

WRAP Exams · wrapexams.com

Prelims PYQ, Mains model answers, and copy evaluation. Write to the desk for this paper, a doubt, or the AI waitlist.

ask@wrapexams.com · +91 85951 84903 · wrapexams.com

Q5

What is the present world scenario of intellectual property rights with respect to life materials? Although, India is second in the world to file patents, still only a few have been commercialized. Explain the reasons behind this less commercialization.

UPSC Civil Services Mains 2024 · GS III · 10 marks · Indian Economy

Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

Core demand of the question

- State the present world IPR position on life materials
- Explain why high patent filing in **India** has not meant matching commercialisation
- Keep ethics, TRIPS room and the lab-to-firm gap in view

Revision summary

TRIPS allows members to exclude plants and animals but not necessarily microorganisms; CBD and Nagoya add benefit-sharing.

India bars patents on plants and animals under **Section 3(j)** and uses PPVFR for varieties, plus TKDL as a defensive record.

The **US** and others have patented engineered microbes and fought over genes; **Myriad** limited patents on mere natural sequences.

High Indian filing has not meant commercialisation because of weak lab-to-industry transfer, thin biotech capital and slow regulation.

Volume of patents is not a market; quality, licences and a usable product are.

Introduction

A seed, a gene, a microbe and a cell line are **life materials**. The world now treats some of them as **property** and some of them as **things no one may own**. **India** files a large number of patents, and the question notes that it stands **second in the world** on filings. **Commercialisation** - a product, a licence, a plant that actually runs - has not kept pace. Volume is not a market.

Body**Life materials and world IPR**

After **Diamond v. Chakrabarty** in the United States, a genetically engineered bacterium could be patented. **TRIPS Article 27.3(b)** lets members **exclude plants and animals other than microorganisms**, and biological processes for their production, while still requiring some protection for plant varieties. The **Budapest Treaty** deposits microorganisms. The **Convention on Biological Diversity** and the **Nagoya Protocol** insist on **access and**

benefit-sharing when genetic resources and traditional knowledge are used. The **European** debate on stem cells and on animal patents remains tighter than the **US**. Gene patents were cut back in the **US** after **Association for Molecular Pathology v. Myriad Genetics**: a mere isolated natural sequence is not an invention. **India**, under **Section 3(j)** of the Patents Act, **excludes plants and animals** (other than microorganisms) and essentially biological processes; **Section 3(d)** blocks evergreening of known substances; **Section 3(c)** blocks the mere discovery of a scientific principle. Plant breeders use the **Protection of Plant Varieties and Farmers' Rights Act, 2001**, which also protects the farmer's right to save seed. **Traditional Knowledge Digital Library** is a defensive database against misappropriation. The world scene is therefore **split**: patents on microbes and biotech tools in many offices, **no patent on plants and animals in India**, and a running fight over genes, CRISPR and digital sequence information.

- **Peg:** **Novartis v. Union of India** showed that a patent on a life-related medicine still has to clear **Section 3(d)**.
- **Peg:** CBD/Nagoya sit beside TRIPS: a patent office grant does not erase a biodiversity permit.

Why so little commercialisation

Filing is a **count**. Commercialisation is a **firm, a trial, a factory and a buyer**. Indian patents are often **academic or CSIR/ICAR** filings with weak **industry liaison**. Many specifications are thin, so they do not survive opposition or attract a licensee. **Technology transfer offices** in universities are still young. **Venture capital** for deep biotech is thinner than for software. **Regulatory paths** for GM crops, biologics and diagnostics are slow and politically contested, so even a valid patent may never become a product. Firms **import licences** rather than scale a domestic file. **Quality versus quantity**: a rush to file for ranking, without freedom-to-operate searches, produces paper that cannot be sold. The missing piece is **governance of the last mile** - incubation, public procurement of innovation, and a farm or hospital that will use the thing.

- **Peg:** A patent without a technology-readiness path is a certificate, not a commercial asset.
- **Peg:** Software-style filing culture does not transfer to wet-lab products that need years of trial.

Flow diagram

TRIPS 27.3b CBD Nagoya -> Life-material IPR
 Indian 3j 3d PPVFR -> Life-material IPR
 High filings -> Lab-firm gap
 Lab-firm gap -> Weak commercialisation
 Regulation and capital -> Weak commercialisation

Conclusion

The world patents some life tools and still argues over plants, genes and benefit-sharing. **India** files a lot and sells little because labs, firms, regulation and capital do not yet form one pipeline. The remedy is transfer and quality, not a larger filing target.

Facts & figures

TRIPS 27.3(b)

Allows exclusion of plants and animals other than microorganisms from patentability, with a plant-variety alternative.

Patents Act s.3(j)

Indian bar on patenting plants and animals and essentially biological processes; microorganisms may still be claimed.

PPVFR Act, 2001

Sui generis plant-variety law that also recognises farmers' rights to save and share seed.

Nagoya Protocol

Access and benefit-sharing rules for genetic resources, sitting beside patent grants.

Myriad (US)

Held that isolated natural DNA is not patentable subject matter; cDNA may be.

Novartis (India)

Supreme Court reading of **Section 3(d)** that blocked evergreening of a known substance.

WRAP Exams · Write. Read. Analyse. Practice. · <https://wrapexams.com/upsc/mains-answers/gs-3/2024/what-is-the-present-world-scenario-of-intellectual-property-rights-with-respect-to-life-materials-although-india-is-second-in-the-world-to-file-patents-still-only-a-few-have-been-commercialized-explain-the-reasons-behind/> · ask@wrapexams.com · wrapexams.com