

Plant Varieties Recognising Farmers

Since the dawn of settled agriculture, generations of farmers world over, and particularly in the centers of crop plant diversity have been continuously selecting domesticated plants to generate many varieties suiting to different agro-climatic and soil conditions. These varieties were also selected to meet changing agronomic requirements such as resistance against different biotic and abiotic stresses, climatic changes and food and fodder needs.

Over the millennia, many crop plants spread across the globe through natural processes, human migration, wars, trade, etc. In their new habitats, they got adapted and generated more variability, suited to the new environmental niches, under selection by local farmers. All along human history until recently, all farmers and breeders across the world freely shared the whole genetic resources of crop plants, irrespective of their centre of origin. The global crop genetic diversity was held as 'common heritage of mankind', with no specific ownership to either a region or a

country or a community or an individual.

This was despite the fact that each plant genetic resource is a product of considerable innovative efforts cumulatively achieved through intelligent selection and diligent conservation across thousands of seed cycles. During the long process of cultivation, selection and conservation in each region, farmers generated a vast body of traditional knowledge from their intimate understanding on each plant variety. This traditional knowledge on each variety in a way showcases its economic value. It would be largely true to state that modern plant breeding had not identified many new traits in most of the genetic resources, which were already not known to farmers. The collective socio-economic capital of this traditional knowledge and the plant variety diversity is so huge to estimate.

Origin of private right on plant genetic resources

It was this immense economic

potential of crop genetic resources and the modern market economic thinking that forced a new turning point to the time-honoured practices on this 'common heritage of mankind'. For the first time in human history, the United States of America in 1930 introduced ownership rights through patents on vegetative propagated plant varieties. Following this, in 1961, a few European countries joined together to establish Plant Breeders' Right (PBR) on newly bred plant varieties under the International Convention on the Protection of New varieties of Plants (UPOV). Since 1980, the USA and few other countries extended the patent to all plant varieties. The Uruguay Rounds on the General Agreement on Tariffs and Trade (GATT) started from 1986 culminated in the establishment of World Trade Organization (WTO) and the Trade Related aspects of Intellectual Property rights (TRIPS). TRIPS universalised the IPR protection on plant varieties. The TRIPS required all members of WTO

to provide intellectual property rights protection to plant varieties either by patents or an effective sui generis system or a combination of both. While patent is widely understood, sui generis system of intellectual property protection is less known. The Latin word sui generis means 'unique by itself' or 'generated by oneself'. A sui generis law on plant variety offers what is called the Plant Breeder's Rights (PBR). Unlike the patent law, the sui generis system of plant variety protection offers certain level of flexibility to a country for devising an effective PBR with due consideration to the socio-political realities embedding the law.

Plant Breeder's Right and embedded flexibility

PBR confers up on the breeder of a plant variety a right to exclude others from production, selling, marketing, distributing, importing or exporting of its seed or other propagating material. This exclusive right, *senso stricto* precludes farmers from producing seed or planting material from a crop raised from the seeds of a

protected variety and its planting back, sharing or exchanging with other farmers. In this sense, the PBR is similar to the patent right.

Origin of Farmers' Rights

Farmers' Right concept was mooted in 1983 by the Council of Food and Agriculture Organization (FAO), which was chaired by Prof M.S. Swaminathan, in response to the expanding intellectual property protection on plant varieties and its appropriation by plant breeders or seed companies. Respecting the national public opinion on intellectual property rights, India amended the Patent Law in 2002, where it did not allow grant of patents to plants and animals and their parts. Therefore, the only option left to India for complying with the TRIPS commitment on plant variety protection was the sui generis system. India legislated the Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPVFR Act).

Framework of the Act

This Act has national mandate. The Act is administered by the Protection of Plant Varieties and Farmers' Rights Authority, which has a body corporate status with head office at Delhi. Currently the office is located at NAAS complex, Pusa Campus, New Delhi. Developing and refining test methods on the eligibility criteria of varieties, conduct of these tests,



characterization and documentation, indexing and cataloguing of all plant varieties, periodic publication of list of registered varieties, collection of comprehensive statistics on plant varieties, and ensuring availability of seeds all registered varieties to farmers are other responsibilities of the Authority.

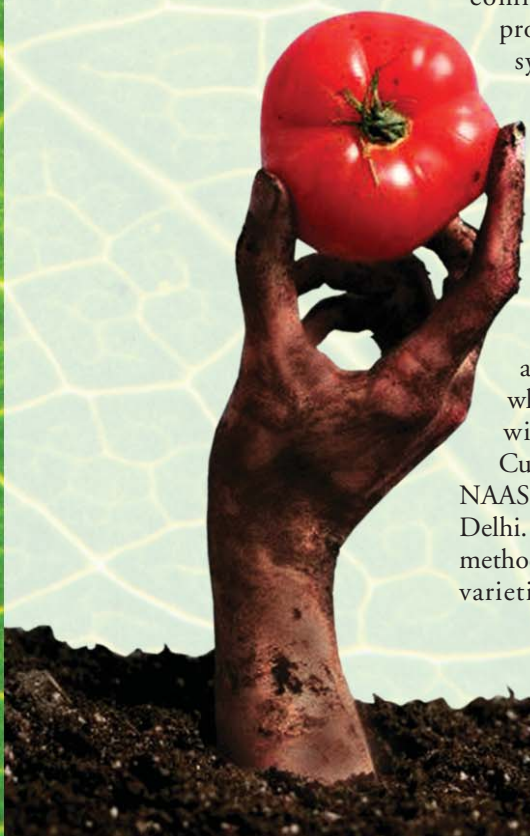
The Act provides for establishment of a Plant Varieties Protection Appellate Tribunal with jurisdiction on the jurisprudence of this Act.

Plant Varieties Registry

The process of granting intellectual property rights on plant varieties is called 'registration'. The IPR on plant variety under sui generis system is called as Plant Breeder's Right (PBR). The Registry is responsible for granting this PBR.

Crop Species and Varieties Eligible for Registration

The Act provides for the registration of new variety, extant variety and farmers' variety. Extant variety is defined as those varieties notified under Sec.5 of the Seed Act, 1966, or farmers' variety, or a variety, which is in common knowledge, or



any other variety in public domain. A farmers' variety is defined as a variety, which is evolved and traditionally cultivated by farmers', or a landrace or a wild relative about which the farmers' possess common knowledge.

Parties eligible for Registration

According to the Act, the eligible applicants for registration of plant variety are either the breeder of a variety, or any successor or assignee of such breeder, or any farmer or group of farmers, or community of farmers, or any person who is authorized to undertake the registration on behalf of the said farmers, or any university or publicly funded agricultural institutions. It is important that any party registering a variety should have adequate proof to prove to the satisfaction of the Authority that the applicant has reasonable claim on the candidate variety.

Eligibility Criteria for Registration

The Act provides two sets of eligibility criteria for the Registration of new variety and extant variety. Extant varieties are required to satisfy the three requirements, namely, distinctness, uniformity and stability. In addition to these requirements, the new variety is required to satisfy novelty.

Plant Breeder's Rights

According to this Act, a certification of registration for a variety shall confer an exclusive right on the breeder, or his/her successor, or the agent, or the licensee, to produce, sell, market, distribute, import or export the variety. This PBR shall be subjected to such limitations and conditions as may be specified in the rules and regulations. Two important limitations provided in the Act are the Researcher's Right and Farmers' Rights.



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Duration of PBR and its maintenance

Registration of a variety, according to this Act offers PBR for a period of 18 years for varieties of trees and vines (eg. mango, apple, coconut, betel vine, grapes, black pepper, etc) and 15 years for varieties of annual crops (eg. rice, maize, green gram, yams, tapioca, cotton, etc). However, initial grant of the PBR is limited to nine years in the case of trees and vines and six years for other crops.

Benefit Sharing

Benefit sharing is a legally binding international commitment on India under the Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic

Resources for Food and Agriculture. The Indian Biological Diversity Act, 2002 also stipulates the essentiality of benefit sharing whenever an IPR is to be established within or outside India on any product or process derived from the use of any components of Indian biodiversity or associated traditional knowledge.

Researcher's Right

One of the objectives of this Act is development of new plant varieties to promote accelerated agricultural development and supply of increasingly high quality seeds and planting material to farmers. This can be best served only with uninhibited access to the genetic resources available in the country for research and breeding. The Act seeks to facilitate such access through Researcher's Right (RR). RR allows access of any variety registered under this Act by any person for use in experiment or research, including use of such a variety for breeding new varieties¹⁶. Only one exception is that a registered variety shall not be repeatedly used as a parental line for commercial production of a newly created variety. When such repeated use is warranted for commercial seed production of the new variety, prior authorization of the PBR-holder of the variety, which is used as the recurrent parent, is mandatory.

National Gene Fund

The Act provides for establishment of a National Gene Fund (NGF) by the Central Government. The receipts to NGF may include contributions from national and international sources, benefit share deposited, annual fee payable for retention of registration of varieties and compensation awarded on plant breeders. The NGF is required to be used for disbursement of benefit share and compensation to the parties

concerned, promoting on-farm conservation of traditional varieties and wild species, for reward and recognition to conservers and sustainable use of genetic resources at community and Panchayat levels. Priority on conservation is to be given to regions identified as genetic diversity.

Farmers' Rights

India is considered to be the primary center of origin of about 168 crop species and secondary centre of diversity for many more crops. Indian farmers, over thousands of years, had been making continuous and rich contributions to the development, improvement and conservation of many traditional varieties of these crops and to the understanding and conservation of wild relatives of some of these crops. These traditional varieties and wild species are critical

resource base for improvement of these crops by modern plant breeding. Crop improvement in future to sustain global food security cannot be done without continued role of farmers in creating and conserving genetic variability. Fundamental to this signal contribution made by farmers is their traditional right on the seeds of plant varieties.. It is relevant to state that among many sui generis laws enacted across the world, it is only the Indian law which gives such triple recognition to farmer and accompanying FR.

1. Right on seed.
2. Right to register farmers' variety.
3. Right to receive equitable benefit sharing.
4. Right to receive reward and recognition.
5. Right to get adequate seeds of registered varieties.

6. Right to claim and receive compensation for under-performance of registered variety.
7. Requirement to seek consent of farmer.
8. Non-cognizance of innocent infringement committed by farmers.
9. Exclusion of farmers from paying fee.

Compulsory licensing

All IPRs have two important roles to serve. Building a monopoly on the innovation to achieve private gains and working of the innovation to serve the public interest by improving economic opportunity or quality of life. For ensuring the latter role of the IPR, most IPR laws invariably provide a clause like compulsory licensing. Under PPVFR Act, compulsory licensing shall be applicable to a variety on completion of three years from date of its registration. A registered variety may attract compulsory licensing when there is wide public perception that the seed of the variety is not made available to farmers in adequate quantity and that it is being sold at unreasonable or exorbitant prices. On satisfaction of these two grounds, the PPVFR Authority can grant compulsory license on a variety.

Penalty

The Act imposes stiff penalty for infringements of PBR, such as conducting unauthorized commercial transactions with the propagating material of the variety by either direct or deceptive methods. Relief on such infringements apart from prescribed penalty shall include ex parte injunction or an interlocutory order to confiscate documents and other evidences on infringement and if necessary, to attach the property of the defendant to recover the damages, costs and other pecuniary remedies awarded to the PBR-holder. ■

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Objective of the PPVFR Act

- To fulfil National commitment under Trade Related aspects of Intellectual Property Rights (TRIPS) of the WTO to provide intellectual property rights protection to plant varieties.
- To recognize and protect the rights of farmers' in respect of their profound contribution in conserving, improving and making available plant genetic resources for developing new plant varieties.
- To institute plant breeders right with a view to stimulate investment in research leading to the development of new plant varieties to catalyze and accelerate agricultural development in the country.
- To promote growth of seed industry to facilitate availability of high quality seeds and planting material to farmers.