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Legal Challenges in the Registration of Farmers' Varieties under the Protection of Plant Varieties and Farmers' Rights Act, 2001

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ABSTRACT

The Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPV&FR Act) is the intellectual property framework developed by India to protect plant varieties while taking into account the role of farmers in agricultural innovation and the conservation of biodiversity. However, many problems remain in the registration of farmers' varieties. This paper examines whether the existing registration regime is able to protect traditional farmers' varieties, given that the registration system is predominantly based on formal and standardized plant variety protection. The main emphasis is on the problems farmers face in fulfilling the criteria of distinctiveness, uniformity and stability (DUS) when traditional varieties contain genetic diversity and have developed over generations of farmers. The procedural, technical, evidential and financial problems of registration are also analyzed, along with the question whether small farmers can fulfill all the requirements. The paper further discusses the limited time period for the registration of farmers' varieties. It also explores the role of traditional farmers in the plant variety protection regime, especially traditional farmers who have conserved, developed or improved such traditional varieties and may also be recognized as breeders. The recognition of such farmers as breeders raises issues about the kind of rights they hold as breeders and the possible conflict between their rights as traditional farmers and their rights under plant variety protection. The study asks whether the present regime properly balances the intellectual property rights of farmers as breeders, on the one hand, and their traditional practices of cultivating, using, exchanging and conserving plant varieties, on the other.

Keywords: *Breeders' Rights, Farmers' Rights, Intellectual Property Rights, Plant Variety Protection*

I. INTRODUCTION

Plant genetic resources have played a crucial role in the development of agriculture, food security and biodiversity.[1] The availability of a wide range of plant species for agriculture allows

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[1] International Treaty on Plant Genetic Resources for Food and Agriculture art. 1, ¶ 1, Nov. 3, 2001, 2400 U.N.T.S. 303 [hereinafter ITPGRFA].

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agriculture to adapt to varying climatic conditions, pests and diseases, and to the nutritional and economic needs of society. For this reason, the development, conservation and improvement of plant varieties have gained importance not only from an agricultural point of view but also from the point of view of intellectual property law. Plant breeding is now a matter of science and technology requiring considerable investment, and there is accordingly a need to protect and recognize the efforts of those who have developed and improved plant varieties. However, the protection of plant varieties presents an interesting challenge to the law, because agricultural innovation has not taken place only within breeding organizations.[2]

This interconnection among agriculture, innovation and intellectual property rights is especially important in India. Indian farmers have traditionally preserved seeds, selected plants with good qualities, adapted plants to particular soil and climatic conditions, and exchanged planting material.[3] In this way, many plant varieties and landraces have been saved and further developed. These varieties may carry genetic variation that reflects their adaptation to particular ecological environments and their further development by farmers. The role of farmers is thus not limited to that of consumers of commercially bred seed. They can act as cultivators, conservers, selectors, developers and, in certain situations, even breeders of plant varieties. An effective system of plant variety protection should therefore take into account not only formal plant breeding but also the traditional agricultural practices through which plant genetic resources are conserved and developed.

The Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPV&FR Act) is India's effort to deal with these issues by developing a *sui generis* system of plant variety protection.[4] The Act provides for the protection of plant breeders while at the same time taking into consideration the contribution made by farmers. It provides a legal process for registering farmers' varieties and also recognizes the role played by farmers in the conservation and improvement of plant genetic resources.[5] In that sense, the Act goes beyond traditional plant variety protection systems, which take into account only the work of breeders.

However, the statutory availability of registration for farmers' varieties does not necessarily guarantee effective legal protection for the farmers concerned. Certain criteria must be fulfilled

[2] *See* ITPGRFA, *supra* note 1, art. 9, ¶ 1 (recognizing the contribution that local and indigenous communities and farmers have made and will continue to make to the conservation and development of plant genetic resources).
[3] *Id.*
[4] Protection of Plant Varieties and Farmers' Rights Act, 2001, No. 53, Acts of Parliament, 2001, pmbl. (India) [hereinafter PPV&FR Act]; *see* Agreement on Trade-Related Aspects of Intellectual Property Rights art. 27, ¶ 3(b), Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299 (requiring members to protect plant varieties by patents, by an effective *sui generis* system or by a combination of the two).
[5] PPV&FR Act §§ 2(l), 39(1)(ii).

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in the registration process, including eligibility criteria, documentation and the technical examination of the variety. One of the most important is the requirement of distinctiveness, uniformity and stability (DUS). Although these criteria help in distinguishing and identifying plant varieties, their application poses particular challenges in the case of traditional farmers' varieties. Unlike varieties that result from a selective breeding programme, traditional farmers' varieties may have undergone many years of cultivation and selection, which leaves genetic variation within the variety.

The issue goes beyond the DUS criteria. Farmers applying for registration may face procedural, technical, evidential and financial problems, especially where registration requires information, knowledge or other resources that may not be available to small-scale farmers. The time allowed for registering farmers' varieties is another issue, because it casts doubt on the capacity of farmers to register their varieties formally. The position becomes even more complicated when farmers are not only preserving traditional varieties but also developing them. Such farmers may have an interest both as traditional farmers and as breeders.[6]

The core problem addressed in this paper is the relationship between the traditional nature of farmers' varieties and the formal demands of plant variety protection. The question is not whether farmers' varieties can, *per se*, meet the requirements of registration, but whether the current legislative framework leaves enough room for the peculiarities of such varieties to be accommodated in practice, so that protection remains available to the farmers and communities that maintain them. This matters because farmers' rights depend not only on recognition in legislation but also on whether farmers can actually use the protection the legislation offers.

In this context, this doctrinal study aims to examine the legal issues in the registration of farmers' varieties under the Protection of Plant Varieties and Farmers' Rights Act, 2001, through an analysis of the statute, the rules, the material published by the Protection of Plant Varieties and Farmers' Rights Authority, decided cases and the secondary literature. It focuses in particular on the relationship between the DUS criteria and the genetic diversity of traditional varieties; the procedural, technical, evidential and financial barriers to registration; the significance of the period allowed for registration; and the relationship between the rights of farmers and the rights of breeders.

II. LITERATURE REVIEW

The existing literature on the protection of plant varieties in India has examined the relationship between intellectual property rights, farmers' rights, the conservation of plant genetic resources

[6] PPV&FR Act §§ 16(1)(d), 39(1)(i).

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and agricultural innovation. In this context, the PPV&FR Act has been identified as important because it represents a *sui generis* system that takes into account breeders' rights as well as farmers' rights.[7] The literature establishes that farmers do not merely use agricultural varieties but also play a role in the conservation, selection, improvement and development of plant genetic resources. Srivastava et al. argue that the PPV&FR regime recognizes the role of farmers as conservers and enables their contributions to the preservation and improvement of plant genetic resources to be identified.[8] Likewise, P.L. Gautam et al. describe how the Indian system of plant variety protection allows various types of varieties, including those evolved by farmers, to be protected under the formal registration regime.[9]

In this broader context, the literature on farmers' varieties focuses on their importance for agricultural biodiversity and local agriculture. Such varieties are often adapted to specific geographical and cultural conditions, and they may be developed through continuous cultivation and selection by farming communities. Singh and Agrawal's review states that farmers' varieties are still grown in different regions and agro-ecosystems of India and are especially well adapted to marginal, low-input environments.[10] The literature thus presents farmers as participants in agricultural innovation and not merely as consumers of the results of breeding. However, farmers' varieties may be the product of collective and intergenerational processes, and their protection within an intellectual property system based on identification and registration may therefore be difficult. A study of traditional rice varieties in Kerala found that farmers were either unaware of the PPV&FR Act or unaware of its functions, which suggests that the existence of a legal system does not necessarily guarantee farmers' participation in it.[11]

A considerable body of work has accordingly focused on the DUS requirements for plant variety registration. The Authority has developed crop-specific guidelines and DUS descriptors for different crop species within the PPV&FR framework, and DUS testing is a key element of the registration procedure.[12] The application of these criteria to farmers' varieties has, however,

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[7] PPV&FR Act pmbl., § 39.

[8] Manoj Srivastava et al., *Intellectual Property Rights on Plant Varieties in India: A Sector-Wise Analysis*, 20 J. INTELL. PROP. RTS. 81, 82 (2015).

[9] P.L. Gautam et al., *Protection of Plant Varieties and Farmers' Rights: A Review*, 25 INDIAN J. PLANT GENETIC RES. 9 (2012).

[10] R.P. Singh & R.C. Agrawal, *Farmer's Varieties in India: Factors Affecting Their Preferential Prevalence and the Current Status of Their Legal Protection*, 89 INDIAN J. AGRIC. SCI. 1371, 1371 (2019), https://doi.org/10.56093/ijas.v89i9.93450.

[11] Michael Blakeney, Jayasree Krishnankutty, Rajesh K. Raju & Kadambot H.M. Siddique, *Agricultural Innovation and the Protection of Traditional Rice Varieties: Kerala a Case Study*, 3 FRONTIERS SUSTAINABLE FOOD SYS. 116 (2020), https://doi.org/10.3389/fsufs.2019.00116.

[12] PROT. OF PLANT VARIETIES & FARMERS' RTS. AUTH., COMPENDIUM OF REGISTERED VARIETIES UNDER PPV&FR ACT, 2001 (data up to Oct. 30, 2018), at 3, 4, 7 (describing the species-specific DUS test guidelines, the characterization of reference varieties as per DUS descriptors by DUS test centres, and the major steps in registration), https://plantauthority.gov.in/sites/default/files/compendiumfinal27oct2018.pdf.

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drawn particular attention from scholars. According to Nagarajan, Yadav and Singh, farmers' varieties may be derived from a heterogeneous base of landraces, and the existing DUS yardstick therefore needs a fresh look in their case, given the considerable field variability of such varieties.[13] More recent research has also identified the difficulty farmers' varieties face in complying with the DUS requirements, especially in cross-pollinated crops, whose greater heterogeneity leaves them failing the DUS test.[14]

The literature has also considered the practical accessibility of the registration mechanism. For example, Lushington's study of the registration of plant varieties by farmers in India discusses the multi-stage nature of the registration process and highlights the value of registration for recording and protecting farmers' varieties.[15] Concern has also been raised about the limited time period allowed for registering farmers' varieties.[16] Pandravada et al. describe the successful registration of farmers' varieties from Telangana and show how institutional help can enable farmers to obtain protection.[17] The practical effectiveness of the legal framework may therefore depend not only on the statutory recognition of farmers' varieties but also on farmers' awareness of the process, technical assistance, institutional help, documentation and the ability of farmers to register their varieties. Importantly, the fee schedule of the PPV&FR Authority prescribes no registration fee for farmers' varieties, and the Act exempts farmers from paying any fee in proceedings under it.[18] Financial difficulty should therefore be considered in terms of all the costs associated with participation in the registration process, including testing, documentation, technical assistance and institutional help, and not merely as a question of the registration fee.

Another issue prominent in the literature is the recognition of farmers as breeders. Under the PPV&FR regime, farmers who conserve, develop, improve or select a variety may obtain legal

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[13] S. Nagarajan, S.P. Yadav & A.K. Singh, *Farmers' Variety in the Context of Protection of Plant Varieties and Farmers' Rights Act, 2001*, 94 CURRENT SCI. 709 (2008).

[14] Singh & Agrawal, *supra* note 10, at 1371 (finding that registration of farmers' varieties of coarse cereals, vegetables and cash crops is very low or negligible because their heterogeneity, owing to genetic make-up and pollination behaviour, leads them to fail the DUS test).

[15] Kaye Lushington, *The Registration of Plant Varieties by Farmers in India: A Status Report*, 2 REV. AGRARIAN STUD. no. 1 (2012), https://doi.org/10.22004/ag.econ.308549.

[16] PROT. OF PLANT VARIETIES & FARMERS' RTS. AUTH., COMPENDIUM OF REGISTERED VARIETIES UNDER PPV&FR ACT, 2001 (data up to Oct. 30, 2018), at 7 (noting a prescribed time limit for registering extant varieties), https://plantauthority.gov.in/sites/default/files/compendiumfinal27oct2018.pdf; *see also* Lushington, *supra* note 15 (urging the extension of the five-year time limit for registering farmers' varieties).

[17] S.R. Pandravada, N. Sivaraj, V. Kamala, M. Swapna & B. Sarath Babu, *Empowering Ethnic Groups Through Farmers' Variety Protection by NBPGR: Success Story from Telangana State*, 33 INDIAN J. PLANT GENETIC RES. 109 (2020), https://doi.org/10.5958/0976-1926.2020.00018.2.

[18] PPV&FR Act § 44; PROT. OF PLANT VARIETIES & FARMERS' RTS. AUTH., COMPENDIUM OF EXTANT NOTIFIED VARIETIES REGISTERED UNDER PPV&FR ACT, 2001, APRIL 2017 TO NOVEMBER 2021 (vol. II, 2021), at vi (listing no fee for farmers' varieties), https://plantauthority.gov.in/sites/default/files/compendiumforextantnotified-nov-2021.pdf.

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recognition in appropriate situations.[19] This is significant because farmers are usually viewed as users of plant varieties, while breeders are viewed as the creators of the varieties protected by law. The literature therefore raises questions about the interaction between farmers' rights and breeders' rights, especially where traditional agricultural practices lead to the creation or improvement of a variety that is eligible for registration. Protecting farmers' varieties may thus require a balance between intellectual property rights and the practices that keep such varieties alive through cultivation, conservation, use and exchange. Litigation under the Indian regime has also revealed tension between the promotion of plant breeding and farmers' traditional seed practices.[20]

III. Legal analysis of the registration framework for farmers' varieties

A. Legal framework for registration of farmers' varieties

The PPV&FR Act provides a dedicated mechanism for the protection of plant varieties that takes account of the role played by farmers in the growth of agriculture and in conservation. Farmers' varieties are covered by the system because these varieties may have a long history of cultivation, selection, conservation, development or improvement by farmers. It is relevant to note that legal coverage does not mean that registration is automatic. The applicant has to meet the requirements relating to the variety, its denomination, documentation and examination. Applications may be filed by farmers individually or jointly, or by groups or communities of farmers.[21]

The process ordinarily involves the filing of an application, its examination, testing for distinctiveness, uniformity and stability (DUS), evaluation of the test results, publication of the particulars of the variety for objections within a specified period, and registration.[22] Before an application for a farmers' variety is accepted, a State or Central Agricultural University, or another designated public institution relevant to the crop, verifies the status of the variety and its genetic purity, uniformity and stability.[23] The Protection of Plant Varieties and Farmers'

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[19] PPV&FR Act §§ 16(1)(d), 39(1)(i), (iii).

[20] *See, e.g.*, *PepsiCo India Holdings Pvt. Ltd. v. Kavitha Kuruganti*, LPA 590/2023, 2024 SCC OnLine Del 153 (Del. HC Jan. 9, 2024) (India) (setting aside the revocation of the registration of a potato variety and rejecting the contention that the breeder's infringement suits against farmers violated section 39(1)(iv)), *SLP disposed of sub nom. Kavitha Kuruganti v. PepsiCo India Holdings Pvt. Ltd.*, SLP (C) Nos. 10320–10321 of 2024, 2026 INSC 811 (India Aug. 5, 2026).

[21] PPV&FR Act §§ 16(1)(d), (2), 39(1)(ii).

[22] Prot. of Plant Varieties & Farmers' Rts. Auth., Compendium of All Registered Varieties, October 2018 to November 2021 (vol. II, 2021), at i (outlining the major steps in registration), https://plantauthority.gov.in/sites/default/files/compediumforallcategoryuptonov-2021.pdf.

[23] *Id.* at ix–x (setting out the process of registration of farmers' varieties).

Rights Authority, together with its DUS test centres, plays a very significant role in examination and DUS testing.[24] While an institutional structure exists through which registration can lawfully be obtained, the problem for farmers lies in translating their knowledge into formal documentation.

B. DUS requirements and genetic diversity

One of the key issues in the registration of farmers' varieties is the need to meet the criteria of distinctiveness, uniformity and stability. Distinctiveness means that the variety is clearly distinguishable from other varieties by at least one essential characteristic.[25] It may be established by relying on locally recognized features and cultivation experience, but it sometimes requires technical description and comparison.

Uniformity, however, raises even greater issues. Traditional varieties may contain genetic diversity because they are shaped by repeated cultivation, selection by farmers, adaptation to the local environment and the exchange of seed between farmers. This does not mean that such varieties automatically fail the requirement of uniformity. The evaluation of DUS should take into account the relevant characteristics and the levels of variation to be expected. But a registration system oriented mainly towards standardized varieties can create serious problems where genetic diversity is one of the key features of a traditional variety.

Stability means that the essential characteristics of the variety remain unchanged after repeated propagation. In the case of traditional varieties, there may be variation across environments and within the population while the basic identity of the variety remains intact. The issue is thus not so much whether the variety changes as whether the existing test can distinguish natural variation from instability. If DUS were applied inflexibly, traditional varieties, which derive part of their value from adaptability and diversity, would suffer. It is therefore critical that DUS be applied flexibly.[26]

C. Practical barriers to registration

Besides the substantive barriers arising from DUS, farmers may face procedural, technical, evidential and financial barriers. Procedural barriers may include, for instance, difficulties in

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[24] PROT. OF PLANT VARIETIES & FARMERS' RTS. AUTH., COMPENDIUM OF REGISTERED VARIETIES UNDER PPV&FR ACT, 2001 (data up to Oct. 30, 2018), at 4, 8 (describing the DUS test centres), https://plantauthority.gov.in/sites/default/files/compendiumfinal27oct2018.pdf.

[25] PPV&FR Act § 15(3)(b); PROT. OF PLANT VARIETIES & FARMERS' RTS. AUTH., COMPENDIUM OF ALL REGISTERED VARIETIES, OCTOBER 2018 TO NOVEMBER 2021 (vol. II, 2021), at v (stating that a variety is eligible for registration if it fulfils the DUS criteria), https://plantauthority.gov.in/sites/default/files/compediumforallcategoryuptonov-2021.pdf.

[26] *See generally* Rayappa R. Hanchinal, *Providing Intellectual Property Protection to Farmers' Varieties in India Under the Protection of Plant Varieties & Farmers' Rights Act, 2001*, 20 J. INTELL. PROP. RTS. 7 (2015).

filling in forms, choosing a denomination and communicating with the authorities. Small and marginal farmers may be less familiar with the official procedures of intellectual property protection. Technical barriers arise where farmers have no access to the facilities and experts needed to describe varieties and prepare for DUS testing.[27]

Evidential barriers are especially relevant to traditional varieties. Farmers and their communities may have extensive knowledge of the origins, cultivation, features and history of a variety but no written documents about it. This knowledge may be transmitted orally from generation to generation and may therefore not meet formal evidential requirements. Community statements, local records, agricultural records and other evidence are accordingly important for demonstrating the identity and history of a farmers' variety.

Financial considerations should also be examined beyond the cost of registration itself. Although farmers are exempt from fees in proceedings under the Act, costs may arise in relation to travel, documentation, technical expertise, preparation of seed, contact with government officials, testing and similar activities.[28] Such indirect costs may affect the accessibility of registration, especially for small-scale farmers and in scattered rural areas.

Time is a further constraint, and it operates in two distinct ways. The first is the period within which an application may be filed at all. An extant variety, a category that under the Act includes farmers' varieties, is to be registered "within a specified period".[29] Under the PPV&FR Rules, 2003 as originally framed, farmers' varieties had to be registered within five years, and other extant varieties within three years, of the notification of the crop species concerned, and the Plant Varieties Registry has had to decide from which notification that period runs.[30] After the 2015 amendment of the Rules left the time limit to be specified by the Authority, the Authority fixed it, for ninety-two crop species, at ten years from the expiry of the original time limit for farmers' varieties, and six years for notified varieties and varieties of common knowledge.[31] Because the period runs crop by crop, a traditional variety that its custodians have not documented and filed in time may lose the opportunity of registration as a farmers' variety, however long it has been cultivated. Preparing an application for a traditional variety may itself

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[27] PROT. OF PLANT VARIETIES & FARMERS' RTS. AUTH., COMPENDIUM OF REGISTERED VARIETIES UNDER PPV&FR ACT, 2001 (data up to Oct. 30, 2018), at 7–8 (describing the crop-specific DUS test guidelines and the DUS test centres), https://plantauthority.gov.in/sites/default/files/compendiumfinal27oct2018.pdf.

[28] PPV&FR Act § 44 (exempting farmers from fees in proceedings under the Act).

[29] PPV&FR Act §§ 2(j)(ii), 15(2).

[30] PLANT VARIETIES REGISTRY, Order on the Time Limit for Registration of Extant Varieties (Feb. 11, 2011), https://plantauthority.gov.in/sites/default/files/order1422011.pdf; *see also* Lushington, *supra* note 15.

[31] PROT. OF PLANT VARIETIES & FARMERS' RTS. AUTH., *Time Extension for Registration of Extant Varieties*, https://plantauthority.gov.in/time-extension-registration-extant-varieties (last updated Jan. 9, 2020); *see also* Lushington, *supra* note 15 (reporting the official view that once registration of extant varieties of a crop species is completed, only new varieties of that species should remain open for registration).

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require much time and communal knowledge, so the filing window can matter as much as any substantive criterion.

The second is the term of protection, which is a different matter. A certificate of registration is valid initially for nine years for trees and vines and six years for other crops and may be renewed, but the total period of protection cannot exceed eighteen years for trees and vines, fifteen years from the date of notification under section 5 of the Seeds Act, 1966 for an extant variety, and fifteen years from the date of registration in other cases.[32] The success of the registration process therefore depends not only on the grant of protection but also on farmers' understanding of both the filing period and the duration and implications of the protection obtained.

D. Farmers' rights and breeders' rights

The Act seeks to strike a balance between the rights of farmers and the rights of breeders. Farmers' rights acknowledge the continuing involvement of farmers in the conservation, use and improvement of plant genetic resources. In some cases, farmers who develop or improve a variety may also be recognized by the legal system as breeders.[33] There is thus a very important connection between traditional agricultural practice and intellectual property rights.

This connection becomes important when a variety has been cultivated traditionally but particular farmers wish to register it. The contribution of a traditional farming community may not always fit within the concept of individual ownership that is typical of intellectual property.[34] The legal system must therefore take into account both the breeding activity and the history of the variety.

Registration must also be viewed in light of the statutory safeguarding of farmers' traditional seed practices. A farmer is entitled to save, use, sow, resow, exchange, share or sell farm produce, including seed of a protected variety, subject to the statutory restriction that the farmer may not sell branded seed of a protected variety.[35] The registration of a farmers' variety should therefore not be regarded as automatically doing away with traditional practices of seed saving and exchange.

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[32] PPV&FR Act § 24(6); PROT. OF PLANT VARIETIES & FARMERS' RTS. AUTH., COMPENDIUM OF REGISTERED VARIETIES UNDER PPV&FR ACT, 2001 (data up to Oct. 30, 2018), at 3, 8–9 (noting that the material moves into the public domain when the period of registration lapses), https://plantauthority.gov.in/sites/default/files/compendiumfinal27oct2018.pdf.

[33] PPV&FR Act §§ 16(1)(d), 39(1)(i).

[34] *Id.* §§ 16(1)(d), 41 (permitting applications by a group or community of farmers and claims by a village or local community for compensation for its contribution to the evolution of a variety).

[35] *Id.* § 39(1)(iv); *see also PepsiCo*, *supra* note 20, ¶¶ 68–72.

The Delhi High Court's decision in *PepsiCo India Holdings Pvt. Ltd. v. Kavitha Kuruganti* shows how these provisions meet in litigation.[36] The Authority had revoked PepsiCo's registration of the potato variety FL 2027, observing among other things that PepsiCo had sued farmers for infringement and later withdrawn the suits. The Division Bench set the revocation aside. It rejected the contention that the suits violated farmers' rights under section 39(1)(iv) and made the registration contrary to the public interest, because the suits had not been shown to be vexatious or intimidatory, and it held that a suit to protect the exclusive rights conferred by section 28 cannot *per se* be described as intimidatory or vexatious. The Supreme Court declined to interfere, while making it clear that an individual farmer who claims the protection of section 39(1)(iv) may do so in any proceeding PepsiCo initiates and prove that he or she comes within it, and that PepsiCo could not be restrained from taking legal remedies if its rights were infringed.[37] The Division Bench also accepted that the variety, although described in the application as "new", had been processed in the extant category.[38] The decision suggests that section 39(1)(iv) will not by itself unsettle a breeder's registration; an allegation that a breeder's infringement suits against farmers are vexatious or intimidatory has to be established on evidence, and the mere institution of such suits is not enough. For farmers' varieties, the case is also a reminder that the category under which an application is processed carries legal weight.

E. Registration and protection of traditional seed exchange

The relationship between registration and traditional seed exchange is key to the balance the Act seeks to achieve. Farmers' varieties are often developed and maintained through cultivation and exchange among farmers themselves rather than through individual commercial ownership.[39] If registration prohibited the ordinary saving, use, exchange and sharing of seed, the protection of a variety would become counterproductive to its preservation.

The statutory protection of farmers' rights in relation to seed prevents such an outcome.[40] At the same time, the protection of registered varieties provides a means of recognizing breeding and of dealing with unauthorized commercial exploitation.[41] The system thus tries to draw a distinction between the ordinary activities of farmers and conduct that may harm the rights of the registered holder. Awareness of this distinction is important, given the uncertainty surrounding farmers' rights.

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[36] *PepsiCo*, *supra* note 20, ¶¶ 1–3.
[37] *Id.* ¶¶ 68–72, 77–78; *Kavitha Kuruganti*, 2026 INSC 811, ¶¶ 6–8.
[38] *PepsiCo*, *supra* note 20, ¶¶ 54, 77.
[39] PPV&FR Act § 2(l).
[40] *Id.* § 39(1)(iv).
[41] *Id.* § 28(1); *see also PepsiCo*, *supra* note 20, ¶ 72.

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F. Institutional implementation and accessibility

Implementation through institutional channels is an essential step in making the statutory framework work. The Authority, state agricultural universities, agricultural officers, local governments and extension institutions can assist farmers in understanding their entitlements, filing applications, recording the characteristics of a variety and keeping proof of its traditional cultivation.[42] This assistance becomes all the more necessary when a variety is preserved by a community rather than by a single individual applicant. Community involvement enables the registration process to trace the history, characteristics and tradition of the variety, and reduces the possibility that registration will overlook the contributions of many generations of farmers.[43] The registration process should explain, in simple language and in regional languages, the difference between registration and the statutory rights of farmers. This would reduce uncertainty about the preservation, exchange, sharing and sale of farm produce. The technical guidelines for DUS testing should likewise state the acceptable degree of variation in each crop-specific standard. These measures would not change the scientific requirements of plant variety protection but would enable traditional farmers to take part in the existing process. An improved institutional mechanism would therefore help in acknowledging the contributions of farmers and improving the operation of the Act, while still safeguarding the legal rights attached to registered plant varieties. Such an approach would further the conservation of adapted genetic resources and prevent procedural complications from becoming an obstacle to registration by farmers.

G. Evaluating the balance between farmers' rights and breeders' rights

The legal system gives valuable recognition to farmers' varieties, and at the same time it introduces a procedure through which traditional agriculture can obtain legal protection. There is, however, a need to distinguish between legal recognition and accessibility.[44] The main difficulties arise from the interaction between the formal requirements for registration and the properties of farmers' varieties, especially genetic diversity, community-based development, oral tradition and lack of access to technology.

The analysis shows that the DUS requirements have to be applied flexibly enough to recognize natural variation while remaining scientifically valid. Procedures are needed for the registration

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[42] PROT. OF PLANT VARIETIES & FARMERS' RTS. AUTH., COMPENDIUM OF ALL REGISTERED VARIETIES, OCTOBER 2018 TO NOVEMBER 2021 (vol. II, 2021), at ix–x (referring to the certification of farmers' varieties for registration by state agricultural universities and other institutions), https://plantauthority.gov.in/sites/default/files/compediumforallcategoryuptonov-2021.pdf.

[43] PPV&FR Act §§ 16(1)(d), 41.

[44] PPV&FR Act §§ 39(1)(ii), 44.

of collective work and for evidence suited to traditional agriculture. Institutional support is crucial in reducing procedural and technological difficulties.

Finally, the system must maintain a clear distinction between intellectual property protection through registration and the continuation, under the law, of farmers' traditional practices. The system can recognize and protect the contribution of a breeder without prohibiting seed saving, exchange, sharing and cultivation.[45] The effectiveness of the PPV&FR system will depend on a reasonable balance between plant variety protection, farmers' rights, conservation and the further development of varieties.

IV. Analysis and Findings

A. Formal registration and traditional genetic diversity

The study of the DUS criteria highlights an essential tension between the process of registration and the attributes of farmers' varieties. Registration requires a variety to have distinct, uniform and stable attributes, whereas farmers' varieties may be genetically varied, adapted, heterogeneous and continuously selected by farmers. Although the present allowance for variation in registration can reduce this tension, it does not resolve it. Uniformity can thus become an indirect barrier, especially where diversity is an attribute of the variety. This conclusion does not mean that the DUS criteria should be abandoned; on the contrary, it shows that they should be applied case by case and crop by crop.

B. Legal recognition does not ensure effective registration

The Act recognizes varieties developed by farmers and recognizes farmers as conservers and breeders.[46] However, recognition of a right does not automatically give its holder the means to register. Farmers may lack knowledge, technical help, information, institutional access or other inputs necessary for registration. Verification and technical description may also be especially challenging for farmers who are isolated from other farms and communities. Registration statistics cannot show how many traditional varieties remain outside the system.[47]

C. Registration barriers are cumulative

The four types of barriers discussed above do not operate independently; rather, they may reinforce each other. A farmer with no technical knowledge may also find it difficult to generate evidence and obtain verification. Likewise, even though farmers are exempt from fees, indirect

[45] PPV&FR Act § 39(1)(iv); *see also PepsiCo*, *supra* note 20, ¶¶ 68–72.
[46] PPV&FR Act § 39(1)(i)–(iii).
[47] Prot. of Plant Varieties & Farmers' Rts. Auth., Compendium of All Registered Varieties, October 2018 to November 2021 (vol. II, 2021), at ii (reporting registration statistics up to Nov. 30, 2021), https://plantauthority.gov.in/sites/default/files/compediumforallcategoryuptonov-2021.pdf.

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costs such as travel, documentation, seed multiplication, technical assistance and communication cannot be avoided.[48] These barriers are more likely to affect small-scale farmers. The registration process therefore needs institutional, technical and financial support of the kind proposed in the suggestions below.

D. Farmers' rights and breeders' rights can overlap

There is, however, ambiguity about the separation of the rights of farmers from those of breeders. A farmer may save, select, improve and develop a variety and later apply for its registration as a breeder.[49] In the development of community-based varieties, contributions may be intergenerational and come from many farmers. The system acknowledges the rights of farmers, including their statutory rights in relation to seed, but questions remain concerning community involvement, ownership, benefits and breeders' rights.[50]

E. Need for a more accessible registration framework

The study shows that although the framework is sound in its legal design, it is less effective in practical access. The point is not to give up DUS or registration, but to ensure that the process is accessible to those whom it is meant to protect. Greater institutional help, appropriate evidentiary procedures, technical assistance and a more accessible process would lower barriers without undermining the scientific basis of plant variety protection.

V. Suggestions

Improvements can be considered in the registration process for farmers' varieties to make the existing legislation more accessible without compromising the scientific criteria of plant variety protection. First, DUS testing can be adapted to the nature of farmers' varieties. The PPV&FR Authority should develop specific standards for individual crops and modes of propagation that take genuine biological variation into account.[51] Where appropriate, population-based descriptors, tolerance limits and field observations may be adopted, especially for traditionally conserved and genetically diverse varieties. In addition, testing procedures should cover crops widely grown by farming communities, such as regional rice varieties and minor millets.

Second, registration procedures should be simplified and made accessible to farmers. Instructions, forms and guidelines should be provided in regional languages. Farmers can be

[48] PPV&FR Act § 44.
[49] PPV&FR Act §§ 16(1)(d), 39(1)(i).
[50] *Id.* §§ 39(1)(iv), 41; *see also PepsiCo*, *supra* note 20, ¶¶ 68–72.
[51] Prot. of Plant Varieties & Farmers' Rts. Auth., Compendium of All Registered Varieties, October 2018 to November 2021 (vol. II, 2021), at v (referring to the Authority's guidelines for species-specific DUS tests for individual crop species), https://plantauthority.gov.in/sites/default/files/compediumforallcategoryuptonov-2021.pdf.

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assisted in completing the forms by agricultural universities, Krishi Vigyan Kendras, seed banks and district agriculture offices. This assistance could take the form of a designated officer or office that helps farmers to apply and to complete the forms in accordance with the procedure.

Third, the fee exemption should be complemented by financial and technical assistance.[52] Government institutions should assist small farmers with seed processing, variety description, technical descriptors, DUS requirements and other expenses relating to registration. This would address the indirect costs that may prevent farmers from using the statutory process.

Fourth, the evidentiary requirements should accommodate the nature of traditional agricultural knowledge. Declarations by communities, records of Biodiversity Management Committees, People's Biodiversity Registers, seed bank records, local agricultural records, oral history and statements by knowledgeable members of the community should all be accepted as valid proof of cultivation, conservation and development.[53]

Lastly, there should be clearer guidelines on the interaction between farmers' rights and breeders' rights. The framework needs to address the recognition of farmers as breeders, community representation, benefit sharing, and the relationship between the protection of breeders and the rights of farmers under section 39(1)(iv). Community members should have an opportunity to oppose inappropriate registrations and to share in the benefits, while seed practices must remain protected.[54]

VI. CONCLUSION

This paper has discussed the legal issues in the registration of farmers' varieties under the Protection of Plant Varieties and Farmers' Rights Act, 2001, particularly with reference to the legal recognition of farmers' varieties, the DUS criteria, the barriers to registration and the relationship between farmers' rights and breeders' rights. The analysis shows that the Act offers a valuable legal framework under which farmers are recognized as producers, conservers, innovators and, at times, breeders, and not simply as users of seed. The legal framework also recognizes the practice of saving, using, sowing, resowing, exchanging, sharing and selling farm produce by farmers, subject to the statutory restriction on branded seed.[55]

However, legal recognition does not automatically lead to adequate protection or accessibility. The DUS criteria may be problematic for traditional varieties with genuine genetic diversity. The procedural, technical, evidential and indirect financial difficulties, together with the time

[52] PPV&FR Act § 44.
[53] *See* The Biological Diversity Act, 2002, No. 18, Acts of Parliament, 2003, § 41(1) (India).
[54] PPV&FR Act §§ 21, 26, 39(1)(iv), 41.
[55] PPV&FR Act § 39(1)(iv).

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limit for filing, which runs from the notification of each crop species, may further limit access to registration for small farmers and rural communities.[56] The relationship between farmers' rights and breeders' rights also needs to be better defined where varieties are developed or preserved collectively. The present scheme is thus a good starting point, but it still needs to be made more accessible and more accommodating of diversity.

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[56] PROT. OF PLANT VARIETIES & FARMERS' RTS. AUTH., COMPENDIUM OF ALL REGISTERED VARIETIES, OCTOBER 2018 TO NOVEMBER 2021 (vol. II, 2021), at 479–84 (listing the crop species open for registration), https://plantauthority.gov.in/sites/default/files/compediumforallcategoryuptonov-2021.pdf; *see also* PLANT VARIETIES REGISTRY, *supra* note 30.

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