

# Pseudo-environmentalists' misleading campaign

By Dr Uttam Gupta

A group of environment friendly people find application of chemical fertiliser as environment unfriendly. Amongst the several flaws that they see in its use for cultivation of various crops include degradation of agricultural land, loss of moisture in soil, pollution of ground water and diminishing crop resistance to pest which leads to increasing use of pesticides and latter's dangerous residual effects on soil.

In view of above, they suggest that use of chemical fertilisers should be reduced. But then, we must know as to why their use was promoted in the '60s, increased steadily/accelerated pace in the '70s/'80s and continues to grow, in the '90s, though at a somewhat reduced pace?

To answer this, we need to look at the role of fertilisers. These provide essential plant nutrients — primarily nitrogen, phosphate and potash — needed by plants to grow food. This fundamental linkage should not be lost sight of or else, there is a danger of our being misled and going the wrong way.

Friends of environment would not perhaps, disagree. Without NP and K plants cannot grow and yield foodgrains. But, they would still say that for supplying nutrients, why depend only on fertilisers? Why not other sources, which may be environment friendly as well? In this context, they would talk of organic sources e.g., farmyard manu-

re, animal waste, crop residue etc.

Is that an idea of contemporary times? Here the planners, policy makers, administrators and agricultural scientists of the '60s/'70s who initiated us into chemical fertilisers, not aware of this? The anti-fertilisers men would not dare say 'no'. While, fertiliser is a fairly recent development, organic manure including its nutrient supply capabilities is known for hundreds of thousands of years; in fact, ever since man started farming.

And yet, fertilisers were inducted into Indian agriculture in a major way as these alone could meet requirements of plant nutrients of new high yielding variety seeds (HYVs) that was needed to increase crop productivity especially that of foodgrains, manifold. It was clear that neither reserves of nutrients in soil — depleted due to centuries of continuous farming — nor, organic manure could come anywhere near meeting massive nutrient needs.

Increasing fertiliser use from about 1.1 million tonnes during 1966-67 to 14.32 million tonnes during 1996-97 has provided this fundamental need and turned our dream of making India self-sufficient in foodgrains production a reality. The Green Revolution would have remained a dream only, but, for increasing use of fertilisers.

Having achieved success, let us not ignore the how part of it? Let us not debunk fertilisers on extraneous considerations. Do we have a substitute that fully meets the need that fertiliser

does! Can organic manure do it? A tonne of organics contains only about 12 kg of nutrient. This is barely 52 per cent of nutrient supplied from a bag (50 kg) of urea and still lower i.e., 37 per cent available in a bag of DAP.

Now, contemplate a situation in which fertiliser consumption is reduced by 1.0 million tonnes in nutrient terms. To make it up, equivalent quantity of organic manure will have to be about 83 million tonnes. And, if entire 14.32 million tonnes has to be replaced by organic manure requirement will be about 1,200 million tonnes. Such monumental quantities are neither available, nor, capable of being generated.

So, by ignoring fertilisers, it is just not possible to supply nutrients needed to maintain even present level of foodgrains production, not to talk of increasing it further. Even in China, which tops the world in use of organic manure, fertiliser consumption is more than double in India. So, how can we with much less use of organic manure, afford to focus less on use of fertilisers especially when our population will soon be hitting the Chinese level?

While, we should all vow to protect environment, to say that this can be done only by discouraging use of fertilisers is the surest way to inviting disaster. The inevitable outcome of this will be sharp decline in foodgrains production, heavy dependence on imports, large scale hunger and starvation and untold miseries to the commonman. In short, turning the clock back to the days of mid '60s. Surely, our

environmentalist friends would not wish India to slip into that sort of a horrendous scenario.

We need to view environment related issues in a much wider perspective. Consider diminishing availability of ground water. This problem has its origin in intensive agriculture wherein requirement of both nutrient and water is high. It has to be tackled by (i) proper use of water avoiding waste (ii) increasing focus on sources other than ground water for irrigation and (iii) measures to ensure that water table get recharged.

Contamination of ground water by nitrate — whenever occurring — is a general problem linked to discharge from chemical industries and fertiliser should not be singled out. As such, all fertiliser plants (except sick units) are meeting stringent effluent standards. As regards use on fields, some losses of nitrogen by way of leaching are unavoidable. Use of proper agronomic practices can help in minimising these.

It is, however, a myth to say that this problem can be eliminated if you put a stop to fertiliser use. Plants take nutrients in inorganic form only e.g., nitrogen mainly as nitrate. It does not matter from where it comes i.e., organic manure or fertilisers. In fact, unlike latter, use of which can be properly monitored and regulated, former cannot and could thus, cause greater environmental hazards.

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