

PLANT VARIETY PROTECTION IN INDIA

What is plant variety protection and what purpose does Plant Variety Protection (PVP) serve?

Plant variety protection provides legal protection of a plant variety to a breeder in the form of Plant Breeder's Rights. Plant Breeder's Rights (PBRs) are intellectual property rights that provide exclusive rights to a breeder of the registered variety.

The Plant Variety Protection and Farmers Rights Act (PPVFRA), 2001, a *sui generis* system, is an attempt by the Indian Government to recognize and protect the rights of both commercial plant breeders and farmers in respect of their contribution made in conserving, improving and making available plant genetic resources for development of new plant varieties and to encourage the development of new plants varieties.

Protection of the plant varieties under the PPVFR Act, 2001 accelerates agricultural development and stimulates investment for research and development for the development of new plant varieties, which in turn facilitates the growth of the seed industry and ensures the availability of high quality seeds and planting material to the farmers.

Why Protection for plants is required in India?

The Agreement on TRIPs requires WTO Members to introduce an “*effective system*” for the protection of plant varieties. Article 27 3 (b) of the TRIPS agreement reads:

Member countries may exclude

“plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of

plant varieties either by patents or by an effective sui generis system or by any combination thereof.”

This commitment by WTO Members implies that most developing countries, which had not extended intellectual property rights to their agricultural sector, would have to do so. Being a member of WTO and signatory of TRIPS, it was mandatory for India to provide protection to plant varieties either by patent or by *sui generis system* or by both. Like most developing countries, India decided to exclude patents for plants and plant varieties but exercised the *sui generis* option. The *sui generis* system means for effective protection of plant varieties. India enacted ‘The Protection of Plant Varieties and Farmers’ Rights’ (PPVFR) Act, 2001, for plant variety registration.

What is a plant variety?

A variety is a plant grouping within a single botanical taxon of the lowest known rank, defined by the expression of the characteristics resulting from a given genotype or combination of genotypes. The variety should be distinguished from other plant grouping by expression and should be considered as a unit with regard to its suitability for being propagated unchanged.

What are registerable plant varieties in India?

Four types of plant varieties can be registered under PPVFR Act, 2001. -

- 1) **New varieties:** A variety which is not in public domain in India earlier than one year before the date of filing; or outside India, in the case of trees or vines earlier than six years, or in any other case, earlier than four years.
- 2) **Extant variety:** A variety which is notified under Seed Act, 1966 or a variety about which there is common knowledge or a farmers’ variety or any other variety which is in public domain is considered as an Extant variety.

- 3) **Farmers' variety:** A variety which has been traditionally cultivated and evolved by the farmers in their fields or a variety which is a wild relative or land race of a variety about which farmers possess common knowledge.
- 4) **Essentially derived variety (EDV):** An “essentially derived variety” shall be said to be essentially derived from such initial variety when it is predominantly derived from such initial variety, or from a variety that itself is predominantly derived from such initial variety, while retaining the expression of the essential characteristics that result from the genotype or combination of genotype of such initial variety and it is clearly distinguishable from such initial variety. An EDV conforms to such initial variety that results from the genotype or combination of genotype of such initial variety.

What are non-registerable plant varieties in India?

All plant varieties cannot get legal protection in India. Certain Plant varieties are excluded from the protection under **PPVFR Act 2001**. Any variety where prevention of commercial exploitation of such variety 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 or any varieties which has terminator technology or any variety belonging to the species or genera which is not listed in the notification issued by the Central Government cannot be registered for the protection under the Act.

What are the criteria for protecting a plant variety?

To be eligible for protection, the plant variety must be:

- a) **Distinct:** a variety should be clearly distinguishable by at least one essential characteristic from existing or commonly known varieties in any country at the time of filing of the application.



- b) **Uniform:** a variety must be sufficiently uniform in its essential characteristics.
- c) **Stable:** essential characteristics of a variety must be stable after repeated propagation or in the case of a particular cycle of propagation, at the end of each cycle.

What is the duration of protection for a registered plant variety?

- Trees and vines - 18 years.
- Other crops - 15 years.
- Extant varieties - 15 years from the date of notification of that variety by the Central Government under Seed Act, 1966

Who can apply for the registration of a plant variety?

Any person claiming to be the breeder of the variety; or any successor of the breeder of the variety or any person being the assignee or the breeder of the variety in respect of the right to make such application or any farmer or group of farmers or community of farmers claiming to be breeder of the variety or any person authorized to make application on behalf of farmers or University or publicly funded agricultural institution claiming to be breeder of the variety.

Where to file the application for the registration of a plant variety?

For the purposes of PPV &FR Act, 2001, Protection of Plant Varieties and Farmers' Rights Authority was established in October, 2005 and its Head Quarters is located at NASC Complex, DPS Marg, Opp-Todapur, New Delhi-110 012.

Any information regarding the protection, application, fee structure, etc. can be obtained from the office or at <http://www.plantauthority.gov.in/>

Is there any need to deposit seed or propagating material before registration?

Yes, the deposition of seeds is necessary for DUS test conducted by PPV&FR authority. The applicant needs to deposit the fixed amount of seed or propagating material with prescribed germination percentage, physical purity and phyto-sanitary standards along with the seed quality test report to the Authority.

What are the exemptions provided under the Act?

- Farmers' Exemption: Farmer shall be entitled to produce, save, use, sow, re-sow, exchange, share or sell his farm produce including seed of a variety protected under this Act.
- Researcher's Exemption: Researchers are allowed to (i) use the registered variety for conducting experiment. (ii) use the variety as an initial source of variety for the purpose of creating other varieties.

What plants are covered under the PPVFR Act, 2001?

As of now following 18 plant species can be registered under the Act.

- Cereals : Rice, wheat, maize, sorghum, pearl millet
- Legumes: Chickpea, mungbean, urdbean, field pea, rajmash, lentil, pigeon pea
- Fibre Crop:
 - Four species of cotton namely *Gossypium arboreum* L. and *G. herbaceum* L. (Diploid cotton) and *G. barbadense* L. and *G. hirsutum* L. (Tetraploid cotton));
 - Two species of Jute (*Corchorus olitorius* L. and *C. capsularis* L.).

Process of filling the application for registration started from **May 21, 2007** onwards for **twelve crop** species comprising of rice, wheat, maize, sorghum, pearl millet, mungbean, green gram, black gram, chick pea, pigeon pea, lentil and kidney bean. Registration of **fiber crop** comprising cotton and jute started from **April 2, 2008**.

Other plant species in the pipeline are:

- [Mango \[*Mangifera indica* L.\]](#)
- [Indian mustard \[*Brassica juncea* L.\]](#)
- [Rapeseed \[*Brassica rapa* L.\]](#)
- [Gobhi Sarson \[*Brassica napus* L.\]](#)
- [Groundnut \[*Arachis hypogaea* L.\]](#)
- [Castor \[*Ricinus communis* L.\]](#)
- [Linseed \[*Linum usitatissimum* L.\]](#)
- [Sesame \[*Sesamum indicum* L.\]](#)
- [Sunflower \[*Helianthus annuus* L.\]](#)
- [Safflower \[*Carthamus tinctorius napus* L.\]](#)
- [Soyabean \[*Glycine max* \(L.\)Merrill\]](#)

What are the rights enjoyed by the owner of variety / Breeder's Rights?

The owner of the protected variety has the right to produce, sell, market, distribute, import and to export the variety.

What is the current status of the applications for registration under PPVFR Act?

A total of around 1200 applications for registration have been received by the Authority that includes 284 applications for new varieties, 900 applications for extant varieties and 9 applications for farmer's variety. Name of Some important crops are Rice, Maize, Bread wheat, Pigeon pea(Red gram/Arhar), Pearl millet (Bajra), Sorghum (Jowar), Chick pea (Bengal gram), Garden pea (Field pea), French bean (Rajmesh), Lentil (Masoor), Black gram (Urd bean), Green gram (Mung bean), Cotton, Jute. For further detail please visit at

http://www.plantauthority.gov.in/app_details.htm

LAKSHMIKUMARAN & SRIDHRAN (L&S) is a pioneer and major player in filing PVP applications in India. More than 220 PVP applications have been filed by the firm from May 2007 to June 2009.

About the Authors



Dr. Malathi Lakshmikumaran completed her Doctorate in Biochemistry from Poona University in 1980. She is a recipient of the prestigious 'Fogarty Visiting Research Associate ship' from National Institute of Health, Bethesda, USA and a Fellow of the National Academy of Sciences. She was awarded the prestigious 'National Young Women Scientist' Award by the Department of Biotechnology in March 2000. Prior to joining L&S, she was the Head of Centre for Bio-resources and Biotechnology at The Energy and Resources Institute (TERI), New Delhi..

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Her technical expertise includes the following areas:

Patent: Molecular biology, microbiology, cell biology, biochemical and pharmaceutical technologies, immunology, genetic engineering, plant biotechnology and medical technology.

Plant Variety Protection: Drafting, filing and prosecution of application for Plant Variety Protection in India.

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