



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

WAITE MEMORIAL BOOK COLLECTION

DEPARTMENT OF AGRICULTURAL AND APPLIED ECONOMICS

232 CLASSROOM OFFICE BLDG.

94 BUFORD AVENUE, UNIVERSITY OF MINNESOTA

ST. PAUL, MINNESOTA 55108

ISSN 0193-9025



Food Research Institute Studies

CONTENTS

Java's Critical Uplands:
Is Sustainable Development Possible?
Frederick C. Roche

Research and Development
of a Biological Innovation:
Commercial Hybrid Wheat
Mary K. Knudson and Vernon W. Ruttan

Animal-Drawn Implements
for Small Farms in Mexico
*Brian G. Sims, Bruce F. Johnston,
Alan L. Olmstead, and Sergio Jácome Maldonado*

Vol. XXI, No. 1, 1988

Published by the Food Research Institute
Stanford University, Stanford, California 94305
Reprints of articles in this issue may be purchased from the Institute

Articles in this journal are abstracted or indexed in *Journal of Economic Literature*, *Agrindex*, *Bibliography of Agriculture*, *L'Agronomie Tropicale*, *Biological Abstracts*, *Biological and Agricultural Index*, *Field Crop Abstracts*, *Nutrition Abstracts and Reviews*, *Public Affairs Information Service Bulletin*, *Schrifttum der Agrarwirtschaft*, *Abstracts on Tropical Agriculture*, *World Agricultural Economics and Rural Sociology Abstracts*, *Asian-Pacific Economic Literature*, and the American Economic Association *Index of Economic Articles*. Table of contents of each issue is also listed in *Contents of Recent Economics Journals* (London) and *Current Contents/Agriculture, Biology, and Environmental Sciences*.

Food Research Institute Studies



Editor: Walter P. Falcon
Associate Editor: William O. Jones
Associate Editor: Carl H. Gotsch
Assistant Editor: Linda W. Perry
Cartographer: Lorraine Nelson

Vol. XXI

1988

No. 1

FOOD RESEARCH INSTITUTE STUDIES

Vol. XXI, No. 1, 1988

CONTENTS

Java's Critical Uplands:	
Is Sustainable Development Possible?..... Frederick C. Roche	1
The Island of Java, 3—Economic Incentives and Upland Evolution, 13—Future Upland Evolution, 27—Conclusion, 33—Citations, 34. Appendix Tables, 38.	
Research and Development	
of a Biological Innovation:	
Commercial Hybrid Wheat	
..... Mary K. Knudson and Vernon W. Ruttan	45
Commercial Hybrid Breeding, 46—Research and Development, 48—Methods of Commercial Hybrid Seed Production, 55—Toward a Commercial Success, 59—Citations, 63—Appendix A, 65—Appendix B, 66—Appendix C, 68.	
Animal-Drawn Implements	
for Small Farms in Mexico Brian G. Sims, Bruce F. Johnston,	
..... Alan L. Olmstead, and Sergio Jácome Maldonado	69
Increased Emphasis on Improved Equipment for Small Farmers, 70—The INIA Agricultural Engineering Program, 73—Two Animal-Drawn Implements, 78—Financial Analysis, 84—Diffusion Problems, 86—Conclusion, 88—Citations, 90—Appendix Tables, 93.	