

## **Inefficiency and Efficacy of Soil Testing Services : A Case Study of Gujrat**

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This paper seeks to answer the question why even after half a century of fertiliser use, farmers in India have not responded to soil testing service; the services that are essential for improving fertiliser use efficiency. The three important findings of this study are as follows: : First, over-use of fertilisers is widespread and is guided by farmers' perceptions about yield response rather than soil test based recommendations. Second, farmers' yield perceptions are shaped in a chaotic environment that is a product of inefficient farm practices and fertiliser use techniques, constraints on yield response due to lack of complementary inputs and misconceptions and ignorance about balanced nutrient use. Thirdly, unless extension system is geared to face the challenge, the inefficient over-use is unlikely to cease. These are not new findings. But their implications are far reaching. They indicate that easy option for productivity growth have been exhausted. Productivity cannot be sustained only by applying more and more fertilisers; efficiency of its use cannot be ignored.

### **I The Issue**

Improving efficiency of applied fertilisers<sup>1</sup>/has acquired an important dimension in the present economic environment. The opening up of the Indian economy has not only adversely affected the viability of the domestic fertiliser industry but also has drastically altered the price environment in which farmers' demand for fertilisers has been growing<sup>2</sup>/. On the other hand to meet the agricultural production targets, the stagnating fertiliser consumption has to increase by over one thousand tonnes per annum till the end of this century. Obviously, whether to use fertiliser is no more a relevant question, the main question is how to use it. But improving efficiency of fertiliser use has remained agronomists' concern till recently. The situation changed after mid seventies due to the oil crisis when economist were attracted to this issue. Two aspects seem to have been prominent in the context : (i) soil - crop fertiliser nutrient management and (ii) time and method of fertiliser use<sup>3</sup>/.

Findings based on experimental results have shown that economics of fertiliser use can be improved if fertiliser use is adjusted according to the fertility status of the field, for the economic rate of nutrient use is negatively associated with the fertility status of the soil (Rama-