

Why India should have *Sui generis* IPR Protection on Plant Varieties

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As has been stated in the preamble of this Act, this legislation was undertaken in compliance with the Article 27(3)(b.) of the Trade Related Intellectual Property Rights (TRIPs), which is one of the agreements bound to the Members of the World Trade Organisation (WTO). TRIPs agreement covers *inter alia* patents including the protection of the plant varieties. While this agreement had specified minimum standards with reference to the Berne and Paris plus Conventions on the patent protection in all WTO Member countries, it notably made no such specification on minimum standards for the protection of plant varieties. Article 27(3)(b.) of TRIPs stated that “*Members may also exclude from patentability plants and animals other than micro-organisms, and essentially biological processes for production of plants and animals other than non-biological processes. However, members shall provide for the protection of plant varieties either by patent or by an effective sui generis system or by combination thereof.*”

All those who are familiar with the various agreements bound to the WTO might be aware of several ambiguities and interpretative expressions used either casually or deliberately in many of the Articles and the consequent controversies being generated by these ambiguities. In the case of TRIPs Article 27(3)(b.), the differences in interpretation have come on the differences between “essentially biological process” and “non-biological processes” on the definition of the “micro-organisms” and “micro-biological processes” and on the “effective *sui generis* system”. It is unfortunate that in all these controversies there is a palpable North-South divide.

With respect to the protection of plant varieties, the TRIPs Article is very clear that plants and animals may be excluded from patentability. Option is left to the member countries to protect plant varieties (please note that the Article does not specify as *new* plant varieties) either by patent or by an effective *sui generis* system or by a combination of both these IPR systems.

What is *Sui Generis*

Sui generis is a Latin word. It means “unique” or “special”, leaving the *sui generis* system open to interpretation. *Sui generis* offers a unique type of intellectual property right (IPR), which is different from the classical IPR, as is the case with the patent. All *sui generis* models that could be tailored to the specific needs and circumstances of the Members are legally recognized systems. The plant varieties constitute the principal means of production and growth in agricultural productivity. It is also recognized that the specific needs and circumstances of agriculture in each country vary and in this respect the differences between the developing and the developed countries are very wide in several aspects. Therefore, it is 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 in ground realities and perceptions have made major contribution to the raging controversy on *sui generis* system.

What Makes *Sui Generis* System Effective

According to the TRIPs, the *sui generis* system should be “effective”. However, it neither specifies which essential elements shall provide the effectiveness nor mentions about any existing plant protection system as the model. The essential elements identified to contribute effectiveness to *sui generis* IPR system by the International Plant Genetic Resources Institute include: (i) definition of protectable subject matter, (ii) creation of a setup for such protection, (iii) definition of scope of protection and its duration, (iv) ensuring balance of privilege for the right holder, (v) inclusion of benefit sharing mechanism with holders of genetic variability which was used for breeding the new plant variety, and (vi) scope for public responsibility like creation of community gene fund to promote conservation of agro-biodiversity and provision of a public defender.

There is a general consensus among developing countries that satisfaction of these basic elements, according to the specific need and agricultural circumstances of the member, may make the *sui generis* IPR system effective for protection of plant varieties as specified in the TRIPs. An important element of *sui generis* law is that contrary to the exclusive IPR awarded to the individuals or corporations, it offers a special type of IPR protection and benefit sharing system to communities which have either collectively created and incrementally improved an innovation or provided prior art underlying a new innovation, either process or product. This community could be indigenous rural or tribal communities or farmers communities. In the case of community ownership no right of custodianship can be established or claimed by anyone in the community. This community rights assumes special significance in countries like India where agriculture has been practiced for thousands of years and the farmers have been singularly responsible for conserving and enriching the bio-resources which constitutes the mainstay for national agriculture and food security.

Biodiversity and Farmers’ Rights

Another dimension to the issue is the differences among countries in their national wealth on biodiversity, particularly the agro-biodiversity. Many countries of the South, including India are hotspots of biodiversity. This has largely influenced the history and system of agriculture in these countries, particularly the historic role of farmers in protecting, preserving and improving crop plants. It should not be forgotten that before the entry of organized and institutionalized scientific plant breeding, it was the farmer breeders who were responsible for creating the huge wealth of genetic variability in all crop plants and their wild relatives. They selected several varieties to suit their taste, social and economic requirements, different growing situations, resistance to several pests and diseases, possessing wide variation in quality, etc. All plant breeding efforts, either by conventional or bio-technological methods, being made today and will be made in future, either by the public research institutions or by the private sector corporates, shall depend on this genetic variability.

In recognition of this fact, the FAO concluded that an international undertaking on farmers' rights arising from the past, present and future contributions of farmers in conserving, improving and making available plant genetic resources, particularly those at the centers of origin or diversity. These rights are vested with the international community, as the trustees for the present and future generations of farmers, for the purpose of ensuring full benefits to the farmers and supporting continuation of their contributions. One of the undertakings relevant to the present context is "to assist the farmers and farming communities in all regions of the world, but especially in the areas of origin/diversity of plant genetic resources, to participate fully in the benefits derived at present and in future, from the improved use of plant genetic resources through plant breeding and ***other scientific methods*** (emphasis added.)

Contradiction between TRIPs and CBD

In addition, the International community also undertook a solemn affirmation under the Convention of Biological Diversity (CBD) to "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wide application with the approval and involvement of holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices" (CBD, Article 8(j.))

The very basis of international agriculture and its future sustenance is solely counted on the genetic variability and the associated knowledge system evolved by the farmers over generations. The economic benefit generated by this genetic variability apart from providing global food security is immeasurable in terms of its socio-economic value. As long as this variability including improved plant varieties was freely exchanged for public good without any ownership claim on the varieties bred by the public institutions and the farmers there was least discrimination and inequity in the use of these resources for the well being of farmers globally. Introduction of crops, flow of new varieties and genetic resources were free without national boundaries and institutionalized monopoly. A paradigm shift to this system came into place with the advent of industrialized agriculture in the developed countries and the transfer of plant breeding research from public to private sector. This is further exacerbated with the requirement to grant *sui generis* IPR protection or patents to plant varieties. It is often said that the system of varietal protection prescribed in TRIPs contradicts the CBD on prior informed consent of holder of knowledge or innovation and benefit sharing with such holders for using their knowledge or innovation as a prior art for developing improved innovations of higher commercial potential. India, supported by many WTO Members from the South, had been a leading votary in TRIPs re-negotiations for creating harmonious reconciliation of TRIPs with CBD, in this respect.

Developing Countries and Globalisation of Private Research

With respect to the *sui generis* system, the conflict between the North and the South is essentially not on the above discussed elements which make the *sui generis* system effective, but on the definition and scope of these elements and from the opposition the

North has on complying with the CBD provisions on prior informed consent and benefit sharing. This opposition largely arises from the fact that plant breeding, conventionally or biotechnologically, is totally under the control of private sector dominated by a dozen multinational giants. For example, when about 85 % of agricultural research including biotechnology research is publicly funded, over 70% of such funding in USA is from multinational companies. When the biotechnology opened a sun rise agri-business, most of the erstwhile giant agricultural chemical and pesticide companies shifted to plant biotechnology with a view on the global seed market. During 1996, ten multinational seed companies from North America, Europe and Japan together had 96 billion US\$ turn over from seed business, with 23 billion US \$ being the share of USA . These companies are pushing for ever stronger PBR in all countries with major seed market, with no nonsense on prior informed consent and benefit sharing. For them all goods and services they create, often with biopiracy or plagiarizing traditional community knowledge are private good for earning profit and the farmers across the world are mere market to expand their monopoly and profit.

Under such a global scenario with increasing privatisation of plant breeding with free use of biological diversity diligently protected and preserved by the local communities of the South, higher the stringency offered on protection of new plant varieties, higher would be the pace of converting public goods into private properties. Intellectual property on plants always does not provide a commercial advantage. But it always permit a person or corporate to exclude others from applying their innovative skills on the protected plant, except under a price, a license or royalty. Hence an initial IPR on a variety helps not only the financial benefit directly flowing from its commerce but also spin off from others innovations used on such a variety. Therefore, unbridled plant variety protection may eventually privatize all important genetic variability in crop plants by a few multinational giants, restricting or preventing the use of this variability by others and placing the agriculture of developing countries to ransom. The adverse impact of such a scenario to the national and household food security and livelihood of resource poor farmers of Asia is unimaginable.

What is and for whom is the UPOV

UPOV is the acronym for the French name *Union Internationale Pour la Protection des Obtentions Vegetales* translated to English as Convention for the Protection of New Varieties of Plants. The UPOV first founded in 1961 with six European countries, subsequently revised its Act during 1972, 1978 and 1991. The object of the UPOV is to oblige member states of the Union to recognize and secure to breeders of new plant varieties, an IPR called PBR, to harmonise such rights and to encourage cooperation among member states in their administration of such rights. Currently only 50 countries are members of the UPOV, with a majority of them party to either the UPOV1978 or the UPOV 1991 Acts. The 1991 Act came into force on 24th April 1998 and as on 15th April 2002 19 members have acceded to this Act. Out of the 50 members, 26 are from Europe, 10 from South America and 3 each from North America, Africa and Asia. Thus, only about 26% of the countries under the United Nations (UN) and about one-third of the WTO members are members of the UPOV. The three member Asian countries are Japan, South Korea and China. The UPOV is essentially a club of developed and near-developed countries. A most important notable point, from the point of India, is that the

pattern of agriculture, the role agriculture plays in the national economy and the per cent of population engaged in agriculture in these member countries is vastly different from those of India.

UPOV achieved its present membership from hardly a dozen developed countries of the North prior to 1990, with diplomatic, economic, trade related and political maneuvering on many new members. It is now part of the international conventions and treaties under the common umbrella of the World Intellectual Property Organisation (WIPO) with administrative headquarter at Geneva. While UPOV was not successful in influencing the TRIPs agreement during GATT negotiations to include its convention as the minimum standard for *sui generis* IPR protection of plant varieties, it is now creating pretensions as the only effective *sui generis* legislation appropriate for all WTO members. With the dominant influence the developed countries already has at the WTO and their proven capability to maneuver contentious issues at the WTO in their favor, it may not be surprising, if eventually UPOV *sui generis* system is accepted as the role model for the protection of plant varieties under TRIPs. Recent decision of the Government of India, which is the second major agricultural country in Asia is a major gain to the UPOV, while it is doubtful how far the many-fold benefits the Government of India contemplates get realized to the advantage of national agriculture. If UPOV becomes part of the TRIPs, the major responsibility for such a situation shall lay with all the developing countries, including India, for their failure in evolving a fairly harmonized alternate *sui generis* system suiting to their agriculture and resource poor farmers.

Why UPOV is Inappropriate to the Agriculture of Developing Countries.

The first reason is that while it is a plurilateral inter governmental organization, it tends to take positions and policies favoring the large multinational seed companies.

The second reason is that over the period, from 1961 to 1991, the UPOV Act had consistently and systematically marginalized or nullified the farmers' right for strengthening the PBR, taking the latter closer to a patent-like protection in the UPOV 1991 Act. As a matter of fact, UPOV neither accepts farmers rights nor see the reason for benefit sharing with the farming community for using the plant varieties bred and conserved by them. This is more emphatic from the statement of Barry Greengrass, Vice Secretary-General, UPOV. According to him "*The subject of farmers' rights is mainly the business of the FAO and its Undertaking on Plant Genetic Resources. The expression 'farmers' rights' appears also in Agenda 21, but not in the Convention on Biological Diversity. It is up to the institutions that are concerned with farmers' rights to explain what farmers' rights mean and what rights should be given to what farmers. It is not UPOV's business*". The '*farmers privilege*' to save seed of the protected variety from his/her farm and reuse this seed for raising the next crop in their own farm provided in the UPOV 1978 Act has been severely abridged in the UPOV 1991 Act. According to the UPOV 1991 Act, the option for granting farmers' privilege is left to the member countries and where ever such option is exercised, there must be safeguards to protect the legitimate interests of the breeders. Further, in the case of essentially derived varieties, reuse of the seed is prohibited. Any unauthorized reuse of this seed shall require the authorization of the breeder for use or disposal of harvested material including entire plants and parts of plants produced therefrom.. Moreover, the burden of

proof for such alleged infringement of the provisions of this Act shall lay with the infringer.

The third reason is that the UPOV 1978 Act stipulates that a Convention country needs to initially provide protection to crop plants belonging to five genera with right to exclude certain species, while the UPOV1991 Act enforces protection for varieties for all plant kingdom. This has serious implications to countries like India whose agriculture and allied areas are served by several genera and species.

The fourth reason is that the UPOV protection is available to the varieties bred by bonafide breeders, institutions or corporates and not to farmers or community of farmers. For UPOV they are always farmers and not breeders with innovativeness.

The fifth reason is that the PBR in the UPOV1978 Act is confined to a propagating material of the protected variety, while the UPOV1991 Act expanded this right to include harvested material and all produces made therefrom.

The sixth reason is that the UPOV 1991 Act is more restrictive on the use of protected varieties for research including developing new varieties by other researchers. The Act provides scope for PBR holder to appropriate either the experiment conducted or a new variety developed by unauthorized use of the protected variety. This aspect virtually provides absolute exclusive ownership on a protected variety similar to a patent. Moreover, the earlier ban on double protection of varieties now stands withdrawn.

While there are some less important reasons rendering the UPOV system of *sui generis* protection unsuitable for developing countries, the reasons explained above are adequate enough to establish that the UPOV legislation is anti-farmer and pro-corporate, and tailored to the agriculture of the developed countries where farmers are copiously supported with various subsidies.

Indian *Sui Generis* Legislation for Protection of Plant Varieties and Farmers Rights:

When India initiated this legislative process in 1993, the first draft of this Bill appeared to have more similarity with UPOV 1978 Act. This draft encountered severe opposition and protest from farmers, non-governmental organisations led by the Gene Campaign, the civil society and Parliamentarians. A dialogue on this legislation organized at the M.S.Swaminathan Research Foundation, Chennai led to the development of another draft model incorporating equitable PBR, farmers' rights, recognition of farmer as the cultivator, conserver and breeder with entitlement to protect farmers' varieties, new concepts such as benefit sharing, creation of national gene fund for promoting conservation of agro-biodiversity by farmers. Further several interactions with farmers, NGOs and other interested parties, the draft bill was modified to suit more to the national agricultural scenario with checks and breaks to minimize the monopolistic role of multinational corporate while encouraging their partnership in plant breeding. The draft Bill was subsequently referred to a Joint Select Committee of Parliamentarians headed by Shri. Sahib Singh Varma. This Committee did a commendable job in shaping

the Bill to its final shape taking inputs from all State Governments, academics, scientists, farmers' associations, NGOs, private sector seed companies and all other shades of interested the civil society . The Bill was enacted in August 2001 with the support of main opposition party. What was notable during this total legislative process was the deep concern conveyed by all including many erudite Parliamentarians to effectively safeguard the interests and rights of farmers from the possible adverse consequences of varietal protection on their livelihood and national food security.

The enacted Protection of Plant Varieties and Farmers' Rights Act, 2001 is notable and distinct from the UPOV Acts in several respects, while it meets all important elements to make it an effective *sui generis* system of IPR. Some of the features are unique with no parallel in the protection of plant varieties. For this reason there is also possibility that a few of the ideological features may encounter certain practical difficulties during their implementation. These problems, how ever, are not insurmountable with motivated implementation agency and willingness for timely review. Some of the major features which are distinct from the UPOV 1978 Act are enumerated here:

1. Establishment of Plant Variety and Farmers' Rights Protection (PPVFR) Authority to administer up on the Act and a Plant Variety Protection Appellate Tribunal for settlement of disputes arising therefrom.
2. Farmer is defined as a person who cultivates crops, conserves traditional varieties, wild species and breeder who adds value to them through selection and identification of useful properties.
3. Protection is open to farmers' variety, extant variety and new variety, with distinctness, uniformity and stability (DUS) as essential requirements for farmers' and extant varieties and novelty, as the additional essential attribute for new variety.
4. Entitlement for protection is allowed to breeders/successors/assignees, farmer, group of farmers or their assignee and publicly funded agricultural research institutions.
5. Application for variety protection to include, apart from the denomination, character profile highlighting the claimed distinctness of the candidate variety, passport data of parental lines, declarations on their geographical origin and lawful acquisition, and an affidavit affirming absence of genetic use restriction technology (like terminator gene).
6. Farmer applicants are exempted from providing much of the above details and payment of all fees.
7. Applications in the case of identical varieties to receive priority on the basis of date of submission of complete application.
8. Genera and species of crops which are to be opened for protection to be periodically notified by the Govt. of India.
9. All applications are published to invite objection, if any, for granting protection to the candidate variety and processed further on resolution of such oppositions, where ever applicable. EDVs are exempted from this process.
10. All varieties other than EDVs are subjected to DUS test for at least two seasons. EDV could be subjected to DNA or protein profile analysis.
11. Application on EDV to be accompanied by a declaration stating prior informed consent from the owner of the initial variety.

12. Decision on approval or denial of protection, in most normal cases, is to be taken during 2-3 year time from date of application.
13. The PBR to have exclusive right on the breeder or his agent to produce, sell, market, distribute, import or export of the variety.
14. Researchers' right to be absolute for using a protected variety for conducting experiment or research including its use as an initial variety for creating other varieties with restrictions on the repeated use of a protected variety in crosses.
15. Requirement to annually pay specifically decided maintenance fee for maintenance of protection with risk of forfeiting protection on grounds of failure in timely payment.
16. Entitlement to assign or license out the PBR at the free will of the PBR holder.
17. The duration of protection to be 18 years for vines and trees and 15 years for other plants with the initial registration period to be 9 years for vines and trees and 6 years for other plants, which is renewable to the limits of protection period.
18. Varieties admitted for protection are to be notified with relevant details to invite claim, if any, on benefit sharing for admitted or suspected use of an initial material owned by other individual, institution or farmer community, for developing the protected variety
19. Claim for benefit sharing could also be preferred on grounds of valid doubt that a protected variety was bred with unauthorized use of a traditional variety conserved by tribal or rural community
20. Benefit sharing where ever eligible is determined and awarded, the quantum of which is decided in commensuration with the commercial value of the protected variety.
21. All benefit shares awarded are to be deposited by the concerned PBR holder in the National Gene Fund (NGF).
22. NGF may also accept donations from national and international institutions/organisations and the fund is to be largely used to promote conservation of agro-biodiversity with recognition and reward farmers doing exemplary conservation assisting to encourage conservation at Panchayat levels.
23. The Act provides exhaustive and wide ranging rights to farmers in accordance with the FAO International Undertaking on Farmers' Rights and relevant CBD Articles on conservation and sharing biodiversity and benefit sharing. All these rights are codified in one chapter in the Act under title Farmers' Rights. These rights include:
 - (a) Right to save, use, sow, re-sow, exchange, share or sell his farm produce including seed of any protected variety with an exemption to prevent the right to sell seeds of branded varieties.
 - (b) Entitlement for recognition and reward for those engaged in conservation of economically useful plants, their land races and wild relatives.
 - (c) Right to seek protection of varieties identified by farmer or their community.
 - (d) Right for claiming and receiving due compensation from concerned PBR holder, including public institutions and private corporates, in case the seed of their protected variety fails to achieve the expected performance under recommended conditions of cultivation.

- (e) Right for benefit sharing if any farmer variety or traditional variety conserved by the tribal or rural community is used by a breeder to develop a new protected variety.
 - (f) Total immunity from legal proceedings for the first innocent infringement of the PBR, on such admission before the Tribunal.
 - (g) Exemption from paying all usual fees before a Tribunal or Court, in all legal proceedings against the farmer.
24. Investment of responsibility with the PPVFR Authority to ensure supply of propagating material of all registered variety is adequately met against the demand.
25. Empowerment to PPVFR Authority to grant compulsory license on a protected variety on satisfaction that the PBR holder continuously failed to adequately meet the demand on the propagating material of the protected variety or that the price realized on such material is unreasonably high.
26. The Plant Variety Protection Appellate Tribunal to expeditiously decide, with in a time frame, on all disputes arising from the Act.

A comparative assessment of UPOV Acts 1978 and 1991 together with the PPVFR Act 2001 may clearly bring out the major differences between them and its significance to the livelihood and domestic food security of resource poor farmers of the South, to the Indian agriculture and food security and in providing a PBR balanced with farmers' right and social obligations to regulate appropriation of national biodiversity as private good. The PPVFR, how ever, does not grant unbridled PBR to facilitate the monopolization of plant breeding by the private sector, to allow free license to liberally use the national biodiversity and convert them for private good and to systematically achieve consolidation of private monopoly on plant breeding and on the agriculture eventually. Such a *sui generis* IPR system on plant varieties anticipates major involvement of a competitive national public research system for public good and to counter the total takeover of protected plant varieties by the private sector in the long term interest of the livelihood of the farmers, national agriculture and food security.

There are signals from the private sector led by multinational seed corporates that the PPVFR Act is far insufficient from their interest point of view, particularly with expanded farmers' rights and benefit sharing. There have been background maneuvers and political lobbying to turn the provisions of this Act to their favour, all along the enacting stage. Hence there is a ground to suspect that such an unexpected decision taken by the Union Cabinet to grant approval for the accession of India to the UPOV, in gross disregard to the sentiments and concern voiced by the lawmakers in both Houses of Parliament on the possible adverse impact of UPOV like more stringent regime of protection of plant varieties on Indian farmers and its food security, during the debate on the PPVFR Act, that certain powerful interest who has an eye on the huge seed market in India has possibly colluded with the bureaucracy. According to the grapevine in Krishi Bhawan, this decision maneuvered by the bureaucracy may fetch some plump positions for some of them at the UPOV headquarter in Geneva.

Now let us examine how far the many fold benefits to the national agriculture claimed by the Government with the joining of UPOV are true. The first claim is increased investment from private sector on plant breeding in India. While there are more than 400 seed companies engaged in sale of seed, hardly a few, which are countable in one hand, have the capability for investment in plant breeding research. It would be far fetched that either these companies or any other Indian business group would be in a position to make the expected level of investment in this sector. It is, hence, obvious that only the multinational corporate giants have the capability to make huge investment in plant breeding, more specifically in bio-technological breeding. Thus the accession to UPOV is a green flag and red carpet welcome to the MNCs to enter India and play their game in seed business in accordance with UPOV rather than the PPVFR Act.

The second stated benefit is avoidance of multilateral agreements with several countries to receive PBR recognition for Indian varieties. This claim can be appreciated only with a fair understanding on the prospective international markets for Indian plant variety seeds. At present seed export from India earns minuscule revenue. There is demand for Indian plant varieties such as sugarcane, wheat, spices, etc. in S-E Asian and some African countries. Hardly any market is possible for the Indian variety seeds either in Europe or the Americas or even in Japan, S.Korea or China who are the members of the UPOV. In other words, the countries where India has large potential for seed export are not members of UPOV. This makes the stated second benefit a misleading hoodwink.

The third stated benefit is that UPOV membership will facilitate Indian plant breeders to get PBR recognition in other countries. Any decision on seeking IPR right in another territory is largely determined by the commercial prospect the protected technology has in that territory. For the reasons mentioned above the potential for Indian bred plant varieties are in countries which are not members of UPOV. Therefore, how many breeders are expected to avail this benefit and make commercial gains from UPOV countries?

In the final analysis, it becomes more evident that capitulation to the MNCs is the primary ground for the sudden about-turn the Union Ministry of Agriculture has taken in respect of *sui generis* system of protection of plant varieties. This unfortunate decision *de facto* disregarded and nullified a land mark national legislation in agriculture undertaken with the collective wisdom of our concerned Parliamentarians, farmers and non-governmental associations, community of agricultural scientists and the civil society, whose only interest and motivation were the welfare of the Indian farmers, progress of Indian agriculture and sustainability of the national food security. Did not this Cabinet decision disregarded to the democratic polity of the country?