
IMPLEMENTING FARMERS' RIGHTS IN PADDY VARIETIES UNDER THE PROTECTION OF PLANT VARIETIES AND FARMERS' RIGHTS ACT, 2001: AN EMPIRICAL STUDY OF GOVERNMENT OFFICERS IN UDUPI DISTRICT

Dr. Sunil Sudhakar Varnekar, Research Scholar, Alliance, School of Law, Alliance University, Bangalore, Karnataka, India

Dr. Upankar Chutia, Associate Professor, Department of Law, Dayananda Sagar University, Bangalore, Karnataka, India

ABSTRACT

Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPV&FR Act) presents a unique Indian approach to plant-variety protection that includes farmer/community-friendly protections, compensation protections, conservation protections and positive rights for farmers and communities. While the text of the statutes and judicial interpretation are important, the realisation of those rights also requires the administrative institutions that interpret the national law into farmer facing processes. This paper explores that aspect in the light of an empirical study of twelve officers of the government of Udupi district, Karnataka analysed with the PPV&FR Act, international rules governing plant genetic resources and recent case law in India. The officer evidence shows a consistent gap in implementation which included insufficient governmental support being provided for implementation (66.7% of officers), with only some or very few records of traditional paddy varieties being kept by the officers (91.7% of officers) and that there was a need for more farmer training (100% of officers) and stronger implementation (100% of officers). Similarly, the majority of the respondents (66.7%) considered the Act as less effective at the district level in protecting the rights of the farmers. Further exploratory chi-square analyses show that there are strong relationships between overall awareness of officers and department involvement ($\chi^2 = 24.000$, $df = 4$, $p < .001$); between perceived farmer awareness and reported registration of varieties of paddy ($\chi^2 = 12.000$, $df = 2$, $p = .002$); and between difficulty in registering the variety and ease of perceived procedural process ($\chi^2 = 12.000$, $df = 2$, $p = .002$). Due to the limited number of officers and the small number of officers in the contingency cells, it is important to consider these inferential results with caution and as mainly signals for implementation. The paper

contends that a major legal issue is not that there is no legal rights, but that these rights are converted into accessible registration, documentation, outreach, conservation and remedial pathways. It suggests a district level implementation architecture comprising of officer legal training, legal literacy at a local level, facilitation of mobile registration, systematic documentation of traditional paddy varieties, coordinating between institutions and measurable implementation indicators.

Keywords: Protection Of Plant Varieties And Farmers' Rights Act; Government Officers; Administrative Implementation; Farmers' Rights; Plant Variety Registration; Paddy; Udupi; Traditional Varieties; Legal Awareness; Empirical Legal Studies.

INTRODUCTION

The statute of plant-variety law is in the nature of an IP law, but in India is intentionally far more wide. The PPV&FR Act¹ provides for exclusive varietal rights, and also provides for the role of the farmer as a breeder, a plant genetic resources conserver, plant genetic resources seed user, a benefit claimant and a custodian of plant genetic resources. This is a dual structure, a decision made by India to avail the option to protect plant varieties and opt for patents or an effective sui generis system or a combination of two.²

The long title and preambular form of the PPV&FR Act clearly reflects the legislative compromise. It aims to create an “effective system” to protect farmers, breeders and plant varieties, acknowledging that farmers play a significant role in conserving, enhancing and providing access to plant genetic resources for the creation of new varieties.

Thus, one cannot judge the effectiveness of the statute from the number of rights that are included in Chapter VI. The rights should be perceived, accessible, and facilitated at the institutional level. Registration of farmers' varieties, documentation of local varieties, access to recognition and rewards, benefit sharing, compensation, and the actual enforcement of the protection of seed use require the capabilities to explain the law, receive applications, keep record, link farmers to the Authority and coordinate with research and extension institutions.³

¹ Protection of Plant Varieties & Farmers' Rights Act, No. 53 of 2001, pmbl. & long title, INDIA CODE (2001) [hereinafter PPV&FR Act].

² Agreement on Trade-Related Aspects of Intellectual Property Rights art. 27.3(b), Apr. 15, 1994, 1869 U.N.T.S. 299.

³ PPV&FR Act § 8.

The mandate of the Protection of Plant Varieties and Farmers' Rights Authority is very wide and covers registration, documentation and cataloguing of Farmers' varieties, collection of statistics, availability of seeds and maintenance of the Register, as well as providing protection.

This administrative aspect is particularly relevant in paddy-producing areas where the traditional varieties, farmer selection, seed saving and informal exchange of seeds are still practiced alongside commercial seed markets and formal varietal protection. The International Treaty on Plant Genetic Resources for Food and Agriculture also assigns to national governments the responsibility for implementation, and recognizes that protection of TK, benefit sharing, participation in decision-making and the continued capacity of farmers to save, use, exchange and sell farm-saved seed (according to national law) are key points of implementation.⁴

In the present study, the government officers in Udupi District's point of view is being emphasized. Different from the farmer's view are the officer's views, which are analytical. Farmers can share their knowledge, use, and trust of a legal mechanism, while officers can provide information on their frequency of awareness activities, the availability of registration, documentation of traditional varieties, institutional coordination, resource availability, and the functioning of the Act at the district level. This study's empirical data consists of responses to 22 questions and five hypothesis tests from 12 officers, in this instance, focused on implementation.

There are three questions to be answered in the paper. What is the "administrative structure" and what are administrative duties, and what are implementation functions that result from the PPV&FR Act statutory structure? Secondly, what is the picture of farmer awareness, farmer registration system, conservation, documentation and institutional coordination system that emerges from officers' perceptions in Udupi? Third, what reforms can be made to take a strong farmers' rights framework at the national level to the district level? The argument goes that the principal deficit uncovered by the officer evidence is an administrative one: the law offers an unusually generous package of protection for the farmers, but that protection will be effective in practice only if the officer(s) know the farmers, the process is simplified, repeated outreach

⁴ International Treaty on Plant Genetic Resources for Food and Agriculture art. 9, Nov. 3, 2001, 2400 U.N.T.S. 303; Food & Agric. Org. of the U.N., How to Promote Farmers' Rights, <https://www.fao.org/plant-treaty/areas-of-work/farmers-rights/promote/en> (last visited Sept. 24, 2026).

efforts are made, records are kept, and there is inter-institutional coordination.

Review of literature and gaps in the research

The PPV&FR Act has long been viewed as a hybrid, due to its mixed nature. Brahmi, Saxena and Dhillon⁵ explain the legislation as a compromise between the interests of breeders and farmers in a national framework of plant-variety protection, whereas later scholarship has emphasised how the Act is more than just a conventional breeder-rights act which also acknowledges farmers' varieties and farmers' ongoing seed practices.

Ganesh and co-authors⁶ describe the Indian regime as a 'coexistence between plant breeders' rights and farmers' rights' which is compliant with TRIPS. It is important because that description places the statute in a context of an institutional balancing project, protection is not only to the private innovation incentive, but to the farmer innovation, conservation, and use practice.

A second stream of literature focuses on the concept of design to implementation as per statutory requirements. Peschard's⁷ engagements around farmers' rights and food sovereignty demonstrate how far the gap lies between the formal recognition of rights and farmers' practical circumstances in which they might be able to exercise the rights they have been granted. The distributive impact of a law is not limited to a single provision: it requires knowledge of the law, access to the institutions, and a design of administrative processes.

The legal scholarship in recent years has honed this focus on implementation. Babu's⁸ discussion of the Indian plant-variety protection regime highlights the many layers of these laws, rules, regulations and administrative bodies, and the impact of interdependence on the implementation of farmers' rights.

A series of analyses arose in the wake of the PepsiCo litigation, dealing with various aspects of customary farmer uses, enforcement by breeders, and the substance of Section 39(1)(iv).

⁵ Pratibha Brahmi, Sanjeev Saxena & B.S. Dhillon, The Protection of Plant Varieties and Farmers' Rights Act of India, 86 CURRENT SCI. 392 (2004).

⁶ Raj Ganesh et al., Farmers' Rights and Plant Breeders' Rights under Indian Regulations of Plant Variety Protection: A TRIPS Compliant Harmonised Coexistence, 35 INDIAN J. PLANT GENETIC RES. 13 (2022).

⁷ Karine Peschard, Farmers' Rights and Food Sovereignty: Critical Insights from India, 41 J. PEASANT STUD. 1085 (2014).

⁸ Amrithnath Sreedevi Babu, Implementing Farmers' Rights Under the Plant Variety Protection Law in India: Analysing the Complex Regulatory Framework and Its Impact, 28 J. WORLD INTELL. PROP. 491 (2025).

Singh and Singh⁹ explore the debate through the lens of a rights-bearing farmer who also needs to have information about formal rights and access to competent institutional guidance.

The lack of research lies in institutional and local level. The majority of the literature on the Act focuses on one of the following: statutory design, international compliance, doctrinal interpretation and/or nationally significant litigation. Much less empirical legal studies has focused on the practical realities in which public officials at the district interface operate: how often awareness activities occur, how easy it is to register, how well public officials are supported, how good records are on traditional varieties, coordination with research institutions and the perceived effectiveness. This paper tries to fill that void by relying on the evidence provided by the Udupi officer survey, instead of just the legal text.

The legal and institutional framework

A. TRIPS Flexibility and India's Sui Generis Choice

Under TRIPS Article 27.3(b), members are allowed to exclude plants and animals (other than microorganisms) from patentability but are obliged to provide patent protection for plant varieties or an effective sui generis system or a combination of both. India opted for a dedicated sui generis law, instead of merely adopting a model based on the 'breeder's rights'. That decision enabled Parliament to structure rights in a way that enables farmer, community and conservation rights alongside the incentive for varietal innovation.¹⁰

The almost universal nature of the biodiversity framework highlights the administrative importance of traditional knowledge and community involvement. Parties should, under their national jurisdiction, respect, preserve and maintain the knowledge, innovations and practices of indigenous peoples and local communities, including traditional knowledge/traditional cultural expressions, and promote their fair and equitable sharing.¹¹

B. Section 8: Administration Is Part of the Statutory Design

The central theme in an officers' perspective is the legalization of administration in Section 8

⁹ Digvijay Singh & Rajnish K. Singh, Customary Rights of Farmers and PepsiCo Controversy, 26 J. WORLD INTELL. PROP. 295 (2023).

¹⁰ World Trade Organization, Agreement on Trade-Related Aspects of Intellectual Property Rights art. 27.3(b), https://www.wto.org/english/docs_e/legal_e/31bis_trips_04c_e.htm (last visited Sept. 24, 2026).

¹¹ Convention on Biological Diversity art. 8(j), June 5, 1992, 1760 U.N.T.S. 79.

as opposed to it being a policy supplement. The Authority's task is to encourage the development of new varieties and to safeguard the rights of the farmers and breeders. The measures it specifies are: registration of existing varieties; characterisation and documentation of registered varieties; documentation and indexing of farmers' varieties; compulsory cataloguing; ensuring the availability of seed; collection of statistical data on a range of plant varieties and their contribution to the process of their evolution; keeping the Register.¹²

Those functions help to light up the empirical variables in the officer survey. Concerns regarding record keeping, registration, coordination, awareness activity and conservation are not "administrative details. They have a direct impact on the infrastructure on which statutory protections can be found and accessed. The lack of a complete traditional variety list, poor visibility of conservation, sporadic outreach efforts, and poor coordination can decrease the number of traditional varieties registered and local farmers connected to technical institutions that can document traditional variety characteristics.

C. Farmers' Rights Under Section 39 and the Need for Administrative Translation

Section 39 is the "heart" of the farmer-rights framework. A farmer who has saved, used, sowed, re-sowed, exchanged, shared or sold farm produce including the seed of a protected variety; a farmer who has bred or developed a new variety may be able to register and protect his or her variety in the same way as a breeder; a farmer who has saved, used, re-sowed or exchanged the seed of a protected variety may be able to get his or her variety registered; a farmer who has conserved genetic resources or landraces may be eligible for recognition and reward under the Gene Fund; and farmers may retain the rights to save, use, sow, re-sow, exchange and share farm produce including seed of a protected variety subject to the statutory restriction on sale of branded seed.

Under Section 39(2) there is a compensation system, if the propagating material of a registered variety does not behave as it was presented to behave under certain conditions. This is a legal remedy which makes the assumption that the farmer can determine the right, keep relevant information and can contact the Authority via the stated procedure.

Administratively speaking, in other words, legal awareness cannot be only educational. It is an integral element of rights to remedies. Whether a farmer is aware of the distinction between

¹² PPV&FR Act § 8(1)–(2).

the two types of seed production, whether a variety of poor performance may be eligible for compensation, whether the locally developed variety may be registered, and whether a compensation claim can be based on the poor performance of a variety.¹³

D. Community Rights, Fee Exemption, and the National Gene Fund

The Act also provides for collective contributions. Part of the mechanism under Section 41¹⁴ is to claim for contribution to the development of registered varieties on behalf of villages or local communities, which will be reimbursed through the mechanisms provided. The provision is particularly important for traditional paddy systems where the conservation and development of varieties can be collective, inter-generational and not linked to a formal breeder.

Section 44¹⁵ eliminates the 'proceeding fees' from farmers, farmers groups and village communities before the Authority, Registrar, Tribunal or High Court under the Act. The legal exemption from fees does not mean that there are no informational, documentary, travel, technical, and/or procedural fees. Those non-fee obstacles are the ones that district institutions can fix to see if the statutory exemption actually has any significance.

Section 45¹⁶ introduces the concept of National Gene Fund and authorizes for utilization of the fund for benefit sharing, compensation for the communities, capability building of Panchayat and conservation and sustainable use of genetic resources. The Authority also has Plant Genome Saviour recognition and reward programmes for farmer and communities involved in conservation.

E. Registration Infrastructure and Institutional Access

The PPV&FR Authority has a special application procedure for the farmers' varieties and provides and circulates prescribed application forms for benefit sharing, compensation and other statutory applications. The presence of these forms indicates that there is an operational administrative architecture in the national arena, for the implementation of the Act.¹⁷

¹³ Id. § 39(2).

¹⁴ Id. § 41.

¹⁵ Id. § 44.

¹⁶ Id. § 45; Protection of Plant Varieties & Farmers' Rights Authority, Introduction—Plant Genome Saviour Farmer Rewards, <https://plantaauthority.gov.in/introduction-plant-genome-saviour-farmer-rewards> (last visited Sept. 24, 2026).

¹⁷ Protection of Plant Varieties & Farmers' Rights Authority, Plant Variety Forms,

Local implementation question is, does that national architecture link with farmers in districts? Raitha Samparka Kendras are established at the hobli level under Udupi Department of Agriculture to impart knowledge in crop production, deliver critical inputs, conduct primary soil and seed testing and link the public and private technologies. These extension nodes are already in place and accessible to farmers and could serve as a platform to roll out PPV&FR legal literacy and registration facilitation without establishing a new local bureaucracy.¹⁸

Judicial development and administrative consequences

A. Monsanto Technology LLC vs. Nuziveedu Seeds Ltd.¹⁹

Monsanto Technology LLC v. Nuziveedu Seeds Ltd. was brought by the Supreme Court in the context of the statutory plant-variety protection framework and the interplay between the patent claims and the same. While not the clear-cut decision on the scope of farmers' rights, the case provides a glimpse into the layers of institutional complexity involved in plant-related IP and the need to identify the proper statutory filings for varietal claims.

B. PepsiCo, FL 2027, and Section 39(1)(iv)²⁰

Farmers' right to use seed and the controversy over the potato variety, FL 2027, brought forth the issue of farmers' rights to seed in the public legal arena. The Delhi High Court, in 2024, considered the interplay of the concepts of registered varietal rights, revocation proceedings and Section 39(1) (iv) safeguarding the “specified farmers practices” in relation to farm produce and seed.

The most up-to-date judicial guidance is in the Supreme Court's August 5, 2026 order. The Court did not find that filing of infringement suits to protect the statutory rights without any proof, amounted to vexatious or predatory conduct for revocation under Section 34(h). The Court also explicitly made it clear that an individual farmer can rely on Section 39(1)(iv) in proceedings commenced by the breeder and prove that he/she fits into the protection of the

<https://plantauthority.gov.in/plant-variety-forms> (last visited Sept. 24, 2026)

¹⁸ Udupi District, Agriculture, GOV'T OF KARNATAKA, <https://udupi.nic.in/en/agriculture/> (last visited Sept. 24, 2026).

¹⁹ Monsanto Tech. LLC v. Nuziveedu Seeds Ltd., (2019) 3 S.C.C. 381 (India).

²⁰ PepsiCo India Holdings (P) Ltd. v. Kavitha Kuruganti, 2024 SCC OnLine Del 153 (India).

section.

The model of coexistence has a direct administrative implication and is immediately visible. Legal literacy cannot be postponed until the litigation process has started unless the farmer is expected to rely on the statutory rights in litigation. The district level officers/ institutions should have adequate knowledge about the problem, to give correct information at the initial stage, and be able to refer farmers to legal or Authority level professionals. The officer survey focus on training, awareness, and implementation is thus directly related to the enforceability of Section 39 in the field.

RESEARCH METHODOLOGY

Research Design

The research methodology used in this study is empirical legal research which consists of two types of research, doctrinal analysis and officer perception. The doctrinal part includes an analysis of the PPV&FR Act, international instruments, official implementation documents and judicial decisions. The empirical aspect has been carried out using an officer dataset provided for Udupi District to examine the perceived statutory protection by the officer at the administrative interface.

Empirical Data and Measures

For the officers, there are twelve valid cases ($n = 12$). The questionnaire consists of 20 items related to the perspective of the officers as follows: Awareness of PPV&FR Act, involvement of the officers in PPV&FR Act, perceived farmer awareness, awareness program, farmer registration of paddy varieties, perceived legal protection, farmer approach to offices, sufficiency of government support, ease of registration, conservation of traditional paddy varieties, record maintenance, registration difficulties, benefits and rewards, coordination with agricultural universities and research institutions, encouragement of conservation, regularity of awareness program, need for additional farmer training, interdepartmental coordination, need for better implementation, and perceived effectiveness of the act.

Analytical Strategy & Hypotheses

The paper presents the frequency distributions of implementation conditions and reports three

hypothesis tests that are most pertinent to the legal-administrative argument. Selected hypotheses are: (H1) officer awareness of PPV&FR Act is related to involvement in plant-variety protection matters; (H3) perceived farmer awareness of the PPV&FR Act is related to reported paddy varieties registration; and (H4) perceived registration difficulties is related to perceived ease of the registration procedure.

The officer sample size is small and the supplied chi-square tables have a high percentage of expected cell counts of less than five, so that the results of this inferential analysis are considered exploratory, and not population estimates. Descriptive distributions are also valuable, in the absence of significance testing, as direct reports of officers' evaluations of implementation conditions and, therefore, have significant legal-policy implications.

EMPIRICAL RESULTS: OFFICERS' PERSPECTIVE

A. Descriptive Profile of Administrative Implementation

The officer responses indicate a fairly uniform opinion that, as a legal act, the PPV&FR Act was seen as generally protective of the farmer but that the local processes by which farmers would know about, sign up to and benefit from such protection was generally weak. The following is a list of the most important implementation indicators:

Implementation indicator	Officer response	Percent
Conduct of awareness programs on farmers' rights	Rarely	66.7%
Conduct of awareness programs on farmers' rights	Never	25.0%
Registration of paddy varieties in the district	Very few farmers	41.7%
Registration of paddy varieties in the district	Few farmers	33.3%
Registration of paddy varieties in the district	None	25.0%
Government support for implementation	Not sufficient	66.7%
Ease of registration procedure	Difficult	66.7%

Implementation indicator	Officer response	Percent
Ease of registration procedure	Very difficult	25.0%
Traditional paddy varieties	Moderately conserved	66.7%
Office records of traditional paddy varieties	Some records	66.7%
Office records of traditional paddy varieties	Very few records	25.0%
Additional training for farmers	Strongly agree	75.0%
Stronger implementation in district	Strongly agree	75.0%
Effectiveness in protecting farmers' rights	Less effective	66.7%

Table 1. Selected officer perceptions of PPV&FR implementation in Udupi District (n = 12).

Source: officer survey data supplied for the study.

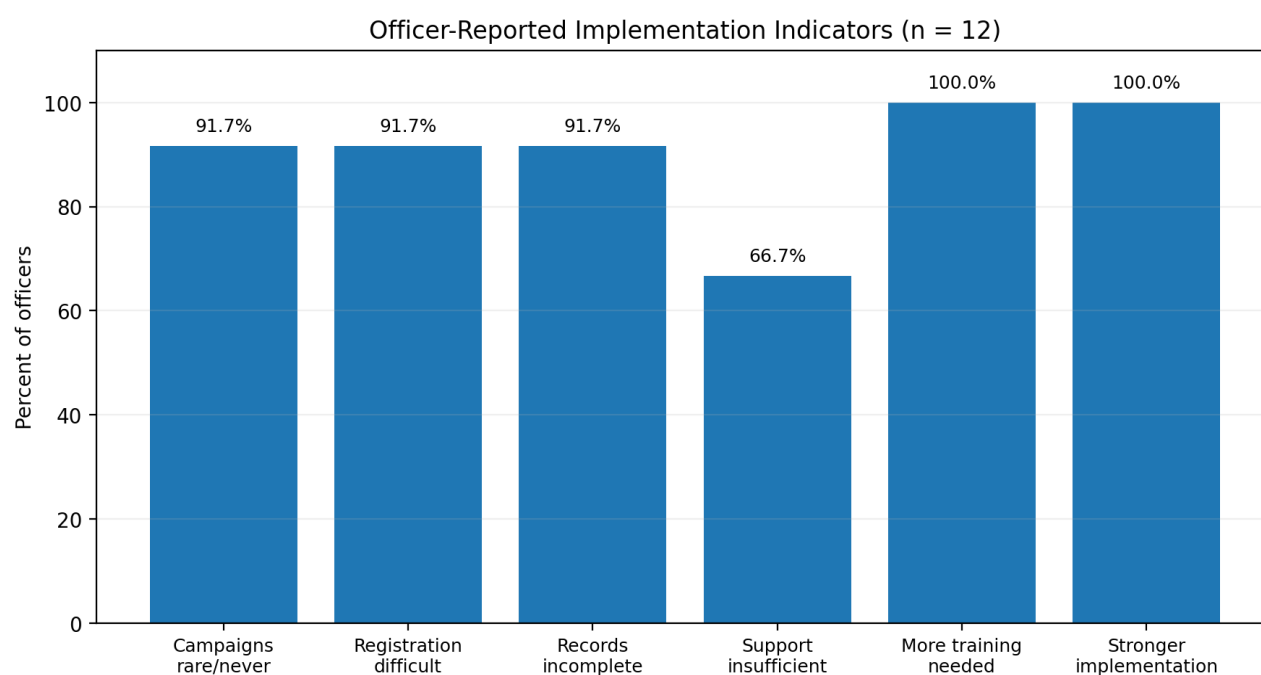


Figure 1. Officer-reported implementation indicators. Percentages are derived from the supplied officer frequency tables

The first implementation impediment is awareness activity. Eight officers (66.7%) reported that awareness programmes on farmers' rights were rarely done and three officers (25.0%) reported that these were never done. The same pattern was found on a parallel item regarding seed-rights campaigns: 66.7% reported rarely and 33.3% reported sometimes conducting such campaigns. The distribution shows that legal outreach is not a standard part of the routines of the legal profession.

The second problem area is access for registration. 100% of the officers reported that the farmer registration of paddy varieties was a low uptake with 41.7% reporting very few farmers registered, 33.3% few farmers registered and 25.0% reporting no farmers registered. Meanwhile, 66.7% described the process as challenging, and 25.0% as very challenging. The majority of officers commented on some or many registration challenges faced by the farmers. This combined evidence suggests that it is not simply that a child is not entitled to a place in school but that the issue is one of access.

The third cluster includes institutional support and documentation. Two thirds of officers rated government support as "inadequate" and one-third rated it as "somewhat inadequate. In the case of records of traditional varieties of paddy, 66.7% of the offices maintained some records, 25.0% had very few and 8.3% had proper records. The percentage of those who reported that there was sometimes (66.7%), rarely (25.0%) and regularly (8.3%) coordination with agricultural universities and research institutions.

The results of conservation were considered to be inadequate. Traditional paddy varieties were moderately conserved by 2/3rd of the officers, poorly conserved by 25.0% and well conserved by 8.3% of the officers. Perceptions of benefits and rewards received by the farmers under the Act were also perceived to be limited to a few farmers: 41.7% indicated that very few farmers had received benefits and rewards, 33.3% indicated that a few farmers had received benefits and rewards, while 25.0% indicated that none of the farmers have received benefits and rewards. This is in line with the findings that link statutory conservation and reward policies with an institutional delivery gap.

The capacity-building and implementation was the most agreed upon. Four out of every five farmers strongly agreed and a quarter agreed that further training programmes for farmers were needed. The same distribution resulted for stronger implementation of the Act in the district. Finally, 66.7% viewed the Act as less effective in the protection of farmers' rights in Udupi

while 33.3% viewed it as effective and none of the officers felt that it was very effective. This pattern allows for setting apart legal design and administrative realization.

B. Hypothesis Tests

Hypothesis	Variables	Pearson χ^2	df	p-value	Result
H1	Officer awareness × departmental involvement	24.000	4	< .001	Significant association
H3	Perceived farmer awareness × paddy-variety registration	12.000	2	.002	Significant association
H4	Registration difficulties × ease of registration	12.000	2	.002	Significant association

Table 2. Selected chi-square results from the supplied officer analysis (n = 12). Results are interpreted as exploratory because of sparse expected cell counts.

1. Officer Awareness and Departmental Involvement

The first test chosen tests whether or not being aware of the PPV&FR Act is correlated with involvement of officers in plant-variety protection matters. The supplied cross-tabulation reports Pearson $\chi^2 = 24.000$, $df = 4$, $p < .001$. The source output also contains that 88.9% of the expected cells were less than five with a minimum expected cell count of 0.08. The association is not, therefore, statistically robust for the sample and should not be used as a population estimate. The legal relevance is in the direction of problem resolution: there seems to be an institutional linkage between officers' knowledge and departments' engagement.

2. Farmer Awareness and Registration of Paddy Varieties

The second selected test is the perceived awareness of the PPV&FR Act by farmers along with the number of paddy varieties reported to be registered by farmers. The supplied output reports Pearson $\chi^2 = 12.000$, $df = 2$, $p = .002$. All of the expected cells were less than five, so again,

caution is advised. In fact, even without causal inferences, the cross tabulation is consistent with the picture the description gives: the more farmers that officers felt aware of, the more farmers that were registered. This reinforces the legal-policy reasoning behind offering substantive rights education alongside procedural assistance when reaching out to people to register.

3. Registration Difficulties and Procedural Ease

The third test chosen looks at the problems experienced by farmers in registering and their perception of how easy the registration process is. Pearson $\chi^2 = 12.000$, $df = 2$, $p = .002$, with 83.3% of expected cells below five. The outcome is best interpreted as a preliminary measure of procedural difficulties. Registration was described independently as difficult or very difficult by 91.7% of officers and all officers reported that farmers were having some or many difficulties. The resulting convergence is one of the most obvious priorities for reform that has been identified from the study, that of simplifying registration.

LEGAL–EMPIRICAL DISCUSSION

A. The Central Gap Is Administrative Realization, Not Statutory Absence

It is important to note that the officer evidence does not imply that the PPV&FR Act is deficient of provisions protecting farmers. This is not the case. Section 39 confers registration rights, Section 41 offers protection for the use of seeds, Section 44 offers compensation, Section 45 offers community claims, and Section 46 lowers fees, provides for conservation recognition, and introduces benefit sharing. The issue uncovered by the officer information is that those rights ought to be made into recurring district-level administrative practice.

This difference is important to take into account when analyzing legal issues. A statute can be a good one that is very idealistic and yet very thin on the administrative side. If there are few awareness programmes, there are few to no registration forms, there are few complete reports on traditional varieties, if any, and the officers themselves request that the Authority be better equipped to implement it, then the question is: who is to make the right visible, how is it going to get to the village, what documents are needed, who will help prepare them, and how will progress be monitored?

B. Officer Capacity Is a Rights-Implementation Variable

Exploratory associations between the awareness of officers and the involvement in the department are also high, which implies the legal significance of the institutional capacity. The role of section 8 calls for more than a rudimentary understanding of agriculture. Officers in contact with farmers require some familiarity with farmers' varieties, registration process, farmers' right to use their own varieties under Section 39 of the Seed Act, conservation measures available and community claims, compensation and referral procedures. If the institutions at the farmer level are good at agronomic extension but are weak vehicles of legal rights, they will not be effective unless they know.

Therefore, a structured program in officers' training should be considered as a part of statutory implementation. Would not make local agriculture officers adjudicators. It would, instead, help them identify situations that are relevant in respect of law, give them accurate first level information, prevent the spread of misinformation, keep records and refer farmers to the PPV&FR Authority or legal services.

C. Procedural Complexity Can Neutralize a Formal Right to Register

The right to registration is an affirmative right for the farmers who have improved or bred the varieties, but it is a right that is hard to start and thus not fully realised. This is an unusual area of consistency in the officer survey – 91.7% found it difficult or very difficult, and all officers reported issues with the registration process. The problem is not if there is a form at the national site. It is if the farmer can recognize the correct form, put together the necessary plant data, get technical characterization if necessary, be able to understand the declarations, follow an application and meet the procedural needs.

Legally serious implementation model must be implemented without lowering the standards in any way, while at the same time cutting down the transaction costs. Organised mobile registration clinics, standardised Kannada language checklists, pre-screening assistance, technical collaboration with agricultural universities and case tracking can guarantee the integrity of the registration and make it feasible.

D. Documentation of Traditional Paddy Varieties Is a Legal Infrastructure Function

The record-maintenance finding also is significant. Documentation, indexing and cataloguing

of farmers' varieties are specifically mentioned in Section 8. When only some or very few records are being kept, the issue is not just about neatness in the archives, it's an issue. Documentation influences the visibility of conservation contributions, identification of farmer varieties, the evidentiary basis for recognition or community claims and building local conservation strategies.

It is also important that any district documentation initiative is respectful of the rights and interests of knowledge holders. Recordings of traditional knowledge should not be an unrestricted disclosing device. The process must include consent, attribution, access controls (where applicable) and clear linkages with benefit sharing and recognition pathways.

E. Coordination Determines Whether National Rights Reach Local Farmers

The Act is administered all over the country; farmer contact is often local. This is a vertical architecture, and therefore, there is no way to avoid coordination. According to the survey, coordination with the agricultural universities and research institutions is basically occasional and not regular. But the roles these institutions can play to help capacity those of technical characterization, varietal documentation, conservation science and farmer training are just the ones in which they have the capacity to add capacity.

The current extension network is a viable coordination platform in Udupi. There are already farmer facing knowledge and service interfaces in Raitha Samparka Kendras. The nodes could be linked with the Director of Agriculture, Agricultural University/ agricultural research institutions, PPV&FR Authority, Panchayats and legal services institutions in a district PPV&FR implementation protocol. The reform does not have to establish a new agency, but must, at the very least, establish a workflow across existing agencies that is defined by law.

F. The 2026 Supreme Court Clarification Raises the Value of Preventive Legal Literacy

The Supreme Court's ruling in Kavitha Kuruganti for 2026 is particularly important for police officers as it has clarified that statutory rights under Section 39(1)(iv) can come into play in ongoing infringement proceedings. A farmer can invoke this provision and demonstrate that it is applicable, and a breeder continues to have the right to take legal action for infringement. The balance in the law makes it even more crucial that guidance is accurate, preventive and meaningful. Farmers should be aware of the extent and boundaries of the provision before

problems occur and officers should have an understanding of situations that will benefit from referral rather than informal advice.

RECOMMENDATIONS

A. Establish a District PPV&FR Nodal Implementation Protocol

It should be clearly laid down by the district administration the nodal workflow in matters related to PPV&FR. The protocol should specify the location for farmers to get first level information, who co-ordinates farmers' registration support, traditional varieties to be referred to for technical documentation, where cases of conservation reward are identified, and where disputes/complicated legal issues are referred. Named workflow is better than "the buck passing" form of institutional responsibility.

B. Mandatory Periodic Legal Training for Relevant Officers

Periodic training should be provided to officers in farmer oriented agri-institutions regarding PPV&FR Act. Training should include the following topics: Sections 8, 39, 41, 44 and 45; farmers' variety registration; differences between farm-saved and branded seed; compensation and reward mechanism; current judicial interpretation; and referral procedures. It is better to have short scenario based training than just statutory summaries.

C. Integrate PPV&FR Legal Literacy into Existing Farmer Extension Channels

Legal literacy should not be considered as individual campaigns, but designed to be a part of the regular Raitha Samparka Kendra activities and farmer's meetings. Rights should be explained in Kannada language using the following questions: Can I save seed? Would you like to trade seeds? When is it important to use a good brand of seed? Is any of my local variety eligible for registration? What type of records should I maintain? What can a "conserving" farmer do to gain recognition? What do you think would happen if registered seed does not perform as represented?

D. Create Mobile Registration and Documentation Clinics

Mobile clinics in the paddy growing areas should be regularly organised by the district institutions, PPV&FR Authority and technical partners. Legal screening should be done in

parallel with technical documentation, assist farmers in preparing applications and establish a case tracking record in the clinics. The aim is to make the statutory process "navigable", not to ensure registration.

E. Build a Protected District Inventory of Traditional Paddy Varieties

It is recommended that a district inventory be developed to document (with appropriate consent and with knowledge-protection safeguards) traditional paddy varieties, local names, variety custodians, cultivation areas, agronomic characteristics, cultural uses of the varieties and status of their conservation. The inventory should be used as a tool for implementation and be connected to farmer-variety registration, community claims, conservation recognition, and research collaboration – and not as a free-for-all archive of community knowledge.

F. Institutionalize University and Research Coordination

Occasional coordination of the survey should be changed to a coordinated mechanism. Quarterly or seasonal coordination between the district agriculture administration, agricultural university or research institutions, and PPV&FR related staffs could be done to review the variety of the farmers being considered as candidates, the documentation needs, their priorities for conservation, and outreach plans.

G. Move from Activity Counts to Rights-Realization Metrics

Measuring outcomes, as well as meetings held, should be used in implementation reporting. Some helpful metrics are: number of officers trained; number of farmer legal-literacy sessions held; number of farmers who get one-on-one assistance with PPV&FR; number of traditional paddy varieties documented (with farmer consent); number of registrations initiated and completed; conservation recognition/reward applications supported; benefit-sharing/compensation queries referred; and average time taken for local facilitation actions.

H. Develop a Section 39 Referral and Dispute Protocol

There should be a brief procedure for dealing with allegations of misuse of protected varieties and doubt about seed practices, with farmer-facing officers. The protocol should include an explanation of the scope of Section 39(1)(iv) (the branded-seed limitation), why the keeping of seed purchase and cultivation records are important, and refer to competent legal services. Such

a protocol would facilitate farmer protection and uphold lawful breeder remedies, given the facts outlined for Kavitha Kuruganti.

CONCLUSION

The PPV&FR Act is one of the most comprehensive statutory initiatives to balance innovation, plant-variety protection, farmers' traditional practices, conservation and benefit sharing. It has a legal framework that is not restricted for private use. It acknowledges farmer breeders, farmer varieties, farmer conservation and reward for saving and exchanging seeds, farmer community contributions, farmer conservation rewards, compensation and exemption from fees. As is further illustrated in Section 8, documentation, institutional maintenance, registration, cataloguing and statistics are part of the statutory system.

Administrative delivery of the challenge is the key, as shown by the Udupi officer evidence. Awareness campaigns are seen to be rare, farmer registration is low, registration procedures are complex, government support is inadequate, documentation of traditional varieties is inadequate and the coordination of research is irregular. Meanwhile, officials strongly advocate further training and better implementation of farmers. These findings suggest an agenda for implementation and not a complete overhaul of statutory rights.

The chosen exploratory associations corroborate that statement. Awareness of the officers is associated with participation in the department, perceived awareness of the farmers is associated with registration, and difficulties with registration is associated with procedural complexity. These relationships should be confirmed in larger studies as there are only a few cells in the contingencies and a small sample. When looked at in the context of the descriptive evidence and the statute's own administrative requirements, they all point to where legal reform can most meaningfully begin: ensuring the capacity of officers to implement the law; making it easier for people to access the law; making it easier for people to find the law; documenting traditional varieties; linking local extension to national registration institutions; and assessing the extent to which rights are being realized.

In Kavitha Kuruganti, the Supreme Court's 2026 decision highlights its relevance to current times. When appropriate, a farmer may take advantage of the protection afforded by Sections 39(1)(iv) but the extent of that protection will depend upon knowledge of its scope and access to competent advice. However, the next phase of the protection of farmers' rights in Udupi is

not just a legislative one. It is institutional: it is putting the rights which Parliament has agreed into procedures, documents, advice and avenues that are accessible to farmers.

There is scope for further research.

Future studies should include a larger sample of officers in taluk, district, extension, seed, horticulture, research and other institutions as well as determine exactly what the officer's job was. With a larger sample, more reliable inferential testing such as exact tests or adequately collapsed categories (when contingency tables are sparse) could be used. Comparative studies conducted across the paddy growing districts would help to determine if the implementation pattern is local or it's the overall institutional one adopted in Udupi.

A second study should follow farmers' registration and conservation-reward of actual varieties through the administrative process. Process-tracing will reveal programmatic deadlock points, time and recordkeeping needs for each step, which institutions are helpful and if the mobile facilitation approach enhances completion rates. A 3rd line should link the outcomes of the administrative processes to the outcomes for the farmers, assessing how increased officer training and increased frequency of outreach translates into improved legal knowledge, increase in registration applications, awareness of conservation, and access to remedies.

REFERENCES:

- Agreement on Trade-Related Aspects of Intellectual Property Rights art. 27.3(b), Apr. 15, 1994, 1869 U.N.T.S. 299.
- Convention on Biological Diversity art. 8(j), June 5, 1992, 1760 U.N.T.S. 79.
- International Treaty on Plant Genetic Resources for Food and Agriculture art. 9, Nov. 3, 2001, 2400 U.N.T.S. 303.
- Protection of Plant Varieties & Farmers' Rights Act, No. 53 of 2001, INDIA CODE (2001).
- Monsanto Tech. LLC v. Nuziveedu Seeds Ltd., (2019) 3 S.C.C. 381 (India).
- PepsiCo India Holdings (P) Ltd. v. Kavitha Kuruganti, 2024 SCC OnLine Del 153 (India).
- Kavitha Kuruganti v. PepsiCo India Holdings Pvt. Ltd., 2026 INSC 811 (India).
- Amrithnath Sreedevi Babu, Implementing Farmers' Rights Under the Plant Variety Protection Law in India: Analysing the Complex Regulatory Framework and Its Impact, 28 J. WORLD INTELL. PROP. 491 (2025).
- Pratibha Brahmi, Sanjeev Saxena & B.S. Dhillon, The Protection of Plant Varieties and Farmers' Rights Act of India, 86 CURRENT SCI. 392 (2004).
- Raj Ganesh et al., Farmers' Rights and Plant Breeders' Rights under Indian Regulations of Plant Variety Protection: A TRIPS Compliant Harmonised Coexistence, 35 INDIAN J. PLANT GENETIC RES. 13 (2022).
- Karine Peschard, Farmers' Rights and Food Sovereignty: Critical Insights from India, 41 J. PEASANT STUD. 1085 (2014).
- Digvijay Singh & Rajnish K. Singh, Customary Rights of Farmers and PepsiCo Controversy, 26 J. WORLD INTELL. PROP. 295 (2023).
- Protection of Plant Varieties & Farmers' Rights Authority, Official Website, <https://plantaauthority.gov.in/> (last visited Sept. 24, 2026).
- Udupi District, Agriculture, Government of Karnataka, <https://udupi.nic.in/en/agriculture/> (last visited Sept. 24, 2026).