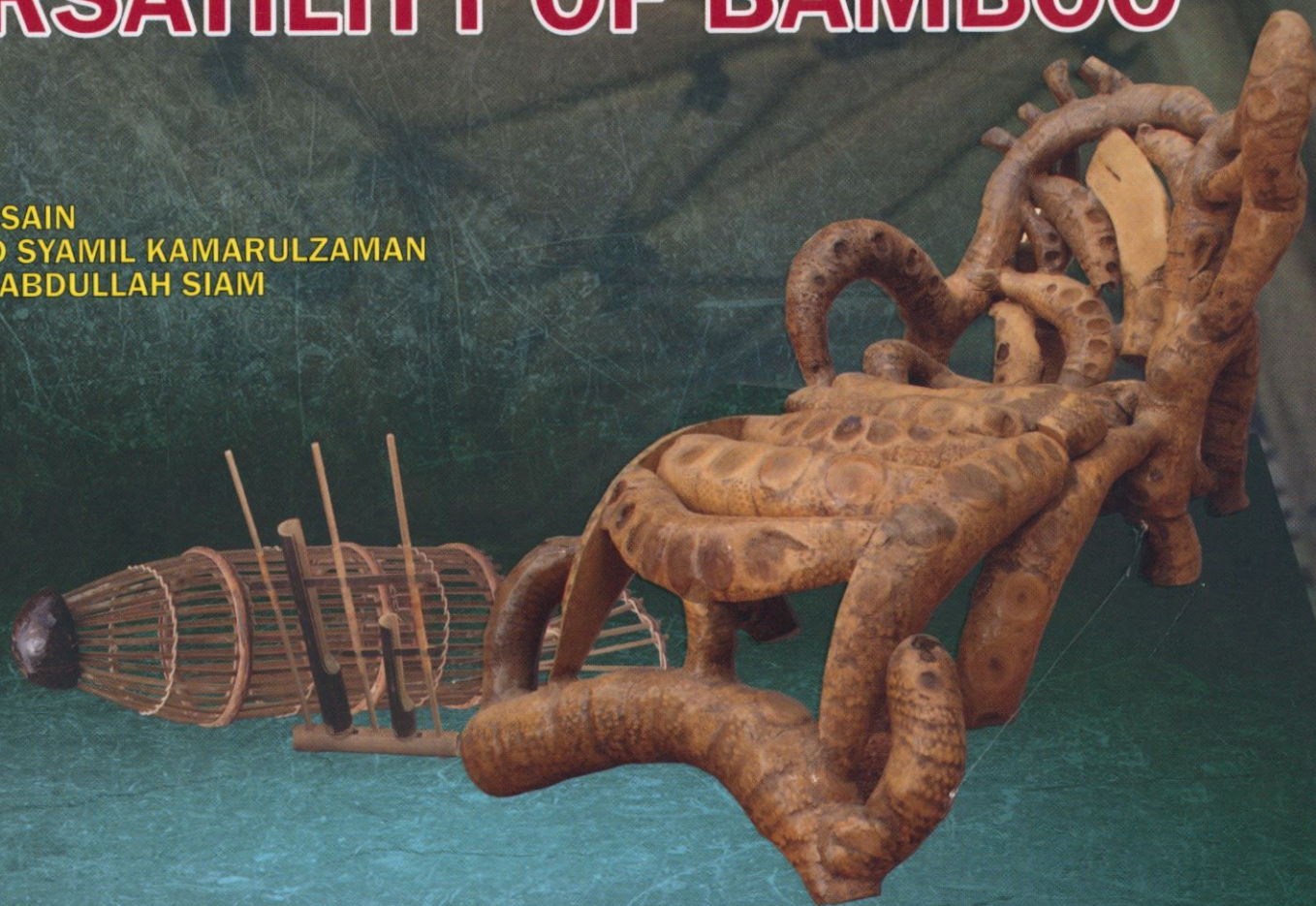




VERSATILITY OF BAMBOO

HAMDAN HUSAIN
MUHAMMAD SYAMIL KAMARULZAMAN
NORDAHLIA ABDULLAH SIAM



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VERSATILITY OF BAMBOO

HAMDAN HUSAIN, MUHAMMAD SYAMIL KAMARULZAMAN
& NORDAHLIA ABDULLAH SIAM



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Message from FRIM Director General

Bamboo is increasingly becoming a vital forest resource contributing to the country's economy. Considered as a fast-growing grass and an environmentally friendly plant, bamboo can be converted into a variety of products. The bamboo industry has the potential to be further developed to create many job opportunities and contribute towards the economic growth.

With the global annual bamboo market fetching billions of ringgit, efforts must now be taken to ensure that bamboo also makes an impact on Malaysia's economy. In order to be competitive, Malaysian businesses should not only be selling products that are already in the market but instead the businesses should focus more on producing high quality products with local identity.

Therefore, I believe this book would certainly benefit the bamboo industry and the public. It contains pictures demonstrating how bamboo-based products are made and showcasing some of the unique bamboo structures built all over Malaysia. Moreover, by understanding the basic characteristics of the commercial bamboo species, it would allow the readers to see and consider the potential of bamboo as a production material. Fresh ideas coupled with the usage of technology would help to generate new bamboo-based product innovations. Furthermore, the traditional bamboo artworks must be preserved so that it can continue to be appreciated by the future generations.

FRIM has always supported the effort of researchers to come up with books like 'VERSATILITY OF BAMBOO' which can appeal to a much larger audience. My sincere and heartfelt congratulations to the authors on the successful publication of this book. I hope that this book would help to generate public interest in bamboo and encourage more people to be involved in the production of bamboo product for a more developed and commercially viable bamboo industry. Thank You.



DR KHALI AZIZ HAMZAH

Director General

Forest Research Institute Malaysia





Preface

*B*amboo can be found in abundance in Malaysia. As a green material, bamboo can be seen as a potential alternative to timber. There are about 70 bamboo species found in Malaysia with the potential to be exploited for the development of various commercial products.

By nature, bamboo is fast-growing and can attain maturity within three years. The bamboo in Malaysia is mainly sympodial. The unique qualities and properties of bamboo as a natural material put it at par with other lignocellulosic materials, and qualifies bamboo to be converted and used for the making of various items.

The global bamboo market is large and fetches billions of dollars each year. China is the main player for bamboo, producing various products in the market. Malaysia should also act aggressively to capture a slice of the bamboo industry and make an impact on the nation's economy. While R, D & C on the properties of bamboo have been carried out by FRIM, there are still much to be done to increase the usage.

This book provides a brief background of the bamboo industry and its distribution in Peninsular Malaysia. The bamboo mills are generally operated by individuals and within their house compounds. This book also includes a chapter on some commercial bamboo species that are often used for making various bamboo products. The chapter gives an illustration of each bamboo as well as the different components for identification purposes.

The main essence of this book is the graphical illustrations of the production of bamboo products. This book shows the step-by-step process of making the bamboo products to give an idea on how these beautiful products are made. The final chapter shows some bamboo structures built at different locations in Malaysia to give an idea on the potential and beauty of bamboo when used for various applications.

It is hoped that the publication of 'Versatility of Bamboo' would generate more public interest and confidence in the future of bamboo industry.

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Bamboo furniture is becoming more popular. It is common to see round bamboo or engineered bamboo furniture; however, bamboo rhizome being made into furniture is quite rare. Temuan ABO Craft has established itself into making furniture using rhizomes. It requires creativity in design and skilful workers to be able to select rhizomes and convert them into unique furniture.

Product cost

The price of the furniture ranges between RM 600.00 and RM 10,000.00 depending on the size and quality of the furniture made. Each item is unique due to the natural shape each rhizome offer.

Material and equipment

Rhizomes of buluh minyak are obtained from eroded or dead clumps found along the riverbanks. The whole clumps are excavated and transported back to the workshop and left to dry under the sun to remove the high moisture content.

Equipment required in making the bamboo rhizome furniture are a hand saw, an air gun, a hand drill, a grinder and a hammer.

Material preparation

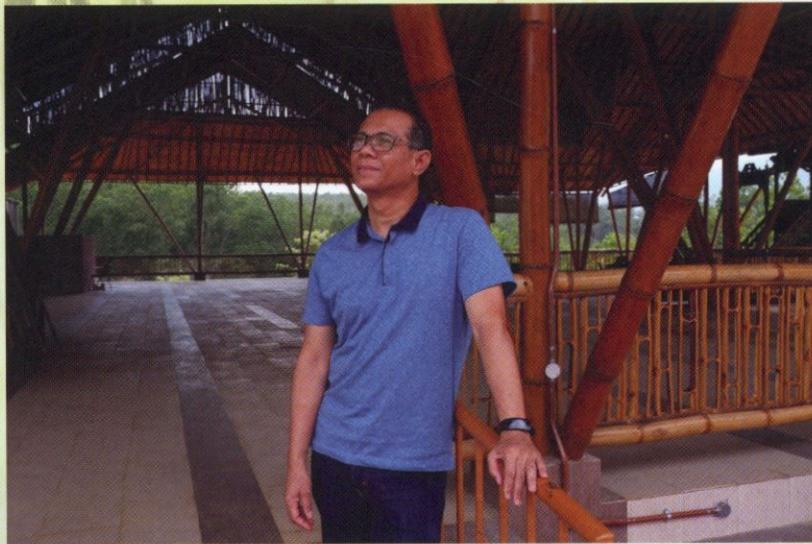
The rhizomes are hand sawn to form the components. Several pieces of rhizomes are selected as components to make into bamboo furniture. The hairy roots can be removed with a grinder. Steel bars are used to strengthen the joints.

Rhizome Chair..... one of its kind



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An architect that wonders into the world of bamboo. He explores the widest possibilities that bamboo could offer. His passion evolves around the beauty of art and bamboo craft making, and he also wonders into the magnificent use of bamboo in structural application. He has also co-authored several books on bamboo.



Muhammad Syamil Kamarulzaman

A young enthusiast in photography, he captures the essence and beauty of bamboo from a different perspective. An advocate for detail, working with bamboo has developed his appreciation and passion towards nature.



Nordahlia Abdullah Siam PhD

An anatomist with wide experience in wood identification, her interest includes studying the basic anatomical properties of bamboo and other non-wood forest products. Her knowledge and dedication are sought by the industry and general public for reference.

VERSATILITY OF BAMBOO

This book demonstrates the resourcefulness of bamboo as a versatile material through many useful applications deep rooted in the culture and daily lives of Malaysian. The book will be a useful reference for many who are interested to revive the skills either as a hobby or as a source of income and to inspire others to develop more useful applications using bamboo.

Ir. Major (Ret) Ahmad Mazlan Othman
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Founder Bamboo Jungle Adventures



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