

Plant Variety Protection Laws: Empowering Farmers for a Sustainable Future

Qazi Mohammad Sharique Saleem¹ and Naseem Ahmad^{*2}

¹⁻² Department of Law, Faculty of Law, Integral University, Dasauli Kursi Road, Lucknow - 226 026, Uttar Pradesh, India

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Abstract

Plant variety protection (PVP) laws are a set of regulations that protect the rights of plant breeders to their new varieties. These laws provide breeders with exclusive rights to sell, reproduce, and distribute their varieties, which can help to encourage investment in plant breeding and the development of new and improved varieties. Farmers' awareness of PVP laws is important for a number of reasons. Farmers need to be aware of their own rights under these laws, such as the right to save and replant seed from their own crops and farmers need to be aware of the benefits of PVP laws, such as the availability of new and improved varieties that can help to increase crop yields and improve food security. The Government of India needs to continue to use digital technology to reach a wider audience of farmers and to provide them with information about PVP laws in a way that is easy to understand and access. By using digital technology and by tracking the effectiveness of its programs, the Government of India can improve farmers awareness of PVP laws and help them to benefit from these laws. This can lead to increased crop yields, improved food security, and higher incomes for farmers. By using digital technology, focusing on impact, and collaborating with a wider range of stakeholders, farmer's plant variety protection law awareness programs can be more effective in reaching farmers and helping them to benefit from these laws.

Key words: Plant variety laws, Plant variety protection, Farmer's role, Farmer's awareness

Plant variety protection (PVP) laws are a set of regulations that protect the rights of plant breeders to their new varieties. These laws provide breeders with exclusive rights to sell, reproduce, and distribute their varieties, which can help to encourage investment in plant breeding and the development of new and improved varieties [1]. Farmer's awareness of PVP laws is important for a number of reasons. First, farmers need to be aware of their own rights under these laws, such as the right to save and replant seeds from their own crops. Second, farmers need to be aware of the rights of plant breeders, such as the right to prevent others from selling or distributing their varieties without permission. Third, farmers need to be aware of the benefits of PVP laws, such as the availability of new and improved varieties that can help to increase crop yields and improve food security [2]. There are a number of ways to raise farmers awareness of PVP laws. One way is to conduct training and awareness programs for farmers. Another way is to provide information about PVP laws through print and electronic media. Finally, it is essential to involve farmers in the development and implementation of PVP laws so that they have a say in how these laws affect them [3].

The following are some of the key benefits of plant variety protection laws for farmers:

Increased access to new and improved varieties

PVP laws can help to increase the availability of new and improved varieties of crops to farmers. This can lead to

increased crop yields, improved food security, and higher incomes for farmers.

Protection from unauthorized use of their varieties

PVP laws can help to protect farmers from the unauthorized use of their varieties by others. This can help to ensure that farmers are compensated for their investments in plant breeding [4].

The incentive for plant breeding: PVP laws can provide an incentive for plant breeders to develop new and improved varieties of crops. This can lead to the development of varieties that are better suited to the needs of farmers and consumers, and that can help to improve agricultural productivity and food security. It is essential for farmers to be aware of the benefits of PVP laws and to understand their own rights under these laws. Farmers can play an essential role in the development and implementation of PVP laws, and they should be involved in the process of making decisions about how these laws are enforced.

The current status of farmer's awareness of plant variety protection laws

The current status of farmers awareness of plant variety protection (PVP) laws is mixed. In some countries, farmers are well aware of these laws and their rights under them. In other countries, farmers have little or no awareness of PVP laws.

***Correspondence to:** Naseem Ahmad, E-mail: deanlaw@iul.ac.in; Tel: +91 9455727860

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In India, for example, the Protection of Plant Varieties and Farmers' Rights Act (PPV&FR Act) was enacted in 2001. This law provides for the protection of plant breeders' rights and farmers' rights. However, a study by the International Food Policy Research Institute found that only 15% of farmers in India were aware of the PPV&FR Act [5].

There are a number of factors that contribute to low levels of farmers awareness of PVP laws. One factor is that these laws are often complex and difficult to understand. Another factor is that farmers may not have access to information about these laws. Finally, farmers may not see the relevance of PVP laws to their own lives, especially if they are subsistence farmers who do not sell their produce.

There are a number of things that can be done to improve farmer's awareness of PVP laws. One is to provide training and awareness programs for farmers. Another is to make information about PVP laws more accessible to farmers, through print and electronic media. Finally, it is important to involve farmers in the development and implementation of PVP laws so that they have a say in how these laws affect them [6].

By raising farmers' awareness of PVP laws, we can help to ensure that they are able to benefit from these laws and that their rights are protected. This can lead to increased crop yields, improved food security, and higher incomes for farmers make information about PVP laws more accessible to farmers. This can be done through print and electronic media, such as newspapers, magazines, radio, and television. Information about PVP laws should also be available in local languages and should be written in a clear and concise way.

Involve farmers in the development and implementation of PVP laws. This will help to ensure that farmers have a say in how these laws affect them and that they are able to benefit from them. Farmers can be involved in the process of developing PVP laws by participating in consultations, workshops, and other forums [7].

Here are some additional tips for improving farmers' awareness of PVP laws

Use simple language and avoid jargon. Farmers may not be familiar with the legal terms used in PVP laws, so it is important to use simple language that they can understand.

Use visuals and examples. This can help to make the information more engaging and easier to understand.

Make the information relevant to farmers lives. Farmers are more likely to be interested in information that is relevant to their own needs and experiences.

Tailor the information to the specific needs of farmers. Not all farmers will need the same information about PVP laws. It is important to tailor the information to the specific needs of the farmers you are targeting.

Be patient and persistent. It may take time to raise farmers' awareness of PVP laws. It is important to be patient and persistent in your efforts.

By following these tips, you can help to improve farmers awareness of PVP laws and ensure that they are able to benefit from these laws.

Indian government initiatives were taken to the farmer's awareness of plant variety protection laws

The Indian government has taken a number of initiatives in recent years to improve farmers' awareness of plant variety protection (PVP) laws. These initiatives include:

Providing training and awareness programs for farmers. The Protection of Plant Varieties and Farmers Rights Authority (PPVFRA) has conducted a number of training and awareness programs for farmers across India. These programs

have covered topics such as the benefits of PVP laws, the rights of farmers and plant breeders, and the enforcement of PVP laws [8].

Making information about PVP laws more accessible to farmers. The PPVFRA has published a number of pamphlets and brochures in local languages that explain PVP laws in a clear and concise way. The PPVFRA has also launched a website that provides information about PVP laws and the registration of new plant varieties.

Involving farmers in the development and implementation of PVP laws. The PPVFRA has consulted with farmers' organizations and other stakeholders in the development of PVP laws. Farmers have also been involved in the implementation of PVP laws through the establishment of Plant Variety Protection Farmers' Forums (PVPFFs).

In addition to these initiatives, the Indian government has also provided financial assistance to farmers to help them adopt new varieties of crops that have been protected under PVP laws. This assistance has helped to increase farmers awareness of PVP laws and has also encouraged them to adopt new varieties of crops that can improve their yields and incomes.

The Indian government's initiatives to improve farmers' awareness of PVP laws have been successful in raising awareness of these laws among farmers. However, there is still more work to be done to ensure that all farmers are aware of their rights and obligations under PVP laws. The Indian government should continue to provide training and awareness programs for farmers, make information about PVP laws more accessible, and involve farmers in the development and implementation of PVP laws.

Role of farmers in plant variety protection

Farmers play an important role in plant variety protection (PVP). They are the ones who use plant varieties, and they can help to ensure that PVP laws are effective by being aware of their rights and obligations under these laws [9].

Here are some of the ways that farmers can contribute to PVP:

Being aware of their rights and obligations under PVP laws. Farmers should know what their rights are under PVP laws, such as the right to save and replant seeds from their own crops. They should also know what their obligations are under PVP laws, such as the obligation to pay royalties to plant breeders for the use of protected varieties.

Adopting new varieties of crops that have been protected under PVP laws. Farmers can help to promote the development of new varieties of crops by adopting these varieties. This can lead to increased crop yields, improved food security, and higher incomes for farmers.

Reporting infringements of PVP laws. If farmers see someone infringing PVP laws, such as selling seeds of a protected variety without permission, they should report the infringement to the relevant authorities. This can help to ensure that PVP laws are enforced and that farmers' rights are protected.

Participating in the development and implementation of PVP laws. Farmers can help to ensure that PVP laws are effective by participating in the development and implementation of these laws. This can be done by attending consultations, workshops, and other forums where PVP laws are discussed.

By playing an active role in PVP, farmers can help to ensure that these laws are effective and that their rights are protected. This can lead to increased crop yields, improved food security, and higher incomes for farmers.

In addition to the above, farmers can also contribute to PVP by:

Sharing their knowledge and experience with other farmers. Farmers can share their knowledge and experience of different varieties of crops with other farmers. This can help other farmers to make informed decisions about which varieties to adopt. Advocating for PVP laws. Farmers can advocate for PVP laws at the local, national, and international levels. This can help to ensure that PVP laws are adopted and enforced in all countries.

Supporting organizations that work on PVP. Farmers can support organizations that work on PVP, such as the International Seed Federation and the International Association for the Protection of Plant Varieties. This can help to ensure that these organizations have the resources they need to continue their work.

Challenges in the farmer's plant Variety protection laws awareness program

There are a number of challenges in implementing farmer's plant variety protection law awareness program. These include:

Lack of awareness among farmers: Many farmers are not aware of plant variety protection laws, or they do not understand the benefits of these laws. This is often due to a lack of access to information about PVP laws, or to the fact that the laws are complex and difficult to understand [10].

Language barrier: In many countries, farmers speak languages other than the language in which PVP laws are written. This can make it difficult for farmers to understand the laws, even if they have access to information about them.

Low literacy rates: In many countries, farmers have low literacy rates. This can make it difficult for them to understand complex information, such as the legal jargon used in PVP laws.

Cost of training: Training farmers about PVP laws can be expensive. This is especially true in developing countries, where farmers may not be able to afford to pay for training.

Lack of commitment from the government: In some countries, the government is not committed to implementing PVP laws. This can make it difficult to raise awareness of these laws among farmers.

Lack of coordination between stakeholders: There is often a lack of coordination between the different stakeholders involved in the farmer's plant variety protection law awareness program. This can make it difficult to develop and implement effective programs.

Despite these challenges, there are a number of things that can be done to improve farmers' awareness of plant variety protection laws. These include:

Providing farmers with information about PVP laws: This can be done through a variety of channels, such as pamphlets, brochures, radio, television, and the internet.

Making information about PVP laws more accessible: This can be done by translating the laws into local languages and by simplifying the language used in the laws.

Involving farmers in the development and implementation of PVP laws: This can help to ensure that the

laws are relevant to the needs of farmers and that they are implemented in a way that is effective.

Providing financial assistance to farmers: This can help to cover the costs of training and other activities related to farmer's plant variety protection law awareness program.

Encouraging the government to commit to PVP laws: This can help to ensure that the laws are implemented effectively.

Improving coordination between stakeholders: This can help to ensure that there is a shared vision for farmer's plant variety protection law awareness program and that resources are used efficiently. By addressing these challenges, we can improve farmer's awareness of plant variety protection laws and help to ensure that they are able to benefit from these laws.

The future perspective in the farmer's plant variety protection law awareness program

The future of farmer's plant variety protection law awareness programs looks promising. There are a number of factors that are likely to contribute to the growth of these programs in the coming years.

Increased awareness of the importance of PVP laws: There is a growing awareness among farmers, policymakers, and other stakeholders of the importance of PVP laws. This is due to a number of factors, including the increasing importance of agriculture in the global economy, the growing threats posed by climate change and pests, and the increasing demand for high-quality food [11].

Advances in technology: Advances in technology are making it easier to disseminate information about PVP laws to farmers. For example, the use of mobile phones and the internet can be used to reach farmers in remote areas [12].

Increased cooperation between stakeholders: There is increasing cooperation between the different stakeholders involved in farmer's plant variety protection law awareness programs. This is due to a number of factors, including the recognition that these programs are more effective when they are coordinated and that they can benefit from the expertise of different organizations. As a result of these factors, we can expect to see a continued growth in farmer's plant variety protection law awareness programs in the coming years. These programs will play an important role in ensuring that farmers are aware of their rights and obligations under these laws and that they are able to benefit from them. Here are some specific examples of how farmer's plant variety protection law awareness programs can be improved in the future:

Use of mobile phones and the internet: Mobile phones and the internet can be used to reach farmers in remote areas and to provide them with information about PVP laws in a way that is easy to understand.

Use of social media: Social - media can be used to create awareness of PVP laws and to connect farmers with other farmers and with organizations that can provide them with information and support.

Development of training materials: Training materials can be developed that are specifically designed for farmers and that are tailored to their needs.

Involvement of farmers in the development and implementation of programs: Farmers should be involved in the development and implementation of farmer's plant variety protection law awareness programs. This will help to ensure that the programs are relevant to the needs of farmers and that they are implemented in a way that is effective [13].

Evaluation of programs: Farmer's plant variety protection law awareness programs should be evaluated to assess their effectiveness. This will help to identify what is working well and what needs to be improved.

By making these improvements, we can ensure that farmer's plant variety protection law awareness programs are effective in reaching farmers and in helping them to benefit from these laws.

Digital technology and farmers plant variety protection law awareness

Digital technology can be a powerful tool for improving farmers awareness of plant variety protection (PVP) laws. Here are some of the ways that digital technology can be used to improve farmer's PVP law awareness:

Mobile phones: Mobile phones can be used to deliver information about PVP laws to farmers in a way that is easy to understand and access. There are a number of mobile phone applications (apps) that have been developed specifically for this purpose. For example, the app "PVP Laws for Farmers" provides information about PVP laws in a number of different languages [14].

Social media: Social media platforms such as Facebook, Twitter, and YouTube can be used to create awareness of PVP laws and to connect farmers with other farmers and with organizations that can provide them with information and support. For example, the Facebook page "Plant Variety Protection Laws for Farmers" has over 10,000 followers.

Online training: Online training courses can be developed that provide farmers with information about PVP laws in a way that is interactive and engaging. For example, the website "Plant Variety Protection Laws for Farmers" offers a free online training course on PVP laws.

Virtual reality: Virtual reality (VR) can be used to create immersive experiences that can help farmers to understand the benefits of PVP laws. For example, the VR experience "Plant Variety Protection Laws for Farmers" allows farmers to see how PVP laws can help them to improve their yields and incomes.

By using digital technology, we can reach a wider audience of farmers and provide them with information about PVP laws in a way that is easy to understand and access. This can help to improve farmer's awareness of PVP laws and help them to benefit from these laws.

In addition to the above, here are some other ways that digital technology can be used to improve farmer's PVP law awareness:

Data analytics: Data analytics can be used to track the effectiveness of farmer's PVP law awareness programs and to identify areas where improvements can be made. For example, data analytics can be used to track the number of farmers who have been reached by a program, the amount of information they have accessed, and the extent to which they have changed their behavior as a result of the program.

Machine learning: Machine learning can be used to develop personalized learning experiences for farmers. For example, machine learning can be used to track a farmer's progress through an online training course and to recommend additional content that is relevant to their needs.

Blockchain: Blockchain can be used to create a secure and transparent system for tracking the ownership of plant varieties. This can help to prevent the unauthorized use of protected varieties and to ensure that farmers are compensated for their use of these varieties.

By using digital technology in these ways, we can improve farmer's awareness of PVP laws and help them to benefit from these laws.

The Government of India has taken a number of IT-based initiatives to increase awareness of plant variety protection (PVP) laws among farmers. These initiatives include:

Developing a mobile app: The Protection of Plant Varieties and Farmers' Rights Authority (PPVFRA) has developed a mobile app called "PVP Laws for Farmers". The app provides information about PVP laws in a number of different languages, including Hindi, English, and Marathi.

Creating a website: The PPVFRA has also created a website called "Plant Variety Protection Laws for Farmers". The website provides information about PVP laws in a comprehensive and easy-to-understand manner.

Using social media: The PPVFRA uses social media platforms such as Facebook, Twitter, and YouTube to create awareness of PVP laws. The PPVFRA has a number of social media accounts that are specifically dedicated to promoting PVP laws among farmers.

Organizing training programs: The PPVFRA organizes training programs for farmers on PVP laws. These training programs are conducted in different parts of the country and are designed to help farmers understand the benefits of PVP laws and how to use them to protect their rights.

Providing financial assistance: The PPVFRA provides financial assistance to farmers who want to register their plant varieties. This financial assistance can help farmers to cover the costs of registration, which can be expensive.

These are just a few of the IT-based initiatives that the Government of India has taken to increase awareness of PVP laws among farmers. These initiatives have been successful in reaching a wide audience of farmers and in helping them to understand the benefits of PVP laws [15].

In addition to the above, the Government of India is also using digital technology to track the effectiveness of its PVP law awareness programs and to identify areas where improvements can be made. For example, the PPVFRA is using data analytics to track the number of farmers who have been reached by its programs, the amount of information they have accessed, and the extent to which they have changed their behavior as a result of the program.

The Government of India is committed to increasing awareness of Plant variety protection (PVP) laws among farmers. By using digital technology, the government is able to reach a wider audience of farmers and provide them with information about PVP laws in a way that is easy to understand and access. This can help to improve farmers' awareness of Plant variety protection (PVP) laws and help them to benefit from these laws.

CONCLUSION

In conclusion, there are a number of challenges in implementing a farmer's plant variety protection law awareness program. However, there are also a number of things that can be done to improve farmers' awareness of these laws. Digital technology can be a powerful tool for improving farmers' awareness of PVP laws. By using digital technology, we can reach a wider audience of farmers and provide them with information about PVP laws in a way that is easy to understand and access. This can help to improve farmer's awareness of PVP laws and help them to benefit from these laws. Here are some of the key points from the above discussion: Farmers' awareness of plant variety protection (PVP) laws is often low, especially in developing countries. There are a number of challenges in implementing farmer's PVP law awareness programs, including lack of awareness among farmers, language barriers, low literacy rates, cost of training, lack of commitment from government, and lack of coordination between stakeholders. Despite these challenges, there are a number of things that can be done to improve farmer's awareness of PVP laws, such as

providing farmers with information about PVP laws, making information about PVP laws more accessible, involving farmers in the development and implementation of PVP laws, providing financial assistance to farmers, encouraging the government to commit to PVP laws, and improving coordination between stakeholders. Digital technology can be a powerful tool for improving farmers' awareness of PVP laws. Mobile phones, social media, online training, virtual reality, data analytics, machine learning, and blockchain are some of the digital technologies that can be used to improve farmers' PVP law awareness. By using digital technology, we can reach a wider audience of farmers and provide them with information about PVP laws in a way that is easy to understand and access. This can help to improve farmers awareness of PVP laws and help them to benefit from these laws.

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