

USE OF MEDICINAL PLANTS, VEGETABLES, HERBS AND SPICES TO SURVIVE IN DIVERSIFIED CLIMATIC CONDITION IN ALMORA & PITHORAGARH IN KUMAON REGION

*Nakul Mohindra**

*Umesh Kushwaha***

ABSTRACT

This study is based on the food used by the kumaoni people to make them survive in such diversified climatic condition. Kumaon region has almost all the different agro-geo climatic zone, which makes the life difficult to survive in hilly areas. The data was gathered from visiting different hilly areas of Kumaon. A set of questionnaire was given to different samples of region, to collect the data on traditional recipes, herbs, spices, other ingredient like vegetable, preservative, shelf life of the food which are grown locally and their relevance based on diversified agro –geo condition of the region. The study also throws light on various medicinal plant and herbs grown, and there uses in local cuisine to make their life healthier. This study proves how the herbal food gives high energy necessities of the mountainous and cold region.

Keywords: Agro-geo zone, Herbal Cuisine, Species, Medicinal Plants.

OBJECTIVE:

1. To identify the different food and eating habits from region of Kumaon–Pithoragarh and Almora (Uttarakhand).
2. To identify the specific herbs, spices, vegetable, and Medicinal plants used by local people of the region and to identify the scientific characteristics of herbs, spices, vegetable, and Medicinal plants, which proves how the herbal food gives high energy necessities of the mountainous and cold region.

* Asst. Professor, Amrapali Institute of Hotel Management, Haldwani

** Lecturer, Amrapali Institute of Hotel Management, Haldwani

METHODOLOGY USED

Kumaon region has a distinctive cuisine which has substantial influence of the herbs, spices and other medical plants. Different ingredients play a substantial role to provide different medicinal values to the local community. Pithoragarh and Almora are the basis of research study. The data was collected from various sources and visiting these places. An interviewing was done with the locals to gather the relevant information. Apart from responses from samples, the data was collected from other sources like books, research articles and web.

INTRODUCTION OF KUMAON

Origin of word Kumaon comes from “Kurmanchal” which means “kurm” avatar, kurm means tortoise. There are many myth regarding the evaluation of Kumaon. The Kumaon region consists of districts of 4 Nainital, Udham Singh Nagar, Almora and Pithoragarh.

MAP



Kumaon lies at the feet of some of the tallest mountains in India, where forests and wildlife have still to unfold their mysteries. Local religious customs and ancient traditions are very much alive here.

INTRODUCTION OF KUMAONI CUISINE

Kumaon has a diversified Agro-Geo zones, where most of the crop and vegetables which are grown and consumed locally. The Kumaoni Cuisine has an influence of local vegetables however Desi Chicken and other game are also have substantial influence on cuisine. Kumaoni cuisine is simple but has high nutritional values as it is required in the tough climatic condition of Hills. The cuisine has combination of Variety of vegetable, pulses and other herbal spices along with game of hills.

Since the socio-economical conditions are not as high as other part of the country due to lack of employment in the Hilly areas of Kumaon, the impact of this scenario encourage the locals to procure the raw material from the surroundings only. Most of the areas in hills of Kumaon have small amount of vegetation including pulses and herbal and medicinal plants. Many times the climatic conditions at high altitude in Kumaon are adverse with respect to human body. As the temperature ranges average maximum of 25° C to average minimum of 15° C in Almora and Pithoragarh Region through out the year hence the human body require more energy and internal heat to adjust with the climate. Also the medical facilities are limited in these hilly areas of Kumaon, to over come this limitation the locals grow many medicinal plants in the near by vicinity which has great influence in the cuisine of Kumaon. Many of the medicinal plants and herbs are used in the food. These medicinal plants like **Gahat** (*Kulthy* or the rust brown lentil which has a high importance to cure the problems of kidney stone and bladder, **Chudakni**—Having properties to keep the body warm during winter season. *Hira Ballabh Joshi, Indian Journal of Natural Products and resources, Vol-1 (I), March 2010.*

Kumaoni cuisine is not very rich but mouth watering having great influence of local delicacies. Rice, lentils, leafy vegetables, Badis, etc are major meal component for the locals. Kumaoni cuisine also has influence of Tibetan and Nepali cuisine because the major part of the Kumaon shares its border with Tibet and Nepal. The food is usually cooked in iron vessels using charcoal or wooden fuel in the interiors of these regions. Kumaoni cuisine is very nutritious but simple in order to provide more energy on hilly areas and also to combat with extreme winters.

Kumaoni cuisine has variety of leafy vegetable used, Dals, and curries. It uses very less quantity of spices and takes lesser preparation time. Many of the herbs and spices have lots of medicinal values. These herbs are useful to cure many diseases like cold, stomach pain, stone problem of kidney and bladder, typhoid, bronchitis, piles, fever and heart problems etc. Pahari Pulses are very important component of the meal in Kumaon because the self life is comparatively more as well as its nutritional values. Pulses are also unknown as Poor Man's Meat in the region and it compensate the nutritional values in the absence of meat. Pulses have very less moisture content and hence can be stored for a longer period of time. Pahari Pulses like *Urad, Gthath, Tor, Masoor, Maans & Sunth* are rich in calories, vitamins, proteins, fiber content and minerals hence they are widely used in Kumaon cuisine to compensate the nutritional values of other food stuff which are not available at high altitude and at low atmospheric temperature.

VARIATION IN CLIMATE AND ITS IMPACT ON EATING HABITS OF LOCAL PEOPLE

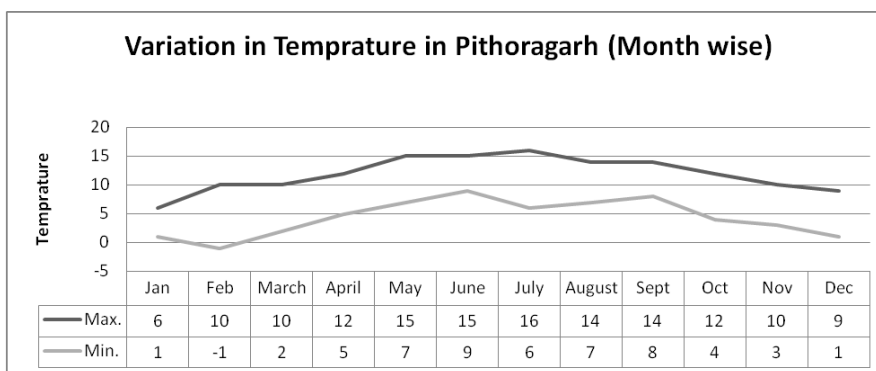
Pithoragarh and Almora are the two prominent districts of Kumaon region of Uttarakhand. The variation in climate has a prominent impact on the region. The temperature varies through out the year with a minimum of 2° C to a maximum of 30 ° C at Almora region, however Pithoragarh region is relatively warmer in summers and cool during winters, the region has extreme variation in the temperature due to high altitude gradient. Variation in temperature in Pithoragarh ranges between -1° C to 16 ° C during the year.

The local community in this region is very hardworking and strong body stature. They require more flavourful, highly nutritional meal which should be easy to cook. The hostile climate and long working hour demand the same from the meal.

A typical Pahadi day begins with late and heavy breakfast which includes Mandua Breads, eaten with Desi Ghee, Lehsun ki Chutney whereas the major meals includes green leafy vegetables, rice and different Pahari Dals. Variety of food stuff are also preserved for the winter season since the fresh vegetable are not often available. At that time the preserved food items compensate the major other ingredients, which are not available in winters.

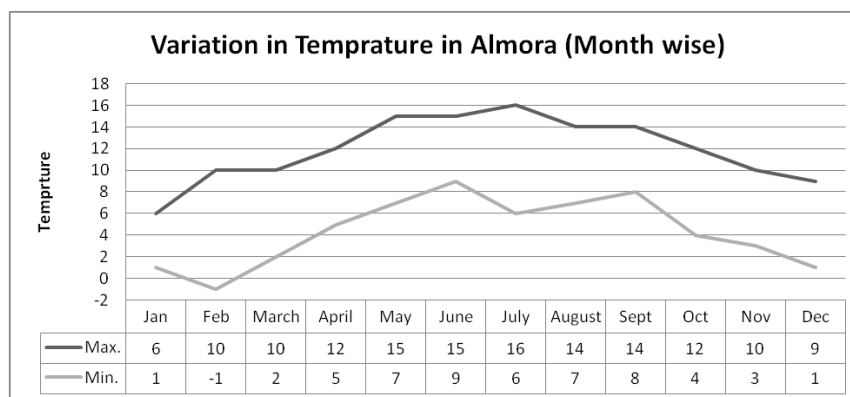
COMPARATIVE STUDY OF VARIATION IN TEMPERATURE OF PITHORAGARH & ALMORA DISTRICTS:

Table 1



Variation in Temperature throughout the Year in Pithoragarh

Table 2



Variation in Temperature throughout the Year in Almora

As per the data provided above, the climatic condition of Pithoragarh and Almora regions are broadly divided into two zones viz summer zone and winter zone. The variation in the temperature is seen through out the year in both the districts. This variation in the temperature also has impact on vegetation and thus results into difficult circumstances for the locals to survive in the difficult climatic condition. During the months of snowfall the growth of vegetables, herbs and spices usually goes down, hence to overcome the situation many of the eatable are dried well in advance during summers like Badis (large dried balls made up of Urad Dal) and Mangodi (Small dried balls made up of Moong dal). These are made up during the summers and stored for winter season. Since the production of the crop grows down drastically during winter season the best substitute for the vegetables are lentils, Gahat (Pahari Dal), Bhatt (Pahari Dal), Maans (Pahari Dal), Badis and Mangodis which provide a staple meal component during winters.

Mostly the green leafy vegetables are eaten during the summer season however the preserved Badis and other Pahadi Dals become major meal component for winters. The meal in these regions are divided into 2 parts unless more number of meals in other parts of the country. The first major meal of the day is a sort of Bruch taken late in the morning when people leave their home for work and an early dinner is taken in the night, since the days are smaller in the winters a normal days starts early and end also early. Wheat and other different types of Pahari Dals are available through out the year however milk is produced in lesser quantity because the cows yield less milk in the hilly areas. This results into less use of milk and milk products in the local cuisine but tea is taken through out the day in winter having less quantity of milk. Medium of cooking in these regions are either mustard oil or Ghee, however the use of Tomatoes are less in the local cuisine.

INTRODUCTION OF DIFFERENT VEGETABLES, SPICES, HERBS AND MEDICINAL PLANTS IN PITHORAGARH AND ALMORA REGIONS OF KUMAON

Rice, vegetables and lentils are the staple food of Kumaon. Kumaoni food is very simple but very nutritious completely suits the hard environment of the Himalayas. Almost all the raw material is grown in near vicinity. Since Pithoragarh and Almora is hilly forest region of Kumaon hence most of the spices and herbs are collected from the Forest. These spices and herbs play crucial role in the local cuisine due to there medicinal importance on human body in critical climatic conditions. The climatic conditions and mineral rich soil of the region brings a distinctive taste in the local crop.

DIFFERENT TYPES OF LOCAL VEGETABLES, CEREALS AND PULSES, FRUITS AND SEEDS, NON VEGETABLES AND HERBS AND SPICES USED IN KUMAONI CUISINE

Table 3

Vegetables	Cereals and pulses	Herbs and spices	Fruits and seeds	Non vegetarian
Liee	Urad	Jamboo	Galgol	Jhaalar
Pao	Ghath	Gadraini	Malta	Jungli suaar
Lingoon	Tor	Ajwain	Kafhal	Charu (Fish)
Jhankaar	Masoor	Bhangira	Khumani	Ashalu (Fish)
Pinalu	Mandua	Dadim	Pulam	Gadhua (Fish)
Kyaul	Madira	Bhang	Jakhya	Chawan (Fish)
Taid	Wajon	Dhuwn	Bedu	Kita (Fish)
Gethi	Kala Bhatt	Chhapi	Anjeer	
Bhuj	Bhura Bhatt	Dhoona		
	Maans			

VEGETABLES:

1. Liee: Belongs to family of spinach, having large green leaves. It is good for bones.
2. Pao: Pahadi spinach.
3. Lingoon : It is a green vegetable which has long stem and circular stick type structure.
4. Jhankar : A small plant with small leaves resembling beetle leaves. It is rich in Vitamin A – It's a hot vegetable often consumed in winter season.
5. Pinalu : A hill version of root *arbi* of colocasia family. It's a cold vegetable often consumed in summer season.
- 6.. Gethi : A type of sweet bitter guard. It's a hot vegetable often consumed in winter season. Provides warmth in the body to combat chilly winters in the region.
- 7.. Bhuj: Wax guard. Taken in winter season to protect from extreme cold.

CEREALS AND PULSES:

1. URAD DAL: A typical lentil found across the country and commonly used in Kumaon Region.
2. GHATH: It is a type of lentil having brown color. It is useful in curing from stones in kidney and bladder.
3. BHATT: This belongs to soya bean family
4. TOR: A type of yellow lentil.

5. MASOOR DAL: A type of lentil commonly found in Kumaon region, Dried Balls are made from Masoor Dal which is known as Badis. These are prepared during summers and stored for winter session. High content of protein.
6. MANDUA: It's a coarse grain which is grown in the interiors of Kumaon. It contains high fiber content. It belongs to Wheat family. Very commonly found in the regional cuisine.
7. MADIRA: A type of rice
8. WAJON: Wheat like barley.
9. KALA BHATT: Black soyabean
10. BHURA BHATT: Brown soyabean, which is very nutritious and used to cure Jaundice.
11. MAANS: A type of pahadi urad which is rich in carbohydrates.

HERBS AND SPICES:

1. JAMBOO: it is a local spice often used in food of Kumaon Cuisine. It has the property to cure common cold and cough.
2. GADRAIN: A local spice found in high altitude of the region, can cure cough and cold.
3. AJWAIN (THYMOLE): A warm herb used in local food.
4. BHANG: Hemp seeds use to make *Chutney*, which is warm and good for digestion.
5. DADIM : A sour pomegranate, helps in curing cough and Cold.
6. DHUWN
7. CHHAPI: Helpful for stomach pain.

FRUITS AND SEEDS:

1. GALGAL : A type of medietarian lemon, generally used in salads, raita.
2. MALTA : It's rich in Vitamin C and very good for eyesight.
3. JAKHYA: A seed from mustard family having pungent flavour.

NON VEGETARIAN

1. JUNGLE SUAAR: Taken in winter season to protect from extreme cold.
2. JHAALAR: A type of wild goat.

The staple grains consumed by the people of the district are wheat, rice, maze, mandua and jhanjora, the last three being coarse grains generally eaten by the poorer sections. The pulses consumed are urad, gahat, bhatt, soontha, tur, lopia and masor. The Hindus of the district mostly vegetarian by habit and preference and although the Muslims, Christians and Sikhs are

generally non vegetarian, those not able to afford eating meat daily due to want of fund or local unavailability often resulting to a vegetarian diet.

The Traditional staple Food

The traditional staple food in Almora and Pithoragarh District of Kumaon is not only limited to *Roti & Bhatt* but also have influence of food items like *Chutney, Raitas, Pulses*, local herb & Spice, fruits, traditional vegetables and non-vegetarian items.

Table 4: Some of the Vegetables/Fruits/Herbs & Spices/Pulses, their uses & Medicinal Importance

S.No.	Vegetables/Fruits/Herbs & Spices/Pulses	Uses in local cuisine	Medicinal Importance
1.	Lice – Leafy vegetable	Vegetable dish	Good for Bones
2.	Pao – leafy Vegetable	Vegetable dish	Good for Bones
3.	Lingoon – stick type vegetable	Vegetable dish	Helps in digestion
4.	Jhankar – Small leafy vegetable	Vegetable dish	Often use to protect from winter.
5.	Pinalu – Hill version of root <i>Arbi</i>	Vegetable dish	Used during summers.
6.	Gethi – A type of sweet bitter guard	Vegetable dish	Provides warmth in the body
7.	Bhuj – wax guard	Vegetable dish	Protect from extreme cold
8.	Ghath – pahadi lentil	<i>Dal</i>	Curing from stones in kidney and bladder.
9.	Bhatt – variety of soyabean	<i>Badis</i>	Provides warmth in the body
10.	Masoor dal – lentil	<i>Badis</i>	Rich in Protein
11.	Mandua: – it's a coarse grain	<i>Roti</i>	Rich in fiber
12.	Madira: – a type of rice	<i>Bhatt</i>	Rich in Carbohydrate
13.	Bhura Bhatt: brown soyabean	<i>Badis</i>	Cure for Jaundice
14.	Maans: a type of pahadi urad	<i>Dal</i>	Rich in Carbohydrates
15.	Jamboo – local spice	Vegetable dish	Cure common cough & cold.
16.	Gadraini: a local spice	<i>Raita & Chutney</i>	Cure common cough & cold.
17.	Ajwain: a local spice	<i>Raita & Chutney</i>	Cure common cough & cold.
18.	Bhang: hemp seeds	<i>Chutney</i>	Provides warmth in the body
19.	Dadim : a sour pomegranate	<i>Raita & Chutney</i>	Cure common cough & cold.
20.	Malta	Fruit	Good for eye sight.

CONCLUSION

The conclusion of the study is that the geographical conditions of the Almora & Pithoragarh district of Kumaon region have extreme cold weather which makes it difficult for the locals to have the availability of raw food materials as well as proper medical facilities due to poor infrastructure. The locals of these districts are highly dependent on the weather conditions and preservation techniques to get proper staple diet during extreme weather. Most of the raw food items are preserved during summer season, also these raw materials are highly recommended for healthier life style. Since the medical facilities are limited in higher places of these districts hence these local food materials plays a crucial role in keeping a good health for the locals.

The vegetable, lentils, local herbs and spices and local fruits have distinctive medicinal values to prevent the residents of these district from the common diseases like cough and cold, stomach pain, and curing from stones in kidney and bladder (since the water at higher altitude is more harder).

The study put a light on traditional recipes, herbs, spices, other ingredient like vegetable, preservative, shelf life of the food which are grown locally and their relevance based on diversified agro – geo-condition of the region.

REFERENCES

- <http://www.uttaranchal.org.uk/kumaonplants.php>
- Hira Ballabh Joshi, *Indian Journal of Natural Products and Resources*, Vol-1 (I), March 2010.
- <http://prayaga.org/documents/gairsain-report.pdf>
- Arora RK & Pandey Anjula, Wild edible plants of India, *Diversity conservation and uses*, NBPGR, New Delhi, 1996.
- Mehta P.S., Kumar Dinesh & Bhatt K.C., Wild edible species for subsistence in Kumaon Himalaya and associated traditional knowledge.
- <http://gbpihed.gov.in/more4.pdf>
- <http://www.mustseeindia.com/Almora-weather>
- <http://www.worldweatheronline.com/weather-averages/India/1017584/Pithoragarh/1041790/info.aspx>
- Chopra Ravi & Pasi Santosh, where are the empty *Thalis* in Uttarakhand? District level food insecurity analysis of U.K., Dehradun.
- <http://agricoop.nic.in/Farm%20Mech.%20PDF/05024-06.pdf>

- http://www.jofamericanscience.org/journals/am-sci/am0604/24_2477_am0604_167_174.pdf
- <http://www.scribd.com/doc/34097977/Uttarakhand>
- <http://www.scribd.com/doc/58982007/Cuisine-of-Kumaon>
- http://digitool.library.mcgill.ca/webclient/StreamGate?folder_id=0&dvs=1321852441380-675
- <http://indianspicetrail.blogspot.com/2011/10/kung-pao-vegetables.html>
- P.S. Mehta, K.S. Negi & S.M. Ojha, Native plant genetic resources and traditional food of Uttarakhand Himalayas for sustainable food security and livelihood, *Journal of Natural Products and resources*.