

# SUSTAINABLE UTILIZATION OF MALAYSIAN AGROWASTE



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**IIUM Press**  
**INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA**



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**IIUM Press**

Published by:  
IIUM Press  
International Islamic University Malaysia

First Edition, 2011  
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Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Ahmed Jalal Khan Cowdhury, Deny Susanti, Jamaluddin Mohd Daud, Roslina Mohd Salim & Abul Bashar Mohammed Helaluddin : Sustainable Utilization of Malaysian Agrowaste

Includes Index  
ISBN

ISBN: 978-967-418-008-9

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM  
(Malaysian Scholarly Publishing Council)

Printed by :

**IIUM PRINTING SDN. BHD.**  
No. 1, Jalan Industri Batu Caves 1/3  
Taman Perindustrian Batu Caves  
Batu Caves Centre Point  
68100 Batu Caves  
Selangor Darul Ehsan

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# CHAPTER 1

## FRUIT KERNELS, PEELS AND SEEDS – FROM BY-PRODUCTS TO COMMERCIAL ANTIOXIDANTS

Kamarul Rahim Kamarudin, Ahmed Jalal Khan Chowdhury and ‘Aisyah

Mohamed Rehan

### Introduction

Malaysia is rich in fruits placing it among the top 12 megadiversity countries in the world. Durian – the king of fruits, chiku, coconut, sour sop, dragon fruit, jackfruit, star fruit, langsung, mangosteen, pineapple, *rambutan*, guava, and papaya are among the varieties of Malaysia’s tropical fruits. Remarkably, some fruits are endemic to Borneo i.e. Sabah and Sarawak e.g. *bambangan*, *dabai* (Sibu olive), and *tarap*. Due to the richness, fruit-based industry e.g. food-processing industry has become one of the contributors to the economic growth in Malaysia. According to the Malaysian Industrial Development Authority (MIDA), in the Ninth Malaysia Plan, the production of fruits in Malaysia is targeted to reach 2.56 million tonnes by 2010 and the cultivation of dragon fruit would gain interest among farmers along with mangos, star fruits, and papayas. Most of these fruits are for catering the domestic market in Malaysia. The halal industry subsequently provides great opportunities to help develop existing food industry in Malaysia,