

Urea Gold - Making Efficient use of Urea

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FERRY GOLD UREA
2 Kg

Addresses soil deficiencies and saves input costs for farmers

Urea Gold will reduce consumption of Neem Coated Urea by 22% and result in proportional decrease in Government's subsidy outgo.

Context - The recent launch of “Urea Gold,” a fortified fertilizer by Rashtriya Chemicals and Fertilizers Ltd (RCF), has sparked interest as it combines urea with sulfur to enhance nitrogen use efficiency (NUE). It seeks to tackle challenges of escalating urea consumption and declining agricultural efficiency.

About Urea Gold

- “Urea Gold” blends urea with sulfur to create a fortified fertilizer aimed at improving NUE and crop performance. The fortified blend ensures gradual nitrogen release, sustaining plant health and potentially reducing fertilizer application frequency.
- Normal urea is the most widely used fertilizer in India, as it provides 46% of N, an essential nutrient for plant growth. However, normal urea has some drawbacks, such as low nitrogen use efficiency (NUE), high leaching losses, and susceptibility to volatilisation. Moreover, normal urea does not supply any other nutrient apart from N, whereas many Indian soils are deficient in S, which is especially important for oilseeds and pulses.
- Urea Gold addresses these issues by fortifying urea with S. Urea Gold contains 37% N and 17% S, which are coated over each other in a granule. This coating ensures a slow and steady release of N, which matches the crop demand and reduces losses. By delivering both N and S in one fertilizer, Urea Gold also saves farmers the cost and hassle of buying and applying separate sources of S.

Challenges with Urea Consumption and NUE Decline

- Urea consumption has risen from 26.7 million tonnes to 35.7 million tonnes between 2009-10 and 2022-23, making it India's predominant fertilizer choice.
- Domestic urea production relies heavily on imported natural gas. India's annual consumption trails only China's, where coal-based production prevails.
- Only around 35% of nitrogen applied through urea benefits crops, raising concerns about resource wastage and increased fertilizer application.

Why does Urea continue to be the Dominant Fertilizer?

- **Favorable Characteristics:** Urea is the most widely used fertilizer because it is a rich source of nitrogen, an essential nutrient for plant growth. Urea is a readily available and affordable nitrogen source for farmers, making it a popular choice.
- **Heavy Subsidy:** In India, urea is the most produced, imported, consumed and physically regulated fertilizer of all. Urea consumption rose by over a third since 2009-10; this has been largely courtesy of its MRP going up by a mere 16.5% – from Rs 4,830 to Rs 5,628 per tonne.

Fortified Fertilizer Solution

- **Coating Strategy:** Fortified fertilizers entail coating primary nutrients (N, P, K) with secondary nutrients (S, calcium, magnesium) and micronutrients (zinc, boron, manganese, etc.).
- **Enhanced Benefits:** Coated fertilizers act as “carrier products” for secondary and micronutrients, thereby increasing their N and P use efficiency and ensuring controlled nutrient release.
- **Innovation by Yara International:** The “Procote” technology facilitates micronutrient coating, demonstrating improved fertilizer efficacy.
- **Efficacy Confirmation:** The trials substantiated amplified paddy and wheat yields through micronutrient-coated fertilizers, potentially mitigating NUE concerns.

Pricing and Distribution Challenges

- **Pricing Complexities:** Existing subsidies for coated fertilizers like zincated urea and boronated DAP may not incentivise companies to promote fortified products.
- **Farmer Adoption Hurdles:** Discrepancies in pricing between fortified and non-fortified fertilizers have deterred farmers from embracing coated options.
- **Optimal Implementation:** Advocates suggest factory-level coating to ensure uniform nutrient distribution and user convenience. Freeing maximum retail prices (MRPs) for coated fertilizers could bolster adoption.
- **Striking Pricing Balance:** Since traditional fertilizers receive substantial subsidies, fortified product premiums must remain reasonable to encourage affordability.

Conclusion

Amidst the challenges of dwindling NUE and escalating urea consumption, the introduction of “Urea Gold” and fortified fertilizers holds promise for enhancing agricultural efficiency. The journey to successful implementation necessitates addressing pricing discrepancies and distribution intricacies.