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## A flawed approach

Chemical fertilisers are needed to meet the foodgrain target even as we promote organic farming, says Uttam Gupta

**R**ECENTLY, agriculture minister Balram Jakhar expressed concern over whether Indian agriculture would be able to produce enough food to feed the growing population by the year 2000 and beyond.

The issue may sound mundane and not so relevant at this stage when the focus is on liberalisation and structural reforms. Some of us may even argue that with bulging food stocks of over 30 million tonnes, we have a problem of too much and, therefore, the very thought of increasing production is absurd. In fact, the agriculture ministry wants to scale down foodgrains production target for 1996-97 from 210 million tonnes to 196 million tonnes.

This approach is seriously flawed. While the government may feel proud about high stocks, it should not ignore the fact that the sale of foodgrains through the PDA has been continuously declining during the last three years. This, in turn, is due to rising issue prices forcing the poor consumers to buy less.

To assess whether or not foodgrains production is adequate in relation to the needs, we should look at the per capita availability. This has gone down from 510 grams per day in 1991 to 474 grams in 1994. Luckily, all these years the weather god has been exceptionally benevolent to us. But for this, the situation would have been much worse.

The more relevant question is what will be our requirements by the turn of the century and how we are going to meet it. To feed the estimated one billion population by the 2000 A D, the Planning Commission has set a foodgrains production target of 240 million tonnes. Having achieved about 192 million tonnes in 1994-95, we are still short of the target by about 48 million tonnes. And that much ground has to be covered in the next five years. A tall order, considering that we added only 21 million tonnes in the last five years. The tempo needs to be accelerated, if we have to reach anywhere close to the 240 million tonnes mark.

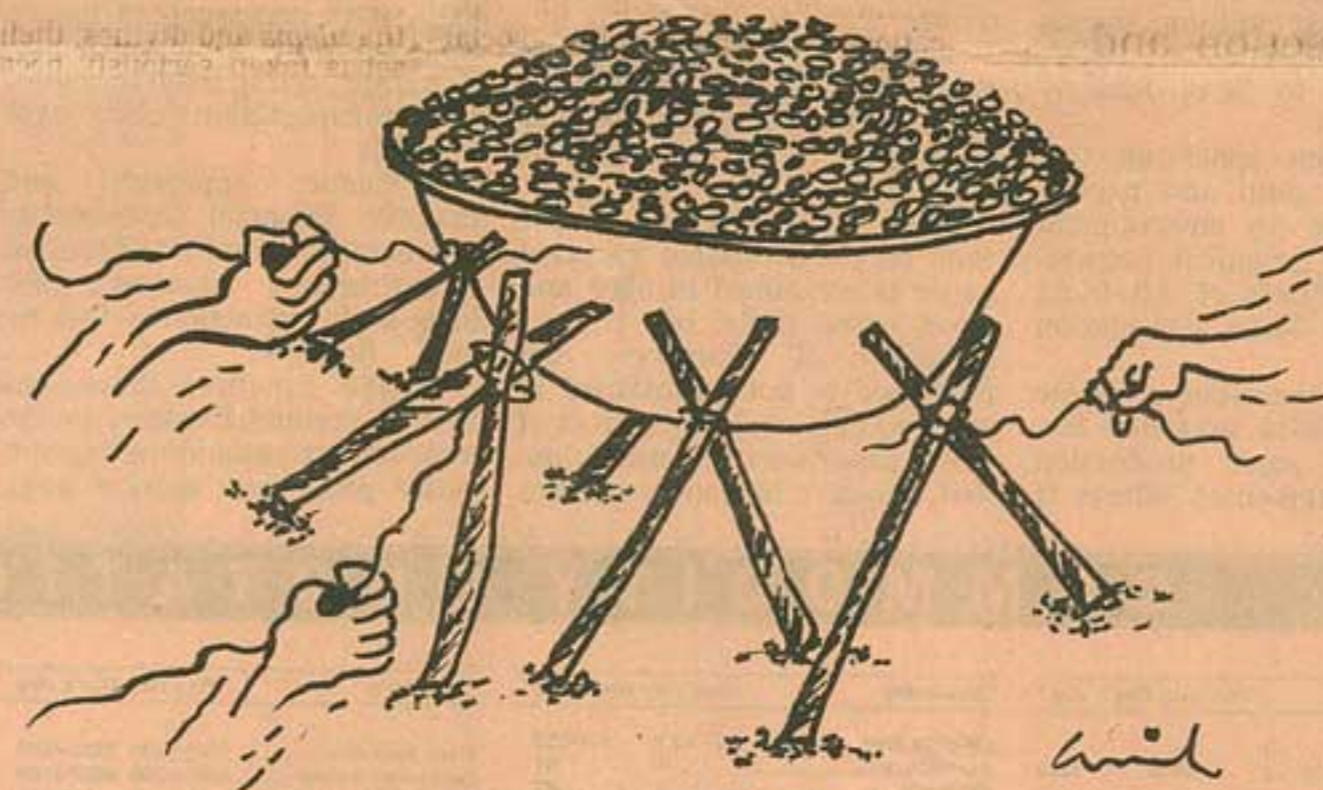
Fertilisers, seed and water are the three main inputs essential for increasing foodgrains production. Framers of the new agricultural policy, in the mid-60s, recognised the importance of this trioka and laid the foundation of India's advance

towards self-sufficiency. Unfortunately, success seems to have become its own enemy. Even as investment in irrigation and agricultural research is slowing down, use of chemical fertilisers has received a serious setback, particularly since 1991-92. Consumption of all nutrients during 1994-95 was 13.5 million tonnes which was only marginally higher than in 1991-92.

But the more disturbing feature was the decline in the use of phosphate from 3.3 million tonnes to 2.9 million tonnes and that of potash from 1.36 million tonnes to 1.06 million tonnes.

Fertilisers have become the victim of ad hoc, arbitrary and uncoordinated policy decisions.

The problem of rising fertiliser subsidy could have been taken care by the simple act of raising the selling price in small doses over a period of time. Remember, in 80s there was virtually no increase and even now, the government is reluctant to increase due to political compulsions. It seems to be believing in either no action at all for several years, or a devastating act at one go that would plunge the entire sector into a state of crisis.



Even as the consumption of nitrogen increased from 8 million tonnes to 9.5 million tonnes the N, P, K use ratio got even more imbalanced from 5.9:2.4:1 in 1991-92 to 8.9:2.8:1 in 1994-95 (ideal being 4:2:1).

Unquestionably, this was the fallout of the sudden decontrol of P and K fertilisers in August 1992 which led to steep price increases. The irony is that retention of subsidy, not its removal, continues to rule high i.e. about Rs 6000 crore (Budget allocation for 1995-96). This includes subsidy of about Rs 500 crore on P and K fertilisers which was reintroduced under a new incarnation. While this has not helped by way of any favourable effect on consumption, it has led to multiple controls by state govern-

Considering the strong linkage of fertilisers to food security, this cannot be treated like any other commodity; nor can it be left entirely to the market forces. Any decline in fertiliser consumption is just not acceptable. This is because any reduction in their use will inevitably affect foodgrain production. We need to manage the fertiliser sector through a well-coordinated, stable and consistent policy and subsidy reduction should be a part of this, instead of being an objective by itself.

Increasing emphasis on organic farming has also sought to deflect attention from fertilisers. The former essentially involves use of farmyard manure, crop residues and human waste, etc. While we may promote its

use, this should not detract from the importance of chemical fertilisers under intensive agriculture. We have to depend predominantly on the latter for meeting the requirements of foodgrains production.

Consider 1994-95 when we produced about 192 million tonnes of foodgrains. Taking a ratio of 1:8 i.e. one tonne nutrient for every 8 tonnes of grains, about 24 million tonnes of nutrients was required. Of this, about 13.5 million tonnes i.e. 57 per cent was supplied through use of chemical fertilisers and only about 3 million tonnes i.e. 12 per cent would have come from organic sources, the balance 7.5 million tonnes representing the depletion of reserves in the soil.

In fact, China which feeds 22 per cent of the world's population with 7 per cent of the world's arable land, uses about 29 million tonnes of chemical fertilisers (against India's 13.5 million tonnes), despite using organics on a much larger scale. In terms of our projected food needs, today's China provides the benchmark for what we will have to achieve by way of increasing fertiliser use. There is hardly any room for complacency.

Alleged damage to the environment due to use of chemical fertilisers has also distorted the focus. Our present use is only 75 kg per hectare which is even lower than the world average, not to talk of China where the use is much higher at 306 kg per hectare. The question of our use levels polluting water or air does not arise.

We must stop fiddling with the food security objective and clearly recognise that foodgrain production has to be increased to meet the requirements of the growing population. In the years ahead, especially after 2010 AD, China will turn into a huge importer of foodgrains and the world grain bowl may not have the required capacity to meet the needs of this giant alone.

Second, the vital role of chemical fertilisers in increasing foodgrains productivity and production should be clearly recognised by dispelling the misgivings on account of alleged environmental effects or exaggerated claims about the role of organic sources of nutrients.

Third, the government should urgently implement a clear-cut and coordinated fertiliser policy, including the subsidy policy. Reduction in subsidy must be done in a gradual manner, avoiding abrupt changes.