Agriculture-Nutrition Linkages

Agricultural growth rate well above population growth rate through the rise in productivity of inputs would result in a decline in the relative prices of food. This would ensure availability of adequate quantity of food at affordable prices. Second, pro-poor growth would generate adequate income and purchasing power for small and marginal farmers and wage labor among whom malnutrition is pervasive. Third, gender-sensitive growth with effective participation of women farmers in decision-making by exercising control over income and expenditure can ensure adequate nutrition for them and for their children. Reduced work burden at home and in the field by lowering demands on physical energy can improve their health status. Fourth, diversification of agriculture and rising share of high value food-rich in micro-nutrients—can improve access to such food for farm households because of their ready availability as well as securing higher income. Bio-fortification of food crops with micro-nutrients can further enhance their nutritional value; and finally, agricultural growth high enough to stimulate and sustain non-farm rural growth through its forward and backward linkages would result in higher wages for farm labor as well as greater off-farm employment for the poor with higher and more stable income.

Recent Experience

According to TANDI (Tackling the Agriculture-Nutrition Disconnect in India), the impact of accelerated per capita income growth on improvement in nutrition in India in the recent period is much weaker than that suggested by global experience. Slow growth of agriculture and consequent reversal of the decline in the relative prices of food grains could be a significant factor accounting for this disconnect. The weakening of public support systems for research, extension and institutional credit may have caused greater slow down in the income growth for small farmers and wage labor who predominate among the malnourished. Owing to population growth and sub-division of land holdings, land per head under cultivation has been declining. Pressure on agriculture has increased owing to slow growth of output and employment in the rural non-farm sector.

Agriculture has not fully benefited from the demographic dividend owing to the increasing out-migration of adult male labor. The consequent feminization of agricultural labor force in the absence of property rights on land for women, their low literacy levels and the absence of gender-sensitive public support systems for extension and credit may have resulted in low productivity and income while at the same time increasing the work burden on the already undernourished women farmers.
That agricultural growth has been skewed against the rural poor in India in the recent period is evident from the rise in the incidence of malnutrition among them. Estimates based on NFHS data show that between 1998–99 and 2005–06, the incidence of malnutrition (underweight) among below 3 year olds has increased by 1 to 3 percentage points for the bottom three deciles (with respect to the standard of living index) as against a decline by 3 to 7 percentage points for the top three deciles. These top deciles also show a significant decline in severe malnutrition to the extent of 4 to 7 percentage points whereas there is little change for the bottom three deciles. Among rural women, aged 15–49 years, the incidence of chronic energy deficiency (CED) increased by 1 to 3 percentage points for bottom three deciles over the same period while it declined by 9 to 16 percentage points among the top three deciles.

Prospects

The on-going phase of agricultural growth offers a great potential for attacking malnutrition through diversification of agriculture, strengthening the position of women farmers and accelerating rural non-farm growth.

(a) **Diversification of Agriculture.** Diversification of agriculture, underway, into micro-nutrient rich and high-value products like dairying, horticulture and fishery, etc., holds considerable prospects for ensuring nutritional security. Being land-saving and labor-using, these activities typically suit the small farmers. However, being input-intensive, perishable and risky they need strong support for extension of technology, credit, insurance and marketing services. Small farmers need to be brought together into cooperatives for reducing transaction costs by entering into contracts with the agro-processing firms which could also provide extension services and credit. A big push for public investment in irrigation, agricultural research and extension and rural roads needs to be supplemented by private investments in storage and other marketing infrastructure.

(b) **Making Public Support Systems Gender-Sensitive.** Diversification of agriculture suits women farmers, as they are traditionally engaged in these enterprises. Provision of institutional credit needs to be based on the viability of production plans and repayment performance, and de-linked with titles to land. The outstanding performance of Women’s Self-Help Groups in India with respect to bank-linked credit and micro enterprises amply demonstrates its feasibility.

To meet the needs of feminizing agriculture, extension services need to become gender-sensitive and feminized by inducting women functionaries in large numbers at various levels in the services chain including agricultural research stations. There is an immediate need for the provision of technologies for women farmers to reduce drudgery from physical labor at home and in the field. Their literacy levels, knowledge and skills need to be improved to meet the needs of diversified agriculture.

(c) **Accelerating Rural Non-Farm Sector Growth.** Rural non-farm sector has a considerable potential for growth as it now accounts for only about half of output and less than one-third of employment in the rural sector. Diversification of agriculture and rise in farm incomes offer potential for the growth of agro-processing and other rural industries. Public investment needs to be stepped up in rural infrastructure like roads, power, education and skills, and institutional credit. Farmers with small holdings and landless laborers may increasingly shift to the emerging rural occupations both because of higher wages and more stable employment. These would have a favorable impact on their nutritional status.