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Fertilisers and Farm Income

in drought years. The subsistence farming becomes even more painful due to natural calamities like drought, floods and hailstorms.

Policy makers, over the years, have suggested diversification of activities at farm level to generate more income. Such a diversification has constraints like availability of initial capital, availability of labour and approach to the markets.

We examine here the issue of increasing crop productivity which can help to improve the economics of farm operations.

In spite of having good arable land and water resources, average yields of major crops in India are much lower and in some cases even half compared to those in many developed and developing countries. Our neighbours like China and Bangladesh are doing much better in terms of yields of paddy, wheat and even pulses.

Application of farm nutrients through mineral fertilisers plays a major role in enhancing crop productivity. But prudent and scientific use of mineral fertilisers is essential to obtain more crop per unit of nutrients applied and to maximize economic return to farmers. *It may be underlined that our country is poor in natural resources.* India is dependent to the extent of 70% on imported raw materials for production of fertilisers. Chemical processing of these raw materials makes these farm inputs quite expensive. Successive governments have very consciously ensured that the prices of mineral fertilisers remain affordable to the farmers. This has been made possible through subsidization of the cost of these fertilisers. The subsidy has all along been routed through fertiliser manufacturers and importers and it continues to be same even after forty years of implementation of fertiliser pricing and subsidy policy in mid 1970s. These policies promoted first use of most limiting nutrient nitrogen and subsequently also provided adequate support to use of phosphorus and potash. Response ratio of crops to application of these primary nutrients was as high as 10 in 1970s and 1980s.

Gradually, fertiliser pricing policies shifted focus from use of phosphorus and potash with decontrol of prices of these fertilisers containing

Agriculture remains main economic activity of more than half of Indian population. Indian agriculture suffers from stagnant crop yields, depleting soil and water resources and low income growth. Farmers in irrigated areas are engaged in intensive agriculture but with low productivity. Mono-cropping, poor nutrient management and adverse climatic conditions are affecting the crop yield adversely. Ground water tables are receding continuously due to over-exploitation of ground water. Finally, poor price realization for agriculture products from the markets have brought the farmers to their knees. Farmers are not able to take advantage of high commodity prices due to market restrictions. Conversely, when commodity prices rule low as is the case for last three years, farmers suffer immense economic loss. The present market prices are lower than minimum support price (MSP) of major food grain crops. Governments do not procure enough and cannot procure all of marketable surplus at MSP. The objective of trade policies for agriculture sector remains to suppress food prices for the consumers. Even export/import policy for agri commodities often works against the interest of farmers. Such a poor market realization along with high input costs in terms of seed, fertilisers, water and labour is causing the distress in agriculture intensive areas such as Punjab, Haryana and Andhra Pradesh.

Rain-fed agriculture has its own cup of woes. Farmers in these areas cannot afford to take risk by making high investment for inputs and other resources. These farmers do not produce marketable surplus. On the other hand, like other non-agriculture population they too are dependent on purchased food from the markets

these nutrients in 1992. Since then, policy flip flop has encouraged use of nitrogenous fertilisers. Phosphatic and potassic fertilisers received step motherly treatment under policies for the sector. In the meantime, deficiency of secondary nutrient like sulphur and micronutrients like zinc, boron and iron also appeared in Indian soils especially in intensively cultivated areas. This led to very skewed use of primary, secondary and micronutrients. With focus on excessive support to use of nitrogen deprived the soils of proportionate use of other nutrients. This coupled with other farm practices like mono-cropping and lack of use of organic manures resulted in ever-declining crop response to application of nutrients.

Both government and farmers are spending lakhs of crores of Rupees on application of crop nutrients with poor results. The crop response ratio declined to as low as 3 in recent times. Simultaneously, government in its anxiety to manage its subsidy bill started squeezing industry's margins. Government did not recognize the legitimate cost of industry while setting up pricing parameters. It also delayed payments of industry's dues as determined by it according to its own policy. Industry continues to bleed and is unable to generate resources for reinvestment in fertiliser plants for sustaining production and maintaining high level of efficiency.

Thus, fertiliser pricing and subsidy policies are affecting all the three stakeholders adversely. Farmers are not able to realize

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Government needs to revisit policies for the agriculture and fertiliser sectors.

returns proportionate to investment in farm inputs. It has also put the question mark on the sustainability of agriculture activity due to deteriorating soil health. Secondly, huge amount of tax payers' money spent for fertiliser subsidy is not achieving intended objectives of increasing agriculture productivity on sustained basis. Thirdly, industry a crucial part of fertiliser matrix is finding it more and more difficult to sustain its operations. This will endanger the fertiliser supply security of the country. Government has been paying much higher subsidy on limited import of urea than for domestic urea for last fifteen years.

It is obvious from the above discussion that there is need for immediate change in status-quo on policy front. Henceforth, it should be endeavour of policy makers that support to agriculture yields best result both for the farmers and the food security. All major developed and developing countries provide support to farmers in one form or the other. More and more countries including China are moving from providing product support to income support.

Indian government should be given credit for its proposed policy to provide direct payments of benefits to farmers. Sooner, it is implemented, better it is for all stakeholders. In the meantime, government should ensure that instrument of subsidy promotes balanced use of all nutrients including use of micronutrients and organic manure.

Industry needs to be treated fairly under any policy dispensation. It should be given freedom to operate in a competitive economic environment. This will promote innovation both in fertiliser products and agri services. The industry has to move from present state of providing commodity fertilisers to providing crop solutions to the farmers. Each of these solutions will be a package containing products and knowledge suitable for specific crop and agro climatic situations. State governments need to be incentivized and nudged to provide more extensive extension services in terms of soil testing and advisory services.

Agriculture is crucial to food security and sovereignty of the nation. Indian farmers are suffering due to poor agriculture productivity and unfair market conditions. Industry is operating under stifling controls and present policies go against the grain of 'Make in India'. Therefore, government needs to revisit policies for the sector. Industry is ready to work with the government to formulate policies for the sector which serve the needs and interest of our great nation in years to come. ■