

Notes for PG course on
PGS 503 (E Course) INTELLECTUAL PROPERTY (IPR) and its
Management in Agriculture (0+1)

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What is Intellectual Property Rights (IPR)?

Intellectual Property Rights are the rights given to persons over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time to inventions, literary and artistic works, and symbols, names, images, and designs used in commerce

Anything made by human intervention requires intellectual efforts and all human made things are a result of intellectual creations. However individual persons do not own most of these creations or organizations but human race as a whole is the collective owner of these creations. Some specific creations made by individuals / organizations are owned by them subject to the conditions laid down by certain laws for recognizing and rewarding the intellectual activity of the creator. Intellectual property refers to such creations. These include Inventions, Symbols, names, images; literary and artistic work.

Why worry about IP?

- IP provides a proprietary right in **intangible products** of the human mind, which are also known as “knowledge” goods or “creations”.
- IP is ownership of property that is **distinct from real estate** or personal property as these are products of human intellect or mind. Though ownership is similar, the kind of goods are different: tangible and intangible goods

Intellectual Property Rights are the legal rights which result from intellectual activity in the industrial, scientific, literary and artistic fields. These are time limited right.

What is IP Management?

- In today's knowledge economy, intellectual assets (such as technological information) are economic assets that must be effectively managed in order to unlock their commercial potential for the sustained growth of technology-related business.
- Legally protected intellectual assets, including intellectual property (IP), are essential for business success. In order to achieve their growth plans, businesses should have a strong IP portfolio.
- An effective IP management regime would have in-built incentive for scientists/innovators to engage in knowledge creation. This would lead to greater professional recognition for them.

Why IPR came into picture ?

It is one of the components of GATT conditions which is to be implemented by all the member countries of the GATT. India is also a member of GATT and it is an obligation for India to honour and implement the IPR components.

What is GATT?

GATT stands for General Agreement on Tariffs and Trade.

The General Agreement on Tariffs and Trade (typically abbreviated GATT) was the outcome of the failure of negotiating governments to create the International Trade Organization (ITO). GATT concept was introduced with the idea for an organization to regulate trade as part of a larger plan for economic recovery after World War II. As governments negotiated the International Trade Organization (ITO), 15 negotiating states began parallel negotiations for the GATT as a way to attain early tariff reductions. Once the ITO failed in 1950, only the GATT agreement was left. The GATT's main objective was the reduction of barriers to international trade. This was achieved through the reduction of tariff barriers, quantitative restrictions and subsidies on trade through a series of agreements. The GATT was a treaty, not an organization. The functions of the GATT were taken over by the World Trade Organization (WTO) which was established during the final round of negotiations in the early 1990s.

The history of the GATT can be divided into three phases: the first, from 1947 until the Torquay Round, largely concerned which commodities would be covered by the agreement and

freezing existing tariff levels. A second phase, encompassing three rounds, from 1959 to 1979, focused on reducing tariffs. The third phase, consisting only of the Uruguay Round from 1986 to 1994, extended the agreement fully to new areas such as **intellectual property**, services, capital and agriculture. Out of this round the WTO was born.

GATT and the World Trade Organization

In 1993 the GATT was updated (*GATT 1994*) to include new obligations upon its signatories. One of the most significant changes was the creation of the World Trade Organization (WTO). The 75 existing GATT members and the European Communities became the founding members of the WTO on January 1, 1995. The other 52 GATT members rejoined the WTO in the following two years . As of October 2007, there were a total of 151 member countries in the WTO.

Whereas GATT was a set of rules agreed upon by nations, the WTO is an institutional body. The WTO expanded its scope from traded goods to trade within the service sector and intellectual property rights. Although it was designed to serve multilateral agreements, during several rounds of GATT negotiations (particularly the Tokyo Round plurilateral agreements created selective trading and caused fragmentation among members. WTO arrangements are generally a multilateral agreement settlement mechanism of GATT.

Rounds of GATT trade negotiations

GATT signatories occasionally negotiated new trade agreements that all countries would enter into. Each set of agreements was called a *round*. In general, each agreement bound members to reduce certain tariffs. Usually this would include many special-case treatments of individual products, with exceptions or modifications for each country.

1. Geneva Round (1947): 23 countries. GATT enters into force
2. Ancey Round (1949): 13 countries.
3. Torquay Round (1950): 38 countries.
4. Geneva Fourth Round (1956): 26 countries. Tariff reductions. Strategy set for future GATT policy toward developing countries, improving their positions as treaty participants.
5. Dillon Round (1960-1961): 26 countries. Tariff reductions. Named after C. Douglas Dillon. Then U.S. Undersecretary of State.
6. Kennedy Round (1962-1967): 62 countries. Tariff reductions. This was an across-the-board reduction rather than a product-by-product specification, for the first time. Anti-dumping agreement (which, in the United States, was rejected by Congress.)

7. Tokyo Round (1973-1979): 102 countries. Reduced non-tariff trade barriers. Also reduced tariffs on manufactured goods. Improvement and extension of GATT system.
8. Uruguay Round (1986-94): 123 countries. Created the World Trade Organization to replace the GATT treaty. Reduced tariffs and export subsidies, reduced other import limits and quotas over the next 20 years, agreement to enforce patents, trademarks, and copyrights (TRIPS), extending international trade law to the service sector (GATS) and open up foreign investment. It also made major changes in the dispute settlement mechanism of GATT.
9. Doha Round: see WTO.

Trade Related Aspects of Intellectual Property Rights (TRIPS)

The **Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS)** is an International Agreement administered by the World Trade Organization (WTO) that sets down minimum standards for many forms of intellectual Property (IP) regulation. It was negotiated at the end of the Uruguay round of the General Agreement on Tariffs and Trade (GATT) in 1994.

- Patents must be granted in all "fields of technology," although exceptions for certain public interests are allowed (Art. 27.2 and 27.3)
- Article 27 of the TRIPS Agreement defines which inventions governments are obliged to make eligible for patenting, and what they can exclude from patenting.
- Inventions that can be patented include both products and processes, and should generally cover all fields of technology.

What is covered under IPR...?

1. Patents,
2. Plant Variety Protection(PVP)
3. Geographical Indications
4. Traditional Knowledge
5. Copy Rights
6. Trade Marks
7. Trade Secrets
8. Industrial Designs

1. PATENT:

A Patent is an exclusive monopoly granted by the Government to an inventor over his invention for limited period of time. Patents protect inventions and improvements to existing inventions.

An inventor or any other person/company assigned by the inventor can obtain the patent over his invention. A patent is obtained by the inventor or his assignee by filing an application with the patent office in the stipulated forms as required by the Patent act of that country.

A patent is granted only on that invention, which is new(Novelty), non-obvious and has industrial applicability(Utility).

Novelty(New). It must show some new characteristic that is not known in the body of existing knowledge (referred to as **prior art**) in its technical field.

Non-obviousness(Inventive step). It must show an inventive step that could not be deduced by a person with average knowledge of the technical field.

Utility(Industrial Applicability) The invention must be of practical use capable of some kind of industrial application.

A patent can expire in the following ways:

The patent has lived its full term i.e. the term specified by the patent act of the country. Generally it is 20 years from the date of filing.

The patentee has failed to pay the renewal fee. A patent once granted by the Government has to be maintained by paying annual renewal fee.

The validity of the patent has been successfully challenged by an opponent by filing an opposition either with the patent office or with the courts.

While not as widespread as patents, utility models are also used to protect inventions.

Utility models are found in the laws of more than 30 countries, as well as in the regional agreements of the African Regional Industrial Property Organization (ARIPO) and the Organisation africaine de la propriété intellectuelle (OAPI). In addition, some countries, such as Australia and Malaysia, provide for titles of protection called **innovation patents** or **utility innovations**, which are similar to utility models. Other countries, like Hong Kong, Ireland and Slovenia, have a short-term patent that is equivalent to the utility model.

In conclusion , there is **no International or Global Patent**. An inventor has to file an application in each country, where he seeks to protect his invention. There are regional and/or

International treaties to facilitate the procedure to seek protection like Patent co-operation Treaty (PCT) or European Patent Convention (EPC) .

Basic Philosophy of patents

Balances the rights of the creator over his intellectual property against... the right of society at large to benefit from the intellectual property of the creator.

Patents – Law and Procedure

Objective of the Patent Law

- To encourage and develop new technology.
- It stimulates technical progress in 4 ways
- It encourages Research and Invention
- It induces the inventor to disclose his invention
- It offers a reward for the development of an invention which can be commercially exploited
- It provides an inducement to invest capital in the new lines of production

Value of Patent System

- It protects abuse of Patent Rights in the entire world
- Inventions made in technology in all fields are published in the patent specifications filed at the patent offices of the different countries
- A world-wide exchange of technical information is possible only by the publication of such patent specification
- The value of patent system is demonstrated in almost all advanced countries with the number of patents granted

History of Patent Law

- 1856: Act VI of 1856 on protection of inventions based on the British patent law of 1852. Certain exclusive privileges granted to inventors of new manufacturers for a period of 14 years.
- 1859: The act modified as Act XV; patent monopolies called exclusive privileges (making, selling and using inventions in India and authorizing others to do so for 14 years from date of filing specification)
- 1883: Protection of inventions act
- 1888: Consolidated as the inventions & designs act
- 1911: Indian patents & designs act
- 1975: India joins WIPO
- 1995: The Indian government became a signatory to TRIPS (Trade Related Intellectual Property Rights) after it joined the WTO in 1995
- 1972: Patents act (act 39 of 1970) came into force on 20th April 1972
- 1999: On March 26, Patents (Amendment) Act, (1999) came into force
- 2002: Patents (Amendment) Act 2002 came into force from 20th May 2003. The concepts of 20 year patent term, 18 months publication, request for examination, inventive step for Patent-ability were introduced by this amendment

- 2005: Patents Act 1970 as amended by Patents (Amendment) Ordinance 2004 & Patent Rules 2003 as amended by The Patent Amendment Rules, 2005 come into force .

Advantages of Patents to Inventor

- Technological inventions provides incentives to monetary reward
- Exclusive right to use the patent
- Grant Licences
- can prevent others from copying the monopoly granted in his favour
- By transferring Know how also he can receive consideration

Patentable Invention:

- Any new and useful art process, method or manner of manufacture machine, apparatus or other article
- Substance produced by manufacture and includes any new and useful improvement of any of them, and an alleged invention
- An invention must be novel
- Has an inventive step or lack of obviousness and is capable of industrial application

Exception from the Patents as per TRIPS of the GATT (Article 27):

Patentability of plants and animals other than micro-organisms and essentially biological processes for the production of plants and animals other than non-biological or micro-biological processes. However, members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof.

What cannot be Patented

- A substance obtained by a mere mixture
- Mere re-arrangement or duplication of known devices
- A method or process of testing
- A method of agriculture and horticulture
- A method for the treatment of human beings

What are not Inventions?

According to Sec. 3 of the Patents Act 1970. The following are not inventions within the meaning of the Act:

- An invention which is **frivolous** or which claims anything obviously contrary to well established natural laws;

Frivolous Inventions

- Inventions contrary to law, morality or injurious to public health
- Discovery of a scientific principle or the formulation of an abstract theories.
- Discovery of a new use or property of a known substance
- Any invention relating to the use of atomic energy

What are not Inventions?(contd...)

- An invention, the primary or intended use or commercial exploitation of which could be contrary to public order or morality or which causes serious prejudice to human, animal or plant life or health or to the environment;
- The mere discovery of a scientific principle or the formulation of or discovery of any living thing or non-living substance occurring in nature (Ex. Salts, Polymorphs)
- The mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substances or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant;
(Ex. new & alternative method for preparing Aspirin is Patentable)
- A substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substances.
(Ex. soap, detergents, lubricants - synergetic properties of a mixture is not admixture)
- The mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way;
(Ex. play-cum-educational device, A Dice)
- A method of agriculture or horticulture
- Any process for the medicinal, surgical, curative, prophylactic (diagnostic, therapeutic) or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products.
(Ex. surgical/therapeutic instruments/apparatus may obtain patent)
- Plants and animals in whole or any part thereof other than micro-organisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals;
(Ex : Clones and new variety of plants are not patentable. But process/method of Genetically Modified Organisms are patentable)
- A mathematical or business method or a computer program per se or algorithm;
- A literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever, including cinematographic works and television productions;

- A mere scheme or rule or method of performing mental act or method of playing a game; (Ex. method of learning language, playing chess,)
- A presentation of information; (visual/codes, signal)
- Topography of integrated circuits;
- An invention which, in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components.
- Inventions Relating to Atomic Energy –Sec.4

How to obtain a Patent?

Who can apply?

- True and the first inventor
- His/her assignee
- Legal Representative of deceased inventor/assignee
- Provisional Specification
- Complete Specification

Transfer of Patent Rights

- Assignment, License Compulsory License

Contents of Specification

- Title, -Field of Invention, -State of art in the field, -object of the invention(Problem-Solution), -Statement of invention, -Detailed description of the invention with Drawings
- Scope/Ambit of the invention, -Claims

Grant of Patent/Opposition:

- Examination of the application, Disclaimer and references
- Grounds of opposition:
- Obtaining wrongfully
- Prior publication
- Prior claim
- Prior public knowledge
- Obviousness and lack of inventive step
- Invention not sufficiently described

Revocation /Surrender of Patents

- Patentee is not entitled to the patent, -Patent wrongfully obtained
- Amendment obtained by fraud, -subject of claim not an invention
- Invention claimed was secretly used before priority date
- Mosaic Publications, -Workshop improvements
- Invention not sufficiently described, -claims not clearly defined

Infringements of Patents:

- Relief's:

- Injunction
- Damages or Account of profits

Different categories of independent claims stating unity of invention:

- Product, process for its manufacture and use of the product
- Process and apparatus for carrying out the process
- Product, process for its manufacture and apparatus for carrying out the Process

For Example

- If one has invented a new kind of spray bottle patents may be granted for -
- The bottle itself (a product)
- A chemical in the plastic (chemical composition)
- The spraying mechanism (an apparatus)
- How you extruded the plastic (a process)

What is WIPO?

WIPO stands for World Intellectual Property Organization.

- The World Intellectual Property Organization (WIPO) is one the specialized agencies of the United Nations which was created in 1967 with the stated purpose “to encourage creative activity, [and] to promote the protection of Intellectual Property throughout the world”.
- WIPO became a specialized agency of the UN in 1974
- WIPO currently has 184 member states, administers 23 international treaties and is headquartered in Geneva, Switzerland. Almost all UN members are members of the WIPO.
- India is also a member of World Intellectual Property Organization (WIPO).

Enforcement of Intellectual Property issues in India

- India is a member of World Intellectual Property Organization (WIPO) based in Geneva.
- Department of Industrial Policy & Promotion (DIPP) is the nodal Department in the Government of India for all matters concerning WIPO.
- Civil and criminal provisions exist in various laws for dealing with counterfeiting and piracy.

- DIPP is concerned with legislations relating to Patents, Trade Marks, Designs and Geographical Indications. These are administered through the Office of the Controller General of Patents, Designs and Trade Marks (CGPDTM):
- The Department of IPP has set up an Inter-ministerial Committee to coordinate IP enforcement issues.

The Acts & Offices to implement and deal with IPR components in India

- The Patents Act, 1970 (amended in 1999, 2002 and 2005) through the Patent Offices at Kolkata (HQ), Mumbai, Chennai and Delhi.
- The Designs Act, 2000 through the Patent Offices at Kolkata (HQ), Mumbai, Chennai and Delhi.
- The Trade Marks Act, 1999 through the Trade Marks Registry at Mumbai (HQ), Chennai, Delhi, Kolkata and Ahmedabad.
- The Geographical Indications of Goods (Registration & Protection) Act, 1999 through the Geographical Indications Registry at Chennai.

Modernization of IP administration in India

- E-filing facility for patent and trademark applications has been introduced on 20.7.2007

Frequently Asked Questions(FAQ'S) on PATENTS:

I. What is a Patent?

A Patent is an exclusive monopoly granted by the Government to an inventor over his invention for limited period of time.

II. How do I find out if I need patent, trademark and/or copyright protection?

Patents protect inventions and improvements to existing inventions. Copyrights cover literary, artistic, and musical works. Trademarks are brand names and/or designs, which are applied to products or used in connection with services.

III. Who can obtain a Patent?

An inventor or any other person/company assigned by the inventor can obtain the patent over his invention.

IV. How a patent is obtained / filed?

A patent is obtained by the inventor or his assignee by filing an application with the patent office in the stipulated forms as required by the Patent act of that country.

V. Why does the Government encourage filing of patents?

To encourage innovation and investment in the research and development activities so that there is economic, industrial and technological development in the country.

VI. How does a patent document help in R&D?

Study of a Patent document may stop re-inventing the wheel. A scientist, who has not consulted the patent literature, may start working on a problem for which the solution might have already been found by someone else and it is available in the patent literature.

VII. Which invention qualifies for the grant of a patent?

A patent is granted only on that invention, which is new, non-obvious and has industrial applicability.

VIII. Upto what extent the inventor has to disclose his invention to get a patent?

An inventor has to disclose his invention in such a manner that any person, other than the inventor, skilled in the art should be able to work out the invention.

IX. How does a patent expire?

A patent can expire in the following ways:

1. The patent has lived its full term i.e. the term specified by the patent act of the country. Generally it is 20 years from the date of filing.
2. The patentee has failed to pay the renewal fee. A patent once granted by the Government has to be maintained by paying annual renewal fee.
3. The validity of the patent has been successfully challenged by an opponent by filing an opposition either with the patent office or with the courts.

X. Is there an International/Global patent?

No. There is no International or Global Patent. An inventor has to file an application in each country, where he seeks to protect his invention. There are regional and/or International treaties to facilitate the procedure to seek protection like Patent co-operation Treaty (PCT) or European Patent Convention (EPC)

XI. Can a scientist get a patent on the invention, which he has already published in the form a paper in a national/International journal?

No. A patent is not granted to an invention if it is already available with the public either in the form of published literature or common knowledge.

XII. Why one should access the patent literature?

Before the start of the research and development project, one should scan the patent literature to stop re-inventing the wheel or during the development phase, when stuck up with a technical problem, to find a technical solution. or once the research is complete i.e. at the time of filing the patent application, to narrow down or broaden the claims and/or to draft the application for getting a patent

References

1. Reading Material supplied for the Course on IPR organized by Administrative Training Institute, Mysore from 26-02.2009 to 28.02.2009

2. PLANT VARIETY PROTECTION Or Plant Breeders' Rights

Plant breeders' rights (PBR), also known as **plant variety rights** (PVR), are Intellectual Property Rights granted to the breeder of a new variety of plant (or to another person or entity that can claim title in the new plant variety by, for example, agreement with the breeder or inheritance from a deceased breeder.

These laws typically grant the plant breeder control of the propagating material (including seed, cuttings, divisions, tissue culture) and harvested material (cut flowers, fruit, foliage) of a new variety for a number of years.

With these rights, the breeder can choose to become the exclusive marketer of the variety, or to license the variety to others.

Breeders can bring suit to enforce their rights and can recover damages for infringement. Plant breeders' rights contain exemptions from infringement, that are not recognized under patent law.

International rights

In 1957, the French Government held a conference in Paris concerned with the protection of new varieties. This led to the creation of the Union Internationale pour la Protection des Obtentions Vegetales (UPOV) and adoption of the first text of the International Convention for the Protection of New Varieties of Plants (UPOV Convention) in 1961. The purpose of the Convention was to ensure that the member states party to the Convention acknowledge the achievements of breeders of new plant varieties by making available to them an exclusive property right, on the basis of a set of uniform and clearly defined principles.

The Convention was revised in Geneva in 1972, 1978 and 1991. Both the 1978 and the 1991 Acts set out a minimum scope of protection and offer member States the possibility of taking national circumstances into account in their legislation.

The UPOV Convention also establishes a multilateral system of *national treatment*, under which citizens of any member state are treated as citizens of all member states for the purpose of obtaining plant breeders rights.

The UPOV Convention is not self-executing. Each member state must adopt legislation consistent with the requirements of the convention and submit that legislation to the UPOV Secretariat for review and approval by the UPOV Council, which consists of all the UPOV member states acting in committee.

In compliance with these treaty obligations, the United Kingdom enacted the Plant Variety and Seeds Act 1964 (UK). Similar legislation was passed in the Netherlands, Denmark, Germany, and New Zealand. In 1970 the United States followed

the lead of seventeen Western European nations and passed the Plant Variety Protection Act 1970 (US). This legislation provided protection to developers of novel, sexually reproduced plants. In total, 65 countries have signed the UPOV Convention and adopted plant breeders' rights legislation consistent with the requirements of the convention.

The WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) requires member states to provide protection for plant varieties either by patents or by an effective *sui generis* (stand alone) system, or a combination of the two. Most countries meet this requirement through UPOV Convention-compliant legislation. India has adopted a plant breeders' rights law that has been rejected by the UPOV Council as not meeting the requirements of the treaty.

PVP in India

India being the signatory, to the TRIPs agreement of the World Trade Organization (WTO) had agreed to provide protection to plant varieties and opted to come out with our own proposal to honour the international binding.. Keeping the interest of the farmers, researchers, seed industry and the international binding, the Government of India enacted "The Protection of Plant Varieties and Farmers' Rights Act(PPV&FR)" in 2001 and regulations for implementing the act were formulated in 2003. Later, so many recommendations and proposals were made and finally the PPVFR Act came into enforcement in 2005 after making rules of the Act and notification in the central Gazette. It is very essential to understand the details of the PPV&FR Act by all those stake holders of plant varieties and agricultural development and research as this act involves many technical and legal issues.

The main objectives of the Act are

- To recognize and protect 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.
- To encourage the development of new varieties of plants for accelerated agricultural development.
- To accelerate the agricultural development in the country and protect Plant Breeders Rights (PBR) and to stimulate investment in research and development (R&D) both in public and private sector, for breeding new plant varieties.
- To facilitate the growth of the seed industry, which will ensure the availability of good quality seed and plant material to the farmers.

Salient features of the Act

Registration of all the plant varieties

The registration of a plant variety under the PPVFR Act is legal process and as per the Act it is compulsory. This process establishes the Plant Breeders Rights(PBR) on the plant variety in favour of the applicant(s). PBR is a legal ownership right granted on a plant variety. Ownership of PBR is not permanent but only for a specific period.(15-18 years). PBR can be inheritable by succession, transferable and salable.

Who are eligible for Registration of Plant Variety

A person/an organization/Individual Farmer/A group of community of farmers who have bred or conserved a variety or their assignees. As per Section-16 of the Act, the eligibility applies to

- (a) any person claiming to be the breeder of the variety or
- (b) any successor of the breeder of the variety; or
- (c) any person being the assignee of the breeder of the variety in respect of the rights to make such application; or
- (d) any farmers or group of farmers or community of farmers claiming to be the breeder of the variety; or
- (e) any person authorized in the prescribed manner by a person specified under clauses (a) to (d) to make application on his behalf; or
- (f) any university or publicly funded agricultural institution claiming to be the breeder of the variety.

The type of varieties that can be registered

- New Varieties
- Farmers' Varieties
- Extant Varieties

A **NEW VARIETY** shall be registered under this Act if it conforms to the criteria of novelty, distinctiveness, uniformity and stability.

Novel: if, at the date of filing of the application for registration for protection, the propagating or harvested material of such variety has not been sold or otherwise disposed of by or with the consent of its breeder or his successor for the purposes of exploitation of such variety -

(i) in India, earlier than one year; or

(ii) outside India, in the case of trees or vines earlier than six years, or in any other case, earlier than four years.

Provided further that the fact that on the date of filing the application for registration, the propagating or harvested material of such variety has become a matter of common knowledge other than through the aforesaid manner shall not effect the criteria of novelty for such variety.

Distinctness: Distinct, if it is clearly distinguishable by at least one essential characteristic from any other variety whose existence is a matter of common knowledge in any country at the time of filing of the application.

Uniformity: Uniform, if subject to the variation that may be expected from the particular features of its propagation it is sufficiently uniform in its essential characteristics.

Stability: Stable, if its essential characteristics remain unchanged after repeated propagation or, in the case of a particular cycle of propagation, at the end of each such cycle.

Registration of Essentially Derived Variety (EDV): A variety essentially derived from an initial variety can also be registered / protected provided that it differs from the initial variety for at least for one character and meets the DUS needs. There must be an authorization by the breeder of the initial variety to the breeder of the EDV and it shall be on a mutually agreed terms and conditions. Material derived through single gene transfer, recurrent back cross derivatives, CMS line, mutant, somaclonal variants, chimeras, poly-embryo, ploidy level changes and deletion/ substitution lines, etc. can come under EDV. EDV is also considered as a New Variety.

EXTANT VARIETIES: Extant variety means a variety available in India which is -

(i) Notified under section 5 of the Seeds Act, 1966; or
(ii) Farmers; variety; or

(iii) A variety about which there is common knowledge

(iv) Any other variety which is in public domain (Released by Private/Public Organizations)

FARMERS' VARIETY

(i) Has been traditionally cultivated and evolved by the farmers in their fields; or (ii) Is a wild relative or land race or a variety about which the farmers possess the common knowledge.

Exclusion of some varieties from registration

The varieties falling under following conditions are prohibited for registration.

- Prevention of commercial exploitation of variety which is necessary to protect public order or public morality or human, animal and plant life and health or to avoid serious prejudice to the environment.

- Species which involves "any technology" includes Genetic Use Restriction Technology (GURT) and Terminator Gene Technology.

Process of Varietal Registration

- Submission of application to the Registrar in the prescribed proforma
- Deposition of Seed to National Gene Bank for conducting DUS test.
- Advertisement of application to call for any opposition.
- Issue of certification of Registration.
- Publication of list of registered varieties.
- Breeder to deposit the seeds/propagating material of registered varieties to National Gene Bank.
- Registration to confer Right of PBR.

Plant Variety Registry

A National Register of Plant Varieties shall be maintained at the Head Office of the Plant Variety Registry in the Authority. The register will contain the name of registered plant variety with the name, addresses and rights of their breeders and particulars of the denominations of the registered variety.

Breeders' rights

Breeder of a registered variety shall have an exclusive right to produce, sell, market, distribute, import or export the variety. In the case of an Extant variety, unless a breeder or his successor establishes his right, the central government, and in cases where such extant variety is notified for a state or for any area thereof under the Section- 5 of the Seeds Act, 1966(54 of 1966), the state government shall be deemed to be the owner of such rights.

Researchers' Rights

- a) The use of any variety registered under this Act by any person using such variety for conducting experiment or research; or
- (b) The use of a variety by any person as an initial source of variety for the purpose of creating other varieties

Provided that the authorization of the breeder of a registered variety is required where the repeated use of such variety as a parental line is necessary for commercial production of such other newly developed variety.

Legal definition of a farmer as per the Act

"Farmers" means any person who - (i) Cultivates crops by cultivating the land himself; or (ii) Cultivates crops by directly supervising the cultivation or land through any other person; or (iii) Conserves and preserves, severally or jointly, with any other person any wild species or traditional varieties or adds value to such wild species or traditional varieties through selection and identification of their useful properties. The Act recognizes the Farmer as not only as cultivator, but also as conservator of traditional varieties, as Plant Breeder and as eligible person to register the Plant Varieties.

Farmers' Rights

The provision of Rights to Farmers as per the Act may be described as follows.

- 1. Farmers' Rights on Seeds:** which includes right to save seed from one's crop and use the saved seed for sowing, exchanging, sharing or selling to other farmers. The Act restricts farmers selling seeds of registered variety in Packages and containers with labels bearing its registered name (**Branded**)
- 2. Farmers' Rights to Register the Traditional Varieties:** Traditional varieties developed or conserved by a community of farmers and new varieties developed by one or more farmers are eligible for registration. PVP laws of other countries do allow protection of new varieties bred only by professional Breeders/companies. No registration fees is charged to farmers to register the varieties.
- 3. Farmers' Rights for Reward and Recognition:**The Act has provision to reward and recognize the Individual farmer/s or farming and tribal communities for their role in conservation of varietal wealth of crop plants and contribution to Plant Genetic Resources(PGR) development.
- 4. Farmers' Rights for benefit sharing:** The Act provides for equitable sharing of the benefit earned from the new variety with farming or tribal communities that had contributed varieties used as parents. Farmers are given opportunity to submit claims for benefit share when their variety is used as parents. The benefit share may be disbursed from the "National Gene Fund"(NGF) to the eligible individual,

community or institution. Assistance from governmental or non-governmental organizations may also help in this regard.

5. Farmers' Rights to get Compensation for the Loss suffered from the Registered variety: Commercial demand for a registered variety arises based on the agronomic performance of the variety. Some seed companies try to promote the sales of the seed by making exaggerated claims on the variety. The Act requires that the seed be sold with a declaration on varietal agronomic performance. In the event farmers are not able to achieve the claimed performance, the PBR holder is liable to pay compensation to affected farmers.

6. Farmers' Rights to receive Compensation for undisclosed use of Traditional

Varieties: Applicants seek to register varieties are required to declare the source of the varieties used as parents to breed new variety. In the event of applicant suppressing the information on use Traditional variety/ knowledge concerned with community and if it is identified. Third party can submit claims for compensation which will be awarded by the Authority. PBR holder has to remit the amount to NGF which in turn will disburse the same to farmer through the applicant

7. Farmers' Rights for the seeds of Registered variety: The Act directs the PBR- holder to meet farmers' demand for seeds of the variety at reasonable prices. If PBR- holder fails to satisfy this requirement, farmers have the right to take the matter to the Authority on non-availability of seed, its poor quality or its high price, three years after the registration of the variety. The Authority may take remedial actions through enforcement of compulsory licensing to others. This compulsory licensing revokes the exclusive right on commercial production and marketing of seed granted to the PBR –holder and transfer the rights to third parties as decided by the Authority.

8. Farmers' Rights for Receiving Free Services: Considering the poor economic capability of farmers and facilitate them to have access to the benefits of the Act, total Exemptions are provided to Farmers on any Fees like fees to be paid towards registration of varieties, to conduct DUS Test on varieties, for the renewal of registration, fees for any application, fees for any legal proceedings etc.

9. Farmers' Rights for Protection against Innocent Infringement: Under legal jurisprudence violation of any law committed out of ignorance is not held as an admissible innocence. However, interest of the farmers are safeguarded against innocence infringement. Court is prevented from prosecution of a farmer on charges of any infringement of the Act

Present Status of implementation of the Act

- The Ministry of Agriculture, Government of India, has been identified as the nodal agency for implementing the PPV&FR act through an authority known as “The Protection of Plant Varieties and Farmers Rights Authority” located at New Delhi.
- The Rules of the Act have been notified by Government of India. The Act is notified in the Central Gezette by GOI during March, 2005
- The authority came into force in November, 2005. Project Directorate on Seed Research New Delhi has been entrusted with completing DUS test for all the varieties in all the crops, identifying different centers for different crops.

The Crops declared by the authority for REgistration

- **Rice, Wheat, Sorghum, Maize, Pearl Millet**
- **Pigeon pea, Chickpea, Green gram, Black Gram, Soyabean, Garden Pea, Kidney bean/French bean, Lentil**
- **Groundnut, Indian Mustard, Rapeseed, Sunflower, Safflower, Castor, Sesame, Lineseed**
- **Cotton(Tetraploid), Cotton(Diploid), Sugarcane, Jute**
- **Turmeric, Small Cardamom, Ginger, Black Pepper, Chrysanthemum,**

What is copyright?

-An Exclusive Right to do or authorize others do certain acts in relation to:

- **original literary, dramatic, musical and artistic works;**
- **cinematograph film; and**
- **sound recording.**
-

Copyrighted Works

**Cinematograph
Films**



Dramatic Works



Literary Works

**Musical
Works**



Sound Recording



Artistic works

The Legislation

-The provisions pertaining to Copyrights and their protection in India are governed by the Copyright Act, 1957.

-Copyright exists in expression of an idea and it is not a right in the novelty of an idea.

-Copyright protects skill, labour and capital employed by the author.

**Trademarks
Geographical Indicators
and
Industrial Designs**

eXampleSM



Meaning:

- **a mark capable of being represented graphically**
- **capable of distinguishing the goods or services of one person from those of others**
- **typically a name, word, phrase, logo, symbol**
- **Service marks**
- **Trade Names**
- **Sound trademarks**
- **Certification mark:**
- **Collective marks**
- **Well-known trademark**

Objectives of Trademark Law

- It protects the public from confusion and deception by identifying the source or origin of products as distinguished from other similar products; and
- It protects the trademark owner's trade and business as well as the goodwill which is attached to his trademark.

Geographical Indications

A place name is sometimes used to identify a product. This “geographical indication” does not only say where the product was made. More importantly, it identifies the product’s special characteristics, which are the result of the product’s origins

Well-known examples include **“Basmathi”** **“Champagne”** **“Mysore Silk”** **“Scotch”** **“Darjeeling Tea”** and **“Roquefort”** cheese

Wine and spirits makers are particularly concerned about the use of place-names to identify products, and the TRIPS Agreement contains special provisions for these products

Industrial Designs

- It means the features of shape, configuration, pattern, ornament and composition of lines or colors applied to an article, and not the article itself.
- Owners of protected designs must be able to prevent the manufacture, sale or importation of articles bearing or embodying a design which is a copy of the protected design

It consists of :

- Three-dimensional features, such as the shape of a product;
- Two-dimensional features, such as ornamentation, patterns, lines or color of a product; or
- A combination of one or more such features.

Piracy of Registered Designs

What is Piracy?

- **To apply the design to any article in the class of registration or any obvious or fraudulent imitation thereof for purpose of sale without consent of proprietor**
- **To import such articles and apply the design with a intent to sell**
- **To publish, expose or cause to be published the article applied with the registered design or its obvious and fraudulent imitation, for sale of that article**

Traditional Knowledge

Traditional Knowledge (TK), indigenous knowledge (IK), and local knowledge generally refer to the matured long-standing traditions and practices of certain regional, indigenous, or local communities. Traditional knowledge also encompasses the wisdom, knowledge and teachings of these communities. In many cases, traditional knowledge has been orally passed for generations from person to persons. Some forms of traditional knowledge are expressed through stories, legends, folklore, rituals, songs and even laws. Other forms of traditional knowledge are often expressed through different means.

“Traditional knowledge” is not recognized as “knowledge” by all who study it since it includes beliefs, values and practices.

Intellectual property protection of traditional knowledge

The Convention on Biological Diversity (CBD)

The Convention of Biological Diveristy (CBD), signed at the United Nations Conference on Environment and Development (UNCED) in 1992, was the first international

environmental convention to develop measures for the use and protection of traditional knowledge, related to the conservation and sustainable use of biodiversity. By 2006, 188 had ratified the Convention and agreed to be bound by its provisions, the largest number of nations to accede to any existing treaty (the United States is one of the few countries that has signed, but not ratified, the CBD). Significant provisions include:

Main Features of CBD

- Countries have sovereign rights over their biological resources within their legal boundaries
- Use of Biological diversity should not endanger the environment or the Biodiversity
- Piracy of Biological resource & traditional knowledge of another country is immoral & illegal act
- Sustainable use of Biological resources
- Each country has the right to enact laws to establish sovereignty over its Biodiversity
- In India “ Biodiversity Act 2002” is the result

Features of Biological Diversity Act 2002

- Conservation and sustainable use of Indian Biodiversity and associated Traditional Knowledge(ITK)
- To ensure equitable sharing of the benefits arising out of commercialization of biological and knowledge resources.
- All Indians have the right to use biodiversity for research purpose within the country
- For commercialization it needs the approval of SBB
- Non-citizens of India or Institutions not wholly incorporated in India or incorporated in India with any non- Indian participation in share capital or management do not have the right for access or use of Indian Biodiversity with out prior approval from NBA

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