



# Nano Urea Liquid: IFFCO

## Why in News

Recently, the **Indian Farmers Fertiliser Cooperative Limited (IFFCO)** introduced the **world's first Nano Urea Liquid** for farmers across the world.

### Indian Farmers Fertiliser Cooperative Limited

#### ▪ About:

- It is **one of India's biggest cooperative societies** which is **wholly owned by Indian Cooperatives**.
- **Founded in 1967** with just 57 cooperatives, today it is an amalgamation of over 36,000 Indian Cooperatives with **diversified business interests ranging from General Insurance to Rural Telecom** apart from its core business of manufacturing and selling fertilisers.

#### ▪ Objective:

- To **enable Indian farmers to prosper through timely supply of reliable, high quality agricultural inputs and services** in an environmentally sustainable manner and to undertake other activities to improve their welfare.

## Key Points

#### ▪ About:

- It is a **nutrient (liquid) to provide nitrogen to plants** as an alternative to the conventional urea.
- It is **developed to replace conventional urea** and it can **curtail the requirement of the same by at least 50%**.
  - It contains 40,000 mg/L of nitrogen in a 500 ml bottle which is **equivalent to the impact of nitrogen nutrient provided by one bag of conventional urea**.
- **Conventional urea is effective 30-40%** in delivering nitrogen to plants, while the effectiveness of the **Nano Urea Liquid is over 80%**.
  - Its **effectiveness** has been tested in over **11,000 farmers' fields for 94 crops like rice and wheat**.
  - An average **8% increase in yield** has been witnessed.

#### ▪ Developed At:

- It has been **indigenously** developed at **Nano Biotechnology Research Centre, Kalol, Gujrat** in line with **Atmanirbhar Bharat** and **Atmanirbhar Krishi**.

- India is **dependent on imports** to meet its [urea requirements](#).

▪ **Significance:**

◦ **Improves Plant Nutrition:**

- It has been found effective and efficient for plant nutrition which **increases the production with improved nutritional quality**.
- It will **boost a balanced nutrition program by reducing the excess use of Urea application** in the soil and will make the crops stronger, healthier and protect them from **lodging effect**.

- **Lodging** is the bending over of the stems near ground level of grain crops, which makes them very difficult to harvest, and can **dramatically reduce yield**.

◦ **Improves Environment:**

- It will also have a **huge positive impact on the quality of underground water**, a very **significant reduction in global warming** with an impact on [climate change](#) and [sustainable development](#).

◦ **Increase Farmers' Income:**

- It is easy on the pocket of farmers and will be effective in **increasing farmers' income**. It will also significantly **bring down the cost of logistics and warehousing**.

[Source:IE](#)

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