

## **Food patenting – a threat to food security**

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## 1. Introduction

This paper discusses the implications of application of intellectual property rights (IPRs) in the field of food and agriculture. IPRs have been accelerated and in the case of developing countries been brought about by the World Trade Organisation.

The WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) requires patents on micro-organisms and *sui generis* legislation for plant varieties. Farmers' rights and indigenous & community knowledge is being impacted negatively by the TRIPS Agreement. This paper does not attempt to capture the whole gamut of issues surrounding preservation and promotion of indigenous and community knowledge, protection of farmers rights, *sui generis* legislation. The paper merely deals with those aspects of these issues that are impacted by intellectual property rights. If the aim of the paper were to address preservation of biodiversity and indigenous knowledge, the strategies employed would be quite varied and more local in nature.

The starting premise of the paper is that patenting of genetic resources for food and agriculture reduces poor women and men farmers' access and control over the resources that secure the right to food.

## 2. Agreement on Trade-Related Aspects of Intellectual Property Rights

Prior to the Uruguay Round, intellectual property legislation was a matter of domestic policy. The Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement of the World Trade Organisation (WTO) for the first time makes it mandatory for developing countries to provide for patent protection for micro-organisms, and non-biological and microbiological processes; as well as an effective *sui generis* system to protect plant varieties. The period for patent protection was increased from 7 to 20 years and now covers both the process and product for an innovation. This serves to only strengthens the control of the patent holder and the industry.

Article 27.3b states that members may also exclude from patentability:

plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof. The provisions of this subparagraph shall be reviewed four years after the date of entry into force of the WTO Agreement.

Developing countries had till December 1999 to comply with the TRIPS Agreement, and the least developed countries have till December 2005 to implement the Agreement. Article 27.3b was supposed to be reviewed in 1999, however, for a long time the WTO member states kept arguing whether the review was of the implementation of the article or of the substance. The developed countries wanted a review of the implementation, whereas the developing countries insisted that the review should be of the provision. Member states submitted a number of proposals prior to Seattle, including the proposal from the African group for 'no patents on life'. Since Seattle, discussions in the TRIPS Council have been substantive in nature, even if there are no changes to the text. The European Union insists on discussing any changes to the text of existing agreements in the context of a New Trade Round where there are possibilities of trade off. Developing countries have been insisting on dealing with implementation issues including inequities in TRIPS as well as the in-built agenda (Agreement on Agriculture and Services) before any new trade round.

Apart from the review of Article 27.3b, the whole TRIPS Agreement has to be reviewed every two years under Article 71.1. Developing countries have raised a number of developmental concerns as part of the 71.1 review.

## 2.1 Patent protection of life forms – a recent phenomenon

Article 27.3b makes an artificial distinction between micro-organisms and microbiological processes on the one hand, and plants and animals on the other.

Historically, patents were used for mechanical and other innovations. Agriculture is a recent addition to the patenting regime. Infact there was opposition to the inclusion of plant varieties in the patenting regime and 'the main opposition to the patenting of plant varieties emerged not from the Ministries of Agriculture in Europe, but from industry'.<sup>1</sup> The industrial property lawyers (AIPPI) were averse to the possible weakening of the patent system so as to accommodate plant varieties. It was recognised that innovations in plant breeding, i.e. the production of most new varieties, would fail to meet two crucial requirements for the grant of patents – demonstration of an inventive step and the disclosure of the invention so as to enable reproduction of the invention.

The US patent law, the recent EC Directive on the legal protection of biotechnological inventions provides for patent protection for biotech plants and animals. The EC Directive states that 'biological material which is isolated from its natural environment' could be patented. The mere act of isolation becomes an innovation. This clearly paves the way for greater biopiracy.

The EC Directive recognises the unique nature of living organisms, plants and animals in that they multiply biologically, and extends patent protection not only to the 'new' biological material, but also to the progeny possessing those same characteristics for fear that the 'innovator' might not be able to recoup their profit in one generation (Article 8.2). This is problematic as not only does it blur the divide between what is an innovation and what is a discovery, but it ensures bondage of the farmers to the seed/animal producer for generations. Dr. Tewolde the African negotiator for the CBD, and the general manager of the Ethiopia Environment Authority states, "distorting the meaning of patenting in order to make it applicable to life only serves to attract rejection of the whole system. Who ever worried about the legitimacy of patenting before the 1990s, before it became known that the USA was allowing the patenting of living thing? But now, opposition is growing all the time, opposition not only to the legitimacy, but also to the legality of patenting."<sup>2</sup>

The African negotiators both at the WTO, and at the Organisation of African Unity have taken a strong position against patenting of life, which they state is contrary to the basic ethical values and morals of the African people. The OAU model law (on the protection of local communities, farmers and breeders and for the regulation of access to biological resources) considers patenting of life a violation of the fundamental right to life and also contrary to the principle of respect for all forms of life.

## 2.2 *Sui generis* systems

Most developing countries have opted for the *sui generis* (of its own kind) option within TRIPS in the form of plant breeders' rights (PBRs) as opposed to patents on plant varieties. They are motivated by a belief that the patenting of food and farming crops could lead to a denial of the right to food, and grant decade-long monopolies on 'inventions' relating to food and farming crops particularly staples. The TRIPS Agreement does not specify what an effective *sui generis* system is, and it is left to each country to define what laws are appropriate for their individual country situation.

However, having opted for PBRs, many developing countries are being pressurised to sign up to the International Union for the Protection of New Varieties of Plants (UPOV) in place of developing their own (*sui generis*) options for protecting ownership of plant varieties. The UPOV system is highly restrictive of farmers' and community rights to innovate, develop,

<sup>1</sup> ActionAid, March 2000. 'Intellectual Property Rights and Agriculture: An Analysis of the Economic Impact of Plant Breeders' Rights'. Dwijen Rangnekar, Research Associate, School of Economics, Kingston University, UK.

<sup>2</sup> Martin Khor. Rethinking IPRs and the TRIPS Agreement. 20<sup>th</sup> March 2001.

exchange, save and sell seed. It promotes a particular attitude to breeding plant varieties (e.g. that they are distinct, stable and uniform-DUS).

### 2.2.1 Indigenous initiatives under attack

A recent EU-Bangladesh Trade and Aid agreement has a TRIPS+ clause requiring Bangladesh to endeavour to join UPOV 1991. This is clearly not necessary as Bangladesh is a least developed country and does not need to comply with the TRIPS Agreement till 2006, and more importantly Article 27.3b doesn't state UPOV 1991 as the '*sui generis*' system. Moreover, Bangladesh had developed an effective and appropriate *sui generis* legislation to suit its requirements in consultation with the civil society, which has now been put aside.

Similarly, the Organisation of African Unity has developed a model law for the protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources. The model law is an effort to comply with the relevant provisions of the CBD and the *sui generis* requirements of TRIPS. It recognises that 'the State and its people exercise sovereign and inalienable rights over their biological resources.' The law also makes it categorically clear in its preamble and in the provision regarding access to biological resources that patents over life forms and biological processes are not recognised and therefore not applicable. The law also provides for regulation of access to biological resources based on prior informed consent. Finally, in addition to providing for breeders' rights, the law provides for community and farmers' rights.

The OAU model has been developed over a period of 3-4 years with the help of over 400 lawyers, NGOs, farmers' organisations, and government ministries from Africa. The law has been endorsed by the heads of the States in July 1998, and signed off by the Trade Ministers. Earlier this year in May, the World Intellectual Property Organisation (WIPO) and UPOV were invited to comment on the model law. Both WIPO and UPOV are sister organisations based in the same building in Geneva. WIPO is the UN agency set up to promote intellectual property laws, whereas, UPOV promotes plant breeders rights.

Instead of positively contributing to making suggestions for furtherance of the African initiative WIPO and UPOV came up with views that sought to totally change and undermine the substance and spirit of the model law.<sup>3</sup> WIPO pointed out that the prohibition of patents on life is contrary to the TRIPS Agreement, whereas UPOV promoted itself as the effective *sui generis* system that met the requirement of TRIPS.

### 2.2.2 Plant breeders' rights encouraging investment, innovation and competition?

Contrary to the popular belief of intellectual property rights, and in this case plant breeders rights being essential to promote investment, innovation and competition, ActionAid's study on plant breeders' rights in the UK<sup>4</sup> highlighted the following:

#### *Impact of PBRs on investment*

On the link between IPRs and investment, the study finds that older firms established before the advent of plant breeders' rights legislation have been the most active in investing in plant breeding. Moreover, private investment appears to concentrate on select crops such as soybean and wheat, suggesting that the profitability of the crop is more crucial in encouraging private investment. As such the stimulating role of PBRs is questionable. Alternatively PBRs on their own cannot account for increased private investment.

<sup>3</sup> Imeru Tamrat, ActionAid Ethiopia. The OAU Model Law for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources. June 2001.

<sup>4</sup> ActionAid, March 2000. 'Intellectual Property Rights and Agriculture: An Analysis of the Economic Impact of Plant Breeders' Rights'. Dwijen Rangnekar, Research Associate, School of Economics, Kingston University, UK. The full report as well as a summary can be found at [www.actionaid.org](http://www.actionaid.org)

*PBRs and the introduction of new varieties*

The study undermines claims that PBRs have a positive impact on inventive activity. There is no clear link between increased number of new plant varieties and PBRs. The study points out that companies are constantly replacing their portfolio of varieties because it is in the breeders' interest to reduce the life-span of older varieties and continuously release new ones. Consequently, there are a number of periods when the market experiences a net withdrawal of varieties.

*PBRs and market power*

The study failed to find evidence of greater competition or increased number of firms active in plant breeding as a result of PBRs. In fact, there is compelling evidence of seed industry consolidation, which is well supported by reports of widespread mergers and acquisitions within the industry.

Developing countries should reject the restrictive plant breeders' rights like UPOV, not only because of their links with erosion of biodiversity, lack of farmers' rights, lack of focus on food security crops; but also because as pointed out above they fail to deliver what they promise. The only reason why seed companies and breeders' want PBRs is to stop competitors from producing the seeds/crops that they are producing without paying a fee. The nature of plant breeding is incremental with each change built upon the past endeavours. IPRs it seems have nothing to do with innovation, investment or competition as industry representatives will admit in private, but have a lot to do with market control and dominance.

**2.3. CBD – TRIPS conflict**

Right to intellectual property is based on individual private right, whereas, the rights under Convention on Biological Diversity (CBD) are founded on the basis of traditional pre-existing rights to biodiversity and indigenous and community knowledge.<sup>5</sup> The CBD recognises the important contribution of the local communities<sup>6</sup> especially in developing countries in preserving biodiversity.

One of the items being discussed as part of the 27.3b review is the relationship between CBD and TRIPS. The developing countries maintain that there is a conflict between the two agreements, whereas the developed countries see no conflict. The Africa group submission to the TRIPS Council in June 1999, stated explicitly that 'the review process should seek to harmonize Article 27.3(b) with the provisions of the CBD and the International Undertaking, in which the conservation and sustainable use of biological diversity, the protection of the rights and knowledge of indigenous and local communities, and the promotion of farmers' rights, are fully taken into account.'

Though the TRIPS Agreement is accelerating exploitation of genetic resources, it does not require the patent holder to either disclose the source of origin, get prior informed consent from the genetic resource/knowledge holders, or ensure that there is an equitable benefit sharing. Prior informed consent and equitable benefit sharing are the cornerstone of the Convention on Biological Diversity. Most governments are signatories of both the CBD as well as TRIPS and have to operationalise the objectives of TRIPS and CBD in the national legislation. The OAU model law is an excellent example of a framework that seeks to address the domestication of these two international obligations.

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<sup>5</sup> The Indian government in its submission to the TRIPS Council in July 2000 states, 'The preamble of the TRIPS Agreement recognizes IPRs to be private rights...CBD on the other hand, in its preamble, categorically reaffirms that nation states have sovereign rights over their own biological resources.'

<sup>6</sup> Article 8j of the CBD states, Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices

To help resolve the conflict between CBD and TRIPS, the Indian government (July 2000), as well as the Brazilian government (November 2000) in their submission to the TRIPS Council have been demanding 'a clear mention of the biological source material and the country of origin.'<sup>7</sup> In this connection, Brazil considers that Article 27.3(b) should be amended in order to include the possibility of Members requiring, whenever appropriate, as a condition to patentability: (a) the identification of the source of the genetic material; (b) the related traditional knowledge used to obtain that material; (c) evidence of fair and equitable benefit sharing; and (d) evidence of prior informed consent from the Government or the traditional community for the exploitation of the subject matter of the patent.'

Discussions at the International Undertaking have also highlighted the need for equitable benefit sharing for the sources of genetic resources which is predominantly the developing world.

The United States rejects these demands stating that they will violate TRIPS by placing additional demands on the patent holder; whereas, the European Commission have made their acceptance of this proposal conditional to the new trade round. The US repeated these demands at the recent negotiations on the IU at the instigation of the industry.

### **3. Farmers privilege Vs farmers' rights**

The advent of intellectual property laws in developing countries has potential for tremendous negative impact for 1.4 billion women and men farmers worldwide who rely on farm saved seed.

The concept of farmers' rights was introduced in the International Undertaking of the Food and Agriculture Organisation of the United Nations in November 1989.<sup>8</sup> Farmers' Rights has been reaffirmed in various international fora including the Convention on Biological Diversity and Agenda 21 of the UN Conference on Environment and Development.

Farmers' Rights mean rights arising from the past, present and future contributions of farmers in conserving, improving, and making available plant genetic resources, particularly those in the centers of origin/diversity. These rights are vested in the International Community, as trustee for present and future generations of farmers.

Farmers' privilege in terms of farmers being able to reuse protected varieties of seeds for use on the farm has been provided for in plant breeders' legislation. The scope of this privilege varies in different national legislation. Most developing country laws providing for a broad exception in line with the existing practice of farmers saving seed for the next harvest. Whereas, the developed countries interpret farmers privilege in a narrow sense in line with the commercial agricultural practice commercial breeders supplying seeds to farmers, and farmers paying a remuneration to the seed company in case they reuse seeds. UPOV 1991 further restricts the scope for the exception to ensure that the breeders are able to recoup adequate profits.

Like the OAU model law, the Indian bill tries to balance farmers' centuries old practice of saving, breeding and selling seeds with breeders' rights. The Indian 'Protection of Plant Varieties and Farmers' Rights Bill, 2000, after intense lobbying from civil society groups provides for farmers' right to resell seed, provided that the farmer does not sell it as branded seed of a variety protected under the Act. Dr. Suman Sahai argues that farmers' ability to resell seed is crucial for India, since more than 85 per cent of seeds planted in India are supplied by the farming community.<sup>9</sup> The Indian bill also provides for the possibility for farmers' varieties to be registered.

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<sup>7</sup> India suggests that Article 29 of the TRIPS Agreement could include this requirement.

<sup>8</sup> FAO Resolution 5/89 on Farmers' Rights

<sup>9</sup> Suman Sahai. Farmers' Rights and Food Security. Economic and Political Weekly, March 11-17, 2000.

Farmers' privilege is one part of farmers' rights and equating the two will be discourteous and unjust towards millions of small farmers around the world who have maintained, preserved and improved upon agro-biodiversity. Adopting UPOV should not be seen as countries having fulfilled their obligations of providing for farmers' rights. The International Undertaking which was being negotiated in Rome, is likely to be adopted at the World Food Summit+5 in November 2001. A strong and legally binding International Undertaking will not only ensure free access to the world's important food crops, but also provide for an international agreement recognising and promoting farmers' rights, which then would need to find expression in national law.

#### TRIPS pokes its nose in the International Undertaking negotiations

The flawed text of a new global treaty - the International Undertaking on Plant Genetic Resources for Food and Agriculture, or IU which could ensure future food security by conserving and protecting the genetic resources of the major food crop and forage species has finally been agreed after a 7 year long marathon of negotiations in the Food and Agriculture Organisation of the United Nations, Rome.

In the last century an estimated 90 per cent of varieties of more than 100 crop species available to farmers have been lost, and the increasing rate of patenting and privatisation is threatening to the global public interest because it:

- removes resources from the public domain
- threatens farmers' livelihoods as their access to crop varieties becomes restricted, and these are replaced by a very small number of commercial seeds
- undermines local and international food security, which is largely based on free use and exchange of seeds
- reduces the agricultural biodiversity which is managed by farmers on the world's behalf

The IU will eventually be legally binding, once ratified by more than 40 countries, and will establish a multilateral system for access to and exchange of the plant genetic resources for food and agriculture which appear on a list of inclusions. The IU also provides a mechanism whereby a share of the wealth generated from any commercial use of these resources is paid back to developing country farmers ('benefit sharing').

Non-governmental organisations (NGOs) immediately criticised it for providing yet further evidence of OECD countries' priority to support private profit rather than food security and making everything subordinate to the trade rules of the WTO and TRIPs.

OECD countries have reluctantly agreed to this treaty so long as it does not challenge existing intellectual property laws and have ensured that they will not be obliged, by this treaty, to rule over the seeds that are in the hands of big biotech industry. If the still undecided text is not challenged, rich seed and biotechnology corporations would increasingly be able to get hold of crop genes for a minimal payment and then privatise them.

Loss of access to these vital resources and their use in fields, especially by the smallholder farmers in developing countries who develop and conserve them on behalf of humanity, will increasingly lead to their extinction. Although concerned not to challenge TRIPs, European countries joined with some of the G77 developing countries in recognising the imperative of having the seed conservation elements in the Treaty in order to ensure long-term food security, and fought hard to keep it alive.

In a joint NGO press release from Rome on 1<sup>st</sup> July 2001, Patrick Mulvany of the UK's Intermediate Technology Development Group (ITDG) said the treaty is:

- not fair - although Farmers' Rights are recognised they will be subordinate to national laws protecting the plant breeding industry.
- not equitable - mandatory benefits returned to farmers in developing countries through this treaty will be a miniscule fraction of the food industry's \$2 trillion annual turnover. and
- not comprehensive - it will apply to a mere 34 food crops and a derisory 29 forages".

See <http://www.ukabc.org/> for Background Briefings.

#### **4. Indigenous and community knowledge**

The recent interest in indigenous and community knowledge has more to do with the potential profits from indigenous knowledge in the field of medicines, agriculture – now made possible through the intellectual property protection provided by TRIPs, than with harnessing indigenous knowledge for the sustainable development of the communities.

Indigenous/traditional knowledge refers to the empirical knowledge of a group of long-time inhabitants of a specific location, and the principles underlying the generation, organisation, meaning and diffusion of that knowledge (IUCN 1997). The importance of indigenous knowledge goes beyond the use of local and indigenous communities. A large majority i.e. 80 % of world's population depends on traditional medicines for its primary health needs (WHO, 1993). Similarly two thirds of world's population depends on the food, provided through indigenous knowledge of plants, animals and farming systems (Rural Advancement Foundation International, 1994). Moreover, customary farming practices produce over 90 percent of food in sub-Saharan Africa (Dakora, 1997).

##### **4.1 Intellectual property rights unsuitable for protection of indigenous and community knowledge**

Genetic resources and indigenous knowledge are intricately linked in the developing world, with the holders of indigenous and community knowledge also the users and preservers of the genetic resources. Intellectual property rights are unsuitable for living organisms and indigenous knowledge, both of which are non-divisible public goods.

The IPRs were developed for manufactured goods, where companies can expect repeat business as fashion change or items wear out. Living organisms can reproduce themselves, and indigenous knowledge can be shared freely and openly and so may not require repeat purchases.

UNESCO paper presented in the UNCTAD experts meeting in Geneva last November states that, "IPRs are designed to protect individuals whose specific inventions require safeguarding in view of their perceived market value. Can such arrangement accommodate traditional knowledge, which is collectively owned, whose invention extends across several generations, and whose intent is to provide ecological understanding and social meaning and not commercial profitability? In short, existing IPR arrangements are culturally inappropriate for protecting traditional knowledge systems". The International Labour Organisation also took the side of indigenous communities over private intellectual property rights.<sup>10</sup>

Similarly Indigenous peoples also reject the protection of traditional knowledge under IPRs. Indigenous people made following recommendations to UNCTAD:

- The current Intellectual Property Rights system is inappropriate for the recognition and protection of traditional knowledge systems because of the inherent conflicts between these two systems including:
- Indigenous Peoples rights are holistic and collective by nature.

<sup>10</sup> With regard to the protection of traditional knowledge through customary law and practice, article 8 of the Convention No. 169 provides that indigenous and tribal peoples shall have the right to retain their customs and institutions.

- IPR is founded on private, economic rights whereas, Indigenous Peoples systems are values based which include both rights to use and obligations to respect the natural world.
- IPR is protected within legal systems of the world. Traditional knowledge (TK) systems are largely unrecognised and unprotected within legal systems.
- Indigenous people have a fundamental right to participate in decision making processes that affect their wellbeing and this has been accepted by a number of UN agencies including CBD, Ramsar, FCC and UNDP.
- Priority must be given to the strengthening of existing customary laws and value systems of indigenous peoples in the protection of traditional knowledge.
- Patenting on life forms should be banned because it attacks the values and livelihoods of indigenous and traditional peoples

A paper recently commissioned by ActionAid highlights the following<sup>11</sup>:

In looking at indigenous knowledge, we are basically dealing with the information 'as contained in traditional knowledge, or the genetic information as contained in the seeds of plant varieties or in domesticated animals'.<sup>12</sup> The task then is to first allocate the information. Controlling access to IK and genetic resources would thus be a step in this direction. This is a prerequisite to an economic value being attached to it. Bioprospecting and access laws that provide for equitable benefit sharing might be two ways of compensating the local communities for use of their knowledge and genetic resources.

Alternatively, we may consider a situation where no economic value is placed on such knowledge or information once it has been 'allocated'. This for example is the idea behind establishing databases or registers of traditional knowledge the purpose of which is to notify the world of the existence of such knowledge. By so doing, that knowledge enters the public domain thus compromising the requirements of novelty and inventive step for patentability. India strongly supports this and has created People's Biodiversity Registers<sup>13</sup> which store peoples' knowledge on site so that they can use and develop it. A clear advantage of this approach will be its establishment of prior art, i.e. the use of a plant variety for centuries, so preventing MNCs from patenting them as innovations. The first of these was finished and put into use in India in 1997.

SRISTI<sup>14</sup> supports them on the grounds that not all people are involved in breeding and biodiversity protection so registering ones own innovations and varieties enables recognition and remuneration should a company seek to use the genetic material.<sup>15</sup> They are also favoured as they do not involve stating ownership regarding plant varieties but are merely a register. Registering with a local database, which is linked to a national network, is also a more financially viable way of protecting traditional knowledge compared to the prohibitive costs of patent seeking.

Caution should be applied to this approach as the flip side of documenting biodiversity and traditional knowledge without the legal status of the registers being ascertained. Since once documented and available on a database, the knowledge can be easily appropriated by bioprospectors without having to go through the effort of documenting the knowledge themselves.

The paper presents three possible options for protecting indigenous and community knowledge:

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<sup>11</sup> Consultancy project for ActionAid by Amarjit Singh and Faye Scott, London School of Economics. Protecting Traditional Knowledge – Improvements and Alternatives to IPRs. London, 18/6/2001.

<sup>12</sup> Biber-Klemm 2000: 5

<sup>13</sup> Dutfield 1999: 118

<sup>14</sup> Society for Research and Initiatives for Sustainable Technology and Institutions

<sup>15</sup> SRISTI c.f. Dutfield 2000: 121

- 1) The improvements needed to the way information is allocated within the IPR regimes of industrialised countries. This involves looking at how the current regime can be made more stringent regarding the allocation of information.
- 2) Creating a more equitable basis for the attaching of economic value to the information. This involves a sharing of the benefits derived from TK with the communities whose knowledge was made use of.
- 3) Allocating information and placing an economic value on it other than through IPRs. This involves looking at the alternatives to IPRs for protecting TK.

## 5. Summary

- **Patents on genetic resources for food and agriculture (GRFA) may threaten farmers' livelihood and food security:** Patents would reduce access to seeds and genetic resources to farmers and breeders. It could also make seeds more expensive for the small farmers due to royalty payments and increased commercialisation. Once the seed is planted companies can insist that farmers purchase new seed every year, and penalise them for saving seeds. This compromises farmers' right to save, grow, and sell (patented) seed. *Monsanto in the United States has taken the aid of Pinkerton detective agency to find farmers who have been illegally saving seed. More recently in a bizarre case, a Canadian Farmer Percy Schmeiser whose field was contaminated by genetically engineered canola has been asked to pay Monsanto around \$10,000 for licensing fees and up to \$75,000 in profits from his 1998 crop.<sup>16</sup> If these laws and practices are transposed to developing countries it will be a disaster for the poorest farmers in developing countries who rely on farm saved seed and enter the market to purchase seeds once in five years.*
- **Patents on GRFA do not recognise community rights:** Patents on genetic resources often do not fully recognise the rights of local communities to their traditional knowledge. Creating private property rights over the intellectual rights of many previous generations of farmers (which they have shared as common property for the common good) raises serious questions in respect to 'prior art', and can also viewed as a form of intellectual property theft - so called 'bio-piracy'. *The patent on the anti-fungal properties of neem, the healing properties of turmeric, and the aromatic qualities of basmati rice illustrate the problem with the patent law that allow for patents on traditional knowledge and genetic resources for food and agriculture. More recently, Pfizer acquired patent rights on P57, the appetite suppressing ingredient in the Hoodia Cactus plant from South Africa to produce anti-obesity drugs, without acknowledging or compensating the Kung bushmen who are the holders and preservers of the knowledge for centuries.*
- **Plant breeders' rights and biodiversity:** Farmers indigenous variety of seeds not only ensures the biodiversity protection but also the livelihood security of poor farmers. Genetic diversity in agriculture enables poor farmers to select varieties of plants and animal breeds that are best adapted to changing environmental, economic and social pressures. The DUS criteria of UPOV provides incentives for a particular (industrial) kind of agriculture which is detrimental to biodiversity protection and livelihood security. *The narrowness of the genetic base is responsible for greater risk of crop failure as occurred in the wheat stem rust of 1954 or the southern corn blight of 1970 in the US. The Irish potato famine in the 1840s is a classic example of genetic vulnerability.*
- **Patents on GRFA accelerates corporate control of the seed sector:** Patents promote the consolidation of global seed and agri-chemical businesses, concentrating power over seeds and seed choices in a very few hands. Poor farmers are already vulnerable players in the marketplace – to be operating in an inefficient market biased against them, increases vulnerability. *Developing countries are the source of 90 per cent of the world's biological resources, and developed countries and their transnational corporations hold 97 per cent of all patents worldwide. TNC's are paying premium prices to acquire local companies in developing countries in anticipation of monopoly rents once the IPRs are fully enforced.<sup>17</sup> In the context of large multinational corporations buying up local seed*

<sup>16</sup> [www.rafi.org](http://www.rafi.org)

<sup>17</sup> Reference: ActionAid's research in Brazil and India.

companies, the question of choices really becomes limited. *For example, 60 percent of the corn market in Brazil is controlled by Monsanto*<sup>18</sup>.

- **Patents granting monopolies:** The economic benefits and costs of patenting are not clear-cut. Patents can have anti-competitive effects by securing and strengthening the position of market leaders and limiting the entry of new competitors.<sup>19</sup> *ActionAid's research in a related field, plant breeders rights*<sup>20</sup> *suggests that creation of monopolies is not necessarily linked to inventive activity, so the trade off society makes in granting 20 year monopolies, between free exchange of ideas and future gains from invention, may be a false one.*
- **The conflict of Patents on GRFA with human rights:** The UN Sub-Commission for the Protection and Promotion of Human Rights passed a resolution stating that the TRIPs Agreement could infringe on poor peoples' right, specially their access to seeds and pharmaceuticals. The Human Development Report of the UN has also consistently pointed out the contradiction between human rights and TRIPS.

## 6. Key recommendations

1. TRIPS review - Developed country governments should stop blocking the substantive review of Article 27.3b of the TRIPS Agreement and support developing countries interpretation of the 'review' at the 4<sup>th</sup> WTO Ministerial. (See Annexe 1 for a detailed position)
2. Patents on life - Developed country governments should respond to the concerns of developing countries, and in particular support the African Group's proposal, to clarify 'that plants and animals as well as micro-organisms and all other living organisms and their parts cannot be patented, and that natural processes that produce plants, animals and other living organisms should also not be patentable';<sup>21</sup> and
  - ◆ Respect the right of developing countries not to grant patents on genetic resources for food and agriculture to ensure free and fair access and benefit sharing, in line with the IU and CBD.
3. Sui generis system – Developing countries should not be pressurised into adopting UPOV 1991 as the effective sui generis system. They should be supported and encourage to develop their own national laws that effectively protect community and farmers rights.
4. CBD-TRIPS - Developed country governments should clarify that the WTO TRIPs Agreement must be consistent with (a) provisions in the Convention on Biological Diversity to conserve and sustainably use natural resources, ensure prior informed consent and benefit sharing;
  - ◆ Make disclosure of genetic resources as well as prior informed consent from the holders of genetic material and traditional knowledge mandatory for any IP and access laws.
5. Farmers' rights – Ensure adoption of a strong International Undertaking on Plant Genetic Resources including the international recognition of Farmers' Rights.
6. Indigenous and community knowledge – Ensure recognition and strengthening of the traditional knowledge, innovations, practises and technologies of indigenous people and farming and other communities in appropriate, local, national and international forum, outside the WTO.

<sup>18</sup> Wilkinson, John and Pierina German Catelli. The Internationalization of Brazil's Seed Industry. ActionAid Brazil, 2000.

<sup>19</sup> World Bank. World Development Report, Knowledge for Development, pg 34-35. 1998/99.

<sup>20</sup> Dwijen Rangnekar. ActionAid, March 2000.

<sup>21</sup> WTO. Preparations for the 1999 Ministerial Conference. The TRIPS Agreement – Communication from Kenya on behalf of the African Group. WT/GC/W/302, 6 August 1999.

## Annexe 1

In the run up to and at the WTO 4<sup>th</sup> Ministerial in Doha, ActionAid is calling for:

### **Substantive review of Article 27.3 (b) outside of the review of Article 71.1**

- ◆ The review of Article 27.3b should be substantive in nature.
- ◆ The review should take into account concerns of small women and men farmers as well as indigenous communities around patenting of genetic resources for food and agriculture
- ◆ The review of Article 27.3b should clarify that there should be no patents on life forms (genetic resources for food and agriculture) allowed as per the demand of the African Group of countries at the WTO.
- ◆ There should be no bilateral pressure on developing countries to adopt UPOV as their *sui generis* model.
- ◆ Ensure that the provisions of Article 27.3 b of TRIPS are consistent with the CBD provisions on prior informed consent and benefit sharing with regards to access to genetic resources.
- ◆ Ensure that the provisions of Article 27.3 b provide space to the International Undertaking of the FAO in maintaining a patent free access for key food security crops.

### **Substantive review of the TRIPS Agreement as part of the review of Article 71.1 outside of a new WTO Round**

- ◆ In the context of the review of the whole TRIPS Agreement, support the demand for an impact assessment of the TRIPS Agreement in terms of its link with development, food security, environment, gender etc with a view to modify or amend the agreement if it so warrants.
- ◆ Operationalise Article 7 & 8 of the TRIPS Agreement to ensure primacy of food security and nutritional concerns vis-à-vis security of private intellectual property rights.

## Annex 2

### Article 7 of the TRIPS Agreement (Objectives)

“The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.”

### Article 8 (Principles)

0. Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement.
0. Appropriate measures, provided that they are consistent with the provisions of this Agreement, may be needed to prevent the abuse of intellectual property rights by right holders or the resort to practices which unreasonably restrain trade or adversely affect the international transfer of technology.

### Article 27 (Patentable Subject Matter)

0. Subject to the provisions of paragraphs 2 and 3, patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application...
0. Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect *ordre public* or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law.
0. Members may also exclude from patentability:
  - (a) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof. The provisions of this subparagraph shall be reviewed four years after the date of entry into force of the WTO Agreement.

### Article 71 (Review and Amendment)

0. The Council for TRIPS shall review the implementation of this Agreement after the expiration of the transitional period...The Council shall, having regards to the experience gained in its implementation, review it two years after that date, and at identical intervals thereafter. The Council may also undertake reviews in the light of any relevant new developments which might warrant modification or amendment of this Agreement.

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