

The Pellet Handbook

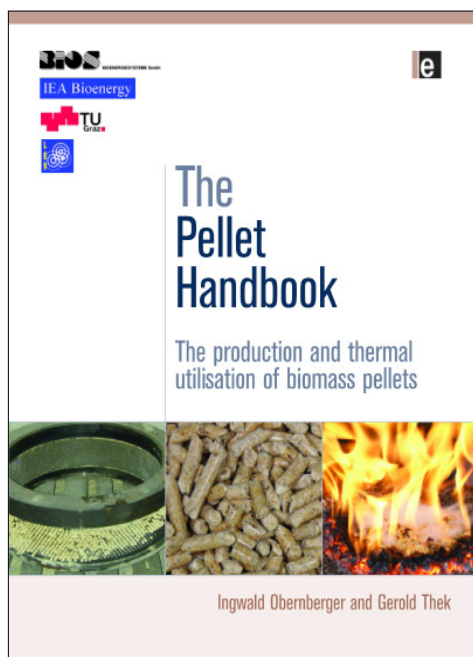
The Production and Thermal Utilisation of Biomass Pellets

earthscan

www.earthscan.co.uk

By Ingwald Obernberger and Gerold Thek

20% off List Price



Hb • ~~£90.00~~ £72.00 • 9781844076314
600 pages • October 2010

'The Pellet Handbook is undoubtedly the most comprehensive work ever produced on this subject and I highly recommend it to industry professionals who are engaged in the production, marketing, transportation, or consumption of wood pellets, as well as regulatory authorities, educators, and students. Well illustrated and easy to read, the book will surely become the essential reference for our industry.'

Gordon Murray, Executive Director, Wood Pellet Association of Canada

'A renowned group of experts have gathered to make this book a success by compiling today's knowledge on the subject available in research institutions and industry as well as in international networks. The Pellet Handbook is both a comprehensive text for teaching requirements and a reference for practitioners in pellet production and use.'

Josef Spitzer, Chairman, Executive Committee, IEA Bioenergy

Extensively illustrated and packed with practical knowledge, this is the ultimate reference for anyone involved in or affected by this burgeoning industry. It addresses all the players of the pellet market, ranging from raw material producers or suppliers, pellet producers and traders, manufacturers of pellet furnaces and pelletisation systems, installers, engineering companies, energy consultants up to the end users and hopes to contribute to a further increase of pellet utilisation within the energy sector by appropriate distribution of information.

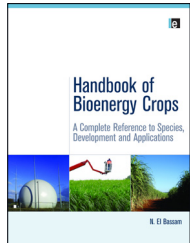
CONTENTS

1. Introduction
2. Definitions and Standards
3. Physio-chemical Characterisation of Raw Materials and Pellets
4. Pellet Production and Logistics
5. Safety Considerations and Health Concerns for Pellets During Storage, Handling and Transportation
6. Wood Pellet Combustion Technologies
7. Cost Analysis of Pellet Production
8. Cost Analysis of Pellet Utilisation in the Residential Heating Sector
9. Environmental Evaluation when using Pellets for Residential Heating Compared to other Energy Carriers
10. Current International Market Overview and Projections
11. Case Studies for the use of Pellets for Energy Generation
12. Research and Development

Prof. Univ.-Doz. Dipl.-Ing Dr. Ingwald Obernberger

is the founder and also general manager of BIOS BIOENERGIESYSTEME GmbH, a company active in R&D and engineering in the field of bioenergy. Since 1994 he is head of the research group "Energetic Biomass Utilisation" at the Institute for Process and Particle Engineering, Graz University of Technology; since 1998 Austrian representative in the IEA, Bioenergy Agreement, TASK 32 "Biomass Combustion and Cofiring"; since 1998 member of the Editorial Board of the international scientific journal Biomass and Bioenergy; since 2003 Key Researcher at the Bioenergy Competence Centre "BIOENERGY 2020+" in Graz responsible for the areas "Biomass Combustion and Energy Utilisation" as well as "Modelling and Simulation"; coordinator of a number of national and international R&D projects in the field of bioenergy. He has already published 6 books dealing with thermal biomass utilisation as well as more than 200 national and international publications and reports.

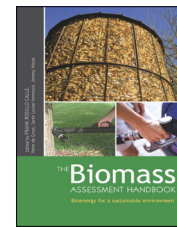
Dipl.-Ing. Gerold Thek, born in 1969, works at BIOS BIOENERGIESYSTEME GmbH since 2000 and since 2006 he is project manager for national and international R&D projects in the field of bioenergy. His working areas and research activities mainly focus on the production and thermal utilisation of pellets, which resulted in several publications in this field and formed a relevant basis for this book.



Handbook of Bioenergy Crops
A Complete Reference to Species, Development and Applications
N. El Bassam
Hb • £150.00 £120.00 • 9781844078547 • 544 pages March 2010



Biochar for Environmental Management
Science and Technology
Johannes Lehmann and Stephen Joseph
Hb • £49.99 • £39.99 • 9781844076581 • 448 pages • March 2009



The Biomass Assessment Handbook
Frank Rosillo-Calle, Sarah Hemstock, Peter de Groot and Jeremy Woods
Pb • £39.99 £31.99 • 9781844075263 • 296 pages • May 2008

Handbook of Bioenergy Crops is a unique reference and guide, with extensive coverage of more than 80 of the main bioenergy crop species. For each it gives a brief description, outlines the ecological requirements, methods of propagation, crop management, rotation and production, harvesting, handling and storage, processing and utilization, then finishes with selected references. This is accompanied by detailed guides to biomass accumulation, harvesting, transportation and storage, as well as conversion technologies for biofuels and an examination of the environmental impact and economic and social dimensions, including prospects for renewable energy.

Biochar is the carbon-rich product when biomass (such as wood, manure or crop residues) is heated in a closed container with little or no available air. It can be used to improve agriculture and the environment in several ways, and its stability in soil and superior nutrient-retention properties make it an ideal soil amendment to increase crop yields.

Biochar for Environmental Management is the first to synthesize the expanding research literature on this topic. The book's interdisciplinary approach, which covers engineering, environmental sciences, agricultural sciences, economics and policy, is a vital tool at this stage of biochar technology development. This comprehensive overview of current knowledge will be of interest to advanced students, researchers and professionals in a wide range of disciplines.

The increasing importance of biomass as a renewable energy source has led to an acute need for reliable and detailed information on its assessment, consumption and supply. Responding to this need, and overcoming the lack of standardized measurement and accounting procedures, this handbook provides the reader with the skills to understand the biomass resource base, the tools to assess the resource, and explores the pros and cons of exploitation. Topics covered include assessment methods for woody and herbaceous biomass, biomass supply and consumption, remote sensing techniques as well as vital policy issues.

International case studies, ranging from techniques for measuring tree volume to transporting biomass, help to illustrate step-by-step methods and are based on field work experience.

ORDER FORM	TITLE	ISBN	PRICE (£) WITH DISCOUNT	QTY	TOTAL
	The Pellet Handbook (Hardback)	9781844076314	£72.00		
	Handbook of Bioenergy Crops (Hardback)	9781844078547	£120.00		
	Biochar for Environmental Management (Hardback)	9781844076581	£39.99		
	The Biomass Assessment Handbook (Paperback)	9781844075263	£31.99		
	Subtotal				
	Postage & Packaging UK: £3.50				
	Europe Airmail: £5 + £2 per additional book				
RoW Airmail: £7.50 + £2 per additional book					
Total					

To get your 20% discount please return this form or enter the voucher code **AF20** when ordering at www.earthscan.co.uk

Please post orders to:

Earthscan, FREEPOST RRUU-TTAX-XCRZ
Dunstan House, 14a St Cross Street, London EC1N 8XA

Telephone: +44 (0) 20 7841 1930 • **Fax:** +44 (0) 20 7242 1474

Email: orders@earthscan.co.uk • **Website:** www.earthscan.co.uk

PAYMENT OPTIONS

1. I enclose a cheque/bankers draft payable to Earthscan (in sterling drawn on a UK bank)

2. Please debit my Credit/Debit Card account number

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Expiry date: _____ Three Digit Security Number: _____

Issue No. or Valid From date (Switch only) _____

Signature: _____ Date: _____

3. Please send me a pro-forma invoice

(Note: this invoice will need to be paid before the books are dispatched)

4. We have an account set up with you - please bill us

Our Macmillan account number is: _____

YOUR DETAILS

Organisation

Address

Postcode

Country

Tel. No.

E-mail

Get a 20% DISCOUNT on all Earthscan books - sign up to our New Book E-Alerts

To receive an e-alert announcing new books from Earthscan, and take advantage of offers unique to our members, visit www.earthscan.co.uk and choose the subjects that interest you:

- Agriculture & Food
- Architecture & Construction
- Business & Environmental Management
- Cities & Infrastructure
- Climate
- Design
- Development
- Ecology
- Biodiversity & Conservation
- Economics
- Energy
- Environmental & Sustainability Assessment
- Forestry
- Health & Population
- Natural Resource Management
- Religion
- Risk, Science & Technology
- Sustainable Development
- Tourism