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## NATIVE PLANT RESOURCES AND TRADITIONAL FOODS OF CHAMBA DISTRICT, HIMACHAL PRADESH FOR SUSTAINABLE FOOD SECURITY AND LIVELIHOOD.

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### **Abstract:-**

*The present study reports the diversity of plant resources of Chamba district of Himachal Pradesh, India for their traditional food and edible uses. The use of above ground parts like leaves, fruits and seeds and other aerial parts, stem, branch, flowers/inflorescence, was found to be higher as compare underground parts include roots, bulb and rhizome. In view of changing of food habits of local communities of Chamba district of Himachal Pradesh, a study to document the native plant resources of food importance and traditional recipes was conducted. Both cultivated and wild edible plant species were documented through scheduled interviewed with the help of respondents the questionnaires were filled up. After conducting the survey in the whole district the plant species of food importance were identified and a large number of traditional food items were enumerated. The relationship between plant species of food importance and sustainable livelihood were also discussed. It was observed that urbanization posing a threat to the plant diversity of the area as well traditional knowledge and cultural practices of the rural peoples.*

**Keywords:** - *Indigenous food, traditional plants resources, Chamba, H.P.*

## INTRODUCTION:

Universally, within communities of Indigenous Peoples, there is the knowledge of the natural resources that make up the food environment. Indigenous people, their communities and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices. At the same time, Indigenous Peoples face potential loss of this knowledge due to lack of use by younger members of the society and to gradual loss of elder members who know the most about the resources. Thus, it is important to implement use of this knowledge soon. However, it has been shown that development often leads to trends in dietary change that lead to increasing risk of chronic disease such as obesity and diabetes. This unfortunate consequence of development can be moderated with increased attention to the principles of diet and health already contained within the culture, and with recognition of the nutrient properties of traditional food resources, these local foods can be used to their best advantage for health promotion. The inextricable link between cultural and biological diversity which cannot be ignored can lead to protection of these food resources for all humankind. Ethnic food knowledge is still an underutilized resource in the development activities. It needs to be intensively and extensively studied and incorporated into formal research and extension practices in order to make agriculture and rural development strategies more sustainable. Special efforts are needed to understand and disseminate traditional knowledge for preservation, transfer or adoption elsewhere. Local knowledge regarding conservation, management and sustainable utilization of food resources should be recorded and duly recognized. Also, document the traditional food system and to promote ethnic food and its healthy benefit to the middle and elite society of the country.

Diversity can be found in India's culture, geography as well as climate and same is true with its food also. In Himachal Pradesh various ethnic food recipes are famous not only for source of nutrition, but in larger part of rural area it constitutes staple food, while others are consumed during local festivals, marriages and special occasions. In areas with pastoral tradition, milk and its products are liberally used in cooking. This traditional cooking knowledge is handed down to the next generation. Earlier, when hilly state did not have well developed means of transport, people were more or less dependent on locally/naturally available food materials as well as seasonally for preparing ethnic food recipes. However, during last many decades' fruits, vegetables, herbs have been available round the year. But these ethnic food recipes are still in craze among local people and can be seen prepared in all the homes during the availability of plant material.

## METHODOLOGY:

The study was carried out in district Chamba, Nestling in the bosom of the Himalaya, Chamba district of Himachal Pradesh is unique in all aspects. It is remarkable among hill districts for its wild natural beauty. Chamba district is stretched between the upper Ravi (Vedic name - Purusni) valley and Chandra - Bhaga (Vedic name - Asikni) valley between North latitude 32°10' and 33°13' and East longitude 75°45' and 77°33' with an estimated area of 6,92,419 hectare. Mountain systems and association with river basins determine the natural division of the district, which happens to be the most important factor in the evolution of cultural diversity. PRA (Participatory Rural Appraisal) techniques were used for collection of information, as well as personal experiences were also helpful in compiling the required information.

## RESULT AND DISCUSSION:

### *Traditional wild vegetables*

In addition to commonly used vegetables across northern India, there are other lesser known wild plants which are used as vegetables. A total of 12 vegetables including leafy vegetables were documented in the village (Table:1). These vegetables are very special cuisines, famous for their taste and nutritious values.

### **Phkudi/ Bhruni**

*Phkudi /Bhruni* is the dish made from tender leaves of fig (*Ficus carica* Linn.). For its preparation, tender leaves are boiled in an earthen pot for 10-15 minutes till soft and then ground well. Heat mustard oil in a pan. Add coriander seeds, cumin seeds, red chillies, asafoetida and turmeric powder, heat till brown and put boiled buds to it. Add salt and spices according to taste. Cook it on slow *fire* for 5 minutes and serve along with *chapatti*

### **Karayaei/Kachnar**

Boil the buds of *Karayaei/Kachnar/ (Bauhinia variegata* Linn.) for 10-15 minutes till they become soft. Heat mustard oil in a pan. Add coriander seeds, cumin seeds, red chillies, asafoetida and turmeric powder, heat till brown and put boiled buds to it. Add salt and spices according to taste. Cook it on slow *fire* for 5 minutes and serve along with *chapati*.

### **Barah ki chutney**

Rhododendron (*Rhododendron arboretum* Sm.) locally known as *brah or chiu ke phool* is a flower present in the hilly areas of Himachal Pradesh. It is red to maroon in colour and slightly sour to taste. For making *chutney*, paste of fresh flowers of *barah*, onion, mint leaves, basil leaves, green chillies, salt and spices is prepared. It can accompany the main meal which is appetizing in nature.

### **Chhachha**

Raw mangoes (*Mangifera indica* Linn.) are used for making *chhachha*. Onion and raw mangoes are taken in equal amount, peeled and grind together coarsely. Chillies, salt and sugar are added to taste.

### **Phafru ka sag**

Buckwheat (*Fagopyrum esculentum* Moench.) leaves locally known as *Phafru* are available in the hilly areas. For making *sag*, buckwheat leaves are washed, cut into fine shreds and then boiled by adding salt till soft. After boiling make its paste. Mustard oil is heated in a pan; coriander seeds and red chillies are added to the heated oil and then paste of buckwheat leaves is added. Cook for some time and serve with rice or *chapattis*; it tastes a bit sour.

### **Kasrod ki sabji**

Vegetable fern/ *Kasrod* /*Lungru* [*Diplazium esculentum* (Retz.) Sw.] Available in hilly areas of Himachal Pradesh look like stems with curled top and with hairy growth over it. For its preparation, remove hair of *Kasrod* /*linger* stems with the help of cotton cloth and then cut into small pieces after washing. It is fried in an open pan with slightly more amount of mustard oil. Add a pinch of asafetida also along with other spices. Curd can also be added at the time of frying.

### **Patrodu**

*Patrodu* are prepared from healthy leaves of colocasia (*Colocasia antiquorum* Schott). And Make the paste of black gram flour of pouring consistency. Now take few leaves of *bhavri* (*Ocimum basilus* Linn.), 2-3 medium sized onion, and one piece of garlic, green chillies and salt according to taste. Ground all the ingredients and add these to the dough of Bengal gram flour. Take one leaf of colocasia keeping its lower side upwards; apply the dough over it properly. Cover the leaf with another leaf in reverse manner and again put paste over it' and repeat this process for 4-6 leaves. Fold sides of the leaves inside and then roll like bedding. Apply paste on all sides of bed while folding. For making it one piece, wrap it in a leaf of turmeric and tie with thread. Take a big pan and add small amount of water to it Put small sticks inside the pan to make rack over water. Place the folded leaves on the rack and let it steam cook. It will take about 20-25 minutes to cook. Take out the leaves, let it cool and cut it into small pieces. Before serving, these pieces can be shallow fried or can be deep fried depending upon the requirement, occasion and availability of time. *Patrodu* are specifically prepared during rainy season

### **Seul ke Patrodu**

*Patrodu* are prepared from healthy leaves of Seul/ *Chenopodium*/ *Chenopodium album* L/ and Make the paste of black gram flour of pouring consistency. Now take 2-3 medium sized onion, one piece of garlic, green chillies and salt according to taste. Ground all the ingredients and add these to the dough of Bengal gram flour. Take one leaf of Seul keeping its lower side upwards; apply the dough over it properly. Cover the leaf with another leaf in reverse manner and again put paste over it' and repeat this process for 4-6 leaves. Fold sides of the leaves inside and then roll like bedding. Apply paste on all sides of bed while folding. For making it one piece, wrap it in a leaf of turmeric and tie with thread. Take a big pan or *tavva* and add small amount of Mustard oil it . Cook it on slow *fire* for 5-10 minutes and serve along with *chapati*.

### **Kulfa ka sag**

Pigweed plant locally called, *kulfa* (*Portulaca oleracea* Linn.) is wildly grown near water channels. It is bit spongy and contains gum like substance. Pigweed leaves are washed, cut into fine shreds, boiled by adding salt till soft and ground into paste. Mustard oil is heated in a pan; Coriander seeds and red chilies are added to the heated oil and then add paste of pigweed leaves, cook for some time and serve hot *Kulfa ka sag* tastes bit sour and is served with rice or *chapati*.

### **Bicchu buti / Aynni ka saag**

In whole district, leaves of *bicchu buti*/ *Ayn* (*Unicu parviflora* Roxb.) are relished as vegetable. Boiled and mashed leaves (100 gm) are cooked in oil with spices like cumin seeds (1/2 tsp), coriander powder (Y2 tsp) and turmeric powder (lit tsp). It is locally called as *bicchu buti ka saag*.

### **Documentation of Ethnic food recipes**

Diversity can be found in India's culture, geography as well as climate and same is true with its food also. In Himachal Pradesh various ethnic food recipes are famous not only for source of nutrition, but in larger part of rural area it constitutes staple food, while others are consumed during local festivals, marriages and special occasions. Earlier, when hilly state did not have well developed means of transport, people were more or less dependent on locally/ naturally available food materials as well as seasonally for preparing ethnic food recipes. However, during last many decades' fruits, vegetables, herbs have been available round the year. But these ethnic food recipes are still in craze among local people and can be seen prepared in all the homes during the availability of plant material.

### **Observations**

Ethnic *food* of Himachal Pradesh is rich and varied, while relying heavily on local ingredients. It can be a healthy choice with a balanced diet of steamed rice or *roti*, lots of vegetables, *dal* (lentils), yogurt and saag (a spinach and/or mustard leaf based dish). Thus, the natives of the state consume a range of foods prepared from cereals, pulses, milk, fruits and vegetables. These foods have been described below (Table: 3)

These traditional practices were aimed to optimizing long-term productivity rather than short-term output. Traditional farming systems consist of crop, livestock and forestry activity and strong dependency existed among them. Throughout the Himalayan region, the traditional practices still dominate and they are based on age old technologies related to the management of biological resources to meet the need in specific zones (Verma, 2002).

It is expected that the documentation of appropriate technologies in this region will help in formulation eco-friendly environment and appropriate development strategies. It will further help in conservation of rich traditional knowledge hitherto practices but most threatened resource of the region. More research should be encouraged in this field of improving existing indigenous technologies by making improvements through scientific validation and blending with modern technologies.

It is a bitter fact that no attention has been given to the ITK related to ethnic food acquired by the farming communities. Indigenous technology is being overshadowed by modern culture and looked down upon as backward, irrational, mostly labour intensive and lacking scientific reasoning.

The traditional ethnic foods were and are still being replaced by capital intensive western fast food. The divergence from the traditional systems has in fact resulted in environmental degradation and decline in biological resources of the region which ultimately result decline in socio-cultural values.

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**Table: 1 List of Plants used in local recipes according to seasonal availability**

S. No.	Name of Recipe	Plant name/ Common Name /Family	Parts used	Time of Availability
1.	Fakudi	Fakuda/Fig/ <i>Ficus carica</i> Linn./ Moraceae	Buds	Feb-March
2.	Karayaei	Karayaei/Kachnar/ <i>Bauhinia variegata</i> Linn. Leguminosae	Buda & Flowers	March –April
3.	Chu ki chatni	Barah/Rhododendron/ <i>Rhododendron arboretum</i> Sm./Ericaceae	Flowers	March-April
4.	Aam ka Chhacha	Aam/mango/ <i>Mangifera indica</i> Linn./ Anacardiaceae	Fruit	May- June
5.	Chir ka Chhacha	Chir/Wild Apricot/ <i>Prunus armeniaca</i>	Fruit	April-May
6.	Phafru ka Sag	Phafru/ Buckweat/ <i>Fagopyrum esculentum</i> Moench/ Polygonaceae	Leaves	May- June
7.	Sarson Ka Sag	Sarson/ Mustard / <i>Brassica campestris</i> / Brassicaceae	Leaves	May-June
8.	Aynni ka Sag	Ayn/ Bichchhu buti / <i>Urtica dioica</i> / Urticaceae	Leaves	Nov-Fab
9.	Kasrood	Kasrood/ Vegetable Fern/ <i>Diplazium esculentum</i> (Retz.)Sw	Stems	May-July
10.	Kachalu ke Patrodu	Kachalu/ Colocassia/ <i>Colocassia antiquorum</i> Schott. /Araceae	Leaves	Aug-Sept.
11.	Seul ke Patrodu	Seul/ Chenopodium/ <i>Chenopodium album</i> L/	Leaves	May-July
12.	Kulfe ka Sag	Kulfa/ Pigweed/ <i>Portulaca oleracea</i> Linn Portulacaceae	Leaves	Aug-Oct

**Table: 2 Name of some ingredients used in indigenous recipes**

Plant name	Family	Common name	Local Name
<i>Allium cepa</i>	Alliaceae	Onion	Payaj
<i>Allium sativum</i> Linn.	Alliaceae	Garlic	Lahsun
<i>Coriandum sativum</i> Linn.	Umbelliferae	Coriander	Dhania
<i>Mentha arvensis</i>	Lamiaceae	Mint	Pudina
<i>Tamarindus indica</i>	Fabaceae	Tamarind	Imli
<i>Brassica campestris</i>	Brassicaceae		Sarson
<i>Cuminum cyminum</i>	Umbelliferae	Cumim	Jeera
<i>Curcuma longa</i>	Zingiberaceae	Turmeric	Haldi
<i>Ferula asafoetida</i>	Apiaceae	Asafoetida	Heeng
<i>Capsicum Frutescens</i>	Solanaceae	Red chillies	Lal Mirch
<i>Trachyspermum ammi</i>	Umbelliferae	Onum	Ajwain
<i>Trigonella foenumgraecum</i>	Fabaceae	Fenugreek	Methi
<i>Zingiber officinale</i>	Zingiberaceae	Ginger	Adrak

**Table 3-List of traditional /ethnic foods of study area**

Item	Ingredients	Importance of Food / Time of consumption	Method of preparation
Pindari	Maize & Codra flour, green leaf, whey, gur	Baisakhi, occasion	Fermentation with butter milk and eaten with milk and gur
Babroo	Wheat flour	Snack food/ Festive occasion	by deep frying after Fermentation
Chabru/c hele	Wheat flour/ sugar	Snack food	griddle(like <i>dosa</i> )
Rot	Wheat, jaggery, ghee	Religious ceremony	Shallow frying on griddle (like parantha)
Terkeera	Wheat sugar, ghee	Snack food	Natural fermentation followed by frying in ghee
Madra	Rajmah, Curd , ghee	Social ceremony, Special dish in marriage feast	Boiled Rajmah followed by slow heat cooking
Kadi	Buttennilk, spices, gram flour, ghee	Accompanimento the main diet, marriage feast	Boiling & slow cooking
Redu	Buttermilk ,rice	the main diet-To relieve indigestion	Boiling & slow cooking
Chrori	Wheat flour	Special occasion	griddle(like <i>dosa</i> )
Ghadi roti	Wheat flour	Accompanimento the main diet	Fermentation and make like chapati
Kodre ki roti	Kodra flour	Special occasion	Simple making like chapatti
Liched	Chenopodium flour	Special occasion	Making like Haluwa
Alsi ke ladoo	Crushed Alsi seed	Occasionally	Mixed with crushed seeds with wheat flour and dry fruits and make ladoo.

Kanak ke ladoo	Wheat flour	Occasionally	Make ladoo and steamed
Maki ke Ladoo	Maize flour	marriage feast	Make ladoo and steamed