 IPC Conference Report  
 November 2007

Sustainability in the Food & Agricultural Sector:  
The Role of the Private Sector and Government

Proceedings from the 40th IPC Seminar, October 15-16, 2007
Stratford-upon-Avon, United Kingdom

This seminar was made possible with support from ASDA, The Grain and Feed Trade Association, Monsanto Company, Unilever & the United Nations Foundation
IPC finds practical solutions that support the more open and equitable trade of food & agricultural products to meet the world’s growing needs.

The conference report and presentations can be accessed at: http://www.agritrade.org/events/sustainability_agriculture.html
Sustainability in the Food & Agricultural Sector: The Role of the Private Sector and Government

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Sustainability in the Food & Agricultural Sector
The Role of the Private Sector and Government

Stratford-Upon-Avon, England
Menzies Welcombe Hotel
October 15-16, 2007

IPC’s fall 2007 seminar will bring together international food and agricultural trade experts, environmental experts, farm leaders, government officials, agribusiness and food retail executives to examine a range of pressing issues confronting the agricultural sector and food security. The seminar will focus on the role of the private sector and governments in addressing these challenges.

Agriculture requires water and healthy soil, both of which are threatened by inefficient practices, population growth, and changing food preferences. The agricultural sector is no longer providing only food, feed and fiber but increasingly also fuel. Rising temperatures and climate variability present additional challenges. While there is consensus that the aim of sustainability is to meet the needs of the present while also ensuring that future generations will have sufficient resources, less consensus exists on how to achieve it. How can we find a balanced approach that encompasses both conservation efforts and technological innovation, since both are crucial for sustainable production?

Consumers, producers and retailers of food products and biofuels are keen to promote environmental sustainability, yet this means many things to different people. It is important to examine initiatives underway and determine what really makes sense at different stages of the supply chain. Governments are also active to promote sustainability and food security, yet their agricultural support and trade policies are not always in sync with their environmental and development policies. How can environmental sustainability practices best be incentivized at the national and international level?

MONDAY, OCTOBER 15, 2007

8h00 REGISTRATION AND COFFEE

8h30-9h30 OPENING SESSION
· Mr. Piet Bukman, IPC Chairperson
· Lord Henry Plumb, IPC Chairperson Emeritus

KEYNOTE ADDRESS –“Farming Sustainably”
· Lord Jeff Rooker, Minister for Sustainable Food and Farming and Animal Health, DEFRA

9h30-11h00 PANEL I: CHALLENGES FACING THE FOOD AND AGRICULTURAL SECTOR
Moderator – Ms. Ann Tutwiler, Managing Director, William and Flora Hewlett Foundation; IPC member
· Dr. Robert Thompson, Gardner Chair in Agricultural Policy, University of Illinois; IPC member
· Dr. Jikun Huang, Director, Center for Chinese Agricultural Policy; IPC member
· Prof. Allan Buckwell, Chief Economist and Head of Land Use, Country Land and Business Association

11h00-11h15 COFFEE

11h15-13h15 PANEL II: BIOFUels
Moderator – Dr. Klaus Schumacher, Head of Economics Department, Toepfer International
· Dr. Jason Clay, Vice President, World Wildlife Fund
· Mr. Maruli Gultom, VP Commissioner, ASTRA International, Indonesia
· Mr. Willem-Jan Laan, European Director External Affairs, Unilever, IPC member
· Mr. Alfred Szwarc, Special Advisor to the President, UNICA, Sugar Cane Industry Union

13h15-14h30 LUNCH

SPECIAL SESSION
· Sir Don Curry, Chairman, Sustainable Food and Farming Strategy, DEFRA
14h30-17h00  PANEL III: CLIMATE CHANGE  
Moderator – Ms. Charlotte Hebebrand, Chief Executive, IPC  

· Dr. Martin Parry, Chair, Working Group II (Impacts) of the Intergovernmental Panel on Climate Change  
· Mr. Francois Falloux, Vice President, Ecocarbon  
· Ms. Mary Mehigan, Head of Corporate Affairs, ASDA  

19h00  KEYNOTE ADDRESS AND CONFERENCE DINNER – “The Role of Sustainability in Europe’s Common Agricultural Policy: Past, Present and Future”  
· Mr. Franz Fischler, former EU Agriculture Commissioner; IPC member  

TUESDAY, OCTOBER 16, 2007  
8h30-10h30  PANEL IV: BEST PRACTICES/ SUSTAINABILITY ALONG THE PRODUCTION CHAIN  
Moderator – Mr. Jon Ratcliff, President, Food and Agriculture Consultancy Services  

· Mr. Meurig Raymond, Deputy President, National Farmers’ Union  
· Mr. Moustapha Magumu, Administrator, International Questions, DG Health & Consumer Protection, European Commission  
· Mr. Jerry Steiner, Executive Vice President, Monsanto; IPC member  
· Mr. Hans Joehr, Corporate Head of Agriculture, Nestle; IPC member  

10h30-10h45  COFFEE  

10h45-13h00  PANEL V: GOVERNMENT POLICIES TO PROMOTE SUSTAINABILITY  
Moderator – Dr. Tim Josling, Senior Fellow and Professor Emeritus, Institute for International Studies, Stanford University; IPC member  

· Ms. Emma Reynolds, Government Affairs Manager, Tesco  
· Mr. John Bensted-Smith, Director, Economic Analyses & Evaluation, European Commission, DG Agriculture  
· Mr. Poul Christensen, Deputy Chairperson, Natural England  

13h00-14h30  LUNCH  

14h30-16h30  PANEL VI: SUSTAINABILITY AND TRADE  
Moderator – Mr. Ricardo Melendez-Ortiz, Executive Director, International Centre for Trade and Sustainable Development)  

· Dr. Harsha Vardhana Singh, Deputy Director General, WTO  
· Mr. Tiku Shah, Chairman, Fresh Producers’ Association Kenya  
· Mr. Malcolm Bailey, Dairy Farmer and Member of the Board, Fonterra Cooperative Group Ltd.; IPC member  

16h30-17h30  CONCLUSIONS  
Moderator – Mr. JB Penn, Chief Economist, John Deere & Company; IPC member  

· Dr. H.S. Dillon, Chair, Center for Agriculture Policy Studies; IPC member  
· Prof. Allan Buckwell, Chief Economist and Head of Land Use, Country Land and Business Association
Executive Summary

Demand for agricultural production is steadily increasing. In 40 years, the world will have 3 billion more mouths to feed, mostly in developing countries. At the same time, rising incomes will allow consumers in developing countries to eat more value-added food products. Additionally, fuel has joined food and feed as an agricultural output. These factors will combine to double world food demand by 2050.

Yet the push to increase agricultural production to meet this demand will run into environmental limits. Little arable land remains in which to expand production, and water resources will be strained by competition with rapidly growing cities. Increasing agricultural production risks deforestation and the cultivation of marginal lands, exacerbating soil erosion and carbon loss. Climate change will alter weather patterns and make droughts and floods more common, impacting harvest yields and predictability. And although they are promoted as greenhouse-gas neutral, biofuels derived from certain feedstocks, depending on their production process, may actually emit air pollutants while also taking land out of food production. Therefore, while farmers will have new opportunities from expanding markets, they must adopt practices that will address environmental concerns and constraints.

This is the conundrum IPC addressed in its 40th seminar, “Sustainability in the Food and Agricultural Sector: The Role of the Private Sector and Government.” Recognizing that agriculture and food security face a range of pressing challenges from increasing population growth to global warming, IPC convened experts from agribusiness, academia, food retail, environmental organizations, government, farming, and international trade to discuss how the private sector and governments can best address these sustainability challenges.

The key messages from the speakers and participants converged around four themes.

Research. In order to meet the food, feed, and fuel demands of a growing world without straining the environment, more investment in research and development is needed. Productivity increases resulting from agricultural research have continually proved Malthus’ Principle of Population wrong and allowed supply to outstrip demand. With fewer land and water resources available and with changing climates, investing in research is more critical than ever to meet the demand of the future without harming the environment.

Trade Liberalization. The world’s arable land is not geographically distributed in line with projected population growth. Trade in agricultural products will ensure that regions with growing populations have adequate food supplies. Furthermore, liberalized trade contributes to sustainability in agriculture by supporting the production of agricultural goods in the most appropriate places. The removal of trade barriers allows the most efficient resource users to utilize their comparative advantage in the marketplace. Contrary to the philosophy that locally sourcing food equals a smaller carbon footprint, trade facilitates agricultural production in places where it has the least environmental impact.

Standards. With the outbreak of food safety scares and with resources becoming scarcer, consumers from developed countries are increasingly demanding strict standards for agricultural products. This has led to two visible trends: independent labeling on food safety and environmental issues by the private sector and the development of sustainability standards for biofuels. In both cases, definitions are vague and the benefits to consumers have to be quantified. Moreover, standards run the risk of decreasing trade by keeping out imports from developing countries that cannot meet divergent standards set by different companies. Labels advertising low carbon footprints simply because a product is locally produced may not represent a true mea-
sure of carbon inputs. Criteria for sustainability in biofuels are similarly ambiguous. Should the environmental impact be determined by the greenhouse gas emission of the fuel when burned, or should it be based on a life cycle-analysis, going as far back as the inputs used to grow the feedstock? Conference participants agreed that finding international consensus around these issues would be challenging, but that internationally agreed and harmonized standards are vital to ensuring efficiency in agricultural production and trade.

What is Sustainability? Sustainability is an amorphous and often contentious term. What exactly is meant by this word? Does it apply only to the environment or to economic and social conditions as well? While conference participants had diverse opinions on this subject, it was generally agreed that sustainability referred to actions and practices that address the needs of present generations in a manner that ensures that the needs of future generations can also be met. The inseparableness of economic sustainability with environmental or social standards was also emphasized. Several participants stressed that it is difficult for farmers and businesses to be ‘green’ if their operations are not profitable. Through incentives and regulations, governments have a role here to play in making sustainability affordable. However, given the extensive debate surrounding biofuel sustainability criteria and food retail practices, what constitutes sustainable practices in food and agriculture will be an on-going, spirited discussion. Several speakers emphasized that agricultural practices, by definition, will always have impacts on the environment and that it was unrealistic to think that these could be eliminated, whereas they certainly can be reduced.

In light of these themes, the speakers and participants had several recommendations for the private sector and governments. Governments must incentivize environmental practices in farming and work harder to facilitate trade through the WTO. In the same vein, governments should ensure that their standards are clear and harmonized with other trading partners to reduce the number of divergent requirements developing countries have to meet. This applies to biofuels, where criteria should not serve to protect domestic agricultural production. Governments also should encourage the transfer of technology from farmers in developed countries to those in developing countries.

As for the private sector, it needs to ensure that any standard it introduces actually helps the environment, rather than existing purely for marketing value. And with the increasing demand for food, consumers would benefit from investment in research by both the private and public sectors.

To help carry out these recommendations, IPC will continue to communicate that trade facilitates, rather than inhibits, environmental sustainability. Sustainability raises many questions related to diverse parts of the food supply chain, but the interconnection of these different issues is often lost. IPC will bring together the disaggregated elements of trade, production, and sustainability to show that efficient and economically viable agricultural production also equals a sustainable environment.
Opening Session

Along with the discussion of the intersection of trade and sustainability, IPC also celebrated its twentieth anniversary at this seminar. Therefore, after IPC Chairman Piet Bukman welcomed the conference participants, he introduced Lord Henry Plumb, IPC’s founding chairman. Lord Plumb recalled the origins of IPC as a diverse group of trade experts concerned with the treatment of agriculture in multilateral trade negotiations. For the past twenty years, IPC has communicated to policymakers and stakeholders pragmatic trade and development policies in food and agriculture in order to meet the world’s growing needs.

Following these recollections, Lord Plumb introduced the seminar’s keynote speaker, Lord Jeff Rooker. Lord Rooker is the Minister for Sustainable Food and Farming and Animal Health within the Department for Environment, Food, and Rural Affairs (DEFRA) in the UK. The primary theme to his address was the need for governments to create policies that encourage environmentally friendly practices in agriculture. It is the job of government, he said, to form a structure in which agriculture can function. Government can introduce frameworks and incentives that facilitate sustainable farming. Such frameworks, however, should not include production-linked subsidies, as these payments promote the production of particular crops, regardless of their environment costs.

Governments can also aid farmers by connecting them with market opportunities. Lord Rooker pointed out that the UK government has done this by assisting farmers with organic production to meet consumer demand. He predicted new opportunities will emerge for European farmers due to changing market trading patterns from increased biofuels production and greater demand for food from developing countries.

To take advantage of these opportunities, trade is necessary. Trade can also play a part in the government’s framework to promote sustainability. Lord Rooker used the UK as an example of the role of trade in sustainability – the UK cannot achieve food independence. It must import food, partly due to the size of its economy and also to meet consumer demand for year-round produce. Trying to meet consumer demand for products inappropriate to the UK climate through domestic production might provide food security, but it would be at the expense of sustainable agricultural practices.

Lastly, Lord Rooker noted that climate change will affect all who work, use, and own land. The government has a role in promoting sustainable management of the countryside so that all parties may continue to enjoy it.
Panel I – Challenges Facing the Food and Agricultural Sector

Ann Tutwiler, an IPC member and Managing Director of Trade and Development for the Hewlett Foundation, moderated the first panel. Before turning to the presenters, she noted that sustainability in agriculture is tied to a number of pressing issues – climate change, the environment, energy use, trade liberalization, and economic development, to name a few. The first panel’s speakers – Dr. Robert L. Thompson, an IPC member and Gardner Endowed Chair in Agricultural Policy at the University of Illinois, Urbana-Champaign; Dr. Jikun Huang, an IPC member and Director of the Center for Chinese Agricultural Policy; and Professor Allan Buckwell, Chief Economist and Head of Land Use for the Country Land and Business Association – elucidated on the connection between these issues and agriculture.

The panelists resoundingly agreed on the largest challenge facing agriculture in the future: the need to produce more food with fewer resources and with less intensive practices. By 2050, the world population is projected to reach 9.1 billion. Combined with more consumption in developing countries with rising incomes, farmers will have to increase production in order to meet the higher demand. Yet this will place unsustainable pressures on land, water, and forestry resources. To meet these challenges, trade and research will be essential.

Dr. Thompson explained that consumers who live on between $2 and $10 a day eat more meat and dairy products, fruits and vegetables and edible oils than people living on $2 a day or less. Currently there are 3 billion people living on less than $2 a day. Almost half of these people live in China and India. As these and other developing economies grow, food consumption will increase. Dr. Huang pointed out that this phenomenon can already be seen in China, where meat production and consumption have significantly increased over the last fifteen years. Under these circumstances, world food demand could double by 2050, with most of the growth occurring in developing countries.

Meeting this new demand will be complicated by a scarcity of resources and pressure on the environment. As Dr. Thompson noted, very little untilled arable land exists. The area of land in farm production could be doubled, but only with massive destruction of forests and extreme damage to wildlife habitat and biodiversity. Furthermore, water availability will also be scarce. The increase in population will probably accelerate the current trend of urbanization. Cities are likely to outbid agriculture for water. Therefore, farmers will have to double food production by 2050 without additional land and with less water.

Furthermore, agricultural production will have to meet these needs while sustaining as well as adapting to the environment. As Professor Buckwell discussed, climate change is intensifying food production challenges. With the increasing variability of rainfall, climate change is contributing to floods and droughts, which severely impact agricultural production. These types of environmental swings increase volatility in yields.
Finally, on top of all these pending challenges, the production of biofuel from agricultural feedstocks is growing. Dr. Huang noted that governments are interested in biofuels because they supply energy security, reduce greenhouse gas emissions, and support farming by expanding agricultural output markets. However, he noted that, while these arguments may be valid, much of the shift into biofuels has taken place without a careful understanding of the social, economic, and environment implications of this change in production. Even with significant investment in the sector, biofuels are only projected to be 4 percent of road transport fuel in 2030. He believes that while the price increase caused by the greater demand for raw commodities presents tremendous opportunities for farmers, market signals to increase production could have major implications for land and water use, especially in developing countries.

The panelists put forward several suggestions for addressing these challenges. With regards to the use of crops as fuel, Professor Buckwell recommended that policymakers focus on energy efficiency and conservation before turning to energy substitution through renewable energy. He also called for more incentives for investing in carbon sequestration. Specifically for the European context, policymakers should pursue a “European Food and Environmental Security Policy” that “incentivizes private sector rural resource managers to produce socially optimal quantities of high quality food and fiber, renewable energy, biodiversity, landscape, heritage, and soil, water, and air management.” To address food security, policies would need to be aimed at improving productivity and competitiveness, stimulating private and public research and development investments, integrating farming with environmentally friendly practices, raising product quality, and ensur-
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Adding the environmental security component to the policy would ensure that these food security goals are met without degrading the environment. Therefore, stress would also be placed on policies that protect biodiversity, present the landscape, maintain water quantity and quality, and manage carbon in soils and forests. Achieving these objectives requires meaningful cooperation among EU member states, including its prioritization and the provision of funds through the Common Agricultural Policy budget.

Dr. Thompson emphasized the need for trade and greater investment in research and development. The world’s arable land and fresh water are not distributed in the same manner as the world’s current population or where population growth is projected to occur. Asia and the Middle East will have to import food, and population growth, urbanization, and economic development will cause many least developed countries to outstrip their production capacity in the future. However, trade alone will not be able to address the demand for food owing to population and income growth. Because more food will need to be produced with less water and little more land than is in production today, research and development to increase food production will be critical to having enough food at affordable prices for the world’s population in 2050.

Dr. Huang echoed this point about technology. More investment in technology, specifically biotechnology, will be essential not only for increasing the availability of food, but also for increasing market returns to farmers in developing countries. Economic analysis shows that farmers in China who have planted biotechnology crops have increased their income. This result and the rising prices of crops due to higher demand represent opportunities for farmers. However, the future will see more competition between food, feed, and fuel and changing trade patterns due to market liberalization and investment in biofuels.

When questioned as to whether such faith could be put in technology, Dr. Thompson averred that research and development can raise the productivity of whatever input is in short supply. While land expansion, such as in North America, New Zealand, and Australia, has contributed to increased supply in the past, the major gains in productivity have been from mechanization and yield enhancements. However, he acknowledged that while this might address food supply problems, it will not in and of itself deal with issues of rural poverty. Reductions in rural poverty come not just from productivity increases, but also from diversification into other crops, the expansion of land, the engagement of part-time employment off the farm, and outmigration from rural areas. He pointed to China as an example of a developing country that is pursuing these other strategies and noted that governments in developing countries will have to look beyond agricultural productivity if they are to alleviate rural poverty.

Impact of Bt cotton in China

<table>
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<tr>
<th>Benefit</th>
<th>% Change</th>
<th>Value (yuan)</th>
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<tr>
<td>Increase yield</td>
<td>9.6%</td>
<td>930</td>
</tr>
<tr>
<td>Reduce pesticide use</td>
<td>60%</td>
<td>923</td>
</tr>
<tr>
<td>Reduce labor input</td>
<td>7%</td>
<td>574</td>
</tr>
<tr>
<td>Increase seed cost</td>
<td></td>
<td>570</td>
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<tr>
<td>Increase net income</td>
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Source: Huang et al., Science, 29 Jan 2002: 674-677
Panel II – Biofuels

While discussed at times in the first panel, the second panel focused on biofuels exclusively. The diverse opinions of the panelists encapsulated the on-going debate about the economic, environmental, and social aspects of biofuels.

Dr. Klaus Schumacher, Head of the Economics Department at Toepfer International, set the stage for the discussion by providing an overview of commodity price trends, world commodity stocks, and biofuels policies in several large markets. He noted that while energy has had a major impact on agricultural markets, first-generation biofuels will have a small impact on energy markets. He highlighted a recent IPC publication, An Examination of U.S. and EU Government Support for Biofuels: Early Lessons, for its discussion of the effects biofuel policies in developed countries can have on developing countries.

![Graph of Wheat and Corn Prices, in US$/t](image)

World: Grain Use for Ethanol Production, in mln tons

- Others
- EU
- Brazil
- USA

Source: USDA, ARS.

World Biodiesel Production Estimate

Source: F.O. Licht

The panelists alternated between caution and optimism for biofuels. Dr. Jason Clay, Vice President for the Center for Conservation Innovation at the World Wildlife Fund, emphasized that agriculture already takes an enormous toll on the environment. Agriculture accounts for 70 percent of human water use, most of which is wasted. It contributes to erosion and loss of carbon in the soil. Agro-chemicals are also destructive to the environment and 25-40 percent of greenhouse gases that contribute to climate change result from agricultural practices. The increased demand for agricultural feedstocks due to biofuels will only aggravate these problems. Therefore, environmental standards need to be developed to ensure that biofuels are produced and processed sustainably. These standards should take into account the energy productivity of a given feedstock, the biofuel's energy efficiency compared to fossil fuels, its greenhouse gas production, and its impacts on soil. Policymakers will need to decide what is the appropriate unit for standards – suggestions included the farm, the processing plant, and the watershed or landscape level. Developing environmental standards will require consensus building among policymakers; ultimately, there should be a single meta-standard for all bioenergy, regardless of feedstock. In agreeing to a meta-standard, parties would have to decide which issues to include. Dr. Clay highlighted energy productivity, greenhouse gas production, energy efficiency of biofuels compared to petroleum, and impacts on soil as issues that could be included in a meta-standard. He stressed that whatever issues policymakers reach a consensus on, they must set standards that enforce measurable results, rather than prescribe best management practices.

Mr. Maruli Gultom focused on the beneficial aspects of biofuels. While biodiesel production from oil palm has been blamed for deforestation and related environmental problems in Indonesia, Mr. Gultom argued that palm plantations have actually been a minor contributor to deforestation and that biodiesel derived from palm oil can be produced sustainably. ASTRA International, where Mr. Gultom sits on the Board of Directors, strives to produce biodiesel in an environmentally friendly manner. The company protects environmentally sensitive land and tries to minimize its impact on wildlife. Mr. Gultom also spoke of the economic and social benefits created by biodiesel production. ASTRA International maintains quality working conditions for its employees and views biodiesel as an income-generating scheme for local farmers that has trickle-down effects into the community. Because of the economic success of palm oil, Mr. Gultom suggested that in order for Indonesia to cut back oil palm planting, alternative low-cost biodiesel feedstocks, like jatropha, would need to be promoted and assistance would need to be provided to increase oil palm yields. This will allow income generation to continue while decreasing oil palm’s environmental impact.

Mr. Willem-Jan Laan, however, noted the increasing pressure biofuels are putting on food prices. Biofuels are creating a competition for acreage between food, feed, and fuel. In the near-term, it does not appear that the development of second-generation biofuels will relieve this pressure. For the food industry, this results in higher cost for raw materials and an increasing dependence on bioenergy, rather than agricultural policy. Because of the tight supply of raw commodities due to competition for feedstocks and because of the potential negative environmental impacts of biofuels, Mr. Laan advocated that environmental standards for biofuels should include an account of what the land was used for before it produced biofuel feedstock. Land conversion can heavily influence the greenhouse gas effects of biofuels. If the land was rotated from one crop to another, the change in greenhouse gas emissions is insignificant. However, if untilled land or forest is converted into biofuel feedstock, the loss of carbon and the net greenhouse gas emissions are quite high. This type of conversion is also damaging to biodiversity. Mr. Laan suggested that biofuels that do not deliver a minimum savings of 50 percent less greenhouse gas should not be counted as sustainable. He also expressed concern that biofuels from food crops will make food too expensive for the poor. Overall, standards should be based on a “well-to-wheel” analysis that ensures environmental, social, and economic sustainability.
Mr. Alfred Szwarc, Special Advisor to the President of UNICA, the São Paulo Sugar Cane Agroindustry Union, pointed out the environmental benefits of biofuels. In Brazil, ethanol is produced from sugarcane, a semi-perennial plant. Much of the crop residue can be used to power the processing facilities and generate excess electricity. Sugarcane is not grown in the Amazon, and Brazil has available arable land in which to expand production. The conversion of sugarcane into ethanol produces much higher ethanol yields than sugar beet and corn, and Brazil has seen its production increase steadily since it launched its ethanol program in the late 1970s. Furthermore, the cost of converting Brazilian sugarcane into ethanol is much lower than is the case for sugar beet and corn. Mr. Szwarc asserted that Brazilian ethanol is much better for the environment than gasoline because it has lower carbon and nitrogen oxide emissions in addition to being renewable and biodegradable. He noted that UNICA is working with other stakeholders to create sustainability criteria that will address economic, environmental, and social issues. UNICA also supports the international trade of fuel ethanol, though it realizes that larger markets, harmonized standards, and reduced trade barriers are needed before this can become a reality.

Overall, the panelists agreed standards are needed. But the diversity of their opinions reveals that reaching an international consensus on standards for biofuels will be difficult. Where in the production chain should the criteria for standards begin and end? Should they include prior land use or a life cycle analysis? Should they look solely at the environment or also encompass social concerns? How is sustainability in biofuels determined, and who enforces it? Although standards are already in place or rapidly being developed, ideally these complex questions should all be answered before standards for biofuels are instituted.
Special Session

Sir Don Curry, Chairman of DEFRA's Sustainable Food and Farming Strategy, opened the afternoon session. He noted the tension that exists in England between environmentalists and farmers over the issue of set-aside land. Environmentalists are unhappy with the EU’s September decision to forego the set-aside program for the coming year. Under this program, European farmers are required to set aside 10 percent of their land in order to receive the Single Farm Payment. Yet farmers are eager to work this land, given the current high prices of commodities. The high commodity prices increase the value of the land; however, they also make it more difficult for the government to provide large enough payments to offer incentives for environmental practices.

Panel III – Climate Change

Ms. Charlotte Hebebrand, IPC’s CEO, moderated the panel on climate change. The panelists elaborated on the interaction between agriculture and climate change and the ways in which agricultural and food retail practices can mitigate climate change.

Dr. Martin Parry, Co-Chair of Working Group II at the International Panel on Climate Change, explained that climate change will significantly impact agricultural production. He noted that temperate zone regions may experience a temporary increase of agricultural yields. Wet areas will receive more rainfall, while dry areas will become increasingly arid. Without changes in current activities, water availability will decrease substantially in some areas by 2080. Changing weather patterns will also increase the unpredictability and intensity of pest and diseases outbreaks. The outcome will be greater uncertainty in harvests, which will cause food prices to rise. Obviously, the world’s poor will have the hardest time coping with these changes.


Given the level of pollutants already in the atmosphere, climate change is going to impact agriculture, even if mitigation procedures are put into place immediately. Agriculture will have to adapt to higher temperatures and changing rainfall patterns. Dr Parry indicated that the most effective mitigation measures need to occur with regard to industrial practices (especially coal), and that it is particularly important to ensure that India and China are integrated in emissions reductions efforts. However, agriculture can also help mitigate climate change by reducing its present greenhouse gas contribution from 15 percent to 10 percent of the global level.
Dr. Parry noted that, while mitigation, especially on the industrial side, is important, it is not nearly enough. Considerably more effort needs to go into adaptation, so that the challenges, such as increased coastal flooding, can be met. Valuable time has already been lost for research and development devoted to adapting to climate change.

Dr. François Falloux, Vice President of Eco-carbone, presented opportunities for agriculture that could help mitigate climate change, but that could also be profitable to farmers. He suggested that agriculture could be a significant contributor to carbon sequestration, especially if there were a functioning carbon market. With simplified methodologies for measuring and monitoring carbon, carbon markets could be boons for the environment and for farmers. This would require educating producers in both developed and developing countries about the best ways to sequester carbon. One strategy involves reduced tillage. By adopting no-till planting procedures, farmers can greatly reduce their greenhouse gas emissions. Dr. Falloux used the opportunity to emphasize that Europe should catch up with other regions that have been much more progressive adopting this practice. He also advocated reforestation efforts and campaigns against deforestation to prevent the loss of carbon in the soil.

At the other end of the production chain, Ms. Mary Megihan gave an overview of what the food retail industry is doing about climate change. ASDA, where Ms. Megihan is Head of Corporate Affairs, operates on the philosophy that sustainability is an economic, not a social issue. Therefore, it is approaching climate change and sustainability from two angles: from the point of view of the company and from the point of view of the customer. First, it wants to reduce the company’s impact on the environment. ASDA is doing this by lowering the emissions of its stores and transport vehicles and reducing the amount of waste it sends to landfills. As a large company, it recognizes that its actions have significant effects and that its choices can influence other companies. Second, it is working to make sustainability an affordable choice for its customers. It is participating with multi-stakeholder processes like the Roundtable on Sustainable Palm Oil and the Forestry Stewardship Council to ensure that it can supply its customers with sustainable products. It tries to be transparent about its approach to sustainability by working with governments and non-governmental organizations and by posting this information on the Internet.

While acknowledging that steps such as ASDA’s and recommendations like Dr. Falloux’s are worthwhile and need to be taken, Dr. Parry closed the session by reiterating that independent and uncoordinated mitigation steps will not be enough to combat climate change. International agreements to address industrial emissions are necessary to address the extent of the problem. He also urged again for increased global action on adaptation, so as to avoid independent and uncoordinated efforts in this realm.
Evening Session

The first day of the conference ended with a presentation by former EU Director General for Agriculture Franz Fischler. Mr. Fischler, who is an IPC member, gave the audience an overview of the role of sustainability in the EU’s Common Agricultural Policy (CAP). Sustainability is achieved by finding a balance among the market economy, social issues, and ecological concerns. In terms of the market economy, CAP reforms have made farmers more responsive to the market. However, to address market failures, it has introduced ‘green’ requirements, such as linking the Single Farm Payment to environmental and animal welfare provisions. To maintain balance in the countryside, it also provides support to young farmers, funding for rural infrastructure, and education and training programs.

In addition to reducing the environment impact of farming by de-linking production and payments, the CAP is also looking to agriculture to help with greenhouse gas emissions. Specifically, the EU has set bioenergy consumption goals of 5.75 percent by 2010 and 10 percent by 2020. While European agriculture can contribute to this, the EU does not have the land necessary to meet these goals sustainably with first-generation biofuels. The 10 percent goal will require second-generation fuels, and therefore, more investment in research. Standards also need to be developed to ensure sustainable production. However, above all, food production must remain the first priority.
Panel IV – Best Practices and Sustainability

Mr. Jon Ratcliff, President of Food and Agriculture Consultancy Services, introduced the fourth panel. He set the stage for the discussion by highlighting several pressing issues that currently confront agriculture, such as food safety, obesity, and biodiversity. This panel brought to light the tensions between addressing these issues sustainably while also maintaining the bottom line, whether the business concerned is a farmer, an input provider, or a food retail company. While all panelists agreed that sustainability is critical, they had different opinions on what it meant and how to reach it.

Mr. Moustapha Magumu of the EU’s Directorate-General for Health and Consumer Protection addressed the issue of whether or not developed countries’ sanitary and phytosanitary (SPS) standards represent non-tariff barriers to developing countries’ products. He acknowledged that EU food safety standards often present developing countries with a challenge. However, because the EU is a large single market and because of its experiences with a number of food safety scares in the last few years, it must enforce a comprehensive food safety regime that reaches from farm to table. Standards are set so that import conditions are no more or less favorable than conditions applicable to EU producers. Mr. Magumu stated that developing countries benefit from the EU’s standards because they improve the safety and quality of their production. They also promote sustainability and competitiveness in agriculture and food chains by requiring better management of key inputs. However, the standards increase production and compliance costs for the producers, and developing countries typically lack appropriate legislative frameworks and standards of their own to integrate with the EU requirements. They also often suffer from unreliable enforcement of standards. Therefore, the EU is working with developing countries to ensure that standards are not a barrier to trade. It is doing this through the Economic Partnership Agreements, SPS technical assistance programs, and food safety training.

Mr. Meurig Raymond, a British farmer and Deputy President of the National Farmers Union, emphasized that environmental sustainability is very difficult for farmers without economic sustainability. If farmers are to conduct environmental practices, they must either have government support for them or get a return from the market for them. To get a return from the market, they must have a way of selling sustainability. He identified the ‘Red Tractor’ label, which certifies that food has been produced to stringent standards, as one way British farmers are capturing market returns from environmental practices. Mr. Raymond emphasized that agriculture is a key part of the economy when the whole food chain is considered and that agriculture must have government support to ensure a safe and adequate food supply.

Food safety standards are also being driven by the food retail sector. Mr. Hans Jöhr, Corporate Head of Agriculture for Nestlé and an IPC member, explained that his company demands that sourcing locales and strategies must contribute to sustainable and profitable business, competitive pricing, lowest system costs, and shared values throughout the supply chain. To meet these types of requirements, private companies like Nestlé instigate their own rules. Nestlé works with the Sustainable Agriculture Initiative, a consortium of food industry companies that support sustainable agriculture, to ensure that social and environmental issues are addressed at the level of inputs, farmers, and processors. Nestlé has to enforce strict standards throughout the production process because it sources two-thirds of its agricultural materials in emerging markets and uses agricultural raw materials from more than 60 countries. Given this massive movement of agricultural materials, it is imperative that standards are met in order to guarantee the consumer buys a safe product. To help developing country farmers and processors meet these standards, Nestlé provides extension services on technical assistance and farm management. The ultimate goal is to produce safe, sustainable, and profitable food products that create value for everyone along the food chain.
Mr. Jerry Steiner, Executive Vice President at Monsanto, returned to a number of the issues that Dr. Thompson raised in the first panel. How can research be used to meet the rising demand for food sustainably? Monsanto knows that its work needs to help increase productivity to meet future nutritional and fiber needs while decreasing the impact on the environment. Mr. Steiner, an IPC member, noted that environmental and economic sustainability need to go hand in hand – if these two work together, then social sustainability will result.

To achieve environmental and economic sustainability, Monsanto is working to provide farmers with the appropriate tools. It is focusing on industrial agriculture, specifically corn and soybean production, because changes in agricultural practices for these crops will impact a large number of acres. The products it is working on should reduce the use of nitrogen, land, and water while still adding to farmers’ viability. By breeding seeds that can meet these objectives, Monsanto will contribute its part to make the food production chain more sustainable. To ensure that these products reach the consumer, it is working with the Keystone Center, a non-profit organization that brings stakeholders together to address environmental issues. By working with other companies throughout the food chain, Monsanto can increase the effectiveness and impact of its research efforts for more productive, less input-intensive crops.

Judging from the panels’ presentations, reaching sustainability in the food chain requires constant communication throughout all parts of the chain and with government regulators.
Panel V – Government Policies to Promote Sustainability

Dr. Tim Josling, Senior Fellow at Stanford University’s Institute for International Studies and an IPC member, introduced the panel on government policies. Not surprisingly, the common consensus of the non-government panelists was that government incentives are better than regulations. The representative from the food retail sector and the farmer both thought government had a role to play in sustainability, but they preferred the carrot to the stick.

Mr. John Bensted-Smith, Director of Economic Analyses and Evaluation at the EU’s Agricultural Directorate, outlined the intersection of the EU’s agricultural policy with sustainability. In terms of economic sustainability, the EU forecasts that direct payments will be almost entirely decoupled by 2014, while cereal and bioethanol markets will be expanding. Market prices should stay relatively steady, providing farmers with some stability. As for environmental sustainability, the EU requires farmers to be in compliance with 19 European standards related to the environment, food safety, plant and animal health, and animal welfare in order to receive government support. Farmers must also maintain their land in good agricultural and environmental conditions. The EU also offers support to farmers through rural development programs because there are societal expectations for rural areas that may not directly pertain to farming, but may affect farmers nonetheless.

Ms. Emma Reynolds, Government Affairs Manager for Tesco, stated that government policy should provide incentives to businesses and consumers to make greener choices. Tesco sees sustainability not only as a social and environmental imperative, but also as a cost-saver and a sales opportunity. The company is working to reduce its carbon footprint in ways which also lower overall operational costs. It also wants to harness the purchasing power of the consumer interested in green products, thereby profiting from a low carbon line of products while also helping the consumer to reduce his or her carbon footprint. Tesco is developing a ‘low carbon footprint’ label, although it admits that determining the metrics on such a label is difficult. It is working with several stakeholders to develop an appropriate measurement tool for carbon input.

Mr. Poul Christensen, a local farmer and Deputy Chairperson of Natural England, agreed that there was a role for the government to play in agricultural sustainability. He emphasized that the government can provide regulations, incentives, and educational outreach to help the market deliver sustainability. Natural England is concerned that, in this time of high prices, marginal land will be brought into production at the expense of biodiversity and natural resources. The organization sees a role for government to assist with farmers’ profitability or with environmental programs so that the expansion of agriculture into marginal lands is not economically attractive. Essentially, the government must supply ‘sustainment’ to sustainability. The government is also needed in this area because sustainable land management must be done at the landscape level, and the government is the only entity with the jurisdiction to provide this.
Panel VI – Sustainability and Trade

Mr. Ricardo Melendez-Ortiz moderated the panel on trade and sustainability. The panelists emphasized that sustainability and trade are not opposing forces – in fact, when they successfully work together, they can improve environmental conditions and profitability in the food supply chain at the same time.

Mr. Harsha V. Singh, Deputy Director-General at the WTO, emphasized that sustainable development is one of the fundamental objectives of the WTO. Its commitment to sustainable development and the environment can be seen in its agreements and in the on-going Doha Round of negotiations. For example, the SPS and the Technical Barriers to Trade (TBT) Agreements explicitly recognize the rights of member states to take measures to protect human, animal and plant life or health, and the environment. The only stipulation is that these measures do not create unnecessary obstacles to trade. Also, by encouraging harmonization of standards, the SPS and TBT Agreements improve efficiency in trade of agricultural products, thereby supporting production where it is most appropriate. Harmonized standards also facilitate the transfer of technology from developed to developing countries, increasing production volume and efficiency in developing countries.

The Doha Round of negotiations also supports sustainable development and the environment. In the mandate adopted when the Doha Round began in 2001, member states’ trade ministers agreed that an open and non-discriminatory multilateral trade system and actions to protect the environment and promote sustainable development should be mutually supportive. This is the first round to include environmental issues. Members are working to liberalize trade in environmental goods and services, which can “facilitate access to goods, services, and technologies [that] directly impact the protection of our air, water, and soil.”

Of course, the reduction of trade-distorting agricultural policies will allow the countries with comparative advantages in agricultural production to trade in a more open and equitable marketplace. But it will also benefit the environment by eliminating the overproduction of some commodities that have received subsidy payments. Removing tariff and non-tariff barriers also “will make it easier to acquire products and technology to meet environmental objectives.”

As a businessman, Mr. Tiku Shah, Chairman of the Fresh Produce Exporters Association of Kenya, emphasized that liberalized trade is critical to sustainability in East Africa. Horticultural exports were valued at $630 million in 2006. This is a sector that employs 100,000 people and that provides indirect support to almost 1 million. Without trade, the producers and their households would not be economically sustainable. The

Kenyan horticultural sector benefits from the government, the private sector, and support industries, such as banking and insurance, working together to enable a policy environment conducive to trade. However, the sector still faces issues of market access and non-tariff barriers, such as food miles. It is also battling against excessive standards requirements and subsidies in developed countries. Developing country producers need fair and open markets to be profitable. As noted by Mr. Singh, with reduced trade-distorting policies and harmonized standards, developing countries will be able to take advantage of new market opportunities and avail themselves of new technologies.

Mr. Malcolm Bailey’s comments reinforced many of the conference’s themes. As a New Zealand dairy farmer and a board member of Fonterra Cooperative Group, Ltd., a liberalized global trading system is critical to his business. Fonterra processes most of New Zealand’s milk and accounts for 95 percent of its milk exports. It also processes milk in 9 countries and markets milk products in 140 countries around the world. Because New Zealand phased out its agricultural subsidies 20 years ago, its sustainability practices have to be supported by market prices. Ultimately, consumers will have to absorb the cost of sustainability in agriculture.

New Zealand has seen more sustainable uses of land since the removal of subsidies because incentives have not existed to encourage agricultural practices that ignore the environment. Land is now being used in its most efficient capacity. Liberalizing trade would cause the same type of efficiency to flourish in other countries that have comparative advantages in agriculture.

Along this line, he noted that farmers trust markets more than governments. In order for farmers to carry out sustainable practices, they must be profitable. Government policies often have unintended, and opposite consequences. A liberalized trade regime would give farmers more opportunity to earn their living from the market, rather than depend on the government for support.

Mr. Bailey, an IPC member, touched on the issue of climate change as well. He reiterated that here, again, trade can help reduce damage to the environment caused by agriculture by encouraging efficient production, allowing more people to participate in the market, and thus, raising living standards.

Mr. Bailey also returned to the theme of non-tariff barriers and private sector standards. He agreed with Mr. Shah that basing the carbon footprint of food solely on the distance it has traveled to the supermarket is simplistic. Carbon footprint labeling by private companies must be thoroughly researched; more simplistic approaches only serve to reduce imports, many of which come from developing countries. Production methods should be taken into account when determining carbon footprints.
Closing Session

Dr. J.B. Penn, Chief Economist at John Deere & Company and an IPC member, summarized the conference themes. The rising demand for food and the increasing concern about the environment mean agriculture must produce more food with fewer resources. On top of this, it will be called on to produce biofuels. Wrapped into all these challenges is the need to address climate change as well.

Dr. Penn observed that most of these issues are being handled separately by policymakers, even though they are all related. IPC should encourage policymakers to look at these concerns from a holistic point of view.

In closing, he noted that discussions about food versus fuel could all quickly move from esoteric to tangible if there is a supply shock. Grain stocks are extremely low, and any disruption in the production system could easily make these debates much more pertinent to every food consumer.

Professor Allan Buckwell concluded that the conference discussion had clearly demonstrated that the current food and agricultural system is not sustainable. For example, European and North American agriculture is unsustainable because it relies on government subsidies. Globally, more and more environmental concerns are appearing related to agriculture. Professor Buckwell questioned whether agriculture was even functioning in such a way that was socially sustainable.

He also recapped that there is a pressing need for a means of measuring sustainability. This concept must be decided before practices can be judged to be sustainable or not.

Professor Buckwell was skeptical of the private sector’s assumption that customers will willingly pay more for sustainable products or that the companies can somehow offer these products for the same price as conventional ones.

He also called for more research and development and more adoption of technology. Europe, in particular, has been resistant to biotechnology. Can it supply the world with the food it needs without these and other technologies?

He closed his observation by noting that Europe has a huge contribution to make in the sustainability debate. Given its population and the size of its market, Europe will have to make some sort of policy framework to deal with food and security issues.

Dr. H.S. Dillon, an IPC member and Senior Governance Advisor of the Center for Agricultural and Policy Studies in Indonesia, called on participants to remember the needs of developing countries when international and national policies are being crafted. Many of the environmental issues developing countries suffer from originated with the demand for natural resources by developed countries several decades ago. Developing countries are still dealing with these repercussions as they try to scale up their own food and energy consumption. IPC can help keep policymakers aware of these needs by building consensus among the private sector, governments, and civil society.

IPC Chairman Piet Bukman closed the conference by thanking participants for their pithy contributions. He reiterated that the idea of sustainability is still fluid and that consensus on what it is and what should be done in agriculture to address it will need to be formed. It is IPC’s role to transform the theoretical possibilities discussed at the conference into recommendations that promote sustainability by clarifying complex issues, building consensus, and advocating policies to decision-makers.
About IPC

The International Food & Agricultural Trade Policy Council (IPC) promotes a more open and equitable global food system by pursuing pragmatic trade and development policies in food and agriculture to meet the world’s growing needs. IPC convenes influential policymakers, agribusiness executives, farm leaders, and academics from developed and developing countries to clarify complex issues, build consensus, and advocate policies to decision-makers.

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