



Rise in Consumption of Urea and Di-Ammonium Phosphate (DAP)

Why in News?

[The Ministry of Agriculture and Farmers Welfare](#) has expressed concern over the sharp increase in [urea](#) and [di-ammonium phosphate \(DAP\)](#) consumption during the ongoing [rabi season \(2024-25\)](#) in multiple states, including Haryana, Gujarat, Bihar, Jharkhand, Chhattisgarh, Himachal Pradesh, Karnataka, and J&K.

Key Points

- **Rising Urea and DAP Consumption:**
 - Urea and DAP are essential for agricultural productivity, and India relies on imports to meet domestic demand.
 - The Agriculture Secretary in a letter to Haryana's Chief Secretary highlighted excessive fertiliser consumption in some districts.
 - He noted that usage had surpassed both the assessed monthly requirement and the previous year's figures, indicating an imbalance.
- **Urea Consumption Trends:**
 - Haryana's urea usage **rose by 18% compared to the past three-year average**, reaching 11,07,205 metric tonnes (MT) from 9,40,549 MT.
 - Highest increases were recorded in:
 - Charkhi Dadri - 107%
 - Yamunanagar - 32%
 - Sonapat - 30%
 - **Other states** also recorded significant increases in urea consumption:
 - Jharkhand - 35%
 - Chhattisgarh - 37%
 - J&K - 24%
 - Karnataka - 20%
 - Bihar - 17%
 - Gujarat - 2%
- **DAP Consumption Trends:**
 - Haryana's DAP **usage increased by 18%**, reaching 3,25,416 MT from the previous three-year average of 2,75,934 MT.
 - Districts with the highest surge:
 - Charkhi Dadri - 184%
 - Mahendragarh - 65%
 - Yamunanagar - 55%
 - Ambala - 48%
 - Panchkula - 39%
 - Rewari - 34%
 - Jhajjar - 30%
 - Other states also saw notable increases in DAP usage:
 - Chhattisgarh - 30%
 - Gujarat - 25%

- Bihar - 17%

▪ **Concerns Over Fertiliser Diversion:**

- The Ministry of Chemicals and Fertilisers flagged potential diversions in January.
- Haryana's Director of Agriculture, Rajnarayan Kaushik, acknowledged that urea might be diverted to industries.

▪ **Factors Driving Increased Usage:**

- **Paddy Stubble Management:** Farmers now use 25-45 kg of urea per acre to manage paddy stubble.
- **Nitrogen (N), phosphorus (P), and potassium (K) Fertiliser Usage:**
 - Consumption rose from 26,000 MT last year to 66,000 MT this season.
 - Since NPK has lower nitrogen content than DAP, farmers compensate by using additional urea.
- **High-Nitrogen Wheat Varieties:**
 - **Wheat varieties** like WH 1270, DBW 187, 303, and 327 require 1.5 times more nitrogen than older varieties.
 - Farmers, expecting higher yields, tend to use more urea.
 - These varieties now cover an estimated 2.50 lakh acres in Haryana.
- **Inter-State Fertiliser Movement:**
 - Reports **indicate fertilisers** are being **transported to Punjab and Uttar Pradesh from Haryana.**
 - Some fertilisers are also being diverted to the plywood industry, claimed Rakesh Bains of the **Bhartiya Kisan Union (Charuni group).**

DAP (Di-Ammonium Phosphate)

- DAP is the second most commonly used fertilizer in India after urea.
- DAP is a preferred fertilizer in India because it contains both **Nitrogen and Phosphorus** which are primary macro-nutrients and **part of 18 essential plant nutrients.**
- Fertilizer grade DAP **contains 18% Nitrogen and 46% Phosphorus.** It is manufactured by **reacting Ammonia with Phosphoric acid** under controlled conditions in fertilizer plants.

Urea

- Urea is a **white crystalline compound** commonly used as a **synthetic fertilizers** in agriculture.
- When applied to the soil or crops, **urea is broken down by enzymes into ammonia and carbon dioxide.**
 - The **ammonia then gets converted into ammonium ions**, which can be **taken up by plant roots and used for growth and development.**