



Plant Pest Risk Analysis: Concepts and Applications

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The book is a guide to plant pest risk management. It provides a definition of the risk concept and instructions on how to control this risk in the field. In addition, it includes several case studies that are beneficial to plant pathology students. The 20-chapter book was written by eight authors from the USDA: Robert Griffin, Lottie Erikson, Alison Neeley, Glenn Fowler, Yu Takeuchi, Stephanie Bloem, Kenneth Bloem, and Anthony Koop. The book aims to provide reliable and up-to-date tools and skills in pest risk analysis and bridge the gap between the available educational materials to support the speedy development of regulatory plant protection courses. This book is organized in five main sections that try to educate the readers about the concept of pest risk analysis and its tools, methods, and applications.

In the first part (chapters 1 to 4), "Pest Risk Analysis Background and History," the authors define and introduce risk, risk analysis and pest risk analysis to the readers. Moreover, they provide a detailed historical perspective of how pest risk analysis has come to be so critical in regulatory plant protection. Furthermore, the authors provide information about the international legal framework for pest risk analysis, including the role of the International Plant Protection Convention (IPPC) and the Agreement on the application of Sanitary and Phytosanitary (SPS) measures.

The second part (chapters 5 to 8), "Pest Risk Analysis – Components and Applications," educates the targeted readers and professionals regarding the necessary terminology, good practices in gathering and using the information, and types of Pest Risk Analysis. This part focuses on the divergence in the language and concepts used by different countries and the need to harmonize and develop common international standards to improve the risk communication

between countries. Moreover, it introduces the economic analysis, the economic consequences and the applications in plant protection.

The third part (chapters 9 to 12), "Pest Risk Assessment Methods," contains a detailed description of various basic approaches used to analyze risk, including the use of qualitative, semi-quantitative and quantitative methods. This part also provides the reader with an overview of risk mapping, associated methodologies and their use in Phytosanitary Risk Analysis.

The fourth part (chapters 13 to 16), "Pest Risk Management, Risk Communication and Uncertainty," is the heart of the book. This part provides a fundamental introduction to the theory and application of pest risk assessment and management. Several commonly applied phytosanitary treatments and measures are listed in this part, such as those used to treat commodities. This part also discusses the role and importance of effective risk communication (including how it relates to pest risk management), and addresses the role of uncertainty in pest risk analysis.

The last part (chapters 17 to 20), "Special Topics for Pest Risk Analysis," communicates additional information on some special topics within Pest Risk Analysis, such as the important role of beneficial organisms in the management of critical pests, weed risk assessment and the role of dispute settlement and precaution in the application of pest risk analysis. Finally, it discusses how to address invasive alien species and living modified organisms through pest risk analysis within the IPPC and the SPS framework.

Plant Pest Risk Analysis: Concepts and Applications is an information-rich book that will help upper-level students and



plant protection professionals gain knowledge regarding the framework, language, applications, and uncertainty of Pest Risk Analysis, in addition to providing them with theory and the applications of pest risk management and risk communication.

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