
SUMMARIES OF GROUP DISCUSSION

Subject I

Hill Agriculture in India: Problems and Prospects of Mountain Agriculture

Rapporteur: M.H. Wani*

The Session began with a brief presentation of the Rapporteur's Report followed by detailed discussion on the various issues spelt out in the report for deliberations. A few more issues were also identified for focused discussion. The paper writers presented their papers and brought different perspectives from different hill agriculture systems.

Mountains play a crucial role in sustaining about 10 per cent of the world population directly. In addition, mountains sustain life of people living in the plains as they are the major source of water supply as majority of rivers originate from these ecosystems. The major mountain ranges in India are the Himalayas and the Western Ghats. They traverse an arc of about 2500 km between the Indus and the Brahmaputra rivers. In India, the mountain ecosystem is spread over 12 states of India: Jammu and Kashmir, Himachal Pradesh, Uttaranchal, Sikkim, Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and West Bengal. They are inhabited by 51 million people, covering 18 per cent of the geographical area and 6 per cent of India's population. The rich environmental heritage of the Himalayan region is under pressure from natural and human-induced stresses.

Considering the poor scope for industrialisation in mountains and perspective of rural livelihood, agriculture remains an important sector for livelihood and economic growth despite its declining share in the economy. In view of its potential for economic growth and development of rural sector within the hill region, and role of hills in providing life sustaining water and environmental services, hill agriculture has started receiving renewed attention of voluntary agencies and government.

The hill agriculture has its own unique characteristics and that the growth potential of hill agriculture has remained under-exploited due to various mountain specificities like undulating topography, lack of system specific technologies, poor marketing and processing infrastructure and under developed supporting institutions.

However, hilly states have a lot of potential to accelerate agricultural growth through diversification from low to high value crops. Demand for attribute based products that can be produced only in hill ecosystem is rising rapidly. These offer

*Professor and Head, Division of Agricultural Economics and Marketing, S.K. University of Agricultural Sciences and Technology of Kashmir, Shalimar Campus –191121 Srinagar (Jammu and Kashmir).

tremendous scope for enhancing the farm income, addressing gender issues and creating job opportunities. However, this potential needs to be harnessed very carefully without disturbing the natural system and in harmony with socio-economic and cultural factors. Hill agriculture has several niche areas having comparative advantage for better exploitation of resources and for better trade. Organic farming still remains a viable option for export of specialised commodities especially fruits and vegetables. Further, it has a potential for quality seed production and commercial floriculture.

Even though we have several constraints in hill agriculture, but we have opportunities to harness the production potential of surface water and agro-climatic diversities that favours cultivation of fruits, vegetables and crops of industrial importance. In this backdrop, the paper-writers presented papers on varied themes covering growth and sustainability issues in hill agriculture.

The discussion started with the role of watershed development programmes in sustaining natural resource base and improving productive potential of hill states. The participants propagated the sustainable hill agricultural practices as well as strategy to combat climate change in hill ecosystems. Emphasis was laid on building of strong institutional mechanism as well as payment scheme in watershed services to maintain, operate and govern the watersheds on sustained basis. It was further advocated that a separate watershed development policy for hill states looking at the specific nature of watershed and the problems confronted by these states need to be formulated.

This was followed by the discussion on farming systems in the foothills of North East. The main highlights of this discussion were optimisation for better utilisation of resources and higher net returns. A concern about various constraints like non-availability of capital, lack of irrigation facilities and unavailability of farm inputs was drawn during the discussion.

An overview of agricultural development in North-eastern hilly region of India employing secondary information supported promotional measures for high-yielding variety seeds and fertiliser use coupled with the efforts for location-specific research with an emphasis on agricultural extension services.

Livestock sector has remained an integral part of various farming systems in hills by way of symbiotic relationship with crops. Due to slope and topography hill soils are subject to soil erosion and many other natural processes which reduces soil fertility. Animal manure is the vital source for restoring and maintaining fertility of hill soils. Besides, livestock sector provides major products like meat and milk. Livestock are also a main source of draught power for hill farms where the scope of mechanisation is least.

A case study of migratory sheep in the Kangra district of Himachal Pradesh brought a very interesting point that the rearing of migratory sheep and goat could be a viable proposition for better livelihood of farming community at high altitudes.

It was observed that hill agriculture is gradually diversifying in favour of fruits and vegetables. Hill states have potential for production of vegetables in off-season that has higher demand in neighbouring plains when there is scarcity of supply. In the background of growing importance of vegetables as a profitable venture, experience in off-season vegetable cultivation in Kullu district of Himachal Pradesh was discussed by the group. It suggested that innovation in the form of hill specific tools and dissemination of organic technologies could encourage this enterprise as a better livelihood opportunity.

Though various aspects relating to the theme were presented, the participants of this technical session expressed serious concern about the fact that some aspects like value chain and marketing which were not touched upon were also discussed.

After extensive and in depth discussion, the participants arrived on consensus with following recommendations for hill agriculture;

- Separate hill agricultural policies need to be formulated.
- Consortium of hill states with representation of farmers need to be established with mandate to formulate the policies for development of hill agriculture.
- Regular brainstorming sessions should be organised for pragmatic hill agricultural planning.
- Market driven production and market led extension may be envisaged in the developmental programs of hill states.
- Formulation of effective trade policies taking into account the potential and livelihood of hill region.
- Construction of basic infrastructure coupled with institutional support would help in harnessing farming externalities.
- Watershed development programs need to be expanded and upscaled with a separate watershed development policy and guidelines for the hill states looking to the peculiar nature of hill states.
- Livestock production system should be strengthened with effective grazing policies.
- Massive plan for rejuvenation or re-plantation of old age apple orchards need to be formulated.
- Convergence of development activities will generate greater social benefits in hill agriculture.