Agriculture-Nutrition Pathways
Recognising the Obstacles

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Policies with a thrust on access to food often fail to yield desirable nutritional results since the pathways between agriculture and nutrition seem to be laden with impediments, particularly in the form of intricate household preferences.

The emphasis on the role of agriculture in alleviating undernutrition burdens in India in the commentary by Kadiyala et al (EPW, 25 February 2012) is well-placed and germane. The implicit assumption underlying the analysis is that there are certain specific “pathways through which agriculture affects nutrition”. Gillespie and Kadiyala (2011) have documented the pathways as operating through changes in access to food, incomes, prices, and feminisation of the agricultural workforce. Agricultural production, when used for self-consumption by cultivator households, ensures food security. Agriculture generates wage incomes for labourers and profits from marketed surplus for producers. One of the pathways operates through the proportion of agricultural income spent on nutrition-enhancing activities such as investment in human capital. Again, crop prices affect the income of net sellers and the food security of net buyers. Increasing feminisation of the labour force empowers women, improves their bargaining power in household decision-making and positively affects child health and women’s own nutrition.

The commentary rightly asserts that India has an immense potential in exploring these pathways by making agriculture “pro-poor” and “pro-nutrition” and lays out a blueprint for reorienting agriculture towards nutritional targets. However, it also argues that to reap nutritional benefits from agricultural progress there is a need for “catalysing critical behaviour change” through “community mobilisation”. We intend to supplement their point by suggesting that policies with a thrust on access to food often fail to yield desirable nutritional results since the pathways between agriculture and nutrition seem to be laden with impediments, particularly in the form of intricate household preferences.

Looking at micro-level evidence, we find that households facing no dearth of food availability often show poor nutritional outcomes, particularly to women and children. Studies have shown the coexistence of hunger and undernutrition with being overweight and obese (often undernourished children and overweight or obese adults) in a large proportion of poorer households in developing countries (Pinstrup-Anderson 2006). Household-level studies on the determinants of children’s nutritional status have not been unanimous on the positive significance of wealth and income.

While in India we do find that lower levels of child undernutrition are associated with higher wealth classes, the proportion of undernourished children in wealthier households is remarkably high in comparison with international standards. Tarozzi (2008) has shown that privileges beyond household wealth (defined in terms of urban residence, high school degree for each parent, piped water and flush toilet) also fail to eradicate long-term undernutrition in Indian children. This hints at certain unobservable sociocultural and behavioural practices playing a crucial role in determining nutritional outcomes. It might be the case that in the presence of inequality, households derive greater utility from “status goods” and substitute them for nutrition-relevant consumption even when incomes rise (Marjit 2011).

Convoluted Links

Again, unleashing the “gender dimensions of agriculture-nutrition linkages” does not seem to be easy. It has been suggested that female empowerment leads to greater well-being of children and removes biases in intra-household allocations of food, health and care. However, these links are often convoluted. Recent evidence shows that maternal income is as good as income derived from other sources and makes no differential impact on children’s nutrition (Leon and Younger 2007).
Addressing the issue of the bias against girls in household decision-making, we need to recognise that such biases are not limited to the provision of food. Families are often willing to have more children when they do not yet have the desired number of sons. Thus, even when girls are not discriminated against in the intra-household allocation of resources, their mean outcomes may be worse since girls are more likely to live in families with fewer resources available per head (Jensen 2002). Again parents who are impartial in the provision of food to children may invest more in the healthcare of sons, such investment giving greater returns in the social system of patrilocal residence (Hazarika 2000). It would be naïve to expect that female empowerment through the process of feminisation of agricultural workforce will suffice to remove the multifaceted discriminations in the absence of effective behaviour change initiatives. Evidence shows that women’s empowerment may even perversely work on such biases. Thomas et al (2002) have shown that sons of Javanese and Sumatran mothers with greater empowerment (proxied by the size of assets brought at marriage) are likely to suffer from significantly fewer episodes of morbidity than their sisters.

Once we shift our focus from maternal incomes and related empowerment to maternal education, we find a mounting body of evidence suggesting a significant and positive effect of the latter on children’s nutrition. Studies have also found a greater effect of mother’s schooling on long-term nutrition of girls than that of boys (Sahn and Stifel 2002). The pivotal role seems to be played by awareness and access to information of women. Indeed, almost the entire effect of maternal education on child nutrition can be explained by the mother’s access to information (Thomas et al 1991).

The commentary has brought in the broad macro picture highlighting the prospects of making agriculture “pro-poor” and “pro-nutrition”, also mentioning that such prospects are conditional on “effective social behaviour change communication and mobilisation strategies to change demand, behaviours and consumption patterns”. On a similar note, Pinstrup-Anderson (2006) has observed that “the final nutrition effect of changes in agricultural research and policy will depend on a series of factors and relationships outside the control of agriculture”, including access to safe water, sanitation, healthcare and household decision-making. While the commentary has elaborately outlined the necessary steps to align the systems of governance and convergence across sectors so that the pathways between agriculture and nutrition may be explored, we re-emphasise the point that such initiatives from the supply-side would be scarcely sufficient if the complexities of household preferences and decision-making are not taken into account.

Aligning targets across sectors with that end in focus would be the most challenging and perhaps the most rewarding exercise. Integrating agricultural policies with behaviour change initiatives such as UNICEF’s Dulra Strategy in Bihar and Jharkhand and the positive deviance programme, “Keno Parbo Na” in Purulia district of West Bengal might bring about desirable results.

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