



## Nano Urea Liquid: IFFCO

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### Why in News

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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

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- **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**