

## Unleashing the Potential of Single Super Phosphate

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Single Super Phosphate (SSP) was the first commercial mineral fertilizer and an important indigenous low cost fertilizer produced in the country. Its history dates back to 1906, when the first fertilizer factory was opened in Ranipet, Tamil Nadu for the production of SSP. SSP in addition to phosphate is an excellent source of two other plant nutrients *viz.*, sulphur (S) and calcium (Ca). The P component reacts in soil similarly to other soluble fertilizers. The presence of both S and Ca in SSP can be an agronomic advantage to soils where both of these nutrients are deficient and specially for oilseeds and pulses. For production of SSP, rock phosphate (~30%  $P_2O_5$ ) and sulphuric acid (65-70% concentration) are main raw materials. India is highly dependent on import for rock phosphate, and to lesser extent for sulphur used to make sulphuric acid. India also imports large quantities of phosphate containing finished products and intermediate phosphoric acid. There was import of 5.46 million metric tonnes (million MT) of DAP and 1.17 million MT of complex fertilizers during 2021-22. India also imported 9.66 million MT rock phosphate and 2.12 million MT of phosphoric acid for production of DAP, complex and SSP fertilizers during the same period. Moreover, around 54% of  $P_2O_5$  is consumed through DAP and only around 12% is consumed through SSP. Therefore, in order to reduce import dependence of DAP, promote balanced use of P and ensure affordability of the product for the farmers, SSP can act as a substitution for highly concentrated product like DAP.

On the fertilizer production front, the pattern has shifted over the years. SSP dominated the fertilizer production till 1960s whereas urea and DAP dominate

the production in recent times. Due to the oil crisis of mid 1970s, and the consequent sharp increase in the international prices of fertilizers, the Government of India encouraged investment in domestic fertilizer production plants in order to reduce dependence on imports through a pricing and subsidy policy. Among other fertilizers, production of SSP also increased from 0.46 million MT in 1975-76 to 1.08 million MT in 1978-79 and further to 3.65 million MT in 1990-91. Following the price decontrol of all phosphatic and potassic fertilizers in 1992, production of SSP fell along with P&K fertilizers. Subsequently, there was proportionately lower fixed subsidy on SSP compared to DAP and other complex fertilizers. This made the SSP more expensive for the farmers and both production and consumption of SSP suffered. However, the major upturn in the production of SSP came after the implementation of Nutrient Based Subsidy (NBS) policy for SSP in 2010, which removed the discrimination of SSP *vis-à-vis* other products. Production of SSP rose sharply from 3.09 million MT in 2009-10 to 4.32 million MT in 2011-12. Since then, SSP production has increased at a compound annual growth rate of 3.3 per cent over more than a decade. The plants are spread all over the country so that the product easily reaches the farmers. On the consumption side, the trajectory has been more or less similar as that of production since 1990-91.

But, underutilization of capacity in SSP plants remains the major cause of concern. At present, 101 SSP plants are installed in the country with a total capacity of more than 12.2 million MT. However, production is only less than 50% of the installed capacity. Recently, in September, 2022, the government notified a new set of guidelines for the SSP industry with an aim to boost production. The guidelines elucidate the eligibility of units under NBS policy and subsidy payments thereof, auditing and inspection, composition of rock phosphate to be used, standards of testing, import of raw material, export of final product, freight subsidy, etc. The concept of developing SSP parks to promote large scale manufacturing of SSP is also being explored. This may be implemented on Public Private Partnership basis.

Another major issue has been the adoption of SSP by farmers due to perception of poor quality of the product. The phrase, 'one rotten apple spoils the whole bunch' fits in the case of SSP industry. Supply of

**Provision of subsidy under NBS in line with other P fertilizers & freight subsidy; use of 29% P<sub>2</sub>O<sub>5</sub> containing rock phosphate for manufacturing SSP; promotional efforts by all concerned, etc. would give fillip to production and consumption of SSP.**

sub-standard quality of the product by a few players has tarnished the image of the entire SSP industry across the market. There is focus on ensuring supply of quality SSP as per the specifications of Fertiliser Control Order (FCO). In this regard, a **Task Force** for assessing the quality of the product has been formed by the Department of Fertilizers (DoF) under the aegis of the Fertiliser Association of India (FAI) to ensure that only standard quality of SSP is manufactured and sold to the farmers. FAI has also been assigned the onerous task of providing support to SSP industry by way of product promotion across the country.

The fertilizer industry as a whole has always been the backbone of Indian agriculture, meets nutrient requirements of the farmers and adheres to the government directives from time to time. As a step towards fulfilling the dream of 'Atma Nirbhar Bharat' in phosphatic fertilizers via 'Make in India' SSP, the government should provide encouragement to the SSP industry by making suitable changes in policies and guidelines for the sector. First and foremost, the government should notify the NBS rates of SSP at par with other phosphate containing fertilizers. This will ensure the competitiveness of SSP *vis-à-vis* other products and will help to increase demand and production of SSP. With this, a production target of 10.0 million MT can be achieved in next 3 years. To improve the availability of rock phosphate, industry may be allowed to use 29% P<sub>2</sub>O<sub>5</sub> as primary rock phosphate for manufacturing both powdered as well as granulated SSP. In order to increase the SSP production and explore possibilities of export, development of SSP parks has been envisaged. Development of SSP parks near east coast and west coast will have added advantage of availability of imported rock phosphate and sulphur as the freight will be minimal and the product can be exported easily. In this regard, concessions on income tax, GST, single window clearances and other financial

incentives may be provided for setting up and ease of operations of these industrial parks.

One measure to achieve higher production in existing plants is by disbursal of subsidy to SSP units on priority. In addition to providing subsidy to SSP units under NBS policy at par with other phosphatic fertilizers, freight subsidy should be provided on all movements of SSP from plants to consumption centres. Further, one of the elements that differentiates DAP and SSP is the presence of both nitrogen and phosphorus in DAP. Some SSP manufacturers are carrying out development works to combine urea and SSP. Promoting usage of SSP with urea would provide both primary nutrients in addition to sulphur, calcium and other micro-nutrients. This combination would be more economical for the farmers.

On the issue of supplying quality product to the farmers, Industry is self-conscious and would provide FCO specified quality with zero defects and on zero tolerance basis. Further, all SSP manufacturers would establish NABL accredited labs in their plants. The SSP produced in the plant would be in batches and generate a quality certificate with a unique serial number for each tonne of SSP produced/dispatched from the plant. The batch number and quality certificate number would appear in each sales invoice. This would check any adulteration/malpractice after the dispatch from the plant.

Perception issues due to quality of SSP can be overcome by the continued and promotional efforts of the government and the industry. FAI too will leave no stone unturned in running the promotion campaigns to educate farmers on the benefits of SSP across the country. Wide acceptance of the quality indigenous fertilizers by the farmers would increase the demand and production levels and India could potentially become a major exporter of this value added fertilizer. Policy dispensation should encourage this and other new products.

Agriculture sector is not only ensuring food security of this vast nation, but is also engine of growth and employment for the country. Fertilizer industry is rock solid behind the agriculture and Indian farmers. We together can fulfil the objective of not only being 'Atma Nirbhar' in production and supply quality fertilizers but also help the nation in its march towards being a developed country in shortest possible time. ■