

INTELLECTUAL PROPERTY RIGHTS, PLANT BREEDERS' RIGHT AND FARMERS' RIGHT IN INDIAN AGRICULTURE—AN OVERVIEW

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ABSTRACT

Intellectual Property Rights (IPRS) can be broadly defined as legal right established over creative or inventive ideas. Such legal right generally allows right holders to exclude the unauthorized commercial use of their inventions by third persons. (8 July, 1998 By ICAR). The intellectual property rights (IPRs) were essentially recognized and accepted all over the world due to reasons like to provide incentives to the individual for new creations, providing property, ensuring the availability of the genuine and original products. Since, India is one of the fattest developing economics and is having diversified Industrial background with suitable economic development mantra. The intellectual property rights broadly divided into two groups, *viz.*, primary rights and Sui-generics Primary Right include copyrights, Patents, Trademarks, Industrial designs rights, utility models, geographical indication, trade secret, related right, trade name and domain name. Sui-generis rights includes, *viz.*, database rights, mark work, moral rights, supplementary protection certificate, plant breeder rights and traditional knowledge.

Kew Words: Intellectual property right, plant breeders' right, farmers' right, PPV & FRAs'.

Intellectual property is the product of the human intellect including creativity concepts, inventions, industrial models, trademarks, songs, literature, symbols, names, brands etc. Intellectual Property Rights do not differ from other property rights. They allow their owner to completely benefit from his/her product which was initially an idea that developed and crystallized. They also entitle him/her to prevent others from using, dealing or tampering with his/her product without prior permission from him/her. He/she can in fact legally sue them and force them to stop and compensate for any damages.

History of IPR: IPR is not a new concept. It is believed that IPR initially started in North Italy during the Renaissance era. In 1474, Venice issued a law regulating patents protection that granted an exclusive right for the owner. The copyright dates back to 1440 A.D. when Johannes Gutenberg invented the printing press with replaceable/moveable wooden or metal letters. Late in the 19th century, a number of countries felt the necessity of laying down laws regulating IPR. Globally, two conventions constituting the basis for IPR system worldwide had been signed; Paris Convention for the Protection of Industrial Property (1883) [1] Berne Convention for the Protection of Literary and Artistic Works (1886).

Protection of Intellectual Property Rights: Protection of IPR allows the innovator, brand owner, patent holder and copyright holder to benefit from his/her work, labor and investment, which does not mean monopoly of the intellect. Such rights are set out in the International Declaration of Human Rights, which provides for the right to benefit from the protection of the moral and physical

interests resulting from the right holder's work; literal or artistic product.

Property and their types

Movable property: 'Movable property' includes standing timber, growing crops and grass, fruit upon and juice in trees, and property of every other description, except immovable property. Section 22 of IPC defines property as:

The words "movable property" is intended to include corporeal property of every description, except land and things attached to the earth or permanently fastened to anything, which is attached to the earth.

Things attached to the land may become movable property by severance from the earth.for example Cart-loaded of earth, or stones quarried and carried away from the land become movable property.

Immovable property: The Term "Immovable Property" occurs in various Central Acts. However none of those Acts conclusively define this term. The most important act which deals with immovable property is the Transfer of Property Act (T.P.Act). Even in the T.P. Act [2] this term is defined in exclusive terminology.

- **A.** According to Section 3 of that Act, "Immovable Property" does not include standing timber, growing crops or grass. Thus, the term is defined in the Act by excluding certain things. "Buildings" constitute immovable property and machinery, if embedded in the building for the beneficial use thereof, must be deemed to be a part of the building and the land on which the building is situated.
- **B.** As per Section 3(26) of the General Clauses Act 1897, "immovable property" "shall include land, benefits to

S. No.	Key Right or Basic Right	S. No.	Solitary or Sui Generis Right
(a)	Copyright	(a)	Plant breeders' rights
(b)	Trade secret	(b)	Farmers' rights
(c)	Trademarks	(c)	Plant varieties
(d)	Trade names	(d)	Genetic resources or specific genetic stock or genetically modified cells
(e)	Patents	(e)	Database rights
(f)	Geographical indication	(f)	Moral right
(g)	Domain names		
(h)	Utility models		

Table-1: Types of intellectual property rights.

arise out of land and things attached to the earth, or permanently fastened to anything attached to the earth". This definition of immovable property is also not exhaustive:

C. Section 2(6) of The Registration Act,1908 [3] defines "Immovable Property" as under:

"Immovable Property includes land, building, hereditary allowances, rights to ways, lights, ferries, fisheries or any other benefit to arise out of land, and things attached to the earth or permanently fastened to anything which is attached to the earth but not standing timber, growing crops nor grass".

The definition of the term "Immovable Property" under the Registration Act 1908, which extends to the whole of India, except the State of Jammu and Kashmir, is comprehensive. The above definition implies that building is included in the definition of immovable property. The following have been held as immovable property.

A right to collect rent, life interest in the income of the immovable property, right of way, a ferry, fishery, a lease of land.

D. The term "Immovable Property" is defined in other Acts for the purpose of those Acts. As per Section 269UA(d) of the Income Tax Act, 1961, Immovable Property is defined as under :

Any land or any building or part of a building, and includes, where any land or any building or part of a building is to be transferred together with any machinery, plant, furniture, fittings or other things, such machinery, plant, furniture, fittings and other things also.

Any rights in or with respect to any land or any building or part of building (whether or not including any machinery, plant, furniture, fittings or other things therein) which has been constructed or which is to be constructed, accruing or arising from any transaction (whether by way of becoming a member of, or acquiring shares in, a co-operative society, or other association of persons or by way of any agreement or any arrangement of whatever nature, not being a transaction by way of sale, exchange or lease of such land, building or part of a building.

Tangible and Intangible property

- **A. Tangible property:** Tangible property refers to any type of property that can generally be moved (i.e., it is not attached to real property or land), touched or felt. These generally include items such as furniture, clothing, jewellery, art, writings, or household goods.
- **B.** Intangible property: Intangible property refers to personal property that cannot actually be moved, touched or felt, but instead represents something of value such as negotiable instruments, securities, service (economics), and intangible assets including chose in action

Intellectual property: Intellectual property is a term referring to a number of distinct types of creations of the mind for which property rights are recognized—and the corresponding fields of law.

Property does not just comprise of tangible things like houses, cars, furniture, currency, investments etc and such assets are not the only kind that can be protected by law. There are many other forms of intangible property known as intellectual property that have been recognized under the law and granted protection against infringement.

Under intellectual property law, owners are granted certain exclusive rights to a variety of intangible assets, such as musical, literary, and artistic works; discoveries and inventions; and words, phrases, symbols, and designs. Patents, trademarks and copyrights, designs are the four main categories of intellectual property.

Types of intellectual property right and their use: Intellectual property right is mainly categorizes into two part. Which is as follows-?

A. Ker Right or Basic Right: Key right or basic right or primary intellectual right include copyright, trade secret, trademarks, trade names, patents, Geographical indication, Domain names, Utility models etc.



B. Solitary or Sui Generis Right: Solitary right or sui-generis rights include things of their own kind or unique characteristics. Such rights include database rights, plant breeders' rights, farmers' rights, moral right, indigenous intellectual property, etc.

A. Key Right or Basic Right

Copyrights: Copyright [4] is the exclusive right given to the creator of a creative work to reproduce the work, usually for a limited time. The creative work may be in a literary, artistic, educational, or musical form. Copyright is intended to protect the original expression of an idea in the form of a creative work, but not the idea itself.

A copyright is subject to limitations based on public interest considerations, such as the fair use doctrine in the United States. Some jurisdictions require "fixing" copyrighted works in a tangible form.

Copyrights can be granted by public law and are in that case considered "territorial rights". This means that copyrights granted by the law of a certain state, do not extend beyond the territory of that specific jurisdiction. Main feature of copyrights is presented below:

- **I.** This right gives protection of intellectual property for a specific period of time.
 - II. It is applicable to the entire world.
- **III.** Content of intellectual property can't be used or reproduced without prior information or written consent and agreement.
- (a) Trade Secret: Any confidential business information which provides an enterprise a competitive edge may be considered a trade secret [5]. The unauthorized use of such information by persons other than the holder is regarded as an unfair practice and a violation of the trade secret. It includes sales methods, distribution methods, consumer profiles, and advertising strategies, lists of suppliers and clients, and manufacturing processes. Some important things regarding trade secret is following:
 - I. It doesn't require registration to any agencies.
- II. It is generally applicable to product making formula. Example: Secret formula of coca cola a cold drink items.
 - III. There is no time period for trade secret.

(b) Trademark : A trademark also written trade mark or trade-mark is a type of intellectual property consisting of a recognizable sign, design, or expression which identifies products or services of a particular source from those of others, although trademarks used to identify services are usually called service marks. The trademark owner can be

an individual, business organization, or any legal entity [6]. A trademark may be located on a package, a label, a voucher, or on the product itself. For the sake of corporate identity, trademarks are often displayed on company buildings. It is legally recognized as a type of intellectual property.



- (c) Trade name: A trade name is simply the official name under which an individual as a sole proprietor, or a company, chooses to do business. A trade name is commonly known as a "doing business as" (DBA) name. Legally registering a trade name is an important step in branding for a company, but it doesn't provide an unlimited brand name or legal protection for the use of the name. State laws vary on requirements for registering a trade name, but most states require registration either with the state government or through your local county clerk's office. Main features related to trade name is following-
 - I. It is different from trademark
 - II. It may be registered or may not be registered.
- **III.** It does not provide protection of the business over the country of all over the world.
 - IV. It can be exclusive or nonexclusive.
- **V.** It is generally printed on letter head of the concerning agencies or company.
- **VI.** It is the name under which a company conducts its business.
- (d) Patents: A patent is the granting of a property right by a sovereign authority to an inventor. This grant provides the inventor exclusive rights to the patented process, design, or invention for a designated period in exchange for a comprehensive disclosure of the invention. They are a form of incorporeal right.

Government agencies typically handle and approve applications for patents. In the United States, the U.S. Patent and Trademark Office (USPTO), which is part of the Department of Commerce, handles applications and grants approvals. There are three types of patents:

1. Utility patents cover anyone who invents a new and useful process, article of manufacture, machine, or a composition of matter.

S. No	Application No.	Geographical Indications	Goods (As per Sec 2 (f) of GI Act 1999)	State
1.	1 an 2	Darjeeling Tea (word and logo)	Agricultural	West Bengal
2.	4	Pochampalli Ikat	Handicraft	Telangana
3.	11	Mysore Silk	Handicraft	Karnataka
4.	12	Kota Doria	Handicraft	Rajasthan
5.	13 and 18	Mysore Agarbathi	Manufactured	Karnataka
6.	25	Kangra Tea	Agricultural	Himachal Pradesh
7.	26	Coimbatore Wet Grinder	Manufactured	Tamil Nadu
8.	32	Mysore Traditional Paintings	Handicraft	Karnataka
9.	33	Coorg Orange	Agricultural	Karnataka
10.	34	Mysore Betel leaf	Agricultural	Karnataka
11.	35	Nanjanagud Banana	Agricultural	Karnataka
12.	69	Mysore Malligae	Agricultural	Karnataka
13.	70	Udupi Malligae	Agricultural	Karnataka
14.	71	Hadagali Malligae	Agricultural	Karnataka
15.	17	Navara Rice	Agricultural	Kerala
16.	36	Palakkadan Matta Rice	Agricultural	Kerala
17.	63	Thanjavur Art Plate	Handicraft	Tamil Nadu
18.	74	Sujini Embroidery Work of Bihar	Handicraft	Bihar
19.	75	Sikki Grass Products of Bihar	Handicraft	Bihar
20.	49 and 56	Malabar Pepper	Agricultural	Kerala, Karnataka, Tamilnadu
21.	50	Allahabad Surkha Guava	Agricultural	Uttar Pradesh
22.	85	Monsooned Malabar Arabica Coffee	Agricultural	Karnataka, Kerala
23.	114	Monsooned Malabar Robusta Coffee	Agricultural	Karnataka, Kerala
24.	72	Alleppey Green Cardamom	Agricultural	India (Kerala and Tamilnadu)
25.	78	Coorg Green Cardamom	Agricultural	Karnataka
26.	110	Eathomozhy Tall Coconut	Agricultural	Tamil Nadu
27.	81	Pokkali Rice	Agricultural	Kerala

Registration details of some geographical indications

- **2. Design patents** include an original, new, and ornamental design for a manufactured product.
- **3. Plant patents** go to anyone who produces, discovers, and invents a new kind of plant capable of reproduction.
- (e) Geographical Indication (G.I.): Geographical indications [7] means any indications which define the goods as originating in the territory of a country or a region or locality in that territory, provided a given quality reputation or other characteristics of the product are attributable to its geographical origin. This means that geographical indications has to indicate that a product of a particular origin has a certain quality or reputation or some other characteristics, which is essential attributable to its geographical origin. Main feature of geographical indications are pointed below:
- **I.** The world intellectual property organization (WIPO) helps in protection of geographical indication.
- **II.** The registration of GI confers certain rights on the registered proprietor and the authorized user and they can institute suit for infringements of geographical indications.

- **III.** Geographical indication may be agricultural, natural or manufactured goods or products.
- **IV.** In the past wines, cheeses, tobacco, which account for 88%, have been registered as GI. Wines and spirits account for almost 71% of all registrations.

(a) Domain name

Domain refers to unique name that identifies an internet site.

Domain names have two or more parts seprated by dots. e.g. www.iipr.res or www.icar.org. Etc.

The Internet is an international network of computers. Each computer has a unique numeric address called an Internet Protocol ("IP") address consisting of four numbers, each between 0 and 225, separated by periods.

The Domain Name System ("DNS") is a tool that allows Internet users to locate computers on the Internet using an alphanumeric domain name instead of the more complicated numerical IP address.

While different persons may be entitled to use the same trademark as long as that use is not confusing, only one of them (or, if the domain name is registered by a third party, none of them) will be able to use the domain name associated with that mark within a particular top-level domain (TLD).

The TLD is usually either generic (such as .com or .org) or country code (such as.ca).

- **(b) Utility models:** A utility model is an exclusive right granted for an invention, which allows the right holder to prevent others from commercially using the protected invention, without his authorization, for a limited period of time. Utility models are sometimes referred to as "petty patents" or "innovation patents [8]." Main point related to utility model protection right is given below-
 - I. This is also a type of intellectual property.
- **II.** It is also called as petty model, petty invention or utility invention.
- **III.** In some countries, utility model protection can only be obtained for certain fields of technology and only for products but not for processes.
- **IV.** In practice, protection for utility models is often sought for innovations of a rather incremental character which may not meet the patentability criteria.
- **V.** The term of protection for utility models is shorter than for patents and varies from country to country (usually between 7 and 10 years without the possibility of extension or renewal).
- **VI.** Utility models are much cheaper to obtain and to maintain.

A. Solitary or Sui Generis Right

(a) Plant Breeders' Right: Plant breeders' rights are a form of intellectual property rights that allow plant breeders to protect new varieties of plants. Other forms of intellectual property protection include patents, trademarks and copyrights. When plant breeders' rights are granted, the breeder gets exclusive rights in relation to propagating material of their new plant variety [9].

A plant breeder who obtains plant breeders' rights usually collects royalties each time propagating material of the protected plant variety is sold, similar to the way an author collects royalties on a copyrighted book.

Exception of Plant Breeders' Right: Plant breeders' rights do not restrict anyone from using the protected variety for:

private and non-commercial purposes,

experimental purposes,

breeding and developing new plant varieties, and storing and saving seed harvested from a protected variety for planting by farmers on their own land.

(b) Farmers' Right: The Protection of Plant Varieties and Farmers' Rights Act (PPV&FR Act) [10] seeks to address

the rights of plant breeders and farmers on an equal footing. It affirms the necessity of recognizing and protecting the rights of farmers with respect to the contribution they make in conserving, improving and making Plant Genetic Resources (PGR) available for the development of new plant varieties. Main points related to farmers' right is given below:

- I. Farmers are entitled to save, use, sow, re-sow, exchange, share or sell their farm produce, including seed of protected varieties, in the same manner as they were entitles to before the coming into force to the PPV&FR Act.
- **II.** Farmers who provide Plant Genetic Resources (PGR) to breeders for developing new varieties shall receive a fair share of benefit from the commercial gains of the registered varieties.
- **III.** Farmer is eligible to claim compensation from the breeder through the intervention of the PPV&FR Authority.
- **IV.** Farmers have the right to access seed of registered varieties at a reasonable and remunerative price. When this condition is not met, the breeder's exclusive right over the variety is suspended under the provision concerning compulsory licensing.
- **V.** The PPV&FR Act allows for the registration of existing farmers' varieties that fulfill requirements for distinctness, uniformity, stability and denomination, but does not include that of novelty.
- **VI.** This right provides farmers with a one-off opportunity for a limited period of time, from the moment when a crop species is species is included in the crop portfolio under the PPV&FR Act for registration. Once registered, these varieties are entitled to all PBRs.

(c) Plant Varieties

India has ratified the TRIPS agreement and to give effect to this agreement, The Protection of Plant Varieties and Farmers Rights Act, 2001 (PPV&FRA) was enacted.

The main aim of this Act is to establish an effective system for the protection of plant varieties and, the rights of the breeders and to encourage the development of new varieties of plants.

Any variety that fulfills the DUS criteria and that is "new" (in the market) is eligible for this kind of protection.

A DUS examination involves growing the candidate variety together with the most similar varieties of common knowledge, usually for at least two seasons, and recording a comprehensive set of morphological (and in some cases agronomic) descriptors.

Plant varieties present in wilderness cannot be registered, under PPV&FR Authority. However, any traditionally cultivated plant variety which has undergone the process of domestication / improvement through human interventions can be registered and protected subjected to fulfillment of the eligible criteria.

Plant varieties should be Novel, Uniform, Distinct and Stable for the particular traits for which it has been registered with PPV &FRA.

Types of Varieties Registered For Protection Under This Act:

New Variety: A new variety can be registered under the Act if it conforms to the criteria for novelty, distinctiveness, uniformity and stability.

Extant variety: An extant variety can be registered under the Act if it conforms to the criteria for distinctiveness, uniformity and stability. Thus novelty is not considered while going for the protection of plant varieties.

The PPV&FRAu/s 2 (j) (iii) and (iv) defines extant variety as any variety "which is in public domain or about which there is a common knowledge.

Farmers' Variety: Under section 2 (I) farmers variety means a variety "which has been traditionally cultivated and evolved by the farmers in their fields".

(d) Genetic resources or specific genetic stock or genetically modified cells: Genetic resources (GRs) refer to genetic material of actual or potential value. include material of plant, animal, or microbial origin, medicinal plants, agricultural crops and animal breeds, modified cells, specific DNA sequences etc.

Genetic Inventions, Intellectual Property Rights and Licensing Practices: More broadly understood also encompass agricultural, environmental and industrial uses. Claims in gene patent applications pertain, among other things, to:

Genes or partial DNA sequences such as cDNAs, ESTs, SNPs, promoters and enhancers.

Proteins encoded by these genes and their functions in the organism.

Vectors used for the transfer of genes from one organism to another.

Genetically modified micro-organisms, cells, plants and animals.

Processes used for the making of a genetically modified product.

Uses of genetic sequences or proteins which include: genetic tests for specific genetic diseases or

predisposition to such diseases; drugs developed on the basis of the knowledge of proteins and their biological activity; industrial applications of protein functions.

- (e) Database Right: Databases are an integral part of digital curation whether as part of the toolkit for curating data or as entities to be curated themselves. Ownership of the intellectual property in a database and the associated rights this provides will have a significant effect on what curation acts can be carried out in relation to a database [11]. There is often confusion around the subsistence of copyright in a database. A database may attract copyright protection but only in certain limited circumstances. Main features of database right is following:
- **I.** Introduced in 1996, this is a sui generis form of intellectual property protection developed exclusively to protect databases.
- **II.** The database right subsists in a database if there has been a substantial investment in obtaining, verifying or presenting the contents of the database.
- **III.** Investment is construed widely and covers financial, human and technical resources.
- **IV.** Like copyright, the database right arises automatically.
- **V.** Protection provides that the first owner of the database right is the 'maker' of a database.
- **VI.** The right subsists for 15 years from the creation of the database, but if the database is published in this time, then the term is 15 years from publication.

There are many unresolved or controversial issues in relation to the IPR in databases. These include :

Ownership in instances of employee creation.

The role of contract/licensing in overriding IP legislation.

The effect of multiple authorship (very common in database creation).

Ownership where much of the database content has been assimilated from other databases (also very common in database creation).

What constitutes 'substantial' in relation to the database right.

What constitutes 'publication' of a database.

The potential term of the database right in the case of dynamic databases.

Ownership where the database is created as part of an externally funded project.

(f) Moral Right: Moral rights are rights of creators of copyrighted works generally recognized in civil law

jurisdictions and, to a lesser extent, in some common law jurisdictions. They include the right of attribution, the right to have a work published anonymously or pseudonymously, and the right to the integrity of the work [12]. Main points related to moral right is given below:

- I. Moral rights were first recognized in France and Germany, before they were included in the Berne Convention for the Protection of Literary and Artistic Works in 1928.
- II. Canada recognizes moral rights (droits moraux) in its Copyright Act (Loi sur le droit d'auteur). The United States became a signatory to the convention in 1989, and incorporated a version of moral rights under its copyright law under Title 17 of the U.S. Code.
- **III.** Some jurisdictions like Austria differentiate between narrow and wide moral rights.
- **IV.** Moral rights are recognised under section 57 of India copyright act. Section 57 of India Copyright act refers to Author's Special rights. It states:
- (a) Independently of author's copyright, and even after the assignment either wholly or partially of the said copyright, the author of the work shall have the right to claim authorship of the work as well as the right to restrain, or claim damages in respect of (a) any distortion, mutilation or other modification of the said work; or (b) any other action in relation to the said work which would be prejudicial to his honour or reputation.
- **(b)** The right conferred upon an author of a work by sub section (1), other than the right to claim authorship of the work, may be exercised by the legal representatives of the author.

Intellectual Property Right Law and Agriculture Research (Four Distinct Phases) :

Up to 1985

Practically no awareness of IPRs

Era of free exchange of resources and technologies

1986-1995

International developments: CBD and WTO (TRIPS)

Obligations for compatible National Laws

Issues regarding access to genetic resources, benefit sharing, farmers' rights, traditional knowledge debated; debates continue

ICAR also involved in inter-departmental/ ministerial meetings and international negotiations

1996-2005

PPVFR Act (2001); Biological Diversity Act (2002) 1997 ICAR Rules and Guidelines services, for trading, consultancy services, contract research and contract services; concept of Intellectual fee and sharing with institute incorporated.

IPR Cell created in ICAR in 1998 and ADG (IPR) designated, awareness on IP-issues created in general meetings

One-day workshops from ICAR Hqr and Short Course on Orientation for PGR Policy & Emerging Intellectual Property Rights Issues at NBPGR

Patent filling minimal and centralized from ICAR Hgrs

2006-onwards

WTO Agreement on Trade-Related Intellectual Property Rights: Provides for minimum standards on IPR protection

Implementation of India's new IPR Laws

Maximum ICAR Hqr-driven awareness on IP issues

Different Agencies Involve in IPR Management and Implementation at National and International level :

National level Intellectual property right and patenting issue dealing organization :

- 1. Protection of Plant Varieties and Farmers' Right Authority: The Protection of Plant Variety and Farmers Right Act, 2001 (PPVFR Act) is an Act of the Parliament of India that was enacted to provide for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders, and to encourage the development and cultivation of new varieties of plants. This act received the assent of the President of India on the 30 October 2001.
- 2. National Bureau of Plant Genetic Resources, New Delhi: CAR-NBPGR has been given the mandate to act as a nodal institute at the national level for acquisition and management of indigenous and exotic plant genetic resources (PGR) for agriculture, and to carry out related research and human resources development for sustainable growth of agriculture.
- 3. Intellectual Property India (IPI) Government of India: Office of the Controller general of Patents, Designs and Trade Marks, Department of promotion of industry and internal trade, ministry of commerce and industry, Government of India deals with the Indian patents issue, trade secret, trade mark and industrial design etc. Brief work of this organization is following:

To survey and report on the working of the patent system in India;

To examine the existing patent legislation in India and to make recommendations for improving it, particularly with reference to the provisions concerned with the prevention of abuse of patent rights;

To consider whether any special restrictions should be imposed on patent regarding food and medicine;

To suggest steps for ensuring effective publicity to the patent system and to patent literature, particularly as regards patents obtained by Indian inventors;

To consider the necessity and feasibility of setting up a National Patents Trust;

To consider the desirability or otherwise of regulating the profession of patent agents

To examine the working of the Patent Office and the services rendered by it to the public and make suitable recommendations for improvement; and

To report generally on any improvement that the Committee thinks fit to recommend for enabling the Indian Patent System to be more conducive to national interest by encouraging invention and the commercial development and use of inventions.

International Level Intellectual property right and patenting issue dealing organization

- 1. World Intellectual Property Organization (WIPO): The World Intellectual Property Organization ("WIPO") is a specialized agency of the United Nations charged with "promoting the protection of intellectual property throughout the world." WIPO Convention, art. 3 (i). The WIPO Secretariat undertakes wide variety of activities relating to IPRs, including hosting diplomatic conferences of government representatives seeking to negotiate new international treaties.
- 2. World Trade Organization (WTO): The WTO is a global intergovernmental organization dealing with the rules of trade between nations. It was established in 1994 at the conclusion of the Uruguay Round of trade negotiations held under the auspices of the General Agreement on Tariffs and Trade ("GATT"). As of July 2004, 147 states and customs territories ("WTO Members" or "Members") had joined the organization. This organization deals with the patents, IPR issue, trademarks, industrial design, trade secret issues at international level.
- 3. Convention on Biological Diversity (CBD): The CBD was opened for signature in 1992 and entered into force in 1993. As of July 2004, 188 states had ratified this agreement. The CBD's main objectives are the conservation of biological diversity, the sustainable use of its components, the fair and equitable sharing of benefits arising out of the utilization of genetic resources and the preservation of indigenous knowledge. CBD does not expressly refer to any international IPR agreements; it contains numerous provisions relating to IPRs, principally

in article 16. In particular, article 16(5) recognizes that IPRs "may have an influence on the implementation" of the CBD. The article obliges member states to cooperate in order to ensure that IPRs are "supportive of and do not run counter to" the treaty's objectives.

- 4. The Consultative Group on International Agricultural Research (CGIAR): CGIAR is an informal association of public and private donors founded in 1971 that supports an international network of agricultural research centers, each with its own governing body. CGIAR's mission is to engage in research, in partnership with other public and private entities, to promote sustainable agriculture in developing nations.
- 5. International Plant Genetic Resources Institute (IPGRI): IPGRI is the world's largest international institute dedicated to the conservation and use of plant genetic resources. Founded in 1974, IPGRI focuses on conservation, management and preservation of the diversity of plant genetic resources, through domestic, regional and international programmes and research initiatives.

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