developed materials are also described that should improve efficacy assessment in terms of pest population censusing or damage reduction measurements. Economic impacts of pests are also emphasized and described that involve the collection of questionnaire and interview data.

Several new marker materials (metal flakes, mirex, iophenoxic acid) and an examination of an older fluorescent chemical (tetracycline) are described in this volume. These products should prove useful in applications where bait placement for improved efficacy or selectivity needs to be verified or researched. Several papers deal with methods for assessing vertebrate pest damage in terms of extent and cost. Both direct and indirect costs of vertebrate damage are estimated as well as predictions made of damage when control chemicals are not routinely used. Development of new repellent assessment methods are discussed in papers dealing with ultrasonic bird repeller devices assessed in field tests, hybrid corn assessment for bird resistance in pen tests, and repellent seed treatments of corn evaluated in terms of plant growth parameters. Always a difficult variable to evaluate, repelling of birds from crops and other resources or for human safety is an important aspect of pest management that will continue to receive attention in future volumes of this series.

Other papers deal with aspects of rodent baiting and predator trapping efficacy (including humaneness aspects), bait station attraction measurement methods, hazard assessments involving the capture of mule deer, and hazards to owls during rodenticide baiting programs. Finally, one paper is devoted to a recommended series of key words to be used and guidelines for their selection in the vertebrate pest control research literature. These are welcome recommendations and should enhance the capability to search literature data base files and improve communications among users, producers, and researchers.

We thank all who have contributed chapters and those who have helped to support our editing assignments by reviewing the final manuscripts. Finally, we thank the ASTM officials and

editorial staff for their long-term sponsoring of this technical publication series. Whether as a reference work or for cover-to-cover reading, we believe this volume is an extremely useful addition to vertebrate control research libraries and to the private collections of professionals in this field.

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