



National Conference on Intellectual Property Rights (IPR)
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TRIPS and Plant Variety Protection

(Technical Session 2A on “TRIPS and Emerging Scenario”)

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PVP in TRIPS

(in Art 27 on 'Patentable Subject Matter')

Art. 27.1

- Members to grant patents in all fields of technology

Art. 27.2

- Patents can be refused ----to avoid serious prejudice to the environment ,
to protect human/animal/plant life, public order/morality-----

Art. 27.3

- Patents can be refused for: diagnostic, therapeutic and surgical methods for treatments of humans/animals; also for plants and animals and essentially biological processes for the production of plants or animals;
But
- Members to grant patents for micro-organisms, and non-biological and microbiological processes for the production of plants or animals
- Members to grant protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof (review after 4 years..)

In 1993, we studied 26 different PVP laws, and thought the following possible *Sui Generis* Systems.*

*** *While honouring legitimate interests of farmers and breeders***

- **Compulsory seed certification, distribution of only certified seed of registered varieties, full control over breeder seed**
- **PBR for parental lines and hybrids only, not other sexually reproduced and asexually propagated plant varieties**
- **PBR for all sexually reproduced varieties, but not asexually propagated plant varieties**
- **PBR for all kinds of plant varieties**
- **UPOV' 1978**
- **Blend of UPOV' 1978 and UPOV' 1991**
- **UPOV' 1991 (without dual protection)**
- **UPOV' 1991 (with dual protection)**

Important Features of the PPV&FR Act

I. For continuity in crop variety improvement

- **Researchers' Right (for development of new varieties)-- Sec. 30**
 - for conducting experiment / research/ use as initial source of variety-
authorization of breeder of registered variety is required

II. For safeguarding the earlier crop variety base of research infrastructure

- **Extant Variety - Sec. 2(j)**
- **Essentially Derived Variety - Sec. 2(i)- Authorization for repeated use (S.30 proviso, 23(6) proviso)**

III. For ensuring quality seed supply - Compulsory License (Chapter VII)

IV. For safeguarding earlier practices of farmers -Farmers' Rights (Chapter VI)-save, use, sow, resow, exchange, share or sell produce including seed of protected variety-not sell the branded seed and Benefit Sharing (Chapter IV)

India's interaction with UPOV

1998 India expressing its interest in UPOV' 1978

2002 Workshops in India; submitted our law for examination by UPOV

2003 India submitted its response to UPOV's observations

UPOV had indicated it is a complicated law; extends beyond protection of plant varieties; telling several areas of 'uncertainty'.

Why not UPOV? Why a different law?

- All over the world, social, economic and political circumstances provide the rationale for developing the laws.
- We understood the sensitivity of the issue. As provided in TRIPS Art 27, the review after 4 years for 'effective' system for plant variety protection was not expected.
- Flexibility available in TRIPS has been used.
- Growth in UPOV membership is not so impressive.
- In our circumstances, safeguarding the farmers' earlier practices was a necessity.
- Option for having a *sui generis* system allowed us to think differently.
- India's law is an effort to promote both private sector and farmers (Farmers: the largest seed producer in India).

Progress in PPVFR Act

114 crops/species notified as on date

Applications received =12691 (As on October 31, 2016)

(Public-1758, Private-3404, Farmer-7527, Individual Breeder- 2)

No. of varieties registered

Year	Extant	New	EDV	Farmers	Total
2009	163	2	-	3	168
2010	49	-	-	-	49
2011	102	15	-	-	117
2012	182	26	1	3	212
2013	205	53	-	46	304
2014	267	107	-	459	833
2015	105	53	-	192	350
2016	25	29	-	70	124
Total	1098	285	1	773	2157

TRIPS Art 27 on 'Patentable Subject Matter' has only addressed the PVP issue

- **PVP has a continuing and important role in plant breeding.**
- **Patents will always be attractive, but are unlikely to displace PVP in the near future.**
- **Each country should have a PVP system; available systems and expertise provide great insight.**
- ***Sui generis* systems need to be further developed and refined.**
- **More work is required through research and capacity building.**

The PPVFR Act – Some recommended works

CS Srinivasan 2001. International Experience of Plant Variety Protection: Lessons for India. Ph.D. Thesis, Department of Agriculture and Food Economics, University of Reading (UK).

Sabine Demangue 2005. Intellectual Property Protection: A Suitable System for India. Ph.D Thesis. Max Planck Institute for Intellectual Property, Germany.

Juliana Santilli 2012. Agrobiodiversity and the Law: Regulating Genetic Resources, Food Security and Cultural Diversity. *Earthscan*.

Mrinalini Kochupillai 2016. Promoting sustainable innovations in plant varieties. Ph.D Thesis. Max Planck Institute for Intellectual Property, Germany. *Springer*.

***Mauria, S. 2004. Protection of Plant Varieties and Farmers' Rights Act - Its Genesis, Salient Provisions, Implementation and Possible Impact on Indian Agriculture. *In: "Seed- A Global Perspective"*; Indian Society of Seed Technology, IARI, New Delhi; Proceedings of the Conference. p.292-308. 312p.**

*** Mauria, S. 2000. DUS testing of crop varieties – a synthesis on the subject for new PVP-opting countries. *Plant Varieties and Seeds (NAIB, Camb)* 13: 69-90.**

Law, Litigation, Lesson

I. Law	Lesson
Biodiversity Act	Access & Benefit Sharing w.r.t resources, services & technologies
PPVFR Act	Pedigree and properties of varieties (public sector - extant varieties)
ITPGRFA/Nagoya Protocol	Classification of Genetic Resources (IPs) and business plan
Seed Bill	Policy/legal research for agriculture
Patent Act	Traceability
Competition Act	Enforcement takes time – sustaining the momentum
II. Litigation	Lesson
Transgenic cotton patent	Techno-legal skills in regulation
Basmati patent	Quality and quantity of research data
Wheat farmers' variety patent	Research planning & technology foresight; shrewd management
<i>Neem</i> patent	Research/patent landscaping/ 'White-space analysis'
<i>Haldi</i> patent	Traditional knowledge documentation and management
Sorghum variety case in PPVFRA	Techno-legal skills in research system
<u>Technology commercialization from public sector</u>	<u>Needs brainstorming for a settled approach</u>

Human touch to issues of developing and poor countries



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Do Stronger Intellectual Property Rights Increase Innovation?

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Summary. — Do stronger intellectual property rights (IPR) increase innovation? Recent decades have seen a global transformation in IPR standards, underpinned by the theory that stronger IPRs spur increased incentives to innovate. This study tests the impact of ever more rigorous IPR systems on innovation through an index of economic complexity of 94 countries from 1965 to 2005. Our results confirm that stronger intellectual property systems engender higher levels of economic complexity. Nevertheless, only countries with an initial above-average level of development and complexity enjoy this effect.

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Key words — innovation, development, intellectual property rights, economic complexity



Environmental Humanities Conference:

i. Affective Habitus: New Environmental Histories of Botany, Zoology and Emotions

ii. Artists and Writers in Critical Dialogue with Nature Ecosystem

iii. Colloquium on Seed Banks and Cultural Interests in Seeds*

17-22 June' 2014; University of Canberra, Australia

***Seeds : The Source of Life**

Four Questions to Speakers (Law Professors and Conservationists)

- 1. Do we need to acknowledge cultural interests when biobanking seeds and using them to research processes?**
- 2. Can cultural interests travel with the seed throughout such processes?**
- 3. Can current legal mechanisms, such as intellectual property, deal with cultural complexity in a research setting?**
- 4. Is traditional knowledge in seeds liable to be subjected to biopiracy?**

10 minutes each by about 12 speakers was followed by a Panel Discussion on:

What conflicts and/or issues are expected to emerge over the next 50 years and how do existing protocols deal with these?

contribution to elevate the spirit of innovation.

Winners of Thomson Reuters India Innovation Awards 2015

Corporate Hi-Tech

- Indian Oil Corporation Ltd.
- Tata Steel

Corporate Pharmaceuticals

- Lupin Limited
- Cadila Healthcare

Academic and Research Institutes

- Indian Council of Agricultural Research
- Department of Atomic Energy



Thomson Reuters report 'India Innovation: Trend and Industry- Academia Government linkages' presents evidence and observations on the nascent and growing innovation collaboration in India. To have a detailed look of the report & to know the Top 50 Indian Innovators, Please [click here](#)

Thank you