

Fertilizers : Key to Food Security

Frank Notes



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In February 2023, the National Statistical Office (NSO) released its Second Advanced Estimates (SAE) of the country's growth for the year 2022-23. As per the estimates, the Indian economy is expected to grow at 7.0 per cent in FY 2022-23. Majority of the world ranking institutions have also forecasted India's GDP growth rate to be well above to that of the major developed economies of the World. One of the contributing factors to this growth rate is the flourishing agriculture sector. Resilient agriculture sector offers a pathway to economic development, especially for a country like India where almost 55% of the population relies on agri and allied activities for their livelihood. The agri and allied sectors account for around 14-16% in the Gross value added (GVA) at constant prices. The sector had occupied a pride place even during the unprecedented crisis due to COVID followed by geopolitical situation during the past 3 years with average growth rate of 4.6 per cent and is expected to grow at 3.3 per cent during FY 2022-23. With overflowing granaries, the country has managed to export agricultural products worth Rs. 3.80 lakh crore during April-February 2022-23, which is higher by about 14 per cent from the corresponding period of the last year. According to latest estimates by the Ministry of Agriculture and Farmers Welfare, there will be a record production of food grains at 323.54 million metric tonnes (million MT) during agriculture year 2022-23, 2.5 per cent higher than 315.6 MT recorded in 2021-22, which is likely to be broadly achievable with minor variations despite unfavourable weather conditions faced during March-April, 2023. Since 2015-16, the production of food grains has increased continuously at a CAGR of 3.66 per cent.

In 2022-23, wheat production is estimated at a record high of 112.18 million MT, up by around 4 million tonnes from 2021-22, when the production was reduced due to heat waves in some wheat growing states. The production of rice is pegged at 130.8 million tonnes, higher by 1.4 million MT from previous year's level. The estimated output of wheat and rice will increase by 6.5 million MT and 10.4 million MT respectively, during 2022-23 in comparison to the average production in last five years since 2017-18. Pulse production is estimated at 27.81 million MT in 2022-23 as against 27.3 million MT in the previous year. On an average, there has been an upsurge of around 13 per cent in pulses production since 2017-18. Noticeable increase in output has also been observed in cash crops such as sugarcane and cotton. Though, all these major crops reported higher production than their respective previous years' levels, the performance of nutri-cereals, comprising millets, does not appear to be very encouraging in the International Year of Millets 2023. The production of *Jowar*, *Bajra*, and *Ragi* is estimated to fall considerably during 2022-23 in comparison to their respective average production levels in last five years. This is in spite of the government's action of substantially increasing the Minimum Support Prices (MSP) of these millets.

Among oilseeds, increase in production levels of castor and niger seed, soybean, sunflower, rapeseed & mustard and linseed, escalated the output of oilseeds by 5 per cent during 2022-23 over 2021-22. The commendable increase in the cultivation of oilseeds is a result of the government's focus on promoting crop diversification and reducing import dependence in edible oils. Before the beginning of the *rabi* sowing season, the government in October 2022, had announced a hike of nearly 8 per cent and 9 per cent in MSP of rapeseed & mustard and soybean, respectively. This promoted the increase in the sown area of rapeseed & mustard by 6.77 lakh hectares in 2022-23 over 2021-22 as per the data released by Ministry of Agriculture and farmers Welfare in February this year. Increased use of fertilizers helped significantly in higher production of various crops including oilseeds. The sales of urea and DAP increased by 4.5% and 13.6% in 2022-23 over 2021-22. But, consumption of MOP declined significantly by 33.6%.

On the production front of fertilizers, government's efforts to become AtmaNirbhar in the production

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of urea has borne fruits. This is reflected in increase in production due to commissioning of new urea plants of Barauni, Sindri and Gorakhpur. The total urea production has risen by 3.42 million MT (approximately 14%) in 2022-23, reaching to all time high of 28.49 million MT. Contribution from Ramagundam (RFCL) and Matix also had enhanced production. Improved production and thus, availability has helped in reducing costlier imports of urea by 1.56 million MT in 2022-23 over 2021-22, which declined by about 17 per cent.

Production of DAP and complex fertilizers too has increased by around 3% and 12% respectively during the year. But there has been increase in imports of these fertilizers due to higher demand of DAP in 2022-23. The imports of DAP have risen by around 21%. Import of complex fertilizers has generally been low. But the imports also increased from 1.17 million MT to 2.75 million MT. Production of these fertilizers is highly vulnerable to non-availability of sufficient quantities of raw materials, high input costs and unfair competition from imports of finished fertilizers. Taxation regime including customs duty and GST are having adverse impact on viability of domestic production. It is reflected in low capacity utilization of plants manufacturing complex fertilizers which are presently operating at 80% of their installed capacity. Investment in this sector has been stagnating for more than a decade due to unattractive returns on investment and other constraints.

With a prediction of normal monsoon by the Indian Metrological Department (IMD), the demand for fertilizers is expected to grow further. The international prices of fertilizers and raw materials are plummeting from their peak levels in the year 2022 including natural gas. A closer look at the latest data released by Department of Fertilizers reveals that the FOB prices of urea and CFR price of DAP in February 2023 at USD 475 MT⁻¹ and USD 655 MT⁻¹ respectively have tumbled down by around 25% in April 2022. During the same period, the CFR prices of major raw materials such as phosphoric acid,

rock phosphate and ammonia too have declined by 31.4%, 14.7% and 49.8%, respectively. The prices of these raw materials and finished fertilizers are likely to fall further in the near future. This will reduce the cost of fertilizers and hence subsidy requirement for 2023-24. With increased emphasis on production of quality SSP, use of combination of SSP and urea, nano urea, nano DAP, etc. will also be helpful in supplementing supplies of fertilizers with increased level of self-sufficiency. The government has been supporting domestic production of potash from various sources like molasses, etc. where India is entirely dependent on imports. Industry will continue to make efforts to maximize production and imports. However, risks and challenges remain. Government and industry will have to work together to ensure adequate availability of fertilizers for Indian farmers.

The fertilizer industry has always been the backbone of Indian agriculture and will continue to make efforts in making our country AtmaNirbhar in production and supply of essential fertilizers. Nonetheless, continued support of the government is needed at each step towards maintaining supply of fertilizers at reasonable prices to the farmers. Timely announcement of subsidy rates under NBS policy, flexibility in deciding MRP which enables the industry to respond quickly to market conditions and to maintain production and import schedules and enabling the industry to earn reasonable return on the investment are a few measures which will help the industry ensure availability of quality fertilizers on time.

Number of countries of the world have become vulnerable regarding food security due to covid followed by geopolitical crisis severely impacting availability and affordability of food. Unprecedented crisis of the past 3 years has once again brought food security to the forefront of global development agenda, including India. Use of chemical fertilizers will continue to play a crucial role in meeting ever-growing demand of foodgrains with shrinking land availability for agriculture. Thus, fertilizer security is sine qua non for global as well as Indian food security. However, what needs to be ensured is to make fertilizers use in agriculture sustainable. This calls for innovation in fertilizer and agriculture sectors involving development and use of more efficient fertilizer products, balanced and integrated use of fertilizers with organic manures, bio-fertilizers and secondary and micro-nutrients. There is also a need for assessment of soil fertility status and better methods of fertilizer applications. ■