

A Study on Implementation Perspective of Indian Protection of Plant Varieties and Farmers Right Act, 2001

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Submitted: 01-04-2022

Accepted: 09-04-2022

ABSTRACT

Traditionally, farmers across the globe have preserved plant genetic diversity while also enriching this diversity by human selection. Despite India's adoption of a sui generis system for the protection of plant varieties ten years ago, academic and sponsored reviews of the functioning of the Indian Protection of Plant Varieties and Farmers Rights Act, 2001 are scant. The newly adopted 'Farmers' Rights' regime together with 'Farmers' Privilege' as per the UPOV 1978 model (rather than UPOV 1991) ensured a broad leeway to farmers to save, exchange and re-sow seeds saved from the harvest of a season, in the next season. The research method followed here is empirical research. A total of samples have been taken out of which is taken through convenient sampling. The sample frame taken by the researcher through an instant messaging platform and the sample size is 200. The independent variable here is age, income, education and gender. The dependent variables are whether the public think the protection of plant variety act is effective, whether the provisions of the act are complex, and whether the act is implemented properly. The statistical tool used by the research is graphical representation, frequency table and crosstab.

KEYWORDS: Farmers right, India, Implementation, Indian Protection of Plant Varieties and Farmers Rights Act, 2001, Policies

I. INTRODUCTION

Perspective The Indian Patents Act, 1970 (as amended in 1999, 2002 and 2005) excludes "plants and animals in whole or any part thereof other than microorganisms but including seeds, varieties and species and essentially

biological processes for production or propagation of plants and animals" from patentability. Given the express exclusion of plant varieties from the scope of patentable subject matter, India was obliged to protect these under a sui generis system as per the mandates of Article 27.3(b) of TRIPs. In furtherance of its obligations under Article 27.3(b), India enacted the Protection of Plant Varieties and Farmers' Rights Act in 2001 ('the PPV&FR Act' or 'the Act'). However, environmental and public interest concerns (including the fear of monopolies in the field of life sustaining essential food) ensured that the Indian law did not just blindly copy the model laws under the International Convention for the Protection of New Varieties of Plants (UPOV 1978 and UPOV 1991). In fact, similar concerns affected the enactment of plant variety protection laws also in developed countries such as the United States: A look at the history of the US Plant Patents Act, 1930 reveals the caution with which legislators in the US adopted the system of proprietary rights in relation to sexually propagated crops and tuber-propagated crops. The Plant Patents Act, 1930 was limited to asexually reproduced varieties and excluded tuber propagated plants such as potatoes, and it was only in 1970 that the US introduced the Plant Variety Protection Act to provide protection to sexually reproduced plants. Evidencing similar caution, discussions that had commenced more than a decade ago in early 1990s towards the introduction of a plant variety and farmers' rights protection regime in India, while gaining momentum after India's ratification of the TRIPs Agreement in 1995, culminated in the enactment of the PPV&FR Act only in 2001.

Further, the law, as enacted, is clearly a sincere attempt to balance several, often seemingly contradictory, interests. The objectives the Act purports to accomplish are stated in its preamble: (i) To recognize and protect the rights of farmers in respect of their contribution towards conserving, improving and making available plant genetic resources for the development of new plant varieties; (ii) To protect plant breeders rights to accelerate agricultural development in the country; (iii) To incentivise both the public and private sector to invest in R&D for the development of new plant varieties (especially those suited to Indian climatic and other conditions); (iv) Facilitate the growth of the seed industry in India to ensure the availability of high quality seed and planting material to farmers; (v) To give effect to subparagraph (b) Article 27(3) of the TRIPs Agreement. After giving an overview of the history and existing state of Indian Agriculture, the article studies the stated objectives of the Act under two broad heads: (i) Protecting farmers rights and conserving landraces; and (ii) protecting plant breeders rights to promote private sector participation and development; and reveals areas of contradiction between these two objectives of the Act.

While India today is self sufficient in most of its food requirements, it suffered from major famines and severe shortage of food even until the mid 1960s.vii As a result of the Green Revolution, (coupled, to a smaller extent with increase in cropped and irrigated areas) India reached its current state of agricultural self-sufficiency. At the time the PPV&FR Act was passed, Indian agricultural produce was sufficient to feed the entire population of India, while also contributing 15 to 20% of the total value of India's exports. India was (and is) also an active participant and contributor to international agricultural R&D efforts, including international research efforts in wheat, maize and rice. Traditionally, farmers across the globe have preserved plant genetic diversity while also enriching this diversity by human selection. As a result, there exist numerous landraces, conserved in situ, that show high adaptability to local conditions and other desirable characteristics such as drought resistance, pest resistance and medicinal properties. Recognising the importance of preserving genetic diversity, particularly in the light of the erosion of this diversity resulting from

'scientific' methods of commercial breeding and from the requirement of uniformity, stability and distinctness under the plant breeders rights regime introduced by UPOV, discussions had commenced at the international level under the aegis of the United Nations with the establishment of the International Commission on Plant Genetic Resources in 1983.

Despite the absence of formal intellectual property protection, India witnessed robust growth of its private sector seed industry from the 1980s when it changed its policies, not only permitting, but also luring the entry of the private sector through various incentive mechanisms, particularly by opening up the seed sector for private competition. Therefore, although the Indian seed industry is relatively young (less than 50 yrs old in total, and only about 20 years old from the perspective of most private corporations), it is economically successful and technologically quite sound. This technological base is not only the result of purely private efforts; a significant amount of technological support has been given to the Indian private sector seed industry by public sector research institutions. Indeed, while technology transfer from the public to the private sector has lagged in most sectors in India, agriculture is perhaps one sector where a considerable amount of technology transfer has taken place, once again, without any underlying intellectual property protection.

II. LITERATURE REVIEW

1. Brush, Stephen B. (1994): Providing Farmers' Rights through In Situ Conservation of Crop Genetic Resources. The study starts out examining the importance of in situ conservation as a complementary strategy to ex situ conservation, and highlights the relationship between conservation and equity. On this basis it outlines a programme for in situ conservation, emphasizing institutional strengthening, community programmes and incentives to farmers.
2. Swaminathan, M. S. (ed.) (1996): Agrobiodiversity and Farmers' Rights; The book starts out with a comprehensive background paper prepared by José Esquinas-Alcázar titled 'The Realization of Farmers' Rights', outlining the rationale for farmers' rights, a list of suggested components and the state of negotiations. One of the conclusions is that present inequities will increase and current

- forces driving genetic erosion most likely be magnified if farmers' rights are not implemented at the international level
3. Cleveland, David A. & Stephen C. Murray (1997): 'The World's Crop Genetic Resources and the Rights of Indigenous Farmers', This article explores some theoretical and empirical aspects of the debate on intellectual property rights for traditional farmers. The authors conclude that traditional farmers have their own concepts of intellectual property rights in folk varieties of plants, and that these differ considerably from the intellectual property rights applied in commercial agriculture.
 4. Girsberger, Martin A. (1999): 'Biodiversity and the Concept of Farmers' Rights in International Law. The first part presents an extensive description of the factual background to the topic, including agriculture, plant genetic resources for food and agriculture, indigenous knowledge and the effects of modern biotechnology.
 5. Correa, Carlos (2000): 'Options for the Implementation of Farmers' Rights at the National Level', After considering the origin of the concept of farmers' rights, and how it has been incorporated in international regimes and national regulations, Correa explores in greater detail the rationale behind the concept. On this background, the relationship between farmers' rights and intellectual property rights is explored.
 6. Lysaker, An Analysis of the Recognition of Farmers' Rights in the International Treaty on Plant Genetic Resources on Food and Agriculture. (2004) This report analyses the influence of developing countries on the recognition of farmers' rights in the International Treaty. By comparing the developing countries' original proposals on the formulation of farmers' rights with the final text of the International Treaty,
 7. Butler, Bees & Robin Pistorius, Robin (1996): 'How Farmers' Rights Can Be Used to Adapt Plant Breeders' Rights In this article, the question of farmers' rights is discussed in light of the lack of political will in developed countries to generate additional funds to support the role of farmers in maintaining agrobiodiversity.
 8. Jose (1998): 'Farmers' Rights', Agricultural Values of Plant Genetic Resources , The author states that implementation of farmers' rights at the international level is vital to global equity and to halting genetic erosion in agriculture. Implementation should ensure that farmers, farming communities
 9. Wright, B. D. (1998): 'Intellectual and Farmers' Rights', the paradox of the high total value of agricultural germplasm and the current low demand of plant breeders for such material due to their own well-stocked gene banks and the narrow genetic bases of their crop varieties.
 10. Gollin, D, (1998): 'Valuing Farmers' Rights This book chapter argues that there are significant potential hazards to the South in seeking to establish a system of farmers' rights based on intellectual property rights or other forms of property rights. The point of departure for the analysis are the international flows of genetic resources.
 11. Swaminathan, M. S. (1998): 'Farmers' Rights and Plant Genetic Resources', The point of departure for this article is the fact that tribal and rural families conserve genetic diversity for the public good at their own personal cost. It is this 'inequity inherent in the current recognition and reward systems that the concept of farmers' rights seeks to end
 12. Rani, M. Geetha (2000): 'Community Gene Banks Sustain Food Security and Farmers' Rights' the author explores how community gene banks can be developed as a means to sustain food security and to put farmers' rights into practice. The author points to experiences with community gene banks in India
 13. Srinivasan, C.S. (2003) 'Exploring the Feasibility of Farmers' Rights', This article examines the feasibility of farmers' rights provisions based on intellectual property rights. It argues that the farmers' rights legislation already adopted in some developing countries will involve enormous operational difficulties,
 14. Borowiak, C. (2004): 'Farmers' Rights: Intellectual Property Regimes and the Struggle over Seeds' This article analyses farmers' rights as a strategy of resistance against the perceived inequities of intellectual property rights regimes for plant genetic resources.
 15. Louwaars, Niels P. (2005): Farmers' Rights and Seed Programmes. Seed Info, This article provides a brief introduction to the concept of farmers' rights and the related provisions of the International Treaty and discusses its

interrelations with breeding and seed production.

16. Moore, Gerald (2005): Explanatory Guide to the International Treaty on Plant Genetic Resources for Food and Agriculture, This sizeable guide offers a comprehensive introduction to the back- ground and content of the International Treaty on Plant Genetic Resources for Food and Agriculture, and will be a valuable tool in its implementation at the national as well as international level.
17. Salazaar, Rene; Bert Visser & Niels Louwaars (forthcoming 2006): ‘Protecting Farmers’ New Varieties, This forthcoming article documents how modern varieties developed in the formal sector have gradually replaced landraces as a source of divers- ity for many small-scale traditional farmers.
18. Ravi, S. Bala (2004): Manual on Farmers’ Rights This manual has been developed as a tool for the implementation of the Indian Protection of Plant Varieties and Farmers’ Rights Act of 2001, with regard to farmers’ rights. It is the first manual for practitioners with regard to the realization of farmers’ rights in a country.
19. Shiva, Vandana (1996): ‘Agricultural Biodiversity, Intellectual Property Rights and Farmers’ Rights’ This article provides insights

into the process prior to the adoption of the Indian Protection of Plant Varieties and Farmers’ Rights Act of 2001. Vandana Shiva describes two lines of development: (1) legislative efforts to meet the requirements of the TRIPS Agreement with regard to plant genetic resources

20. Sahai, Suman (2000): ‘Farmers’ Rights and Food Security In a number of articles, Suman Sahai examines and comments on the Indian Protection of Plant Varieties and Farmers’ Rights Act of 2001. In one of the final drafts before the bill was adopted.

III. METHODOLOGY

The research method followed here is empirical research. A total of samples have been taken out of which is taken through convenient sampling. The sample frame taken by the researcher through an instant messaging platform and the sample size is 200. The independent variable here is age, income, education and gender. The dependent variables are whether the public think the protection of plant variety act is effective, whether the provisions of the act are complex, and whether the act is implemented properly. The statistical tool used by the research is graphical representation , frequency table and crosstab.

IV. ANALYSIS AND INTERPRETATION

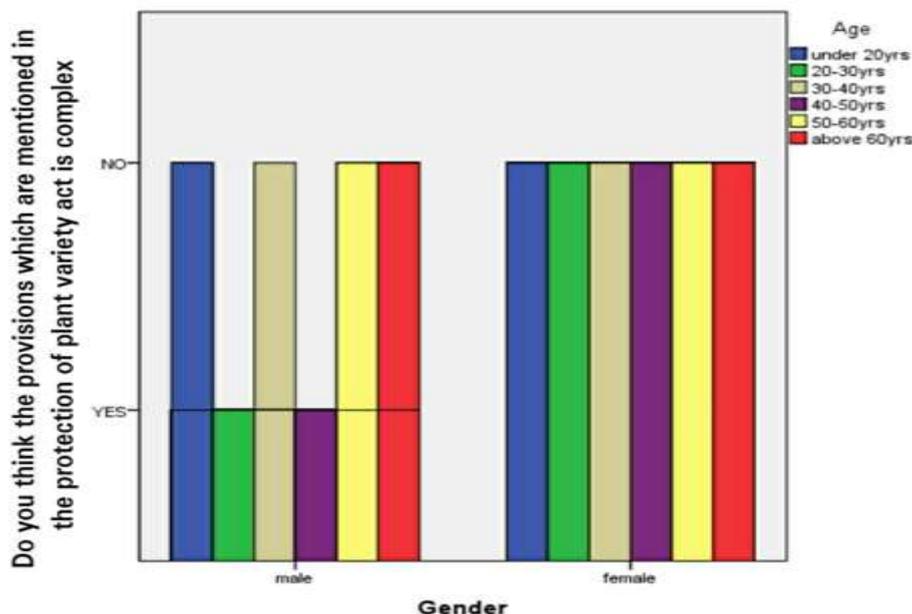


Figure 1

LEGEND: This table shows the gender distribution pertaining to different age categories and their opinion on whether the provisions of the protection of plant variety act is complex

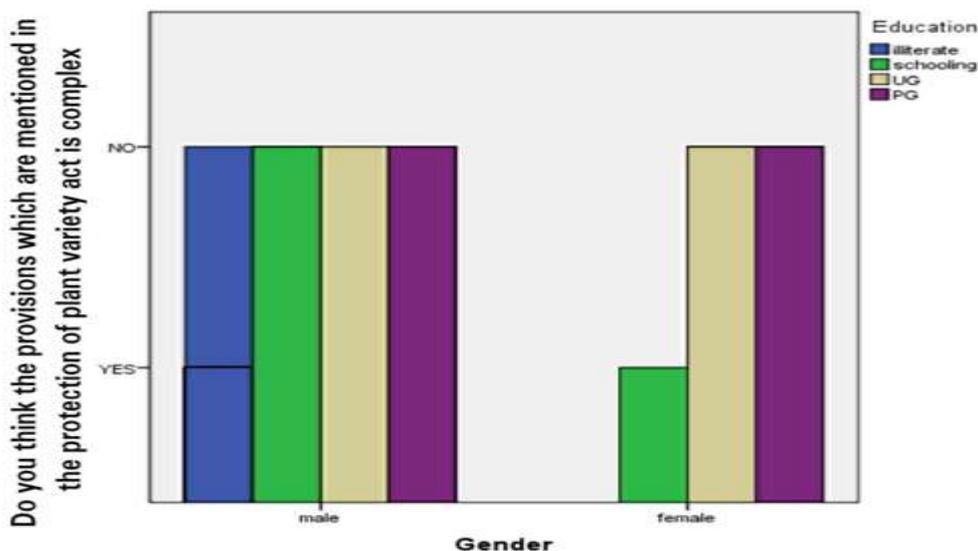


Figure 2

LEGEND: This table shows the gender distribution pertaining to different educational qualification categories and their opinion on whether the provisions of the protection of plant variety act is complex.

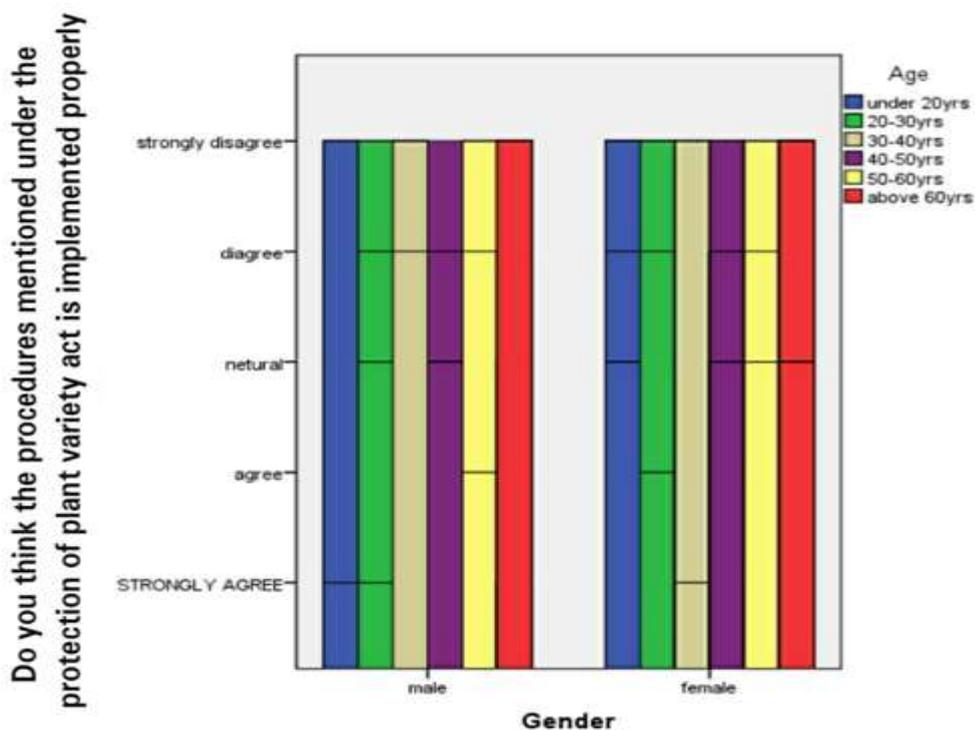


Figure 3

LEGEND: This table shows the gender distribution pertaining to different age categories and their opinion on whether the provisions of the protection of plant variety act are implemented properly.

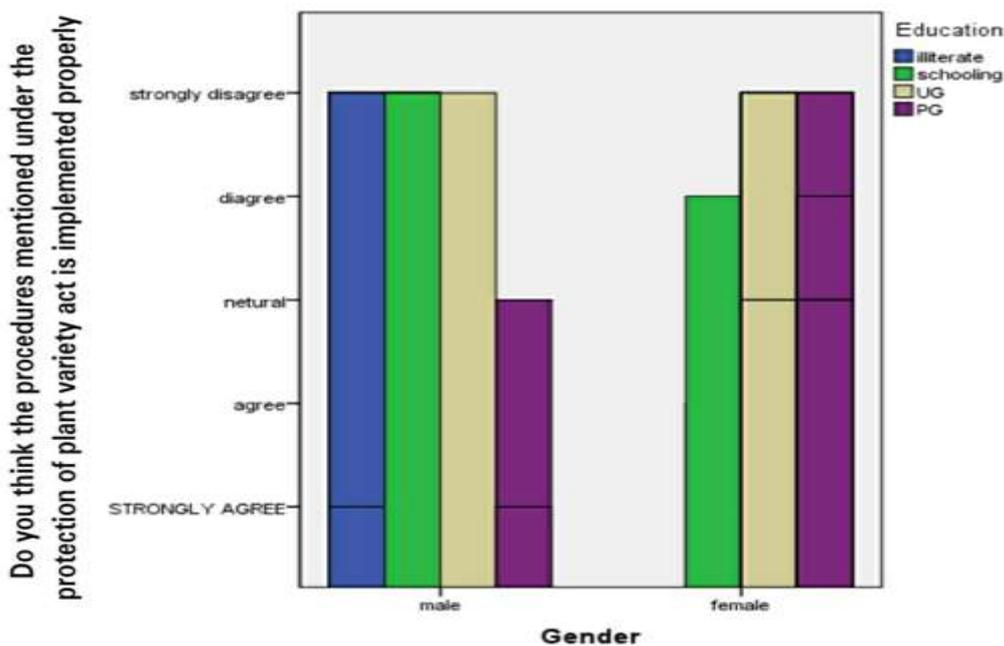


Figure 4

LEGEND: This table shows the gender distribution pertaining to different educational qualification categories and their opinion on whether the provisions of the protection of plant variety act are implemented properly.

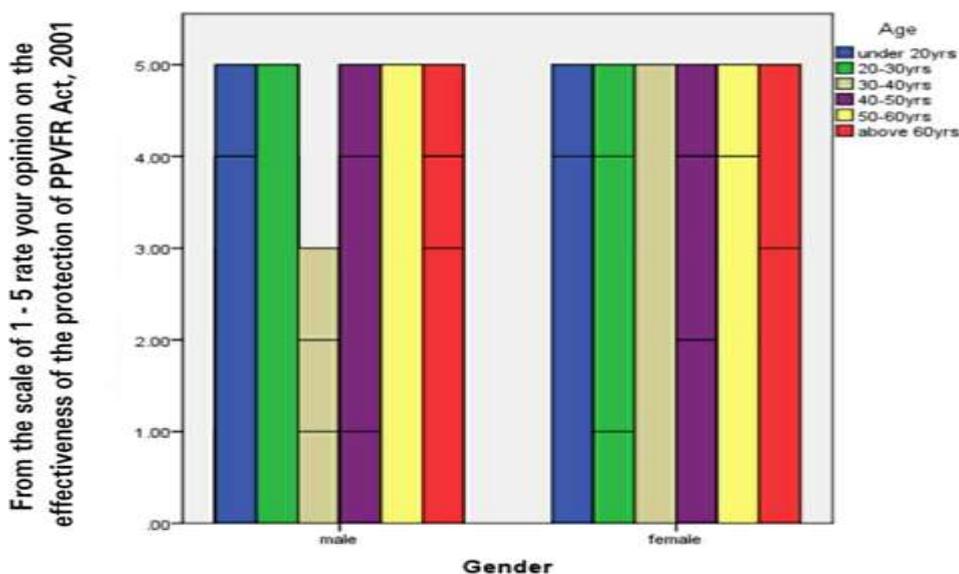


Figure 5

LEGEND: This table shows the gender distribution pertaining to different age categories and their opinion on whether the protection of plant variety act is effective.

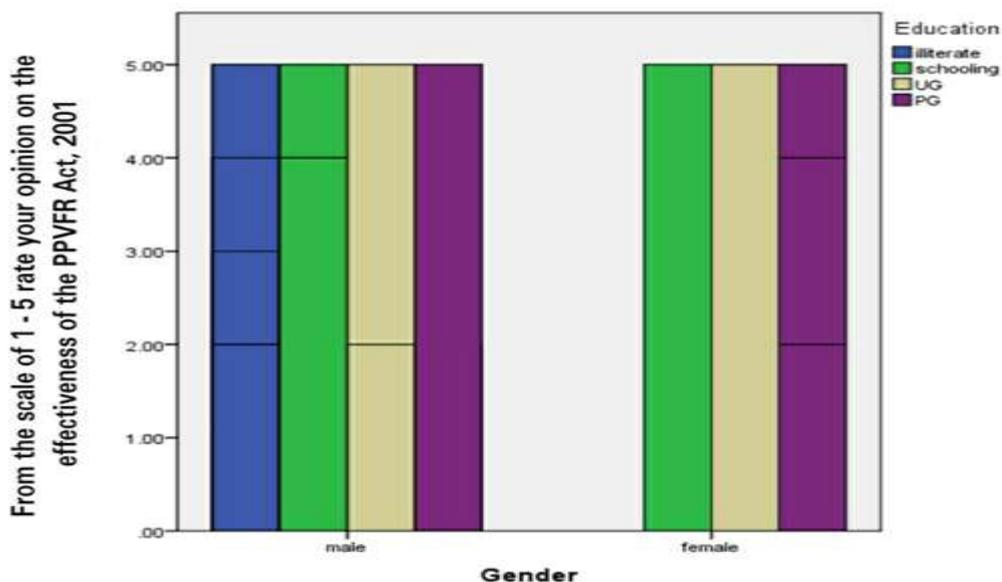


Figure 6

LEGEND: This table shows the gender distribution pertaining to different educational qualification categories and their opinion on whether the protection of plant variety act is effective.

V. RESULT

This figure 1 shows the gender distribution pertaining to different age categories and their opinion on whether the provisions of the protection of plant variety act is complex. Most of the public who have responded to the question states that they are neutral about it. There is a huge percentage of people who have also selected the option yes. So it can be interpreted that the public that the provisions of the act quite complex.

This figure 2 shows the gender distribution pertaining to different educational qualification categories and their opinion on whether the provisions of the protection of plant variety act is complex. From looking at the results derived for this question it can be seen that more number of male respondents have opted for strongly agree and agree more than the female respondents.

This figure 3 shows the gender distribution pertaining to different age categories and their opinion on whether the provisions of the protection of plant variety act are implemented properly. In this figure it can be seen that most of

the respondents have opted for the option strongly agree and agree, where they feel that the procedures which are related to the protection of plant variety act are implemented properly as there are many number of people who are benefited from the act.

This figure 4 shows the gender distribution pertaining to different educational qualification categories and their opinion on whether the provisions of the protection of plant variety act are implemented properly, are relatively more numbers of females who have responded for option yes than male respondents.

This figure 5 shows the gender distribution pertaining to different age categories and their opinion on whether the protection of plant variety act is effective. From this figure it can be seen that most of the respondents have opted for the option of scale 5. From this it can be stated that the public feel that the law relating to plant variety act are effective.

This figure 6 shows the gender distribution pertaining to different educational qualification categories and their opinion on whether the protection of plant variety act is effective. From the figure it can be seen that most of the people have responded above the scale of 4, which can be interpreted that most of the public

feel that laws relating to plant protection are effective.

VI. DISCUSSION

This figure 1 shows the gender distribution pertaining to different age categories and their opinion on whether the provisions of the protection of plant variety act is complex. Most of the public who have responded to the question states that they are neutral about it. There is a huge percentage of people who have also selected the option agree. So it can be interpreted that the public feel the laws related to warrant cases are complex. This figure 2 shows the gender distribution pertaining to different educational qualification categories and their opinion on whether the provisions of the protection of plant variety act is complex. From looking at the results derived for this question it can be seen that more number of male respondents have opted for strongly agree and agree more than the female respondents. This figure 3 shows the gender distribution pertaining to different age categories and their opinion on whether the provisions of the protection of plant variety act are implemented properly. In this figure it can be seen that most of the respondents have opted for the option no, where they feel that the procedures which are related to warrant cases have been properly implemented by the people who are supposed to implement it. This figure 4 shows the gender distribution pertaining to different educational qualification categories and their opinion on whether the provisions of the protection of plant variety act are implemented properly, are relatively more numbers of females who have responded for option yes than male respondents. This figure 5 shows the gender distribution pertaining to different age categories and their opinion on whether the protection of plant variety act is effective. From this figure it can be seen that most of the respondents have opted for the option of scale 5. From this it can be stated that the public feel that the laws relating to plant variety act are effective. This figure 6 shows the gender distribution pertaining to different educational qualification categories and their opinion on whether the protection of plant variety act is effective. From the figure it can be seen that most of the people have responded above the scale of 4, which can be interpreted that most of the public feel that laws relating to plant protection are effective.

VII. LIMITATION

The major limitation of my study is the sample frame. The sample frame is restricted only to a minimum number of public individuals and that too it was concentrated only on some areas throughout Chennai. The sample size is also limited to a minimum number of advocates. The physical factors are the most impactful and major factor limiting the study.

VIII. CONCLUSION

India's farmers' rights regime is an inspiring model for several developing countries. As a pioneer and role model in the protection of farmers' rights, India is duty bound to closely monitor the effectiveness of this regime, not only for the benefit of its own large farming community, but also for the benefit of the farming communities in other developing countries. For this purpose, statistics such as those that are made available in the PVJs are extremely important. Given the importance of agriculture in India's economy, the importance of monitoring the functioning of legislations such as the PPV&FR Act cannot be overstated. Academic and scientific analysis of data under the Act ought therefore to be undertaken by all concerned parties on a regular basis. The private sector does not appear to be shifting its focus away from hybrids towards R&D in typical varieties of self and open-pollinating staple crops such as rice, wheat and lentils. However, given the continuing private sector emphasis on hybrids, the government may need to adopt policy or regulatory measures to ensure that the necessary research and development of non-hybrid varieties of self-pollinating crops continues, particularly in the public sector research institutions and corporations.

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