



## Opium Poppy Straw

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### Why in News

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The Central government has decided to **rope in the private sector to commence production of concentrated poppy straw (CPS) from India's opium crop to boost the yield of alkaloids**, used for medical purposes and exported to several countries.

### Alkaloids

- Alkaloids are a huge group of naturally **occurring organic compounds which contain nitrogen atom or atoms** (amino or amido in some cases) in their structures.
- These nitrogen atoms cause alkalinity of these compounds.
- Well-known alkaloids include **morphine, strychnine, quinine, ephedrine, and nicotine**.
- The medicinal properties of alkaloids are quite diverse. Morphine is a powerful narcotic used for the relief of pain, though its addictive properties limit its usefulness. Codeine, the methyl ether derivative of morphine found in the opium poppy, is an excellent analgesic that is relatively nonaddictive.

### Key Points

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- **Poppy Straw:**

- Poppy straw is the **husk left after the opium is extracted** from pods.
- This poppy straw also contains a **very small morphine content** and if used in sufficient quantities, poppy straw can give a high.
- **Possession, sale, use**, etc. of poppy straw is **regulated by the State Governments** under the **State Narcotic Drugs & Psychotropic Substances Rules**.

- Farmers sell the poppy straw to those licensed by the State Governments to purchase poppy straw.

Any excess poppy straw is ploughed back into the field.

- Poppy straw is one of the narcotic drugs under the **Narcotic Drugs & Psychotropic Substances Act 1985 (NDPS Act)**.

Hence, anyone possessing, selling, purchasing or using poppy straw **without a license or authorization or in violation** of any conditions of the license is liable to prosecution under the NDPS Act.

- **Current Extraction of Alkaloids:**

- India currently only **extracts alkaloids from opium gum** at facilities controlled by the Revenue Department in the Ministry of Finance.

This entails farmers extracting gum by manually lancing the opium pods and selling the gum to government factories.

- The Ministry has now decided to **switch to new technologies**, after trial cultivation by two private firms showed higher extraction of alkaloids using the **Concentrated Poppy Straw (CPS)**. Thus, the Government is mulling the idea of using public-private partnership (PPP).

- **Partnership Model:**

- Two types of Narcotic Raw Material (NRM) can be produced from opium poppy - **Opium gum and Concentrate of Poppy Straw (CPS)**.
- So far, only opium gum has been produced in India. The Government of India has now decided that CPS production should be commenced in India.
- The various stakeholders will frame an appropriate model including **public-private partnership (PPP)**, advise on the changes needed to the rules and laws to facilitate private investment, and recommend security measures to protect the crop and the final product.
- The firms carrying out the **trials faced legal hassles** in terms of getting relevant licences from the State governments to manufacture bulk alkaloids on their premises, this issue will need to be ironed out.
- As per the trials' findings, the **imported seeds of certain CPS varieties worked effectively in Indian fields** and their narcotic raw material yield was much higher from imported seeds instead of those used currently.
- Some firms also **cultivated CPS with hydroponic and aeroponic methods** under a greenhouse environment.

Both Hydroponics and Aeroponics are sustainable, water-conservative farming methods, differing only by the medium which is used in the growth of the plants.

- **Significance of the Move:**

- While alkaloid extraction from the current opium crop using the CPS was found more than opium gum, it is possible to have two or three crop cycles in one year if CPS varieties of seeds are used in an indoor greenhouse environment.
- **India's opium crop acreage has been steadily declining** over the years and using the CPS extraction method is expected to help cut the occasional dependence on imports of products like codeine (extracted from opium) for medicinal uses.

## **Opium Cultivation In India**

- After independence, the control over cultivation and manufacture of opium became **responsibility of the Central Government** with effect from April, 1950.
- At present the **Narcotics Commissioner** along with the subordinates exercises all **powers and performs all functions** relating to superintendence of the cultivation of the opium poppy and production of opium.
  - The Commissioner derives this power from the **Narcotic Drugs & Psychotropic Substances Act 1985 and Narcotic Drugs & Psychotropic Substances Rules, 1985**.
  - **License for manufacture** of certain types of narcotic drugs and psychotropic substances as well as permits for export and import of narcotic drugs, psychotropic and controlled substances are issued with the approval and permission of the Narcotics Commissioner.

- The Government of India announces the **licensing policy for cultivation of opium poppy every year**, prescribing the minimum qualifying yield for issue of or renewal of licence, maximum area that can be cultivated by an individual cultivator, the maximum benefit that can be allowed to a cultivator for damage due to natural causes, etc.
- The opium poppy can be cultivated only in such tracts as are **notified by the Government**.
  - At present these **tracts are confined to three States**, viz. **Madhya Pradesh, Rajasthan and Uttar Pradesh**.
  - **Mandsaur district** of Madhya Pradesh and **Chittorgarh and Jhalawar Districts of Rajasthan** constitute about **80% of the total area cultivated**.
- India is one of the few countries **internationally permitted (by the United Nations Office on Drugs and Crime ) to cultivate opium poppy for export**.

### **Uses**

- Opium is unique in its therapeutic value and is indispensable in the medical world.
- It also finds use in **Homeopathy and Ayurveda or Unani systems** of indigenous medicines.
- The opium which is used as **Analgesics, Anti-Tussive, Anti spasmodic** and as a source of **edible seed-oil**, acts as a **medicinal herb**.

### **Source:TH**