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Adequate supplies of food and other agricultural products, sufficient production of crops for agro-industries and export, and increased farm income are basic factors for social and economic development. For a variety of reasons, the increased food requirements of growing populations should be met in the majority of countries through increased productivity per area unit. Fertilizers can contribute more than 50 percent to such an increase.

According to UN projections (SALAS, 1981), the world's population could reach a stable level of 10.5 billion by the year 2010, compared with 4.4 billion in 1980 and 6.2 billion projected for the year 2000. Requirements for food and other agricultural commodities will grow faster than the population, since 95 percent of this population increase will take place in economically developing countries. Consequently, by the time the population level should approach stability, the demand for food and other agricultural products could be three times its present level.

In its study "Agriculture: Toward 2000", the FAO has estimated that the 90 economically developing countries will collectively need, among other measures, to increase their use of fertilizers by four to five times by the year 2000 if the needs for food and other agricultural commodities of their growing populations are to be adequately met. Another FAO study carried out in 1978 has shown the correlation between cereal yields and fertilizer use in 62 major cereal growing countries. India provides an example of a developing country where fertilizer use, together with other improvements and appropriate policies, has been instrumental in increasing food production to meet current requirements and even to build up reserves.

Considering the economic constraints on developing countries meeting their fertilizer requirements and also the importance of fertilizer economics at the farm level for the adoption of its use by farmers, fertilizer efficiency must be increased and other renewable sources of plant nutrients mobilized. The concept of "Integrated Plant Nutrition Systems" is found in this approach. In these systems nutrient requirements of crops are met according to production targets from all available sources of plant nutrients such as recycled organic matter, crop residues, biological nitrogen fixation and fertilizers. Fertilizer and plant nutrition recommendations are based on the crop system rather than on single crops.

Since 1961 the FAO Fertilizer Programme has assisted, with the help of trust funds provided by donor governments and by the fertilizer industry, more than 50 countries in Africa, Asia and Latin America in their efforts to increase crop production, particularly of food crops grown by small farmers, and the farm income through the development of the judicious use of fertilizers and related inputs. This was done through field trials and demonstrations, related extension work, pilot schemes for fertilizer distribution on credit and training.

From 1961 to 1982 more than 46,000 field trials and over 170,000 field demonstrations were carried out. About 175,000 farmers' field days were held with more than 3 million farmers attending. Over 64,000 national staff members were trained. During the same period, fertilizer use in economically developing countries rose from 6.2 kg N + P₂O₅ + K₂O to 47.9 kg per hectare of arable land and permanent crops. With the gradual inclusion of other inputs and of the concept of integrated plant nutrition systems in the field work, the Fertilizer Programme has developed into an assistance programme for increased crop production through the rational integration of all major components of such a programme.

The "International Fertilizer Supply Scheme" of FAO, created in 1974 during the so-called "fertilizer crisis", has been able since then to assist 58 developing countries to alleviate their