



Work in progress
for public discussion

Integrating Biodiversity in Agricultural Intensification *Toward Sound Practices*



Jitendra P. Srivastava
Nigel J. H. Smith
Douglas A. Forno

Contents

Foreword	v
Abstract	vii
Acknowledgments	viii
Executive Summary	1
Chapter 1 Introduction	3
Destroying Myths about Modern Agriculture	3
Harnessing and Managing Biodiversity	4
Rationale	5
Conceptual Approach	5
Chapter 2 Promising Signposts to Sustainable Intensification	7
Intensification of Dairy Farming in Uruguay	7
Adjustments to Farming Practices in Response to Rapid Population Growth in Southeastern Nigeria	8
Home Gardens in Mexico and the Amazon: A Pantropical Cornucopia	9
Oil Palm in Malaysia and the Amazon	10
Upholding Intensive Rice-Wheat Farming on the Indo-Gangetic Plain	11
Soybean on India's Black Cotton Soils: Filling a Vacant Niche with a New Crop	12
Agricultural Intensification through Fallow Reduction in Anatolia, Turkey	13
INTERFISH and NOPEST Projects in Bangladesh	14
Chapter 3 Sound Practices at the Farm and Community Levels	15
Entry Points for Promoting Sound Practices at the Farm Level	16
Chapter 4 Sound Practices at the Landscape Level	19
Promote a Balanced Mix of Land Use Systems	19
Minimize Off-site Impacts	20
Conduct Rapid Agrobiodiversity Surveys in Advance of Agricultural Projects	21
Monitor Agricultural Projects for Impacts on Biodiversity	23
Expand the Scope of Parks and Reserves to Include Agrobiodiversity	23

Chapter 5	Strengthening Institutions and Technology Delivery	24
	Agricultural Research: Elements of the Emerging Paradigm	24
	Training and Extension	27
	Quarantine: Forgotten Link in Sharing Biodiversity Resources	28
Chapter 6	Fine-Tuning Fiscal and Regulatory Environments	30
	Tap Market Opportunities and Employ Specially Targeted Credit Programs	30
	Trade and Intellectual Property Rights	33
Chapter 7	World Bank's Role and Leverage	34
	Country Assistance Strategies	35
	Economic and Sectoral Reviews	35
	Agricultural and Rural Development Projects	36
	Environmental Assessments	36
	National Environmental Action Plans	36
	National Biodiversity Strategy and Action Plans	37
	Environmental Adjustment Loans	37
	Policy Dialogue	37
Chapter 8	Toward Implementation	38
References		39

Boxes

- 6.1 A renaissance of local breeds 32
- 7.1 Crop and livestock megadiversity centers 35

Tables

- 3.1 Agricultural practices that reduce natural resource degradation while boosting yields and enhancing biodiversity 16
- 4.1 Agrobiodiversity performance indicators 22
- 6.1 Fiscal policies that constrain adoption of more biodiversity-friendly agricultural practices 31