

## Valuing Agroforestry Systems

# Advances in Agroforestry

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Volume 2

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## ***Series Editor:***

**P.K.R. Nair**

*School of Forest Resources and Conservation,  
University of Florida, Gainesville, Florida, U.S.A.*

## **Aims and Scope**

Agroforestry, the purposeful growing of trees and crops in interacting combinations, began to attain prominence in the late 1970s, when the international scientific community embraced its potentials in the tropics and recognized it as a practice in search of science. During the 1990s, the relevance of agroforestry for solving problems related to deterioration of family farms, increased soil erosion, surface and ground water pollution, and decreased biodiversity was recognized in the industrialized nations too. Thus, agroforestry is now receiving increasing attention as a sustainable land-management option the world over because of its ecological, economic, and social attributes. Consequently, the knowledge-base of agroforestry is being expanded at a rapid rate as illustrated by the increasing number and quality of scientific publications of various forms on different aspects of agroforestry.

Making full and efficient use of this upsurge in scientific agroforestry is both a challenge and an opportunity to the agroforestry scientific community. In order to help prepare themselves better for facing the challenge and seizing the opportunity, agroforestry scientists need access to synthesized information on multi-dimensional aspects of scientific agroforestry.

The aim of this new book-series, *Advances in Agroforestry*, is to offer state-of-the art synthesis of research results and evaluations relating to different aspects of agroforestry. Its scope is broad enough to encompass any and all aspects of agroforestry research and development. Contributions are welcome as well as solicited from competent authors on any aspect of agroforestry. Volumes in the series will consist of reference books, subject-specific monographs, peer-reviewed publications out of conferences, comprehensive evaluations of specific projects, and other book-length compilations of scientific and professional merit and relevance to the science and practice of agroforestry worldwide.

# Valuing Agroforestry Systems

## Methods and Applications

by

JANAKI R.R. ALAVALAPATI

*School of Forest Resources and Conservation,  
University of Florida, Gainesville, Florida, U.S.A.*

and

D. EVAN MERCER

*U.S. Forest Service,  
Southern Research Station,  
Research Triangle Park, North Carolina, U.S.A.*

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# TABLE OF CONTENTS

Contributors	vii
Preface	ix
Chapter 1:	Agroforestry systems and valuation methodologies: An overview. <i>Janaki R. R. Alavalapati, D. Evan Mercer, and Jensen R. Montambault</i>
	1-8
ECONOMIC ANALYSES	
Chapter 2:	Financial analysis of agroforestry practices: Fodder shrubs in Kenya, woodlots in Tanzania, and improved fallows in Zambia. <i>Steven Franzel</i>
	9-37
Chapter 3:	Economic analyses of a sustainable agroforestry system in the southeastern United States. <i>Stephen C. Grado and Amanda L. Husak</i>
	39-57
Chapter 4:	Determining agroforestry profitability using the policy analysis matrix: A case study from Pohnpei, Federated States of Micronesia. <i>W. Mark Drew, J. R.R. Alavalapati, and P. K. R. Nair</i>
	59-78
Chapter 5:	Exploring the economics of agroforestry systems using a production function approach. <i>Geoff Bright</i>
	79-93
Chapter 6:	Analyzing risk in agroforestry systems using a portfolio approach: A case study from the United Kingdom. <i>Peter Blandon</i>
	95-122
ENVIRONMENTAL ECONOMIC ANALYSES	
Chapter 7:	Economics of agroforestry carbon sequestration: A case study from southern Mexico. <i>Ben H. J. De Jong, Susana Ochoa Gaona, Sotero Quechulpa Montalvo, Elsa Esquivel Bazán, and Nicolás Pérez Hernández</i>
	123-138

Chapter 8:	Dynamic optimization for evaluating externalities in agroforestry systems: An example from Australia. <i>Oscar Cacho and Robyn Hean</i>	139-163
Chapter 9:	Valuing environmental services from agroforestry: Economics of soil and forest conservation in Manggarai, Indonesia. <i>Subhrendu K. Pattanayak and Brooks M. Depro</i>	165-182
Chapter 10:	Estimating ranchers' cost of agroforestry adoption: A contingent valuation approach. <i>Ram K. Shrestha and Janaki R.R. Alavalapati</i>	183-199
<hr/> HOUSEHOLD CONSTRAINTS AND AGROFORESTRY ADOPTION <hr/>		
Chapter 11:	Assessment of constraints to the adoption of improved fallows in Zimbabwe using linear programming models. <i>Maxwell Mudhara and Peter E. Hildebrand</i>	201-218
Chapter 12:	Metamodeling agroforestry adoption: Assessing factors influencing adoption of improved fallows in southern Africa using an integrated linear programming and econometric model. <i>Paul H. Thangata, Janaki R. R. Alavalapati, and Peter E. Hildebrand</i>	219-236
Chapter 13:	Analyzing ex-ante agroforestry adoption decisions with attribute-based choice experiments. <i>D. Evan Mercer and Ann Snook</i>	237-256
<hr/> MACROECONOMIC AND INSTITUTIONAL ANALYSES <hr/>		
Chapter 14:	Valuing the impacts of agroforestry in northern China. <i>Runsheng Yin</i>	257-277
Chapter 15:	A framework for institutional analysis of agroforestry systems. <i>Shashi Kant and Emma Lehrer</i>	279-302
Chapter 16:	Summary and future directions. <i>D. Evan Mercer and Janaki R.R. Alavalapati</i>	303-310
<hr/> INDEX <hr/>		311-314

# CONTRIBUTORS

Janaki R.R. Alavalapati

*School of Forest Resources and Conservation, University of Florida, Gainesville, Florida, United States.*

Peter Blandon

*Department of Business Studies, London Metropolitan University, London, United Kingdom.*

Geoff Bright

*School of Agricultural and Forest Sciences, University of Wales, Bangor, United Kingdom.*

Oscar Cacho

*School of Economics, University of New England, Armidale, Australia.  
Cooperative Research Centre for Plant-based Management of Dryland Salinity.*

Ben H. J. De Jong

*El Colegio de la Frontera Sur, Unidad Villahermosa, Villahermosa, Tabasco, México.*

Brooks M. Depro

*RTI International, Research Triangle Park, North Carolina, United States.*

W. Mark Drew

*School of Forest Resources and Conservation, University of Florida, Gainesville, Florida, United States.*

Elsa Esquivel-Bazán

*Ambio, San Cristóbal de las Casas, Chiapas, México.*

Steven Franzel

*World Agroforestry Centre (ICRAF), Nairobi, Kenya.*

Stephen C. Grado

*Department of Forestry, College of Forest Resources, Mississippi State University, Mississippi, United States.*

Robyn Hean

*Agroforestry Unit, New South Wales Agriculture, Tamworth, Australia.  
Cooperative Research Centre for Plant-based Management of Dryland Salinity.*

Peter E. Hildebrand

*Department of Food and Resource Economics, University of Florida, Gainesville, Florida, United States.*

Amanda L. Husak

*Department of Forestry, College of Forest Resources, Mississippi State University, Mississippi, United States.*

Shashi Kant

*Faculty of Forestry, University of Toronto, Ontario, Canada.*

Emma Lehrer

*Faculty of Forestry, University of Toronto, Ontario, Canada.*

D. Evan Mercer

*United States Department of Agriculture – Forest Service, Southern Research Station, Research Triangle Park, North Carolina, United States.*

Jensen R. Montambault

*School of Natural Resources and Environment, University of Florida, Gainesville, Florida, United States.*

Maxwell Mudhara

*Department of Agricultural Economics and Extension, University of Zimbabwe, Harare, Zimbabwe.*

P. K. R. Nair

*School of Forest Resources and Conservation, University of Florida, Gainesville, Florida, United States.*

Susana Ochoa-Gaona

*El Colegio de la Frontera Sur, Unidad Villahermosa, Villahermosa, Tabasco, México.*

Nicolás Pérez-Hernández

*Ambio, San Cristóbal de las Casas, Chiapas, México.*

Subhrendu K. Pattanayak

*RTI International, Research Triangle Park, North Carolina, United States.  
North Carolina State University, Raleigh, North Carolina, United States.*

Sotero Quechulpa-Montalvo

*Ambio, San Cristóbal de las Casas, Chiapas, México.*

Ram K. Shrestha

*School of Forest Resources and Conservation, University of Florida, Gainesville, Florida.*

Ann Snook

*Universidad de Quintana Roo, Chetumal, Quintana Roo, Mexico.*

Paul H. Thangata

*World Agroforestry Centre (ICRAF), Southern Africa Regional Programme, Harare, Zimbabwe.*

Runsheng Yin

*Department of Forestry, Michigan State University, East Lansing, Michigan, United States.*



# PREFACE

The primary objective of this book is to offer practical means for strengthening the economics and policy dimension of the agroforestry discipline. This book, written by the leading experts in economics and agroforestry, encompasses case studies from Australia, China, Kenya, India, Indonesia, Malawi, Mexico, Micronesia, Tanzania, United Kingdom, United States, Zambia, and Zimbabwe. The applied economic methodologies encompass a wide variety of case studies including enterprise/farm budget models through Faustmann models, Policy Analysis Matrix, production function approach, risk assessment models, dynamic programming, linear programming, meta-modeling, contingent valuation, attribute-based choice experiments, econometric modeling, and institutional economic analysis. It is our belief that these methodologies help agroforestry students and professionals conduct rigorous assessment of economic and policy aspects of agroforestry systems and to produce less biased and more credible information.

Furthermore, the economic and policy issues explored in the book – profitability, environmental benefits, risk reduction, household constraints, rural development, and institutional arrangements – are central to further agroforestry adoption in both tropical and temperate regions.

All of the chapters in this volume were subject to rigorous peer review by at least one other contributing author and one external reviewer. We would like to acknowledge the indispensable collaboration of those who provided careful external reviews: Ken Andrasko, Chris Andrew, Peter Boxall, Norman Breuer, Bill Hyde, Tom Holmes, Sherry Larkin, Jagannadharao Matta, Venkatrao Nagubadi, Roz Naylor, Thomas Randolph, Gerald Shively, Changyou Sun, Bo Jellesmark Thorsen, and Yaoqi Zhang. All reviews were coordinated by the book editors.

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– *The Editors*