BOOK REVIEWS

New Books Received


Biodiversity and Pest Management in Agroecosystems


After decades of extensive agricultural activities, we now understand that biodiversity plays an important role in agroecosystems, and complex systems are more sustainable in ysis (identifying key components among plants, weeds, pests, and natural enemies and desirable types of ecosystems structural design (choosing management strategies, e.g., cover crops), and best management practices for sustainable management, etc. to enhance biodiversity.

The book is well organized into nine chapters that rate introduction and conclusion. The first two chapters establish the ecological and biological principles of biodiversity and provide case studies in later chapters. Starting with an overview of the differences between traditional and modern agricultural models, the authors review the role of biodiversity in systems, characteristics of the agricultural habitat, pest management, and interactions with biological control. With such diverse topics in a complex system, authors use bulleted text and many figures provided by authors helpful for understanding the relationships and interactions.

Chapter 3 can be seen as a connection between the second part of this book. In this chapter, the authors review several theories explaining the relationship between pest stability and plant diversity, including “monophagous pests,” “associated resistance,” the “natural-enemy hypothesis,” “resource concentration,” and other issues. Given the limitations of real situations, comparisons between major hypotheses and criticisms concerning theories are discussed, which makes it one of the most applicable chapters of this book.

The second part of this book, Chapters 4 to 7, contains specific examples of biological and alternative pest management in different cropping systems using case studies. Chapter 4 to 7 examine the effects of weed management, cover crops, and crop-field border vegetation on pest population density and damage. Chapter 8 discusses combinations of crops with trees, extending the diversity to agroforestry systems. Chapter 9 is research oriented and focuses on principles involved in successful management.

From resource-poor farms in Latin America to the agrarian structure of California, the case studies in the book are all different and site specific. But certain underlying mechanisms and relations between plants, herbivores, and natural enemies, which are keys to the successful designs. For researchers and natural control practitioners who are developing the design of pest-stable agroecosystems, the successful cases in this book are especially encouraging.

I believe that the authors’ many years of experience in the field that has made this book a substantial contribution more than 100 studies and covering numerous species of weeds, pests, and natural enemies. A well-organized structure searching for information about crops and pests an easy task. The book is well-organized and provides case studies in different cropping systems using case studies. Chapters 4 to 7 examine the effects of weed management, cover crops, and crop-field border vegetation on pest population density and damage. Chapter 8 discusses combinations of crops with trees, extending the diversity to agroforestry systems. Chapter 9 is research oriented and focuses on principles involved in successful management.

From resource-poor farms in Latin America to the agrarian structure of California, the case studies in the book are all different and site specific. But certain underlying mechanisms and relations between plants, herbivores, and natural enemies, which are keys to the successful designs. For researchers and natural control practitioners who are developing the design of pest-stable agroecosystems, the successful cases in this book are especially encouraging.

I believe that the authors’ many years of experience in the field that has made this book a substantial contribution more than 100 studies and covering numerous species of weeds, pests, and natural enemies. A well-organized structure searching for information about crops and pests an easy task. The book is well-organized and provides case studies in different cropping systems using case studies. Chapters 4 to 7 examine the effects of weed management, cover crops, and crop-field border vegetation on pest population density and damage. Chapter 8 discusses combinations of crops with trees, extending the diversity to agroforestry systems. Chapter 9 is research oriented and focuses on principles involved in successful management.

From resource-poor farms in Latin America to the agrarian structure of California, the case studies in the book are all different and site specific. But certain underlying mechanisms and relations between plants, herbivores, and natural enemies, which are keys to the successful designs. For researchers and natural control practitioners who are developing the design of pest-stable agroecosystems, the successful cases in this book are especially encouraging.

I believe that the authors’ many years of experience in the field that has made this book a substantial contribution more than 100 studies and covering numerous species of weeds, pests, and natural enemies. A well-organized structure searching for information about crops and pests an easy task. The book is well-organized and provides case studies in different cropping systems using case studies. Chapters 4 to 7 examine the effects of weed management, cover crops, and crop-field border vegetation on pest population density and damage. Chapter 8 discusses combinations of crops with trees, extending the diversity to agroforestry systems. Chapter 9 is research oriented and focuses on principles involved in successful management.

From resource-poor farms in Latin America to the agrarian structure of California, the case studies in the book are all different and site specific. But certain underlying mechanisms and relations between plants, herbivores, and natural enemies, which are keys to the successful designs. For researchers and natural control practitioners who are developing the design of pest-stable agroecosystems, the successful cases in this book are especially encouraging.

I believe that the authors’ many years of experience in the field that has made this book a substantial contribution more than 100 studies and covering numerous species of weeds, pests, and natural enemies. A well-organized structure searching for information about crops and pests an easy task. The book is well-organized and provides case studies in different cropping systems using case studies. Chapters 4 to 7 examine the effects of weed management, cover crops, and crop-field border vegetation on pest population density and damage. Chapter 8 discusses combinations of crops with trees, extending the diversity to agroforestry systems. Chapter 9 is research oriented and focuses on principles involved in successful management.

From resource-poor farms in Latin America to the agrarian structure of California, the case studies in the book are all different and site specific. But certain underlying mechanisms and relations between plants, herbivores, and natural enemies, which are keys to the successful designs. For researchers and natural control practitioners who are developing the design of pest-stable agroecosystems, the successful cases in this book are especially encouraging.