Intellectual property protection for plant innovation was a challenge for India. The Protection of Plant Varieties and Farmers Rights Act, 2001 in consistency with the WTO standards has rightly addressed the issues and challenges pertaining to the farmers and plant breeders. The unique scheme of protection and benefit sharing is widely appreciated to be of progressive nature. This model law serves to a viable and potential source of inspiration for other similarly placed countries of the world.

Agriculture in the global economy is continuously evolving and thus seeks to see viable solutions to complexities of concern as to rights of plant growers and breeders and the market players. So Intellectual property protection for various plant varieties demands support for agricultural innovations, better viability of genetics and poverty alleviation measures in agricultural economies. In the light of ongoing debates and criticisms on various existing models for plant variety protection, India has listed itself into list of countries that have successfully evolved an intellectual property rights legislation recognising rights and privileges of various parties/stakeholders. India borrowed some aspects of these regimes but also modified them within its own domestic legislation. The Protection of Plant Varieties and Farmers Rights Act, 2001, establish a unique system by extending the concept of Plant Breeders. Rights (PBRs) currently applied to new varieties of breeders, to varieties held by farmers, NGOs and public sector institutions. The Indian model on plant variety protection presupposes an intellectual property right, i.e. a legally enforceable right, either to exclude others from certain acts of commercial relevance in relation to the protected plant variety or to obtain remuneration in respect of at least certain uses of the plant variety by third parties.

**Issues and Challenges:** Issues in the plant variety is varied ranging from allowable subject matter/varieties, the scope of rights of stakeholders, the farmers community and breeders and thereby providing a level playing field for both. Exploitation of traditional knowledge without due recognition of the right holders i.e. the indigenous communities and use of biotechnoligy for plant innovations among other issues are matters of significant concern in the plant variety protections rights regime. Therefore, Issues are much beyond the periphery of the legislations and model laws. It extends to filling up significant lapses which could not be addressed during the initial stage or primary drafting of any "sui generis" (of its own kind) model suitable to the context. Before discussing and critically analysing the notable features of the sui generis model ensured under the Indian legislation, it is desirable to have an overview of the international models and other sui generis effective models those have influenced the development of the much appreciated effective Indian model.

UPOV Convention, 1978 was adopted to provide the protection of new varieties of plants. By codifying intellectual property for plant breeders, this convention aims to encourage the development of new varieties of plants for the benefit of society. Analysing the provisions, it is very much evident that with respect to farmed saved seed the UPOV, 1978 contains no language around the ability for farmers to save production and use it as seed where as UPOV 1991 has specific language to permit countries to allow farmers to save production for use as seed on their own farms. However, the sale of saved seed of a protected variety is prohibited by both the Conventions. The UPOV 1991 puts a lot of restrictions on the farmers' right to save, use, exchange and re-use the PGR (seed) of the plant breeders. Further, UPOV 1991 makes it compulsory for breeders to allow other breeders to use protected material to develop new and different varieties whereas the earlier version of 1978 Act does not include this provision.

With the coming of the Trade Related Aspects of Intellectual Property (TRIPS), 1995 options were made available to signatory states to implement a unique model of their own choice confirming to the aspirations/requirements of various stakeholders. Amongst many praiseworthy features, it could only provide that the sui generis system be “effective”. Article 27.3 provides for patentable subject matter under the chapter "patents" wherein it allows “member countries to exclude from patentability the following:

- diagnostic, therapeutic and surgical methods for the treatment of humans or animals;
- plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. Members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof.

So it seems obvious that a sui generis system of protection appropriate for a developing country may require certain modifications in another developing country and these systems may not be even relevant to a developed country. These differences with relation to ground realities and perceptions have made major contribution to the raging controversy on sui generis system and challenges for states to develop an “effective” system.

Apart from the TRIPS and UPOV which deals with the farmers' access to the Plant Genetic Resources(PGR) of the plant breeders, the Convention on Biological Diversity (CBD), which came into force on 29 December 1993 with the objective of biodiversity conservation, sustainable use of components and fair and equitable sharing of benefits deals with the plant breeders' access to the PGR and Traditional Knowledge of the farmers to the concerned local farming and tribal/indigenous communities under the "in-situ conservation’’ scheme. It affirms national sovereignty over biodiversity and associated traditional knowledge (TK) and thus, confers the natural and legal ownership to these stakehold-
ers ensuring their due share in benefit sharing scheme under the legal framework of the Government. Under the Convention, access by other parties is regulated on the prior informed consent (PIC) of the community obtained in accordance with customary laws. Any benefits arising from genetic resources or associated knowledge will be equitably shared. It is not the farmers whose prior informed consent (PIC) that is envisaged by the CBD, but that of the State. So, it is the State which will have to find out fair mechanisms to identify the stake-holders. The much appreciated International Treaty on Plant Genetic Resources (ITPGRFA) deals with the both. The Treaty was purposively introduced to harmonise the International Undertaking on Plant Genetic Resources (IUPGR) signed in 1983 with the CBD. It has provided rights to the farmers as custodians of Plant Genetic Resources which gives a wide range of rights to farmers benefit i.e. rights to save, use, exchange and sell farm-saved seed or propagating material.

The Indian Perspective: Considering the international obligations and developments in plant variety protection regime and plant genetic resources, recognizing their source and development to get recognition, India signed CBD on 5 June 1992 and ratified it on 18 February 1994. Similarly, it signed and ratified ITPGRFA on 10 June 2002. India which became a WTO Member in 1995 considered on the proposal of enacting Biological Diversity Act, 2002 giving due recognition to the principles under CBD and which was it introduced in the form of Protection of Plant Variety and Farmers’ Rights Act in 2001 under TRIPS. In India the Protection of Plant Varieties and Farmers’ Rights (PPV&FR) Act, 2001 aims to establish “an effective system for the protection of plant varieties, the rights of farmers and plant breeders, to encourage the development of new varieties of plants”, in line with Article 27.3 (b) of TRIPS.

The basic objectives for enactment of such a model legislation are:

- protection of the rights of farmers for their contribution made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties;
- protection of plant breeders’ rights to stimulate investment for research and development, both in the public and private sector, for the development of new plant varieties;

In the lines of above guidelines, the Act, 2001 provides rules for access to genetic resources for research and development on biodiversity to Indian citizens. No person within or outside India is eligible to apply for any IPRs for any invention based on any research or information on a biological resource obtained from India without prior approval from National Biodiversity Authority (NBA). The Authority is entitled to impose benefit sharing fee or royalty or both or impose conditions including the sharing of financial benefits arising out of the commercial utilisation of such rights while granting approval.

The wide range of rights and privileges offered to the farmers is with respect to the registrable Subject matter under the Act which includes; new variety (largely modelled on UPOV), farmers’ variety, extant variety and essentially derived variety.

To ensure balance of privileges and promote a benefit sharing model, the PVP&FR Act provides for the granting of compulsory license to a party other than the holder of the Breeders’ Certificate. However, it has to be shown that the seed of the variety is not available to the public at a reasonable price. But, in the case of compulsory licensing provisions, the PPVFRA shows more leniency towards the breeder, than that is shown to a patent holder by the Patent Act.

A certificate of registration for a variety issued under this Act confers an exclusive right on the breeder or his successor, his agent or licensee, to produce, sell, market, distribute, import or export the variety. On receipt of copy of the certificate of registration under sub-section (8) of section 23 or sub-section (2) of section 24 of the Protection of Plant Varieties and Farmers’ Rights Act, 2001, the Authority shall publish such contents of the certificate and invite claims of benefit sharing to the variety registered under such certificate in the manner as may be prescribed. The Act further provides for the establishment of Gene Fund out of the revenue generated from the use of farmers’ variety to be utilized for rewarding and recognizing farmers.

At the same time, it is required to appreciate the concerns of the National Commission on Farmers (NCF) with respect to the farmers’ plight in India which highlighted the issues pertaining to poor accessibility and control over basic resources, food security in the absence of universal public distribution system. The breeders have been influential in terms of having monopoly and own say in matters of their extended list of rights provided to them under international models. However, considering the developing nations economy, the farmers’ rights need to be given due recognition and protection. With the advent of the new intellectual property right (IPR) called the plant breeders rights (PBR); there emerged new problems for the farmers, and thus the need for new solutions. In fact, with the emergence of this new IPR, the farmers were compelled to defend themselves in order to continue their freedoms as before.

In most developing countries, farmers form the main source of seed supply and a large amount of the seed requirements are met through farmer-to-farmer exchange. Lobbies have been able to raise significant protest against adopting plant breeders’ rights as found in advanced countries due to this role of farmers in developing nations. Recognising and giving farmers their due share under the agricultural policy rests upon the very principle of “equity, fairness and justice” which demand that somebody who took the pain to conserve and preserve something should have the first priority over it, whether in the form of property right or not.

Conclusion: In the light of growing concern in the domain of food security in most of the world economies especially the developing and the least developed countries, India has tried to develop a balanced approach in addressing the concerns and assimilating the aspirations of various actors and participants in terms of preserving, securing and guaranteeing them their rights, privileges in proportion of their participation. Even the unique scheme of protection and benefit sharing proposed under the Plant Variety Protection and Farmers Rights Act 2001 is widely appreciated to be of progressive nature, still there are many practical problems attached to it which need to be addressed cautiously.
REFERENCE