

SOME TRADITIONAL RECIPES OF INDIA IN THE LIGHT OF AYURVEDA

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ABSTRACT

Indian cuisine varies from region to region. The tradition in food when recognised can be a potent tool for fighting food hunger in India. India is an ever expanding economy and this emerging super power needs its roots consolidated and nourished. Rural households are the smallest unit of the country and also its building blocks. In Ayurveda, food is considered to affect the mind as well as the body. By understanding how to prepare foods best suited to our minds and bodies, we can utilize nutrition as a source of healing. Food is the most essential to sustain a good life and the same food if consumed inappropriately becomes the root cause of many diseases. The sustainable development goals enlist 'No Hunger' as one of the goal. By understanding traditional food and strengthening its relevance in the current times offers very promising solution to world issue over food shortage and at the same time it gives substance to the idea of preventive medicine which is the building block of health in society.

KEYWORDS: Rural households are the smallest unit of the country and also its building blocks.

AIMS AND OBJECTIVES

The study is conceptualised with the aim of comprehending the traditional recipes in the light of Ayurveda. This work is a humble attempt to address the innumerable health benefits to mankind from traditional recipes of food across India. The sustainable development goal of 'No Hunger' and 'Responsible Consumption' can be potentially achieved with backing these recipes across the country by the government and non governmental organisations. Various

food recipes documented here are from some regions of India, their potential benefits, season of cooking and botanical information has been furnished with an attempt to document its ethanobotanical health benefits using Ayurveda textual references to support it.

INTRODUCTION

The world of 21st century has shrunk aided with sophisticated connectivity. The global village entails myriad ecosystems. The subject of food is also extensively varied in all these micro ecosystems. Indigenous recipes of the micro ecosystems is an intricate interplay of sustainability and health. Thus, the need of the hour is an insightful comprehension, preservation and exaltation of the traditional food recipes across these microenvironments. India being a land of assorted and diversified cultures that speak volumes about food harbours multitudinous microecosystems. Thereby this study explores traditional food recipes across various states of the country with the aim of comprehending their health benefits and role as preventive therapy in the age of countless lifestyle borne and metabolic diseases.

TRADITION IN FOOD ACROSS VARIOUS STATES OF INDIA

Indian cuisine varies from region to region. Traditionally, some states in India have their own unique dishes, which they often prepare during religious and social gatherings. The many similarities between the culinary regions of India are highlighted with an exquisite use of spices and flavourings. These range from cardamom, cumin, cloves, fennel seeds and garlic to ginger, chillies, fenugreek, saffron and turmeric. Spice mixtures or masalas are a crucial element of Indian cuisine. Whether fresh or dried, masalas make use of local ingredients and are prepared daily along with grains, pulses and vegetables. While meat, poultry, fish and seafood dishes are offered throughout India, most vegetarian specialities are found in the central and southern regions. For an added dimension of flavour, a variety of fruits are served fresh or pickled, such as chutney and relish. Dairy products, such as clarified butter (ghee), cheese (paneer), yogurt, milk and buttermilk (moru) are used as ingredients and condiments.^[1]

ECONOMIC AND HEALTH BENEFITS OF TRADITIONAL FOOD RECIPES

The tradition in food when recognised can be a potent tool for fighting food hunger in India. India is an ever expanding economy and this emerging super power needs its roots consolidated and nourished. Rural households are the smallest unit of the country and also its building blocks. The scientific insight into the various food traditions across India can create awareness about various lost and less practised recipes across the country. The sustainable

development goal of No Hunger and Responsible Consumption can be potentially achieved with backing these recipes across the country by the government and non governmental organisations. These recipes often are cooked from what is available in the region in a given time of the year thereby promoting reliance on local procure. The self sufficient rural economies are a goal that the nations are striving for.

In Ayurveda, food is considered to affect the mind as well as the body. By understanding how to prepare foods best suited to our minds and bodies, we can utilize nutrition as a source of healing. Food is the most essential to sustain a good life and the same food if consumed inappropriately becomes the root cause of many diseases. So, proper knowledge about food and its importance should be known by all human beings to have better benefits from it.

Ayurveda believes that *ahara* articles are composed of five *mahabhutas* and respective *bhutagnis* digest their own ingredients during the process of digestion and metabolism but only when they are stimulated by *antaragni*. Traditional wisdom about the processing of food, its preservation techniques, and their therapeutic effects has been established for many generations in India.^[2]

RECIPES ACROSS INDIA

For the purpose of the study regions of India chosen with their traditional recipes include the following.

- Kangra Region of Himachal Pradesh
- Rajasthan
- Punjab

The season of cooking recipes, part of plant used, its known active phytochemical constituents along with their relevance to the population of the region has been strived for in the study.

Recipes of Kangra Region

Kangra district of Himachal Pradesh formerly Nagarkot, town, western Himachal Pradesh state, northwestern India, in an area at the southern edge of the Himalayan foothills drained by the Beas River. The climate in the region varies across the year from being cold and dry winters to hot and dry summers, while the monsoon season is hot and humid. The region experiences a maximum of 38 degrees celsius to a minimum of zero degree celsius in the year

around. Since it is situated in the foothills of Himalayas, the region grossly comes down to being *Anupa desha*.

Anupa region surrounds with dense forest, *snigdha taru* (soft plants), rich with plenty of river resources, heavy rainfall and has more moist content in atmospheric region. The people residing in this region are known to endure more with *Kapha-vata* predominant diseases.^[3]

The cooking recipes are mostly rich in sour, pungent and salty taste. These stimulate the digestive fire(pita) and suppress vata, delay aging being rich in antioxidant properties. Many traditional recipes are known in the region, some of which are documented in the table below.

S. No.	Recipe	Name of the principal ingredient of the recipe	Botanical name and family	Part of the plant used in recipe	Main chemical constituent	Season of preparation	Ethnobotanical	Ayurvedic benefit
1	Karalen	Karalen	<i>variegata</i> Leguminosae	Buds/ flower	Phenolics, lignins, saponins, terpinoids, β -sitosterol, tannins, kaempferol-3-glucoside, rutin, quercetin, apigenin, apigenin-7-O-glucoside, lupeol amides, carbohydrates, reducing sugars, protein, vitamin C, fibers, calcium and phosphorus ^[4]	March – April	The flower buds of <i>B.variegata</i> for the treatment of diarrhoea, dysentery and haemorrhoids. The flowers are used in piles, oedema, dysentery, as laxative and anthelmintic. ^[5]	Flowers possess Pittaghna (Pacify pitta dosha), Rakta Pradaraghna (treats dysfunctional uterine bleeding), Kasaghna (cough treatment) and Kshyaghna (Anti tubercular) properties. ^[6]
2	Seera	Kanak	<i>Triticum aestivum</i> Poaceae	Whole grain	rich source of bioactive phytochemicals namely, phenolic acids, carotenoids, tocopherols, alkylresorcinols, benzoxazinoids, phytosterols, and lignans. ^[7] Seera is a fermented dish which has microflora mainly comprised of <i>Saccharomyces cerevisiae</i> , <i>Cryptococcus laurentii</i> and <i>Torulospora delbrueckii</i> among yeasts and <i>Lactobacillus amylovorus</i> , <i>Cellulomonas</i> sp.,	April-May	Seera is a nutritious, easily digestible traditional fermented food. ^[9]	Heavy, refreshing, aphrodisiac, cardio-tonic. ^[10]

					<i>Staphylococcus sciuri</i> , <i>Weissella cibaria</i> , <i>Bacillus</i> sp., <i>Leuconostoc</i> sp. and <i>Enterobacter sakazakii</i> among bacteria ^[8]			
3	Chhachha	Raw Mangoes	<i>Mangifera indica</i> (Anacardiaceae)	Raw fruit	Pectins and cellulose, lysine, leucine, cysteine, valine, arginine, phenylalanine, and methionine, chlorophylls (a and b) and carotenoids. ^[11] Vitamin C, Copper, Folate, Vitamin B6, Vitamin A, Vitamin E, Vitamin K, Niacin, Potassium, Riboflavin, Magnesium, Thiamine ^[11]	May June	It is appetiser, carminative and digestive.	Pungent, sour, sweet and saline in taste, light, palatable, cardiotonic and carminative. Cause palatability in other foods when added to them. Linctus of mango is nourishing, strength promoting, palatable and refreshing. ^[11]
4	Lasiade ki sabji	Sebesten Plum Raw mango	<i>Cordia dichotoma</i> (Boraginaceae) <i>Mangifera indica</i>	Fruit	The seed contains palmitic acid, stearic acid, arachidic acid, behenic acid, oleic acid and linoleic acid ^[12] Vitamin C,	May-June	It is appetiser and increases palatability of other foods taken along with it. It is considered cool and relieves heat of the	Shaka produce vishtambhi or flatulence, guru and ruksha in guna, especially it produces more mala and expels it as well

			(Anacardiaceae)	Fruit	Copper, Folate, Vitamin B6, Vitamin A, Vitamin E, Vitamin K, Niacin, Potassium, Riboflavin, Magnesium, Thiamine ^[15]		summers. It increases digestive fire.	<i>marutor adhovayu</i> or flatus. ^[13] Bahuvarah Unripe fruit causes vishtambhi, has ruksha guna, pitta kapha shamaka and relieves rakta vikara. ^[14] Shleshmataka is sweet in taste, cold in potency, heavy and aggravator of kapha. ^[15] Raw mango is <i>Kashaya</i> and <i>amla</i> in <i>rasa</i> , <i>ruchya</i> increases <i>vata</i> and <i>pitta</i> . ^[16]
5	Khatta	Galgol Coriander Jaggery	<i>Citrus medica</i> Rutaceae <i>Coriander sativum</i> Apiaceae	Fruit Leaves	Vitamin C, vitamin B, Vitamin A, Potassium, Fiber ^[17] Vitamin C, vitamin D, calcium, magnesium, Vitamin A, Vitamin B-6 ^[19]	June-Oct	Immunity booster, Good for people suffering, cardio-tonic, improves digestive fire, prevents anaemia	It is sweet and sour in taste, dipana, raktapittanashaka, clears kantha, useful in shwas, kasa, aruchi, trishna and hridroga ^[18]

Recipes of Punjab

The state of Punjab is wedged between Pakistan on the west, Jammu and Kashmir on the North, Himachal Pradesh on the north-east and Haryana and Rajasthan on the south. Physically, the topography of Punjab can be divided into the upper portion of the sub-Shivalik area and the rest of Punjab is situated on the Sutlej - Ghaggar river basin. The region according to Ayurveda fits into category of *Sadharana desha*.

Sadharana Desha is that which has the characters of both the types I.e. Anupa as well as Jangam desha. As the cold, heat, rains and wind are moderate in medium place equilibrium in the strategy of Dosha is mostly found. Some of the recipes from the region are as illustrated in the table.

S. No.	Recipe	Main ingredient	Botanical name & family	Part used	Nutrients	Season of preparation	Ethnobotanical uses	Ayurvedic health benefit
1	Sarson ka Saag	Mustard Bathua Palak	<i>Brassica campestris</i> (Brassicaceae) <i>Chenopodium album</i> (Amaranthaceae) <i>Spinacia oleracea</i> (Amaranthaceae)	Leaves and tender stem Leaves leaves	loaded with soluble and insoluble fibre, vitamins and minerals like iron, folic acid, calcium, potassium, phosphorous and magnesium. ^[20] Vitamin A, B, and C iron,calcium,phosphorus,magnesium,potassium,manganese,sodium, and zinc. ^[23] vitamin C, vitamin K, and potassium. ^[25]	Dec-Feb	It takes long hours to cook this, the saag is creamy and tasty. It is heavy to digest so keep belly full for long time. It is very good for the bowel movement and counters constipation due to winter season. It is taken with generously added butter and ghee.	Shaka are vishtambhi or causing flatulence, dry in property, laxative. ^[21] Sarshapa Shaka - diuretic, adds bulk to the stool, heavy and dry in property, amla in vipak, ushna in potency. ^[22] Bathua - dipana- panchan, shukrala, balaprada, useful in pliha roga, raktpitta, arsha, worms and tridosha shamak. ^[24] Palak Shaka - Cold in potency, kaphakaraka, bhedaniye, heavy in

								property, causes inflatulence, cures mada, shawasa, mitigates pitta, kapha and raktaja diseases. ^[26]
2	Makki ki roti	Makki/ corn flour	Zea mays (Poaceae)	Fruit	Magnesium, Vitamin B-6, Iron, Vitamin B-12, Potassium Calcium ^[27]	Dec-Feb	It is cooked with generous amount of ghee/ butter for cooking. Heavy to digest, dry in property. It dries the phlegm or cough produced due to winters. Taken with sarson saag promotes satiety for long hours.	Rotika – it is balakarak or strength promoting, dhatu vardhak or increases tissue, it decreases vata, increases kapha, heavy in digestion. Good for the diptagni or individuals with good metabolism. ^[28] Makki/ Mahakaya It is triptikar, alleviates vata, kapha and pitta, causes flatulence appetiser and nourishing food. ^[29]
3	Panjeeri	Fox nuts, Edible gum, Melon seeds	<i>Euryale ferox</i> (Nymphaeaceae) <i>Acacia arabica</i> (Fabaceae) <i>Benincasa hispida</i> (Cucurbitaceae)	Seed Gum exudate Seeds	Rich in antioxidants, calcium, fibre, negligible in fat and cholesterol, rich in micronutrients like iron, potassium, phosphorus. ^[30]	Nov-Feb	Panjiri is known to generate heat in the body. The ingredients in panjiri help soothe sore muscles, lubricate joints and reduce body aches. It fuels us with loads of energy and vigour. It is customary dish for post partum females in	Makhana are garbhasamsthapakam (maintains pregnancy), balya, vrishya, grahi and pitta shamak, relieves raktaja roga. ^[31] Edible gum from babul tree- It is kaphashamak, grahi, and useful in kushath, krimi and visha. ^[32] Kushmanda seeds brihanam, vrishya, guru, rakta, pitta and vataj roga shamak ^[33]

							overcoming debility and after pains.	
4	Alsi pinni	Alsi	<i>Linum usitatissimum</i> (Linaceae)	Seeds	Alsi is a good source of essential fatty acids (omega 3 fatty acid) and organic acids. 1 It is also a rich source of dietary fibres, protein, antioxidants, vitamins E, K, C, B1, B3, B5, and B6. ^[34]	Nov-Feb	Beneficial for cold and cough related matters, arthritis, produces heat in the body in extreme winters, body pains and also gives strength.	Atasi – it is snighdha, ushna virya, madhur and tikta rasa, katu in vipaka, causes loss of vision, alleviates vata, kapha and pitta and destroys shukra. ^[35]
5	Dal Makhani	Urad dal Rajmah	<i>Phaseolus mungo</i> (Fabaceae) <i>Vigna catiang</i> Walp (Fabaceae)	seed Seed	Flavonoids, isoflavonoids, phytoestrogens, phenolic acids, enzymes, fibers, starches, trypsin inhibitors, phytic acid, lectins, saponins, tocopherols, fatty acids, and proteins ^[36] Thiamine, Niacin, Pantothenic acid, Folate, Riboflavin, Manganese, Iron, Magnesium, Selenium, Calcium, Potassium,	All the year around	This is also prepared on special occasions and festivities. It is heavy to digest and very relishing. It promotes satiety. It is usually eaten in the winter as it is considered heavy and hot in potency	Dali- vishtambhaka (causes constipation) and when taken after removing husk it is easily digestible. ^[37] Urad- bulk forming pulse that adds roughage to the faeces. Also brihmana or promotes muscle mass, aphrodisiac. ^[38] Rajmah- it is guru/heavy to digest, nourishing, laxative, stanyajanana or

					Phosphorus, Zinc. ^[39]			galactagogue, bestows strength greatly. ^[40]
6.	Missi Roti	Whole wheat flour,	<i>Triticum aestivum</i> (Poaceae)	Seed	High protein content, Sugars, riboflavin, thiamine, nicotinic acid, cyanocobalamin ^[41]	Nov- feb	It is usually taken with white butter and has chillies, cumin powder and other condiments added which makes it heavy breakfast that promotes satiety. It is also dry in nature so gets ride of phlegm or cold due to the winter season	<p>Rotika – it is balakarak or strength promoting, dhatu vardhak or increases tissue, it decreaes vata,increases kapha, heavy in digestion. Good for the diptagni or individuals with good metabolism.^[42]</p> <p>Wheat- it is cold in potency, alleviates vata and pitta, it increases kapha and Shukra, balya, snigdha, sandhikrit or promotes fracture healing, it is saraka or relieves constipation, it promotes and improves complexion, promotes healing, and adds stability.^[44]</p> <p>Gram flour- cold in potency, light in property, relieves rakta, pitta and kaphaja rogas, it causes constipation and cures fever.^[45]</p>
		Gram flour	<i>Cicer arietinum</i> (Fabaceae),	Seed	Calcium, Iron, Potassium Sodium ^[43]			

Recipes of Rajasthan

The state of Rajasthan is the largest state in India. The huge area of the state sees many traditions in food and culinary. It was influenced by both the warlike lifestyles of its inhabitants and the availability of ingredients in an arid region. Food that could last for several days and could be eaten without heating was preferred. Scarcity of water and fresh green vegetables have all had their effect on the cooking. According to Ayurveda, the region falls under the Jangal desha. In Jangal desha maximum subjects belong to Vata Pradhan Prakriti. The Jangal desh has similar characters of Vata because Jangal is a desert or semi desert like geographical pattern in which there is mostly arid land with less rainfall, less vegetation with mostly thorny, succulent plants with dry, blowing winds and in this desha also aahara is mostly similar to qualities (guna) of Vata dosha, for example in this area most of the people use gram, maize (jwar/yava) etc. in daily diet.

S.no	Recipe	Main Ingredient	Botanical Name and Family	Part used	Nutrients	Season of preparation	Ethnobotanical uses	Ayurvedic health benefit
1.	Haldi ro saag	Amba Haldi Curd Milk	<i>Curcuma amada</i> (Zingiberaceae)	rhizome	Volatile oils extracted from rhizomes of C. amada are rich in phytoconstituents. The major constituents found in its rhizomes are curcuminoids, phenolic compounds, terpinoids, and essential oils ^[46]	Dec-Jan	Cooked in generous amount of ghee, it provides heat in the body during cold winters of desert. It is hot in potency.	Shaka are in general vishtambhi or causing flatulence, dry in property, laxative ^[47] Curcuma amada is <i>vata karaka</i> , alleviates <i>pitta</i> and is useful in all types of <i>kandu</i> . It is also aphrodisiac. ^[48]
2.	Laapsi	Dalia	<i>Triticum aestivum</i> (Poaceae)	Broken Seed	High protein content, Sugars, riboflavin, thiamin, nicotinic acid, cynocobalamin ^[49]	July-Sept	Lapsi sweet is usually prepared on Dhanteras since it is considered to bring in good luck for the coming year. It is	Lapsi - brikhmana, tarpanam, ruchya, kapha karaka ^[50]

							cold in potency and strengthens gut motility. Improves bowel habit.	
3.	Ker Sangri	Ker berry & Sangri beans	<i>Capparis decidua</i> (Capparaceae) <i>Prosopis cineraria</i> (Fabaceae)	Fruit (Berry) Fruit (berry)	C. decidua contains a number of glycosides, terpenoids, alkaloids, and fatty acids ^[51] Sangri are rich in minerals such as potassium, magnesium, calcium, zinc and iron. They are a good source of protein and dietary fiber. Sangri pods also contain a moderate amount of saponins, which help to boost the immune system and lower cholesterol levels in the blood.	April -June	Ker sangri provides as a source of nutrition in drought and dry region Sangri acts as a cooling anthelmintic, tonic, and is also helpful in treating asthma, piles, and tremors of the muscles. Also, it is used during pregnancy along with sugar to prevent miscarriage. It is a folk remedy for various ailments.	Karira has katu tikta rasa ushna virya, swedajana, bhedana, useful in arsha, kapha vata amaroga, gara visha, shotha, vrana. ^[52] Shami – rechaka, kaphashamak, useful in kasa, bhrama, shwasa, kushatha, arsha and krimi. ^[53]
4.	Bajra raab	Millet	<i>Pennisetum glaucum</i> (Poaceae)	Fruit	Pearl millet is high in fiber and essential amino acids, micronutrients like copper, phosphorus, manganese, magnesium. ^[54]	Dec-Jan	In the folklore it is highly recommended for lactating mothers.	Dali/ soup vishtambhaka (causes constipation) and when taken after removing husk it is easily digestible. ^[55] Vajraanna or bajra- It is balaya. Vatapittakara, agnideepan ^[56]

5.	Marawari Khichiya Papad	Rice flour	<i>Oryza sativa</i> (Poaceae)	Seed	Rich in insoluble fibres, proteins and vitamin b complex	Monsoon season of June- September	It is eaten in the monsoon season with spices and fried with ghee, it acts as an appetiser and carminative.	Parpata- It is rochaka, dipana, pachana, ruksha and guru in properties. ^[57]
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DISCUSSION

KANGRA REGION RECIPES

- KARALEN

The dish is made using flower buds of *Bauhinia variegata* which is popular in Ayurveda as Kachnar plant. The dish is cooked in the flowering season of the plant i.e in the months of March and April. The active constituents of the drug are found in abundance in the flowering season. The ethnobotanical uses of the plant documented from the locals include the flowers being useful in haemorrhoids, diarrhoea and piles. Ayurveda establishes these ethnobotanical uses since the flowers of Kachnar are considered pittaghna i.e. pacifies pitta. The diseases of rakta include haemorrhoids, piles and bleeding disorders, heavy mensuration in women. The flower buds being pitta shamak act excellent in raktaja disorders enlisted above. The dish is great option not just for promoting the indigenous food recipes promoting regional sustainability but also added medicinal uses.

- SEERA

This dish from Kangra region is rather unique and interesting. The wheat from the harvest is offered to diety worship and seera is made from it. Contrary to recipes of seera elsewhere this is made by fermenting the whole wheat grains. The dish is cooked with equal quantity of ghee which makes it even more nutritious. It acts excellent bulk forming food that stimulates good gut motility. The ethnobotanical benefits suggest it to be nutritous, easily digestible since it is fermented. The recipe has nutrients loaded in it, high protein content, riboflavin, cynocobalamin, nicotinic acid and sugars. A modern day research shows the nutrient enhancement of wheat in Seera dish by the process of fermentation. The recipe has microflora that stimulates gut microecosystem and is highly recommended probiotic as well. The recipe is highly recommended for growing age group as cerlac substitute from the market. In Ayurveda, Acharya Charak quotes in sutraasthan Annapanavidyadhyaya the properties of eatables of wheat prepared by adding fat to be cardi tonic, aphrodisiac, refreshing and heavy to digest. But the fermentation process here in case of Seera makes it light and easy to digest.

- CHHACHHA

the recipe is made from the raw mangoes cured during the season of May- June. According to ethnobotanical documentation of the uses of recipe, it is mouth relishing, sour, sweet and excellent appetiser, carmantive and digestive. According Ayurveda, dish is pungent (*Katu*)

and sour (*Amla*) which makes it an excellent appetiser, carminative and digestive. The *amla rasa* is said to be *manobudhi-indriyaprasadhak, hridaya*. The mangoes are rich source of Vitamin B6, Vitamin A, Vitamin E, Vitamin K, Niacin, Riboflavin, Thiamine, copper, folate. According to Ayurveda, the *Adaankala* is the time of the season when the strength (*Bala*) of the body depletes drastically due external soaring temperatures and the digestive fire (*Agni*) goes down. This dish from raw mangoes is an excellent appetiser, carminative and digestive.

- LASIADE KI SABJI

This recipe from Kangra region is made from the raw fruits of sebesten plum or popularly known as Lasuda (*Cordia dichotoma*). The recipe also makes use of raw mangoes. The dish is considered cool, heat relieving and stimulates digestive fire as per the ethnobotanical documentation of its uses. The added benefits of Sebesten plum and raw mangoes makes it rich in stearic acid, palmitic acid, arachidic acid, linoleic acid, oleic acid, vitamin c, vitamin A, vitamin E, vitamin K, Riboflavin, Folate, Thiamine etc. According to Ayurveda, the Shaka are generally considered *Vishtambhi* or causing flatulence, dry in property and laxative in action. The sebestum plum or *Shleshmataka* as it is mentioned in Aurvedic classics, is *sheeta veerya* or cold in potency, heavy(*guru*), oily (*snighdha*) and slimy(*picchila*) in properties. It acts as excellent kapha-pittashamaka and hence taken in the months of May- June. The raw mango added to it accentuates the *amla rasa*.

- KHATTA

The recipe of *Khatta* happens to be favourite of the season amongst the locals of Kangra region. The Galgal (*Citrus medica*) fruit along with coriander chutney and jaggery makes it sour and sweet. The ethnobotanical uses of the dish are- immunity booster, improves digestive fire, prevents anaemia and is a cardiotonic. According to Ayurveda, the galgal is sweet and sour in taste, it is carminative, appetiser, relieves bleeding disorders, useful in *kasa-shwas* and also *hridyaya* due to *amla rasa*. The recipe is made usually when fresh Galgal are available locally, from the months of June to October. The nutritional benefits include presence of Vitamin C, Vitamin B, Vitamin A, potassium, fibre from dietary source. The Anupa desha has kapha- pradhanya diseases besides pittaja disease. Hence the recipes we see here are focussing upon balancing these doshas more.

RECIPES FROM PUNJAB REGION

- SARSON KA SAAG

This recipe from Punjab region is cooked in the winter months when the arson *Brassica campestris*) is available from fields. The fresh leaves of Bathua(*Chenopodium album*) and Palak (*Spinacea olera*) in near to equal proportion are added to make 'Sarson ka Saag'. The dish is overall a heavy one to digest, relishing in taste, good for gut motility and flora. According to Ayurveda, the Sarshapa Shaka is rather heavy, dry in property and amla in *vipak* and hot in potency. This logically explains the addition of bathua and spinach in the recipe that balances the undesirable properties of sarshapa and accentuates the favourable ones. The spinach is cold in potency, bhedaniya in action, causes inflation since is heavy to digest. Bathua is *pachana* and *dipana* in action. It is *shukrala* and *balaprada* and *tridosha shamak*. The dish is made with generous amount of ghee/ butter added to it. It is *agnideepak* and aids digestion. The dish is cooked in winter months which explains the concept of availability of raw material besides that the dish is overall heavy to digest and promotes satiety for long time. The metabolic fire is winter is high in the winter months and begins to eat the body tissues when left hungry. So the 'Sarson ka Saag' is a good recipe for the winters.

- **MAKKI KI ROTI**

This flat bread from Punjab is made from corn flour (*Zea mays*). It is cooked with generous amount of ghee/butter for cooking. It is heavy to digest, dry in property, dries phlegm and cough produced due to winter season. It is consumed in winter months along with 'Sarson ka Saag'. According to Ayurveda, rotika or flat bread is considered *balakaraka* or strength promoting, *dhatuvardhak* or increases tissue, it decreases *vata*, increases *kapha*, heavy to digest. It is considered for individuals with good metabolism. *Mahakaya* as it is termed in Ayurveda, it is *triptikara*, alleviates *vata*, *kapha* and *pitta* causes flatulence, appetite and nourishing food.

- **PANJEERI**

This mixture is prepared from variety of super foods like the fox nuts, edible gum and melon seeds. The mixture is cooked in generous amount of ghee and sugar or jaggery. It is prepared in the winter months from November to February. This food recipe is known to generate heat in the body, this is believed to soothe the sore muscles, lubricate joints and reduce body aches. It is customary food recipe given to women after post partum and reduces debility and after pains. According to Ayurveda, the *makhana* are *garbsthapakam*, *balya*, *vrishya*, *grahi*, *pitta shamak* and relieves *raktaja roga*. Edible gum from babul tree is *kaphashamak* and *grahi*.

The Kushmanda seeds(*Benincasa hispida*) added are vrishya, guru, pitta and vata shamak. The dish is overall rich in antioxidants, calcium, fibre, cholesterol, rich in micronutrients like iron, potassium and phosphorus. Thus suited for the cold winters of north India.

- ALSI PINNI

This dish from Punjab region is made using Atasi seeds, jaggery and generous amount of ghee. Atasi according to researches is rich in omega 3 fatty acids and is a source of essential fatty acids. It is also rich source of dietary fibre, rich in antioxidants, Vitamin E, Vitamin K, Vitamin C, B1,B3,B5 and B6. The ethnobotanical uses state it to be beneficial for cold and cough related matters, arthritis, produces heat in the body in extreme winters. As per Ayurvedic viewpoint, it is snighdha, ushna virya, madhur and tikta rasa. It alleviates vata, kapha and pitta. It keeps satiated for long hours in winters owing to its heavy to digest property.

- DAL KI MAKHANI

This world famous recipe from Punjab region is made from Urad (*Vigna mungo*) and rajmah (*Phaseolus vulgaris*). This dish is cooked on special occasions like festivities, marriage and other rituals. Dal Makhani is cooked in generous amount of ghee and Makhan (white butter). It is heavy to digest, very relishing and hot in potency. Though it is cooked all through the seasons but preferably a winter dish. It is eaten with rice or chappati. Both of which happen to be cold in potency. According to Ayurveda the Dali is vishtambhaka or causes constipation and when taken after removing husk, it is easily digestible. Urad as per Ayurveda is bulk forming, adds roughage to the faeces, brihmana (promotes muscle mass) and is aphrodisiac. Rajmah as per Ayurveda, is guru/ heavy to digest, nourishing, laxative, stanyajnana or galactagogue and bestows strength greatly. The dish is rich in nutrients like protein, riboflavin, niacin, vitamin B6, vitamin C, vitamin K etc.

- MISSI ROTI

This flat bread is made using gram flour and whole wheat in equal proportion. This is taken along with generous amount of ghee/ Makhan(white butter), chillies, cumin powder and other condiments from the kitchen. These make it a good breakfast which is heavy to digest and promotes satiety for long hours in winter. The digestive fire is very strong in the winter months in north India, this serves perfect for the season. It also dries phlegm due to the winter season because of its dry property. Both wheat and gram flour are nourishing as per

Ayurveda, wheat flour is cold in potency and alleviates vata and pita, it is shukrala or aphrodisiac and relieves constipation. Gram flour is considered cold in potency as per Ayurveda, easy to digest, and relieves pitta- raktaja disorders.

RECIPES FROM RAJASTHAN REGION

The region of Rajasthan being Jangal pradesh, the diseases prevalent here are Vata and Pitta pradhan. The food recipes from the region generally work on these lines, keeping into consideration the season, prakriti of the individuals and doshas prevalent in the region.

- HALDI RO SAAG

The dish is made from grated Amba haldi(*Curcuma amada*) rhizome. The amba haldi rhizome is rich in volatile oils, curcuminoids, essential oils etc. The dish is made in the winter months since the amba haldi is hot in potency and cooking in generous amount of ghee provides heat in the body in cold wave across the desert. The curcuma amada as per Ayurveda is pitta alleviating in nature and is useful in all types of *kandu*. It is aphrodisiac in nature.

- LAAPSI

The recipe of laapsi uses Dalia or broken wheat seeds, ghee and jaggery or sugar. It is high in protein, sugars, riboflavin, thiamine, nicotinic acid and cyno-cobalamin. The laapsi is made on Dhanteras in the region of Rajasthan. It is considered to bring in good luck for the coming year. It is cold in potency and strengthens gut motility and improves bowel habit. Bhavprakash Nighantu of Bhav misra mentions about this recipe under the same name. The laapsi is brihmana, tarpanam, ruchya and kaphakaraka. The recipe is taken in the months from July to september.

- KER SANGRI

This dish from Rajasthan is made using Ker fruit (*Capparis decidua*) and Sangri (*Prosopis cineria*) fruit. The sangri fruit is rich in minerals such as potassium, magnesium, calcium, zinc and rich source of protein. The sangri pods also contain moderate amount of saponins which helps to boost immune system and lower cholesterol levels in the blood. The ker fruit is rich in number of glycosides, terpenoids and fatty acids. In the ethnobotanical documentation of recipe, ker is great source of nutrition in the drought and dry region. The sangri acts as cooling, antihelmintic, tonic and is helpful in treating asthma, piles, tremors of muscles. According to Ayurveda, Karira, cooked in ghee are beneficial for eyes. Shami is

rechaka, kaphashamak, useful in kasa, bhrama, shwasa, kushtha, arsha and krimi. The region of Rajasthan is rather dry in vegetation. The recipe being cool in potency is taken in the months of April to June.

- **BAJRA RAAB**

The recipe uses pearl millet. The soup like dish is highly recommended for lactating females in folklore since it is easy to digest. The pearl millet is rich in fibre, essential amino acids, micronutrients like copper, phosphorus, manganese, magnesium. The *dali* or soup as per Ayurveda is *vishtambhaka* (causes constipation) and when taken after removing husk it is easily digestible. The *Vajranna* is balaya, vatapittakara and agnideepak. The recipe is taken in the winter month of January when the temperatures sink low in the desert. It generates heat in the body and keep warmth in winter season.

- **MARAWARI KHICHIYA PAPAD**

This relishing recipe from the state of Rajasthan is made using rice flour. The papad is consumed in the monsoon season of June to September along with pickle, chutney. It is eaten in the monsoon season with spices, ghee. It acts as appetizer and carminatives. According to Ayurveda Parpata as it is called in the texts is rochaka, deepana, pachana in action and guru and ruksh in property. These food recipes are taken in the desert region due to non-availability of vegetation. These promote not only sustainability but also nutrition to the locals.

CONCLUSION

The traditional food recipes need to be studied and backed up scientifically. Ayurveda has a huge role to offer in viewing these recipes with its tools and contemporary findings. The traditional food recipes offer wide utility to the society, they offer solution to the problem of food crisis and promote health as these are specific to region, season and genetic constitution of the population of the given area which is the principle of Ayurveda considering ahara sevan. The sustainable development goals enlist 'No Hunger' as one of the goals. By understanding traditional food and strengthening its relevance in the current times offers very promising solution to world issue over food shortage and at the same time it gives substance to the idea of preventive medicine which is the building block of health in society.

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