Book Review

Handbook of Agricultural Entomology.

H.F. van Emden. 2013. John Wiley, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK. 336 pages with 5 tables and 387 figures (images and line drawings). \$129.95 USA; \$142.95 Canada (£75.00). Hardcover, ISBN: 978-0-470-65913-7.

To manage insect pests effectively in agricultural cropping systems, whether it is implementing the use of cultural, chemical, or biological approaches, it is essential to understand the biology and life cycle of the particular insect pests. The book *Handbook of Agricultural Entomology* is a comprehensive evaluation providing this knowledge for different kinds of insects that may be encountered in agricultural cropping systems; however, it is not a book that provides advice on management strategies. As the author states in the preface, "This book concentrates on the entomology of the 'insects that matter.' It is not a book where you can look up how to

control a particular pest problem. I focus on things like symptoms, damage caused, life histories and spot characters for recognition." Despite this limitation, the book is extremely valuable with plenty of relevant information associated with life cycles, damage, biology, and number of generations, although it should be noted that what is presented regarding the number of generations may not be accurate for all regions.

The book contains 13 chapters with information not just on insect pests but also on a wide array of different types of insects including those considered beneficial. The first chapter covers the world of insects and includes sections on the impact of insects on humans, climate change, land management practices, and a generalized introduction to insect classification. I found this chapter to be a well-rounded overview of the importance of insects to us and our environment. The second chapter deals with the external features and structure and function of insects, primarily focusing on the anatomical and morphological characteristics of insects. The remaining chapters (3 through 13) deal with the insect subclasses and divisions and with designated insects within the particular subclass. For example, Chapter 13 discusses

the class Arachnida, which includes spiders and mites. Each chapter starts with background information on the morphology of specific insects in the subclass. The figures, which include actual images and line drawings, are interspersed throughout each chapter near the insect being described, making it easy to see the actual insect and damage. The book also includes a bibliography for those interested in obtaining more in-depth information on any of the insect pests mentioned.

The book *Handbook of Agricultural Entomology* is a valuable contribution to the understanding of insect pests of agricultural cropping systems. In fact, I would highly recommend this book to anyone teaching a class in basic entomology or economic entomology. It should be emphasized that pest management relies on a thorough understanding of the biology, damage, and life cycle of insect pests. The need for that understanding is why this book will be an important resource for anyone interested in pest management.

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