

# India's plant variety protection and Farmers' Rights Act, 2001

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The General Agreement on Trade and Tariffs (GATT), the predecessor to the World Trade Organization (WTO), was established to restore world trade after the end of the Second World War in 1945. Several GATT rounds starting from 1948, dealt with the quotas and duties of tradable commodities between nations. The 1986 GATT Round, popularly known as the Uruguay Round, brought in new elements into the trade discussion, especially relating to agriculture (Box 1). One of the most controversial agreements of the Uruguay Round is that relating to the granting of Intellectual Property Rights on biological materials embodied in the Trade Related Intellectual Property Rights (TRIPS) chapter. TRIPS specifically requires member nations to grant patents on microorganisms, non/biological and microbiological processes as well as effective IPR protection for plant varieties.

TRIPS provides a choice for protecting plant varieties. Members may choose from patents, a *sui generis* system or a combination of the two. Most developing countries including India have decided not to have patents for plant varieties and have chosen the *sui generis* option instead. The *sui generis* system (translating roughly into *self-generating*) means any system a country decides on, provided it grants effective Plant Breeders' Rights. TRIPS does not specify what kind of breeders' rights is meant and it does not say what else a member state can include in its law, apart from breeders' rights. In short, TRIPS is a flexible system, which leaves a lot to the discretion of members. As a response to the TRIPS agreement, India has started enacting a series of domestic laws to implement the commitments it has made (Box 2). The Plant Variety Protection and Farmers Rights Act, 2001, is the Indian *sui generis* legislation.

The Indian law, which has been hailed as a progressive, pro-developing country legislation, has some notable features. Apart from a well-defined breeders' right, it has strong and proactive farmers' rights. In fact the Indian legislation succeeds in balancing the rights of Breeders and Farmers and exploits the flexibility granted in TRIPS, in an intelligent manner. There are clauses to protect the rights of researchers and provisions to protect the public interest.

The Indian legislation is the first in the world to grant formal rights to farmers in a way that their self-reliance is

not jeopardized. What is significant and positive about this legislation is that it charts its own course, deviating from the norms set by the Union for the Protection of New Plant Varieties (UPOV). UPOV is at present the only platform for regulating plant breeders' rights. It is a platform for developed countries which is modulated to protect the interests of agriculture in industrial countries. It does not even have the notion of farmers rights. The innovative Indian legislation has opened up interesting possibilities for developing a developing country platform for regulating breeders' and farmers' rights so that both, not just one, are acknowledged and protected. The salient features of the new law are described in this article.

## Breeders' rights

Breeders' rights over the varieties they have developed are more than adequately protected by the draft legislation. On registration, the breeder has rights of commercialization for the registered variety either in his/her own person or through anyone he designates. These rights include the right to produce, sell, market, distribute, import or export a variety, in short, full control over formal marketing.

The strong protection granted to a plant breeder over his/her variety is seen in the section dealing with infringement of breeders' rights where punishment in the form of substantial fines and jail terms has been prescribed for those who infringe the rights of the registered breeder.

## Penalties for infringing breeders' rights

Violation of breeders' rights can be construed at several levels. It applies to the variety itself as also to its packaging. Infringement will be established if the packaging is the same or even similar, such that the package could appear to be that of the breeder. Legally, a similar-looking package will be considered 'Passing Off' and hence actionable. Anyone other than the breeder naturally cannot use the registered name or denomination. The use of the same or similar name in any way, by action or even suggestion, will constitute a violation and will be punishable. Penalties are prescribed for applying false denomination and for selling varieties to which false denominations are applied.

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The breeders' rights have been strengthened to the extent that if there is mere suspicion of violation or infringement, the onus of proving innocence is placed on the alleged violator. In any prosecution for falsely using a denomination, the burden of proof is reversed and it is incumbent on the alleged violator to prove that the consent of the breeder was obtained. This is somewhat excessive and needs to be toned down. The normal course in law is for the accuser to furnish proof for the accusation and so it must remain in this case too.

Penalties can range from Rs 50,000 to Rs 10 lakh as well as a jail term ranging from three months to two years, depending on the severity of the damage caused. If the violator is actually selling, offering for sale or merely in the possession of a registered variety belonging to someone else, the punishment is somewhat worse. The penalty remains the same, between Rs 50,000 and 10 lakh but the jail term applicable will not be less than six months, going up to two years. If the offence is repeated, the minimum jail term prescribed is one year, extending to three years and the fine starting at Rs one lakh, can go up to Rs 20 lakh.

The Indian legislation, in providing a well-defined breeder's right, provides sufficient incentive for the seed industry to invest in this sector. At the same time, it is important to recognize that IPR protection does not necessarily deliver a successful product. If a variety decisively provides an advantage, it will be bought, if it does not, it will fool the farmers for a few seasons and then fail. It is also necessary to keep in mind that all IPR systems must strike a balance between the monopoly granted to the IPR holder, in this case the plant breeder, and the benefits to society, in this case the farmers and consumers. Since nobody concerned with public interest would want plant breeding to shift into just a few hands, it is important to maintain competition and vitality in the plant-breeding sector. That is why freedom and rights for other researchers to use all genetic material, including IPR protected material, is important. An IPR system in a country should not grant such strong rights to breeders that farmers suffer and their livelihoods are threatened. On the other hand, the breeder's innovation should be rewarded so that they continue to breed useful varieties to benefit agricultural and food security.

### **Rights of researchers**

The Bill has provisions for researchers' rights, which allows scientists and breeders to have free access to registered varieties for research. The registered variety can also be used for the purpose of creating other, new varieties. The breeder cannot stop other breeders from using his/her variety to breed new crop varieties except when the registered variety needs to be used repeatedly as a parental line. In that case authorization is required.

There are however some views that the Indian law actually grants very restricted rights to researchers

because of the acknowledgement of Essentially Derived Varieties (EDV), which is defined in detail in the 1991 UPOV Convention<sup>1</sup>. According to the expansive definition of EDVs, it is felt that all kinds of research will become subject to the breeders' authorization if a protected variety is used for research. In the Indian Act, the breeders' authorization is needed for making EDVs. The processes for making EDV have been made so all-encompassing in UPOV (natural selection, mutant selection, somaclonal variants, backcrosses and transformation by genetic engineering), that all known forms of creating new varieties will be covered. This would squeeze the researcher's space to the extent that for practically any kind of research on the protected variety, the authorization of the breeders will be needed, establishing their control on a lot of germplasm.

### **The Patent Second Amendment Act, 2002**

The Plant Variety Protection Act is supportive of research on transgenics because of the strong rights it grants to plant breeders. However, it is the Patent Second Amendment Act that makes distinct concessions to the biotechnology sector and the breeding of transgenic crops. According to this Act, process patents will be allowed on microbiological, biochemical and biotechnological processes. In this way, methods of genetic engineering, processes in the pharmaceutical industry using microorganisms and related processes will be patentable. There is a curious detail in this section on what constitutes a patentable process, which reflects the special adjustments made for the biotechnology sector. Processes and methods for making plants resistant to disease and for increasing their value or the value of their products, will be patentable. This appears to be tailor-made for the *Bt* cotton situation and other *Bt* and *Bt*-like approaches to introduce resistance to disease.

Discoveries, however, will not be patentable under the Indian law. To qualify for a patent, invention will have to be demonstrated. Plants and animals and species of plants and animals have been kept out of the purview of patents, so have plant varieties and seeds. New varieties of crops and their seeds are thus outside the patent system. Though the Indian law permits process patents, this will not apply to the crucial sector of food. Methods and processes of agriculture and horticulture cannot be patented nor can any other biological processes. The Patent Amendment Act also does not allow the patenting of cells, cell lines, cell organelles like mitochondria and genes.

### **Farmers' rights**

The Act recognizes the farmer not just as a cultivator but also as a conserver of the agricultural gene pool and a breeder who has bred several successful varieties. The Act makes provisions for such farmer's varieties to be

registered, with the help of NGOs so that they are protected against being scavenged by formal sector breeders. The rights of rural communities are acknowledged as well. Farmers' rights are defined in the following way:

*The farmer . . . 'shall be deemed to be entitled to save, use, sow, resow, exchange, share or sell his farm produce including seed of a variety protected under this Act in the same manner as he was entitled before the coming into force of this Act.;*

*Provided that the farmer shall not be entitled to sell branded seed of a variety protected under this Act.*

*Explanation: For the purpose of clause (iii) branded seed means any seed put in a package or any other container and labelled in a manner indicating that such seed is of a variety protected under this Act.'*

This formulation allows the farmer to sell seed in the way he has always done, with the restriction that this seed cannot be branded with the breeder's registered name. In this way, both farmers' and breeders' rights are protected. The breeder is rewarded for his innovation by having control of the commercial market place but without being able to threaten the farmers' ability to independently engage in his livelihood, and supporting the livelihood of other farmers.

#### *Importance of farmers' right to sell seed*

The pivotal importance of the farmer having the right to sell (not save nor exchange, but sell) seed has to be seen in the context of seed production in India. In India, the farming community is the largest seed producer, providing about 87% of the country's annual requirement of over 60 lakh tons. If the farmer were to be denied the right to sell, it would not only result in a substantial loss of income for him but far more importantly, such a step would displace the farming community as the country's major seed provider.

Weak Farmers' Rights, including denial of right to sell seed, will allow seed corporations to dominate the seed market since farmers will be denied the right to function as seed producers. The space vacated by them will be taken by the seed industries since public sector institutions have been so weakened by budget cuts that they could not compete. The seed industry would then become the dominant source of seed. Strong Farmers' Rights, allowing the farmer to continue to be a significant supplier of seed, make the farming community a viable competitor and an effective deterrent to the take over of the seed market by the corporate sector. Control over seed production is central to food security which is in the forefront of national security<sup>2</sup>.

#### *Other kinds of farmers' rights in the bill*

*Contribution of rural/local communities:* Apart from the right to sell non-branded seed of protected varieties, the rights of farmers and local communities are protected in

other ways too. There are provisions for acknowledging the role of rural communities as contributors of landraces and farmers' varieties in the breeding of new plant varieties. Breeders wanting to use farmers' varieties for creating EDVs cannot do so without the express permission of the farmers involved in the conservation of such varieties.

Anyone is entitled to register a community's claim and have it duly recorded at a notified centre. This intervention enables the registration of farmer varieties even if the farmers themselves cannot do this due to illiteracy or lack of awareness. If the claim on behalf of the community is found to be genuine, a procedure is initiated for benefit sharing so that a share of profits made from the use of a farmer variety in a new variety goes into a National Gene Fund.

*Disclosure:* Other details supportive of the rights of farmers are the explicit and detailed disclosure requirements in the passport data required at the time of applying for a Breeders' certificate. Concealment in the passport data will result in the Breeders' certificate being cancelled.

*GURT (terminator) forbidden:* Breeders will have to submit an affidavit that the variety does not contain a Gene Use Restricting Technology (GURT) or terminator technology.

*Protection against innocent infringement:* The draft legislation has also attempted to address a concern voiced by several quarters, that when the new system of Plant Breeders' rights is imposed for the first time, there will probably be many cases of unknowing infringement of breeders' rights. Section 43 specifies that the farmer cannot be prosecuted for infringement of rights specified in the Act if he can prove in court that he was unaware of the existence of such a right.

*Exemption from fees:* Further, protecting farmers from the new set of provisions being put in place, the Bill stipulates that if farmers wish to examine documents and papers or receive copies of rules and decisions made by the various authorities, they will be exempt from paying any fees. Such fees will be payable by all other people.

#### *Clauses that need amendment*

*Benefit sharing:* The use of farmer varieties to breed new varieties will have to be paid for. Revenue will flow into a National Gene Fund. Despite its good intentions of protecting the interests of the farming community, the formulation of this section [46 (2) d] is likely to create problems in implementation because the drafting is poor. The Gene Fund should be the recipient of all revenues payable to the farming community under various heads. Farming communities should collectively, rather than individually, access this money, except in clear cases where an identifiable farmer's variety has been used. Farmers should have the right to decide how this money that they have earned will be spent. The use of the money

should not be restricted to conservation or for maintaining *ex situ* collections.

The method for fixing and realizing benefit sharing should be made simpler and easier to implement. One approach to fixing benefit sharing could be a system of lump-sum payments, based for example on (projected) volume of seed sale.

*Protection against bad seed:* In providing a liability clause in the section on Farmers' Rights, the farmer in principle is protected against the supply of spurious and/or poor quality seed leading to crop failures. At present there is too much left to the discretion of the Plant Variety Authority which will fix the compensation. This could lead to arbitrary decisions and should be amended. If it is proven that the breeder has made false claims and the farmer has suffered a crop failure, then compensation should be awarded amounting to at least twice the projected harvest value of the crop. Compensation should be large enough to be a deterrent. In addition, a jail term should be provided if the breeder repeats the offence<sup>3,4</sup>.

### Protection of public interest

The new Act includes public interest clauses, like exclusion of certain varieties from protection and the grant of Compulsory Licensing. To secure public interest, certain

varieties may not be registered if it is felt that prevention of commercial exploitation of such variety is necessary to 'protect order or public morality or human, animal and plant life and health or to avoid serious prejudice to the environment'.

### Compulsory license

The Act provides for the granting of compulsory license to a party other than the holder of the Breeders' Certificate if it is shown that the reasonable requirements of the public for seeds have not been satisfied or that the seed of the variety is not available to the public at a reasonable price. The breeder is entitled to file an opposition but should the charge be valid, the breeder may be ordered by the Authority to grant a compulsory license under certain terms and conditions including the payment of a reasonable license fee. A compulsory license however will not be awarded if the breeder can demonstrate reasonable grounds for his inability to produce the seed.

### Is UPOV appropriate for developing countries?

The interests of developing countries are not served by UPOV, which is completely insensitive to their needs. In all fairness, UPOV was not created for developing countries and therefore does not address itself to their concerns. In understanding the UPOV system, it is

#### Box 1. WTO agreements related to agriculture

##### Agreement on agriculture

- To establish a fair and market-oriented agricultural trading system which is to be achieved through a reform process with negotiation of commitments on support and protection.
- To provide for substantial progressive reductions in agricultural support and protection.
- The provisions of the Agreement covers market access; domestic support; export competition.

##### Agreement on sanitary and phytosanitary measures

- The Agreement recognizes that Members have the right to adopt or enforce measures that are necessary to protect human, animal or plant life or health. This right is subject to the condition that such measures should not act as a means of arbitrary or unjustifiable discrimination between Members as a disguised restriction on international trade.

##### Agreement on technical barriers to trade

- The Agreement is for the establishment of international standards and conformity assessment system in packaging, marking and labelling, so as to ensure that technical regulations and standards, and procedures for assessment of conformity with technical regulations and standards do not create unnecessary obstacles to international trade.
- No country should be prevented from making provisions to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices.

##### Agreement on trade-related aspects of Intellectual Property Rights

- The Agreement is to promote effective and adequate protection of intellectual property rights and also to ensure that the measures taken in this direction do not become an impediment to legitimate trade.
- It is through Article 27.3(b) of the Agreement that the subject of agriculture is brought under this Agreement. The said Article requires the Members to provide for the protection of plant varieties either by patent or by an effective *sui generis* system or by any combination thereof.

crucial to understand that right from 1961, even when it was more flexible than it is today, UPOV granted only one right, the right to the Plant Breeder. There was never any concept of Farmers' Rights. What was granted at best, was an exemption to farmers and researchers, from the otherwise exclusive rights granted to the breeder.

The UPOV is a corporate-backed organization based in Geneva. It was set-up in 1961 at a time when investments in agricultural research in Western nations were diminishing in the public sector research establishment and moving into private hands. This was a logical step in industrialized economies where the percentage of people engaged in agriculture was reduced to about 2 to 5% of the total population. As the corporate sector made private investments, it sought returns on these investments and set-up UPOV to protect the interests of breeders who were increasingly corporate breeders.

UPOV started as a flexible system, which, apart from granting breeders' rights was not particularly concerned about restricting the exemptions it provided to the other players, namely farmers and other researchers. This began to change as the corporate breeders consolidated their hold on the plant-breeding and seed-producing industry. Amendments to the UPOV convention were brought in 1972, 1978 and 1991. All these amendments had one goal, to further strengthen the hold of the breeder

and reduce any exemptions that were granted in early versions of the convention. The valid treaty of today is the 1991 treaty, which has almost exclusive rights of breeders and no exemptions for farmers or researchers. In fact UPOV has moved to accept the patents system now so that it is not only a platform for breeders' rights but also for patents on plant varieties.

In light of all this and the path-breaking Indian legislation, the recommendation made by the Agriculture Ministry to join UPOV, has stunned the international community and those who have fought hard to get a balanced legislation in India.

The Indian legislation is incompatible with UPOV in the farmers' rights it provides and the strong public interest clauses it contains, which UPOV does not support.

It seems likely that the main casualty of UPOV membership will be the issue of farmers' rights. The 1978 version grants only paltry exemptions to farmers and the 1991 revision of the UPOV Convention has further restricted the scope even of exemptions to farmers that can be granted under national law and the trend is for further restrictions. Any legislation must be 'within reasonable limits and safeguarding the legitimate interests of the breeder' (Article 15.2 UPOV 1991 Convention), The term 'legitimate interests of the breeder' has been widely interpreted to mean compensation or remuneration to the

## **Box 2. Post-WTO Indian legislation pertaining to agriculture**

### **Protection of plant variety and Farmers' Rights Act, 2001**

- The Act is for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants. This Act is to give effect to Article 27.3(b) of the Agreement on Trade Related Intellectual Property Rights, India having ratified the Agreement on Trade Related Aspects of Intellectual Property Rights. The Act recognizes the necessity of protecting the rights of farmers in respect of their contribution made in conserving, improving and making available plant genetic resources for the development of new plant varieties.

### **The geographical indications of Goods (Registration and Protection) Act, 1999**

- According to the Act, the term 'geographical indication', in relation to goods, means an indication which identifies such goods as agricultural goods, natural goods, or manufactured goods as originating, or manufactured in the territory of a country, or a region or locality in that territory, where a given quality, reputation or other characteristic of such goods is essentially attributable to its geographical origin. In case where such goods are manufactured, one of the activities of either the production or of processing or preparation of the goods concerned takes place in such territory, region or locality, as the case may be.
- The Act is for the exclusion of unauthorized persons from misusing geographical indications, add to the economic prosperity of the producers of such goods and also promote goods bearing Indian geographical indications in the export market. Unless a geographical indication is protected in the country of its origin, there is no obligation under the TRIPs Agreement for other countries to extend reciprocal protection.

### **The patent (Second Amendment) Act, 2002**

- The non-patentable aspects of the invention are specified. This includes plants, animals in whole or any part thereof, including seed varieties and essentially biological processes for the production or propagation of plants and animals.
- Microorganisms per se can be claimed provided, they are not mere discovery of organisms existing in nature.
- Methods for rendering plants free of diseases or to increase their economic value will be patentable.
- The Act of 2002 makes it mandatory to deposit the biological material mentioned in the specification with a depository notified in the Gazette of India. The source and geographical origin of the biological material must also be disclosed in the specification.

breeder if the farmer even saves seed from his harvest, to plant the next crop<sup>5</sup>.

Senior scientists of the ICAR and bureaucrats of the Agriculture Ministry who have been UPOV's strongest advocates, offer the argument that joining UPOV will allow India to protect its breeders' rights without having to do bilateral agreements. The fact is that Indian varieties for which there is demand outside are essentially sugarcane, spices and some wheat varieties. These are grown in Africa and some Asian countries, none of which are UPOV members. UPOV members like Japan, Korea, USA, EU, Canada, etc. do not grow any Indian varieties. So on the face of it, the decision to join UPOV makes absolutely no sense.

### An alternative to UPOV

The Gene Campaign, along with other civil society organizations, believes that UPOV does not have conditions favourable to developing countries<sup>6</sup>. It is absolutely necessary that developing countries need to craft their own platform, to address their special needs, which are very different to the needs and requirements of, industrialized countries for whom UPOV was developed.

Some efforts have already been made to provide an alternative to UPOV. The model law drafted by the Organization of African Unity (OAU) and the Gene Campaign's Convention of Farmers and Breeders (CoFaB) is being discussed in various forums. CoFaB has been analysed along with UPOV<sup>7</sup> and described by the UNDP as 'a strong and coordinated international proposal which offers developing countries a far better alternative to European legislation, by focusing on the need to protect farmers' rights and food and nutritional security goals of their people'<sup>8</sup>.

CoFaB and the OAU model law reflect the strengths and vulnerabilities of the developing countries. They aim to secure their interests in agriculture and fulfil the food and nutritional security goals of their people. CoFaB and the OAU law seek to achieve *inter alia* the following goals:

- Supply of reliable, good quality seeds to the small and large farmer.

- Provide for breeders of new varieties to have protection for their varieties in the market, without prejudice to public interest.
- Acknowledge the role of farmers as creators of land races and traditional varieties which form the foundation of agriculture and modern plant breeding.
- Acknowledge the enormous contribution of farmers to the identification, maintenance and refinement of germplasm.
- Provide a mutually acceptable system of access to biological resources, community knowledge, technologies and practices subject to the prior informed consent of the State and the concerned local communities.
- Provide and promote appropriate mechanisms for the enforcement of the rights of local communities, including farming communities, and breeders and the conditions essential for access to biological resources, community knowledge, technologies and practices.
- Ensure that plant genetic resources are utilized in a sustainable and equitable manner so as to guarantee national food security.
- Maintain genetic diversity in the field.
- Emphasize that the countries of the tropics are germplasm-owning countries and the primary source of agricultural varieties.

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