



THE CRAWFORD FUND

An Initiative of the Australian Academy of
Technological Sciences and Engineering

Crawford Fund

2009 Annual International Conference

World Food Security

Can Private Sector R&D Feed the Poor?

BIOGRAPHICAL NOTE AND ABSTRACT FOR

Dr Amit H Roy



Amit Roy, IFDC President and CEO since 1992, came to IFDC as a chemical engineer in 1978. Under his leadership, IFDC - an International Center Creating Food Security and Agricultural Sustainability - expanded its mission to address not only food security but also trade, equity, and the environment. Leading IFDC from fertilizer to agribusiness and economic development, he instituted research and development of new or modified fertilizer materials and processes using indigenous sources, especially phosphate rock. Roy encouraged the development of fertilizer industries in many developing countries and provided needed technical assistance. He played a key role in organizing the landmark Africa Fertilizer Summit held in Abuja, Nigeria, in June 2006.

Soil Fertility and Fertilizer Research and Development

So far, world food supply has managed to stay ahead of rising population due to increasing productivity and modest expansion of cultivated area. However, dwindling resource reserves, increasing cost of energy and increasing environmental cost of opening new land pose new challenges. Africa is a special case where increased food production has come mainly from land expansion and low fertilizer use and extensive soil mining have retarded productivity. Recent limited public/private initiatives show promise of reversing this low productivity. Global food security depends on a focused effort to increase productivity of food crops in which fertilizer must play an important part. Government policy must be supportive including the purchasing power support for smallholder farmers using vouchers. The production and use of current fertilizer products is quite inefficient and must be improved. New products using new resources must be developed. Much of the nutrient content of current fertilizer products is wasted at high cost to the environment because only 30%-40% is absorbed by crops. This can be improved by better application technique and improved products and by improving crop attributes. There is also ample scope for increased use of nutrient-bearing waste products. The new tools of nanotechnology and biotechnology open new opportunities for collaborative research between the public and private sectors. For the world to be provided the next generation of fertilizers, the private sector must play a significant role in partnership with public institutions.

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