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Tea Cultivation and Sustainable Development in Kumaon Region: A Case Study of Ghorakhal Organic Tea Estate

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Abstract: Tea (Camelia Sinesis) is very versatile plant that grow under varying conditions. The credit for creating India's vast tea empire goes to the Britishers who discovered and cultivated tea in India. In India, the extension of Tea Industry in modern form, started between 1818 and 1834. The role played by all Tea Industry in our national economy is very important. Tea cultivation is the unique feature of the Ghorakhal Organic Tea Estate. Ghorakhal Organic Tea Estate is rich in natural beauty and resources. Tea cultivation has been playing a pivotal role in the sustainable development of Ghorakhal Organic Tea Estate. Brutl and Commission report "Our Common Future" defined sustainability as "Sustainable development is development that meets the needs of the present without compromising the ability of future generation to meet their own needs". Ghorakhal Organic Tea Estate offers the cleanest cup of tea and free from artificial chemical residues and as well as contribution to the development of the environment. Organic tea production means a future for health, a future of the environment and future for the generation to come. The Present study will be an effort to understand the role of Tea Cultivation in sustainable development with emphasis on the ecological and economic impact in the Ghorakhal Tea Estate.

I. INTRODUCTION

According to World Comission on Environment and Development 'Our Common Future' (1987), the sustainability in a broad sense is the capacity to endure. It can be definedas the abilityof an ecosystem to maintain ecological process, functions, biodiversity and productivity into the future. With sustainable agriculture becoming the new mantra all over the world. Sustainable agriculture is the production of food, fiber or other plants or animals products using farming techniques that protects the environment, public health, human communities and animal welfare. This form of agriculture enables us to produce healthful food without compromising future generation 'ability to do the same'. The primary benefits of sustainable agriculture are- Environment preservation, Protection of Public Health, Sustaining Vibrant communities and Upholding Animal Welfare. Orgainc cultivation practiced in India from time immemorial beu largely given up in recent decades for agrochemicals deserves a close look from the agricultural policy makers. Major nations particularly the developed ones, are rediscovering the virtures of chemicals free, pro-nature kind of cultivation through techniques that are friendly to the environment including, soil, flora and fauna.Organic agriculture is a holistic system which promotes and enhances health of the agro ecosystem, including biodiversity, biological cycles, and soil biological activity. Organic production system are based on specific and precise standards of products which aim at achieving optimal agro-ecosystem which are socially ecologically and economically sustainable. Tea the Queen of Camellias is unique in many ways playing, a important role in the economy of hills areas espically for the small grovers. Tea plays a significant role in transforming the rural economy- providing livelihood for millions. In Uttarakhand Tea cultivation was introduced by British in 1835 when first consignment of 2000 tea seedlings was brought here and with these two nurseries were established in Kumaon Region. Tea production started in this region in 1837-38. Till 1880, there were a total of 63small and big tea gardens in Uttarakhand measuring about 10937 acres areas. In spite of the glorious beginning of tea industry in this region, it could not continue for long and collapsed due to several reasons. As a result the number of tea gardens reduced from 63 in 1880 (10937 acre areas) to 20 in 1911 (2120 areas only).Considering the existence of flourishing tea plantations in the past, the employment and income generation potential and environment friendly nature of the tea plantation, the Hill development Project in March 1994 with the blessing of the Hill Development Secretary of Uttrakhand, Dr. R.S Tolia IAS, with the objective of developing the rural areas in the state. The responsibility of implementing the Project was initially given to the Kuma on Mandal Vikas Nigam (KMVM) and Garhwal Mandal Vikas Nigam (GMVN) in their respective regions. In March 1994, Public Investment Board (PIB) of Uttar Pradesh Government sactioned Rs. 21.77 crore for Tea Development Projects in Chheedapani (Champawat), Vijaypur, Kausani (Bageshwar),

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Bhimtal(Nainital), Gadoli- Mandakhal (Puri) and Nauti (Chamoli) areas PIB took a decision to established tea gardens in 811 Hectares land with a tea processing factories in each sub projects. Till now around 380 Hectare land is under tea plantation. The land is classified as Van Panchayat, Gram Panchayat and the land of the farmers, which is taken in lease for 30 years.

S. No	Sub Project	Hectare	Finance	R.s (crore)
1	Chheedapani, Champawat, Pithoragarh	200	JawaharRojgaarYojana	7.25
2	Vijaypur, Kausani, Almora	195	India Tea Board	3.90
3	Bhimtal, Nainital	205	AmbedkarYojana	5.31
4	Gadoli- Mandakhal/ Nauti, Gharhwal Nursery	200	Uttranchal Finance Department	5.31

Source: Uttarakhand Tea Development Board (2005)

In 2002-03 this processing unit started production and tea sale to commence under the name of "Uttaranchal Tea". The tea was sold locally as well as at Kolkata Auction House. Approved and endorsed by professional tea tasters in Kolkata, who acknowledged it equal in taste, flavour and quality compared to Darjeeling tea, the use and consumption of "Uttaranchal Tea" grew rapidly. The tea has been exported to South Korea, Germany, USA, the Netherlands and Japan. "Uttaranchal Tea" (tip tea) is being purchased by South Korea for the maximum price of Rs. 36000/- per kilogram and the demand for this tea grows day by day. Thus "Uttaranchal Tea" has also entered the International market. In 2004, Government of Uttarakhand established a Tea Development Board with its Headquarter at Almora, Keeping the suitable agro-ecological conditions for cultivation of tea in view.

A. The main objectives of establishing of Tea Garden in the state are:

1) To enhance the economy of the people inhabiting in the surrounding areas of these tea gardens.
2) To ensure the people's involvement so that augmentation of employment may be taken place.
3) Reduce the soil erosion after plantation of tea.

B. The board has achieved the following success so far

1) Plantation of tea in 380 Hectare land.
2) Established of lab for soil testing in Bhowali (Nainital).
3) Establishment of nurseries.
4) Promotion for Organic Farming.
5) Imparted training for supervisors and labours.
6) Establishment of tea processing factories.
7) 52% Employment has been given to women so far.
8) A research centre has been established at Kausani in 2003 by GBP University of Agriculture and Technology Pantnagar.

II. RESEARCH METHODOLOGY

The present study is based on primary and secondary data. The sources of Secondary data are publication and reports of Tea Board Almora Uttarakhand. Primary data are collected through Social Economic Survey. The analysis based on secondary data covers the period 2001 to 2016.

A. Study Area

The area selected for present study is Ghorakhal Tea Estate of Uttarakhand. Ghorakhal is the place situated in the Nainital district of the Uttarakhand. Ghorakhal literally means "a pond for water to horses". Ghorakhal is the place suituated in 29'38' North to 79'28'East. It is 2000 metres above sea level. Ghorakhal is famous for its atmosphere. The first Sanik School of Uttarakhand is located at Ghorakhal , established in 1996. One of the famous attraction in Ghorakhal is GoluDevta Temple. It is the perfect destination for tourists.

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III. OBJECTIVE OF THE STUDY

A. The Main Objective Of This paper Are

1) To understand the role of tea cultivation in sustainable development
2) To discuss the ecological and economic impact of tea cultivation in the Ghorakhal Tea Estate
3) To suggest some recommendation for environment friendly economic development.

B. General Introduction Of Uttrakhand



Uttarakhand was carved out the state of Uttar Pradesh on 9th November 2000 and was the 27th State of India. It is strategically located at the foothills of the Himalayan range. Dehradun is the capital of the state. The state of Uttarakhand is a rich repository of natural resources with plenty of water resourses, and dence forests. The state has almost all major climatic zones, making it suitable for a variety of commercial opportunities in horticulture and floriculture activities. 75% of the population depends on agriculture for their livelihood. The state is divided into two regions Garhwal and Kumaon.

Economic Sector Overvie-Sectorial Distribution of GSDP in %

Sectors	Year 1999-2000	Year 2010- 2011
Primary	30.1%	15.0%
Secondary	18.8%	31.5%
Tertiary	51.1%	53.7%

Source: Directorate of Economics & Statistics, Govt. of Uttarakhand (2008-2009)

As can be seen the share of agriculture in the Primary Sector is on a decline, where as that of secondary and Tertiary sector is rising. Share of GSDP in the secondary sector has shown remarkable increase from 18.8% from 1999-2000 to 31.5 during the year 2010-

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2011. The contribution of Tertiary Sector to the GSDP has increased marginally 1999-2000.Haridwar, Dehradun, Udham Singh Nagar &Nainital together contribute more than 50% of the total GSDP of the state.

IV. ENVIRONMENT ISSUES

All economic activities either affect or are affected by the natural environment. Thus development based on reckless use of the natural resources is bound to result in reduced productivity of our economic system affecting the quality of life of the future inhabitants of this planet. Sustainable development therefore attempts to strike a balance between the demands of economic development and the need for protection of our natural environment. It is basically concerned with economic development in an environment responsible manner, keeping in the mind the needs of the future generation. Soil erosion in the Kumaon region is taking palce rapidly, so it is one of the major problems, which is disturbing the ecological balance and agriculture development over the region. The rate of soil erosion depends upon the amount of seasonal distribution of rainfall, steepness of the slope and length, vegetation cover and nature of soil and the velocity of water. The process of soil formation is very slow, rather impossible on the bare slope. So, soil erosion should be encouraged by afforest ration, slope terrace cultivation, practices and provision of proper drainage system. Landslide is one of the most rampant environment hazards in Nainital District and surrounding areas. Landslides are not new in Kumaon region, every year in the monsoons landslides destroy properties and claim alives. Although landslide is a natural phenomenon, landslides in the hills are mostly triggered by man- made structures and practices. Improper drainage system, improper waste management and unscientific cultivation are the factors which augment the landslides in Kumaon region. Rapid depletion of forests is environmentally the most destructive force in Kumaon region in hilly areas. The main reason for this is the random clearance of forests of a short-term commercial profit, dependence on forests for fuel and folder, uncontrolled grazing and pilferage of trees, extension of cultivation and encroachment due to population pressure. The tea plantation has contributed its share, in bringing about ecological balance in hilly areas of Kumaon region. For Sustainable Development Uttarakhand Tea Board initially launched, each sub-project envisaging the establishment of a 200 ha tea estate as model in each of the then following districts- Bageshwar, Chamoli, Champawat, Nainital Rudraprayag, Almora and PauriGarhwal.

A. Uttarakhand Tea Development Board Various Plan

Following tea gardens being developed in various districts-

S.no	Name of Sub-Project	Target	Plantation in Ha.
1	Kausani (Bageshwar) Tea Garden	211 Ha.	211
2	Nauti (Chamoli) Tea Garden	200 Ha.	160
3	Champawat (Champawat) Tea Garden	200Ha.	191
4	Ghorakhal (Nainital) Tea Garden	200Ha.	96
5	Jhakholi (Ruduraprayag)	100Ha.	14
6	Jaurasi (Almora)	100Ha.	-
7	Khirsu (PauriGarhwal)	100Ha.	-
	Total	1111 Ha.	672 Ha.

Source: Uttarakhand Tea Development Board Almora, Uttarakhand.

New plantation will be done in following districts in 2016-2017 Jaurasi Vikaskh and, Chaukhutiya, District Almora and Khirsu (PauriGarhwal)

B. Special Component Plan Yojana

Uttarakhand Tea Development Board have being developed tea gardens in Gaurur and Berinag.

S.no	Name of Sub-Project	Target	Plantation in Ha
1-	Vikaskhand Garur (Bageshwar)	150 Ha.	141.00
2-	Vikaskhand, Berinag (Pithoragarh)	50 Ha.	50.00
3-	Vikaskhand, Munshari (Pithoragarh)	100 Ha.	-
4-	Vikaskhand, Dholadevi (Almora)	100 Ha.	-
Total		400 Ha.	191.0

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C. MangeraYojana

Under Mathama Gandhi National Employment GuranteeYojana, Board has done various plantations in 600 Ha. in various Vikaskhand. Till the year 2016 149.00 Ha. Plantation have done. Figures are as follows:

S.no	Name of Sub-Project	Target (Ha.)	Plantation in Ha.
1-	Vikaskhand, Dhauladevi (Almora)	60	32.00
2-	Vikaskhand, Takula (Almora)	60	18.00
3-	Vikaskhand, Garur (Bageshwar)	100	25.00
4-	Vikaskhand, Didihaat (Pithoragarh)	60	20.00
5-	Vikaskhand, Pokhri (Chamoli)	60	23.00
6-	Vikaskhand, Tharali (Chamoli)	60	25.00
7-	Vikaskhand, Betalghat (Nainital)	100	6.00
8-	Vikaskhand, Agushtmuni (Rudraprayag)	60	-
9-	Vikaskhand, Ukhimath (Rudraprayag)	60	-
10-	Vikaskhand, Kapkot (Bageshwar)	60	-
Total		680	149

Source: Uttarakhand Tea Development Board Almora, Uttarakhand.

1) Organic Tea Cultivation- Organic gardens are being developed in Nauti (Chamoli), Ghorakhal (Board Nainital) and Champawat by the Uttrakhand Tea Development. In each area, small tea factories have been established in order to begin production by 2016. The tea produced by these factories will be exported to developed countries where it has got high demand, good revenue will also be generated.
2) *Unorganic Tea Cultivation*-Unorganic garden are being developed in Garur (Bageshwar) by Uttarakhand Tea Development, small processing factory have been established. It can produce 50000Kgs capacity of Tea. Financial year 2015-16 it produces 42,000Kgs tea.
3) *Generating Employment*- Under Manrega every year approximately 9.00 lakh it generates employment.. In which 70-80% are women participate are fixed. Through this migration have been reduced.

V. CASE STUDY OF

A. Organic Tea Estate Ghorakhal (Nainital)



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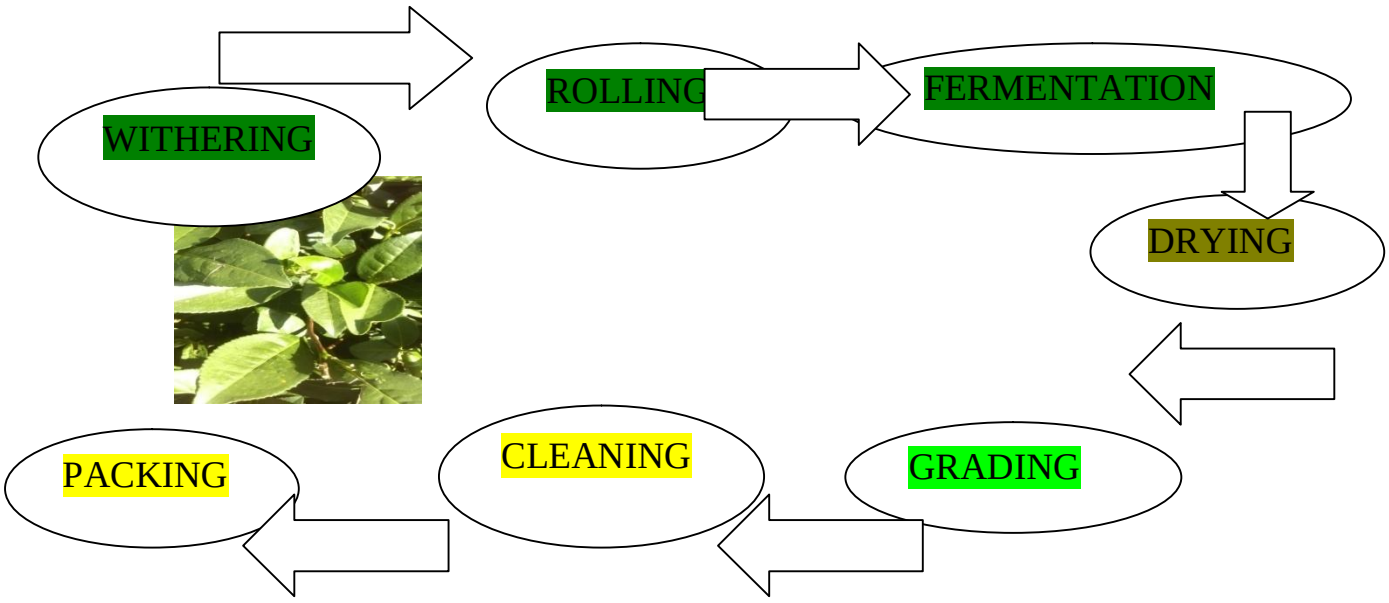
Ghorakhal Tea Factory is located in Nainital Tehsil of Nainital District in Uttrakhand. It is suituated 14 km away from Nainital. Ghorakhal has a total population of 881 approximately. Bhowali is nearest town to shyamkhet which is approximately 3km away.Ghorakhal tea factory established in 2007-08. The board has leased more than 105 Hectare of land for 30 years from Sanik School Ghorakhal. Lease area also taken from different places for plantation like Padampuri, Guniyakhet, Nathuvakhan and Betalghaat. The lands taken on lease are barren fields. Organic tea gardens are being developed in Nauti, Ghorakhal and Champawat. Unorganic gardens are being developed in Kausani. The State Board currently operates 4 factories at Ghorakhal, Kausani, Champawat and Nauti. While the one at Kausani produces 70,000 kg of tea annually. Ghorakhal produces Ghorakhal estate in Nainital draws more than 100 visitors everyday and the production facility is expcted to give a further boost to tourism in the area.

A. The ideal climatic conditions for production and growing of tea are as follows:

1) Temperature- 21 C to 29C is ideal for the production of tea. High temperature is required in summer. The lowest temperature for the growth of tea is 16 C.
2) Rainfall- 150-250 a rainfall is required for tea cultivation.
3) Soil- Tea shrubs require fertile mountain soil mixed with lime and iron. The soil should be rich an humus.
4) Land- Tea plant is very sensitive to both excess and deficit soil moisture condition. During dry season irrigation to tea was optimized through sprinkler irrigation system. During rainy season adequate drainage facility has been provided to remove excess water as tea is susceptible to water logged condition.

Green Tea	Non Fermented
Black Tea	Fermented
Oolong Tea	Partly Fermented
White Tea	Least Fermented

B. Tea Processing Cycle



1) Withering- The objective of withering to reduce the moisture content in the leaf. The plucked leaves are laid out in troughs where air is passed through the tea, removing the moisture. This can take up to 17 Hours and by the end of the process the leaves have a wilted appearance.

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2) *Rolling- There are two types of rolling* –Orthodox- Where the leaves are rolled between rollers until gently broken. C.T.C (Cut, Tear, Curl)- Where a machine cuts and tears the leaves into smaller pieces. The purpose of this process is to break the leaves so the enzymes are released and the 3rd step of oxidation begins.
3) *Oxidation*- The broken leaves are laid out to oxidise or ferment. This part of the process is very important as this will significantly impact the overall taste and quality of the tea. This can take up to 2 hours.
4) Drying- to stop the oxidation process the tea leaves are heated. The dried tea is now ready to be sorted into grade before packing.

C. *Management Of Tea Garden Ghorakhal*

Ghorakhal Tea Estate is spread over 12 Hectares. It is established during the period of 2007- 2008. The Government of Uttarakhand decided to encourage Organic Tea Cultivation in the State. To start with, Uttarakhand Tea Development Board has prepared "Tea Development Plan", Ghorakhal. Ghorakhal Tea Estate is managed by Sri Naveen Chandra Pandey with two other members.

D. *Tea Grades*

On the basis of the physical appearance of the made tea different grades are maintained. The type of different grade and its description are given below-

Kind of Tea	Grade Name	Grade Full name
Broken	OP	Orange Pekoe
	FOP	Flowery Orange Pekoe
	GFOP	Golden Flowery Pekoe
	TGFOP	Tippy Golden Flowery Orange Pekoe
	TGFOP1	Tippy Golden Flowery Orange Pekoe one
	FTGFOP	Finest Tippy Golden Flowery Orange Pekoe

E. *For whole tea leaves they used some name which are as follows:*

OP- Orange Pekoe
FOPP- Flowery Orange Pekoe
GFOP-Golden Flowery Orange Pekoe
TGFOP- Tippy Golden Flowery Orange Pekoe
TGFOP1-Tippy Golden Flowery Orange Pekoe
FTGFOP-Finest Tippy Golden Flowery Orange Pekoe

For Broken leaves they used "B" Word and its name is BOP- Broken Orange Pekoe, FBOP, GBOP, TGBOP ETC. For Tea bags, Fanning and Dust it used less important grade which are- OPF, FBOF, FD and GD etc. Types of Tea in Ghorakhal- Different types of tea are produced in Ghorakhal. Green Tea, Black Tea, STGFOP (Standard Tea Golden Orange Pekeo), TGFOP (Tea Golden Flowery Orange Pekeo), BOP (Brown Orange Pekeo) and Dust etc.

S.no	Grade	Price (Rs)
1	STFFOP	12,00
2	TGFOP	800
3	BOP	600
4	DUST	100

F. *Employment In Tea Garden Ghorakhal*

Tea is a labour intensive industry. Especially women who pluck tea and pack tea. Ghorakhal Tea Estate provides employment to many people's especially poor and weaker sections of the village. Here Ghorakhal Tea Estate 50 peoples get employment. Percentage of male workers in tea plantation is 30% and female is 70%. For per day they got 230 Rs and 12% EPF. The wages are directly

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transferred to their bank account. Ghorakhal Tea Estatecreate employment for weaker sections of the village. The strength of the staff employers is 10.

G. Organic arthodox tea packing

	Packing	Grade	Packet Price
1-	Wood Box	STGFOP	50 Gram Rs 200
		TGFOP	50 Gram Rs 200
		BOP	50 Gram Rs 200
2-	Paper Pack	TGFOP	250 Gram Rs 110
3-	Plastic Pack	TGFOP	250 Gram Rs 110

H. Tea Production, Income And Employment-

Ghorakhal Tea Garden production capacity is 11,000 Kilogram per year. Under the Tea production it generates 25 Lakh Income Annually. Tea production gives positive impact to the generation of the self- employment and economic upliftment of the local people. The participation of women is almost half in this activity. Thus Tea Cultivation has created employment mostly for women. Ghorakhal Tea Garden provides employment to 3 gramsabha Bhowali, Ghorakhal and Bhumiyadhaar. Ghorakhal Tea Estate generates employment to 50 peoples of village. Workers got 230Rs per day and 6900Rs in a month. Ghorakhal tea Factory also provides employment for temporary base when they need extra labour for plucking the tea. For Tea production Ghorakhal climate is most suitable for Tea Production. Many tourists also came here from different places to look the beauty of Tea Garden. For Tourists, it is also beneficial and profitable for income purpose. Ghorakhal Tea Annually Green leaves Production Data and Annually Tea Production data is given below-

Table 1.
Year Wise Green Leaves Production in Ghorakhal Garden in (Kg)

Year	Year Wise Green Leaves Production in Ghorakhal Garden in (Kg)
2001-02	709.000
2002-03	1384.00
2003-04	1449.000
2004-05	4507.000
2005-06	6352.000
2006-07	6522.000
2007-08	7460.500
2008-09	8545.700
2009-10	7214.000
2010-11	8179.000
2011-12	9058.000
2012-13	6850.000
2013-14	9726.000
2014-15	9802.000
2015-16	10382.00
Total	98140.200

Source: Uttarakhand Tea Development Board, Almora

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I. Uttrakhand Tea Development Board, Almora

Table 2.Year Wise Made Tea Production in Ghorakhal Garden in (Kg)

Year	Year Wise Made Tea Production in Ghorakhal Garden in (Kg)
2001-02	170.000
2002-03	350.000
2003-04	330.000
2004-05	630.000
2005-06	1360.000
2006-07	1295.240
2007-08	1628.000
2008-09	1854.000
2009-10	1716.600
2010-11	1821.413
2011-12	2318.390
2012-13	1583.000
2013-14	2197.000
2014-15	2302.000
2015-16	1568.000
Total	21123.643

Source: Uttarakhand Tea Development Board, Almora(2017)

It can be seen in the table, tea production increases every year. During 2003-04, 2006-07, 2009-10, 2012-13 and 2015-16 it shows fluctuations. It is because every year weather is not same.



Ghorakhal Tea Factory works under Mahatma Gandhi Rural Employment Guarantee Act (MNREGA). MNREGA starts works in Ghorakhal from the 2013. During 2013 MNREGA sanctioned 7.50 Lakh to Ghorakhal Tea Garden for tea cultivation.

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Table 3.

J. Production Of Tea Cultivation In Districts-

District	Location	Name of T.E	Present area
Nainital	Bhowali	Ghorakhal	10 Ha
Almora	Kausani	Kausani	208Ha
Champawat	Champawat	Champawat	49Ha
Chamoli	Nauti- Gairsan	Nanda Devi	118Ha

Source: Uttarakhand Development Board, Almora, Uttarakhand

1) *Advantage Of Tea* -Organic Tea offers the leaves cup of tea and free from artificial chemical residues and as well as contribution to the sustainable development of the environment. Organic Tea Production means a future, for health , a future for the environment and the future for the generation to come. Green tea believed to have a horde of benefits for the brain, body, and skin. It is rich in catechins a variety of antioxidants that prevent cell damage. Green Tea also boosts metabolism reduce cholesterol, helps burn body fat and reduces the risk of cancer. Further Tea crop is not harm by any animals. It is also good and beneficial for environment.

VI. MEDICINAL BENEFITS

A. Digestive Complaints- The anti- bacterial antioxidant, antiseptic and detoxifying properties are effective in treating infectious dysentery and ease inflammatory bowel disease.

B. Infection- The antiseptic properties of tea are attributed to the tannins and flavonoids present, A poultice or green tea cases itching and inflammation of insect bites, white a compress stems bleeding.

C. Immunity Booster- This is due to the antioxidant, invigorating, detoxifying and antibacterial properties as well as the vitamins and mineral present in them.

D. Prevention of Cancer- Drinking over 10 cups of tea daily, especially Green tea are reported to play important role in prevention of cancer of breast, prostate and stomach, ass tea catechism have been shown to inhibit tumour cell proliferation as well as promote the destruction of leukaemia cells.

E. Decreases risk of cardiovascular disease- Epidemiological studies support the suggested role of tea in decreasing the risk of coronary artery disease due to the presence of antioxidants. Green tea helps to lower cholesterol and prevent high blood pressure, thereby cutting the risk of stroke in men.

F. Skin disorders- Green tea can reduce the risk of skin cancer due to its significant antioxidant properties.

VII. CONCLUSION

Can be concluded that Organic tea estate is a complex operation involving risk and problems both technical and economic. Organic farming is more costly than the conventional one, mainly because the labour input, as well as worker. Thus generating more employment. Organic cultivation improves soil quality, strengthens the natural resource base and sustains biological production at levels commensurate with the carrying capacity of the managed agro ecosystem. Organic tea market is relatively small but growing quickly in the state. There is a future of export of Uttarakhand Organic Tea. Tea cultivation may be a promising sector and play a significant role in sustainable development of Uttarakhand. The area which have similar geo-ecological condition as the area where tea cultivation is already being done, it may be done in a wider perspective which will enable the sustainable livelihood.

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VIII. PROBLEMS OF WORKERS OF GHORAKHAL



A. There Are Many Problems For The Workers Which Are As Follows-

1) Many women said that it is very hard work.
2) They wear polythene in rainy season, and work in garden.
3) Salary is the main issue of workers. They do not get salary time to time.
4) Salary is very low only 230 Rs per day, it should be increased.
5) Only working hour's salary is given to labours.
6) It is very tough for female workers to manage both house and work.
7) In tea cultivation expenditure is very high comparison to revenue.
8) Limited funds are provided to the tea factory.

IX. SUGGESTIONS

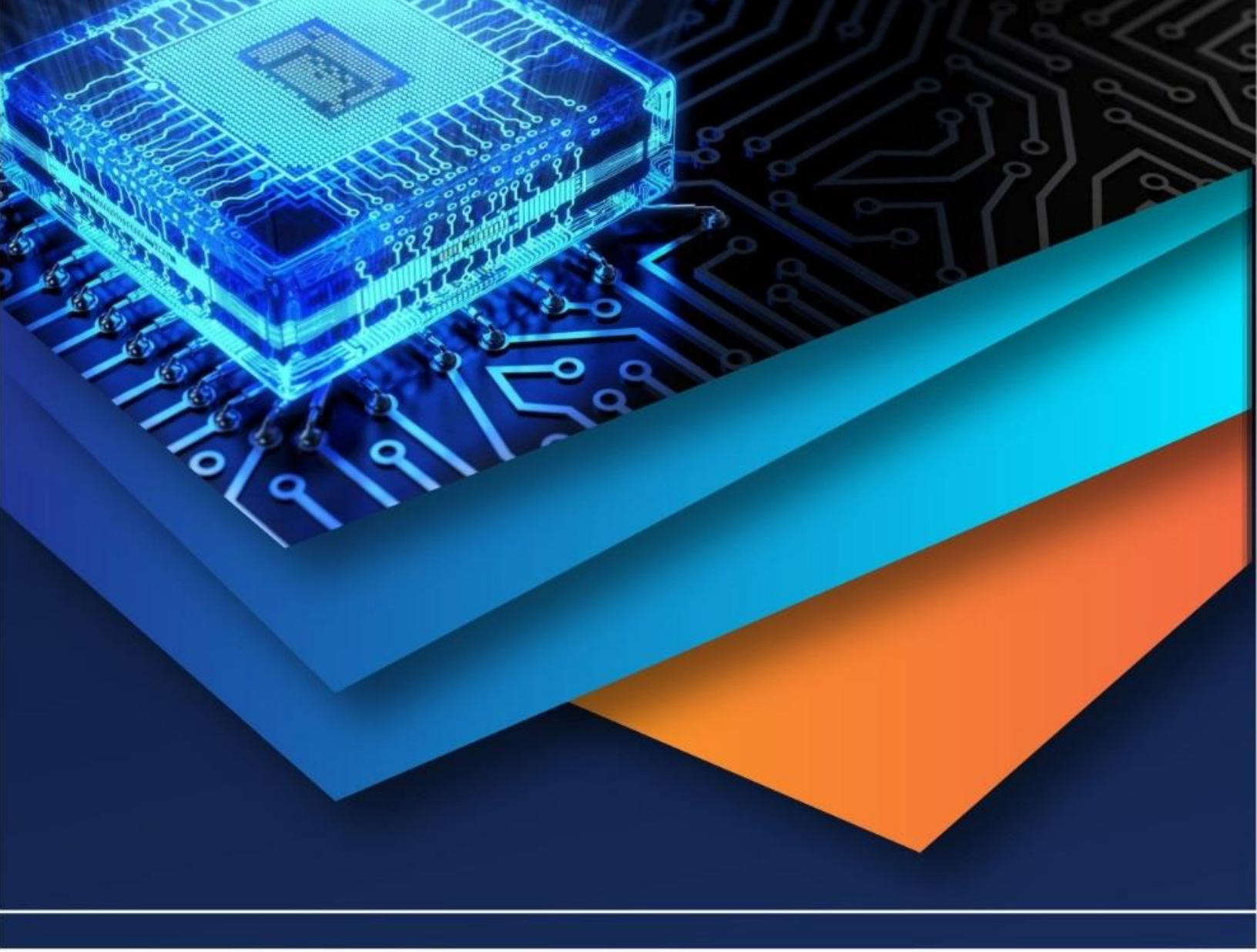
A. As We Can See There Are Many Problems For The Workers. Some Suggestions Are Given Below.

1) Female workers should Provide equipments in the rainy season so that they can work in an easy manner.
2) Workers salary should be increased.
3) Many tourists came here to look the beauty of tea production but they pay no fair for it. Tea board should be provide some rules and apply to take some fair for tourists.
4) Hutt should be made for tourist's attraction.
5) Funds should be provided in a large amount so that tea plantation can take place in a broad way.
6) Identify suitable areas for growing tea and create support for small growers.
7) Public participation directly and through voluntary organisation and non-government organisation is essential for utilizing the natural resources for economic development.
8) Efforts should be taken to educate the people about eco-consciousness and integrate education on economic conversation.

REFERENCES

[1] Joshi R,(1995),Tea Industry: The Basis of future in Uttarakhand, Pahad, pp-5-6,59-64.
[2] Tamang , M.B, (2005), "Profile of Tea Plantation in Uttaranchal, Vision and strategies for Tea development in Hilly states,M/S Nepathya Communication H-7 Malviya Nagar, New Delhi, pp-31-32.
[3] Uttarakhand Development Project, Uttarakhand Tea Development Board Almora.
[4] Motwani,G.S,(2005), "Marketing of Uttaranchal Organic Tea",H/SNepathya Communication H-7, Malviya Nagar, New Delhi,pp-64-68.
[5] Jaram T, (2005), "Sharing the experience of small grower Development in Nilgiris", H/S Nepathya Communication H-7, Malviya Nagar, New Delhi,pp-55-59.
[6] Papney, Nishant,(2005), "History of tea production in Uttaranchal", ",H/S Nepathya Communication H-7, Malviya Nagar, New Delhi,pp-21-22.
[7] Wagh, Ashok,(2014), "Indian tea Industry: Its status in global scenario", Abhinav International monthly Referred Journal of Research in Management & Technology, Vol.3, Issue12,pp-32-36.
[8] Uttarakhand Tea Development Scheme, Uttarakhand Tea Development Board Almora, Uttaranchal.

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