

## Challenges for the global food chain and Achieving Sustainable Nutrition Security For All and Forever

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### Challenges for the global food chain

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With increasing liberalization of trade, human food products, animal feed, and ingredients incorporated in to both, are being globally distributed. Often food products contain components from processors in numerous countries highlighting the need for harmonized and equivalent standards. Food is only as safe as the standards of the weakest players in the food chain and no country is immune, pathogens and chemical contaminants do not respect national boundaries. The longer the food chain and the more players in the food chain, the more opportunities for things to go wrong, or for criminal adulteration to occur, exist with resulting adverse health consequences for consumers. Intensification of farming and industrialization of the food industry and global distribution have meant that, when things go wrong, the problem is rapidly disseminated.

When contaminated ingredients incorporated in to many products, are contributing to adverse events traceability to permit effective recalls to protect consumers' health and companies' brands and reputation is extremely difficult. Consumer confidence can be rapidly damaged by adverse media coverage of contamination incidents and a global media exists which is open for business 24 hours a day, 7 days a week. Often the risk management response is in proportion to the media coverage of the issue rather than the risk to the public's health. Free trade has to be safe trade therefore companies need robust food safety management systems and the competent authorities in every jurisdiction need to implement science based policies appropriate and proportional to the risks.

The responsibility for food control in many countries is shared between different agencies or Ministries with different roles and responsibilities within, and between, countries. Ensuring that there are no gaps in the continuum of controls from farm to fork in a global supply chain poses huge difficulties. In addition to those factors that impact on human health, a chronology of trade disrupting animal diseases from Food and Mouth disease to Avian flu have demonstrated that no country can afford to be complacent about their food supply. Scientific risk assessment is more advanced in some countries than in others and even when it does exist, politics, economics, consumer acceptability, ethical issues and trade requirement and international disputes etc. regularly have more influence over the ultimate risk management decisions taken. Increasing sensitivity of laboratory chemical analysis and the identification of contaminants at levels of parts per million pose challenges for risk communication and for enforcement regimens operating zero tolerance "threshold for action" levels.

### Achieving Sustainable Nutrition Security For All and Forever

M S Swaminathan

We need to bring about a paradigm shift in policy formulation from attention to food security at the aggregate level to nutrition security at the level of each child, woman and man. Nutrition security can be defined as physical economic and social access to balanced diet, safe drinking water, environmental hygiene, primary health care and primary education. Thus, it involves both food and non-food factors from the point of view of professional and public action.

Physical access can be assured only if countries adopt the strategy of an ever-green revolution based on enhancing productivity in perpetuity without ecological harm. This will call for mainstreaming ecological principles in technology development and dissemination. Population rich but land hungry countries have no option except to produce more food under conditions of diminishing per capita availability of land and water and expanding biotic and abiotic stresses, including the consequences of climate change.

Nutrition security safety nets for the economically underprivileged population should be based on a life cycle approach starting with pregnant mothers and ending with old and infirm persons. Attention to maternal and foetal under nutrition is particularly urgent, since in many developing countries every third child born is under weight. Such low birth weight children suffer from many handicaps including impaired cognitive abilities. Denying a child, even at birth, an opportunity for the full expression of his/her innate genetic potential for mental and physical development is the cruelest form of inequity. Therefore those engaged in nutrition education and intervention should give priority to pregnant women belonging to the economic and socially underprivileged sections of society.

In a life cycle approach the 0-2 age group requires particular attention since such children can be reached only through the mother. Even in India where there is an extensive Integrated Child Development Services (ICDS) the 0-2 group is often bypassed since ICDS interventions start with the nursery school upwards. For children in the age group 6 -18, there is need for School Noon Meal Programmes which can provide the needed micro and macro nutrients. Such Noon Meal Programmes can be organized with community participation.

Food scientists can help in spreading nutrition literacy and in proposing feasible and affordable methods of achieving nutrition security for all. For example home grown food is the best option in predominantly agriculture countries since this will stimulate concurrently both production and consumption. Horticultural remedies can be applied for nutritional maladies with particular reference to micro nutrients like iodine, zinc, iron and Vitamin A. Such community nutrition security systems can help nations to leapfrog in achieving the UN Millennium Development Goal in relation to hunger.

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