

Raising food production is, therefore, one of the most pressing issues challenging the world community and action is taken at all fronts. As world food production would have to increase by 60%, over the next 35 years, such action would continue to mainly depend on the use of fertilizers, considering, in particular, the large quantities required and the large number of people involved. Fertilizers are, therefore, important for world food security and a significant off-farm input in modern agricultural practice. Traditionally, increases in food production were attained by expanding arable land, improving cropping intensity and increasing yields and for the developing world as a whole, this combination will continue to be pursued. However, except for major investments in land improvement, such as irrigation, drainage, and anti-erosion measures, substantial increases in food production will mainly come from increased yield per unit of arable land and inputs. In practice, this requires adequate fertilizers as source of crop nutrients.

We should not overlook, however, another paradox. That, although we do produce enough food for everyone, thousands of children continue to die from hunger, each day. World food production does, indeed, have to drastically increase. However, equally important is the need to improve the unequal and unbalanced situation in the geographic distribution of food. The latter has a lot to be blamed for the fact that world production of basic foodstuffs cannot satisfy the needs of mankind. We therefore, need, concurrently, to tackle the equally serious problem of the geographic distribution of food and the global inequalities, as there are countries with overabundance of food whereas others suffer from serious food deficits.

In developing countries, fertilizer consumption is growing at a slower pace than is necessary to produce sufficient food to nourish their increasing population. With such a trend, the need for improved efficiency of fertilizer use is important, as it would lead to considerably higher production of the same or even better quality, with the same input of fertilizers. This seems to be a realistic approach in order to alleviate and ultimately solve, satisfactorily, the problem.

Simultaneously, however, many developed countries experience the consequences of overfertilization. This observation takes us directly into the core issue of the sustainable development concept which necessitates the integration and harmonization of the targets of social and economic development, which includes agricultural development and food production, with those for the protection of the environment. It is imperative, therefore, to improve fertilizer management practices and to rationalize the use of fertilizers in developed countries, whilst avoiding the emergence of similar problem in developing nations. In this regard, many countries in Western Europe and North America, but also countries in the Middle East and North Africa region, face problems of increased nitrate content in drinking water and accumulation of high levels of nitrates in agricultural produce. These problems are mainly due to overfertilization and poor fertilizer and water management practices.