

Contents

1	How Climate Change Reshuffles the Cards for Agriculture	1
	Emmanuel Torquebiau, José Tissier and Jean-Yves Grosclaude	
Part I Coping with Climate Change		
2	Hazards, Vulnerability and Risk	19
	Olivier Gilard	
3	Rice Adaptation Strategies in Response to Heat Stress at Flowering.	31
	Tanguy Lafarge, Cécile Julia, Alpha Baldé, Nourollah Ahmadi, Bertrand Muller and Michaël Dingkuhn	
4	Adaptation to Salinity.	45
	Nourollah Ahmadi, Jean-François Baroiller, Hélène D’Cotta Carreras and Raphaël Morillon	
5	Enhanced Drought Adaptation in African Savanna Crops	59
	Jean-Marc Lacape, Romain Loison and Daniel Foncéka	
6	Tropical Crop Pests and Diseases in a Climate Change Setting—A Few Examples	73
	Christian Cilas, François-Régis Goebel, Régis Babin and Jacques Avelino	
7	Healthy Tropical Plants to Mitigate the Impact of Climate Change—As Exemplified in Coffee	83
	Benoît Bertrand, Pierre Marraccini, Luc Villain, Jean-Christophe Breitler and Hervé Etienne	
8	Climate Change and Vector-Borne Diseases.	97
	Véronique Chevalier, Fabrice Courtin, Hélène Guis, Annelise Tran and Laurence Vial	

9 Relationships Between Tropical Annual Cropping Systems and Climate Change	109
Edward Gérardaux, François Affholder, Martial Bernoux and Bertrand Muller	
 Part II Seeking Novel Practices	
10 Livestock Farming Constraints in Developing Countries—From Adaptation to Mitigation in Ruminant Production Systems	127
Mathieu Vigne, Vincent Blanfort, Jonathan Vayssières, Philippe Lecomte and Philippe Steinmetz	
11 Climate-Smart Farms? Case Studies in Burkina Faso and Colombia	143
Nadine Andrieu, Philippe Pédelahore, Fanny Howland, Katrien Descheemaeker, Éric Vall, Osana Bonilla-Findji, Caitlin Corner-Dolloff, Ana-Maria Loboguero and Eduardo Chia	
12 Joint Management of Water Resources in Response to Climate Change Disruptions	155
Olivier Barreteau, Stefano Farolfi and Sylvain Perret	
13 Agricultural Organic Waste Recycling to Reduce Greenhouse Gas Emissions	167
Tom Wassenaar, François Dumoulin, Jean-Luc Farinet, Jean-Marie Paillat, Laurent Thuriès, Emmanuel Tillard, Jonathan Vayssières and Mathieu Vigne	
14 Will Tropical Rainforests Survive Climate Change?	183
Bruno Hérault and Sylvie Gourlet-Fleury	
15 Adaptation and Mitigation in Tropical Tree Plantations	197
Jean-Paul Laclau, Frédéric Gay, Jean-Pierre Bouillet, Jean-Marc Bouvet, Gilles Chaix, André Clément-Demange, Frédéric Do, Daniel Epron, Bénédicte Favreau, Jean-Marc Gion, Yann Nouvellon, Valérie Pujade-Renaud, Philippe Thaler, Daniel Verhaegen and Philippe Vigneron	
16 Coffee and Cocoa Production in Agroforestry—A Climate-Smart Agriculture Model	209
Philippe Vaast, Jean-Michel Harmand, Bruno Rapidel, Patrick Jagoret and Olivier Deheuvels	

Part III Stimulating Change

- 17 Impact of Climate Change on Food Consumption and Nutrition** 227
Michelle Holdsworth and Nicolas Bricas
- 18 The One Health Concept to Dovetail Health and Climate Change Policies** 239
Francois Roger, Pascal Bonnet, Philippe Steinmetz, Pierre Salignon and Marisa Peyre
- 19 Impact of Climate Change on Ecosystem Services** 251
Miguel Pedrono, Bruno Locatelli, Driss Ezzine-de-Blas, Denis Pesche, Serge Morand and Aurélie Binot
- 20 Life Cycle Assessment to Understand Agriculture-Climate Change Linkages** 263
Cécile Bessou, Claudine Basset-Mens, Anthony Benoist, Yannick Biard, Julien Burte, Pauline Feschet, Sandra Payen, Thierry Tran and Sylvain Perret
- 21 Payment for Environmental Services in Climate Change Policies** 277
Driss Ezzine-de-Blas, Marie Hrabanski and Jean-François Le Coq
- 22 Tackling the Climate Change Challenge: What Roles for Certification and Ecolabels?** 289
Sylvaine Lemeilleur and Gaëlle Balineau
- 23 Climate Policy Assessment on Global and National Scales** 301
Franck Lecocq

Part IV Looking Ahead

- 24 What About Climate-Smart Agriculture?** 313
José Tissier and Jean-Yves Grosclaude
- 25 Climate-Smart Agriculture and International Climate Change Negotiation Forums** 325
Patrick Caron and Sebastien Treyer
- 26 New Research Perspectives to Address Climate Challenges Facing Agriculture Worldwide** 337
Emmanuel Torquebiau, Dominique Berry, Patrick Caron and Jean-Yves Grosclaude

Climate Change and Agriculture Worldwide

Torquebiau, E. (Ed.)

2016, XXV, 348 p., Hardcover

ISBN: 978-94-017-7460-4