Fertilizer Policy Reforms for Sustainable Agriculture

Frank Notes

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Aligning agricultural practices with UN Sustainable Development Goals (SDG) is a global challenge. For India it assumes special significance because more than 40% of its population still depends for their livelihood on agriculture which has only about 15% share in GDP. Moreover, India is the 2nd largest populous country in the world and is likely to surpass even China in population by the year 2027. Hence, India has always to keep the objective of nutritional security of its population at top of its agenda. Fertilizers are integral part of modern agriculture. Therefore, making fertilizer production and application sustainable is equally important.

Government policies have played the catalytic role in shaping agriculture and fertilizer sectors in India. Agricultural policies and practices adopted since green revolution paid rich dividends. India not only achieved self-sufficiency in foodgrain production, but it has also emerged as one of the leading exporters of agricultural commodities including rice, spices, sugar, fruits and vegetables. Similarly, fertilizer policies formulated in 1970s resulted in creation of a world class efficient fertilizer industry in India. India emerged as the 2nd largest consumer and 3rd largest producer of fertilizers in the world.

However, policies governing the fertilizer and agriculture sectors have not kept pace with times. Currently, agriculture suffers from imbalanced and imprudent use of mineral fertilizers; low water and nutrient use efficiency and lower than optimum crop yields besides environmental issues. Fertilizer sector suffers from lack of attractive returns under existing pricing and subsidy policies despite being one of the most efficient industries of the world. Existing policies have distorted the relative price ratios of primary nutrients N, P and K through different products. There are also issues of inadequate use of organic manures, bio-fertilizers, secondary and micronutrients. The fiscal burden of the Central Government on account of fertilizer subsidy has increased manifold over the years. Allocation for fertilizer subsidy during 2020-21 was Rs. 1.34 trillion and this year again a total of Rs.1.38 trillion have already been allocated which still may not be sufficient.

These developments clearly point out that there is need for reforms in fertilizer sector because business as usual will continue to take us down the road of degraded soil, poor farm income, adverse impact on environment and wastage of precious natural resources. The process of reforms has to be calibrated and gradual for smooth transition. First existing fertilizer policies need to be tweaked to encourage maximum domestic production in line with the Government's overall scheme of Atma Nirbhar Bharat. Second, major reforms in these policies are needed for promoting balanced and integrated use of plant nutrients from all sources for making agriculture environmentally sustainable.

Under the present policies for urea sector, the foremost issue is the non-revision of fixed cost and provision of certain minimum fixed cost for units with historical defect in fixation of their fixed costs. A realistic level of minimum fixed cost for urea units will restore viability of more than 8.5 million tonnes of domestic urea production including production from three low cost units and additional production beyond reassessed capacity by other urea units. Needless to mention that all urea units are providing urea at much lower cost than the cost of imports. Similarly, one-time recognition of past escalations in fixed cost, which largely remain unrecognized after 2002-03, and linking it to appropriate cost index for future increases will restore viability to all existing urea units. Production from domestic gas based urea units have resulted in saving of more than Rs.1.5 trillion subsidy during the past 15 years. It is ironic that domestic urea units continue to struggle for survival for want of recognition of legitimate costs and we continue to pay much higher prices to international producers.

Energy accounts for almost 95% of variable cost of production. The energy consumption norms have been revised downwards thrice in last five years. But, there has been no recognition of investment made in energy saving projects. Such capital related charges should be captured in fixed cost. Production of urea is based on natural gas and only small quantity of coal of few million tonnes is used by a few units for steam and power generation. Given very low cost of coal compared to imported LNG, these units should be provided relief in energy consumption norms.

Fertilizer industry is utilizing imported gas to the tune of 85% of its requirement. This high dependence on imported gas has happened due to change in gas utilization policy of the Government. A mechanism

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needs to be established where an aggregator can bid for the gas from new domestic findings on behalf of fertilizer industry. This will bring up the share of domestic gas and decrease the pooled price of gas for urea units. This in turn will reduce cost of urea production and urea subsidy.

Domestic production of P & K fertilizers, where capacity utilisation is stagnating at 80-85% for years, can be increased by removing customs duties on major raw materials like rock phosphate, sulphur, phosphoric acid, ammonia and sulphuric acid. Domestic industry is heavily dependent on imports of these raw materials. Levy of customs duty on these materials increases the cost of domestic manufacturing compared to imports. Subsidy and pricing policies should also encourage production and use of complex fertilizers other than DAP, which is comparatively costlier. Similarly, production and use of quality SSP should be encouraged and maximized which can use domestic rock phosphate with beneficiation. These steps would promote balanced use of fertilizers, reduce overall cost of nutrients and consequently reduce subsidy burden of the Government, besides reducing import dependence.

Domestic fertilizer industry with its precarious financial health is not able to invest in mining and manufacturing facilities of phosphate and potash in resource rich countries which generally needs huge investment. Sovereign guarantee or financial assistance by Indian Government can help the domestic industry in acquiring phosphate and potash assets abroad. It will ensure long term supply security of these nutrients for Indian farmers. This aspect has become even more important in view of recent spurt in prices of P&K fertilizers and raw materials and constraints in availability of these materials in international market.

Apart from self-reliance and long term supply security, reforms in fertilizer policies are needed more urgently in the interest of balanced fertilization and improvement in nutrient use efficiency. Nitrogen use efficiency in India is particularly very low at about 40% against global average of above 50%. One of the reasons of course, is due to very low selling price of urea. Farmers use disproportionately higher nitrogen compared to other nutrients specially in agriculture intensive areas. There are other implications like huge subsidy outgo on import of urea. The most important aspect of the low nitrogen use efficiency is escape of active nitrogen to environment creating both water and air pollution. Therefore, there is a need for creating balance between prices of urea and other fertilizers.

There is a need for more innovative fertilizer products like nano urea, other liquid fertilizers and water soluble forms of existing N,P,K grades. Modern technology like drone can be deployed for application of fertilizers more evenly and efficiently. Fertigation is another area where fertilizer can be applied through micro-irrigation technique. This increases both water and fertilizer use efficiency.

The Government has also been emphasizing on increasing use of organic and bio-fertilizers in addition to chemical fertilizers. Synergy between organic manure and mineral fertilizes give higher use efficiency with higher yields with same level of agri-inputs. Sustainable use of scarce resources like land and water with balanced and integrated use of all plant nutrients including organic, inorganic and secondary and micronutrients with minimum damage to the environment is the need of the hour. The contemplated reforms in fertilizer pricing and subsidy policies are expected to address all these issues in a holistic manner.

The Government is already in the process of consultation and deliberation for changes in existing policies as well as major reforms including deliberations of Working Groups set up under Chintan Shivir and subsequent constitution of a committee for changes in urea policies. It is hoped that there is paradigm shift in urea pricing and subsidy policies which will also increase ease of administration for the Government and ease of business for the industry.

FAI Annual Seminar 2021 was held during 1-3 December, 2021 on the theme "Challenges in Fertilizer and Agriculture" in hybrid form. Inaugural function on 1st December, 2021 was held in physical form with limited gathering and the proceedings were streamed virtually for around 800 participants across the globe. The Seminar was inaugurated by Dr. Trilochan Mohapatra, Secretary, Department of Agricultural Research and Education and Director General, ICAR. The technical sessions during the next two days were held virtually. In total 16 presentations were made by eminent speakers covering challenges of fertilizer and agriculture sectors, sustainable fertilizer production, strategies for fertilizer marketing and making agriculture climate smart. The Seminar generated valuable conclusions and recommendations, which will be useful inputs for the policy makers. Current issue of Indian Journal of Fertilisers contains proceedings of inaugural session, resume of technical sessions and major conclusions and recommendations. ■