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LIQUID NANO UREA

Why In Newspapers?

Prime Minister Narendra Modi recently inaugurated the country's first Liquid Nano Urea Plant in Kalol, Gujarat. It will be produced by the Indian Farmers Fertilizer Cooperative (IFFCO) Limited.

Quick Issue?

- Urea is a white colored chemical nitrogen fertilizer, which artificially provides nitrogen, a major nutrient essential for plants.
- Liquid Nano Urea is essentially urea in the form of a nanoparticle.

Historical Background?

- **Cost:** Liquid nano urea is cheaper (Rs 240 for half a liter without subsidy) the international market price of a bag of urea is between Rs 3,500 and Rs 4,000. One bottle of nano urea can cost at least one bag of urea manner may change.
- **Benefit for the government:** Reduces the fertilizer subsidy bill of the government. India is dependent on imports of widely used fertiliser.
- The efficiency of liquid nano urea can be up to 85-90 percent (the efficiency of conventional urea is about 25 percent)
- Liquid nano urea has a shelf life of one year, and farmers need not worry about "caking" when exposed to moisture.

Other Key Facts?

- What is NPK Fertilizer?
- If farmers use NPK fertilizers ie NPK fertilizers, then these fertilizers are provided to the farmers in only three types of proportion, because this fertilizer is mostly sold in three types of ratio in the fertilizer store. You must have noticed that when you take the fertilizer packet from the fertilizer store, the ratio of 18:18:18, 19:19:19 and 12:32:16 is written on the top of that packet. The first number is for nitrogen, the second number is for phosphorus and the third number is for potassium. That's why farmers buy any one fertilizer according to their work. By the way, most of the farmers buy 12:32:16 ie, potassium only for use.
- A mixture of 12% nitrogen, 32% phosphorus and 16% potassium is found in the fertilizer of this ratio. Farmers can use NPK fertilizers for carrots, potatoes, onions, radishes, etc., but farmers use DAP fertilizers more, because only phosphorus in NPK fertilizers is found to be 14% less than DAP.



- Fertilizers in nano form provide targeted supply of nutrients to crops as they are absorbed by stomata found on the epidermis of leaves.
- Reduces unbalanced and indiscriminate use of conventional urea. Increases crop productivity
- Reduces soil, water and air pollution.

Likely Question Asked In Preliminary Exam

Que: Consider the following statements:

1) Urea is a chemical nitrogen fertilizer.

2) It artificially provides nitrogen, a key nutrient needed by plants.

Select the correct answer using the code given below:

A. 1 only

B. 2 only

C. Both

D. None.

Ans (C) Both

Other Key Facts?

- What is DAP Fertilizer?
- DAP fertilizer is considered better than NPK fertilizer, so DAP fertilizer is used more by farmers. On the other hand, if we talk about the full form of DAP, then its full name is Di ammonium phosphate, but farmers know it more by the name of DAP fertilizer. Chemical fertilizer of alkaline nature is mainly found in this fertilizer. The use of this fertilizer was started from 1960, which is used by farmers more than all fertilizers, because DAP contains a mixture of 18% nitrogen and 46% phosphorus and with it 15.5% out of 18% nitrogen. Ammonium nitrate is also found.

INS KHANDERI

Why In Newspapers?

- Recently, the Defence Minister made a sea voyage on the Scorpene class submarine 'INS Khanderi' during a visit to the Karwar Naval Base in Karnataka.

Quick Issue?

- During the visit, he oversaw a wide range of operational exercises with the submarine showcasing the advanced sensor suite, combat system and weapon capability. These capabilities provide an advantage to the submarine in the subsurface area.
- The Scorpene class submarines built under Project-75 are powered by a diesel-electric propulsion system.
- The Scorpene is one of the most sophisticated submarines, capable of carrying out multiple missions including anti-surface warfare, anti-submarine warfare, intelligence gathering, mining and area surveillance.

Other Key Facts?

- Project-75
- It is one of two lines of P-75 submarines, the other line being the P75I. This is part of a plan approved in 1999 to build indigenous submarines with technology sourced from foreign firms.
 - The contract for six submarines under the P-75 was awarded to Mazagon Dock in October 2005 and deliveries were to begin in 2012, but the project has faced delays.
 - The program has been initiated with the transfer of technology from French company Naval Group (earlier known as DCNS) to Mazagon Dock Limited (MDL).

Historical Background?

- The Scorpene class is the Navy's first modern conventional submarine series in nearly two decades since INS Sindhushastra was procured from Russia in July 2000.
- Khanderi is a Kalvari class diesel-electric attack submarine.
- It is named after a deadly fish named 'Sawfish Khander' which is found in the Indian Ocean.
- The first Khanderi submarine was commissioned by the Indian Navy on 6 December 1968 and decommissioned in October 1989.
- Apart from Khanderi, these submarines include - Karanj, Vela, Vagir, Vagsheer and Kalvari which have already been launched.

