

Initiatives for the Farmers

Frank Notes



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Among the key inputs such as fertilizers, high yielding variety seeds, irrigation water and pesticides, use of fertilizers is the most important for agricultural development for any country of the world. It has been reported in the literature that 50% increase in agriculture production is on account of fertilizer use. Same is the case with India. The figures quoted in the last month's Frank Notes on increase in food grains production from 1951-52 to 2022-23 with increase in use of fertilizers are the testimony of the fact that enhanced application of fertilizers has played private role in ensuring food security of the country. Such relationship between the two will continue to be so in future also. Fertilizer companies have been playing significant role in ensuring availability of fertilizers to the farmers at every nook and corner of such a large country having geographical area of about 329 million hectare (Mha) with net cultivated area of nearly 140 Mha. Towards this, meticulous planning is in place through production of fertilizers, import of raw materials and finished products and logistics operations.

To give fillip to agricultural development on sustainable basis and economic betterment of the farmers, Government of India has been announcing packages of schemes. Some were briefly touched upon in the last month. The meeting of Cabinet Committee on Economic Affairs (CCEA), held on 28th June, 2023, Chaired by Hon'ble Prime Minister, approved unique

package of innovative schemes for the farmers with a conglomeration of Rs. 3,70,128.7 crore.

Among the 17 essential nutrients for the normal growth of plant, nitrogen (N) is the most essential primary nutrient and is a key component of amino acids which form the building blocks of plant proteins and enzymes. More than 80% N requirement of the crop plants is met by urea alone in the country. Realizing its importance, the CCEA approved continuation of urea subsidy scheme to ensure availability of urea at the existing maximum retail price of Rs. 242 exclusive of GST and *neem* coating charges per 45 kg bag. The package of Rs. 3,68,676.7 crore has been committed for urea subsidy scheme for three years *i.e.* from 2022-23 to 2024-25.

In view of COVID-19 and geopolitical situations, there had been multi-fold spurt in prices of finished fertilizer products and raw materials used for production of fertilizers. However, in its endeavour to protect the farmers from any hike in MRPs of fertilizers, Government of India increased the fertilizer subsidy considerably in 2020-21, 2021-22 and 2022-23 to the extent of Rs. 1,27,922, Rs. 1,53,758 and Rs. 2,25,222 crore, respectively. The budget estimate for the current year is Rs. 1,75,103 crore. The CCEA has also approved strengthening of nano urea ecosystem. IFFCO has developed a nano based technology and developed nano urea (liquid) and recently nano DAP (liquid). Coromandel International Limited has also developed nano DAP (liquid). Eight nano urea plants with production capacity of 44 crore bottles each of 500 ML, will be commissioned by 2025-26. Country may become atmanirbhar in urea by 2025-26 with 6 new urea units already in production and one more may commence production in 2024-25 along with use of nano urea.

Another scheme related to PM Programme for Restoration, Awareness Generation, Nourishment and Amelioration of Mother-Earth (PM PRANAM) was also approved by the CCEA. To restore fertility of the Mother Earth, the emerging need is to promote balanced and sustainable use of fertilizers along with organic manures, alternative fertilizers, nano fertilizers, bio-fertilizers, etc. It was announced in the Budget 2023-24 that PM PRANAM will be

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launched to incentivize states/union territories to promote alternative fertilizers and balanced use of fertilizers. Market development assistance scheme in the form of Rs. 1500 per MT was approved to support marketing of liquid/fermented organic manures, phosphate rich organic manures produced as by-product from bio-gas plants/compost bio-gas plants set up under the Umbrella of Gobardhan initiative. The brand for such organic fertilizers will be Bharat Brand. The scheme will address the on-going issue of management of crop residues and *Parali* burning on one hand and help in minimizing the environmental footprint on the other in addition to providing additional income to the farmers. The initiative will facilitate in implementation of Budget announcement of establishing 500 new waste to wealth plants under the scheme and also to make these bio-gas and compost bio-gas plants viable.

Use efficiency of N applied through urea is less than 35% in waterlogged rice cultivation and less than 50% in other upland crops. The products such as *neem* coated urea, sulphur coated urea, slow release N fertilizers, nitrification inhibitors have been reported to enhance nitrogen use efficiency. Realizing the importance, Government of India made 100% coating of urea with *neem* mandatory effective from 25th May, 2015. The other initiative of the package is to introduce sulphur coated urea (Urea Gold), a technology developed by Rashtriya Chemicals and Fertilizers Limited (RCFL). Use of Urea Gold will result in better use efficiency of applied N and also address the problem of sulphur deficiency as 41% of Indian soils are deficient in sulphur. Production of Urea Gold may commence shortly. For the convenience of the farmers, the retail shops are being converted to Pradhan Mantri Kisan Samrudhi Kendras (PMKSK) to provide

farm inputs under one roof and cater to all needs of the farmers inclusive of farm advisory services in a better way. Hon'ble Prime Minister visited a PMKSK at Sikar on 27th July, 2023 developed by National Fertilizers Limited and dedicated 1.25 lakh PMKSK to the Nation.

Hon'ble Union Minister for Chemicals & Fertilizers and Health & Family Welfare has shown foresightedness in ensuring fertilizer supply during the crisis precipitated by the Russian-Ukraine war. As already mentioned, country is import dependent to meet its requirement of fertilizers and raw materials used for production of fertilizers. The Government has forged long-term agreements and created joint ventures with resource rich nations. Industry has been encouraged to set up overseas joint ventures to secure raw materials. Joint venture plants have been set up in some countries with buy-back agreements and assured off-take agreements for the supply of rock phosphate and phosphoric acid. The Government has also encouraged the domestic industry and public sector undertakings to sign long-term agreements for the import of raw materials/intermediates such as ammonia, phosphoric acid, and sulphur. These initiatives have enabled India to diversify its product portfolio and produce more NPK complexes, which offer not only a wider range of products to farmers but also ensure balanced nutrition.

Fertilizers are plant food and contain the ionic forms of nutrients which the plant roots are capable to absorb. However, adoption of 4Rs of nutrient stewardship *i.e.* right source, right rate, right time and right place is essential for getting better net returns from applied fertilizers. All stakeholders need to educate the farmers on adoption of 4Rs of nutrient stewardship. Further, the balanced use of fertilizers on the concept of 4Rs stewardship along with organic manures, bio-fertilizers, nano urea, recycling of organic wastes, etc. will go a long way in improving soil health and farm productivity.

The package schemes, the efforts of Department of Fertilizers and the fertilizer companies will continue to ensure fertilizers and other diversified products available to the farmers to improve farm productivity on sustainable basis. ■