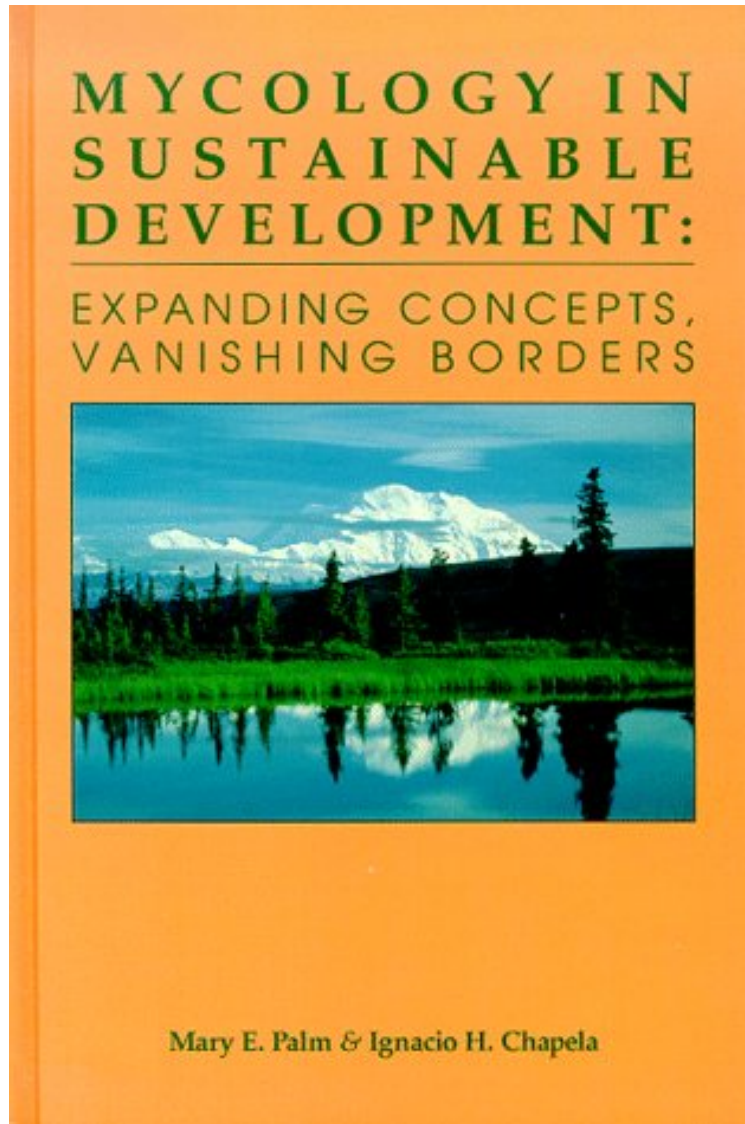


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4 of 4 people found the following review helpful. An Optional Addition to the Mycological LibraryBy Gregory McMahanGiven that virtually all of the papers in this book juxtapose mycorrhizal fungi with Pacific Rim forests, the

title of this book should really be 'Mycorrhizae in Sustainable Agro-Forestry'. The majority of the chapters focus on the mycorrhizae and forestry, and the book as a whole attempts to make a strong case for greater research, development, and support for applied mycorrhizal research. Chapela and Palm introduce the papers by intelligently and eloquently stating the need for and practical use of sustainable development while at the same time providing background on the individual papers. That said, the first three chapters provide a detailed history of wildcrafting of Matsutake mushrooms in British Columbia, the US Pacific Northwest, and Mexico, and elaborate upon the attempts of government and conservationists to regulate the harvest of this non-timber forest product so as to promote resource conservation and sustainable use of the regional forests. Several chapters further elaborate various aspects related to mycorrhizal fungi- from their plant associations and recent attempts to inventory plant-fungal associations to the utilization of mycorrhizae in land reclamation and biocontrol of weedy trees and grasses. The last two chapters are quite possibly the most interesting part of the book and briefly present two attempts toward developing new markets for fungal products. In these chapters, we learn of successful attempts by Central American farmers to organically cultivate mushrooms, principally *Pleurotus* species, using various types of agricultural waste. We also learn of attempts in many lesser developed nations to exploit their fungal bioresources and the efforts underway to make certain that developing nations and indigenous peoples reap their fair share of the proceeds from bioprospecting. The final chapter also argues that bioprospecting is a viable means of conservation and sustainable development. While the book is interesting, the text could be taken more seriously had the editors only acknowledged the fundamental challenges of sustainable myco-resource utilization, fungal inventory monitoring, and development of fungal-based biological control agents. In their defense, more than a few of the contributors do point out the inherent challenges associated with management of sustainable development and fungal inventory research. Nonetheless the reader gets very few successes and a lot of dubious triumphs from the field of mycorrhizal ecology. In addition, the researchers conveniently neglect to state two very important points about the Matsutake myco-industry. Since Japan is the major market for Matsutake, this fledgling myco-industry would face ruin if this market collapsed. Furthermore, the opening of new Matsutake reservoirs in Russia, Central and South America continuously expands the supply-side while the demand-side has remained relatively constant. This in turn has had the obvious effect of lowering supply-side prices worldwide. As a result, although wildcrafting of Matsutakes and other botanicals is an important source of income in impoverished forest communities, it can not be looked upon as a key driver of sustainable development in these rural regions. Although Chapela and Palm's *Mycology in Sustainable Development* starts off brilliantly, it quickly devolves into yet another thinly veiled plea for more funding for the contributors' pet research projects. The book's premise that the fungal kingdom has much to offer the worthwhile cause of sustainable development is quickly overpowered by paper after paper highlighting some dubious applications involving mycorrhizal fungi. Given the 'global' title of the book, I was rather dismayed at the limited number of regions and countries represented and the overwhelming emphasis on the mycorrhizae. Granted, the mycorrhizae are a neglected area of research and do have much to offer the worthy cause of sustainable development. However, it would have been nice to see other classes of fungi and examples of sustainable development using the fungi in other regions of the world, particularly Africa and Asia, given an equivalent amount of exposure. Moreover, I was extremely dismayed at the paucity of information on edible mushrooms other than expensive exotics like Matsutake, given their often critical role in the health and nutrition of many of the world's communities and their extraordinary potential for global environmental improvement. In conclusion, although this book contains some interesting information, it ultimately remains an optional addition to the library of the applied mycologist.

This book contains the proceedings of The Mycology in Sustainable Development Workshop in 14 chapters organized by subject. Four chapters discuss the management of the Pine mushroom "matsutake" (*Tricholoma magnivelare*) as a model for the emergence and management of non-timber forest products. The value of sustainably harvesting "matsutake" could exceed the value of logging trees in some parts of North America. Three chapters provide an overview of the monitoring and inventory of fungal biological diversity, in order to determine methods for successful sustainable development in each North American country. In the section entitled Environmentally Friendly Technologies, authors discuss the use of mycorrhizae in land restoration, fungi as biological control agents of weeds, and endophytes as instruments of ecological management. Finally, several authors consider the potential for cultivation of novel fungal products and the use of fungi in pharmaceutical bioprospecting. The Mycology in Sustainable Development Workshop brought together Canadian, Mexican, and U.S. scientists involved in establishing the biological bases for integrating fungi into sustainable plans and practices. The workshop facilitated the exchange of ideas and experiences, analysis of current practices, and the charting of future goals for successfully utilizing and integrating fungi in sustainable development. This book reflects these developments. Differences between the perspectives of the three North American countries are highlighted, but a regional viewpoint is also included that encompasses common economic and environmental concerns of these convergent economies. Authors discuss how current and proposed legislation, as well as public perception, affect the ability of each Region to include fungi, a grossly underused resource, in sustainable land management. Issues of economic reciprocity and property rights are

addressed in many of the chapters. In addition to providing a unique approach to this timely subject, several of these chapters are comprehensive, up-to-date reviews of a specific subject area. This book will be of interest and use to a broad audience ranging from biologists and other scientists to administrators and policy-makers.

About the Author Mary E. Palm received her Ph.D. from the Plant Pathology from the Plant Pathology Department, University of Minnesota in 1983. Since 1984 she has been the mycologist for USDA/Animal and Plant Health Inspection Service and is responsible for identifying fungi on plants and plant products entering the United States. She also is an Adjunct Associate Professor of Plant Pathology at the Pennsylvania State University. Her research interests include the taxonomy and biology of plant pathogenic fungi, especially ascomycetous anamorphs. Ignacio H. Chapela received his Ph.D. in 1987 at the University of Wales, Cardiff. He is an Assistant Professor in the Department of Environmental Science, Policy, and Management at the University of California, Berkeley. He also is Scientific Director of The Mycological Facility, Oaxaca, Mexico. His research interests include various aspects of sustainable uses of fungi, including edible fungi as non-timber forest products.