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TRADITIONAL NON-LEAFY VEGETABLES OF THE BODO COMMUNITY OF ASSAM: NUTRITIONAL, THERAPEUTIC AND AYURVEDA PERSPECTIVES

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ABSTRACT

Traditional non-leafy vegetables is an inseparable component of the dietary and healthcare practices of Bodo community of Assam. These indigenous food resources possess a significant nutritional and therapeutic potential, however their scientific and Ayurvedic documentation remains limited. This review aims to evaluate the nutritional composition, therapeutic properties and Ayurvedic perspectives. A comprehensive review of published literature was conducted using ethnobotanical surveys, scientific databases and classical Ayurvedic texts. Information regarding nutritional constituents, active phytochemicals, traditional uses, pharmacological activities and ayurvedic attributes was collected and critically analyses. The reviewed vegetables were found to be rich source of carbohydrates, dietary fibre, vitamins, minerals and bioactive compounds with antioxidant, anti-inflammatory, antidiabetic, antimicrobial and hepatoprotective properties. Ayurvedic interpretation revealed that many of these vegetables possess qualities for maintaining doshic balance and promoting overall health. The findings highlight the importance of Bodo traditional vegetables as functional foods with considerable nutritional and therapeutic value. Integration of indigenous knowledge with Ayurvedic principles and modern nutritional science may contribute to dietary diversification, preventive healthcare and preservation of traditional food resources.

Further phytochemical and clinical studies are needed to validate their health promoting potential.

KEYWORDS: Bodo community, indigenous vegetables, ethnobotany, Ayurveda, functional foods.

INTRODUCTION

Food traditions represent an important component of indigenous healthcare systems. The Bodo community is one of the major indigenous groups of Assam, maintains a unique culinary heritage. Their food habit is simple ayurveda food. They are dependent on locally available food items. Traditional Bodo cuisine utilises a wide variety of vegetables from homesteads, agricultural fields, wetlands and nearby forests. These vegetables are incorporated into daily meals and seasonal dishes which are often valued for their medicinal properties.

In recent decades, the global scientific community has increasingly recognised the importance of traditional food systems in promoting national security and preventing chronic diseases. Indigenous vegetable often contains high concentrations of vitamins, minerals, low glycemic index carbohydrates, dietary fibre, antioxidants and other bioactive compounds. Simultaneously, ayurveda has long emphasised the role of vegetables (*Shaka*) in maintaining health and preventing disease.

Although several ethnobotanical surveys have documented Bodo food plants, comprehensive reviews integrating nutritional science, therapeutic evidence, and Ayurvedic interpretation remain scarce. Therefore, the present review aims to evaluate the nutritional composition, clinical significance and ayurvedic relevance of selected non-leafy vegetables traditionally used by the Bodo community of Assam.

MATERIALS AND METHODS

A narrative review methodology was adopted. For literature review data was collected from ethnobotanical surveys, peer-reviewed journals, nutritional database and pharmacological studies. Ayurvedic databases was collected from classical ayurvedic texts including *Charaka Samhita*, *Sushruta Samhita*, *Bhavaprakash Nighantu*, *Raja Nighantu* and *Kaiyadeva Nighantu*.

The inclusion criteria were

- Vegetables traditionally consumed by the Bodo community.
- Availability of nutritional information.
- Availability of pharmacological or therapeutic evidence.
- Ayurvedic references or comparable ayurvedic interpretations.

Data were categorised under nutritional value, clinical significance and ayurvedic interpretations.

RESULTS

Table I: Traditional non-leafy vegetables used by the Bodo Community of Assam.

Scientific name	English Name	Bodo Name	Part used	Traditional use
Abelmoschus esculentus	Ladies finger	Bhindi	Green pods, seeds	Often fried, boiled as curry
Agacarius bisporus	Mushroom	Mwikhum	Fruiting body	Food to boost immunity
Alocasia indica (Lour.) Koch.	Arum	Thaso	Young shoot, tuber, tender leaves	Eaten cooked mostly with acidic fruits
Alpinia nigra (Gaertn) Burtt.	Sessile joyseed	Tharai	Young shoot and rhizome	Added to curries for the flavour
Amaranthus caudatus	Amaranth	Datha	Leaves and stem	Different types of curry
Amorphophallus paeoniifolius	Elephant foot yam	Wol kochu	Under tuber and occasionally leaves and stems.	Prepared via boiling, backing or frying into curries, pickles etc.
Bambusa balcooa Roxb.	Bamboo	Auwa mewai	Young tender emerging shoot	Cooked with grinded rice and with fish, meat, stored as pickles.
Benincasa hispida	White gourd	Khumbra	Fruit	Immature fruits are fried and mature fruits are cooked.
Colocasia esculenta (Linn.) Schott	Coco yam	Gwswm Thaso	Petiole, root, young leaves and flowers	Eaten as vegetable and curry. Stem is used in preparation of Napham
Cucumis sativas	Cucumber	Thaisum	Fresh fruits	Consumed as raw salad, curry and pickles.
Cucurbita maxima	Pumpkin	Jwgwnath	Fruit, tender leaves and flowers.	Tender leaves and stem as vegetable, flowers fried, fruit cooked with fish.
Discorea alata L	Purple yam	Tha	Subterranean tuber and aerial tuber	Tubers are peeled, sliced and prepared by boiling.
Ipomoea batatas	Sweet potato	Thakum tha	Tuberous root	Roots are boiled, roasted or baked.
Lablab purpureus	Indian beans	Garsi	Pods	Cooked in fish curries, fried
Lagemaria	Bottle gourd	Jati Lao	Fruit, tender leaves,	Young shoot and leaves eaten

siceraria			flower	as vegetable, fruit as curry
Luffa acutangula	Ridge gourd	Jinkha	Fresh immature fruit	Cooked with indigenous fish
Lufa aegyptica	Sponge gourd	Bhol	Fresh immature fruit	Cooked with fish in summer
Momordica charantia Linn	Bitter gourd	Kerela	Fresh immature fruit	Typically stewed with pork (Oma bedor)
Momordica dioca	Teasle gourd	Khangkhree kola	Green immature fruit	Fried, cooked as curries
Moringa oilefera	Drumsticks	Sajina	Fruit, young leaves	Tender moringa leaves is cooked with kharwi (alkali)
Musa paradisiaca	Banana	Thalir	Fruit, pseudo stem, flower bud, rhizome and leaves.	Fruit, stem used as curry, flower bud used as vegetable, rhizome is used to prepare kharwi (alkali)
Pisum sativum	Garden pea	Motor	Seed, pods and young shoots.	Used in preparation of ondla curry (rice powder curry)
Solanum melongena	Brinjal	Phanthao	Fruit	Eaten as mwiwta (mash) with mustard oil, chilli etc.
Trichosanthes dioca	Pointed gourd	Potol	Immature green fruit	Often fried and served alongside rice

Table II: Nutritional profile (per 100gram)

Vegetable	Macronutrients	Micronutrients	Reference
Abelmoschus esculentus	carbohydrate 7.45g, dietary fibre 3.2g, protein 1.93g	Vitamin C, Vitamin K, Folate, potassium, calcium, phosphorus, magnesium.	[1]
Agacarius bisporus	High protein & amino acid, low calorie and low fat,	Natural source of Vitamin D, B-complex, trace amounts of Selenium, potassium.	[2]
Alocasia indica (Lour.) Koch.	high quantity of dietary starch, fibre and carbohydrates	Rich in calcium, potassium and irons. Contains high level of calcium oxalate.	[4,5]
Alpinia nigra (Gaertn) Burtt.	Carbohydrate, crude fibre, protein and fat	Abundant in potassium (upto 34.14 mg/g), calcium, magnesium, phosphorus and iron.	[6]
Amaranthus caudatus	Grain contains 14.12-21 % crude protein.	Magnesium, potassium, Calcium and bioavailable iron.	[7]
Amorphophallus paeoniifolius	Crude protein 4.19-4.50%, starch 17.3-20.1%, total sugar 0.14% (which is exceptionally low)	Potassium 327.8mg, phosphorus 166.9mg, calcium 161.1mg, Iron 3.4mg	[9]
Bambusa balcooa Roxb.	High moisture (~90.78%), carbohydrate (5.28%), Protein (2.96%), very low fat content of 0.28%.	Source of essential elements. Potassium, phosphorus, iron, calcium and water soluble vitamins.	[12]
Benincasa hispida	Carbohydrate (1.10-4.00g), Dietary fibre (0.50-2.90g), protein (0.30-0.70g), fat(0.02-0.30g)	Vitamin C (13.0-17.2mg), Calcium (19.0-30.0mg), iron 11.8mg and Potassium.	[15]
Colocasia	Carbohydrates (~75.5%),	Rich in Vitamin C, B1, B2, B6, A,	[18]

esculenta (Linn.) Schott	Protein (~10.9%)	D, E. Leaves are rich source of fibre, protein, calcium, iron, Vitamin A.	
Cucumis sativas	Water (95-96%), carbohydrate (2.16-4.0g), protein (0.65-1g), Fats (0.1g)	Vitamin C, Potassium and Magnesium.	[20]
Cucurbita maxima	Pulp: low calorie & minimal fats (0.2g); Young leaves & stems: superior concentrations of plant based protein, Flowers: Rich in volatile nectar pigments.	Pulp: high source of provitamin A (beta-carotene), vitamin C, potassium and phosphorus; young leaves & stems: abundant bioactive compounds like chlorophylls, lutein and water soluble vitamins.	[21]
Discorea alata L	Carbohydrate (60.3-74.4%), Protein (4.3-8.7%), dietary fibre (4.1-11%), high valued for GI	High concentrations of Potassium, Calcium, Magnesium and Vitamin C.	[23]
Ipomoea batatas	High concentrations of complex carbohydrates, driven by starch and sugar (maltose, sucrose,	Rich in provitamin A(beta-carotene), vitamin C, Vitamin B6, Potassium, phosphorus and manganese.	[25]
Lablab purpureus	Carbohydrates (~60.74g), Protein (23.90-28.00g), Dietary fibre (25.6g)	High concentrations of Potassium (1235mg), Phosphorus (372g), magnesium (283mg), Calcium and iron.	[27]
Lagemaria siceraria	Hig water (~96%), carbohydrate 3.39g, fibre 0.5g, protein 0.62g, fat 0.2g	Enriched with Vitamin C, Thiamine, Riboflavin, Niacin and trace amounts of Potassium, sodium, calcium and	[30]
Luffa acutangula	Low glycemic complex carbohydrates and abundant dietary fibre.	Rich source of Riboflavin, Thiamine, Niacin, Vitamin C and carotene along with calcium, phosphorus and iron.	[32]
Lufa aegyptica	High water (~93-95%), low calorie (15-18kcal), carbohydrate 3.5g, dietary fibre 0.6g, protein 1.2g	Rich in Thiamine, Riboflavin, Vitamin C and essential folates, potassium, calcium, phosphorus and magnesium.	[34]
Momordica charantia Linn	93.2% water, protein 18.02%, fats 0.76%, naturally rich in carbohydrates and dietary fibre.	Vitamin C, Vitamin A, Thiamine, Riboflavin and niacin, seed contains healthy fatty acids.	[35]
Vegetable	**Macronutrients**	**Micronutrients**	**Reference**
Momordica dioca	Carbohydrates 45-47.92%, protein 18-19.38% (highest among cucurbits), fibre 21.3-22%, fat 4-4.7%.	Calcium 33-35mg, phosphorus 42-45mg, iron 4-5mg, sodium 1.5mg, potassium 8.25mg, Magnesium, zinc and manganese. Vitamin A, B1, B2, B3, B5, B6, B9. B12, Vitamin D2 and D3, Biotin and Vitamin K.	[36]
Moringa oilefera	Dried leaf powder: Carbohydrate 38.2g, Protein 27.1g, fibre 19.2g, fat 2.3g.	Calcium 1324mg(17x more than milk), Iron 28.2mg(25x more than spinach), potassium 1324mg(15x	[37]

		more than banana), Magnesium 368mg, Vitamin C(17.3mg, in raw 220mg, 7x more than in orange), Vitamin A 18.9mg(4x more than carrot).	
Musa paradisiaca	Carbohydrates 23.0g, fibre 2.6g, protein 1.1g, fat 0.3g,	Potassium, phosphate, magnesium, calcium, iron, Vitamin C, Vitamin B6, Vitamin A, Vitamin B9(folate).	[38]
Pisum sativum	Called poor man's meat due to high protein and minerals, protein 5.4g, carbohydrates 14.5g, fibre	Vitamin K, Vitamin C, phosphorus, iron, manganese and zinc.	[40]
Solanum melongena	Carbohydrates 4.70-5.88g, dietary fibre 2.80-3.40g, protein 0.80-1.01g, fat 0.18-0.20g	Potassium ~230mg, Calcium 7.94-9.0 mg, phosphorus 22.5-25.0mg, Magnesium, iron, vitamin C, Vitamin K, Vitamin B6, folate and niacin.	[42]
Trichosanthes dioca	Good source of carbohydrates	Vitamin A, Vitamin C and trace elements like Magnesium, Potassium, copper, sulphur and chloride.	[44]

Table III: Therapeutic significance

Vegetable	Pharmacological activity	Reference
Abelmoschus esculentus	Antidiabetic, Anticancer, Hypolipidemic, Gastroprotective, antioxidant, Gastroprotective.	[1]
Agacarius bisporus	Immunomodulatory, antioxidant & cellular defence, promotes healthy gut microbiome functions, Hypolipidemic	[3]
Alocasia indica (Lour.) Koch.	Antioxidant, anti-inflammatory and Antimicrobial.	[4,5]
Alpinia nigra (Gaertn) Burtt.	Antimicrobial, Antidiabetic, antioxidant, preventative of ageing, reduced inflammation, protecting cardiovascular system.	[6]
Amaranthus caudatus	Seeds: Antidiabetic, antibacterial, Antimicrobial and Antifungal; leaf: Hepatoprotective and helps in biotin deficiency; whole plant: Anthelmintic, Antimalarial and cardiovascular protection.	[8]
Amorphophallus paeoniifolius	Curative action on hemorrhoids through anti-inflammatory and antioxidant properties. Metabolic regulation (Antihyperglycemic) due to low glycemic index. Analgesic & anti-inflammatory.	[10,11]
Bambusa balcooa Roxb.	Antidiabetic and Hypoglycaemic potential, Antioxidant and Gastroprotective,	[13,14]
Benincasa hispida	Gastroprotective, Neuropharmacological & anti-stress, Metabolic regulation - Hypoglycaemic and Hypolipidemic, anti-urolithiac, anti-angiogenic (seed extract)	[16,17]

Colocasia esculenta (Linn.) Schott	Antidiabetic, Antimicrobial, Antifungal, antioxidant-inflammatory, Hepatoprotective, Anticancer and nervine tonic.	[19]
Cucumis sativas	Anti-inflammatory & analgesic, antioxidant and free radical scavenging, hypoglycaemic.	[20]
Cucurbita maxima	Antidiabetic: low glycemic load, antioxidant and tissue protection, anti-inflammatory, immunomodulatory, Anthelmintic.	[22]
Discorea alata L	Antidiabetic hypoglycaemic, antioxidant and, anti-inflammatory, cardioprotective and Hypolipidemic.	[24]
Ipomoea batatas	Antidiabetic, antioxidant, anti-inflammatory, immunomodulatory and Gastroprotective.	[26]
Lablab purpureus	Antiviral, Bone health and anti-Osteoporotic, hypolipidemic, Antidiabetic.	[28,29]
Lagemaria siceraria	Cardioprotective, Hypolipidemic, diuretic and renal protection, Gastroprotective and Hepatoprotective.	[31]
Luffa acutangula	Hepatoprotective and anti-jaundice, Antidiabetic, antioxidant-inflammatory and analgesic, Gastroprotective and laxative.	[33]
Vegetable	**Pharmacological activity**	**Reference**
Lufa aegyptica	Antidiabetic, Hepatoprotective, anti-inflammatory analgesic, immune and anti-allergy support.	[34]
Momordica charantia Linn	Antidiabetic, antioxidant, Anticancer, Antimicrobial, antiviral, anti-inflammatory, immunomodulatory.	[35]
Momordica dioca	Antioxidant, anti-inflammatory, Antidiabetic, reducing bad cholesterol, nephroprotective, Anticancer, Antimicrobial and analgesic.	[36]
Moringa oilefera	Antioxidant, Anticancer, Hepatoprotective, cardioprotective, anti-ulcer/gastroprotective, analgesic, immunomodulatory, anti-obesity, anti-allergic, Antidiabetic and diuretic.	[37]
Musa paradisiaca	Antidiabetic, antioxidant, Antidiarrheal, antidepressants, Antiulcer, Antimicrobial, Hypolipidemic, Antihypertensive, Hepatoprotective.	[39]
Pisum sativum	Antidiabetic, promotes Cardiovascular health, antioxidant and anti-inflammatory.	[41]
Solanum melongena	Antioxidant, cardioprotective, Anticancer and glycemic control.	[43]
Trichosanthes dioca	Antidiabetic, antioxidant, Hepatoprotective, Hypolipidemic, anti-inflammatory, Antifungal and antibacterial.	[45]

Table IV. Ayurvedic attributes

Vegetable	Sanskrit name	Rasa	Guna	Virya	Doshakarma	Reference
Abelmoschus esculentus	Bhindika	Madhura (sweet), tikta (bitter).	Guru (heavy), snigdha (unctuous)	Shita (cold)	Kaphakara, Vata-Pitta hara, Rakta shodak, Sotha hara.	[46]
Agacarius	Chhatraka	Madhura	Laghu(light),	Shita (cold)	reduces Vata, Pitta,	[47]

bisporus		(sweet)	Snigdha(unctuous), picchila (slimy)		increases Kapha, Nutritious and aphrodisiac, brimhana.	
Alocasia indica (Lour.) Koch.	Manakanda	Madhura (sweet)	Guru (heavy), snigdha (unctuous)	Shita (cold)	reduces Vata, Pitta, easily digestible, mutrajanana, mild laxative.	[48]
Alpinia nigra (Gaertn) Burtt.	Mahavari vacha	Katu (pungent),	Laghu (light), Tikshna (penetrating), ruksha (dry)	Ushna (hot)	Reduces Kapha-Vata, Appetizer, improves voice, kantha vishuddhikara.	[49]
Amaranthus caudatus	Tanduliyaka	Madhura (sweet)	Laghu (light), ruksha (dry)	Shita (cold)	Pacifies Pitta-Kapha, mild laxative, whole plant is Mutrala (diuretic), beneficial in mutrakriccha.	[50]
Amorphophallus paeoniifolius	Suranakanda	Katu (pungent), Kashaya (Astringent)	Laghu (light), Ruksha (dry), Tikshna (penetrating)	Ushna (hot)	Pacifies Kapha-Vata, deepana, pachana and Appetizer, benefits in Arsha,	[51]
Bambusa balcooa Roxb.	Kareera	Katu (pungent)	Ruksha (dry), guru (heavy), sara (mobile)	Ushna (hot)	Balances Kapha, increases Vata-Pitta, it relieves burning and painful micturation.	[52]
Benincasa hispida	Kushmanda	Madhura (sweet)	Laghu (light), snigdha (slimy)	Shita (cold)	Pacifies Vata-pitta, Medhya, Mutrajanan, Balya, useful in Raktapitta, unmada, apasmara, prameha.	[53]
Colocasia esculenta (Linn.) Schott	Aaloki	Madhura (sweet)	Guru (heavy), snigdha (slimy)	Shita (cold)	Increases kapha, balakrith (promotes strength), Vistambha (causes constipation), useful in hepatomegaly.	[54]
Cucumis sativas	Trapusha	Madhura (sweet)	Laghu (light), ruksha (dry)	Shita (cold)	Pittahara (reduces pitta), Mutrala, Shothahara, seed is useful in Bastishula.	[55]
Cucurbita maxima	Kushmandi	Madhura (sweet)	Ruksha (dry), guru (heavy)	Shita (cold)	Raw: Increases Vata, pitta, Kapha; Ripe: Balances Kapha-Vata,	[56]
Discorea alata L	Varahikand a	Madhura (sweet), Katu (pungent)	Laghu (light), Snigdha (slimy)	Ushna (hot)	Balances Kapha- Vata, increases Pitta, strength promoting, aphrodisiac	[57]
Ipomoea batatas	Pindalu, Shakarkand	Madhura (sweet)	Guru (heavy), snigdha (slimy)	Shita (cold)	Pacifies Vata, Pitta, increases kapha, Vrushya, Balya	[58]
Vegetable	**Sanskrit name**	**Rasa**	**Guna**	**Virya**	**Doshakarma**	**Reference**
Lablab purpureus	Nishpaava - simbi	Madhura (sweet), kashaya (astringent)	Ruksha(dry), guru(heavy), vidahi (causes burning)	Ushna (hot)	Increases Vata-Pitta, increases breast-milk, pitta, blood	[59]

Lagemaria siceraria	Alabu, Mahaphala	Tikta (pungent)	Laghu(light), Ruksha (dry)	Shita(cold)	Balances Vata-Pitta, Vamaka, Ahrudya. Bitter variety is used for therapeutic purpose.	[60]
Luffa acutangula	Koshataki	Tikta (bitter)	Laghu (light), ruksha(dry)	Ushna (hot)	Kapha-pitta hara, Vamaka(seed), Deepana, leaves paste is useful in various skin diseases.	[61]
Lufa aegyptica	Dhamargava	Tikta (bitter),	Laghu (light), ruksha (dry)	Ushna (hot)	Kapha-pitta hara, Vamaka, Deepana.	[62]
Momordica charantia Linn	Karvellaka	Tikta (bitter), katu (pungent)	Laghu (light), ruksha (dry)	Sheeta (cold), Ahima (neither cold nor hot)	Kapha-pitta hara, Deepana, Krimighna, mutrajanana, useful in Prameha, fruit as curry and leaves paste in useful in skin disorders.	[63]
Momordica dioca	Kakoda, Vandya karkoti	Tikta (bitter)	Laghu(light),	Ushna (hot)	Balances Vata, increases pitta, helps in Prameha, root paste act as Rakta stambhana.	[64]
Moringa oilefera	Shigru	Katu (pungent), tikta (bitter)	Laghu, Tikshna, Ruksha	Ushna (hot)	Pacifies Kapha-Vata. Tender leaves consumption act as laxative, fruit is Antimicrobial.	[65]
Musa paradisiaca	Kadali	Ripe: Madhura; Raw: Kashaya	Ripe: guru, hima, Raw: Laghu, ruksha	Shita (cold)	Ripe: aphrodisiac, nourishing, increases sperm production. Raw: Prameha, Diarrhoea.	[66]
Pisum sativum	Kalaya	Madhura (sweet), kashaya (astringent)	Laghu (light), Ruksha (dry)		Increases Vata, pacifies Pitta-kapha	[67]
Solanum melongena	Vartaku	Madhura (sweet)	Laghu(light)	Ushna (hot)	Balances Kapha-Vata,	[68]
Trichosanthes dioca	Patola	Tikta (bitter), katu (pungent)	Laghu (light), Ruksha (dry)	Ushna (hot)	Balances Kapha-Pitta	[69]

DISCUSSION

The present review demonstrates that non-leafy vegetables which are traditionally consumed by the Bodo community are valuable source of nutrients and bioactive compounds. Root and tuber vegetable such as taro, sweet potato and purple yam provide energy, dietary fibre and essential minerals. Fruit vegetables including pumpkin, bottle gourd, cucumber, ridge gourd and bitter gourd are rich in antioxidants and vitamins while maintaining low caloric density.

Several vegetables exhibited scientifically validated antidiabetic properties. Bitter gourd, pumpkin, sweet potato, teasle gourd and taro have demonstrated gloucose-lowering effects in

experimental studies. This observation is particularly important considering the increasing burden of metabolic disorders in modern society.

Ayurvedic analysis revealed that many vegetables possess Tikta (bitter) and Madhura (sweet) rasa, which are traditionally associated with metabolic regulation, nourishment and dosha balance. Bitter vegetables such as Karvellaka, Koshataki and Dhamargava are Kapha-Pitta hara and have traditionally been indicated in Prameha, Kustha and digestive disorders. Similarly, nourishing vegetables such as Kushmanda, Varahi kanda and kadali serve as Balya and Brimhana foods.

The convergence of indigenous knowledge, scientific evidence and Ayurvedic principles highlights the importance of these vegetables as functional foods. Preservation of traditional food practices may contribute to national food security, biodiversity conservation and preventive healthcare.

CONCLUSION

Traditional non-leafy vegetable of the Bodo community constitute an important component of indigenous food system and possess a significant nutritional, therapeutic and ayurvedic value. These vegetables provide essential nutrients, antioxidants compounds and potential disease-preventive effects. Scientific findings largely support traditional claims regarding their health benefits. Integration of ethnobotanical knowledge with modern nutritional science and Ayurveda can facilitate the development of evidence-based dietary recommendations and promote the conservation of indigenous food resources. Future clinical and phytochemical studies are warranted to further validate their therapeutic potential.

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