

Issues and Options for Improving Livelihoods of Marginal Farmers in Uttaranchal

G.S. Mehta

Giri Institute of Development Studies, Aliganj, Lucknow, India

Introduction

Uttaranchal is one of the more underdeveloped states of India. Agricultural and associated activities, including animal husbandry and fishing, form the economic base and the main sources of livelihood and employment. However, increasing population, decreasing arable land due to increasing landslides and soil-erosion, decreasing natural resources required to sustain agricultural production, and the decreasing quality of lands due to increasingly scarce water for irrigation have increased the problems of sustaining the livelihoods of farming households, particularly for marginal farmers.

Emerging Situation of the Farming System

Land use pattern

A detailed enquiry revealed that the utilisation of land for the production of crops is very low, and decreasing at 0.2% per annum due to land degradation which makes farming communities unwilling to engage in agricultural activities that give low returns. The tendency to leave land fallow is increasing as land fertility decreases. At the same time, due to over-exploitation of forests by both local people and organised timber thieves, the land under forest cover is decreasing. Consequently, the land classified as barren and cultural waste has been increasing significantly in almost all mountain and hill areas. The land problems have caused shifts in the occupational structure of employment and led to increasing out-migration of the male labour force outside the state.

Production system

The productivity rates of major crops in hill districts were examined for at least a decade. A significant shift in the cropping pattern was seen in both plains and hill areas, but to a higher extent in hill areas. Utilisation of available land for the production of high-value commercial crops such as fruits, pulses, and off-season vegetables is increasing consistently, while land under the cultivation of low-value traditional food grains such as paddy, madua, wheat, and barley has been decreasing in hill areas.

Land distribution and utilisation

Cultivated land accounts for only around 13% of the state's total geographical area. The farmers own very small amounts of cultivable land, a sizeable part of which is not being utilised for either 'kharif' (summer) or 'rabi' (winter) crops, because the land has been degraded and to a large extent lost its productive capacity. Farmers keep the land fallow in alternate years to regain fertility. Of the total land available to the farmers, over 64% (90% in hill areas and 24% in plains areas) does not have irrigation facilities. In such circumstances, every category of farm in Uttaranchal can be considered as marginal and small.

There are 754,000 operational holdings in the state, of which 97% are marginal and small farms. The average land area per cultivator is only 0.6 ha (0.5 ha in hill areas and 0.9 ha in plains areas).

Over the years, landholdings have become fragmented due to the increasing population and numbers of households. Consequently, the numbers of small and marginal farms are increasing rapidly. Every year, the operational land area decreases by 0.2%, while the numbers of holdings increase by 0.3%. The increase in the numbers of marginal and small farms results from the fragmentation and sub-division of the highest categories of farms. The pressure of cultivators on the farming system is increasing at a much faster rate than the growth of population, and more sharply in hill areas than in plains areas. During the past decade, the average amount of cultivated land per cultivator has decreased from 1.4 ha to 0.6 ha, an annual decline of 5.8%.

Options for Improving Livelihoods

Given the problems of the existing farming system and various constraints to increasing the productivity of different field crops, diversification of the farming system by shifting the available land from the production of low-value food crops to hi-value commercial crops could be an important option for sustaining the livelihoods of marginal and small farmers. Shifting available land from growing traditional food crops to cultivation of fruits and vegetables has been instrumental in terms of both employment generation and increasing incomes. Utilisation of one hectare of land for cultivating fruits provides 77% more employment and 58% more income than the cultivation of agricultural crops (Mehta 1997).

Uttaranchal state has a great potential for growing different kinds of off-season vegetables, flowers, ornamental plants, mushrooms, and medicinal and tea plants in its different climatic zones. Temperate fruits such as apples, pears, peaches, plums, apricots, cherries, and walnuts are grown at elevations from 1000m to 3000m; and crops such as citrus, mangoes, litchi, banana, guava, papaya, strawberry, and different local fruits at elevations ranging from 300m to 1400m.

Fruits: area, production, and productivity

In Uttaranchal, 188,000 ha are under the production of different fruits, 15% of the total cultivated area. The land area for fruits increased by 132% between 1984/85 and 1998/99, the total production of fruits increased from 330,000 tonnes to 520,000 tonnes or 58%, and productivity per hectare increased from 2.3 tonnes to 2.8, or 20.4%. Apple is the most important fruit crop grown in the state and is cultivated on 55,000 ha, nearly 30% of the total area of all fruits. Farmers owning both small and large landholdings have become quite aware about the economic use of their available land. In some areas nearly 63% of fruit growers have expressed a desire to diversify and expand the size of their orchards by additional planting of different varieties of fruits. Farmers not currently engaged in growing fruits would also like to do so, but the problems of marketing represent a major constraint in diverting their land from the cultivation of traditional low-value crops to the plantation of fruit trees (Mehta 1988).

Vegetables: area, production, and productivity

Uttaranchal possess advantages over the plains areas in terms of producing a variety of seasonal vegetables, particularly potato and tomato, and the land area under vegetables has been increasing consistently. Between 1984/85 and 1996/97, the land area of vegetables increased from 46,000 to 90,000 ha, an average of 3,700 ha added each year mainly for potato and the productivity of all vegetables together increased from 6.1 tonnes/ha to 9.1 tonnes/ha.

These facts clearly indicate that farmers are increasingly shifting their available land into the production of different vegetables instead of growing traditional crops. Increasing returns from vegetables has influenced them to adopt various improved technologies, which have increased the productivity rates of different vegetables over the years. If this successful trend is sustained, the growing problem of poverty among marginal and small farms can be substantially reduced. However, at present, lack of proper marketing facilities and the absence of post-harvest technologies and storage facilities are serious constraints to a more rapid and systematic development of vegetable cultivation.

Marketing Arrangements and Support Services

The advance or pre-arranged sale of orchard crops is the most prevalent marketing arrangement in the state. It favours fruit contractors rather than fruit growers, as the contracted prices are usually significantly lower than market prices. At the same time, fruit grown in remote and less accessible areas does not find a convenient market. Collecting fruits from these areas is difficult even for contractors.

The emerging marketing problems could be solved by organising fruit growers to form cooperative societies and developing fruit markets and marketing centres in different fruit growing areas. This would also prevent perpetuation of the inequitable linkages prevailing between fruit growers and contractors. Marketing arrangements would need to ensure sale of fruits at remunerative prices and to make available crop-credit from banks and other financial institutions. A network of cooperative societies, including primary credit societies, would probably be the most effective system for these purposes.

In addition to these initiatives, it would be necessary to provide easy access to support services such as seeds, fertilisers, production techniques, improved agricultural services and methods, and marketing infrastructure in order to increase yield levels and minimise the risks involved in the shift from food-centred subsistence production to niche-based commercial production.

Measures for Meeting the Opportunity Cost of Shifting Land

Intercropping

Fruit trees require five to six years to develop before they can bear fruits and earn income. Therefore, the shift from the production of food grains to the plantation of fruits would initially mean hardship for farmers, particularly those owning very small pieces of land. Farmers should be encouraged and helped to carry out intercropping on land where fruit trees are grown. Suitable high-value commercial crops should be identified by carrying

out research on the quality and suitability of soils for growing particular crops. A study by Karane (1996) showed that raising soybeans during the kharif season and peas in the rabi season successfully complemented pecan nut trees. Inter-cropping between fruit trees with oil seeds and local varieties of pulses has been quite successful over a period of four to five years in most orchards in Nainital and Almora. In fact, the value of pulses and oil seeds grown as intercrops is estimated to be much higher than the value of traditional crops grown on the same land. Nevertheless, Mehta (1996) estimated losses of 20% to 35% on production of agricultural crops as a result of intercropping with fruit trees in some areas. The yield will of course be relatively lower than cultivating food crops without fruit trees, but at least some food requirement will be met.

The Task Ahead

Mobilisation of public support for the diversification of farming systems by shifting land to the production of fruits and vegetables will not be a difficult task. Farmers are very keen to bring changes to the farming system and are making great efforts in this regard even without any proper support from either local institutions or the government. However, farmers possessing small landholdings are hesitant to adopt changes because of the high production and market risks. If this is not addressed properly, it could deprive farmers even of the limited subsistence they now derive from food crops.

References

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