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A STUDY ON THE LEGISLATIVE FRAMEWORK ON THE PLANT VARIETIES PROTECTION IN INDIA

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Introduction

The protection extended by intellectual property regime is a vital player in extending protection to new plant varieties, essentially derived varieties and extant varieties etc., Agriculture contributes to about 23% of GDP. Agricultural sector acts as a huge source of livelihood by providing employment to 59% of the population. 82% of the farmers have small and marginal landholdings. In the rural areas more than 70% of the households depend on agriculture for their livelihood.¹

Intellectual property regime aims at rewarding the inventor for the intellectual and creative investment by the mind of the inventor. These creations bear the reflection of the mind of the author, inventor or creator. The Intellectual Property system allows the inventor to make economic exploitation of their invention to the exclusion of other persons for a definite time period. IP protection is extended to inventions since these inventions also contribute largely to the cultural and intellectual sphere of a community thus leading to the wellbeing of the society.

Plant breeding and seed supply require intellectual property protection for its growth. Selective traits such as higher yields, drought resistance, and improved quality can be inherited by crops only after trying and testing the same for several years. This process requires a number of years of labour, skill and a huge investment of material and economic resources. However when the developed plant variety is introduced into the market is usually reproduced by other breeders thus depriving the original breeder the opportunity to commercially exploit the breed developed by him. Thus one of the key enabler for the development of new plant varieties or developing the existing plant varieties is an effective system of plant variety protection. The international system of intellectual property protection regulates the import of foreign varieties, export of indigenously developed varieties.²

¹ <https://www.fao.org/india/fao-in-india/india-at-a-glance/en/>

² Lence, Sergio & Hayes, Dermot & Alston, Julian & Smith, J.. "Intellectual property in plant breeding: Comparing different levels and forms of protection", European Review of Agricultural Economics, 2015.

Global Perspective

In the year 1883 the Paris convention³ first chanced the idea that agriculture must be explored as an area to which intellectual protection can be extended. However due to the existing state of technology at that time the IP protection for agriculture were trademarks and indications of source.

The United States of America was the first state to recognise the intellectual property for plant breeds through the Plant Patent Act⁴. This law aimed at extending protection to asexually propagated plants. This law triggered the discussion on extending IP protection to the field of agriculture. There were divided arguments on whether or not to extend protection to plants or to extend sui generic protection to new plant breeds that are developed. The debate further extended to assess whether this protection could also be given to plants or animal varieties or essentially biological processes since plants and animals as such are excluded from patentability.

WTO

The rapid progress of technology established that extending IP protection to agriculture would also led to protection of farmer's rights and rise in the prices due to monopolisation of the agricultural produce. Efforts to make a global sui generic system for the protection of new varieties of plants were first initiated at the International Convention for the Protection of New Varieties of Plants⁵ at the behest of the international Union for the Protection of New Varieties of Plants (UPOV). Presently 75 countries have signed the agreement.⁶

The indigenous communities and farmers around the world had experienced severe exploitation of the plant genetic resources that were safeguarded and developed by them. The exploitation of the traditional knowledge that was preserved by these communities for centuries led to the adoption of through 2 international treaties Convention of Biological Diversity,⁷ and the Food and Agriculture Organization (FAO)⁸, International Undertaking on Plant Genetic Resources⁹ which was later used to develop the Seed Treaty. The treaty aimed at facilitating the

³ Paris Convention for the Protection of Industrial Property, 1883

⁴ The Plant Patent Act, 1930, 35 U.S.C. 161

⁵ International Convention for the Protection of New Varieties of Plants, 1961

⁶ https://www.upov.int/edocs/pubdocs/en/upov_pub_221.pdf

⁷ Convention on Biological Diversity, 1992

⁸ Food and Agriculture Organization of the United Nations, 2001

⁹ The International Treaty on Plant Genetic Resources for Food and Agriculture, 2004

mechanism for benefit sharing and access to genetic resources. The Nagoya Protocol¹⁰ which was adopted later further streamlined the exploitation of genetic resources.

In the year 1995 the establishment of the WTO led to the adoption of the TRIPS Agreement¹¹ which mandated all member countries to implement a system of protecting IP in agriculture. The international conventions, treaties, protocols regulating the usage of biological resources encouraged a flurry of research and innovations on a universal level.

The TRIPS Agreement first streamlined intellectual property into the international trading system. The TRIPS Agreement extends protection to three items related to agriculture. Articles 22-24¹² deals with patent protection to geographical indications, Articles 70.8 and 70.9¹³ deal with agricultural chemical products, Article 27.3 (b)¹⁴ extends protection to plant varieties. The TRIPS Agreement requires that member states to provide patent protection to plant varieties either through patents or through a sui generic system. The member states however reserve the right to determine the scope of the rights that are granted under the sui generic system.

Legislative Framework regarding protection of Plant varieties in India

India has enacted several legal instruments in response to its international obligations under various treaties and conventions. These include the Seeds Act,¹⁵ The Patents Act¹⁶ and its subsequent amendments; the Geographical Indications of Goods Act¹⁷, and the Biological Diversity Act, 2002¹⁸.

Seeds Act¹⁹: Enacted to ensure the availability of good quality seeds to farmers following the introduction of high-yielding varieties in the 1960s, the Seeds Act established a framework for seed certification and quality control. The Act also provides for the formation of advisory bodies, seed certification agencies, seed testing laboratories, and regulatory mechanisms for

¹⁰ The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, 2014

¹¹ The *Agreement* on Trade-related Aspects of Intellectual Property Rights, 1999 (1869 UNTS 299)

¹² Articles 22-24 of The *Agreement* on Trade-related Aspects of Intellectual Property Rights, 1999 (1869 UNTS 299)

¹³ Articles 70.8 and 70.9 of The *Agreement* on Trade-related Aspects of Intellectual Property Rights, 1999 (1869 UNTS 299)

¹⁴ Article 27.3 (b) of The *Agreement* on Trade-related Aspects of Intellectual Property Rights, 1999 (1869 UNTS 299)

¹⁵ The Seeds Act, 1966, Act No. 54 of 1966

¹⁶ The Patents Act, 1970, Act No. 39 of 1970.

¹⁷ The Geographical Indications of Goods (Registration and Protection) Act, 1999, Act No. 48 of 1999

¹⁸ The Biological Diversity Act, Act No. 18 of 2003

¹⁹ Supra note 15

seed distribution.

Patents Act²⁰ : This Act, first implemented under British rule, has undergone several amendments to comply with the WTO's TRIPS Agreement. These amendments introduced a TRIPS-consistent patent regime, including provisions for product patents in pharmaceuticals and other fields, while excluding plants, animals, and traditional knowledge from patentability.

Geographical Indications of Goods Act²¹: Enacted to provide registration and protection for geographical indications, this Act is administered by the Controller General of Patents, Designs, and Trade Marks. It aims to protect the names of products that have a specific geographical origin and possess qualities or a reputation due to that origin.

Biological Diversity Act²²: In response to the Convention on Biological Diversity, the Act regulates access to biological resources and associated traditional knowledge to ensure equitable benefit-sharing. It also supports conservation efforts and the protection of traditional knowledge, with the National Biodiversity Authority overseeing its implementation.

Protection of Plant Varieties in India

In the Indian context it was understood that protection of plant varieties is imperative since agriculture was a significant contributor to the nation's economy. Therefore the need was felt to have a balanced approach to protect the interests of the farming community. This led to the enactment of the plant varieties and farmers rights protection Act²³. This Act has several unique features as it assimilates the provisions of UPOV, CBD²⁴ and several other distinctive features of its own.

The Act establishes the Protection of plant varieties and farmers rights an authority which under the Ministry of Agriculture besides the Chairperson, the Authority has 15 members, notified by the Government of India to cater to the following major objectives of the Act:

- a) To establish an effective system for protection of plant varieties and rights of farmers and plant breeders.
- b) To acknowledge and protect the breeders who play a significant role in developing new plant varieties
- c) To catalyse the investment and research in the field of agriculture.

²⁰ Supra note 16

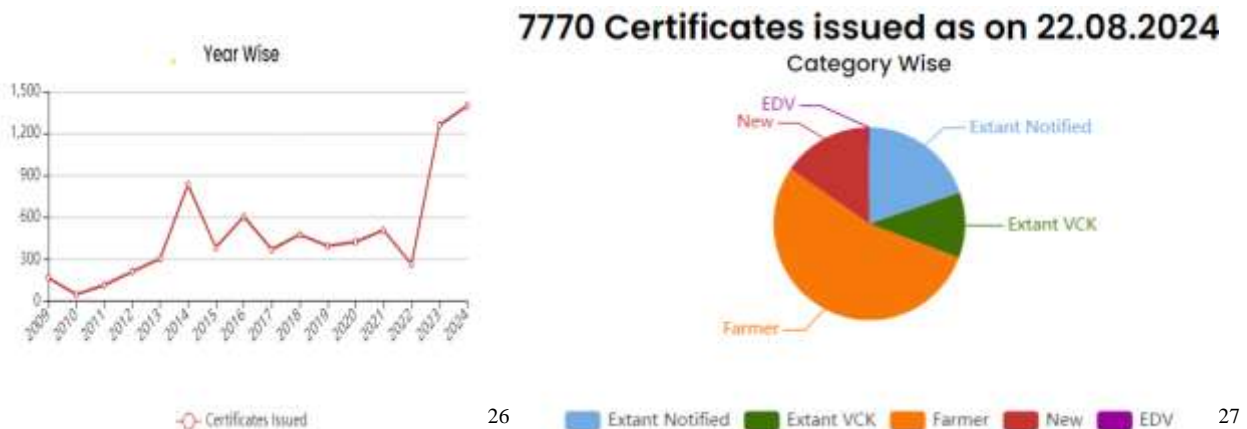
²¹ Supra note 17

²² Supra note 7

²³ The Protection of Plant Variety and Farmers Right Act, 53 of 2001

²⁴ Supra note 7

- d) To promote the growth of the seed industry so that high quality of seed resource is available to the farmer. To maintain a national register of new plant breeds developed.
- e) Registration of Plant Varieties Section 29(2) of the Act²⁵ provides for the registration of eligible species. The guidelines laid down by the authority specify the Distinctiveness, Uniformity and Stability which must be met by the plant varieties.



The registration of new plant varieties must be accompanied by registration fee. The fee varies based on whether the registration is based for new or essential or extant plant varieties. However fees is not required for a plant variety that has been developed by a farmer. The National Register²⁸ which is maintained by the Authority acts as an authentication of the rights granted to the applicants. The certificate of registration issued by the Authority will be valid for a period of 9 years in case of trees and vines. On submission of application the registration will be extended for a period of not more than 18 years.²⁹

National Gene Bank and Field Gene Bank

The Act makes it mandatory to maintain the seed samples and propagating material for plant varieties which are protected under this Act. This helps in contesting issues pertaining to patent protection of these varieties. Seed samples are maintained by the National gene bank³⁰. The Authority has also opened a “National Register of Plant Varieties” having all details of the registered plant varieties and kept at the Headquarters of the Authority at New Delhi.

²⁵ Section 29(2), The Protection of Plant Variety and Farmers Right Act, 2001

²⁶ <https://plantauthority.gov.in/>

²⁷ <https://plantauthority.gov.in/>

²⁸ Section 13, The Protection of Plant Variety and Farmers Right Act, 2001

²⁹ *Ibid*

³⁰ Section 27, The Protection of Plant Variety and Farmers Right Act, 2001

Rights Provided under the Act

Breeders' Rights³¹

Breeders, or their successors, agents, or licensees, hold exclusive rights under the Act to produce, sell, market, distribute, import, or export a registered variety. A breeder can authorize others to handle these activities for the registered variety. During the period between the filing of an application and the Authority's decision, breeders are provisionally protected against any unauthorized actions by third parties. Enforcement of breeders' rights can be pursued by filing an infringement suit concerning the registered variety. Remedies may include the discovery of documents, preservation of the infringing variety, and attachment of the infringer's property. However, these rights do not extend to farmers who save, exchange, or use part of the seed from the first crop of plants they have grown for sowing on their farms to produce subsequent crops. Plant breeders are also restricted from exercising their rights when protected varieties are used as initial sources for developing new plant varieties.

Researchers' Rights³²

Researchers are permitted to use any registered variety under this Act for experiments or research. This includes using a variety as a starting point for creating new varieties. However, the breeder's authorization is required if the registered variety is repeatedly used as a parental line for commercial production of a newly developed variety.

Farmers' Rights³³

The Act grants comprehensive rights to farmers in line with the FAO International Undertaking on Farmers' Rights and related CBD Articles on biodiversity conservation and benefit-sharing. This provision is distinct from the UPOV framework, which treats farmers' rights as privileges rather than inherent rights, unlike breeders' rights. Farmers' rights are recognized as positive rights, acknowledging their past, present, and future contributions to conserving, improving, and making Plant Genetic Resources (PGR) available, particularly in centers of origin/diversity. The Act allows farmers to register their varieties without paying fees and ensures they benefit from sharing if their material is used to develop new varieties. Farmers are entitled to save, use, sow, re-sow, exchange, share, or sell their farm produce, including seeds of a protected variety, as they could before the Act, provided they do not sell branded seeds.

³¹ Section 38, The Protection of Plant Variety and Farmers Right Act, 2001

³² Section 30, The Protection of Plant Variety and Farmers Right Act, 2001

³³ Section 39, The Protection of Plant Variety and Farmers Right Act, 2001

Rights of Communities³⁴

This provision compensates villagers or local communities for their significant role in the development of a registered variety. Claims for compensation can be filed on behalf of these communities by any person, group, or organization. After verifying the claim and allowing the breeder to raise objections, the Authority may order compensation to be paid, subject to limits set by the Central Government. The breeder may be directed to deposit this compensation into the Gene Fund, with arrears treated as land revenue.

Benefit Sharing³⁵ and Compulsory Licensing³⁶

The Act outlines provisions for benefit sharing in relation to registered varieties under two main scenarios. First, specifically concerning Essentially Derived Varieties ³⁷, and second, allowing village or local communities to claim benefits for their contributions to the development of a registered variety under Section 41. For an EDV, any Indian citizen, group of citizens, firm, or organization, whether governmental or non-governmental, can claim a share of the benefits from commercialization within six months of the registration certificate's publication on behalf of any village or local community. The Authority assesses the validity of the claims and determines the amount to be paid based on two criteria: (a) the extent and nature of the claimant's use of genetic material in developing the variety and (b) the commercial utility and market demand for the variety. If any benefit-sharing amount is determined, the breeder must deposit it into the National Gene Fund.

In the second scenario, any individual or group, including firms and organizations, can claim compensation on behalf of a village or local community for their contribution to the development of any variety registered under the Act. The applicant must provide detailed information about the parental lines and the geographical location in India from where the genetic material was sourced, including the contribution of any farmer, community, or organization involved in the development of the variety. If the claim is justified after investigation, and after giving the breeder an opportunity to object and be heard, the Authority will determine the compensation, which the breeder must then deposit into the National Gene Fund³⁸.

³⁴ Section 41, The Protection of Plant Variety and Farmers Right Act, 2001

³⁵ Section 26, The Protection of Plant Variety and Farmers Right Act, 2001

³⁶ Section 47, The Protection of Plant Variety and Farmers Right Act, 2001

³⁷ Section 26, The Protection of Plant Variety and Farmers Right Act, 2001

³⁸ Section 45, The Protection of Plant Variety and Farmers Right Act, 2001

The Authority is also responsible for ensuring the availability of seeds from registered varieties to farmers, including the provision for compulsory licensing. According to Section 47 of the Act, after three years from the registration date, anyone can appeal for a compulsory license on the grounds of inadequate seed supply or unreasonably high prices from the breeder. The Authority will hear both parties and may, in the public interest, order the breeder to grant a license to a third party upon payment of a fee. The duration of a compulsory license can vary, but it will not exceed the period of protection. The Authority can also set terms and conditions, modify, or revoke the compulsory license as needed.

National Gene Fund

The Central Government established the National Gene Fund, which is funded through benefit-sharing payments from breeders of registered varieties or essentially derived varieties, annual royalties from breeders, compensation deposited³⁹, and contributions from national and international organizations. The Gene Fund is used to support conservation and sustainable use of genetic resources, including in-situ and ex-situ collections, and to strengthen Panchayat capabilities in conservation efforts. It also funds benefit-sharing schemes⁴⁰.

The Central Government is responsible for creating schemes that address registration, processing, enforcement of claims, and the utilization of benefit-sharing funds for the breeding, discovery, and development of varieties. The funds are also used to support and reward farmers and farming communities, particularly those in agro-biodiversity hotspots, for their conservation efforts⁴¹.

Infringement and Penalty

An infringement occurs when someone violates the rights of a registered breeder by using the registered variety or denomination without the breeder's consent. Remedies for such infringement include the discovery of relevant documents, preservation of the infringing variety, or the attachment of the infringer's property. However, if a farmer can prove that they were unaware of the existence of the breeder's rights at the time of the infringement, their actions will not be considered a violation under the Act. Additionally, the Act imposes penalties, including imprisonment and fines, for offenses such as using a false denomination,

³⁹ Section 41, The Protection of Plant Variety and Farmers Right Act, 2001

⁴⁰ Section 46, The Protection of Plant Variety and Farmers Right Act, 2001

⁴¹ Section 41,45, The Protection of Plant Variety and Farmers Right Act, 2001

selling varieties with a false denomination, or falsely claiming that an unregistered variety is registered.

Conclusion

Intellectual Property Rights (IPR) are globally recognized and have gained importance in both developed and developing countries. The push for stronger IPR protection has intensified with changes in the global technology landscape. The WTO's TRIPS Agreement has provided a framework for the global protection of IPR, including plant variety protection, which has become an essential tool in developed countries. However, developing countries face unique challenges in designing IPR systems that balance the interests of formal sector breeders and traditional farming communities. Despite initial resistance, many developing countries have accepted the TRIPS Agreement and are revising their IPR laws to reflect their specific needs and conditions. India, for example, has adopted a sui generis system for plant variety protection.

