Book of Abstracts

1st World Congress of Agroforestry

Working Together for Sustainable Land Use Systems

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Congress website: conference.ifas.ufl.edu/wca/

FOREWORD

This Book contains the abstracts of papers that were selected for presentation at the 1st World Congress of Agroforestry (WCA), 2004. Except for the abstracts of 29 invited presentations for seven symposia included in the beginning of the book, all were voluntary submissions for oral or poster sessions.

In preparation for the Congress, we solicited potential participants to submit abstracts for presentation during oral and poster sessions. The response vastly exceeded our expectations: we received more than 800 voluntary submissions from all over the world. The abstracts were sent to the respective WCA session organizers for their scrutiny and decision on their acceptability for oral or poster presentations. Although the session organizers were requested to be as accommodative as possible in making their decisions, quite a few abstracts had to be rejected as they were deemed unrelated to agroforestry even by the broadest definition of the term. The authors were then given the opportunity to submit revised and updated abstracts. The final selected abstracts were then edited for uniformity in length (maximum 250 words), presentation format, and language. Because of the volume of work that had to be accomplished within a tight time schedule, the edited versions could not be sent back to the authors for their approval; we request the authors' understanding and forbearance for this. At the time of sending this to the press, some authors' attendance in the Congress and presentation of their work are still uncertain because of financial and administrative reasons. Nevertheless, all abstracts processed as above are included in this book with the authors' approval.

Undoubtedly, this Book of Abstracts represents the current state of information and knowledge in agroforestry worldwide. Several of these presentations will be developed as full-length journal articles for the special issues of thematic journals that will feature Congress presentations (at the time of this writing, arrangements have been confirmed for special issues of seven scientific journals). But, for the majority of the abstracts that may not be published as professional and academic publications, this Book of Abstracts will remain the only source of reference. Thus, we believe that this book will be a valuable resource for future use. The book will also be made available to Congress participants as a CD, and the abstracts will be posted on the Congress Web-site (http://conference.ifas.ufl.edu/wca), and retained for several months after the Congress.

Compiling this Book of Abstracts involved the efforts of a number of individuals. I wish to express my sincere appreciation to my colleague Dr. Samuel Allen of the Center for Subtropical Agroforestry (CSTAF), University of Florida (UF), who edited the final abstracts for technical language, length, content and style. Other CSTAF colleagues, notably Dr. Michael Bannister and Ms. Julie Clingerman, provided considerable support and assistance to Dr. Allen in accomplishing this task. Special thanks are due to the Congress Coordinator, Ms. Mandy Stage, who with the assistance of Ms. Tracy Nininger and others at the UF Office of Conferences and Institutes, has handled effectively and tirelessly the myriad of logistics and communication associated with the development of this Book, including the final proofing and printing. Finally, I sincerely thank all the authors and session organizers, without whose cooperation and timely inputs this publication would not have been possible.

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Tropical Homegardens in Riverine Communities of Amazonian Estuary, Marajó Island, Brazil

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Amazonian tropical homegardens play an important social role beyond the economic and ecological aspects by promoting the family integration while sharing farming, managing and harvesting activities. The homegardens function as a place where the farmers exercise their knowledge and beliefs on dealing with the environment, with notable participation of women in the managing of the activities. As all the majority of tropical production systems in riverine areas, homegardens also possess many technical difficulties and for this are seldom considered as economically viable systems. However, it is important to know the species that compose these systems, as well as the socio-economic and ecological characteristics that result of these interactions. In this paper the description of tropical homegardens in riverine communities in the Amazonian Estuary is presented. Research was conducted in Santana do Afuá Community at Santana do Afuá River (0°09'32"S and 50°23'31"W; mean temperature of 26ºC and annual precipitation of 2,500 mm). Main economic activity is the wood and palm-heart extraction. Data on the species component uses and zones (measured in m^2) were collected through semi-structured interviews, surveys and direct observation. Descriptive statistical analysis was used. The following management zones were identified as: 1) Palm-heart trees; 2) Fruit trees; 3) Wood trees; 4) Ornamental and medicinal plants; and 5) Other (wood sawing or palm-heart storage spaces). Among the 58 identified species, the most important was *Euterpe oleracea*, an important multipurpose species with a very high meal value for farmers, beyond its economic importance due to palm-heart commercialization at local industries.

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Medicinal Plant-based Agroforestry Models: Strategy for Income Generation and Biodiversity Conservation

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The global interest in tropical medicinal plants has increased recently, especially in the Western countries. At present the international market for medicinal plants is worth 60 billion US$ $year^{-1}$, which is growing at a rate of 7% per annum. Consequently, the existence of these species, which augment the health care systems of more than 70% of the world's population, is threatened. This has already led to extinction of a number of key species, with many more under continuous threat. Furthermore, information on availability in natural forests, current threat status, cultivation aspects, marketing and value addition prospects, etc., of these medicinal plants, is very sketchy. Thus, many international organizations (e.g., FAO, World Bank, World Wildlife Fund) and national bodies (e.g., National Medicinal Plant Board of India, Ministry of Environment and Forests) have suggested that cultivation of commercially important medicinal plants offers great potential for income generation and *ex situ* conservation of globally important tropical biodiversity. However, in India, like many other developing countries, it is difficult to divert fertile agricultural land exclusively for medicinal plant cultivation due to land hunger for food production. Introduction of medicinal plant species as understory crops for commercial production in agroforestry plantations, therefore, appears to be a viable option to overcome this problem. The paper deals with the biological compatibility, physical possibilities and economic viability of such models, which have been developed at the Forest Research Institute by planting of medicinal plants under plantations of poplars, eucalyptus and fruit orchards in the Indo-Gangetic plains of India.

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