GMOS AND NTBS: TRADE AND BIOSAFETY POLICY AFTER THE CARTAGENA PROTOCOL

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The group addressed policy issues concerning the management and trade of genetically modified organisms (GMOs) since the signing of the Biosafety Protocol. Their rapid development and adoption in agriculture has increased demands for regulation and oversight. However, problems exist in developing effective, efficient and acceptable regulations. The technology is novel, hence uncertainties exist about risks to consumers, the agricultural sector and the environment. The inability of current regulatory mechanisms in international trade and environmental agreements (for example, WTO and the Biosafety Protocol) to address concerns about GMOs has led to an impasse in the trade of grains, foods and fibre products in which they are contained. The principal difficulties in reaching an agreement include (a) inherent problems in harmonizing regulatory standards across countries, (b) political economy constraints arising from the potential impact of GMO products on comparative advantages in trade, (c) issues related to intellectual property rights (IPR) (that is, technology ownership and control) and the distribution of benefits resulting from GMO products, and (d) competing priorities between international agreements governing trade competition and environmental, consumer and agronomic protection.

Jimmye Hillman, as chairman, described the similarities between today's GMO debates and earlier discussions of trade. He noted that 40 years ago, at IAAE meetings, trade debates focused on the newly coined phrase 'non-tariff trade barriers' (NTBs). Hillman also distributed and briefly outlined a paper co-authored with George Frisvold entitled 'Genetically Modified Organisms and Non-Tariff Trade Barriers: Trade and Biosafety Policy after the Cartagena Protocol'. It described the evolution of the GMO debate and examined how the regulatory impasse has emerged. They considered the role played by the countervailing influences of the WTO Agreements, viz. the new Sanitary and Phytosanitary (SPS) Agreement and revised Technical Barriers to Trade (TBT) Agreement, and the Cartagena Protocol on Biosafety. The paper also discussed other key aspects of the GMO trade controversy, including IPR, the increasing private sector role in plant breeding and seed distribution, and the potential impact of GMOs on crop genetic diversity.

Donna Roberts (USA) next offered a detailed description, with reference to the Frisvold and Hillman paper, of the evolution of GMO debates in Geneva

over the past five years. She agreed with the authors' identification of two major themes, namely NTB issues about the extent to which regulatory measures are intended to manage risk and protect against economic competition, and concerns about the control and ownership of GMOs, including the distribution of benefits from the new technology. According to Roberts, the initial debates, after the signing of the Uruguay Round of the WTO in 1995, were informal as governments reviewed their existing regulatory regimes for compatibility with the agreement. Formal discussion began in 1998 after the EU notified the TBT committee of a proposal for mandatory labelling of GM products and other countries gave their responses. These and subsequent events led to an impasse in public policy debates and in GMO-related trade. The limited capacity of the WTO Agreements and the Cartagena Protocol on Biosafety to deal effectively with both environmental and trade-related aspects of GMOs, as well as the competing nature of the agreements, were responsible. She also suggested that an overreliance on jargon in the GMO trade debates continues to stifle the inclusion of trade-off concepts. She noted how 'sound bites' (for example, 'sound-science', 'precautionary') flavour the discussion and stressed the difficulty of handling risk assessment against such a background. Other points made during this session related to the difficulty of sustaining an economic argument against labelling and to the importance of the labelling regime (that is, voluntary versus involuntary) for designing policy.

In the second session Timothy Josling (USA) commented on the implications of the Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement as a framework obliging WTO members to establish certain standards for protecting property rights. He suggested that such agreements, coupled with litigation protecting IPR, might have the unintentional impact of creating barriers against entry to agricultural biotechnology development. This could shift responsibility for development from the public to the private sector, leading to the development of technology that might not be socially optimal. Josling described how the results have been very different industrial structures for 'red' (human/medical) and 'green' (agricultural) biotechnology. Numerous small firms, engaged in strategic alliances with major firms who supply capital, are found in 'red' biotechnology. In contrast, fewer, larger, firms dominate the 'green' sector and a higher degree of vertical integration has occurred. Josling's discussion then focused on how industrial structure influences technological development (for example, the crops selected), the distribution of innovations and benefits on a global scale, market concentration and power, and comparative advantage.

In the final session, David Harvey (UK) weighed the difficulties confronting economists interested in designing GMO trade and regulatory policy, noting that GMO technology could shift production functions and consumer preferences simultaneously, thus substantially complicating conventional welfare analysis. He also stressed the importance of full information for markets to work effectively; without it they could 'fail'.

Harvey further explained that imperfect information affects the GMO issue in two conceptually separate ways. Firstly, consumer and producer information is filtered through 'context, circumstance, character and culture' and the same

material can be interpreted in quite different ways. The traditional economic recipe – increased competition – does not necessarily overcome this information failure. Secondly, the appearance of the GMO itself is 'new information'. Restriction of access to its use (entailed in private firms claiming property rights) amounts to a market failure, supposedly justified as a second-best way of dealing with the problem of generation and provision of the information in the first place. Harvey suggested that much of the popular opposition to GM stems from concern over private monopolization of the technology, and perceptions of the distribution of the benefits and costs. Rights to 'rent collection' need to be balanced with responsibilities for the socially desirable use of scarce resources.