How Can Agricultural Interventions Contribute in Improving Nutrition Health and Achieving the MDGs in Least-Developed Countries?

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The principle Millennium Development Goal (MDG) concerned with nutrition (Goal 1) aims to halve from 1990 to 2015 the proportion of people suffering from hunger, measured in terms of the prevalence of underweight children younger than 5 years and the proportion of people with dietary energy consumption below a minimum level.

Substantial gains have been made on reduction in underweight prevalence in some regions, but the overall target of halving underweight prevalence is unlikely to be met by 2015 [1]. Recently revised estimates of the numbers and proportions of undernourished people show that absolute numbers of undernourished people have hardly fallen, while the prevalence of undernourishment has fallen, but again the 2015 target of halving the prevalence of undernourishment is unlikely to be met [2].

Links between agriculture and nutrition underpin the concept of food security and have received increasing attention in recent years. There are three major pathways by which agriculture impacts on nutrition (fig. 1): a general development pathway (whereby increasing agricultural labor productivity leads to rising incomes and falling food prices and structural economic and social change), and own-production and market pathways, whereby increasing agricultural productivity and changes in product composition lower food prices and improve nutrient access for agricultural producers and food buyers, respectively.

Evidence on the efficacy of these pathways in the past is mixed, with some strong and some weak or negative impacts, reflecting varied processes and contexts as well as insufficient high-quality empirical research [3–5]. It is clear, however, that there is significant potential for improving the nutritional status of poor people through a range of agricultural interventions alongside complementary social and nutritional interventions – with particular attention to the status of women.
The potential and relative importance of the three pathways also varies with countries’ and societies’ social and economic structures and circumstances, with the development and own-production pathways having the greatest potential in poorer agrarian economies, while the potential of the market pathway increases with development, as the number of food buyers increases and subsistence production and consumption decline. Agri-nutrition interventions in the least developed, poor agrarian economies are likely to be most effective if they work in the overlap of the development and own-production pathways (intersection C in fig. 1). As development proceeds, the focus should shift towards areas A and D in figure 1, before concentrating on the market pathway – although there will still be some disadvantaged producers and poor consumers who merit specific attention through own-production of particular foods (such as vegetables, fruit or small livestock). Agri-nutrition interventions will also need to be supported and complemented by other services and interventions and a supportive environment, particularly where there are substantial food imports.

An increasing variety of approaches and measures are available to increase the impact of agricultural change on nutrition within these pathways, but these need to be tailored to specific contexts and integrated with other measures. This requires a major reorientation and integration of policy, practice and research across the agriculture and nutrition sectors and disciplines – with changes within each to accommodate the other. More effective agricultural-nutrition linkages are also likely to be increasingly
important with emerging challenges to global and local food systems and increasing policy emphasis on nutritional outcomes. An almost universal observation is that women's roles in agriculture and nutrition mean that a major emphasis on improving the status and education of women is fundamental to improving agriculture-nutrition linkages.

References