

## Agritourism to Enhance Integrated Farming Model: A Case of Agritourism Centre in Uttarakhand

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**ABSTRACT:** Uttarakhand is an agrarian state situated in the northern region of India. More than 80 percent of all the croplands are in the plains and the remaining are in the hills. The local residents of hilly areas are facing problems to ensure a sustainable source of income due to fragmented land holding, unfavourable weather conditions, natural calamities, lack of irrigation facilities and wild animal's attack. There is a dire need for diversifying farm activities and agritourism is one such activity that could supplement farm income with the available resources. Uttarakhand is divided into two divisions viz. Kumaon and Garhwal. Pauri Garhwal district was selected from Garhwal division of Uttarakhand using simple random sampling and agritourism centre run by Gauri Self Help Group was selected through snowball sampling. Here an attempt has been made to document features of agritourism venture situated in Gaurikot that is assisting 18 families to sustain in hilly areas of Uttarakhand that are managing the issue of migration with innovative approaches. It incorporated integrated farming model and also added agritourism in which they opened their farms for tourists, visits and trainings to supplement the farm income without additional inputs. This paper highlights that hilly regions having adversities for agriculture can evolve into areas of socio-economic adaptations and could create income through the amalgamation of agriculture and tourism.

**Keywords:** Agritourism, Self-help Group, Integrated farming, sustainable livelihood.

### INTRODUCTION

Uttarakhand is located in the northern region of the country. Agriculture in Uttarakhand is dominated by traditional subsistence cereal farming. Major portion of the state consists of hills but more than 80 per cent of all croplands are in the plains. Although More than 75 per cent of the state's total population is engaged in agriculture and allied activities but the yield per hectare is considerably low. Agricultural advancement is the biggest challenge in Uttarakhand due several constraints. According to Tuteja (2013) Due to special geographical features the development of irrigation facilities is limited, especially in the hilly districts of the state. Natural calamities, natural hazards, land-slides, cloud burst etc. are major problems of hilly areas. Around 71 per cent of holdings are marginal and small farms. Agriculture and allied sectors alone is economically unviable here.

Hence, many farmers and other stakeholders have realized the need for diversifying their farm activities so as to supplement their farm income. There is a dire need to shift to agricultural diversification strategies i.e. agritourism as it can compensate the damage that can occur due to the unfavourable weather conditions and

other limitations. It also provides farmers with other employment alternatives, steady income and ensures that the farmers live a comfortable life.

Amalgamation of agriculture and tourism has resulted in agri-tourism, which redefines agricultural fields as tourist destinations and attracts visitors by providing a type of special interest tourism. Agritourism caters to the need of modern tourist to experience and obtain knowledge about cultivating different crops.

### REVIEW OF LITERATURE

The Agricultural Marketing Resource Center (2018) stated, 'Agritourism describes the act of visiting a working farm or any agricultural, horticultural, or agribusiness operation to enjoy, be educated, or be involved in activities. Some people become involved in agritourism as a way of improving their income while for others it is an opportunity to educate the tourists and visitors to the farming community. Agritourism in industrial countries has significantly contributed to regional development and has therefore attracted growing attention in developing countries. The introduction of agritourism in developing countries is increasing gradually (Akpinar *et al.* 2005; Malkanthi and Roury 2012; Kunasekaran *et al.*, 2012). In the case

of developing countries, agritourism is regarded as a tool not only for rural development but also for poverty alleviation. However, until now, the majority of the studies on agritourism have been conducted in economically strong countries, focusing on already-developed agritourism destinations (Brian *et al.*, 2006; Barbieri and Mshenga, 2008; Ohe and Ciani 2012). Agritourism development is primarily based on farmers' intentions and their characteristics because they are the key factors that determine agritourism success. Therefore, farmers' willingness is necessary to understand before any kind of agritourism implementation because their readiness is the first major step for agritourism development.

Krishna *et al.* (2020) analysed 45 Agritourism Centres (ATCs) drawn from Maharashtra (n=30) and Goa (n=15). It was found that an average number of employment days in Maharashtra and Goa increased from 149 to 202 man-days/year and 117 to 208 man-days/year *viz.*, after 2016 which indicate a positive attitude of the operators. Significant changes in the perception of the operators were observed in the installation of new irrigation system and new farm, installation of new processing and post-harvesting equipment and arrangements for entertainment.

Chase *et al.* (2018) developed a conceptual framework which suggested that agritourism could be categorized into core and peripheral activities. While core activities are accepted as agritourism practices, peripheral activities are not conventionally included in the scope of agritourism. In simpler terms, the core activities are directly related to the production and marketing of the farm-based products. Farm experiences that are directly linked to farm produce such as pick your own products hayrides, farm tours, farm accommodation and meals and harvest festivals are part of core activities. The peripheral activities are practiced on the farm but they may not be directly associated with the production of the farm such as renting out the hosting weddings or parties.

Ghetiya *et al.* (2018) conducted a study on "Attitude of agriculture students towards agrotourism as an enterprise" in Anand Agriculture University Gujarat. It was found that that majority (60 per cent) of respondents falls in higher favourable attitude towards agrotourism as an enterprise and other 40 per cent falls in medium favourable attitude towards agrotourism as an enterprise.

Gopal *et al.* (2008) in a case study in an agri tourism destination- Melgaon village, Baramati Pune and reported that the unique features of this venture were giving visitors a personalized contact, taste of the physical and human environment in the villages and allow them to take part in the activities, traditions and lifestyles of local people. Other important aspects of agritourism are environmental protection through integrated land management, create understanding about rural life, agricultural sciences among school children while studying agriculture. It also provides opportunity for hands on experience for urban college students in agriculture through recreation and by

making learning fun, effective and easy. He elaborated that rural tourism is an umbrella term that includes distinct features of agritourism, heritage and cultural tourism and eco-tourism. They mentioned that agritourism has a unique characteristic that enables farmers to diversify their activities while enhancing the value of their products and property. Key components of agritourists is farm accommodation in rural atmosphere where tourists can share intimacy of the household they live in, learn traditional crafts and skills with their hosts, make friends, enjoy home-made food and drinks. It also includes establishing a local produce which can be used as a selling point to tourist who want to taste home grown quality food and drink.

It is evident from several literatures available that in Uttarakhand individual farmers and group of farm women have played a significant role in enhancing the viability of the agritourism and value-added processing sector. But there is lack of proper institutionalisation and training in this field. This study is designed to document the current scenario of agritourism tourism in Uttarakhand. It will help different stakeholders to get acquainted with the status quo of agritourism in Uttarakhand and further planning can be done to make agritourism a supporting enterprise for all small and marginal farmers of the state.

## METHODS AND MATERIALS

According to Uttarakhand Tourism Policy Report (2018), and Upadhyay (2020) eight districts in the state that have agritourism potential. It includes Uttarkashi, Tehri Garhwal, Rudrapur, Chamoli, Pithoragarh, Almora, Bageshwar and Pauri Garhwal. Pauri Garhwal district was selected randomly from Garhwal Division of Uttarakhand and agritourism centre run by Gauri SHG women was selected through snowball sampling.

## ABOUT THE AGRITOURISM CENTRE

The agritourism centre is situated in Gaurikot, a small village about 9 Kms from Pauri in Pauri Garhwal district of Uttarakhand. The centre is managed by 20 women SHG members under the supervision of Mr. Anil Kumar, a farmer of the village Gaurikot. The women are members of three Self Help Groups, *viz.* Gauri Self Help Group, Jyoti Self Help Group and Pragati Self Help Group. Initially, all the three SHGs were engaged in the cultivation of fallow land near their village. The Co-operative Department encouraged them to adopt integrated farming approach under Integrated Community Development Programme (ICDP), involving off-season vegetable cultivation, broiler poultry, fishery, horticulture, etc. To add more components in their integrated farming model the SHG members started hosting tourists and trainers by developing lodging and boarding facilities on the farm. The integrated farming model and inclusion of agritourism in it is depicted in Fig. 1. They started home stay facility in 2017, under the Home Stay Scheme of government of Uttarakhand.

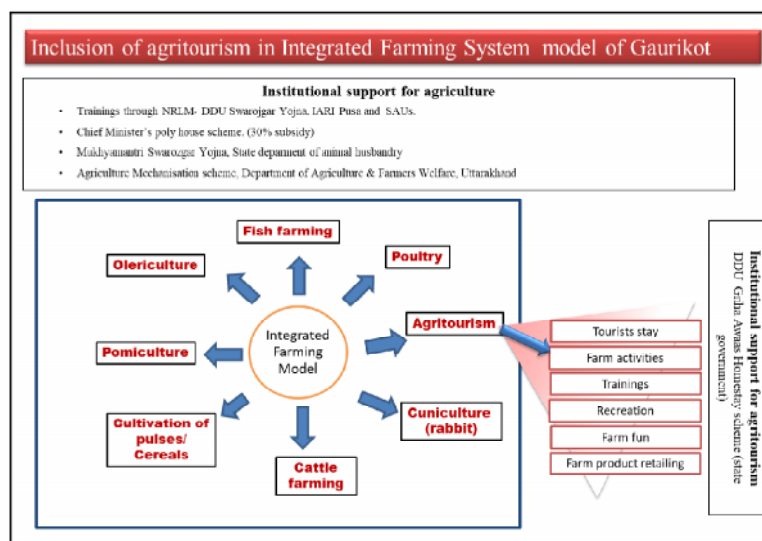


Fig. 1. Agritourism in Integrated Farming System at Gaurikot.

Table 1: Detail description of outputs from the farm.

Sr. No.	Farming activity	Products	Total production (Quintal/Annum)	Price
1.	Pomiculture	Citrus fruits, walnuts, apples and sugarcane.	10 Quintal/ Annum	Rs 15- 20 / kg
2.	Olericulture	Cabbage, tomato, radish, potato, brinjal, capsicum, cucumber, onion	30 – 40 Quintal/ Annum	Rs 30 – 40/kg
3.	Pulses	Tauvr dal (Yellow split Pigeon peas), Masoor dal (Red lentils)	2 – 3 Quintal/ Annum	Rs 200 /kg
4.	Cereals	Ragi (finger millets)	1 -2 Quintal/ Annum	Rs 40-50 /kg
5.	Livestock farming	3 cow (Badri breed), 2 calf and 3 goats	3 lit/ day	Rs 50 /liters
6.	Fish farming	Grass carp, common carp and silver carp species.	2 – 3 Quintal/ Annum	Rs 200 / kg
7.	Poultry	Hens, ducks and pigeons	Eggs & meat	
8.	Cuniculture	--	50 – 60 pairs p.a.	500 Rs/ pair
9.	Organic manure	--	10 – 12 quintal	20 Rs/ Kg

The women were trained in formation and functioning of SHGs under the Deen Dayal Upadhyay-National Rural Livelihood Mission. The state government provided free transportation and organized training/demonstration, farmer-scientist interactions, exposure visits for them to impart farming skills and techniques under Mahila Kisan Sashaktikaran Pariyojana and Aajeevika Grameen Express Yojana. These are the sub-schemes of DDU-NRLM that mainly focuses on women empowerment. All the SHG members have participated in horticulture training programme and entrepreneurial skill development programme organised by IARI, New Delhi. VCSG University of Horticulture, Bharsar has organised training programs on forestry, animal husbandry, horticulture, mushroom cultivation and beekeeping for the SHG members.

#### A. Establishment of the farm enterprise

The SHG was engaged in farming activities since 2014 and cultivated cereals, pulses, vegetables and fruits on a small scale. Later other activities such as fisheries, animal husbandry, poultry, cuniculture and goat rearing were added by the SHG members on their 60 Nali (1 Nali = 0.02007 hac.) land. Output from the farm and prices at which they are sold is given in the Table 1.

#### B. Farm facilities, equipment and Infrastructure

This centre also has adequate facilities and infrastructure for diversified farm activities. It has established a poly house, two fisheries ponds, poultry house, two rain water harvesting unit, sprinkler (irrigation) and one mini power tractor.

#### C. About the venture

Members of the three SHGs decided to supplement their farm activities with the agritourism in 2016. The facilities for accommodation of the tourists were constructed with assistance under the Deen Dayal Upadhyaya Griha Awaas Homestay scheme. This scheme was introduced by the state government to attract tourist to far-flung tourist destinations by providing good accommodation facilities, generate employment opportunities for local people and provide an additional source of income to house owners in rural and hilly areas of the state.

The scheme aims to provide clean and affordable home stay facilities to national and international tourists and encourage them to explore Uttarakhand's culture and scenic landscapes. The Gaurikot Agritourism Centre has two non-ac rooms with en-suite facilities, double bed, furniture, television and a function hall. Housekeeping is conducted by SHG members. The following infrastructural facilities are available at Gaurikot Agritourism Centre:

**Accommodation:** Two en-suite non-ac rooms with double bed, chairs, table, dressing table, proper ventilation and heater

**Dormitory:** A large hall with beddings to accommodate large groups that is mainly used to house trainers.

**Kitchen:** Traditional kitchen that has a mud stove and all the traditional utensil. This agritourism centre serves local cuisines and snacks cooked from products harvested from the farm.

**Function hall:** One function hall with adequate sitting arrangements and a television screen that is used for organising training programs, parties and get together.

*D. Activities for tourists/ visitors*

The Gaurikot Agritourism Centre is open to everyone interested in farming practices and pet animals, learning about places, enjoying weather, rural ambiance and scenic view of the Himalayas. It organises following activities for the visitors and tourists:

**i. Day-visits:** Under the direction of state government the NGOs from the nearby places organise trips to the centre for farmers to visit the farms and learn about sustainable agricultural practices and increasing the output.

**ii. Trainings:** State agriculture and horticulture department organise training programs for groups of farmers at the agritourism centre on improved agricultural practices. One of the SHG members acts as a master trainer and hosts the trainees. These training programs are mainly in the areas of Integrated Farming System, production and application of organic manure, pisciculture and rain water conservation.

**iii. Agritourism:** The centre also has accommodation facilities and tourists can stay on the farm to experience farming environment and rural life. The tourists can also participate in various farming and non-farming activities like:

**a. Fishing.** There are two fish ponds on the farm and the tourist can feed the fishes and can also do fishing.

**b. Petting animals.** The Centre has reared variety of animals and birds such as rabbits, goats, cows, pigeon, ducks and hens. The tourists have the opportunity to pet these birds and animals and feed them.

**c. Taking care of cattle.** The visitors are also allowed to take care of cows on the farm and learn the milking process.

**d. Bird watching.** Uttarakhand boasts of more than 600 species of birds and rich biodiversity. Due to the presence of different types of forests, alpine & subalpine moist scrub land, grasslands, wetlands and rivers. The state provides sanctuary to a wide variety. At Gaurikot Home Stay, tourists can enjoy watching different species of birds.

**e. Site seeing.** Gaurikot village is situated in the hills of Pauri Garhwal which offers quality of the mountain-scape to its visitors and the prime focus is on the snow-capped curtain of central Himalayas. The tourists can enjoy the sunsets, sunrises with the mountains and Himalayas from their windows only.

**f. Pick your own.** The visitors can pick fruits grown on the farm for consumption and they can also purchase to take home.

**g. Harvest festivals and seasonal event.** Many local festivals are celebrated collectively in the village. The tourists can also participate in those celebrations.

**h. Workshops to learn new skills.** During the visits of group of farmers various workshops are conducted in which they are taught about different innovative ways of practicing sustainable agriculture. The workshops are conducted mainly in organic manure, vegetable and fruits growing practices their processing and storage, poultry, agripreneurship etc.

**i. Meditation.** Gaurikot has spiritually elevating atmosphere and environment in which is ideal for a person to sit in a quiet place and meditate.

**j. Videography and nature vlogging.** People also visit Gaurikot Agritourism Centre for videography. One of the popular Garhwali video songs on agriculture was filmed at the center and several vlogs are also shot here available on social media site YouTube.

**k. Online work.** The centre is very conducive for doing online work as the place is equipped with good internet connectivity and tranquillity of the surrounding encourages focussed efforts.

*E. Income from agritourism/ farm activities*

The centre receives remittance from various activities and products. The same are listed in the Table 2.

**Table 2: Income generated through agritourism activities at Gaurikot agritourism Centre.**

Sr. No.	Items	Prices	Description	Total (in Rs)
1.	Accommodation tariffs	800 – 1000 Rs/ 2 person	30 – 40 bookings per year	40,000 /- to 50,000 /-
2.	Trainings programmes and exposure visits	Food- Rs. 150/ plate Resource person fee – 500 / training.	150-200 people. (5- 10 trainings programmes per year.)	1,50,000 /- to 3,50,000 /-
3.	Sale of rabbits	Rs. 500/ pair	50 – 60 pairs per year.	25,000 /- to 30,000/-
4.	Farm products		Citrus fruits, pulses, local coarse grains, spices, ginger etc.	50,000/- to 1,00,000/-

*F. Institutional support for farming activities*

To address these challenges faced by agriculture and allied sectors state government and other funding agencies have focussed their immediate attention on providing new, advance and feasible technologies to the farmers. The Agritourism centre has received assistance under various schemes these are:

**i. Deen Dayal Upadhyaya Griha Awaas scheme:** Under this scheme, for hill areas, the government provides capital subsidy of 33 per cent or 10 lakh, whichever is minimum and for the first five years of loan payment, the interest subsidy is 50% of the interest or Rs 1.50 lakh per year, whichever is lesser. For the plain areas, the capital subsidy is 25 per cent or Rs 7.50 lakh, whichever is lesser and the interest subsidy for



first 5 years of loan payment is 50 per cent of interest or 1 lakh per year, whichever is lesser.

The salient features of this scheme with latest regulations are:

- Purely residential space.
- Family head should be staying in the house along with family.
- Home stays should have minimum 1 or maximum of 6 rooms for tourists.

**ii. MNREGA:** All the 20 members are registered under this scheme and they receive assistance for construction of infrastructure on the centre. They have constructed a meeting hall, tank, pedestrian way, concrete fencing and other infrastructure for their farm. The material is procured by the SHG members but they are paid for the labour work.

**iii. Sub-Mission on Agricultural Mechanization (SMAM):** Under this scheme power weeders are provided to the farmers. Ministry of Agriculture and Farmers Welfare has launched a Sub-Mission on Agricultural Mechanization (SMAM) in 2014-15 with the objectives of increasing the reach of farm mechanization to small and marginal farmers and to the regions & difficult area where farm power availability is low. To boost up mechanization in the agriculture sector improved agricultural implements and machinery are essential inputs for modern agriculture that enhance the productivity of crops besides reducing human drudgery and cost of cultivation.

**iv. Fisheries Pond manufacturing in hilly areas:** State department of Fisheries Uttarakhand provides funds for manufacturing and making small fisheries ponds in 0.005 Hectare area. Under this project concrete ponds of minimum 200 Sq. meter/0.02 Hectare size (20 × 10 × 1.5 meter/ 01 unit) area. First year subsidy INR 150000 (of total investment INR 300000). One candidate can have maximum 3 units.

#### *F. Constraints faced by the member in agriculture and agritourism*

The centre has come a long way since its inception through collective efforts of the women. Even so, some constraints do exist which hinder the functionality of these centre. These include:

- The centre requires funding for developing the infrastructure especially for accommodation for guests. They also have to improve the existing facilities by constructing railings, installing lighting and other facilities so that the place is safer for visitors and tourists.
- The centre produces a lot of fruits and vegetables most of them get wasted because of lack of proper storage facilities. So, there is a need for storage facilities to reduce losses.
- The tourists who are dependent on public transportation face a difficulty in reaching the centre, as it is far off. Hence the transportation facilities have to be improved so that the centre becomes easily accessible to tourists.
- The members also reported lack of cooperation from local people and poor coordination among the SHG members. It was reported that some of the group

members do not contribute towards running of the centre.

#### *G. Awards and recognitions*

Due to proper execution of different farming activities in the limited land holding, Gaurikot's farmers have proved that integrated farming model can be helpful in improving the farm income in the hilly areas and plains as well. So they were bestowed with a several awards such as national award for best performance by DAY-NRLM, best performance for Neel Kranti Mataski Sanransan award, district level Best fish farming award (2017) and district level farmer recognition on Uttarakhand Foundation day

#### **CONCLUSION**

As agritourism is in the nascent stage in Uttarakhand and the tourism department does not have any specific institution working for identification and registration of all such centers. Gauri Self Help Group is collaboratively working towards insertion of several activities besides farming and supplementing the farm income. It has also exhibited that addition of agritourism in the integrated farming model can be proven utilitarian and should be taken up as a farm diversification strategy. Although agritourism activities have been recently included by this group and a main reason behind this is that agritourism is in nascent stage in Uttarakhand and there is a lack of awareness. Majority of the SHGs across the country are working dedicatedly to improve their living condition but the activities are limited to food processing, art and craft. So, SHGs can include agritourism for diversifying their income in an innovative way.

#### **FUTURE SCOPE**

Agritourism is a viable strategy, that has enhanced the profitability of farms by exploring alternate income sources. The members of Gauri SHG have set a very encouraging example for other small farmers that agritourism can be taken up on small land holding collectively by the community members. Agritourism can be taken up as an income generating activity for the SHGs too. Agritourism can be used as a strategic tool for boosting the agrarian economy as well as reversing out-migration and farm abandonment in the hilly areas.

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