Rural and Farming Systems Analyses

Environmental Perspectives

Edited by

Werner Doppler

Department of Agricultural Economics and Social Science in the Tropics and Subtropic University of Hohenheim, Germany.

and

Alex Koutsouris

Development Agency of Karditsa (AN.KA) Karditsa, Greece



Werner Doppler and Alex Koutsouris

Rural and Farming Systems Analyses: Environmental Perspectives

Proceedings of the Third European Symposium of the Association of Farming Systems Research and Extension in Hohenheim, Germany, March 25 to 27, 1998.

Editors:

Werner Doppler

Department of Agricultural Economics and Social Science in the Tropics and Subtropics, University of Hohenheim, Germany.

Alex Koutsouris

Development Agency of Karditsa (AN.KA), Karditsa, Greece

Die Deutsche Bibliothek – CIP Einheitsaufnahme

Ein Titeldatensatz für diese Publikation ist bei

Der Deutschen Bibliothek erhältlich

Druck und Bindung

f.u.t. müllerbader gmbh, Filderstadt

Produktion

Dirk Hangstein, Weikersheim

© Margraf Verlag, 1999

Laudenbacher Straße

D-97990 Weikersheim

ISBN 3-8236-1320-0



CONTENTS

Contr	ibutors	iv
Prefac	ce	vii
Syste	g the Frame: Environmental Perspectives in Farming and Rural ms Analyses	
Werner	Doppler	1
I	Concepts and approaches for integrating environmental perspectives	11
1	Combining Agricultural and Environmental Perspectives: Integrated Arable Farming Systems Research in the UK	
	J. Park, A. Bailey, J. D. H. Keatinge, T. Rehman and R. B. Tranter	13
2	The Municipality Approach in Regional Agricultural Models: Improving Accuracy in Environmental Analyses	
	Johannes Umstätter and Stephan Dabbert	25
3	Nitrate Pollution of Groundwaters in a Small Mediterranean Region Stéphane Bellon, Patrick Bertuzzi, Joanne Musset, Sophie Vannier, Cécile Mirambeau, Anne-Elisabeth Laques and Pierre Derioz	38
4	Environmental Behavior Related to the Socio-Economic Situation of Farmers: A Case Study in South East England, North Holland and South West Germany Bareld van der Ploeg, Patrick Baudoux and Gottfried Häring	48
5	Towards Research Which is Policy-Relevant: Comments on a Method for Exploring the Complexity of Agro-Environmental Issues M. Lemon, P. Jeffrey, P. Longhurst and R. Seaton	62
_		
6	A Process-Analysis Approach for Improving Multi-Disciplinary Farming Systems Research, Development and Extension	71
	C A King	/1
7	Learning Steps Towards a Sustainable Development Strategy Carmen G. Hess	80
II	Management strategies for coping with the environment	89
8	Systems Methodology and Technological Change in Agriculture R.M.Morris, C.P. Blackmore, S. Carr, R.L. Ison, A.B. Lane and P.T. Maiteny	91
9	Researching Farmers Possibilities and Motivation for Including Environmental Aspects in their Management Niels Halberg	101

ii Contents

	10	Networking for a Sustainable Future: The Case of Development Agencies Alex Koutsouris	112
	11	A Farming Systems Approach to Increased Use of Integrated Pest Management in the Australian Cotton Industry	
		J. A. Coutts	123
	12	Re-Innovated and Accepted: An Approach for More Effective Management of Engineering for Small-Holder Farmers	122
		B. Douthwaite, J.D.H. Keatinge and J. Park	132
Ш	Us	e of local resources for rural development	145
	13	Farmers' View and Knowledge: the Gate to Problem Solving - A Case from Northern Thailand -	
		S. Praneetvatakul	147
	14	Milk Production Systems and Extension Work: Promoting a Dynamic Local Management of Collective Milking Parlours	
		Artur Cristóvão, Alberto Baptista, Timothy Koehnen, Fernando Pereira and Manuel Luís Tibério	157
	15	Agriculture: A Critical Resource in Rural Development Jim Phelan	165
	16	Socio-Economic Impact of Use of Water Resources in Farming Systems: A Case of Phayao Province, Northern Thailand	
		Acharee Sattarasart	178
	17	System of Farmers' Objectives - Basis to Formulate Strategies of Family Farms in Poland	
		Edward Majewski and Wojciech Ziêtara	191
IV	The	e role of institutions in managing ecosystems	201
	18	Terms of Engagement: Lessons Learnt from a Comparison of NARS Activities North and South in Sustainable Agriculture	
		Simon Anderson and Sabine Gündel	203
	19	Social Embedding of Environmentally Integrated Farming on a Regional Scale: A Case Study about Ecological Modernisation in Waterland (The Netherlands), a Target Area for EU Agri-Environmental Programs (regulation 2078/1992)	
		Bareld van de Ploeg	218
	20	Wood Energy Production and Consumption in Rural and Farming Systems Context: A Case of Family-Household and Local Industry Northern Thailand S. Praneetvatakul and W. Doppler	234
	21	Agricultural Transformation and Implications for the Rural Financial System in Romania	
		Gertrud Schrieder and Franz Heidhues	252

Contents iii

	22	The EU Nitrate Directive - Experiences and Necessity of Further Action Cord Stoyke	266
	23	Extended Study Circles as a Means of Facilitating Change Towards Sustainable Management of Ecosystems: Is there a new role for agricultural universities? <i>Magnus Ljung, Anna Richert and David Gibbon</i>	279
٧	Fai	ming and rural systems in zones of transition	291
	24	Family Types on Extensive Farming Systems in Less Favoured Mountain Areas of Spain A.M. Olaizola, E. Manrique and A. Bernués	293
	25	Strategic Alternatives to Agricultural and Rural Development in the Romanian Mountain Area Eugen Buciuman	305
	26	Prototyping and Dissemination of Ecological Olive Production Systems in Co- Operation with Farmers Emmanouil Kabourakis	312
	27	Economics of the Family-Household in Marginal Zones of Jordan <i>Raid AL baqain</i>	326
	28	Protection of the Natural Resources in Marginal Areas and Sustainable Rural Development in Northern Lebanon Marwan Owaygen	334
	29	Integrating Tree Cultivation in Farming Systems in Fragile Landscapes in Kenya: Some Empirical Evidence from Meru and Machakos Districts Walter Odhiambo	344
	30	Potentials and Perils on Periurban Agriculture in a West African Coastal Region Anne Floquet	354
	31	Famine and Markets in Nomadic Systems: Conceptual Approaches Reconsidered Ulrike Schultz	364