



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

PANEL 13: SOUTH AND EAST ASIA: FOOD SECURITY,  
DIVERSIFICATION AND RESOURCE MANAGEMENT

**ORGANIZER AND CHAIRPERSON**

*A. Vaidyanathan (Madras Institute of Development Studies, India)*

**PANEL DISCUSSANTS**

*Zhu Ling (Chinese Academy of Social Sciences, China) K.S. Parikh (Indira Gandhi Institute of Development Research, India), S. Osmani (University of Ulster, Northern Ireland)*

**RAPPORTEUR**

*Latha Nagarajan\* (M.S. Swaminathan Research Foundation, India)*

The presentations centred on various aspects of food security for the poor. Zhu Ling highlighted the role of income distribution, across and within regions, in determining food consumption, especially in the post-reform period. She emphasized the importance of policies to redress regional income disparities and of poverty reduction programmes to ensure food security for the poor. Professor Osmani reported some interesting findings, based on a micro study, regarding the influence of subsistence production, market dependence and diversification of livelihood on the level of food consumption and on ability to cope with seasonal shortages. Dr Parikh sought to demonstrate that providing additional incomes through employment guarantee programmes (combined with subsidized supply of food to the aged and the infirm) is a far more effective and cheaper way of ensuring food security for the poor than subsidizing food supply through a wide coverage public distribution system.

*Floor discussion*

There was then a wide-ranging floor discussion, prompted by the chairperson, about the concept of food security and its relation to income. Most discussion of the subject takes it for granted that the level of food consumption is an increasing function of income per capita. The level of income of the poor is therefore seen as the key determinant of their nutritional status. Most of us

have accepted this assumption as being reasonable. However, evidence is accumulating which seriously calls this into question.

This has appeared in the plenary paper by Hanumantha Rao and Radhakrishna, which gives data from the Indian National Sample Survey to show that the mean level of calorie intake of the population as a whole has remained constant over the last two decades despite a significant increase in total consumption in real terms. There have also been substantial changes in the pattern of consumption from food to non-food items, within the food group from cereal to non cereal foods, and from 'coarse' to 'fine' cereals. What is more important, however, is the fact that these tendencies were also in evidence among the poorest 30 per cent of the population, whose mean calorie intake was only 1500–1600 per capita per day, compared with the nutritional requirement of 2200. These classes seem to have experienced changes in the consumption similar to that of the rest of the population.

It was then pointed out in discussion that a similar pattern seems to be found in several other low-income countries as well, including China, as is evident from Zhu Ling's report. That the overall calorie elasticity of even the poor with respect to other income is turning out to be very low, and that they seem to be shifting to more expensive sources of calories, was agreed to be surprising. While this phenomenon remains to be satisfactorily explained, the available evidence does call seriously into question the widely held belief that the quantum of food consumed, and therefore the nutritional status of the poor, will automatically increase, and increase substantially, as incomes increase. If higher incomes do not, for whatever reasons, lead to increased consumption of food, the superiority of employment programmes as a means to ensure food security, over direct subsidized supply of food to the poor through public distribution systems or school meals and other such interventions, is questionable.

There were also warnings that food intake estimates, derived from sample surveys of household consumption, need to be used with caution. These surveys typically seek information on the quantity of various items of food stuffs consumed by each sample household during a specified reference period. Apart from recall lapses and informant biases, food eaten outside the household (for example, meals given by employers to their workers, and meals, snacks and refreshments brought from eating houses or teashops) is not always ascertained and accounted carefully. Furthermore, informants are usually asked about the quantities of particular foodstuffs consumed in raw (for example, paddy), semi-processed (milled rice) and in processed form (flour). The information relates to gross amounts utilized by the household during the reference period. The actual amount ingested by members of the household is usually lower because of weight losses in the process of cooking and wastage on the plate. There is need to know what kind of changes have occurred in these respects and what their net impact on actual intake has been. Insofar as there are systematic changes in one or other of them, reported gross intake may not accurately reflect the level of actual food intake (and changes therein) of the sample population and more especially for its poor segments.

A further consideration is that changes in nutritional status are not uniquely determined by food intake. The efficiency with which ingested food is utilized

by the body also depends, to an important degree, on the incidence and severity of infections. Given that there has been considerable improvement in water supply, control of certain mass communicable diseases and containment of infections (on account of the wider and greater use of antibiotics), we cannot rule out the possibility that nutritional status may improve in spite of the stagnation of reported gross food intake. That nutrition surveys in India show some improvement in anthropometric indices (such as the weight and body mass index) and a reduction in the extent of malnourishment points in that direction. But these data are an inadequate basis on which to judge nutritional status of even the population as a whole not to speak of the poorer segments, whose calorie intake is 30 per cent below the recommended norm. Much more detailed and careful research to monitor nutritional status in terms of outcome indicators (namely, body mass index, morbidity, mortality and nature and intensity of activity) along with actual food intake is clearly necessary to assess trends in nutritional status, especially of the poor.

The relative stagnation of calorie intake in the face of rising per capita real incomes even in low-income countries like India also has important implications for planning of production. Recent exercises in long-term projections of agricultural supply by organizations such as FAO, the World Bank and IFPRI, draw pointed attention to the decline in the income elasticity of demand for food grains. This means that the rate of growth in food grain production required to sustain a given rate of growth in the rest of economy, without risking inflation due to shortage of basic wage goods, is also lower. Does this mean that agriculture is becoming less of a constraint on the growth of the economy? Such an inference would be unwarranted. For one thing, it is necessary to allow for relatively rapid rise in the demand for grains used as animal feed. Also the composition of foodgrain demand is changing. The problems and prospects of increasing production are not the same in all cases. More important, food demand is becoming diversified towards milk, meat, eggs and fish, vegetables and fruits. The elasticity of demand for these items is much higher, while recent evidence suggests that this demand may be rising even as that for cereals is falling. Therefore the required rate of growth in their output consistent with a given overall rate of growth is also much higher. The constraints, opportunities and resource requirements of expanding production of food items other than foodgrains therefore should receive much greater attention than they have hitherto. Focusing only, or mainly, on declining demand elasticity of foodgrains can mislead policy makers into underestimating the importance of agriculture and of the resources and attention needed to ensure the requisite level and pattern of agriculture production.