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# Food and Population: Priorities in Decision Making

Report of a Meeting  
of the International  
Conference of Agricultural  
Economists, Nairobi, August 1976.

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## Discussion on paper by Sturrock

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The need to increase agricultural production in the face of an ever expanding population is a perplexing problem confronting all third world countries. The problem of increasing agricultural production in developing countries could be conveniently grouped into two categories based on the availability of suitable agricultural lands, viz. overpopulated developing countries that are fortunate enough to have sufficient agricultural land and the less fortunate with little or no land for further expansion. A common feature is the wide variation in the farm types that are found with different resource endowments and potential. The general consensus was that Allan's 'critical density' theory regarding the influence of population on agricultural production, was untenable, particularly in the light of Asia's experience. In fact, the evidence seemed to favour Boserup's contention that population pressures on the land force farmers to adopt more intensive techniques of agricultural production.

The level of productivity prevailing on peasant farms in the less developed countries leaves much to be desired. In this regard the role of both formal and informal education seem to be fundamental. At the present time the agricultural extension services, particularly farmer training programmes, could be considerably improved. It is not only important to ensure that farmer education is realistically planned and implemented but that the other essential inputs are also available in time and in the form required. The need to provide sufficient incentives to motivate farmers to increase agricultural production cannot be overemphasised. The neglect of appropriate markets besides other conventional production incentives have often thwarted development efforts. In other words a piecemeal approach to agricultural development will not suffice. An integrated programme of action is necessary to ensure sustained agricultural production. The BIMAS programme in Indonesia is a good example of such an effort where an increase of over 50 per cent in rice production was registered during the five year period 1970–75.

In the provision of inputs it is imperative to note that marginal benefits will not provide necessary stimuli to bring about change and development. Farmers have to contend with many hazards and their traditional behavioural patterns are understandable in view of the subsistence goals of farm production. Therefore, it is imperative that incentives to production are substantial. The gap between technical knowhow and what prevails under actual farm conditions could be attributed to this fact.

There is no gainsaying that the agricultural sector of developing countries will have to support the vastly expanding populations for many years to come due to

the lack of the necessary resources for the development of industrial and manufacturing sectors. Clearly, the approach to agricultural productivity cannot be via the productivity of land alone due to the population pressures of most developing countries. The solution to the food problem is not mass production *per se* but production for and by the masses. If increasing the efficiency of land was the only goal of production, the social problem of unemployment would be exacerbated. Redistribution of population into other sectors does not seem to be possible at the present time due to the large numbers involved and the slow rate of growth of these sectors. For instance in Indonesia, of the total population of 130 million people, 70 per cent is concentrated in Java. Although the density of the population is extremely high, it is impracticable to suggest a policy of redistribution due to the restricted opportunities of doing so. Likewise in India where more than 120 million farmers and 70 million operational holdings are involved reorganisation of farms and farming systems would seem unthinkable due to the logistical problems involved.

Group approaches to farming seem to offer some respite to the problems of increasing land productivity without deepening the problem of rural unemployment, particularly in areas where there is an unfavourable man/land ratio. In fact, group farming approaches are now being pursued with vigour in a number of developing countries. Beside the attraction of this approach in offering some solution to the problem of growing unemployment, it also provides a convenient organisational approach for introducing scientific methods of farming.

The resource endowment situations of farmers seem fundamental in determining their success or failure. In planning programmes of intensification this aspect should be carefully examined and the potentials for development explored on this basis. Another aspect which needs further examination is a study of the factors which motivate peasant farmers and their behavioural patterns, if we are to quicken the process of agricultural development by providing the appropriate stimuli.