

PREFACE

As a non-profit organization, MushWorld has devoted itself to distributing abundant, valuable information on mushroom science and cultivation via its website, www.MushWorld.com, for free since established in 1998. Though the access to MushWorld is free and unlimited, Internet is not readily available for people in developing countries, who sincerely need information sources for mushroom growing.

The **Mushroom Growers' Handbook** series published and distributed for free by MushWorld is aimed at providing those people with greater access to information on mushroom cultivation. The first handbook was published in March, 2004, on the subject of oyster mushroom cultivation and has been distributed to developing countries free of charge through their embassies and NGOs. All the papers included in the first handbook are also being provided on the MushWorld website. This handbook joined in disseminating the effectiveness of mushroom growing as a means of poverty alleviation and in providing practical guides to oyster mushroom cultivation in less developed countries. Since distribution of the handbook, many letters of appreciation and encouragement have been received from those interested in poverty alleviation by mushroom farming or mushroom growing project.

Following the successful publication of the 1st handbook, MushWorld worked on its second handbook, which is about shiitake cultivation, by reviewing various publications on shiitake, contacting mushroom growers and scientists in every corner of the world, and visiting exemplary shiitake growing bases in developing countries.

Mushroom Growers' Handbook 2: Shiitake Cultivation covers various aspects of shiitake cultivation with emphasis on applicable technology, especially in developing countries. It consists of two parts and ten chapters.

Part I deals with all the aspects of shiitake cultivation.

Chapter 1 is an introduction to shiitake and its cultivation. It presents interesting aspects of shiitake cultivation including its cultivation history, various kinds of growing practices, world production & consumption, nutritional & medicinal values, and illustrated guides to shiitake cultivation.

Chapter 2 is about spawn and strain, one of the most important factors affecting mushroom growing. In this chapter, shiitake spawn preparation is provided with vivid images, shiitake spawn improvement for alternative substrates is discussed, and finally, cryogenic preservation method of shiitake spawn stocks is described.

Chapter 3 reviews shiitake cultivation on log, a traditional method. Every detail of log cultivation is elaborated with solid scientific data and 2 examples in Brazil and Nepal.

Chapter 4 is about shiitake bag cultivation, which is widely practiced. This chapter begins with a technical investigation on principles of shiitake cultivation on sawdust. Following are several examples of shiitake growing on different alternative substrates. The subsequent examples of shiitake growing in Thailand and China illustrate various practices of bag cultivation adapted to each region. Finally, farm diary of shiitake bag cultivation encourages growers to do various trials to find cultivation methods best fit for their environmental and market conditions.

Chapter 5 contains how to manage pest and disease of shiitake. Pathogens, symptoms and control measures of different pests and diseases are well summarized for log and bag cultivation respectively. Abnormal growth is also described with informative supporting images.

Chapter 6 illustrates shiitake growing houses in Thailand and how to regulate environmental parameters. It is followed by a detailed description of Korean shiitake growing houses, which makes full use of environmental conditions.

Chapter 7 the last chapter of the Part I, covers post-harvest management. Various ways of recycling of spent shiitake substrate and processing harvested shiitake are illustrated. Suggestions are provided for farm management and marketing.

Part II illustrates mushroom growing for better life in the world.

Chapter 8 is about cultivation of various mushrooms for a living. It includes *Coprinus* mushroom in Thailand, *Agaricus blazei* in Brazil, and oyster mushroom in Egypt.

Chapter 9 illustrates how mushroom growing projects for poverty alleviation were planned and implemented in Nepal and Colombia, to provide possible project planners and managers with a guide to mushroom growing project.

Chapter 10 provides in-depth researches on the potential of mushroom industry in two Asian countries: Lao PDR and Vietnam.

Appendix provides invaluable information sources not to be missed.

Resource directory offers contact information of spawn providers and mushroom consultants and lists of books, periodicals, papers, and online publications regarding shiitake.

MushWorld's Profile presents MushWorld's mission, activities and milestones in detail, along with its network throughout the world.

Index will allow you to locate the pages that address a given topic throughout this handbook.

Acknowledgement

As it was for the first handbook, the second handbook came into being thanks to those devoted scientists and growers from various countries as well as MushWorld staff members. Mr. Rick Gush again volunteered to devote his valuable time to copy-editing 370 pages of manuscripts. We are always impressed by his enthusiasm and hard work. MushWorld takes this opportunity to express our special thanks to Mr. Rick Gush for his great job.

MushWorld also wants to acknowledge that Prof. Kwon-Sang Yoon and Dr. Won-Chull Bak read all the papers with much care and provided elaborate scientific supervision for the entire handbook. As accomplished scholars in mycology and mushroom science, they contributed a lot to the completion of the handbook. Sally Feistels reviewed every manuscript and provided suggestions and feedbacks from the view point as a non-professional in this field. Her suggestion made this handbook more understandable to the readers with relatively little background knowledge on shiitake and its cultivation.

Also, we appreciate MushWorld members from Egypt, Dr. Amira Ali El-Fallal who generously contributed images of mushroom growing in Egypt. Tawat Tapingkae provided detailed review for the manuscripts on Thailand. Photo credits are also given to Furugawa and Nobuchi, and Renato May. A special thanks is made to Mi Jung Kang for her creative and devoted design work.

Primary acknowledgement must go to the many contributed authors listed below from nearly a score of countries. Being MushWorld members, they gave us valuable contributions devoted to poverty alleviation through mushroom farming, and substantial encouragement as well.

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