

Gene Bank

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Gene Bank Latest News

Establishment of Second National Gene Bank

Why in the News?

- The **Government of India** has announced the establishment of the **Second National Gene Bank** to **conserve 10 lakh crop germplasm** for ensuring **future food and nutritional security**.
- This initiative is part of the **“Investing in Innovations”** theme of the **Union Budget 2025-26**.

What is a Gene Bank?

- A **Gene Bank** is a **storage facility** that preserves **seeds, pollen, and plant tissues** to **protect plant species from extinction** and ensure their availability for future use.
- These stored samples help in **crop breeding, scientific research, and biodiversity conservation**.
- Gene banks play a crucial role in maintaining **genetic diversity**, essential for **climate resilience and food security**.

India's First National Gene Bank

- **Established:** 1996 by the **Indian Council of Agricultural Research – National Bureau of Plant Genetic Resources (ICAR-NBPGR)** in **New Delhi**.
- **Current Status:**
 - **Second-largest Gene Bank globally** after the Svalbard Global Seed Vault in Norway.
 - Houses **4,71,561 accessions** of **2,157 species**.
 - Provides plant genetic resources for use by both the **public and private sectors** involved in **crop improvement and genetic conservation**.

National Bureau of Plant Genetic Resources (NBPGR)

- **Apex Institution** under the **Indian Council of Agricultural Research (ICAR)**.
- **Objective:** Conservation, evaluation, and utilization of **plant genetic resources** for **sustainable agriculture and food security**.
- **Headquarters:** **New Delhi**.

National Gene Fund

- **Established Under:** **Section 45** of the **Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPVFR Act)**.
- **Objective:**
 - Ensures **fair distribution** of benefits derived from **genetic resources**.
 - Supports **conservation efforts** and promotes **sustainable farming practices**.
 - Provides **financial incentives** to **farmers and institutions** engaged in biodiversity conservation.

Gene Bank FAQs

Q1. What is the National Gene Bank?

Ans. The National Gene Bank in India is a repository for conserving plant genetic resources, managed by the National Bureau of Plant Genetic Resources (NBPGR), New Delhi.

Q2. What is the purpose of the National Gene Bank?

Ans. It preserves crop diversity, wild plant species, and rare genetic material to ensure agricultural sustainability and food security.

Q3. How does the National Gene Bank store genetic material?

Ans. The bank stores seeds in cold storage at sub-zero temperatures, using cryopreservation, field gene banks, and in-vitro conservation techniques.

Q4. How does the National Gene Bank help in climate resilience?

Ans. By preserving climate-resilient crop varieties, the gene bank helps in developing drought-resistant and disease-resistant crops to combat climate change.

Q5. What is India's global position in genetic conservation?

Ans. India is among the few countries with an advanced gene bank system and collaborates with international gene banks like the Svalbard Global Seed Vault in Norway.

Source: PIB

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