
SUMMARIES OF GROUP DISCUSSION

Subject I

Sustainable Agricultural Growth, Diversification and Farm Income

Rapporteur : Bidhan Chandra Roy*

As the issues of agricultural growth, sustainability of agricultural system, diversification and farm income are closely interlinked, the three major challenges- feeding a growing population, providing a decent livelihood, and protecting the natural resource base- must be tackled together if we are to make agricultural development sustainable. With this background, papers were solicited under this subject with a focus on recent trends and regional pattern of agricultural growth, diversification and farm income. Accordingly, a very large number of papers were received out of which 66 were accepted for discussion under this subject which covered broad areas like crop, income and livelihood diversification; climate change impacts, resilience, vulnerability and adaptations in agricultural systems; regional evidence on sustainability of production systems including adoption of sustainable farm practices; analysis of past sources of agricultural growth and instability; identification of future sources of growth and strategies for sustainable agricultural development to enhance farm income; and finally on miscellaneous issues related to the subject.

Out of these 66 papers, only 25 were presented in the Conference followed by active discussions and deliberations on issues raised therein. Since a large number of contributed papers were not presented but raised some very important issues, at the end of all the presentations, an active discussion and deliberations was also conducted on major issues raised in the remaining 41 papers.

The main issues emerged from the entire discussions are summarised as under:

1. Diversification is crucial and has definite contribution in raising farm income. The extent of crop diversification has decreased in most of the states, particularly after global food crisis in 2008-09. However, in spite of fall in the extent of crop diversification, there is a continuous shift towards high value crops particularly towards fruits and vegetables. The direction of diversification has been changed. Farmers are now growing limited number of crops but their decisions are driven by

* Professor, Department of Agricultural Economics, Institute of Agriculture, Visva-Bharati, Sriniketan-731 236 (West Bengal).

market demand and profitability. There exists an industry-crop relationship leading to cultivation of certain specialised crops required for the industry.

2. Income and livelihood diversification is growing at a larger pace. Whereas the share of income from crop production has declined, the share of income from wage earning and rearing of animals has increased substantially in most of the states. Fisheries and poultry sectors are also growing fast.

3. Climate change is a major risk to sustainability of agricultural system. Climate is changing and will continue to change at a faster rate. Exposure to climatic variability has increased during last few decades, at the same time adaptive capacity of the farmers and resilience of our agricultural systems too increased substantially, but the level of vulnerability is still at very high level. If we don't take immediate action this is going to be a major threat in near future. Climate change represents a significant threat to current agricultural production and poses serious challenges particularly to the poor farmers who live in areas often located in arid or semi-arid zones and in ecologically vulnerable mountains.

4. It appears from the presented papers and subsequent discussions that climate change impacts are significantly more adverse in rainfed and hilly areas and the resource poor are the most vulnerable groups. Crop, agricultural and livelihood diversification is arguably one of the most rational and cost-effective approaches to cope with the vagaries of climate change and thus is vital for creating healthy agro-ecosystems, and to enhance farm income. Sustainable agricultural practices (SAPs) also offer a much needed alternative to input-intensive agriculture. However, SAPs are still far from mainstream in India.

5. From the findings of the studies presented, it is clear that the technology was and will continue to remain the main sources of growth in future too. Besides ensuring growth, to a great extent, it also helped in reducing the volatility in agricultural growth i.e., increasing the resilience of our agricultural systems to long term climatic fluctuations.

6. Besides technology, investment in rural infrastructure (particularly irrigation, road and market), institutional credit and price support also played a crucial role in ensuring growth in agriculture.

7. However, it is a matter of serious concern that the share of investment in total public expenditure is declining over time. The limited public funds (non-salary component) allocated towards agricultural sectors are now getting diverted towards subsidies and transfer payments like PMKISAN (all India), Rayathu Bandhu (in Telangana and Andhra Pradesh), KALIA (in Odisha), and Krishak Bandhu (in West Bengal).

8. Corporate investment in agriculture is not picking-up as expected and farm household investment is also constrained due to several reasons. One of the important studies presented in the conference, reveals a weak association between household's saving rate and investment in agriculture and allied activities. This implies households' dependence on borrowings for investment finance.

9. Investment in agriculture (both public and household) is particularly low in Eastern and North-Eastern states which are also home to the majority of rural poor in India.

10. Prices too play an important role in ensuring growth, changing cropping pattern and raising farm incomes. Minimum support price (MSP) is an integral part of agricultural price policy of India which helped a lot in ensuring growth, but of late farmers in several parts of the country feel it inadequate (as reported in as many as 4 studies). In many areas, particularly in eastern and north eastern states, the procurement system is inadequate and inefficient too. Researchers also stressed on the need to reorient agricultural price policies from cereal centric approach to ensure nutritional security and sustainability of natural resources.

11. The diversity of Indian agriculture is a great strength. Therefore, the regional and sub-sectoral diversities in Indian agriculture should be kept in mind while taking policy decisions. During discussion, in almost all the above issues, one common argument (and agreement too) was there that since Indian agriculture is highly location specific, instead of prescribing a uniform policy for the whole country, the policies and interventions must be region specific and sector specific.

RECOMMENDATIONS

1. We need to encourage further diversification towards high value crops, livestock and fisheries. However, diversification strategy should encourage region/location specific crop plans considering natural resource endowments and local demands. This will help both to conserve stressed natural resources and manage price volatility, and thereby, leads to sustainable agricultural growth and enhanced farm income.

2. Given that an accelerated pace of diversification will have positive impacts on income, employment, conservation, and use of natural resources, there is a need for increased investment in R&D and scaling of innovations linked to sustainable farming systems that are best suited to varying agro-ecologies. At the same time, fallow lands (particularly after *kharif* crops like paddy) need to be used for less water consuming crops like pulses, oilseeds, etc.

3. Adoption of SAPs is the key to sustainable agricultural growth and thus need to be promoted. Steps need to be taken in favour of introduction of more climate resilient crops, technologies (soil testing, machineries, pest, drought and flood resistant seeds), and promotion of adoption of sustainable agricultural practices by the farmers.

4. There is an urgent need to increase public investment in agriculture. However, given the fiscal constraints faced by both the union governments as well as most of the state governments, region-specific policies on the prioritisation of items investment are needed.

5. Investment in agricultural research and micro-irrigation are very vital. Time has also come to enlarge the scope of conventional rural infrastructure by including investments in soil testing laboratories, automatic weather stations, and other technology applications such as use of drones, especially in the context of risk.

6. In addition to the physical 'hard' infrastructure, there is a case for development of soft infrastructure too. Investment in soft infrastructure in terms of information and research and extension services to farmers will go a long way in ensuring sustainable agriculture growth and in enhancing farm incomes.

7. Eastern and north-eastern states have very low saving rate and thus there is a greater need for higher public investment and increased flow of institutional credit in these states to sustain agricultural growth.

8. Minimum support price (MSP) is still very important. To make it effective the procurement arrangements, particularly in eastern and north eastern states, need to be improved. At the same time there is an urgent need to reorient agricultural price policies to ensure nutritional security and sustainability of natural resources. The cereal (particularly rice & wheat) centric approach need to be changed in favour of millet, pulses, oilseeds and other high value crops. There is a need to create market for coarse cereals.

9. There is also a need to re-prioritize agricultural research agenda to meet the future food requirements in accordance with the structural changes taking place due to growing incomes, urbanization, globalization, increasing middle-income groups, and changes in tastes and preferences.

10. Of late, agricultural policy implementation in our country facing resistance from the farmers and other stakeholders. Agriculture is a state subject in India, but Union Government too plays a significant role. Therefore, as highlighted in the Presidential address, agricultural policy making should include the preferences of all the stakeholders.

11. Agricultural policy making should also take in to consideration of huge regional diversity, both across the regions and sub-sectors, in terms of natural resource endowments, human capacities, poverty and opportunities. Therefore, instead of prescribing a uniform policy for the whole country, the policies and interventions must be region specific and sub-sector specific.

CONCLUSION

The theme received a good response from researchers on the above mentioned issues. At the same time, few important issues were not covered by the paper writers. For example, agriculture is one of the core industries in achieving SDGs, especially in developing nations like India. In fact, sustainable agricultural growth is at the heart of the agenda for SDGs and first fundamental step to securing zero hunger. Almost all the state governments have prepared and submitted mid-term progress report on SDGs. However, it is discouraging not to receive a single paper on this particular issue. Similarly, other than price policy (that too MSP only), effectiveness of government schemes and policies (like income transfer schemes) in achieving sustainable agricultural growth and farm income hitherto remained unattempted.

- In order to achieve SDGs, there is an urgent need to adopt a new strategy evolved around scaling of technologies and innovations, through an enabling policy environment and better governance. The new strategy should promote new agriculture on the principles of efficiency, inclusiveness and ecology, innovative institutions, public-private partnership (PPP) and higher public investment.
- Since the limited public funds for agriculture are now being diverted towards transfer payments, an in-depth assessment of such schemes particularly their impact will be very useful.