

Protection of Farmers' and Community Rights on Indigenous Genetic Resources

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1. Protection of Plant Varieties and Farmers' Rights Act, 2001

For a country like India, a different form of protection was felt necessary in addition to or instead of the existing international models. It is because in a mega-biodiversity country like India, diversity among plants continuously played a major role in evolution of agriculture. Tribal and farming communities contributed over generations in improvement of economic plants by domestication, selection and conservation. Changing global environment may gradually lead to evolution of more resistant varieties which will be more suited to the new environment. These situations gives rise to many researchable issues on plants, a major source of food and key to socio-economic growth of the people, directly or indirectly.

Agriculture provided for employment and the key means of livelihood for a majority of India's population. More significantly, about 65 per cent of the total farming population in the country constitutes small and marginal farmers. A balanced approach towards protecting the interests of the plant breeders and the traditional farming communities was needed. Keeping in view the national requirement and international obligation under Article 27(3) (b) of TRIPS Agreement, India adopted a *sui genesis* system for plant variety protection system and Government of India enacted the "Protection of Plant Varieties and Farmer's Rights (PPV&FR) Act, 2001". The Act is the first of its kind in granting intellectual property rights not only to plant breeders but also to the farmers by protecting new, extant and farmers' varieties. It emphasizes farmers' Rights as positive rights capturing the spirit of FAO international treaty on plant genetic resources and UN convention on biological diversity. The PPV&FR Rules were notified on 12 September, 2003 and the PPV& FR Regulations notified on 7th December, 2006. The major objectives of the Act include providing an effective system for protection of plant varieties and rights of farmers and plant breeders, recognizing and protecting the rights of farmers in respect of their contribution made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties, contributing to accelerate the agricultural development in the country, stimulate investment for research and development in public / private sector for development of plant variety; and facilitating the growth of seed industry. For implementing the various provisions of the Act, the Central Government established the "Protection of Plant Varieties and Farmers' Rights Authority" on 11 November 2005 with its office at New Delhi.

2. Farmers' Rights and Community Rights

Under the provisions of PPV&FR Act, 2001 farmers' rights are covered under section 39 and gene fund under section 45. Under section 39 farmers' rights includes farmers who bred or develop a new variety. The farmers also engaged in conservation and plant genetics resources of land landraces and wild relatives of economic plants and their improvement through selection & preservation are entitled for recognition and reward from the National Gene Fund.

The Act provides for the following shelters to the Indian farmers:

1. A farmer as the provision in the Act if bred or developed a new variety shall be entitled for registration in the like manner as a plant breeder.

2. The farmer is also entitled to save, use, sow, resow, exchange, share or sell his farm produce including seed of a registered variety under the Act like wise entitled before the enforcement of the Act. Farmers are not entitled to sell branded seed of the variety registered under the Act.
3. Farmers' Variety is the variety which has been traditionally cultivated and evolved by the farmers in their fields or is a wild relative or land race of a variety about which the farmers possess the common knowledge.
4. Registration of farmers variety:- farmers are entitled for the registration of the variety which were bred are developed by them.
5. Farmers are exempted from payment of any fees in respect any proceeding, inspection of any document or obtaining any decision/order/document under the Act before the Registrar/Authority/tribunal/High Court.
6. Compensation to the farmers:- farmers are entitled to the compensation in case of failure of expected performance by registered varieties under the given condition.
7. Rights of communities/ compensation - any person on behalf of any village community file any claim for compensation if the village or local community has contributed significantly to the evolution of the variety which has been registered under the PPV&FR Act, 2001. The Authority upon receiving objection from the registered breeder shall give an opportunity to breeder and determine the compensation which should be deposited in the Gene Fund within a period of two months.
8. Protection of innocent infringement: - A right established under the Act shall not be deemed to be infringed by a farmer who at the time of such infringement was not aware of the existence of such right and a relief in an infringement suit shall not be granted by court against a farmer who proves at the time of infringement he was not aware of the existence of the right so infringed.
9. Compulsory licence: - The Authority can grant compulsory licence after the expiry of three years from the date of issue of a certificate of registration of a variety on the ground of inadequate supply, unreasonable price to the public with the consultation on Central Government.
10. Benefit Sharing: - The claims after due examination and receiving counter-claims will be disposed by the Authority. The benefit claim will be decided after providing proper and fair opportunity to be heard to both the claimer and Breeder.

In addition to farmers rights, the breeders, researchers and community rights were also framed in the PPV&FR Act, 2001 as follows:

- A. **Breeders' Rights:** Breeders will have exclusive rights to produce, sell, market, distribute, import or export the protected variety. Breeder can appoint agent/licensee and civil remedy in case of infringement of rights.
- B. **Researchers' Rights:** Researcher can use the variety using such variety for conducting experiment or research, use of the variety as an initial source of variety for the purpose of developing of another variety but repeated use requires prior permission.
- C. **Community Rights:** Under section 41 any person on behalf of any village community file any claim for compensation if the village or local community has contributed significantly to the evolution of the variety which has been registered under the PPV&FR Act, 2001. Compensation to be determined by the Authority and deposited in National Gene Fund.

A National Gene Fund has been established by the Govt. of India under PPV&FR Act, 2001. The contribution in the National Gene Fund is mainly for.

- The benefit sharing received in the prescribed manner from the breeder of a variety or an essentially derived variety registered under the Act, or the propagating material of such variety or essentially derived variety, as the case may be
- The annual fee payable to the Authority by way of royalty
- The compensation deposited by breeders and
- The contribution from any National and International organization and other sources.

The Gene Fund is meant for:

- Payment of benefit sharing and compensation to village and local communities and
- Supporting the conservation and sustainable use of genetic resources including *in-situ* and *ex-situ* conservation and strengthening the capability of panchayats in carrying out such conservation and sustainable use.

PPV&FR Authority has constituted plant genome saviour awards to farmers *viz*; community award and individual farmers reward and recognition

A. Plant Genome Saviour Community Awards

While the contribution of agricultural scientists in the advancement of agriculture is measurable and quantifiable in the form of desired outcome, the contribution of large number of individual farmers and farming communities who are engaged in agriculture for generations in conserving the plant genetic resources who have contributed significantly in the development of improved varieties goes unnoticed. To recognize their important contribution and role in enhancement of quality in research and development in agriculture, PPVFR Authority confers annually Plant Genome Savior Community Awards from the National Gene Fund. The award consists of Rs. 10 lakhs in cash along with citation and memento. A maximum of 5 such awards are conferred every year to communities/tribal communities. The selection of awardees is done by a high level national committee.

The Award is open to all Indian farming communities, particularly the tribal and rural communities engaged in conservation, improvement and preservation of plant genetic resources of economic plants and their wild relatives particularly in the areas identified as agro-biodiversity hotspots. The applicants are required to submit evidences in support of the conservation work done by them, provide seeds/planting material of the conservation varieties, brief



proposal for the utilization of the award money in community welfare and also to inform if the material has been utilized by any breeders in developing any other improved varieties etc.

Rule 70(2)(a) of PPV&FR Rules, 2003 provides that Gene Fund could be utilized to support and reward farmers, particularly the tribal and rural communities engaged in conservation, improvement and preservation of genetic resources of economic plants and their wild relatives, particularly in areas identified as agro-biodiversity hotspots. To energise and implement the said Rule, the PPV&FR Authority initiated Plant Genome Savior Community Awards.

B. Plant Genome Saviour farmers reward and recognitions

Section 39 of PPV&FR Act, 2001 confers the power to the central Govt. to make rules for reward and recognition to individual farmers namely Plant Genome Savior farmers reward and recognition. In reward and recognition maximum ten farmers are rewarded which comprises of citation, memento and cash of Rs. 1 lakh each.

Till 2013, the Authority has rewarded ten farming community with PGSC Award; ten farmers with Farmer award and recognised twenty nine farmers/communities for their conservation work.

Details of the awards, rewards and recognitions are given below-

| Awards / Reward / Recognition | Awarded | Since |
|---|----------------|---------------------|
| Plant Genome Saviour Community Awards (max. 5, consisting of a citation, memento and cash of Rupees Ten lakh each) | 31 | 2009 to 2016 |
| Plant Genome Saviour Farmer Reward (max. 10, consisting of citation, memento and cash of Rupees one lakh each) | 33 | 2012 to 2016 |
| Plant Genome Saviour Farmer Recognition (max. 20, consisting of a citation and memento) | 50 | 2012 to 2016 |
| Total | 114 | |

3. Registration of plant variety

A variety is eligible for registration under the Act if it essentially fulfills the criteria of Distinctiveness, Uniformity and Stability (DUS) which means that the candidate variety must be distinguishable by at least one essential characteristics from a variety which is a matter of common knowledge in any country at the time of filing application, sufficiently uniform in expression of its essential characteristics which should remain unchanged even after repeated propagation. The variety should also have a single and distinct denomination. According to the PPV&FR Act, 2001, the varieties that can be registered include new plant varieties, essentially derived varieties (EDV), extant varieties notified under the Seeds Act, 1966, extant varieties about which there is a common knowledge (VCK) and farmer's varieties. The major steps in registration of plant varieties include filing of application, examination of applications and conduct of suitable DUS test, evaluation of DUS test results, publication of passport data in the Plant Variety Journal of India (PVJI) for calling objections, if any, within a specified time frame and issuance of registration certificate to the applicant / breeder. A comprehensive criteria for registration of the different types of varieties is followed.

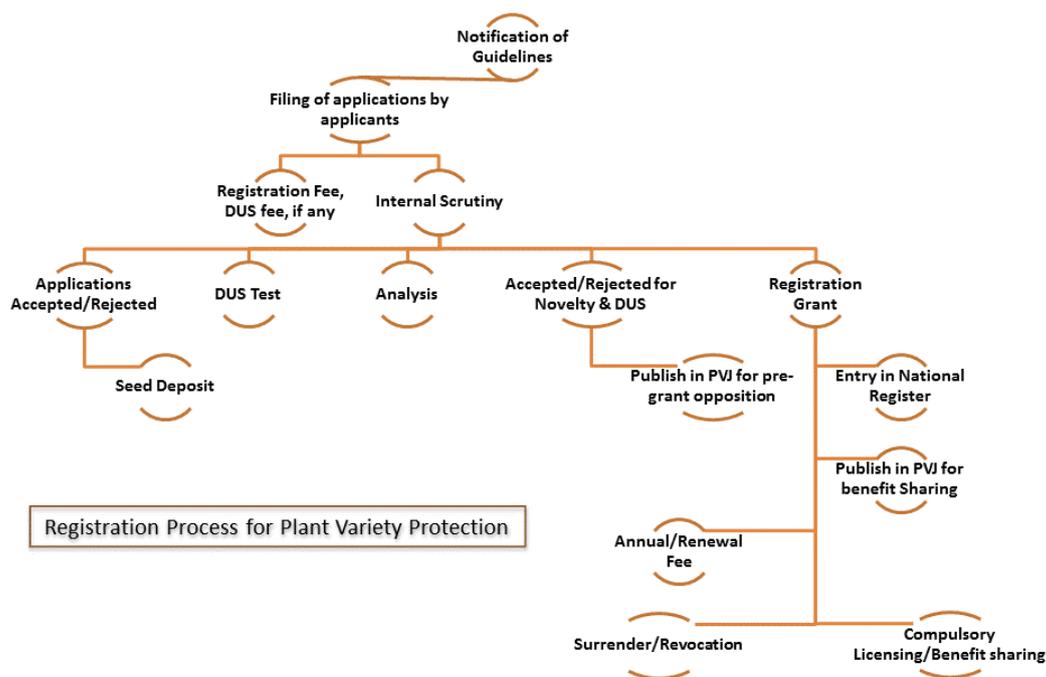
PPV&FR Authority has notified 147 crop species for registration under various categories (for details the website of the Authority may be seen).

4. Registration of Plant Varieties of Farmers

The PPV&FR Authority follows a broad principle of internationally recognized system of Distinctiveness, Uniformity and Stability (DUS) and Novelty for a new variety. Any person can apply for registration of any of the following categories of varieties:

- **New Variety:** A new variety should conform to the criteria of novelty [not been sold or otherwise disposed of in India, earlier than 1 year and outside India (in case of trees and vines earlier than six years, or, in any other case, earlier than four years)], distinctiveness (for at least one essential character from all varieties of common knowledge), uniformity (sufficiently uniform in its essential characteristics) and stability (if its essential characteristics remain unchanged after repeated propagation, or, in the case of a particular cycle of propagation, at the end of each cycle).
- **Extant Variety** means a variety available in India which is
- notified under section 5 of Seeds Act, 1966,
- about which there is a common knowledge;
- in public domain,
- **farmers' variety**

- that has been traditional by cultivated and evolved by farmers in their fields,
- is a wild relative or landrace about which farmers possess common knowledge.
- Essentially Derived Variety: In respect of the initial variety, shall be said to be essentially derived from such initial variety when it :
 - is predominantly derived from the initial variety, or from a variety that itself is predominantly derived from initial variety, while retaining the expression of the essential characteristics that results from the genotype or combination of genotypes of initial variety;
 - is clearly distinguishable from such initial variety; and
 - conforms (except for the differences which result from the act of derivation) to such initial variety in the expression of the essential characteristics that result from the genotype or combination of genotype of such initial variety
- Authority has developed crop specific "Guidelines for the Conduct of Test for Distinctiveness, Uniformity and Stability' which provide detailed practical guidance for the harmonized examination of DUS of the candidate variety and, in particular, to identify appropriate characteristics for the examination of DUS. Many more crop species are at final stage and will be notified and opened for registration in the due course of time. So far the Authority has notified DUS test guidelines for 140 crop species (Table 1) which are open for the purpose of registration and protection of plant varieties in these genera and species.



5. Duration of protection

Duration of protection of varieties is mentioned as under:

| Particulars | Duration of protection (in years) | | |
|---------------------------|---|---------|----------|
| | Total | Initial | Extended |
| Trees & Vines | 18 from date of registration | 9 | 9 |
| Other Crops | 15 from date of registration | 6 | 9 |
| Extant Notified varieties | 15 from date of notification of variety under the Seeds Act, 1966 by the Central Government | | |

6. Various Fee under the PPV&FR Act, 2001

A. Registration Fee from various categories of applicants

| Type of variety | Fees for Registration |
|--|--|
| Essentially Derived Varieties | Individual Rs. 7000/- Educational Rs. 10000/- Commercial Rs. 50000/- |
| Extant variety notified under section 5 of Seeds Act, 1966 | Rs. 2000/- |
| New Variety | Individual Rs. 7000/- Educational Rs. 10000/- Commercial Rs. 50000/- |
| Extant variety about which there is common knowledge | Individual Rs. 7000/- Educational Rs. 10000/- Commercial Rs. 50000/- |
| Farmers' Variety | No fee |

B. DUS Test Fee:

The applicant has to submit the DUS test fee for conduct of the DUS test of the candidate variety. The DUS test fee has been decided by the Authority for different crops and notified in the Plant Variety Journal of India.

The DUS test fee notified for different crops is available on www.plantauthority.gov.in.

C. Annual Fee :

For maintenance of registration the applicant has to pay annual fee which is specified as under:

| Type of variety | Annual Fee |
|--|--|
| New Variety | Rs. 2000/- plus 0.2 per cent of the sales value of the seeds of the registered variety during the previous year plus 1 percent of royalty, if any, received during the previous year from the sale proceed of seeds of a registered variety. |
| Farmers' Variety | Rs. 10/- only |
| Extant variety notified under Section 5 of the Seeds Act, 1966 (54 of 1966) | Rs. 2000/- only. |
| Extant variety (VCK) | Rs. 2000/- plus 0.1 per cent of the sales value of the seeds of the registered variety during the previous year plus 0.5 percent of royalty, if any, received during the previous year from the sale proceed of seeds of a registered variety. |
| Annual fee shall be determined on the basis of declaration given by the registered breeder or agent or licensee regarding the sales value of the seeds of the variety registered under the Act during the previous year and royalty, if any, received during the previous year from the sale proceed of seeds of the registered variety and verified by the Authority. | |

7. Progress in filing of applications and PVP certificates issued

Applications which have fulfilled all requirements and have been finally accepted by the Registrar for registration are issued PVP certificates. Details of applications received (**Table 2a & 2b**) and

PVP certificates issued (**Table 3a & 3b**) are indicated hereunder. The certificate of registration issued will be valid for nine years in case of trees and vines and six years in case of other crops. It may be reviewed and renewed for the remaining period on payment of renewal fees subject to the condition that total period of validity shall not exceed eighteen years in case of trees and vines from the date of registration of variety, fifteen years from the date of notification of variety under Seeds Act, 1966 and in other cases fifteen years from the date of registration of the variety.

Table 2a: Applications received year-wise/variety-wise

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Total |
|---------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| EDV | 0 | 19 | 16 | 34 | 15 | 0 | 71 | 22 | 2 | 1 | 0 | 180 |
| Extant | 360 | 395 | 385 | 123 | 274 | 256 | 255 | 196 | 181 | 344 | 68 | 2837 |
| Farmer | 2 | 5 | 127 | 4 | 939 | 302 | 1001 | 1962 | 1954 | 1859 | 2168 | 10323 |
| New | 70 | 128 | 160 | 379 | 133 | 141 | 350 | 340 | 331 | 242 | 149 | 2423 |
| Total | 432 | 547 | 688 | 540 | 1361 | 699 | 1677 | 2520 | 2468 | 2446 | 2385 | 15763 |

Table 2b: Applications received year-wise/applicant-wise

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Total |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Farmer | 2 | 5 | 127 | 4 | 941 | 304 | 1002 | 1964 | 1957 | 1859 | 2168 | 10333 |
| Individual Breeder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Private | 143 | 220 | 368 | 505 | 295 | 266 | 534 | 420 | 420 | 257 | 162 | 3590 |
| Public | 287 | 322 | 193 | 31 | 125 | 129 | 141 | 136 | 89 | 330 | 55 | 1838 |
| Total | 432 | 547 | 688 | 540 | 1361 | 699 | 1677 | 2520 | 2468 | 2446 | 2385 | 15763 |

Table 3a: Registration Certificate Issued year-wise/variety wise

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Total |
|---------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| New | - | - | 2 | - | 15 | 26 | 53 | 108 | 64 | 127 | 51 | 446 |
| Extant | - | - | 163 | 49 | 101 | 182 | 205 | 266 | 121 | 133 | 110 | 1330 |
| Farmer | - | - | 3 | - | - | 3 | 46 | 459 | 200 | 345 | 249 | 1305 |
| EDV | - | - | - | - | - | 1 | - | - | 0 | 0 | 0 | 1 |
| Total | 0 | 0 | 168 | 49 | 116 | 212 | 304 | 833 | 385 | 605 | 410 | 3082 |

Table 3b: Registration Certificate Issued year-wise/applicant-wise

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Total |
|----------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Public | - | - | 149 | 49 | 95 | 154 | 154 | 250 | 64 | 112 | 54 | 1081 |
| Private | - | - | 16 | - | 21 | 55 | 104 | 124 | 121 | 148 | 107 | 696 |
| Farmer | - | - | 3 | - | - | 3 | 46 | 459 | 200 | 345 | 249 | 1305 |
| Total | 0 | 0 | 168 | 49 | 116 | 212 | 304 | 833 | 385 | 605 | 410 | 3082 |

8. Way forward

The Indian PPV&FR Act is an effective sui generis system providing a balance between plant breeders' rights along with farmers' rights and researchers' rights. The practice of small, marginal

farmers to exchange the harvested material with others are essential for their livelihood and being practices not only in India but to a large extent to most of the developing countries in Asia-Pacific. All efforts are being made by PPV&FR Authority to implement different provisions of the PPV&FR Act and also to make the availability of quality seeds of registered varieties but also to support farm families for conservation and sustainable use of genetic resources including in-situ and ex-situ collections and for strengthening the capability of the stakeholders in carrying out such conservation and sustainable use. The farmers can take advantage of this Act to get IPR on their innovations in the form of improvements in plant varieties and also for their role in their preservation and conservation of landraces and traditional varieties. Some of the important challenges which we foresee are:

- Popularization of farmers' role in conservation and development of new variety and preparation of database of the same for awarding farmers and farming communities and registration of farmers' varieties.
- Mainstreaming and commercialization of registered farmers' varieties.
- Notification of farmers' varieties under Seeds Act, 1966.

Recently, the Government of India in their National Intellectual Property Rights Policy has indicated the number of filings and registrations by the Protection of Plant Varieties and Farmers' Rights Authority very encouraging and has asked to provide support to various stakeholders for increased registration of new, extant and essentially derived varieties of plants. It has further emphasised to establish links between the Authority and Agricultural Universities, Research Institutions, Technology Development & Management Centers and Krishi Vigyan Kendras and facilitate development of seeds and their commercialization by farmers. It makes the Authority more responsible to focus on strategies for mainstreaming of registered farmers' varieties and to take breeders rights as envisaged in PPV&FR Act, 2001 to every concerned stakeholder and make India as a forerunner in the implementation of not only farmers' rights but also the breeders' rights.