



25 July, 2024

## GM Crops in India

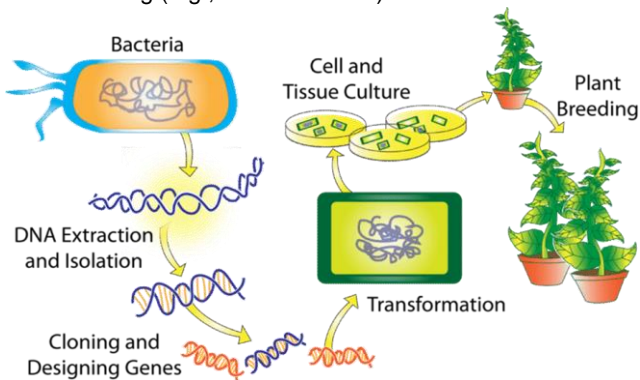
**Context:** A two-judge Bench of the Supreme Court issued a split verdict on the approval of the “environmental release” of Genetically Modified (GM) mustard.

### ➤ Journey of GM Mustard

- On September 15, 2015, Delhi University's CGMCP sought GEAC approval for DMH-11, a GM mustard.
- The GM mustard has two genes: 'barnase' for male sterility and 'barstar' to restore fertility, aimed at higher yields.
- GEAC recommended environmental release on May 11, 2017, but re-examined due to further representations in March 2018.
- Tests on honey bees and soil diversity were deferred until 2020-21.
- In May 2022, CGMCP urged approval. The proposal was accepted by the Centre on October 25, 2022.

### ➤ Genetically Modified (GM) Crops

- **Definition:** GM crops, or genetically engineered (GE) crops, have altered genetic material to gain specific traits not found naturally. Modifications aim to improve pest resistance, herbicide tolerance, nutritional content, or shelf life.
- **Genetic Modification Techniques:** Involves insertion, deletion, or modification of genes using methods like recombinant DNA technology and gene editing (e.g., CRISPR-Cas9).



### ➤ Types of Traits:

- **Pest Resistance:** GM crops like Bt cotton produce proteins toxic to certain pests.
- **Herbicide Tolerance:** Crops can withstand specific herbicides, improving weed control.
- **Disease Resistance:** Modification can provide resistance to plant diseases.
- **Improved Nutritional Content:** Examples include “Golden Rice,” which has higher beta-carotene levels.

### ➤ Benefits:

- **Increased Crop Yields:** Enhanced pest resistance and yield.
- **Reduced Pesticide Use:** Lower environmental impact and health benefits.

- **Enhanced Nutrition:** Addresses nutrient deficiencies.
- **Extended Shelf Life:** Longer-lasting produce.

### ➤ Concerns:

- **Health and Safety:** Potential risks compared to conventional food.
- **Environmental Impact:** Concerns about ecological effects.
- **Business and Intellectual Property:** Issues with corporate control and IP laws.
- **Biotech Companies:** Major players include Monsanto India, Mahyco, and BASF. ABLE-AG advocates for advancing GM technology in India.

### ➤ Genetic Engineering Appraisal Committee (GEAC):

- **Function:** Statutory body under the Ministry of Environment & Forests for regulating the use of hazardous microorganisms and GM organisms.

### ➤ Responsibilities:

- Approval of large-scale use and field trials of GM organisms.
- Approval for commercial release of biotech crops.
- Oversight of recombinant pharma products involving living-modified organisms.

### ➤ Operational Details:

- One-third member quorum required for meetings.
- Members must sign declarations of independence and confidentiality.
- The committee functions for three years, with potential for special invitees.

### ➤ Genetically Modified Crops in India

- **Bt Cotton:** The only GM crop currently commercially cultivated in India, introduced in 2002.
- **Bt Brinjal:** Recommended by GEAC in 2007 but blocked in 2010.
- **GM Mustard:** Dhara Mustard Hybrid-11 (DMH-11), developed by Delhi University, uses “barnase/barnstar” technology. If approved, it will be the second GM crop and the first transgenic food crop in India.

## Lingayats

**Context:** For over three years, Panchamasali Lingayats, a sub-caste of Karnataka's Lingayat community, have sought inclusion in Category 2A of the Other Backward Classes (OBC).

### ➤ Who are the Lingayats?

- Lingayats are a Hindu sub-caste, also known as Veerashaiva Lingayats.
- They follow 12th-century philosopher Saint Basavanna, who opposed the caste system and Vedic rituals.
- They make up nearly 17% of Karnataka's population.

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- Lingayatism emerged from the Bhakti movement that spread across South India from the 8th century onwards.
- The tradition was founded by Basavanna in 12th-century Karnataka and later spread to other parts of South India.

#### ➤ Characteristics of Lingayatism

- Monotheistic: Worship one God, Linga (Shiva).
- Reject social discrimination and the caste system.
- Wear an Ishtalinga, a pendant with a small Shiva Linga, symbolizing devotion.
- Follow burial practices in a sitting, meditative position instead of cremation.

#### ➤ Origin of the Name "Lingayat"

- "Lingayat" means "one who wears a linga," reflecting their worship of Shiva in the linga form.
- The sect emerged during the Vijayanagara Empire (14th-18th century) and spread across South India.
- Thrived in northern Karnataka and was supported by the Vijayanagara Empire.

#### ➤ Saints and Historical Figures

- Basavanna: Prominent proponent, served in the court of Kalachuri king Bijjala II; capital of Kalyani Chalukyas named Basavakalyana in his honor.
- Allama Prabhu, Channabasavanna, and Akka Mahadevi: Key saints; Akka Mahadevi was a noted 12th-century female poet.
- Rani Chennamma: Lingayat queen known for her anti-colonial struggle against the British.

#### ➤ Royal Patronage

- Gained support from Deccan kingdoms, especially during Devaraya II's reign in the Vijayanagara Empire.
- Royal dynasties in Karnataka, including the Chalukyas and Vijayanagara rulers, became followers of Lingayatism.
- Lingayat queen Rani Chennamma of Kittur played a significant role in resisting British colonial rule.

#### ➤ Vachana Literature

- Vachanas are single-line philosophical utterances that express the thoughts of mystics based on their spiritual experiences.
- This literature showcases both common themes and significant individuality among the authors.
- Vachana literature notably flourished after the 15th century.
- To date, approximately 12,000 Vachanas authored by over a hundred spiritual seekers and saints, including more than 30 women, have been discovered.
- Vachanas were written in Kannada and aimed at ordinary people rather than academic philosophers.

- The authors, known as 'Sharanas,' came from various societal classes and professions, including outcastes or "untouchables."

#### ➤ Lingayat Reservation Demand

- Veerashaiva Lingayats currently have 5% reservation under category 3B.
- Panchamasali Lingayats, a sub-sect primarily composed of agriculturists, seek inclusion in category 2A, which provides 15% reservations to backward castes.
- Karnataka CM has directed the Karnataka Backward Classes Commission to study the social, economic, and educational status of the Panchamasali community for potential inclusion in category 2A.

## India-Colombia Relations

**Context:** India-Colombia diplomatic relations complete 65 years.

#### ➤ Bilateral Cooperation:

- The relationship spans various sectors including culture, education, South-South cooperation, investment, and trade, with bilateral trade exceeding \$4.5 billion.
- Notable exchanges include the visit of India's Minister of External Affairs Dr. Jaishankar to Colombia in April 2023 and the Colombian Minister of Information Technologies Mauricio Lizcano's visit to India in February 2024.

#### ➤ Global Challenges:

- Both nations aim to address global issues like climate change and carbon footprint, aligning their goals with the Paris Agreement to reduce Greenhouse Gas emissions by 2030.
- Colombia and India, being among the world's seventeen megadiverse countries, focus on preserving biodiversity.

#### ➤ Cultural Exchanges:

- Cultural ties between the two nations are strengthened through festivals, literature, music, and dance.
- Indian traditions, including yoga, classical music, and festivals, have gained popularity in Colombia, while Colombian cultural elements have found an audience in India.

#### ➤ Economic Cooperation:

- Bilateral trade grew by over 50% in 2022-2023, reaching \$4.31 billion. India's exports to Colombia include pharmaceuticals, automobiles, and chemicals, while Colombia exports mineral fuels, gold, and emeralds to India.
- India's investment in Colombia stands at \$300 million, with Colombian investment in India estimated at \$5 million.

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➤ **Historical Ties:**

- Diplomatic relations, formally established on January 19, 1959, have been nurtured through high-level visits and cultural exchanges.
- Embassies in both countries have played key roles in fostering dialogue and cooperation.

➤ **Future Prospects:**

- Both nations are committed to further strengthening their bilateral ties and exploring new collaboration opportunities.

- The future looks promising for a more dynamic and fruitful relationship centered on shared values and mutual growth.

➤ **Upcoming Events:**

- Colombia will host the 16th Conference of the Parties to the Convention on Biological Diversity from October 21 to November 1, 2024, with the theme "Peace with Nature."

## NEWS IN BETWEEN THE LINES

### Sangameswara Temple



Recently, rising water levels in the Krishna River due to continuous rain have partially submerged the Sangameswara Temple in Nandyal district of Andhra Pradesh.

**About the Sangameswara Temple:**

- The Sangameswara Temple, formerly known as Vijayeswara Temple, was constructed around **733 AD by the Chalukya king Vijayaditya Satyashraya**.
- It is **considered one of the oldest temples in India** and the oldest in the Pattadakal region.
- The temple is an **east-facing Dravidian structure** and is square in shape.
- It features an inner sanctum housing a **Shiva Linga**, surrounded by a **covered pradakshina patha** (circumambulatory path) illuminated by three carved windows.
- The temple is built on a raised moulded base decorated with friezes of mythical elephants, yali and makara, and features detailed **carvings of ganas** (playful dwarfs) on the **parapet**.
- The carvings at Sangameswara Temple depict various themes from **Shaivism, Vaishnavism, and Shaktism**.
- **Excavations in 1969 and 1971** revealed a brick temple structure beneath the ruined hall, suggesting that Sangameswara was built over an older temple, possibly dating from the third century CE.

### INS Brahmaputra



Recently, the body of Leading Seaman who went missing after the fire incident onboard INS Brahmaputra was found.

**About the INS Brahmaputra:**

- The INS Brahmaputra is the **first of India's indigenously built** Brahmaputra-class guided missile frigates.
- It was commissioned into the Indian Navy on **14 April 2000**.
- The ship was **built by state-run Garden Reach Shipbuilders & Engineers Limited** in Kolkata.
- INS Brahmaputra is **125 meters long** with a **beam of 14.5 meters**.
- The ship is powered by two diesel engines and two gas turbines in a Combined Diesel or Gas (CODOG) configuration, allowing for **speeds up to 30 knots**.
- The frigate is equipped with a variety of weapons, including **surface-to-surface** missiles (SSM), **surface-to-air missiles** (SAM), **anti-submarine warfare** (ASW) torpedoes and **anti-aircraft guns**.

### National Green Tribunal



Recently, the National Green Tribunal (NGT) has issued a notice to the Centre and the Municipal Corporation of Delhi on a plea alleging the dumping of garbage near the All India Institute of Medical Sciences (AIIMS).

**About the National Green Tribunal:**

- The National Green Tribunal is a **statutory body in India** that was **established in 2010** to handle environmental cases.
- The National Green **Tribunal Act of 2010** allows for the creation of a special tribunal to expeditiously dispose of cases related to environmental protection and the conservation of forests.
- It is a specialized judicial body that can **handle environmental disputes** with multi-disciplinary issues.
- The Tribunal has a Chairperson, Judicial Members, and Expert Members, who **serve for 5 years and cannot be reappointed**.
- The Chairperson is **appointed by the Central Government in consultation with Chief Justice of India (CJI)**.
- Its headquarter is situated in **New Delhi**.

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**Fundamental Rights**

Recently, the Supreme Court called for balancing railway development in Haldwani, Uttarakhand with the right to shelter for nearly 50,000 people living on railway land, noting their fundamental human rights.

**About the Fundamental Rights:**

- The Fundamental Rights are **enshrined in Part III** of the Indian Constitution, specifically in **Articles 12 to 35**.
- This section is often described as the Magna Carta of India, drawing inspiration from the **Magna Carta of 1215**.
- The categories of Fundamental Rights provided by the constitution of India include: **Right to Equality** (Articles 14-18), **Right to Freedom** (Articles 19-22), **Right against Exploitation** (Articles 23-24), **Right to Freedom of Religion** (Articles 25-28), **Cultural and Educational Rights** (Articles 29-30) and **Right to Constitutional Remedies** (Article 32).
- Originally, the **Right to Property** was included as **Article 31** under Fundamental Rights. However, it was removed from the list of Fundamental Rights by the **44th Amendment Act, 1978** and is now a legal right under Article 300-A in Part XII of the Constitution.
- Fundamental Rights **can be suspended during a National Emergency**, except for those guaranteed by **Articles 20 and 21**, while the six rights under **Article 19** can only be suspended during an external emergency, not an internal one.
- **Article 33** allows the Parliament to restrict or abrogate Fundamental Rights for the members of armed forces, police, intelligence agencies, and similar services.

**Personality in News**  
**Christopher Thomas Kurien**

**Christopher Thomas Kurien (2 July 1931 – 23 July 2024)**

Christopher Thomas Kurien was a distinguished economist and former Professor at Madras Christian.

**Contributions:**

- C.T. Kurien served as **president of Indian Economic Association in 2000**.
- He **authored 15 books** that focused on various aspects of economics, with a particular emphasis on poverty eradication.
- He was **known for his criticism of mainstream economics** for not addressing poverty effectively and advocated for economic policies aimed at reducing poverty.
- His doctoral **thesis was titled “Factor Market Structure and Technological Characteristics of an Underdeveloped Country: An Indian Case Study.”**

**Place in News**

**Philippines**

Recently, relentless rain and Typhoon Gaemi caused floods in Manila and deadly landslips in the northern Philippines.

**Philippines (Capital: Manila)**

**Location:** The Philippines is an archipelago located in Southeast Asia, situated in the **western Pacific Ocean**.

**Boundaries:**

- Philippines shares its borders with the **Philippine Sea** (East), the **South China Sea** (West) and the **Celebes Sea** (South).
- It also shares **maritime borders** with **Palau** (East and Southeast), **Vietnam** (West), **Taiwan** (North), **Indonesia** (South), **Japan** (Northeast), **China** (Northwest) and **Malaysia** (Southwest).

**Physical Features:**

- The highest point in the Philippines is **Mount Apo**, located on the island of Mindanao.
- The major rivers of the Philippines include the **Cagayan, Mindanao, Agusan, Pampanga, Agno, Pasig, Bicol, Chico, Pulangi** and Marikina rivers.
- The Philippines has a **tropical maritime climate**.
- The Philippines is rich in mineral resources, including **gold, copper, nickel, chromite** and coal.



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## POINTS TO PONDER

- Who unveiled the commemorative stamp to honor legendary singer Mukesh on his 100th birth anniversary in New Delhi?  
– **Gajendra Singh Shekhawat (Union Culture Minister)**
- What percentage of global milk production does India contribute, ranking it first in milk production? – **25%**
- Who unveiled the logo, website, and teaser of the inaugural edition of the Kashmir Marathon in the Union Territory of Jammu and Kashmir? – **Manoj Sinha (Lieutenant Governor)**
- According to the latest ranking by the UK-based Henley Passport Index, India's passport is now ranked at which position globally?  
– **82nd**
- In the Union Budget 2024-25, the Union Minister for Finance proposed the abolition of which tax for all classes of investors?  
– **Angel Tax**

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