

Contributors

Chapter 1 – Climate change scenarios and their potential impact on world agriculture

Dr David Viner and **Dr Craig Wallace** are Senior Research Scientists at the world-renowned Climate Research Unit based at the University of East Anglia in the United Kingdom.

David Viner's interests include: Climate change science, scenario construction, impacts assessments, the construction and provision of climate data sets for the international climate change research community, the interactions between climate change and tourism, the rural economy, insurance and integrated assessments.

Through his work as Principal Investigator on the DEFRA funded Climate Impacts LINK Project he has developed a wide range of research interests and established numerous national and international contacts in the research and stakeholder communities. The majority of projects that require observed climate and climate change data, use the Climate Impacts LINK Project. Current activities and projects include:

- Co-Manager of the IPCC Data Distribution Centre.
- Application and construction of climate datasets for use by the international research community. Working with the IPCC, international and national research programmes and individual research projects.
- Soil erosion and the interactions with land-management and climate. Collaboration with Anglia Polytechnic University and local (Norfolk) land managers.
- Climate Change Impacts, Options, Strategies and Solutions for Rural Estate and Land-Use Management in the European Union. Collaboration with EU partners, the European Land Owners Organisation and the Country Land and Business Association.

Craig Wallace was awarded his PhD from the Unit in 2003 following a 3-year research programme identifying how the natural seasons have changed in the past 100 years, and how they might change in the next century. Since completing his PhD research, he has been employed at the Unit on a number of government-funded research projects with the aim of producing global and regional climate scenarios for the next 100 years.

Chapter 2 – Climate variability and extremes – where are the risks of crop failure

Dr Francesco N. Tubiello holds research faculty appointments at Columbia University, Center for Climate Systems Research in New York, and at the International Institute for Applied Systems Analysis in Austria. His scientific interests include the broader issues of sustainable development and climate change, including energy use and methodologies for greenhouse gas emission accounting; impacts, adaptation and mitigation strategies for agriculture, forestry and land use; and the dynamics of the terrestrial carbon cycle as affected by anthropogenic and climate interactions. Francesco has substantial experience in managing the scientific, organizational and financial aspects needed to coordinate multidisciplinary, international teams. He has worked extensively in developing countries. His work is funded by grants from US and international agencies such as NOAA, NSF, NASA, UNDP, as well as by NGO's. Francesco is active in the international policy arena. He has served as an adviser to the Italian Ministry of the Environment and as a UNFCCC expert on matters related to climate change, including issues on the interactions of land-based adaptation and mitigation strategies, and emission guidelines for greenhouse gas emissions from land use and land use change. He is a U.N. Expert Desk Reviewer for Clean Development Mechanism (CDM) projects –new methodologies.

Chapter 3 – Climate change – Crop and plant variety changes and needs

Dr Roger Turner After a distinguished and successful career, Dr Turner now operates a management consultancy (Romadest Associates) handling high tech issues and strategic change in agriculture and horticulture. He worked for many years in multinational businesses (Shell and Fisons) and recently stepped down as the Chief Executive of the British Society of Plant Breeders. In this latter role he developed the expertise used to write this article and he played a prominent role in the science and politics of biotechnology in the UK and served on a UK Government Commissions (AEBC and Foresight).

Chapter 4 – Climatic factors and their influence on crop production, pest, disease and weed incidence and control

Bruce Knight established Innovation Management in 1992, as a specialist business consultancy, which supports the management of change based on new investments and new technology in agricultural and related activities. He has worked extensively on market opportunities for materials derived from industrial crops and prospects for energy crops, on GM technology and on Precision Agriculture.

Within industry he achieved senior international management positions within two agrochemical groups. For five years he was Managing Director of Horstine Farmery Limited, a subsidiary of Rhône Poulenc, which specialised in the international development of application equipment. Since establishing Innovation Management he has contributed to a number of multi-client studies and writes regularly on crop protection issues.

Chapter 5 – Developments in weather-based Decision Support Systems for improved crop protection/production

Howard Hinds graduated from Trent Polytechnic in Nottingham, UK, in Applied Biology in 1983. Soon after Howard began a career in agriculture with an independent agrochemical trials company. In 1985 he joined McCain Foods (GB) Ltd as an Agronomist involved in the introduction of North American processing potato varieties to the UK. Following on from this Howard was Technical Manager for an agricultural development company of novel spray application techniques. Since 1997 he has been Director and Crop Consultant of Plantsystems a UK-based business specialising in delivering technology-based services to the fresh produce sector. One of his main achievements has been the introduction and market development of new decision support systems to the UK potato and vegetable industry. Plantsystems are currently the UK's leading commercial supplier of weather stations and Decision Support Systems to agriculture. As well as working on mainland UK, Howard also works in Jersey, Portugal and Spain.

Impact Research Partners and Editors

Bruce Knight - see chapter 4 above

Adam Wimshurst is a freelance agricultural marketing research consultant specialising particularly in the international agrochemicals, seed and the agricultural biotechnology markets. His early career included international technical development and marketing management positions in the agrochemical industry. Latterly, he was managing director of Landell Mills Market Research Limited which specialised in providing services to the international inputs and food industries.