

## **Subject: Call for Sustainable Agri-Tech and Supply Chain Technology**

TDB provides financial assistance to Indian industries and agencies involved in the development and commercialization of indigenous technologies or adapting imported technologies for domestic use. Its goal is to strengthen technology development across short-, medium-, and long-term horizons by supporting innovation and growth. This support aims to close technology gaps, enhance industrial capabilities, and promote the widespread adoption of advanced technologies in India.

In the agricultural sector, TDB has facilitated around 27 agreements with various companies, providing a total funding of ₹218 crore. This assistance has empowered Indian agricultural companies to innovate and bring new products to market, addressing vital domestic requirements.

### **BACKGROUND**

Farmers are the backbone of Indian agriculture, playing a crucial role in the nation's overall growth. The Government of India is focused on enhancing agricultural productivity, improving farmers' income, and ensuring better livelihoods for them. With India's food demand projected to reach 400 million tonnes (MT) by 2050 (ICAR Vision 20250), it is essential to address the gap between production and demand. In FY 2022, food grain production stood at around 315 MT, while the cultivated area remained largely unchanged from FY 2014 to FY 2022 (Economic Survey Report). This highlights the critical need for innovative technologies that not only increase agricultural output but also significantly boost farmers' income and ensure sustainable growth in the sector.

- Pests and plant diseases cause significant crop losses globally, with up to 40% of crops affected each year. In India, 30-40% of annual crop yield is lost to pests, severely impacting food security and farmers' incomes (Indian Farming Journal ICAR, January 2022). The Food and Agriculture Organization (FAO) estimates annual losses of nearly USD 70 billion due to plant pests and diseases.
- Cold storage is crucial for preserving perishable goods, ensuring food safety, and improving supply chain efficiency. In India, the cold storage capacity is currently inadequate, resulting in significant crop losses. Enhancing cold storage infrastructure can reduce waste, increase farmers' incomes, and improve supply chain efficiency. Innovative solutions, such as energy-efficient systems, IoT monitoring, and eco-friendly refrigerants, present opportunities for Indian companies to lead in this sector while reducing costs and environmental impact.
- Mechanization of horticulture and farming is essential to reduce labour costs, increase productivity, and promote sustainable farming practices. Developing specialized machinery for planting, irrigation, and harvesting will help improve crop yields.

Combined technological advancements in pest management, cold storage, and mechanization are essential to increase agricultural output, improve food security, and uplift farmers' livelihoods, ensuring a sustainable and prosperous future for Indian agriculture.

### **OBJECTIVE**

This initiative aims to strengthen India's agricultural sector, enhance storage infrastructure, minimize food wastage, improve supply chain efficiency, and promote sustainable practices in line with national objectives. To further these goals, the **Technology Development Board (TDB)** has issued a 'Call for Proposals,' inviting Indian companies with innovative or indigenous technologies that are ready for commercialization in this emerging sector.

The call seeks proposals from companies focusing on technologies in areas such as:

1. **Sustainable agricultural practices and production methods**
2. **Innovative post-harvest management and Value Additions**
3. **Advanced supply chain technologies**

Companies meeting the eligibility criteria can receive financial support according to TDB's guidelines, aiming to drive technological advancements that align with the country's agricultural priorities.

## **PROPOSAL**

**Call for Proposal:** In line with national priorities and the urgent need for improvement it is proposed that the TDB issue a 'Call for Proposal' inviting applications from Indian companies focused on agriculture products. This initiative will target companies that have indigenous technologies at the commercialization stage, including but not limited to:

- **Advanced Crop Production & Technologies:** Implementation of high-yield crops and precision farming techniques using specialized equipment for planting, irrigation, and harvesting to reduce labor costs, improve productivity, and lower losses.
- **Integrated Pest & Crop Protection:** A combination of chemical treatments, biopesticides, plant growth regulators, and eco-friendly methods to manage pests effectively and boost yields.
- **Sustainable Fertilization & Waste Utilization:** Implementing biofertilizers and composting agricultural waste to improve soil health and minimize environmental impact.
- **Cold Storage Innovations:** Energy-efficient, IoT-enabled cold storage systems using eco-friendly refrigerants for cost-effective, long-term preservation of agricultural products.
- **Value Addition through Processing:** Converting raw agricultural produce into high-value products such as animal feed, sweeteners, and specialty chemicals and medicines through processing.
- **Efficient Post-Harvest Handling:** Advanced technologies to reduce waste and enhance the quality of harvested crops through better storage, packaging, processing, and management.
- **Agri-Business & Market Solutions:** Technologies for streamlining operations, optimizing transport, and enhancing the marketing of agricultural goods, increase market access to rural farmer.
- **Precision Agriculture Tools:** Sensor-based technologies to monitor crops, manage pests, and optimize irrigation for better resource efficiency and farm productivity.

### **Eligibility Criteria:**

- Any Company incorporated under the Companies Act, 1956/the Companies Act, 2013.
- Enterprises, with or without any other partners
- Start-up companies

Please refer to the website for more details: <https://tdb.gov.in/project-fundingguidelinesfaqs>.

### **Modes of Funding:**

- Loan @ 5% Simple Annual Interest
- Equity

**How to Apply:**

The detailed information and the format for submission of the proposal may be downloaded from the official website: <https://tdb.gov.in/>

**For queries and further details contact:**

**Dr. Rachana Jain**

**Sr. Project Coordinator**

**Technology Development Board**

**<https://tdb.gov.in/>**

**Email: [rachana.jain@tdb.gov.in](mailto:rachana.jain@tdb.gov.in)**

**Start Date: 09-01-2025**

**End date: March 15, 2025**