

## Book Review

Bharat P. Singh (Ed.). **Industrial Crops and Uses**. 1<sup>st</sup> edition, September 2010. 510 Pages. CAB International, Nosworthy Way, Wallingford, Oxfordshire, OX10 8DE, UK. ISBN-13:978 1 84593 616 7, Price £115/ US\$220/ •160.

This book covers industrial crops based on the pedantic definition of plant-based products that have non-food based uses; even though, there are books on this topic that take a more loose approach by covering crops directly used by humans or animals also. As per the book's preface, the editor indicates that the motive to write this book was a dearth of detailed and quality publications available in this fast changing field. A quick look at some of the online book stores also reveals the lacuna in publications emanating in the area of industrial crops that systematically review and consolidate research and development that has taken place recently.

The book approaches the entire topic with a textbook like coverage of key industrial crop species of importance. The current status of research and development in their production, harvesting, handling and processing, and the current and prospective end uses for these crops are covered in detail. The book has been divided into eight parts including a 'setting the scene' overview of the topic by the editor. Probably due to the current pace of development and topical nature of the subject, major portion of the book is dedicated to biofuels/ bioenergy (heat and power generation by gasification and combustion, ethanol production from sugar, grain and lignocellulosic crops, biodiesel production from oilseed crops). Other aspects covered are industrial oil, industrial starch, fibre and dyes, rubber and related compounds, plant-based insecticides, and plants in land rehabilitation. Some of the topics have been given less prominence (e.g. resins, plant-based insecticides, dyes etc.) which probably reflect the loss of prominence of some of these crops due to availability of synthetic analogues.

I think the book achieves its purpose by providing an exhaustive coverage of the various topics, especially

from a graduate-level student point of view. I think the biggest draw card for the book is the encyclopaedic coverage of the biofuel/bioenergy industry. Also with the impending energy crisis, when all potential leads are being explored to find solutions to this crisis, such a state-of-knowledge compilation is highly beneficial. It is worth noting that the Association of Advancement of Industrial Crops is yet to recognise the industrial implications of the biofuel revolution. My only qualm is that even with large coverage of the biofuel/bioenergy topics, the book does not delve deeper into the ongoing food versus fuel debate; this is in spite of the blurb by the editor that topics include controversies, scopes and prospects, sustainability and planning, and policy issues associated with different plant-based industries will be covered. Farmers' decision to change cropping pattern influenced by market forces is having a profound impact on global food production and availability.

Most books on industrial crops ignore the area of phytoremediation. It is very heartening to see the final two chapters dedicated to plant-based environmental remediation. I feel this topic has a lot to offer when it comes to environmental remediation/restoration of polluted sites. Sunrise industries such as *biochar* production which has a two-pronged benefit of carbon sequestration and as an energy source could have been covered. Even though the book has been pitched for a global audience, some of the dominant regional industrial crops such as oil palm could have been discussed in greater detail. On a minor note, the lack of referencing of some of the tables and figures makes it impossible for the reader to know about the original source of the information.

The book is a wealth of information on industrial crops, processes and chemistry and thus a must for libraries

and is a repository of information for researchers, professionals spanning from economic botany/ agriculture to energy and resource sectors. It is not an ordinary feat to produce a scientific book of this proposition with extremely clear graphs, lucid writing style, and few errors. I hope this book is available in the digital e-book format since the span of topics being covered are so vast and special interest groups may only need to download specific chapters.

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