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FOOD SECURITY, DIVERSIFICATION AND RESOURCE MANAGEMENT: REFOCUSING THE ROLE OF AGRICULTURE?

PROCEEDINGS
OF THE
TWENTY-THIRD
INTERNATIONAL CONFERENCE
OF AGRICULTURAL ECONOMISTS

*Held at Sacramento, California
10–16 August 1997*

Edited by
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INTERNATIONAL ASSOCIATION OF
AGRICULTURAL ECONOMISTS
QUEEN ELIZABETH HOUSE
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1999

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PREFACE

This volume reports the bulk of the Proceedings of the 23rd International Conference of Agricultural Economists held at Sacramento, California, USA, during August 1997. The gathering was attended by 780 participants from 81 countries. It was the first time that the Association had met in the United States in many years, the last occasion being in East Lansing, Michigan, in 1955.

The theme of the conference was 'Food Security, Diversification and Resource Management: Refocusing the Role of Agriculture?'. The global food and agriculture system is changing dramatically, hence the conference addressed a range of important research and policy issues likely to challenge that system well into the 21st century. These included the implications of rapidly expanding food demand in the presence of natural resource constraints and rapid urbanization; the likely adjustments of markets and trade due to the diversification of diets in quickly developing nations, and also recent and current trade liberalizations; the economic opportunities presented by development in biological and information technologies; and region-by-region examination of the interface between food security, diversification and resource management.

The 23rd conference had a number of new features. We shortened it to less than one week, starting after lunch on Sunday and ending at noon on Saturday, with there being fewer arranged papers and twice as many competitively selected contributed papers as in recent meetings. Computer-based presentations and software demonstrations supplemented poster sessions, while invited panels were an innovation that fostered open discussion and bringing a regional perspective to the themes that ran through the conference.

A meeting of this size would not be possible without the creativity and hard work of many people. Vice President Joachim von Braun (then of the University of Kiel, Germany) deserves high praise for the intellectual and organization leadership he brought to the programme. He also brought a number of well-received innovations to the conference. Peter Hazell (British, but a member of staff of the International Food Policy Research Institute, Washington, DC) led the heroic task of peer review of the large number of contributed paper submissions and reducing them to the 111 selected for presentation at the conference. He was also responsible for editing the special issue of the IAAE journal, *Agricultural Economics*, which contains half the contributed papers selected for publication, and writing a masterly introduction to it. Arie Oskam (Wageningen Agricultural University, The Netherlands) organized the poster sessions. He was in charge of selection as well as being responsible for broadening the concept to include computer-based presentations. Larry Siverson (National Agricultural Statistics Service, United States Department of Agriculture) organized the workshops and symposia. The tireless efforts of these

individuals, and all who made presentations in Sacramento, provided the programme with a rich substantive content.

Organizing the logistics for a major conference requires a huge effort by the host country. Jerry Siebert (University of California at Berkeley) provided outstanding leadership of the local arrangements in Sacramento, while Nicole Ballenger (Economic Research Service, United States Department of Agriculture) chaired the country Organizing Committee. Bud Stanton (Cornell University, USA) led the successful effort which raised funds to foster participation by more agricultural economists from foreign exchange-constrained countries than ever before. During the meeting he was also responsible for editing the daily newsletter, *Cowbell*, which has a unique place in each conference.

The home institution of all these organizers made a significant in-kind contribution of their time, and often covered major items of expense, which helped towards the success of the meeting. In addition, substantial support was provided by the University of California (through the Berkeley and Davis campuses), the Giannini Foundation, the United States Department of Agriculture, the American Agricultural Economics Association and the Farm Foundation.

I wish to thank my fellow Executive Committee members for their efforts on behalf of the International Association of Agricultural Economists: President Elect Douglas D. Hedley (Agriculture and Agri-Food, Canada); Past President Csaba Csaki (Hungary, working at the World Bank); Vice President (Programme) Joachim von Braun (University of Kiel); Secretary-Treasurer Walter Armbruster (Farm Foundation, Chicago); and Members, Ruvimbo Chimedza (University of Zimbabwe) and Yang-Boo Choe (Office of the President, Republic of Korea). Finally, but in no sense least, all members of the International Association owe a great debt of gratitude to its editors who are responsible for publications: George Peters (Oxford University, United Kingdom) for this Proceedings volume, and Stanley Johnson (Iowa State University, USA) for the journal, *Agricultural Economics*. Their diligence and editorial care ensure that the intellectual contributions of the Association become valued additions to the literature of agricultural economics. For the largely uncompensated investments of time and resources made by them and their home institutions, the entire membership is most appreciative.

ROBERT L. THOMPSON
Immediate Past President

Introduction: The 23rd Conference and the Association

INTRODUCTION

The 23rd Conference of the International Association of Agricultural Economists was held at the Hyatt Regency Hotel and Convention Centre in Sacramento, California, USA, in August 1997, around the theme of 'Food Security, Diversification and Resource Management: Refocusing the Role of Agriculture?'. Regular conference attenders, or indeed those who are in the less fortunate position of being simply readers of this *Proceedings* volume, will recognize the similarity between the format of the congress and that of its recent predecessors, though they will also note some evolutionary changes in the programme and in the manner of our reporting.

Both of these latter elements are important. Briefly, at this stage, it can be noted that the Conference was shorter than hitherto (beginning on Sunday afternoon and ending by lunch time on the following Saturday), with innovation in the programme (the introduction of Panel Sessions, the dropping of what were known as 'Invited papers' and a different method of handling 'Contributed paper' sessions). A shortened version of the programme appears as an appendix. On reporting, the publications from the meeting now consist of what is often called the '*Blue Book*' (that is, this volume) and a special issue of our journal, *Agricultural Economics*. Some of these points will eventually be spelled out in greater detail. There is one further matter to notice. At the end of the Introduction there is a report on business of the International Association, which includes biographical sketches of the new life members elected in Sacramento.

ORGANIZING THE LOCATION

The on-site organizing work was again performed by a local committee, headed by Professor Jerry Siebert, Department of Agricultural Economics, University of California-Berkeley. At a parallel level the United States Organizing Committee was chaired by Dr Nicole Ballenger (United States Department of Agriculture). Since much work had to be done, the two groups are too large for their members, and responsibilities, to be named individually. They are simply assured of our gratitude for their collective efforts.

Apart from the complexity of organizing a meeting attended by 762 professionals, the local committee set up a full programme of associated events,

including a series of tours and events for 'accompanying persons'. The day tour was to the Kautz Ironstone Vineyard and Winery in the 'Gold Country' of California State, a site which was able to accommodate (and feed) over 800 people. To add to that there was a selection of post-conference tours, which included the beauty of Yosemite and the Monterrey area and provided an opportunity to visit farms, processing plants and research stations to observe the sheer efficiency of California agriculture at first hand.

The local and national committees received massive financial and material support from the United States Department of Agriculture, from organizations serving California agriculture, and from universities, foundations and commercial undertakings. It was also notable that money could be raised to provide grants, which facilitated attendance by colleagues from low-income and transforming economies (handled through the 'Fund for the International Conference of Agricultural Economists') from governments and official aid agencies in Denmark, Germany, The Netherlands, United Kingdom, Switzerland and the United States. Help was also forthcoming from the Rockefeller and Ford Foundations and the Japan branch of the Association. The Fund is administered by Professor B.F. Stanton (Cornell University, USA).

As can be seen from the programme appendix, Professor Csaba Csaka (Budapest University of Economic Science, Hungary and World Bank) took the chair at the opening ceremony. This is the traditional task of the Past President of IAAE. Other speakers included Jerry Siebert, Nicole Ballenger and our own Secretary-Treasurer, Dr Walter Armbruster, though he was appearing on this occasion as the President of the American Association of Agricultural Economists. The opening address was given by Richard Rominger, Deputy Secretary, United States Department of Agriculture, who is also a Californian farmer. It was a memorable speech which ranged across the agricultural spectrum, from the challenges of policy making at a national and international level to the realities of financing a farm and doing farm work.

Traditionally International Association conferences include at least part of a day devoted to local agriculture. Prior to the Wednesday tour, which is part of that segment, talks were presented. The organizers were Professors Daniel Sumner and Frank Buck (University of California-Davis). Speakers included Susan Offutt (Administrator, Economic Research Service, US Department of Agriculture²), Ann Veneman (Secretary, California Department of Food and Agriculture) and 'local academics' (if that is an allowable designation of colleagues with a far higher profile) Alan Olmstead, Warren Johnston, Roberta Cook and David Sunding.

ORGANIZING THE PROGRAMME

In accordance with the accepted practice of the International Association of Agricultural Economists the task of evolving a theme and an array of speakers fell to the Vice-President (Programme), Joachim von Braun. He was ably assisted by Gerta Gedess, Katinka Weiberger, Detlef Virchow and Ulf Stolzke, all at that time from the University of Kiel. Their presence in Sacramento

contributed substantially to the smooth running of an extremely complex and full programme.

The contents pages and the appendix provide information on the form of the programme. There is a certain amount of inevitable duplication involved, though it was the view of the Executive Committee that it would be worthwhile to record the depth and complexity of the programme and the extent to which it covered so many issues of great contemporary importance.³ To draw attention to the familiar elements, the *Opening Session*, in addition to the various speeches of welcome already noted, included the Presidential Address (Robert Thompson, President and Chief Executive Officer of Winrock International) and the Elmhirst Memorial Lecture (Professor Yair Mundlak, Hebrew University of Jerusalem and University of Chicago).

At the core of subsequent days were four *Plenary Sessions*, each consisting of three papers, with discussion openings and participation from the floor. As a professional organization, the IAAE obviously has 'agriculture' in the forefront of its activities. In fact, however, the relevant agenda is always tending to broaden, a process reflected in a theme which embraces the issues of 'food security, diversification and resource management'. The Vice-President, after much consultation with the membership, took a leading role in setting out the highlights of the programme. Traditionally, however, some of the organizational work is delegated, in this case to Ruvimbo Chimedza (University of Zimbabwe), Alain de Janvry (University of California-Berkeley), Clem Tisdell (University of Queensland, Australia) and Michel Petit (World Bank, Washington, DC). Apart from their superb efforts in arranging speakers and discussion openers, they took the chair for the appropriate Plenary Session and did much to foster a stimulating atmosphere devoid of rigid formalism. Shortened comments of discussion openers, compiled with the help of the rapporteurs, are included within the session reports.⁴ It is impossible to record details of the floor debate or the closing comments of the main speakers, though it is worth noting that discussion was always vigorous and that there was competition to catch the eye of the chair.

In previous conferences it has been customary to supplement the plenary papers with further 'invited papers' relating to each sub-theme, as well as organizing an open competition for a place on the programme as the presenter(s) of a 'contributed paper'. At Sacramento there was a substantial modification. It has always been understood that contributed papers can cover any issue of interest within our subject and that relevance to the main theme and sub-themes was not a requirement for acceptance. To allow a wider element of freedom, 'invited' papers, which had been 'themed', were dropped and there was a single competition for a large number of contributed paper slots. The organiser was Dr Peter Hazell (International Food Policy Research Institute, Washington, DC, USA). In selecting over 100 papers for floor presentation, from submissions of about three times that number, he was assisted by a panel of appraisers. As explained later, there was then a further selection for publication either in this volume or in *Agricultural Economics* (vol. 19, Sept. 1998).

The next elements in the *Proceedings* are a mixture of the new and the traditional. The Panel Discussions were an innovative feature. Under the general direction of the Vice-President Programme they were organized by leaders

in the profession to provide opportunity for more open discussion, especially with users of the results of agricultural economics research. Several included a methodological focus, while some concentrated on themes (or sub-themes) of the conference in relation to particular developing country regions. Platform speakers were asked to introduce topics, rather than to present formal papers, and then to participate in open discussion in relatively small groups. We have been reminded by one of our older members, Professor John Raeburn,⁵ that an early aim of Association conferences was to mix together academic 'golf' and academic 'tennis'. In the former, one persons fires off the shots and others watch (or rather listen in the context of conferences); in the latter, there is an exchange 'over the net' as shot is matched with shot. Reports of the interchanges are included below.

It must not, of course, be thought that wide participation was secured only by changing the format of contributed papers and introducing panel sessions. There was continuance of *Discussion Groups and Mini-symposia*, so ably organized by Dr Larry Siverson (United States Department of Agriculture, Washington, DC) and of *Poster Paper Sessions*, where Professor Arie Oskam (Wageningen Agricultural University, The Netherlands) undertook the daunting task of putting together a large number of posters. There were three long sessions, which proved exceedingly popular. On this occasion it was also decided to add to the attractiveness of informal presentations by including computer-based sessions designed to provide methodological guidance. Enormous efforts were made by Arie Oskam, as organizer, to make a success of the innovation. Help in guiding the discussion was provided by a team of colleagues (G. Nagarajan, Z. Hassan, W. Florkowski, M. Trueblood, S. Makki, J. Kola, R. Huirne, L. Unnevehr, A. Burrell, M. Veeman, M. Reed, H. Guoyomard, V. Sukhatme, K. Olson, E-A. Nuppenau, O. Bergland, H. de Gorter, G. Schiefer, S. Lerman, A. Kuyvenhoven, W. Masters, D. Colman, J. Peerlings, Q. Paris, H. Jansen, H.P. Witzke, G. Meester, B. Mills, M. Lyne and W. Heijman). It is regretted that more extensive reporting is not possible.

The conference had its traditional ending, which makes up the final component of the *Proceedings*, namely the *Synoptic View* by the President-Elect, Dr Douglas Hedley, the senior official of the Policy Branch of Agriculture and Agri-Food Canada, Ottawa.

ORGANIZATION OF PUBLICATIONS

The basic format of post-conference reporting has remained virtually standardized over seven conference periods. Each meeting resulted in the appearance of a hardback *Proceedings* volume (or *Blue Book*), a paperback *IAAE Occasional Paper* containing the contributed papers and poster paper abstracts,⁶ and a less formal *Members' Bulletin* (distributed from the Editorial Office in Oxford), with the reports on discussion groups and mini-symposia, plus short biographies of new life members elected at the conference. This latter publication will no longer appear; the material is incorporated into the *Proceedings*. The *Occasional Paper* series is also abandoned, though effectively it is replaced rather than abolished. The poster abstracts appear below, as does a selection of

contributed papers, with 20 others included in a special issue of the Association journal, *Agricultural Economics*. Part of the motivation was to make the journal more central to the affairs of IAAE by having it include papers from our main triennial event.

As indicated earlier, the Association has long experience of running a 'contributed paper competition'. On this occasion, however, it also had to decide on how many papers to publish either in the *Proceedings* or in *Agricultural Economics*. To be brief, the first stage of selecting 'floor papers' was done in the normal way; but there was then a 'second competition' involving colleagues from the review panel of the journal, as well as others in attendance at Sacramento, to make a further selection on the basis of standard 'journal referee' processes. Authors were then allowed some time to revise their material in the light of referee comment. The process was organized by Peter Hazell, Stanley Johnson (Iowa State University, editor of *Agricultural Economics*) and George Peters. Indispensable assistance was given by Ellen Balm, the journal editorial assistant.

There are a number of points which emerge. First, it was desperately difficult to make a cut from 'floor papers' to a smaller group (about 70 were sent to referees), and then to refine the list to 40 selected for publication, with half in each publication. We are expecting many of those not selected to be resubmitted to the journal, or to appear in other publications. Second, it was decided that the division of papers should allow the special issue to have a 'theme', the one chosen being *Agricultural Growth, Poverty and the Environment*. In the programme appendix, which lists all of the contributed paper sessions, those which appear in the special issue are labelled (S). The papers which appear below (labelled as P) are then grouped into the four sections shown in the contents page.⁷ Because of space constraints, discussion openings, unfortunately, do not appear.

There are many people who assisted in book preparation. Notable among these were Ellen Balm, who has already been mentioned, and Geryl Unterberg (University of California-Berkeley) who found time to organize much of the paperwork for the editors in Sacramento as well as acting as assistant to Jerry Siebert. Katinka Weinberger dealt with the organization of Panel reports. In Oxford, a debt is owed to Denise Watt and Roger Crawford, who did a great deal to help the editorial process, and to the library staff of Queen Elizabeth House, University of Oxford (notably Sheila Allcock, Bob Townsend, Gill Short and Dawn Young), who can always find the details of misquoted references. Larry Sivers, in addition to organizing so much, also provided the report on the discussion groups. A major part was played by Judith Peters, who took the bulk of the responsibility for editing the poster abstracts and also checked over much of the text for the types of problem which inevitably appear, even in the work of the most careful of authors. The staff of Ashgate Publishing Company (notably John Irwin, Ann Newell and Sonia Hubbard) were again enthusiastic, constantly helpful and extremely patient.

ASSOCIATION BUSINESS

A conference *Proceedings* volume is not the place in which to engage in long discussion of the business affairs of the International Association. For members that purpose is served by the Newsletter and the Internet.⁸ During conference weeks, pride of place is taken by 'Cowbell' (the daily conference newsletter), edited with incomparable style by Bud Stanton. A feature of the work of the Council, which can only meet at a conference venue on a triennial basis, is the election of Life Members of the Association. Those elected at Sacramento in 1997 were Michele de Benedictis (Italy), John Dillon (Australia), Yujiro Hayami (Japan), Michel Petit (France) and Vijay Vyas (India). Brief biographies are appended.

CONCLUSION

Three standard observations must now be made. First, the International Association records its debt to the many organizations and universities which have lent 'in-kind' support to its activities. Second, the views expressed in this book are not necessarily those of the IAAE nor of the institutions to which the various authors are affiliated. Third, the IAAE is an organization without any form of political affiliation and the use of geographical descriptions is simply a matter of convenience. The points may appear formal, but they are of vital significance to the Council, the Executive Committee and the Membership at large.

NOTES

¹George Peters, Research Professor in Agricultural Economics, University of Oxford, International Development Centre, Queen Elizabeth House, and Wolfson College, is Editor of Proceedings of the IAAE. Joachim von Braun, Vice-President Programme, at the time of the 1997 meeting was with the University of Kiel, Germany, but is currently Director of the Centre for Development Research at the University of Bonn.

²Included among the useful material distributed was Economic Research Service, USDA (1997), *Forces Shaping U.S. Agriculture: A Briefing Book* (Washington, DC: USDA). This was a helpful compilation prepared specially for the conference.

³The appendix does not list the Panel Sessions, or the Discussions Groups and Mini-Symposia, both of which appear in detail in later sections of this volume. Some details of the administration of the poster sessions are also excluded.

⁴The inclusion of the programme means that the names of chairpersons and rapporteurs are recorded. This is not repeated. They will understand how vital their role is both at the meetings and for the preparation of proceedings.

⁵The opportunity appears here of reminding readers of an important book, whose title speaks for itself: J.R. Raeburn and J.O. Jones (1990), *A History of the International Association of Agricultural Economists: Toward Rural Welfare Worldwide* (Aldershot: Dartmouth). Neither author is able now to attend conferences but both are a constant source of advice and encouragement to the Editor of Proceedings.

⁶The last in the series contained material from the Harare, Zimbabwe, meeting of 1994. It appears as R. Rose, C. Tanner and M. Bellamy (eds) (1997), *Issues in Agricultural Competitiveness: Markets and Policies*, IAAE Occasional Paper Number 7, Aldershot: Dartmouth. The Proceedings volume from that meeting is G.H. Peters and D.D. Hedley (eds) (1995), *Agricultural Competitiveness: Market Forces and Policy Choice*, Aldershot: Dartmouth.

⁷Slotting papers into groups is inherently difficult – some could fall into more than one category – and it is done as a means of providing readers with *some* guidance as to content. The programme classification was not used since it was designed for the guidance of those attending the meeting. It was quickly decided that the poster papers could not usefully be handled on any sort of thematic basis; hence they are arranged in a way which depends heavily on nothing more complex than geography.

⁸The newsletter is distributed to members twice a year. The website is <http://www.ag.iastate.edu>.

BIOGRAPHIES OF NEW LIFE MEMBERS

Michele De Benedictis

Michele De Benedictis was born in Asmara in 1927 and earned his bachelor's degree in agricultural studies at the University of Naples in 1952, gaining a PhD in agricultural economics from Iowa State University in 1957. As a professor at the University of Rome, La Sapienza – from which he is expected to retire next year – his contributions to agricultural economics are numerous. He was responsible in the 1960s and 1970s for the successful spread, among the profession in Italy, of the use of quantitative analysis. Many Italian agricultural economists received their training in the post-graduate programme in Portici, Naples, an institution he has been associated with for more than 20 years.

Michele is the only agricultural economist to be elected to membership of the Italian 'Lincei' Academy. His research contributions range from the early seminal application of programming to farm and sector problems, to the most recent analyses of the nature of the reform processes of the Common Agricultural Policy of the European Union. Some will remember the brilliant paper (written with Fabrizio de Filippis and Luca Salvatici) delivered at the European Association meeting in The Hague in 1990, in which he steered carefully between Scylla and Charibdis or, in our context, protectionism and free trade in agriculture.

Michele de Benedictis was a founding member of the Editorial Board of the journal of our Association, *Agricultural Economics*, rendering devoted and efficient service.

John L. Dillon

An active member of the IAAE since the late 1960s, John Dillon's discussion opening on Academician Rustaeov's paper (Minsk, 1970) is still remembered with mixed, but cordial, feelings. That capacity for frank, fearless and constructive criticism remained a valuable asset during his long service on the Editorial Committee of *Agricultural Economics*. John Dillon has now retired from the University of New England, where he served variously as Foundation Professor of Farm Management, Head of the Department of Agricultural Economics, Dean of the Faculty of Economic Studies and Pro-Vice Chancellor. He supervised a multinational network of graduate students from Chile, Brazil,

India and Australia. He retains an office in the Department but restricts his activities to guiding a few graduate students.

The published work on which his international reputation is based includes Heady and Dillon (1961) *Agricultural Production Functions*, his 1968 *Analysis of Response in Crop and Livestock Production* and his joint work with Anderson and Hardaker, *Agricultural Decision Analysis* (1977). He is currently involved in work on a book for FAO.

John is highly regarded in the international agricultural science community, playing an active role in the Consultative Group on International Agricultural Research, where he has served on more Boards of Trustees than perhaps anyone else, and being a prominent participant in many Centre reviews. Professional recognition has come in many forms, with election to fellowship of several learned societies, including the American Agricultural Economics Association. He has a number of honorary doctorates, a Distinguished Alumnus Award from his PhD alma mater, Iowa State University and, most recently, he received the highest national honour, Member of the Order of Australia. John Dillon is one of the most committed and distinguished internationalists of our profession.

Yujiro Hayami

Yujiro Hayami's first degree was in liberal arts at the University of Tokyo, from which he proceeded to a PhD from Iowa State University, where he was a Rockefeller Foundation Scholar. He began his career at Japan's National Research Institute of Agricultural Economics and this was followed by positions at Tokyo Metropolitan University (Professor and Council member), the International Rice Research Institute (Philippines) and Aoyama Gakuin University (Tokyo), where he continues as Director of the Centre for International Studies. He has served as visiting professor or fellow at the University of Minnesota, the University of the Philippines, the Australian National University, the Institute for Economic Growth in Delhi, the Economic Growth Centre at Yale, and as T.H. Lee Professor of World Affairs at Cornell.

Yujiro received international acclaim for work with Vernon Ruttan on induced technological innovation (*Agricultural Development: An International Perspective*). Further books on Japan, Taiwan, Korea, the Philippines and the revised 1985 edition of the induced innovation hypothesis constitute a valuable corpus of work in agricultural economics. Other important publications include *Anatomy of a Peasant Economy* and *Japanese Agriculture Under Siege*. He continues to publish on Japanese and Asian agrarian issues.

There have been many academic honours, including the Distinguished Research Award from the Agricultural Economics Society of Japan, the Outstanding Published Research Award of the American Agricultural Economics Association, the Outstanding Economic Book Award from Nikkei Shinbun, the Best Journal Article in the *American Journal of Agricultural Economics* on two occasions, the Award for Enduring Quality Publication from the AAEA, the Tohata Memorial Award from the National Institute for Research Advancement in Japan and the Award for Quality of Research Discovery by the AAEA. He is

a Fellow of the American Agricultural Economics Association, Honorary Professor of Tokyo Metropolitan University and he was the Elmhirst Lecturer at the IAAE Conference in Buenos Aires, 1988.

He has served with the Consultative Group on International Agricultural Research, the Technical Advisory Committee to the CGIAR, has been a board member of the UN ESCAP Regional Centre for Research and Development of Coarse Grains, Pulses, Roots and Tubers in Bogor, Indonesia, a board member of IFPRI, and a member of the Executive Committee of the International Economic Association. He has been a member of the editorial boards of numerous publications including the *American Journal of Agricultural Economics*, the *Journal of the Japan Society of Agricultural Economics* and of *Agricultural Economics* since its inception.

Michel Petit

Michel Petit was elected President of the IAAE at the Malaga Conference in 1985, as an individual who had come to his professional maturity in three different cultures. First, he was a French 'agronome', a former student of René Dumont and Denis Bergmann, educated in the tradition of the grassroots agronomists (who celebrated farmer contact and knowledge of all technical aspects of agriculture). Michel was also the intellectual offspring of Michigan State University. This second culture was much concerned with discovering the policy and social implications of microeconomic observation and analysis. He obtained his PhD thesis under the supervision of Glenn Johnson, also a former IAAE President and Honorary Life Member. The examination was actually held during the 1964 IAAE Conference at Lyons, France, in a room of the university, which for the occasion had been given the extraterritorial privilege of being deemed part of the Michigan State University campus for the day. His third cultural source was India, where he was appointed programme advisor for agriculture and rural development for the Ford Foundation. For two years from 1975, he saw at first hand the realities of developing economies in Asia.

Apart from the time in India, Michel was a researcher and teacher at Lyons from 1964 to 1988, becoming well known for his pioneering work in applying linear programming models to the study of local and regional development. Subsequently, during a stay at IFPRI in 1983–4, he shifted his interests to the study of agricultural policies and he is famous for his analysis of the worldwide consequences of European agricultural policies. As a teacher, he was responsible for the economic education of most of the higher-level staff in the French Ministry of Agriculture, where he is particularly well received. He was among the founders of the *European Review of Agricultural Economics*, of which he was for many years the associate editor, in charge of Spain and France.

In the late 1980s, Michel's career took him more deeply into administration and management, when he was appointed head of the agricultural branch of the World Bank in Washington, though he did not forget his primary research interests, since he has continuously published in academic journals

and participated in professional conferences. At the Bank his latest work has been especially concerned with the development of agricultural research around the world. When his contract with the Bank expires, it is no surprise to learn, he intends to resume his research career in Paris.

Vijay S. Vyas

Vijay Shankar Vyas is Director of the Institute of Development Studies (IDS) in Jaipur, India. Prior to this, Professor Vyas was the senior advisor in the agricultural and rural development department of the World Bank in Washington. In 1983–4, he was awarded an IDRC Senior Research Fellowship and was a visiting scholar at the Asian Studies Centre of Boston University. From 1978 to 1982, he was Director of the Indian Institute of Management at Ahmedabad.

After receiving his PhD in economics from the University of Bombay in 1958, Professor Vyas was on the faculty of Bombay University, Sardar Patel University and the Indian Institute of Management. He has extensive experience in the field of rural development and agricultural policy in India and abroad. He was a member of the Agricultural Prices Commission of the Government of India and served as chairman or member of other commissions and committees set up by the Union and the State governments.

Vijay has acted as a consultant to the United Nations and other international institutions and has served on the Board of the International Centre for Tropical Agriculture (CIAT) in Colombia. He was a member of the Governing Council of the Institute of Development Studies at Sussex University and now occupies a place on the governing boards of several academic and non-governmental institutions in India.

He has written extensively on various aspects of agricultural development and policies, and has been honoured by the academic community of India and abroad for his contributions. Professor Vyas delivered the Elmhirst Lecture at the Tokyo Conference of the IAAE in 1991.

APPENDIX: PROGRAMME INFORMATION*

Sunday, 10 August 1997

13:00–13.45 Opening, Convention Center (Chairperson: Csaba Csaki, Past President IAAE)

Welcome to the 23rd Conference of IAAE

Nicole Ballenger, Chair, US Organizing Committee, Walter J. Armbruster, President of AAEA

Introduction to the Programme and Conference Theme

Joachim von Braun, Vice President Programme, IAAE

Opening Address

Richard Rominger, Deputy Secretary, US Department of Agriculture

13:45–14:30 Presidential Address, Convention Center

Robert Thompson, President IAAE

14:30–15:30 Elmhirst Lecture, Convention Center: ‘The Dynamics of Agriculture’

Yair Mundlak, The Hebrew University of Jerusalem, Israel, University of Chicago, USA

15:30–16:00 Break

16:00–18:30 Panel Session 1 (5 concurrent)

19:30–21:30 Reception, Regency Ball Room

Monday, 11 August 1997

8:30–10:30 Plenary Session 1, Regency ABC: ‘Security and Demand Challenges: Global Level and National Policy Issues, Household Consumption Improvement’

Chairperson: Ruvimbo Chimedza, University of Zimbabwe

Rapporteur: Kizito Langha, Rural Development Resource Centre, Cameroon

Food Security: A Global Perspective

Per Pinstrup-Andersen, Rajul Pandya-Lorch, IFPRI

Discussion opener: Eugenia Muchnik de Rubinstein, CEPAL, Chile

National Food Security: a Policy Perspective for India

C.H. Hanumantha Rao, University of Hyderabad, R. Radhakrishna, Indian Council of Science Research, India

Discussion opener: Anthony Ikpi, University of Ibadan, Nigeria

*Papers below marked (P) appear in this volume; those marked (S) appear in a special issue of *Agricultural Economics*.

Food Security and the Household

Ben Senauer, Terry Roe, University of Minnesota, USA

Discussion opener: Luciano Venturini, Università Cattolica Piacenza, Italy

10:30–11:00 Break

11:00–12:30 Poster/Computer Presentation 1

12:30–14:00 Lunch and visit to posters at leisure

14:00–15:30 Contributed Paper Session 1 (5 concurrent)

CPS 1-1: Emerging Supply Shifts in World Agriculture Markets

Chairperson: Nicole Ballenger, USA

- (1) Prospects for China's grain security in the new millennium
Liming Wang (UK) and John Davis (UK)
- (2) Declining agricultural productivity in developing countries? (S)
Lilyan E. Fulginiti (USA) and Richard K. Perrin (USA)
- (3) The impact of agricultural productivity increases in the Former Soviet Union and Eastern Europe on world agriculture markets
Silvia Weyerbrock (USA)

Discussion opener: Kelley White, USA

CPS 1-2: Price Stabilization Policies for Food Markets

Chairperson: Shoichi Ito, Japan

- (1) The optimal quantity of official rice purchase in Taiwan under trade liberalization
Rhung-Jieh Woo (Taiwan) and Yih-Bey Lin (Taiwan)
- (2) A study of optimal rice policy changes in Taiwan
Chin-Cheng Chang (Taiwan) and Shih-Hsun Hsu (Taiwan)
- (3) Storage–trade interactions under production uncertainty: implications for food security
Shiva S. Makki (World Bank), Luther G. Tweeten (USA) and Mario J. Miranda (USA)

Discussion opener: Stan Thompson, USA

CPS 1-3: Food Demand Analysis

Chairperson: Michio Kanai, Japan

- (1) Changing food demand under transition in Slovenia
Emil Erjavec (Slovenia), George Mergos (Greece), Leonard Mizzi (Belgium) and Jernej Turk (Slovenia)
- (2) Will European diets be similar? A cointegration approach (P)
A. Gracia (Spain), A.M. Angulo (Spain), and José M. Gil (Spain)
- (3) Analysis of domestic food demand in Costa Rica
Hans G.P. Jansen (Costa Rica), Jorgen M. Geurts (Netherlands) and Aad van Tilburg (Netherlands)

Discussion opener: Ben Senauer, USA

CPS 1-4: Targeting Food Assistance for the Poor

Chairperson: Sisay Asefa, Senegal

- (1) Determinants of diversification of urban Sahel diets into maize: a contingent valuation study of processed maize demand in Mali (P)
Duncan Boughton (UK), Thomas Reardon (USA) and Jeffrey Wooldridge (USA)
- (2) Can targeting work in food security programmes? A study of consumer behaviour and the fair price shop system for food in India
Vasant P. Gandhi (India) and Abraham Koshy (India)
- (3) Estimating the demand for calories in India
P.J. Dawson (UK) and Richard Tiffin (UK)

Discussion opener: Per Pinstrup-Anderson, IFPRI

CPS 1-5: Socioeconomic Issues at the Household Level

Chairperson: Patrick Webb, Germany

- (1) Intra-household resource allocation in Ghana: the impact of the distribution of asset ownership within the household (P)
Cheryl R. Doss (USA)
- (2) Welfare impacts of technological change on women in Mali (S)
Nina Lilja (Côte d'Ivoire) and John H. Sanders (USA)
- (3) Some socioeconomic and health problems of urinary schistosomiasis in Benin State, Nigeria
J. Chinedu Umeh (Nigeria), O. Amali (Nigeria) and E.U. Umeh (Nigeria)

Discussion opener: Agnes Quimsumung, IFPRI

15:30–16:00 Break

16:00–17:30 Contributed Paper Session 2 (5 concurrent)

CPS 2-1: Public Policy and Agricultural Growth in Developing Countries

Chairperson: Kirit S. Parikh, India

- (1) External adjustment, production subsidies and agricultural growth in Brazil (P)
Joaquim Bento de Souza Ferreira Filho (Brazil)
- (2) Assessing impact of government policies on rural development: an explorative study for Bangladesh
Abdul Bayes (Bangladesh) and Mahabub Hossain (Bangladesh)
- (3) Planning, investments and exports in Malaysia's economic development
Thamir Saleh (USA) and Dale Colyer (USA)

Discussion opener: Michel Griffon, France

CPS 2-2: Policy Issues in Transition Economies

Chairperson: Natalija Kazlauskienė, Lithuania

- (1) Official and effective liberalization in the Former Soviet Union: the example of Ukrainian agriculture
Stephan von Cramon-Taubadel (Germany) and Ulrich Koester (Germany)
- (2) Consolidation of the Russian budget: a general equilibrium analysis
Peter Wehrheim (Germany) and Manfred Wiebelt (Germany)

- (3) Economic assessments of the social costs of food security of the economies in transition: the case of Bulgaria and Romania
Nedka Ivanova (Bulgaria)

Discussion opener: Csaba Forgacs, Hungary

CPS 2-3: Agricultural Issues in Transition Economies

Chairperson: Sergey V. Kiselev, Russia

- (1) The economics of agricultural decollectivization in Central and Eastern Europe (P)
Erik Mathijs (Belgium) and Johan F.M. Swinnen (Belgium)
- (2) The roads of agricultural decollectivization: the case of Eastern Europe
Volker Beckmann (Germany) and Konrad Hagedorn (Germany)
- (3) Competitiveness of agriculture and the food industry in Central and Eastern European Association countries (CEAs)
Monika Hartmann (Germany)

Discussion opener: Zhu Ling, China

CPS 2-4: New Directions in Agricultural Policy Analysis

Chairperson: Markus Hofreiter, Austria

- (1) Transfer efficiency of agricultural policies: a review
David S. Bullock (USA), Jukka Kola (Finland) and Klaus Salhofer (Vienna)
- (2) Sunk costs and resource mobility: implications for economic and policy analysis (P)
Bradford L. Barham (USA) and Jean-Paul Chavas (USA)
- (3) Economic development, rurality and minority cultures
T.N. Jenkins (UK) and G.O. Hughes (UK)

Discussion opener: Bruce Gardner, USA

CPS 2-5: Domestic and International Agricultural Pricing Issues

Chairperson: Lio da Rocha, Brazil

- (1) Lessons from the coffee market on political economy in developing countries
Mary Bohman (USA) and Lovell Jarvis (USA)
- (2) Does China discriminate among origins in the pricing of its wheat imports? (P)
Kevin Z. Chen (Canada), Jianguo Hui (USA) and Peter Chen (Canada)
- (3) The effects of food aid on maize prices in Mozambique (P)
Cynthia Donovan (Senegal), Robert Myers (USA), David Tschirley (USA) and Michael Weber (USA)

Discussion opener: David Harvey, UK

17:30–19:00 Discussion Groups/Mini-symposia 1 (27 concurrent)

18:30–20:00 IAAE Council Meeting

20:00–22:00 CWAE Reception

Tuesday, 12 August 1997

8:30–10:30 Plenary Session 2: ‘Agricultural Diversification and New Technology’

Chairperson: Alain de Janvry, University of California-Berkeley, USA

Rapporteur: Akinwumi A. Adesina, IITA, Cameroon

Diversification and International Trade

Alex McCalla and Alberto Valdés, World Bank

Discussion opener: Hassan Sergini, University of Hassan II, Morocco

Rural Economy and Farm Income Diversification in Developing Countries

Chris Delgado, IFPRI and Ammar Siamwalla, Thailand Development Research Institute

Discussion opener: Michael Carter and Bradford Barham, University of Wisconsin, USA

Agricultural Biotechnology: Economic and International Perspectives

David Zilberman and Cherisa Yarkin, University of California-Berkeley, USA,

Amir Heiman, Hebrew University of Jerusalem, Rehovot, Israel

Discussion opener: Rafael Posada, CIAT

10:30–11:00 Break

11:00–12:30 Poster/Computer Presentation 2

12:30–14:00 Lunch and visit to posters at leisure

14:00–15:30 Contributed Paper Session 3 (5 concurrent)

CPS 3-1: Agricultural Marketing

Chairperson: Cornelis J. van der Meer, The Netherlands

(1) Food quality, reputation and price: the case of wine

Silke Gabbert (Germany), Günter Schamel (Germany) and Harald von Witzke (Germany)

(2) Trade, labels and consumer information: the case of hormone-treated beef

Jean-Christophe Bureau (France), Stephan Marette (France) and Alessandra Schiavina (France)

(3) The competitive position of farmers’ food processing cooperatives: the German case

C.-Hennig Hanf (Germany)

Discussion opener: Roley Piggott, Australia

CPS 3-2: Spatial Issues in Food Marketing and Processing

Chairperson: Margherita Chang Ting Fa, Italy

(1) Development of an optimizing system with fully-connected neural networks for marketing of vegetables

Yasushi Sembokuya (Japan), Daisuke Takeshima (Japan), Yoshinori Fujii (Japan) and Kozo Kasahara (Japan)

- (2) Spatial food market integration in Russia (P)
Jens-Peter Loy (Germany) and Peter Wehrheim (Germany)
 - (3) The location of foreign direct investments in the food industry: empirical evidence for developed countries
Margherita Scoppola (Italy)
- Discussion opener: Johan van Zyl, South Africa

CPS 3-3: Off-farm Employment

Chairperson: Consuelo Varela-Ortega, Spain

- (1) Off-farm work participation of Dutch arable family farms: implication for the 1992 CAP
Tassew Woldehanna (Ethiopia), Alfons Oude Lansink (The Netherlands) and Jack Peerlings (The Netherlands)
- (2) Determinants of time spent in non-farm employment by farmers in Northern Ghana (P)
Awudu Abdulai (IFPRI) and Christopher L. Delgado (IFPRI)
- (3) Rural financial institution building and gender-sensitive demand analysis in a food-insecure environment: the case of Cameroon
Gertrud Schrieder (Germany)

Discussion opener: Tom Reardon, USA

CPS 3-4: Rural Credit

Chairperson: Franz Heidhues, Germany

- (1) Choices by poor households when the interest rate for deposits differs from the interest rate for loans (P)
Mark Schreiner (USA), Douglas H. Graham (USA) and Mario Miranda (USA)
- (2) The impact of credit constraints on smallholder dairy farms in Ethiopia and Kenya (S)
H. Ade Freeman (Ethiopia), Simeon K. Ehui (ILRI) and Mohammad A. Jabbar (Ethiopia)
- (3) Factors affecting rural medium-term loan repayment: evidence from a South African development finance institution (P)
M.E. Kuhn (South Africa) and M.A.G. Darroch (South Africa)

Discussion opener: Geetha Negarajan, India

CPS 3-5: Farm Size, Efficiency and Employment

Chairperson: Francis Idachaba, Nigeria

- (1) Farm size, productivity and returns to scale in agriculture revisited: a case study of wine producers in South Africa (S)
Robert Townsend (South Africa), Johann Kirsten (South Africa) and Nick Vink (South Africa)
- (2) Size efficiency of sugarcane farms in KwaZulu-Natal
S. Mbowa (South Africa) and W.L. Neuwoudt (South Africa)
- (3) Small-scale deciduous fruit farms for historically disadvantaged South Africans: prospects, issues and implications
Michael J. De Klerk (South Africa)

Discussion opener: Ken Thompson, UK

15:30–16:00 Break

16:00–17:30 Contributed Paper Session 4 (5 concurrent)

CPS 4-1: Trade and the Environment

Chairperson: Gordon Rausser, USA

- (1) Have structural adjustment programmes compromised efforts to sustainably intensify African agricultural production? Empirical evidence from Senegal
Valerie Kelly (USA), Thomas Reardon (USA), Bocar Diagana (Senegal), Matar Gaye (Senegal) and Maniivel Sene (Senegal)
- (2) Growth, trade, pollution and natural-resource use in Chile: evidence from an economy-wide model (S)
Dominique van der Mensbrugge (France), David Roland-Holst (USA), Sebastien Dessus (France) and John Beghin (Belgium)
- (3) Environmental regulation and trade: exploring the time dimension
Ki-Ju Han (Korea) and John B. Braden (Korea)

Discussion opener: Don MacLaren, Australia

CPS 4-2: Land Tenure and Security

Chairperson: Peter Rieder, Switzerland

- (1) Rights to land and farmer investment incentives in China (S)
Guo Li (USA), Scott Rozelle (USA) and Loren Brandt (USA)
- (2) Tenure security and productivity in small scale agriculture in Zimbabwe: implications for South Africa
G.M. Moore (South Africa) and W.L. Neiuwoudt (South Africa)
- (3) A game theoretical model of land contract choice
Americo M.S. Carvalho Mendes (Portugal)

Discussion opener: Klaus Deininger, World Bank

CPS 4-3: Induced Innovation and Nature Resource Management

Chairperson: Hans Binswanger, World Bank

- (1) Population pressure, technological change and agricultural growth in sub-Saharan Africa: the farming systems evolution approach, evidence and issues
Kizito Langha (Cameroon)
- (2) Population growth, agricultural intensification, induced innovation and natural resource sustainability: an application of neoclassical growth theory (S)
John L. Pender (IFPRI)
- (3) Induced innovation in natural resource management: example from a community case study in the Honduras hillsides
Sara J. Scherr (IFPRI), Gilles Bergeron (IFPRI), John Pender (IFPRI) and Bruno Barbier (IFPRI)

Discussion opener: Simeon Ehui, ILRI

CPS 4-4: Agricultural and Greenhouse Gas Emissions

Chairperson: Rafael Posada, CIAT

- (1) Food security and environmental sustainability: an economic evaluation of CO₂ mitigation strategies
R.P.S. Malik (India)
 - (2) Farming systems models on the reduction of greenhouse gas emissions in crop and dairy farms
Jürgen Zeddies (Germany) and Konrad Lothe (Germany)
 - (3) Economies of tropical forest land use and global warming
Paula Horne (Finland)
- Discussion opener: Pierre Crosson, USA

PS 4-5: Trees and Agriculture

Chairperson: Scott Rozelle, USA

- (1) Agricultural development with rainforest conservation: methods for seeking best bet alternatives to slash-and-burn, with applications to Brazil and Indonesia (S)
Thomas P. Tomich (ICRA), Meine van Noordwijk (ICRA), Stephen Vosti (IFPRI) and Julie Witcover (IFPRI)
- (2) Policy and competitiveness of agroforestry-based technologies for maize production in the western highland of Cameroon: an application of policy analysis matrix (S)
Akinwumi Adesina (IITA) and Ousmane N. Coulibaly (IITA)
- (3) Woodland clearing and forest policy: the Ethiopian case
Tassew Woldehanna, (Ethiopia), Erwin Bulte (The Netherlands) and Wim Heijman (The Netherlands)

Discussion opener: Steve Franzel, ICRAF

17:30–19:00 Discussion Groups/Mini-symposia 2 (27 concurrent)

20:00 Ad hoc meetings and reunions

Wednesday, 13 August 1997

08:30–10:00 Contributed Paper Session 5 (5 concurrent)

CPS 5-1: Water Management Policies

Chairperson: Mona Nour El Din, Syria

- (1) Water conveyance, spatial technology choice and rents
Ujjayant Chakravorty (USA) and Chieko Umetsu (USA)
- (2) Water pricing policies, public decision making and farmers' response: implications for water policy (S)
Consuelo Varela-Ortega (Spain), José M. Sumpsi (Spain), Alberto Garrido (Spain), Maria Blanco (Spain) and Eva Iglesias (Spain)

Discussion opener: Mark Rosegrant, IFPRI

CPS 5-2: Determinants of Adoption of Soil Conservation

Chairperson: Boubakar T. Thabet, Tunisia

- (1) A microeconomic analysis of adoption of soil conservation in the Philippine uplands
Ma. Lucila A. Lapar (IRRI) and Sushil Pandey (IRRI)

- (2) Determinants of farmers' indigenous soil and water conservation investments in semi-arid India (S)
John L. Pender (IFPRI) and John M. Kerr (IFPRI)
- (3) Poverty, market imperfections and time preferences: of relevance for environmental policy?
Stein T. Holden, (Norway), Bekele Shiferaw (Norway) and Mette Wik (Norway)

Discussion opener: Peter Matlon, UNDP

CPS 5-3: Household and Community Models of Soil Management Decisions

Chairperson: Antonio Cipiriano Pinheiro, Portugal

- (1) Induced innovation and land degradation: results from a bioeconomic model of a village in West Africa (S)
Bruno Barbier (IFPRI)
- (2) Technology, market policies and institutional reform for sustainable land use (S)
Arie Kuyenhoven (The Netherlands), Ruerd Ruben (The Netherlands) and Gideon Kruseman (The Netherlands)
- (3) Agricultural policy reform and smallholder soil fertility management
Steven Were Omamo (The Netherlands) and Gerdien Meijerink (The Netherlands)

Discussion opener: Ruud Huirne, The Netherlands

CPS 5-4: Pest Management

Chairperson: Jürgen Zeddies, Germany

- (1) Economic and environmental implications of pesticide use on vegetable production
Latha Nagarajan (India), Shiva S. Makki (World Bank) and M.S. Swaminathan (India)
- (2) Pesticide productivity, host-plant resistance and China's battle against insects and diseases (S)
David Widawsky (IRRI), Scott Rozelle (USA), Songqing Jin (China) and Jikun Huang (China)

Discussion opener: Mahabub Hossain, IRRI

CPS 5-5: Rangeland Management in the Sahel

Chairperson: Kwadwo Asenso-Okyere, Ghana

- (1) Economic analysis of mixed-species grazing and implications for sustainable livestock production in semi-arid West Africa
Timothy O. Williams (ILRI), Salvador Fernandez-Rivera (ILRI) and Pierre Hiernaux (ILRI)
- (2) Pasture taxes and agricultural intensification in Southern Mali (S)
Timothy J. Dalton (Côte d'Ivoire)

Discussion opener: Jock Anderson, World Bank

10:00–10:30 Break

10:30–12:30 Special Plenary Session US/California Agriculture

Organizer: Daniel A. Sumner, Director, Agricultural Issues Center, University of California

Chairperson: Frank H. Buck, Jr. Professor, Department of Agricultural and Resource Economics, University of California-Davis, USA

- (1) The US agricultural economy
Susan Offutt, Administrator, Economic Research Service, US Department of Agriculture, USA
- (2) A welcome from California agriculture
Ann Veneman, Secretary, California Department of Food and Agriculture, USA
- (3) A historical perspective on California agriculture
Alan Olmstead, Department of Economics, University of California-Davis, USA
- (4) A geographic survey of California agriculture
Warren Johnston, Professor Emeritus, Department of Agricultural and Resource Economics, University of California-Davis, USA
- (5) Marketing of fruits and vegetable crops in California
Roberta Cook, Cooperative Extension Specialist, Department of Agricultural and Resource Economics, University of California-Davis, USA
- (6) Resource and environmental issues in California agriculture
David Sunding, Cooperative Extension Specialist, Department of Agricultural and Resource Economics, University of California-Berkeley, USA
- (7) Government policy and California agriculture
Daniel A. Sumner, University of California, USA

12:30–13:00 Break

13:00 Load buses for tour (with box lunch on board)

17:00–19:00 Barbecue

Thursday, 14 August 1997

8:30–10:30 Plenary Session 3: 'Resource Management in Agriculture: Water and Land, Biodiversity, Agriculture and Climate'

Chairperson: Clem Tisdell, University of Queensland, Australia

Rapporteur: R.P.S. Malik, University of Delhi, India

Water and Land Resources and Global Food Supply

Mark Rosegrant, IFPRI, Claudia Ringler, IFPRI, Roberta Gerpacio, IFPRI

Discussion opener: Anthony H. Chisholm, La Trobe University, Australia

Impacts of Global Warming on Agriculture

Darwin Hall, California State University, USA

Discussion opener: Prabhu L. Pingali, IRRI

The Management of Genetic Resources for Agriculture: Ecology and Information, Externalities and Policies

Tim Swanson, Cambridge University, UK

Discussion opener: P.S. Ramakrishnan, Jawaharlal Nehru University, India

- 10:30–11:00 Break
- 11:00–12:30 Poster/Computer Presentation 3
- 12:30–14:00 Lunch and visit to posters at leisure
- 14:00–15:30 Panel Session 2 (5 concurrent)
- 17:30–19:00 Discussion Groups/Mini-symposia 3 (27 concurrent)
- 20:00 Ad hoc meetings and reunions

Friday 15 August 1997

08:30–10:30 Plenary Session 4: 'Economics of Policy and Institutional Change'
Chairperson: Michel Petit, World Bank

Rapporteur: Nedka Ivanova, Ministry of Agriculture, Bulgaria

Institutional and Organizational Forces Shaping the Agricultural Transformation Process: Experiences, Causes and Implications

P. Michael Schmitz, Cornelia Noeth, University of Giessen, Germany

Discussion opener: Ewa Rabinowicz, University of Uppsala, Sweden

Policy and Institutional Change for Agriculture in China: Production, Consumption and Trade Implications

Ke Bingsheng, China Agricultural University

Discussion opener: Mahabub Hossain, IRRI

Regionalism in World Food Markets: Implications for Trade and Welfare

Thomas Hertel, William Masters, Purdue University, USA, Mark Gehlhar, ERS/USDA, USA

Discussion opener: Alexander Sarris, University of Athens, Greece

10:30–11:00 Break

11:00–12:30 Contributed Paper Session 6 (5 concurrent)

CPS 6-1: Agricultural Effects of the North American Free Trade Agreement

Chairperson: Mauro De Rezende Lopes, Brazil

(1) NAFTA in a changing policy environment

Mary E. Burfisher (USA), Daniel Plunkett (USA), Sherman Robinson (IFPRI) and Karen Thierfelder (USA)

(2) Impact of the Uruguay Round agreement and NAFTA on the Mexican economy

Erly Cardoso Teixeira (Brazil)

(3) Agricultural effects of a North American customs union: a game theoretic analysis

P. Lynn Kennedy (USA) and Karol W. Hughes (USA)

Discussion opener: Ruben Echeverria, IDB

*CPS 6-2: Agricultural Trade Issues**Chairperson:* Stefan Tangermann, Germany

- (1) The impacts of regional integration and unilateral reforms: the world rice market and expanded Mercosur trade
James M. Hansen (USA), Ralph Bierlen (USA), Eric J. Wailes (USA) and Gail L. Cramer (USA)
- (2) CAP response to the 1996 US Fair Act: a WTO negotiation perspective
Jean-Christophe Bureau (France), Alexandre Gohin (France), Hervé Guyomard (France) and Chantal Le Mouel (France)
- (3) Explaining stocks and export subsidies in agriculture (P)
Jesús Antón (Spain)

Discussion opener: John Slater, UK

*CPS 6-3: Trade Discrimination**Chairperson:* John McInerney, UK

- (1) The trade restrictiveness index and its potential contribution to agricultural policy analysis (P)
Luca Salvatici (Italy), Colin A. Carter (USA) and Daniel A. Summer (USA)
- (2) A first step in understanding technical barriers to agricultural trade (P)
Suzanne Thornsbury (USA), Donna Roberts (USA), Kate DeRemer (USA) and David Orden (USA)
- (3) Are income distribution effects the dominant explanation of trade protection in rich versus poor countries? The case of mobile factors
Colin A. Carter (USA) and Andrew J. Estrin (USA)

Discussion opener: Antonio Brandao, Brazil

*CPS 6-4: Impact of Trade Reform on Rural Households**Chairperson:* Manfred Wiebelt, Germany

- (1) Income effects of alternative trade policy adjustments on Philippine rural households: a general equilibrium analysis (P)
Romeo M. Bautista (IFPRI) and Marcelle Thomas (IFPRI)
- (2) Post-GATT agricultural trade liberalization and growth in developing countries: the case of the Philippines (P)
Alexander H. Sarris (Greece)
- (3) Evaluation of the impact of trade liberalization on food crop production and farm income in lowland Java, Indonesia (P)
F. Gérard (Indonesia), Erwidodo (Indonesia) and I. Marty (France)

Discussion opener: Hans Löfgren, IFPRI

*CPS 6-5: Applications of Cointegration Methods in Agricultural Economics**Chairperson:* Stefan von Cramon-Taubadel, Germany

- (1) Cointegration and causality in international agricultural economics research
Hector O. Zapata (USA) and J.M. Gil (Spain)
- (2) Wheat and barley market integration in the EU
José M. Gil (Spain), A. Angulo (Spain) and Hector O. Zapata (USA)

- (3) Testing the induced innovation hypothesis: an error correction model of South African agriculture (S)
Colin Thirtle (UK), Robert Townsend (South Africa) and Johann van Zyl (South Africa)

Discussion opener: Awudu Abdulai, Switzerland

12:30–14:00 Lunch, ad hoc meetings and reunions

14:00–15:30 Contributed Paper Session 7 (4 concurrent)

CPS 7-1: Determinants of Agricultural Exports

Chairperson: Hassan Sergini, Morocco

- (1) An econometric analysis of US broiler exports
Crispin Mutshipayi Kapombe (USA) and Dale Coly (USA)
- (2) A Bayesian analysis of trade in processed food products: an application to France
Nadine Herrard (France), Yves Le Roux (France) and Yves Surry (France)
- (3) US–Mexico fresh vegetable trade: policy intervention and technological change
Jaime E. Malaga (USA), Gary W. Williams (USA) and Stephen W. Fuller (USA)

Discussion opener: Ralph Lattimore, New Zealand

CPS 7-2: Agricultural Research Policy

Chairperson: Prabhu Pingali, CIMMYT

- (1) Organizational models for management of research and extension: the case of New Zealand
R.W.M. Johnson (New Zealand)
- (2) The rise and fall of public sector plant breeding in the United Kingdom: a recursive model of basic and applied research and diffusion (S)
Colin Thirtle (UK), P. Bottomley (UK), P. Palladino (UK) and D. Schimmelpfennig (USA)
- (3) An empirical study of the determinants of public research investment and commodity policies in agriculture
Johan F.M. Swinnen (Belgium), Harry De Gorter (USA) and Gordon C. Rausser (USA)

Discussion opener: Dina Deininger-Umali, World Bank

CPS 7-3: Impact of Agricultural Research

Chairperson: Charles Mataya, Malawi

- (1) The contribution of genetic resources and diversity: the case of wheat productivity in the Punjab of Pakistan
Jason Hartell (Belgium), Melinda Smale (CIMMYT), Paul Heisey (CIMMYT) and Ben Senauer (USA)
- (2) Agricultural research priority setting under multiple objectives: an example from Zimbabwe
Gladys Mutangadura (USA) and George W. Norton (USA)

- (3) The impact of agricultural research in Africa: aggregate and case study evidence (S)
William A. Masters (USA), Touba Bedingar (Mali) and James F. Oehmke (USA)

Discussion opener: Derek Byerlee, World Bank

CPS 7-4: Policies for Promoting Technology Adoption among Smallholders

Chairperson: Guenther Dresruesse, Germany

- (1) Getting technology and the technology environment right: lessons from maize development in Southern Africa
Julie A. Howard (USA), Lawrence Rubey (USA) and Eric W. Crawford (USA)
- (2) Market access by smallholder farmers in Malawi: implications for technology adoption, agricultural productivity and crop income (S)
Manfred Zeller (IFPRI), Aliou Diagne (IFPRI) and Charles Mataya (Malawi)
- (3) Technology and farm performance: paths of productive efficiencies over time
Kali Kalirajan (Australia) and Ric Shand (Australia)

Discussion opener: Truman Phillips, Canada

15:30–16:00 Break

16:00–18:30 Panel Session 3 (5 concurrent)

18:00–19:30 IAAE Council Meeting, Big Sur

19:30 Conference Dinner, Regency Ball Room

Saturday, 16 August 1997

8:30–10:00 Contributed Paper Session 8 (4 concurrent)

CPS 8-1: Agricultural and Economic Growth

Chairperson: Kohei Kobajashi, Japan

- (1) Agriculture and economic growth in a market economy: analysis of the French postwar experience
Xavier Irz (USA) and Terry Roe (USA)
- (2) The Asian path of agricultural development: patterns of development of structural input–output relationships
Cid L. Terosa (Philippines), Katshuhiko Demura (Japan) and Akio Ito (Japan)
- (3) The place of agriculture in the development of Poland and Hungary: lessons of a computable general equilibrium model with risk considerations (P)
Jean-Marc Boussard (France) and Ane Kathrine Christensen (Denmark)

Discussion opener: Alexander Sarris, Greece

CPS 8-2: Agricultural Sector Modelling Methods

Chairperson: Ralph Lattimore, New Zealand

- (1) The mixed-complementarity approach to specifying agricultural supply in computable general equilibrium models (P)
Hans Löfgren (IFPRI) and Sherman Robinson (IFPRI)
- (2) MATA Africa: a model to study the impacts of agricultural policies
D. Deybe (France) and P. Castella (France)
- (3) Reform of the CAP: empirical evidence for the new Länder of Germany
D. Kirschke (Germany), H. Lotze (Germany), S. Noleppa (Germany) and H. von Witzke (Germany)

Discussion opener: Jean Marc Boussard, France

CPS 8-3: Management with Imperfect Information

Chairperson: C.-Henning Hanf, Germany

- (1) Imperfect information in contracts between farm contractor and farm: interpretation by extensive-form game
Fumio Osanami (Japan), Xiu Zhenjie (Japan) and Takumi Kondo (Japan)
- (2) Hazard and the household microenterprise: evidence from Guyana, South America
Edward W. Bresnayan (USA)
- (3) Putting economics into dairy farm management: a Scottish experience
David D. Mainland (UK)

Discussion opener: Michael Murphy, UK

CPS 8-4: Estimation Methods

Chairperson: Gunter Fisher, The Netherlands

- (1) Amending profit function models with farm structure information
H. Peter Witzke (Germany)
- (2) A two-constraint AIDS model of recreation demand and the value of leisure time
Douglas M. Larson (USA), Sabina L. Shaikh (USA) and John B. Loomis (USA)
- (3) Environmental degradation and mortality increase. Estimation of the value of a statistical life in developing economies
Brad J. Bowland (USA) and John C. Beghin (USA)

Discussion opener: Gunter Fisher, The Netherlands

10:00–10:30 Break

10:30–12:00 Conference Synthesis

Chairperson: Douglas Hedley, President Elect, Canada

Statements of Panellists

Food Security and Demand Challenges

Ruvimbo Chimedza, University of Zimbabwe, Harare

Agricultural Diversification and New Technology

Alain de Janvry, University of California-Berkeley, USA

Resource Management in Agriculture

Clem Tisdell, University of Queensland, Australia

Economics of Policy and Institutional Change

Michel Petit, World Bank

Conference Synthesis: Douglas Hedley, President-Elect, IAAE

12:00 Adjourn and Departure

13:00 Post-conference tours departure