

Migration and Organic Farming in Mountains (Uttarakhand)

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Migration is a severe problem in the mountainous region of Uttarakhand. The main reasons for migrating are the desire for better livelihood/employment, education, and medical facilities. Together, these three reasons account for almost three-fourths of the reasons for migrating at the state level. Farming in the mountainous region is organic by default. The demand for organic products is very high in the market. Union and state governments are trying to promote organic farming at the national level. Many government and non-government organizations are working for the development of organic farming in Uttarakhand. The young generation is adopting organic farming as a career and earn a handsome amount of money. They also save the degrading environment and serve humanity. Many successful stories are taking place in different parts of Uttarakhand. The present paper is an attempt to find out organic farming as a solution to migration in the mountain of Uttarakhand. This paper is based on secondary data available on the internet.

[Keywords : Migration, Organic farming, Better livelihood/ Employment]

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1. Introduction

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2. Objective of the Study

The present paper is an attempt to find out organic farming as a solution to migration in the mountain of Uttarakhand. This paper is based on secondary data available on the internet.

3. Development in Uttarakhand and Migration

Uttarakhand formerly known as Uttaranchal is a state in the northern part of India. It is often referred to as the Devabhumi (literally "Land of the Gods") due to a large number of Hindu temples and pilgrimage centers found throughout the state. Uttarakhand is known for the natural environment of the Himalayas, the Bhabhar, and the Terai. On 9 November 2000, Uttarakhand became the 27th state of the Republic of India, being created from the Himalayan and adjoining northwestern districts of Uttar Pradesh. It borders Tibet to the north; the Sudurpashchim Pradesh of Nepal to the east; the Indian states of Uttar Pradesh to the south and Himachal Pradesh to the west and north-west as well as Haryana on its south-western corner. The state is divided into two divisions, Garhwal and Kumaon, with a total of 13 districts. The interim capital of Uttarakhand is Dehradun, the largest city of the state, which is a railhead.¹

Over 700 villages in Uttarakhand have been deserted and more than 3.83 lakh people have left their villages in the last 10 years with

half of them going out in search of livelihood, according to a report. Sharing the data with the media Rural Development and Migration Commission Chairman S S Negi said however 70 percent of the migrating population had moved only from one part of the state to another and not outside it. The data forms part of the commission's report on the status of migration in the state over the last ten years which was released by the Chief Minister at his official residence here. According to the data, a total of 3,83,726 people have migrated from their homes in Uttarakhand villages over the last 10 years with 50 percent of them going out in search of livelihood and the rest due to poor education and health facilities. Since the 2011 census, 734 villages in Uttarakhand have become depopulated out of which 14 are within an aerial distance of 5 km from the borders, Negi said. There are 565 villages where the population has gone down by 50 percent during the period, he said.²

The development experience of Uttarakhand over nearly one and half decades has been quite encouraging in respect to achieving high economic growth. However, such growth has been mainly centered in three plain districts of the State, and ten hill districts remaining far behind in this increasing prosperity of the state (GoUK, 2013-14 Annual Plan).³ Most of the economic opportunities have been developed in plain parts of the state. As a result, the population in the hill region of the state has yet to struggle hard to eke out their livelihoods largely from agriculture by putting larger numbers of their household members into the labor force (Mamgain, 2004).⁴ The increased migration process in Uttarakhand's hill districts thus could hardly transform the local economy in the form of the increased flow of remittances as has been seen in Kerala and to some extent, Bihar (Deshangikar and Farrington, 2009).⁵

The Migration Commission report serves to confirm what is already known about why people migrate. The main reasons for migrating, in order of importance, are the desire for better livelihood/ employment, education, and medical facilities. Together, these three reasons account for almost three-fourths of the reasons for migrating at the state level. In individual districts search for better livelihood/ employment remains the most important reason with its share ranging between 41 and 76 percent. Other reasons include a decline in fertility of land or reduction in agricultural production, or following the footsteps of relatives, acquaintances who have

migrated, and 'sundry' reasons. The share of the last-mentioned reason is as high as 24 percent in Bageshwar, 19 percent in Uttarkashi, and 18 percent in Dehradun. A desire for better livelihood and employment opportunities remains the dominant reason for migration ranging between 41 and 77 percent in individual districts and 50 percent in the State as a whole.⁶

4. Organic Farming for Better Livelihood/ Employment in Uttarakhand

Organic farming is a method of crop and livestock production that involves much more than choosing not to use pesticides, fertilizers, genetically modified organisms, antibiotics, and growth hormones. Organic production is a holistic system designed to optimize the productivity and fitness of diverse communities within the agro-ecosystem, including soil organisms, plants, livestock, and people. The principal goal of organic production is to develop enterprises that are sustainable and harmonious with the environment. The general principles of organic production, from the Canadian Organic Standards (2006), include the following :

- Protect the environment, minimize soil degradation and erosion, decrease pollution, optimize biological productivity and promote a sound state of health.
- Maintain long-term soil fertility by optimizing conditions for biological activity within the soil.
- Maintain biological diversity within the system.
- Recycle materials and resources to the greatest extent possible within the enterprise.
- Provide attentive care that promotes the health and meets the behavioral needs of livestock.
- Prepare organic products, emphasizing careful processing, and handling methods to maintain the organic integrity and vital qualities of the products at all stages of production.
- Rely on renewable resources in locally organized agricultural systems.⁷

A study published in 2005 compared conventional cropping, organic animal-based cropping, and organic legume-based cropping on a test farm at the Rodale Institute over 22 years.⁸ The study found that "the crop yields for corn and soybeans were similar in the

organic animal, organic legume, and conventional farming systems". It also found that "significantly less fossil energy was expended to produce corn in the Rodale Institute's organic animal and organic legume systems than in the conventional production system. There was little difference in energy input between the different treatments for producing soybeans. In the organic systems, synthetic fertilizers and pesticides were generally not used". As of 2013, the Rodale study was ongoing and a thirtieth-anniversary report was published by Rodale in 2012.⁹

In the United States, organic farming is 2.7 to 3.8 times more profitable for the farmer than conventional farming when prevailing price premiums are taken into account.¹⁰ Globally, organic farming is between 22 and 35 percent more profitable for farmers than conventional methods, according to a 2015 meta-analysis of studies conducted across five continents.¹¹

The profitability of organic agriculture can be attributed to several factors. First, organic farmers do not rely on synthetic fertilizer and pesticide inputs, which can be costly. In addition, organic foods currently enjoy a price premium over conventionally produced foods, meaning that organic farmers can often get more for their yield. The price premium for organic food is an important factor in the economic viability of organic farming. In 2013 there was a 100% price premium on organic vegetables and a 57% price premium for organic fruits. These percentages are based on wholesale fruit and vegetable prices, available through the United States Department of Agriculture's Economic Research Service. Price premiums exist not only for organic versus nonorganic crops, but may also vary depending on the venue where the product is sold: farmers' markets, grocery stores, or wholesale to restaurants. For many producers, direct sales at farmers' markets are most profitable because the farmer receives the entire markup, however, this is also the most time and labor-intensive approach.¹²

There has been a rise in consumers' demand for safe and healthy food due to increasing concerns over the quality of food, contamination due to chemicals, serious health hazards, and environmental issues. This increasing demand has given way to a new stream of agriculture, popularly known as Organic Agriculture. The key issues emerging in organic farming include yield reduction in conversion to the organic farm, soil fertility enhancement, and

integration of livestock, certification constraints, ecology, marketing, and policy support. This paper discusses the potential for organic farming and argues that organic farming is productive and sustainable, but there is a need for strong support to it in the form of subsidies and research carried out by Public-private partnerships.¹³

The Uttarakhand government would develop nearly 10,000 organic clusters in the mountain region even as a move “is on” to legalese organic farming, agriculture minister Subodh Uniyal said Thursday. “The Centre has agreed in principle to allocate a budget of Rs 1500 crore to develop 10,000 organic clusters in the state. It is one of several steps initiated by the Centre to realize Prime Minister Narendra Modi’s vision to develop Uttarakhand as an organic state so that local farmers’ income could be doubled by 2022.”¹⁴

Maikhuri identifies the key problems, their causes, and the scope of solutions based on the perceptions of the farmers participating in the organic farming training and development. The present approach of providing subsidy as part of policy though encourages the farmers to take up the programs, they need to build the capacity to continue the organic farming once the subsidy is withdrawn. The policy is currently looking at only to export the raw material from the region rather than value addition to increase the shelf life and export potential. Some potential actions for sustainable organic farming in the state are suggested.¹⁵

Initially, a pilot program of demonstration of certain technologies was taken up in 16 villages of Uttarakhand. Later, it was expanded to 212 villages. The term bio-village has evolved along with the development of demonstration villages to 100 percent saturation villages where commodity production, certification, and market linkage have been established. Presently, 1,200 bio villages are covered under the organic program and 20,000 farmers have been sensitized.

The tangible results are the export of 100 tonnes of organic rice to Germany and a product expansion plan for 400 tonnes of commodities like kidney beans, lentils, buckwheat, and millets. An increase of 35-40 percent in unit price has been realized for the farmers. The groups logged domestic market sales to the tune of Rs. 35 lakh in 2004. Organic producer groups have been trained to semi-process and package the products at the village level itself. A total of 40 organic commodities have been developed, including

organic detergents. Several farmer groups are actively engaged in exploring organic opportunities and some NGOs are also active in linking farmers with healthy food activities.¹⁶

Srikot is a village a role model for bio-village in Pauri Garhwal. A minion village called Srikot in Pauri Garhwal district of Uttarakhand has emerged as a surfeit bio-village. It all started with a project in which the farmers were educated about the harmful effects of chemical fertilizers and the advantages of using biofertilizers. About 18 demonstrations were done on EM (Effective Micro-organisms) Heap, BD Heap, CPP (Cow Pat Pit), and NADEP was also organized in Sirkot Village. NADEP is a process to make compost. It involves placing layers of different types of compostable materials in a simple, mud-sealed structure designed with brick and mud water. The system permits the conversion of approximately 1 kg of animal dung into 40 kg of rich compost which can be applied directly to the field. The farmers who were not associated with this project also started producing their NADEP compost.

In 2001, a tiny hamlet called Dhanpur in the Kalsi block of Dehradun district was identified as a bio-village. The village consumed a total of 146 quintals of D.A.P. (Diammonium phosphate). When this village was selected as a bio-village, it reduced the use of chemical fertilizers to 10 quintals. Each household of this village now produces compost and bio-pesticide for their farmlands using cow urine. The women of Danpur have also come up as a strong pillar for making their village a complete bio-village. Durga Mahila Swayam Sahayata Samuh, a Women Self Hep Group leads the village. The women of this group make baby pillows made out of millet husk and other organic produce such as organic ginger, organic turmeric, etc.

Mankandpur Village of Ramnagar in Nainital has become a fully saturated bio-village. The farmers of this village are producing a different kind of compost called 'Matka-Khad', a vermin compost which is beneficial for the crops. The villagers are also using cow dung to make compost and are selling their organic wheat at Rs. 1,400 per quintal.

5. Success Stories of the Farmers of Uttarakhand who had a Profitable Return from Organic Farming

Girish Joshi of Jalut Village in Gangolihaat block of Pithoragarh district, a master trainer who is well aware of the benefits of

bio-agriculture has grown 3 tons of onions using the bio-compost per acre, CPP, and liquid manures. Girish Joshi also recorded a rise of 15% extra onions and saw a hefty growth in bulbs.

Brijmohan Chauhan of Thadun Village in Purola block of Uttarkashi district has invented low-cost bio-pesticide by using bio-liquid obtained from aromatic leaves of wild plants. He used it on his 10 nali about 0.02 hectares land and earned a profit of Rs. 10,000 by selling the agricultural produce.

Shiva Charan Singh, a farmer and gram pradhan in Mundakhedakalan village of Haridwar district has grown more than 70 kilograms of bottle gourds in 60 days by using a single seed. He used 3 kilograms of bio-compost to achieve this unrealistic result.

Anand Singh Bisht, a farmer of a quaint village called Jitpur in the glittering Nainital district has used 900-kilo bio-fertilizer on 4 hectares of land for growing basmati crop. Consequently, he has witnessed a 10% rise in the crop by reducing the input costs.

The farmers of Sheel Village in the Almora district are not lagging as they are using bio-composts to increase their agricultural produce. Umesh Singh, a farmer of Sheel village has effectively improved the quality of groundnut crops. He saw an increase in the grain density and size along with a significant decrease in its harvesting time. Umesh recorded a boost of 15% in the output.¹⁷

6. Conclusion

After 20 years of the formation of Utrakhhand some crucial issues like unemployment, education and medical facilities, and migration from hilly areas to plane (within the state or outside the state) have not been resolved yet. There is no significant improvement in employment opportunities in remote hilly areas of Uttarakhand. In the last two decades increasing awareness of healthy food practices, the demand for organic products has increased manifold globally. This provides opportunities to the people of remote hilly areas of Uttarakhand who are engaged in organic farming by default because agriculture in hilly areas is rainfed and there is no use of chemical fertilizers, insecticides, and pesticides. Government and non-government organizations are engaged in promoting organic farming all over the state, which is reflected in the development of organic farming. Success stories of organic farming

attract the youth who are fed up with urban life. They returned to their native places and started organic farming with new technologies and developed skills. Along with the production of organic produces they also attract tourists. Based on the literature discussed above we may conclude that organic farming is sustainable, provides healthy and environment-friendly products, and employment opportunities. the government also provides the incentive for the development of organic farming practices. Organic farming can play an important role to control migration and minimize its repercussion.

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