

# PROTECTION OF FARMER'S RIGHTS UNDER THE PLANT VARIETIES PROTECTION REGIME: NATIONAL AND INTERNATIONAL PERSPECTIVES

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## I. INTRODUCTION

Farmer's rights have assumed significant importance in the contemporary world. It plays a crucial role in various areas particularly in the area of food security, protection of traditional knowledge and protection of Biological diversity. With the adoption of Trade Related Aspects of Intellectual Property Rights (TRIPs Agreement) in 1995, the world witnessed the raising of two seemingly conflicting concerns one for plant breeder's rights and other for farmer's rights. The former was raised by developed nations and the later by developing nations. The issue of farmer's rights became a complex one with the advent of modern technologies in plant breeding. It is a mixed issue of breeder's rights, farmer's rights, conservation of bio diversity and the traditional knowledge of indigenous people.

The protection of plant varieties by means of intellectual property rights has become a subject matter of growing importance in the post - TRIPs Agreement era. The traditional breeding techniques to generate new plant varieties have been used for hundreds of years, but the systematic intellectual property Rights (IPR) protection for plant breeding is a recent phenomena. The rationale to provide protection to plant varieties is to provide incentive to the actors engaged in plant breeding as returns of their investment in developing that variety. Such protection are of two forms: patents and plant breeder's rights (PBRs).

Patents give the patentee the right to prevent third parties from making, using or selling the patented products or process whereas the PBR holder can only prevent third parties from commercially exploiting the protected material. The criteria used to grant such protection is lower than that used to determine patentability as these are novelty, distinctiveness, uniformity and stability.

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## II. FARMER'S RIGHTS

Since the early 1980's the issue of ownership and control over the world's plant genetic resources has been an extremely contentious one. Developing countries in centers of diversity were and remain very much concerned over the loss of legal and even physical control over germplasm. There was a wide spread perception that the industrialized countries were employing a double standard, treating elite breeding lines and patented material as private property but insisting that the land races and the wild plant genetic resources of the developing world should be treated as the common heritage of mankind.

This issue was debated extensively in the forum of the Food and Agriculture Organization of the United Nations (FAO)<sup>1</sup>. One of the outcomes of the debate was the recognition by FAO of the concept of "farmer's rights" as a parallel to breeder's rights.

"Farmer's 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 trustees of present and future generations of farmers, for the purpose of ensuring full benefits to farmers, and supporting the continuations of their contributions.

In essence the term farmer's rights cover the following main aspects:

- a) Entitlement for benefit sharing for the use of bio diversity conserved by the farming community
- b) Right to save, use, sow, re-sow, exchange, share or sell farm produce including seeds.
- c) Right to claim compensation for under performance of a right protected variety from its promised level under defined production conditions.
- d) Mandatory need to secure consent of farmers when a farmer variety is used to develop an essentially derived variety (EDV)<sup>2</sup>

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<sup>1</sup> FAO Conference Resolution 5/89, Twenty Fifth session of the FAO conference, Rome, September 11-29, 1989.

<sup>2</sup> Article 14(5) (b) of UPOV Convention, 1991 reads:

A variety is deemed to be essentially derived from another variety when it is predominantly derived from the initial variety or from a variety that is itself predominantly derived from the initial variety while retaining the expression of

### A. *Farmer's Rights Under FAO*

International Undertaking on Plant Genetic Resource (IUPGR)<sup>3</sup> was adopted as non legally binding mechanism on Plant Genetic Resource (PGR) in 1983, it is the first comprehensive global mechanism on PGR. By the definition of PGR in the undertaking,<sup>4</sup> the IUPGR applied equally well to the new products of biotechnology, farmer's varieties and wild material.

In the March 1987, meeting of FAO Commission on Plant Genetic Resource, third world delegates argued that if plant breeders had rights of ownership control and compensation by virtue of labouring for a decade to develop a new variety from third world genetic resources then third world farmers also had rights since they had domesticated important agricultural crops-observed, developed and safeguarded the tremendous bio-diversity that breeders and seed industry use as 'raw material'. Farmer's right at the FAO were observed through the creation of an "international gene fund" for the conservation and utilization of plant genetic resources. Such a fund, it was felt would make farmer's right concrete.

One of the basic deficiencies in the idea of 'farmer's rights' as a fund may be that the farmers and local communities do not engage in decisions about bio-diversity and transaction of knowledge. Government and non government agencies involved in collection, receive the "compensation" for information and resource transfer while local communities stay excluded. This system of compensation through aid or assistance for the exploitation of resources by developed counties may be insufficient and inappropriate, moreover the contribution to the gene fund are voluntary unlike royalty payments under intellectual property rights.

The FAO International Treaty on Plant Genetic Resources for Food and Agriculture was adopted by the FAO Conference on November 3,

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the essential characteristics that result from the genotype or combination of genotypes of the initial variety;

- It is clearly distinguishable from the initial variety,
  - except for the difference which result from the act of derivation, it conforms to the initial variety in the expression of the essential characteristics that result from the genotype or combination of genotypes of the initial variety.
- <sup>3</sup> The FAO Conference Resolution 8/83 together with its three annexes on revised agreed interpretation to the effect, as adopted vide Resolutions 4/89, 5/89 and 3/91, together constitute the IUPGR.
- <sup>4</sup> Article 2, IUPGR.

2001 after several years of difficult negotiations. The Treaty replaced the International Undertaking on Plant Genetic Resource for Food and Agriculture of 1983.<sup>5</sup>

Article 9 of the FAO Treaty deals with farmer's rights.<sup>6</sup> The first paragraph recognizes the contribution of farmers. The second paragraph the language of which is inspired by Article 8 (j) of Convention on Biological Diversity, calls upon national governments to protect and promote farmer's Rights. And the third paragraph establishes a kind of farmer's exemption that is different from any existing exception to intellectual property rights conferred, the existing exceptions (including those under UPOV 1978) do not permit third parties to engage in commercial activities.

The FAO Treaty creates a Multilateral System (the 'MS') which covers the plant genetic resources for food and agriculture listed in Annex I to the Treaty. Access to those genetic resources is to be ruled by the conditions set forth by the treaty.<sup>7</sup> Recipients who commercialize products that are plant genetic resource obtained from the multilateral system, shall pay to a trust account<sup>8</sup> "an equitable share of the benefits arising from the commercialization" of those products.

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<sup>5</sup> [www.fao.org/ag/cgrfa](http://www.fao.org/ag/cgrfa)

<sup>6</sup> Article 9 of FAO Treaty provides:

- i. The contracting parties recognizes the enormous contribution that the local and indigenous communities in the centers of origin and crop diversity have made and will continue to make for the conservation and development of plant genetic resources which constitute the basis of food and agriculture production throughout the world.
- ii. The contracting parties agree that the responsibility for realizing farmer's rights as they relate to plant genetic resources for food and agriculture, rests with national governments. In accordance with their needs and priorities, each contracting party should, as appropriate and subject to national legislation take measures to protect and promote farmer's rights, including :
  - a. Protection of traditional knowledge relevant to plant genetic resource for food and agriculture.
  - b. The right to equitably participate in sharing benefits arising from the utilization of plant genetic resources for food and agriculture; and
  - c. The right to participate in making decisions at the national level, on matters related to the conservation and sustainable use of plant genetic resource for food and agriculture.
- iii. Nothing in this Article shall be interpreted to limit any right that farmers have to save, use, exchange and sell farm – saved seed / propagating material, subject to national law and as appropriate.

<sup>7</sup> Article 12, FAO Treaty.

<sup>8</sup> Article 19.3(f), *id.*

This means that traditional farmers do not have the right to oppose the inclusion of their wild varieties and landraces in the MS whenever they fall under the Annex I to the Treaty. Secondly, the benefits arising from the commercialization of products derived from wild varieties and landraces do not go to the farmers who have preserved and eventually, improved them by natural breeding, they go to a trust account.

### *B. Farmer's Rights Under UPOV Convention*

With respect to the protection of plant varieties, there is an international convention known as UPOV Convention (Union for the Protection of New Plant Varieties) which was adopted in 1961 and revised in 1972, 1978 and 1991. The farmer's rights under UPOV is recognized in the form of farmer's exemption. UPOV 1978 provides that prior authorization of the breeder is required for "the production for the purpose of commercial marketing, the offering for sale and marketing", of the reproductive or vegetative propagating material, as such, of the variety.<sup>9</sup>

The right, as defined by the convention, did not cover acts of third parties without a commercial purpose, it followed in the view of a large number of UPOV members, that third parties could practice acts that did not involve such a purpose without needing the prior authorization from the right owner. Therefore where a farmer saved seeds and used those seeds for resowing on his/her farm, there was no breeder's right infringement. This concept has been expanded to comprise some acts that may have some commercial implications, such as traditional bartering among small farmers, but in the light of the 1978 Act's narrow scope, those acts do not constitute marketing as such. This is what is called "farmer's exemption".

The 1991 UPOV Act defined the breeder's right more extensively than the 1978 Act so as to include any acts of production or reproduction, regardless of their purpose or commercial nature.<sup>10</sup> The farmer's exemption could no longer be implied. Under 1991 Act the farmer's exemption has become the subject of a specific provision.<sup>11</sup> It recognizes as an option to member countries, the farmer's exception to save seed, although only

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<sup>9</sup> Article 5, UPOV Convention, 1978.

<sup>10</sup> Article 14(1) (ii), UPOV Convention, 1991

<sup>11</sup> Article 15(2) of the UPOV Convention provides – "[...] each contracting party may within reasonable limits and subject to the safeguarding of the legitimate interests of a breeder, restrict the breeder's right in relation to any variety in order to permit farmers to use for propagating purposes", on their own holdings, the product of the harvest which they have obtained by planting on their own holdings, the protected variety or a variety covered by Article 14(5)(a) (i) or (ii) (that is, an essentially derived variety).

within reasonable limits and subject to the safeguarding of the legitimate interests of the breeder. Some countries such as Denmark restrict the farmer's privilege to save seed to farms below a certain size, or subject it to the payment of an equitable remuneration to the right holder, such as Italy and United Kingdom. The only country that does not allow this privilege at all is France.<sup>12</sup> There are apprehensions that these might affect food security, given that small and traditional farmers would no longer be able to save seeds and maintain their traditional crops and farming techniques.

It is significant to note that the UPOV Convention was adopted to suit the conditions and needs of European agriculture, which differ markedly from those of a majority of the developing countries where agriculture constitutes the central economic activity.<sup>13</sup> The revised Convention aimed at strengthening the rights of commercial breeders and conversely reduced the rights and privileges of farmers.<sup>14</sup> The Convention does not recognize farmers as breeders, and rights over varieties.<sup>15</sup> On the whole, the current international legal framework favours the appropriation of biological resources and traditional knowledge through private property rights.<sup>16</sup>

### C. Farmer's Rights under TRIPS Agreement

The TRIPS Agreement of the WTO obliges members to either provide protection for plant variety through patents or through an effective *sui generis* law or through any combination of the two.<sup>17</sup> While TRIPS Agreement calls for institution of an effective *sui generis* system, there is no reference to UPOV or a call to adhere to any version of it, making it the only exceptional case. Developing countries were of the view that farmer's rights aspect has been dealt adversely in the UPOV Convention and accordingly they took advantage of this clause to devise their own *sui generis* systems. The Protection of Plant Varieties and Farmer's Rights Act, 2001 of India is one such *sui generis* law.

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<sup>12</sup> See OECD (1999) at 26.

<sup>13</sup> Phillipe Cullet, *Farmer's Rights in Peril*, FRONTLINE, April 14, 2000 at 71.

<sup>14</sup> Md. Zafar Mahfooz Nomani, *WTO TRIPS Agreement and Protection of Plant Variety: Imperative and Implication for Indian Intellectual Property Rights Regime* in A.K. Koul and V. K. Ahuja (ed.) THE LAW OF INTELLECTUAL PROPERTY RIGHTS: IN PROSPECT AND RETROSPECT, 2001 at 124.

<sup>15</sup> *Supra* note 13.

<sup>16</sup> *Supra* note 14.

<sup>17</sup> Article 27(3)(b), TRIPS Agreement.

#### *D. Farmer's Rights under Convention on Farmers and Breeders*

Gene Campaign and Center for Environment and Development (CEAD) have drafted an alternative treaty to UPOV to provide a forum for developing countries to implement their farmer's and Breeder's rights. This treaty is called the Convention of Farmers and Breeders (CoFaB) and it has an agenda appropriate for developing countries.

In case of farmer's rights it provides that each contracting state will recognize the rights of farmers by arranging for the collection of a farmer's rights fee from the breeder of new varieties. The farmer's rights fee will be levied for the privilege of using land races or traditional varieties either directly or through the use of other varieties that have used land races and traditional varieties, in their breeding programme.

Farmer's rights will be granted to farming communities and where applicable, to individual farmers. Revenue collected from farmer's rights fees will flow into a National Gene Fund (NGF) the use of which will be decided by a multi – stakeholder body set up for the purpose.

The rights granted to the farming community under farmer's rights entitle them to charge a fee from breeders every time a land race or traditional variety is used for the purpose of breeding or improving a new variety.

Rights granted to the farmer and farming community under farmer's rights are granted for an unlimited period.

### III. FARMER'S RIGHTS AND BIOTECHNOLOGY

Ever since mankind learned to cultivate useful plants, rather than just gather them and their products from the wild, farmers have sought their improvement. Seeds of plants with particularly large yields, or which exhibited other useful traits, were saved for planting the following seasons. In this way, over many years, a vast array of different types, varieties or land races were developed within each crop species. Almost all crops of agricultural significance were first domesticated in regions of the world that are today classified as "developing".

With the application of modern science to agriculture the crop improvement efforts of farmers have increasingly been supplemented by those of scientifically trained plant breeders.

Indigenous varieties, called landraces, evolve through both natural and human selection, and produced and used by third world farmers worldwide, are primitive cultivars. Those varieties created by modern plant breeders in international research centers or by trans national seed corporations are called advanced or elite. Plant breeding by farmers is not considered as breeding, real breeding is seen to begin when this "primitive germplasm" is mixed or crossed with inbred lines in international labs.

The landraces that farmers have developed are not genetically chaotic. Nor do they lack innovation. They consist of improved and selected material, embodying the experience, inventiveness, and hard work of farmers, past and present. Placing the contributions of corporate scientists over and above the intellectual contributions made by third world farmers over thousands of years – contributions to conservation, breeding, domestication, and development of plant genetic resources – is based on rank social discrimination.

The intellectual property rights system that treats plant seeds as corporate inventions is transforming farmers' highest rights to save and exchange seed with neighbours into crime. Small farmers cannot afford the costs of registration and thus they are slowly pushed into dependence on the seed industry. A three level relationship of farmers is created with the corporation<sup>18</sup> - First, farmers are suppliers of germplasm to the transnational corporations; second, they become competitors in terms of innovation and rights to genetic resources; and third, they are consumers of the technological and industrial products of these corporations.

There are at present, two trends reflecting different views as to how farmer's rights should be treated. On one hand, there are initiatives across the world that recognizes the contributions of farmers to agricultural innovation and seed conservation and see patents and PBRs as a threat both to genetic diversity and to farmers. On the other hand the dominant view is that biotechnology is an effective weapon in fighting such major evils as disease, malnutrition, plagues, energy deficits and pollution and no country can afford not to consider it as a high priority.

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<sup>18</sup> Vandana Shiva, *BIOPIRACY: THE PLUNDER OF NATURE AND KNOWLEDGE* (1997) at 54.

## IV. BENEFIT SHARING

Sharing of benefits is an important principle of Convention on Biological Diversity(CBD). Article 8(j)<sup>19</sup> calls for the national protection of traditional knowledge that is associated with bio-diversity, provided such protection is deemed by each contracting party to be possible and appropriate. Farmer's rights or compensation to local farming communities for collective improvements to plant varieties is not specifically addressed under this article of the convention, but countries are free to frame their legislation on this subject.

Article 15 of the CBD governs access to genetic resources. Such access is required to be on mutually agreed terms<sup>20</sup> and subject to prior informed consent<sup>21</sup>. The results of research and development and the benefits arising from the commercial and other utilization of genetic resources have to be shared in a fair and equitable way with the country providing such resources on mutually agreed terms.<sup>22</sup>

This recognition has changed the open access regime that was prevalent in which third world genetic resources were treated as the common heritage of mankind.

In case of seeds, the issue of benefit sharing between two parties is complicated due to various factors, such as: (i) parties are combination of farmers, governments and seed industry; (ii) the ownership and control governing access has two different legal frameworks - the legal framework of the Convention on Biological Diversity recognizing ownership and control as based on national sovereignty; and the legal framework of TRIPs Agreement in GATT/WTO restricting ownership concepts to IPRs of private

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<sup>19</sup> Article 8(j) of the Convention on Biological Diversity provides:  
"Each contracting party shall, as far as possible as appropriate: [...]  
(j) Subject to its national legislation respect, preserve and maintain knowledge, innovation and practices of indigenous and local communities embodying traditional life styles relevant for the conservation and sustainable use of biological diversity and promote their wide application with the approval and involvement of the holder of such knowledge, innovations and practices and encourage the equitable sharing of benefits arising from the utilization of such knowledge, innovations and practices".

<sup>20</sup> Article 15.4, *id.*

<sup>21</sup> Article 15.5, *id.*

<sup>22</sup> Article 15.7, *id.*

industry; (iii) the provider of seed (the farmer) is also the buyer of seed from industry; and (iv) it is not just biological material that is exchanged, but knowledge and technology too.

Farmer's rights are legal rights held by farmers which now need formal recognition in the context of IPR monopolies. The real issue of farmer's rights and access and benefit sharing is to ensure that the public good is not sacrificed for the private interest.

#### V. FARMER'S RIGHTS IN INDIA

The enactment of the Protection of Plant Varieties and Farmer's Rights Act 2001 was an outcome of the India's obligation which arose from Article 27(3) (b) of the TRIPs Agreement which obliges members to protect plant varieties either by patents or by an effective *sui generis* system or by any combination thereof. India decided to protect plant varieties by a *sui generis* law.

##### *Salient Features of Plant Varieties and Farmer's Rights Act, 2001*

The Indian Act on protection of plant varieties is a unique *sui generis* legislation. This Act took a long time since its first draft was made in 1993. It is worth mentioning in this context that a seed review team constituted by Government of India in October, 1967 had recommended that "... this (PBR) system may have many advantages. In the long run, the breeder's right system would be desirable particularly as a means of encouraging private research". Another Bill in 1999 was drafted, but it was recognized that it required various changes, accordingly a redrafted Bill of 2000 was passed by Parliament in August 2001. There are certain unique aspects of this Act in relation to farmers' rights.

##### (i) Farmer

Farmer is recognized as breeder, conservator and preserver of traditional varieties of crops and wild species in addition to cultivator, either directly or indirectly, the Act provides that farmers<sup>23</sup> means any person who:

- i) cultivates crops by cultivating the land himself;
- ii) cultivates crops by directly supervising the cultivation of land through any other persons; or

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<sup>23</sup> Section 2(K), Indian PPVFR Act, 2001.

- iii) conservers and preserves, severally or jointly with any person any wild species or traditional varieties, or adds value to such wild species or traditional varieties through selection and identification of their useful properties.

(ii) Protectable Varieties under the Act

The Act provides protection<sup>24</sup> to new varieties, extant varieties<sup>25</sup> and farmer's varieties. The Act provides that any person specified in section 16 may make application to the Registrar for registration of any variety—

- a. of such genera and species as specified under sub section (2) of section 29; or
- b. which is an extant variety; or
- c. which is a farmer's variety while the de minimus requirement for protection of new plant variety is novelty, distinctiveness, stability and uniformity (NDUS); novelty is not essential for extant and farmer's varieties.

The Act specifically provides that a plant variety having genetic use restriction technology (GURT) like terminator gene is disqualified from protection.<sup>26</sup>

(iii) Disclosure Requirement<sup>27</sup>

The Act requires every application for registration, to state the denomination assigned to such variety by the applicant, to contain a complete passport data of the parental lines from which the variety has been derived along with the geographical location in India from where the genetic material has been taken and all such information relating to the contribution, if any, of any farmer in breeding, evolving or developing the variety.

<sup>24</sup> Section 16, *id.*

<sup>25</sup> Section 2(j) of PPVFR Act provides:

“Extant variety” means a variety available in India which is -

- (i) notified under Section 5 of the Seeds Act, 1966 (54 of 1966); or
- (ii) farmer's variety; or
- (iii) a variety about which there is common knowledge; or
- (iv) any other variety which is in public domain.

<sup>26</sup> Section 29(3), *id.*

<sup>27</sup> Section 18(1), *id.*

The Act provides an exception in case of “farmer’s variety”. There is no requirement to disclose the parental lines and assigning any denomination to such variety.

(iv) Benefit Sharing<sup>28</sup> and National Gene Fund<sup>29</sup>

The Act provides that any person or group of persons who are citizens of India or governmental or non-governmental organizations or firms, if such firms or organizations are formed or established in India, can claim for benefit sharing from a commercial variety, which has been bred by using parental material belonging to such person or group of persons or firms or governmental or non-governmental organizations. The Act also provides for the creation of a national gene fund, the benefit shared under the Act shall be credited to the fund.

(v) Compulsory License<sup>30</sup>

When a breeder or institution or their licensee fail to produce and supply enough planting material of the variety to farmers and causes its non supply or short supply or charges prohibitively high price, the application for grant of compulsory license to undertake production, distribution and sale of the seed or other propagating material of that variety may be made by any interested person.

(vi) Farmer’s Rights<sup>31</sup>

The most progressive step taken by the Indian legislature is probably the inclusion of a separate chapter on farmer’s rights. The Act treats farmers and breeders at par. The extensive farmer’s rights include the following main aspects:

- a. right to register farmer’s varieties;
- b. entitlement for benefit sharing for the use of bio-diversity conserved by the farming community;
- c. right to save, use, sow, re-sow, exchange, share or sell farm produce – including seed of registered variety but not the branded seed;

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<sup>28</sup> Section 41(1), *id.*

<sup>29</sup> Section 45, *id.*

<sup>30</sup> Section 47(1), *id.*

<sup>31</sup> Chapter VI – Farmer’s Rights, sections 39 to 46, *id.*

- d. right to claim compensation for under performance of a right protected variety from its promised level under defined production conditions;
- e. mandatory need to secure consent of farmer(s) when a farmer's variety is used to develop an essentially derived variety (EDV);
- f. protection from legal proceedings related to alleged infringement;
- g. exclusion from paying fee in any legal proceedings in the tribunal and higher courts.

## VI. UPOV CONVENTION AND PLANT VARIETY PROTECTION ACT

The Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPVFR Act) admittedly projects a model perspective of a developing country on varietal protection with harmonious marriage of the essential features of TRIPs Agreement and CBD. While granting PBR to new plant varieties, the Act does not transgress the traditional rights of farmers and recognizes the historic contribution of generations of farmers in a bio-diversity rich country like India for preserving, protecting and enriching this bio-diversity, a legacy of profound value to the modern crop improvement efforts. A comparison can be made between UPOV Convention and PPVFR Act, 2001. It becomes more important because the Government of India has decided to join UPOV Convention.

### *A. New Varieties and Extant Varieties*

UPOV Convention provides for registration of only new varieties of plants that are uniform, distinct and stable. India presently allows registration of both new as well as existing varieties that have the same attributes. However, UPOV Convention does not bar the registration of existing plant varieties and therefore, India could continue with this rule even after joining the UPOV Convention. But in an international system like the UPOV Convention, there needs to be systematic interaction between systems for the registration of extant and new varieties. This is crucial for India since it has a rich variety of plants being traditionally produced, and these could be exploited by new registrations that are recorded in countries that do not record extant varieties or acknowledge them. As a member, India will be obliged to recognize the rights recorded abroad, even if it is at the cost of its own traditional cultivators. On the other hand, UPOV Convention by its very nature does not recognize the registered extant varieties and cannot secure for India any special benefits regarding international understanding in the field.

### *B. Tenure of Registration*

India provides comparatively shorter tenure for new varieties – 15 years for annual crops and 18 years for trees and vines.<sup>32</sup> UPOV Convention provides for legal rights over a much longer period of 20 and 25 years for the two categories, respectively. If providing incentives for private seed breeders is the motive, then a 15 year duration should suffice. Once a crop is cultivated extensively for a number of years, farmers should be able to access it freely, without having to pay a royalty on it. But this scope is limited under UPOV Convention.

### *C. Traditional Knowledge, Research and Local Communities*

UPOV Convention does not allow for the registration of traditional knowledge. Once this knowledge has been used to develop a new plant variety, the latter can be registered for protection. The UPOV rule requires the physical embodiment of knowledge. Traditional knowledge is not protected by Indian law either. However, since India, like many other countries in the South is replete with rich traditions of traditional knowledge in plant cultivation, and since multinational seed corporations based in the West have not shown themselves to be above appropriating such knowledge, India needs to protect its indigenous system. However, the very abstract nature of this resource makes it a difficult task.

India allows for the registration of extant varieties of plants. So plants derived from traditional knowledge, which are cultivated now can be registered in India to prevent others from cultivating these plants without paying royalty. However, where India can get these practices recognized internationally, and fight out the necessary legal battles, remains in doubt. UPOV Convention makes it mandatory that plant varieties based on traditional knowledge have to be new but at the same time it does not acknowledge either traditional knowledge or varieties emanating directly from it which are already in cultivation.

The research clause in UPOV Convention, which is similar to Indian Act,<sup>33</sup> provides for free availability of a registered new variety as a starting material for research. New plants derived from such registered variety, can

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<sup>32</sup> Section 24 (6), *id.*

<sup>33</sup> Section 30, *id.*

be registered as another new variety if sufficient differentiation can be made out. The developers of this new variety do not have to pay any royalty to the original breeders. While this will definitely encourage research and new developments, this together with the fact that traditional varieties are not recognized by the UPOV Convention, would mean that farmers using traditional systems of cultivation will get no share of the benefits.

In a crucial departure from the above, Indian Act has established the concept of benefit sharing. Local communities and farmers have the right to stake a claim to the evolution of a new variety if it is derived from the traditional systems of cultivation practiced by their communities (farmers). This is a very important provision for gene-rich developing countries. In India, despite a lack of clarity, this rule clearly recognizes community rights and attempts to prevent bio-piracy. The signing of the international treaty on Plant Genetic Resources for Food and Agriculture<sup>34</sup> is a major step in this direction.

#### *D. Restrictions on Breeder's Rights*

According to the Indian PPVFR Act, 2001, plant varieties in India can be excluded from registration in cases where prevention of commercial exploitation of such varieties is necessary to protect public order or public morality or human, animal and plant life and health or to avoid serious prejudice to the environment.<sup>35</sup> UPOV Convention places no restrictions as regards the use of terminator technology on the breeders' rights. Inclusion of such provision is likely to cause major uproar in many countries.

#### *VII. Implementation of PPVFR Act, 2001*

The Indian PPVFR Act, 2001 primarily aims at stimulating investment in research and development of new plant varieties to ensure availability of high quality seeds and planting materials to Indian farmers. The Act is considered to be the first formal national legislative attempt in the developing world that may simultaneously address the issue of IPR protection and

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<sup>34</sup> India signed the International Treaty on Plant Genetic Resource for Food and Agriculture during the World Food Summit in June 2002.

<sup>35</sup> Section 29(1), PPVFR Act, 2001.

<sup>36</sup> Sudhir Kochhar, *Plant Variety Protection – A New Challenge for Public Sector Breeding Programmes*, paper presented at the workshop on IPR in the Life Sciences at DARL Pithoragarh, June 2-3, 2003.

equitable sharing of benefits within the territorial jurisdiction of India.<sup>36</sup> Nevertheless, one often gets a feeling that some of the provisions are of more academic significance than of legal acceptability from the point of their implementation.

Benefit sharing is one of the problematic areas. It formalizes the fact that some actors involved in plant variety management, such as farmers cannot easily obtain property rights even though the possibility is now open to them in principle.

Another provision that may find problems during implementation is the right for compensation to the farmer that the propagating material sold to him failed to provide the expected performance. It could be difficult to match the defined crop production conditions. This provision, however, shall protect farmers from spurious seeds or propagating materials with tall production claims, particularly in the case of orchard crops.

There is no provision in the Act for obtaining prior informed consent of farmer breeder. Claims can only be made after a variety is registered. There is no participation before that state and no right to intervene at the point at which a commercial breeder is making an application for registration.

The PPVFR Act, 2001 is faced with real challenges of its implementation vis –a – vis the enforcement of *sui generis* system of plant variety protection. Therefore, there is a need to be more practical and cohesive in our approach to implement various provisions already made in the Act.

#### VIII. CONCLUSION

Farmer's rights is new form of intellectual property at the state of initial conceptualization where the international or national laws are yet to evolve. The introduction of plant variety protection in developing countries is a novelty. It constitutes a significant departure from previous practice, which generally emphasized the free sharing of knowledge at all levels. The challenge is further compounded by the fact that plant variety protection has until now only been introduced in countries with relatively small but highly industrialized agriculture sector. In such a situation, developing countries must thus innovate in this field. Some of the problems they have encountered on the road to developing plant variety protection regime has been the time pressure forced upon them by TRIPs Agreement

implementation deadlines and the pressure brought upon them to adopt an existing plant variety protection regime developed variety by industrialized countries. India in the post-independence era has made significant technology led progress in agriculture. India is a member of TRIPs Agreement and Convention on Biological Diversity and has recently joined the UPOV Convention. These Agreements obligate the members to enact/amend relevant domestic laws. There are two proposed legislative changes to strengthen country's legal rights to traditional knowledge. One suggestion is to create community intellectual rights, which would define and protect the rights of communities over their traditional knowledge. Another suggestion is to strengthen the concept of farmer's right or privileges giving the farmers the legal right to control a particular variety's use and enjoy the benefits of any future profits from commercial success.

To influence the practical impacts of a given property rights regime, a strategy of different duration to different right can be used. It is possible to foster broader development policy goals by reducing the duration of commercial breeder's rights and extending farmers right as far as possible. For example the Indian Patents Act of 1970 which provided till recently that the duration of patents on processes of manufacture for substance intended for use as food would be half the normal term.

It is further suggested that the right of the breeder should be forfeited if he is not able to meet the demand of farmers, leading to scarcity of planting material, increased market price and monopolies. There should be a strong requirement of disclosure information from the breeder.

There is a crying need to increase the IPR literacy, not only in terms of laws, rules and procedures but also in terms of increasing the awareness of the fact that proper balance between breeders rights and farmers rights needs to be maintained for the long term benefits.

At present the most challenging task is the enforcement of the forward looking PPVFR Act, 2001. Institutional capacity building is to be done on priority basis for making such legislation a practical success.