

Farm Dos and Don'ts

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Introduction:

The Narendra Modi government can take credit for insulating Indian farmers from the volatility in international prices of fertilizers and their raw materials over the last two years or so.

Prices of fertilizers in India:

1. Urea, which was being imported into India at \$900-1,000 per tonne in November-January 2021-22. It dropped to below \$300 towards June-July 2023, but has again risen to about \$400.
2. Landed prices of imported di-ammonium phosphate (DAP) similarly peaked at \$950-960 per tonne in July 2022 and fell to an average \$440 a year later, only to climb to \$595 levels now.
3. All through these fluctuations, the maximum retail price (MRP) of urea has been kept unchanged at Rs 5,628 per tonne.
4. Even the MRPs of the so-called decontrolled fertilisers have been frozen — at Rs 27,000/tonne for DAP, Rs 29,400-29,500 for complexes such as 10:26:26 and 12:32:16, and Rs 33,000-34,000 for muriate of potash (MOP) — with companies simply “told” not to charge more.

Significance of fertilizers' price control and its drawbacks:

1. These price controls, formal or otherwise, have no doubt ensured adequate supplies of fertiliser and shielded farmers from the global price shocks post the Russia-Ukraine war. But they have come at a cost.
2. The Centre's fertiliser subsidy outgo, which was Rs 81,124 crore in 2019-20, has shot up to Rs 1,53,758 crore in 2021-22, Rs 2,51,339 crore in 2022-23 and a budgeted Rs 1,75,100 crore this year that is likely to be overshot.
3. Fiscal unsustainability apart, there is the environmental cost from farmers applying too much nitrogen and probably even phosphorus at the expense of all other nutrients.
4. Agricultural scientists consider the ideal nitrogen:phosphorus:potassium ratio for Indian soils at 4:2:1.
5. For the recent kharif cropping season, this ratio was estimated at close to 11:5:1. It shows that farmers today have little incentive to use MOP and other potassium-containing fertilisers costing more than urea and DAP.
6. It would be even worse with respect to sulphur and micronutrients.
7. The impact of such imbalanced nutrient use on crop productivity, produce quality and soil health in the medium and long run is something that should concern policymakers.

How governments can correct the perverted N:P: K ratio:

Education and Awareness:

1. Disseminate information: Employ various channels like agricultural extension services, mobile apps, farmer-to-farmer networks, and media campaigns to spread awareness about the importance of balanced fertilization and the detrimental effects of excessive or imbalanced fertilizer use.
2. Promote soil testing: Provide affordable and accessible soil testing facilities to farmers, enabling them to understand their soil's specific needs and choose the appropriate fertilizer type and ratio. (e.g., Soil Health Card)
3. Organize training sessions: Conduct workshops and field demonstrations to educate farmers on best practices for fertilizer application, including the recommended NPK ratios for different crops and soil conditions.
4. Encourage farmer exchange programs: Facilitate knowledge exchange between farmers who have successfully adopted balanced fertilization practices and those who are still hesitant.

Economic Incentives:

1. Subsidize balanced fertilizers: Implement a targeted subsidy scheme that incentivizes the purchase and use of fertilizers with recommended NPK ratios.
2. Introduce nutrient-based subsidies: Shift fertilizer subsidies from a per-ton basis to a per-nutrient basis, rewarding farmers for using fertilizers with the right nutrient ratios.
3. Area-based subsidy: The government must extend the subsidy on a per-hectare basis. This will restrict the farm subsidies to small and marginal farmers only.
4. Promote crop insurance: Encourage farmers to adopt crop insurance schemes, which can help mitigate the financial risks associated with experimenting with new fertilizer practices.

Regulation and Enforcement:

1. Set clear standards: Establish and enforce regulations requiring fertilizer manufacturers and retailers to clearly label products with the NPK ratios and provide accurate information about their proper use.
2. Restrict the sale of imbalanced fertilizers: Gradually phase out or restrict the sale of fertilizers with significantly imbalanced NPK ratios.
3. Conduct regular inspections: Implement a robust system for monitoring fertilizer sales and usage, identifying and penalizing violators who promote or sell non-recommended fertilizers.

Technological Solutions:

1. Develop precision agriculture tools: Invest in and promote the development and adoption of precision agriculture technologies like soil sensors, variable rate applicators, and drone-based monitoring systems. These tools can help farmers optimize fertilizer applications based on real-time data and spatial variability within their fields.
2. Promote digital platforms: Develop and promote online platforms that provide farmers with personalized fertilizer recommendations based on their soil test results, crop type, and local weather conditions.

Cooperation and Partnerships:

1. Collaborate with research institutions: Partner with agricultural universities and research institutions to develop and disseminate knowledge on soil fertility management and best practices for balanced fertilization.
2. Engage with fertilizer companies: Encourage collaboration with fertilizer manufacturers and retailers to develop and promote balanced fertilizer products that cater to the specific needs of Indian farmers.

3. Build partnerships with NGOs: Work with non-governmental organizations and farmer associations to reach out to farmers and provide them with the necessary support and guidance for adopting balanced fertilization practices.

Conclusion:

The government should let farmers buy any kind of fertilizer using this money. It will also force companies to come out with new value-for-money fertilizer products that are crop-, soil- and agro-climatic region- specific.



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