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QUNO Quaker United Nations Office

Agricultural Innovation for the 21st Century:
Matching the Intellectual Property Framework with Farmers' Needs

Report on QUNO-IIED panel at the
World Trade Organisation Public Forum 2012, Geneva

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Panelists

Derek Eaton, Graduate Institute, Geneva
Guy Kastler, Via Campesina, Europe
Krystyna Swiderska, IIED, London
Antony Taubman, WTO Intellectual Property Division
Moderator Caroline Dommen, Quaker UN Office

This panel explored the complex international landscape on intellectual property (IP) relating to agriculture. The panel considered the main features of the international IP framework through the following questions:

- *Does the IP system stimulate innovation?*
- *How does it meet the needs of farmers and consumers?*
- *In what directions is it likely to evolve?*
- *Are new rules or new processes needed to ensure it responds to changing farming needs?*

Panelist presentations

Antony Taubman outlined the framework of TRIPS and relevant legal provisions. He pointed out that since the 1990s the debate about TRIPS has broadened to 'TRIPs plus' to incorporate broader concerns such as food security, biodiversity and public health. He commented that seeds can be viewed in a range of ways, from a commodity to a crop to a livelihood, and with these notions come different approaches of how to value seeds and how to assign ownership of them. Examples of these different notions are embodied in the Convention on the Protection of New Varieties of Plants (UPOV), Farmers' Rights, indigenous rights, traditional knowledge and protection of genetically-modified organisms.

Recent progress on the agriculture-related facets of the 'TRIPS plus' debate has been slow. The review of article 27.3(b) which started in the late 1990s has thrown up interesting questions, such as the substance of article 27.3(b) itself; links between TRIPS and the Convention on Biological Diversity (CBD) and; links between IP, traditional knowledge and folklore. In relation to this, over 120 WTO

Members provided information about their legislation in this area, and one contribution the WTO can offer is to make this information more easily available in order to further inform the debate around IP and agriculture.

Derek Eaton approached the topic as a question of empirical interest, considering the 'appropriability' of IP on seeds and how to incentivise research in plant breeding, given that seeds are to a large extent self-reproducing. Research has traditionally been carried out by public sector actors, but there has been a significant increase in activity by the private sector - mostly in developed countries - over the last 50 years. This has gone together in the growth of the IP system, including Plant Variety Protection (PVP), UPOV and patents. Derek Eaton discussed the difficulty of measuring whether IP has incentivised or hindered innovation. Research shows mixed results as to any correlation between the granting of IP rights and innovation in new plant varieties. It is extremely difficult to systematically and statistically analysis this link. Some have looked at the number of plant varieties registered in a particular jurisdiction, but this measure is imperfect as the registered varieties could be only marginally improved seeds. He said that we needed more appropriate indicators.

Alongside this lack of empirical evidence, there is a growing concern among researchers that changes are needed to the IP system. There are several reasons for this. Firstly, there are signals that increased burdens of IP systems - especially patents - are impeding on plant breeders' ability to carry out new research. Further, in some cases IP laws are in place on paper but many developing countries find it difficult to meaningfully meet their obligations. This raises questions about the ambitions of the international community in some developing countries. Finally, it is important to keep in mind one of the main goals of the TRIPS agreement is to promote dissemination of innovation as well as incentives for innovation.

Krystyna Swiderska discussed the issues from the perspective of her expertise in innovation among farming communities. To find ways that farming innovation can be strengthened and protected we need a more balanced IP system that protects plant breeding but does not miss out a huge sector of important innovators who continually adapt plant varieties and protect an astounding level of plant diversity and livestock.

The ability to adapt to changing temperatures and precipitation patterns will be a major issue not just for farming communities but food security for all of us. We therefore urgently need to protect, preserve and strengthen these seed systems that are centres of genetic diversity. It would help to link them to scientific seed systems so the two are mutually supportive, but this is not happening for four reasons. Firstly, scientific breeding systems are promoting increased production and uniformity, but we need diversity for resilience among small farmers. Secondly, giving farmers incentives for preserving genetic diversity is not being implemented either in law or in practice. Thirdly, there is a rapid spread of hybrids which is feeding into the critical loss of agricultural biodiversity. Fourthly, IP frameworks are impeding the exchange and sharing of seeds across landscapes; this is essential for food security in the context of climate change.

Guy Kastler emphasised that during the last 40 years of agricultural development half of the varieties his network of farmers uses have been lost. Seeds are suffering more and more with changing temperatures and precipitation, but when the conditions are right, farmers' seeds often give better results than commercial seeds.

Farmers are not involved enough in drafting seed laws. Guy Kastler commented that it is difficult to see how these seed laws can encourage innovation because farmers do not innovate in the way described by these laws, even though farmers have been evolving plants for thousands of years. Farmers innovate in an ongoing way, constantly adapting to local conditions. Farmers – whether in the North or in the South – grow plants from their seeds and also often exchange seeds, to mix up the genetic base and maintain diversity, but this is not recognised by IP and seed laws. The 1991 Act of UPOV, for instance, defines a plant variety as being defined by the 'characteristics resulting from a given genotype or combination of genotypes'. Farmers do not take this approach, but seek to see new, diverse, varieties and characteristics appearing in their fields. The European Commission recognises this and

uses 'plant populations' rather than 'plant varieties'. The problem is that in many countries, meeting the UPOV definition of plant variety is a condition for access to the market and can restrict farmers from freely exchanging or selling their seeds.
So, Guy Kastler said, the commercial, UPOV-related system brings us homogenous, stable varieties that cannot actually adapt to changing climatic and agricultural conditions. If used with pesticides, inputs and mechanisation, these kinds of varieties can increase yields per hectare (in relation to the number of people employed), but this involves chemicals, health concerns and fossil fuels. Farmers systems and agro-ecological systems use less fossil fuel, fewer harmful chemicals and create jobs, he emphasised.

He recognised that UPOV does have positive aspects even though he would like to see it return to its 1961 or 1978 Act, which are more respectful of farmers' needs and concerns. Guy Kastler particularly favours the UPOV system over the patent system, which is more restrictive for new breeding that the UPOV system, and is more harmful for farmers. He emphasised that farmers do not need the IP system and encourages breeders to join with farmers against patents, warning that otherwise, patents may be the end of breeders and farmers.

Panelists then reflected on what type of IP system or systems should be considered for the future, and how that would mesh with the current international IP system.

Guy Kastler: Via Campesina is not against patents but is against patents on living organisms. He is concerned that patents encourage research that responds to the need to make money rather than the actual needs in the areas of food or agriculture. Guy Kastler recognises value of initial PVPs, that really did bring useful innovations to agriculture. He is more concerned about UPOV 1991, which is moving closer to the patent system. He would like the IP system to recognise farmers' collective rights on their seeds. States and farmers spent years defining the rights of farmers to save, sell and exchange seeds. These are recognised in the FAO International Treaty on Plant Genetic Resources for Food and Agriculture (even if the addition of the words 'subject to national legislation' in the International Treaty undermines the Famers' Rights principles). Farmers' Rights are inalienable and should be discussed and recognised within the World Intellectual Property Organization (WIPO) and UPOV.

Krystyna Swiderska: There is no international agreement that protects or incentivises small farmers' traditional knowledge and breeding practices. The FAO International Treaty is positive but it has no teeth to it, unlike, for instance, the WTO Agreements. The way forward is to look at customary practices. Whereas the characteristics of innovation in IP systems are exclusivity, uniformity and stability of plant varieties, in customary systems innovation is primarily driven by subsistence needs, social networks and collective sharing. Access to genetic biodiversity is farmers' seed bank and food security (as illustrated in current IIED research in Peru, Kenya, India and China). So to promote innovation and resilience in farming communities we need to look at key elements of customary systems, valuing diversity and reciprocity more than uniformity and exclusivity. She concluded that here is a real lack of understanding at the policy level, and small farmers must be brought into discussions in both national and international fora.

Derek Eaton: The IP system in theory is meant to be about sharing. The disclosure provision in the patent system is supposed be as important an element as the incentive element. A current compliant in the wider IP debate is that disclosure is being overlooked. The 'breeders' exemption' is a characteristic of the PVP system (UPOV) and is meant to perform this disclosure function effectively. Essentially Derived Varieties, however, is a move towards patents by some actors in this area.

Antony Taubman: I reflect back to working in the field with an anecdote. People would either go to an IP lawyer together in partnership when they valued each others input, or the lawyer would try to capture what a partnership should look like. The former just needed a lawyer to capture the spirit of intended collaboration, while the latter could create problems. This shows that in reality, the role of law is to provide a framework for healthy collaboration.

Selection of Audience Responses

The Chairperson of the Quebec Federation of milk producers said that as a farmer himself, he is not against research, but it only plays a small part in increasing production: mechanisation has played the largest role over the last fifty years in increasing agricultural production. Ensuring food security in developing countries will require equipment, not hybrid seeds. Hybrid seeds and IP-protected seeds are about sustaining multinational corporations, not people's livelihoods, as many others have pointed out.

In response to several speakers' comments about the difficulties of establishing causality between IP and innovation, Tom Goodwin from the World Intellectual Property Organization (WIPO) flagged research that WIPO is embarking on, in an attempt to contribute to empirical evidence in link between innovation on wheat and IP in East Africa.

David Vivas who has long worked on issues relating to intellectual property, environmental protection, development and agriculture agreed with the needs for reform that several speakers called for. He observed that there is a need to think about where and how reform will happen. The WIPO Inter-Governmental Committee (on Intellectual Property, Genetic Resources, Traditional Knowledge and Folklore) is including provisions on traditional knowledge, but will these help? Should we focus on preservation or on protection of, say, traditional knowledge? Do we want to preserve traditional knowledge through systems like benefit sharing or do we want to protect farmers' rights? These two different objectives might lead to different measures.

A farmer from Pakistan mentioned her view that IP is as important for improving investment in plant breeding as it is in pharmaceutical research, but we have seen that a safety box had to be created due to some adverse effects of IP on public health. She asked the panellists whether they think compulsory licenses might play a role in the case of agricultural research, in the context of decreasing biodiversity and climate change.

UPOV's Vice-Secretary-General said that UPOV carried out an impact study in 2005 (referred to by Derek Eaton in his presentation). He added that UPOV has accumulated other information and evidence about the role of PVP in public-private partnerships and so on. UPOV has discussed the need for mutual supportiveness between UPOV, CBD, and the FAO international treaty system but this conversation requires a better understanding of the UPOV system.

Marco Marzano of the World Farmers' Organization, expressed his view that there is a misperception of the IP system among farmers. The system does not necessarily need to be changed, but there needs to be better explanation of how the IP system works. In response to the first audience comment, Mr Marzano said that farmers too can benefit from the IP system and that this should be better communicated to farmers by the bodies responsible for administering IP.

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