Green Revolution Management: Problems Should Not Scare Us from Adopting the Technology

Tsegaye Tegenu 07/05/10

I would like to thank Yemane for his response and sharing us his concerns. The purpose of the article is to initiate discussion on already existing practice and model for addressing food crisis caused by population pressure and price hike. The concerns of Yemane are legitimate and absolutely essential in understanding the management of green revolution. I am not sure how my restricted definition of green revolution as technological packet has contributed to conceptualization of the issue. I know green revolution is more than technology and the model includes the state, the private sector and the smallholder agriculture. I emphasized the technological aspect out of my interest in labor productivity in Ethiopia. As I pointed out increasing land and labor inputs to ensure food security in Ethiopia is leading to diminishing returns. The country has reached stage necessitating the adoption of technology to overcome the multi-dimension crisis of low agricultural labor productivity, rural income stagnation, land degradation and climatic changes.

Green revolution has been criticized for its impact on the environment as mentioned by Yemane and its skewed socio-economic outcomes favoring certain farmer group and regions. Mostly the criticism is forwarded by conservationists and protagonists of smallholder agriculture. The criticisms were severe in the 1960s when the program was new in number of Asia countries. As countries start to gain extensive experience, green revolution started to move in a more environmentally friendly direction and small holders began to benefit as much as large farmers. Over time the environmental and economic consequences of the green revolution have been well understood and taken into account in practice. Today there is no disagreement about the significance of green revolution in solving food crisis. The USA, Mexico and Asian Countries have proved that. For details on controversies and Asian experience please read SIDA (2006), what can sub-Saharan Africa learn from Asian experiences in addressing its food crisis? (addressing food crisis in Africa)

Ethiopia itself has got experiences of the green revolution technology since the 1970s through the Chilalo Agricultural Development Unit (CADU-ARDU) program (see Cohen, J.M. (1987), Integrated Rural Development: The Ethiopian Experiences and the Debate. Uppsala). Someone who has got time can read this book and summarize why the program has failed. Considering the time Ethiopia has gone through modern agricultural technology experience, it is now clear that the country does not need to import and introduce high yield varieties of wheat and rice. Ethiopia has got its grain varieties such as teff, maize, sorghum and enst that fit well with its ecology. The country has got extensive experience in irrigation even if it uses only 8% of irrigable land. Much has been also done in areas of research and agricultural manpower development in the country. At one time soil laboratories
were established at the regional levels to study the type of fertilizer that suits the soil type. The government has extensive experience in providing inputs on time.

What is remaining now is to create a purpose and system for green revolution based on the experiences in Ethiopia and Asian countries. Green revolution is not something that starts by directives emanating from the Minister of Agriculture. The government must declare its intention on green revolution for the purpose of food-self sufficiency and mobilize resources in the construction of irrigation facilities, development of the technology, provision of inputs on time, creating conditions for the involvement of private sector such as expanding road networks and studying the conditions how smallholder farmers participate in the revolution. To operationalize green revolution in Ethiopia it may be necessary to establish an expert group which studies the context, mechanisms, intervening conditions and effects of green revolution in the country.