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"Ethnomedicinal Cucurbitaceae Fruit In Nanded, Maharashtra, India For Primary Health Care."

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KEYWORDS ABSTRACT: Family Cucurbitaceae, Fruit The use of Family Cucurbitaceae fruit vegetables as a source of food are wellvegetables, Medicinal plants, documented all over the world. However, some of the vegetables have since found Ethnopharmacological, their way into the database of medicinal plants. The purpose of this study was to assess the medicinal value of fruit vegetables consumed by local people of Nanded Carotenoids, Terpenoids, District, Maharashtra state of India. This article aims to systematically document Antioxidant properties and bridge scientific evidences with the ethnopharmacological and folklore claims belonging to the Cucurbitaceae family. The Cucurbitaceae family is a large group of crops with more than 800 species known worldwide. In current article, twelve fruit vegetables of family Cucurbitaceae reported to have ethnopharmacological and medicinal values. Cucurbit plants are rich in carotenoids, terpenoids, saponins, and phytochemicals. Vegetables from the Cucurbitaceae family have a positive influence on human health, and various studies have clearly indicated that cucurbit vegetables have antioxidant, antidiabetic, anti-inflammatory, and purgative properties. This review evaluates the current literature about vegetables from the Cucurbitaceae family and their products, in addition to their positive effect on human health.

Introduction:

Cucurbitaceae is the largest family of vegetable and fruit crops, which includes approximately 125 genera and 960 species. Vegetables of the Cucurbitaceae family are part of ancient medicine and culinary traditions. It is mentioned in Ayurveda and folk medicine in India for their therapeutic importance and may be considered as the potential source for the development of safe and effective therapeutics (Mukherjee, 2019). Most of these species are widely distributed around the tropical and subtropical regions, where they flourish freely in the wild, hence, referred to as wild vegetables (Dhiman et al., 2012; Christenhusz and Byng, 2016; Morgia and Russo, 2018). However, they have become one of the plant families now cultivated globally (Dhiman et al., 2012). Cucurbitaceae plants are widely used in medicines for a variety of ailments globally, especially in the Ayurveda and Chinese pharmacopoeia (Yang and Walters, 1992; Dhiman et al., 2012). Some of the traditional medicinal uses include; treatment against gonorrhoea, ulcers, respiratory diseases, jaundice, syphilis, scabies, constipation, worms, piles, leprosy, skin infections, haemoptysis, diabetes, nightblindness, obesity, kidney and liver diseases and fatigue (Grover

and Yadav, 2004; Khulakpam et al., 2015; Ahmad et al., 2016).

The recommendation is to eat at least 200 g of different vegetables per day (Verschuren W, 2012). In many parts of the world, wild edible vegetables are not the only source of food, but are also used as nutraceutical and functional foods (Mokganya MG and Tshisikhawe MP, 2019). Recent clinical and epidemiologic studies indicate that different vegetables and their products contain phyto-protective compounds that possess various biological activities, which may have a beneficial effect on human health. However, the mechanism of their action has not been clearly demonstrated (Olas B, 2019). In many countries, especially developing ones, almost 80% of the population choose traditional medicine over health care in their country. Bioactive natural compounds are the basic source for the development of modern pharmaceutical agents. All around the world, natural and conventional drug are used in 50% of total drug use (Shah SS et al., 2014). A plethora of studies have demonstrated their mineral richness in iron, calcium, magnesium, zinc and potassium which are needed for healthy living (Upadhyay et al., 2015; Odeleye and Oyedeji, 2008; Hassan et al., 2008; Wax, 2019).

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The present review examines the current information concerning the positive role of vegetables from the Cucurbitaceae family for human health.

Methodology:

Study Area:

The study was conducted in different villages located in the Nanded District of Maharashtra state, India (Fig.1). The District of Nanded lies between 180 15 ' to 190 55' North latitudes and 770 to 78025' East longitudes. It covers an area of 10,332 sq. km. It is located in the South-Eastern part of the state. The climate is variable with temperate and subtropical areas and most of the population lives in rural villages and survives by subsistence farming. The current study focused on selected a total of seven rural villages (Therban, Somthana, Somthana-tanda, Shingarwadi, Dhawari, Dhanora, and Borgaon) situated in the Bhokar Tehsil of Nanded District (MS), India.



Figure 1: Maps showing Nanded District (the study area) of Maharashtra State, India.

Data collection and analysis:

A systematic and extensive ethnobotanical survey of vegetables of family Cucurbitaceae was carried out in different villages of the Nanded district from Aug. 2021 to Dec. 2022 for the collection of information on vegetable species being used by tribal communities in the study area. In the present study, a detailed survey was conducted during which various villages were visited and information was gathered about the people knowing vegetables or those involved in the collection and sale of these plants. During the survey, a Semi-structured questionnaire was used to interview respondents after Prior Informed Consent was obtained verbally with them before commencing each interview. A total of 122 informants (35 males and 87 females) between the ages group 20-90 y was interviewed. During the interviews, respondents were asked questions about the local names of plants, edible parts, the season of availability, methods of consumption, and medicinal uses. Among the 122 respondents interviewed in this study, most of them were elders aged above 60 (n = 73) followed by adults aged between 36-59 (n = 31). Youth aged between 20-35 (n = 18) constituted the least category. During the interviews, respondents were asked questions about the local names of known cultivated and wild vegetables,

methods of preparations, or recipes prepared individually or in combination with other plants, taste, supply system, ethnomedicinal, and other additional uses. The collection of plant specimens assisted in clarifying the confusion that usually arises due to reference by local people to one species by two or more common names. In some cases, different species are known by one common name. The pressed specimens were validated and deposited in the Botany department. Validation of authority on botanical names was done through the International Plant Names Index (IPNI) database and Flora of Marathwada (Naik V. N., 1998) for the botanical nomenclature of species. The frequency index was calculated using a mathematical formula adapted from (Madikizela B. et al., 2012). The formula is

$FI = (FC \div N) \times 100$

Where, FI = Frequency index, FC = Number of participants and N = Total number of participants.

The information presented in present work concerned with medicinal applications of Cucurbitaceae vegetables were obtained from scientific literature databases such as Google Scholar, Science-Direct, PubChem, PubMed, Scifinder, Web of Science and Scopus. In addition,

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information was sourced from Doctoral and Masters' theses, dissertations and books.

Result and Discussion:

Demography of informants:

Among the 122 respondents interviewed in this study, most of them were elders aged above 60 (n = 73) and followed by adults aged between 36-59 (n = 31). Youth aged between 20-35 (n = 18) constituted the least category. The results show that elders contributed more vegetables with medicinal values as compared to other age categories. When looking at gender, females (n = 87/122) dominated over males (n = 35/122) as shown in fig.2. Fourty seven percent of the surveyed respondents hold secondary education while 12, 23 and 18 % had tertiary education, no education, and primary education respectively (Table 1).



Parameter	Specification	Frequency	Percentage (%)
Gender	Male	35	29
	Female	87	71
Status	Youth (20–35)	18	15
	Community adult (36–59)	31	25
	Elder (>60)	73	60
Education	None	28	23
	Primary	22	18
	Secondary	57	47
	Tertiary	15	12

Table-1: Demographic structure of participants

Geographical Distribution in India:

In India, the highest number of species of Cucurbitaceae family plants is mostly found in the east, northeast India (AS, MN, MZ, TR, SK, WB) and peninsular India (KL, KA, TN, AP) state and Bangladesh (Figure 1). Western regions of the Himalayas such as JK and HP have the lowest number of Cucurbitaceae plant species. Medicinally important plants of Cucurbitaceae family are originated in India and other parts of Western Asia, due to the wide range of climatic zones. In India, the plants are mostly cultivated in UP, UK, MP, WB, GJ, BR, KA, TN and MH (Renner and Pandey, 2013). There are some species found in the foothills of the Himalayas, which cannot be cultivated due to their extreme bitterness as well as dormancy in seeds and delayed maturity. The plants of the Cucurbitaceae family grow vigorously in warm temperature, which helps in faster germination of seeds and loamy soil mostly enriched with nutrients and moisture. The well-irrigated, fertilized land with a lot of vertical and horizontal growing rooms and well-drained soil containing clay, sand is required for the development of most plants belonging to this family and should avoid a potential frost encounter during its cultivation. The geographical distribution of Cucurbitaceae family plants has been described in Table 2 (Renner and Pandey, 2013).

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JCHR (2023) 13(5), 449-464 | ISSN:2251-6727



C.	Sciontific	Habit	Dictribu	Utilizati	Socor	Commons	Froque	Mothod	Ethnomodic:
SI	Scientific,	пари			Season		Freque	Methou	
• •	English		uon	ON/		lany Sold	ncy		nai and
IN	and Local			Ealble	Availabi		Index	Consump	
0.	Name	~		Part	lity		(F1)	tion	gical Uses
1.	Benincasa	Cultiva	PB, RJ,	Fruits	Annual	Yes	82	This	Tinda is best
	fistulosa	ted	UP.					unique	known for its
	(Round/ap							squash-	beneficial
	ple gourd/							like gourd	effects to the
	Tinda/ Dil-							is native to	digestive
	Pasand							India, very	system,
								popular in	anthelmic,
								Indian	cardiovascula
								cooking	r, improving
								with curry	circulatory
								and many	and nervous
								gourmet	systems.
								dishes	e je comercia de la c
								The seeds	
								may also	
								be roasted	
								and eaten	
2	Cucumis	Cultiva	Northern	Fruits	Annual	Yes	86	Immature	The fruit
	sativus L	ted	India	1 Turto	1 Innour	105	00	fruits are	promotes the
	(Cucumbe	tea	(Ganges					chopped	healthy hair
	r/ Khira		(Guinges					into small	growth skin
	Kakadi		region)					slices and	problems
	Rakadi							are mixed	suppurption and
								with	also curing
								cereals for	swelling
								making	under the eve
								wagatablas	Inder the cyc.
								Those	fruit softens
								straight	the skin
								lino	toxturo: fruit
								chopped	considered
								chopped	the important
								slices are	in weight
								hy adding	loss Soods
								by adding	ora usad
								siliali amount of	are used
								allouit of	against in
								salt 101	intestinal
								testier	worms and
1								would.	taneworms
1									Useful in
1									hurning
									sensation
1									fever
1									constinution
									diuretic
									anthelmintic
1									and
									bronchitic
									(Rahman of
									$(1 \times a)$
3	Cucurbita	Cultive	AR AS	Fruite	Winter	Ves	72	Immeture	Eruits reduces
5.	neno I	ted	BR DI	Fruits	w mitel	105	12	fruits are	fever
	pepo L.	icu	DR, DL,		l			muns alt	10,001,

Table 2: Ethnomedicinal and Pharmacological application of certain fruit vegetables of Cucurbitaceae family.

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	(Pumpkin/ Kashibhop ala)		GA, HP, KA, KL, MP, MH, MN, MZ, PB, TN, TR, UP.					chopped into small slices and are mixed with cereals for making vegetables . Mature fruits boiled slices are used to "Kheer" by adding sugar in it.	cooling, laxative, good for teeth, throat, eyes. Seeds reduced tapeworms and fruit is soften the skin and removes pimple and spots by applying pulp. Seeds diuretic, tonic, bronchitis and used as a treatment for nephritis other urinary system and prostate problems (Shrivastava and Roy, 2013).
4.	Lagenaria siceraria (Mol.) Standl. (Bottle gourd/ Lauki)	Cultiva ted	Native and cultivate d througho ut India.	Fruits	Rainy & Winter	Yes	78	Fruit vegetable used throughou t the India. The fruit has light green smooth skin and white flesh. Collected fruits are sliced into small pieces and used in making Bhajiya.	Gourd juice with lime reduces the urinary tract infection. Fight against constipation, leaves juice cure baldness and aid in preventing tooth decay. The leaves of Lagenaria siceraria are taken as emetic in the form of decoction this one by adding sugar also used in Jaundice. Leaves are also used as alternative purgative, diuretic and antibilious. Seeds were

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			1		1		-		
									cooling and
									used to
									relieve
									headache.
									The fruit is
									traditionally
									used as
									cardiotonic
									entrodicioa
									and general
									tonic, liver
									tonic against
									the liver
									disorders and
									pain, anti-
									inflammatory
									, expectorant
									and diuretic
									agent.
									Lagenin
									isolated from
									the seeds
									nossesses
									immunoprote
									ctive
									enve,
									anti UIV and
									allu-fil v allu
									anupromerau
									ve properties
									(Deshpande
									et al., 2008).
5.	Luffa	Cultiva	Native	Fruits	Annual	Yes	83	Fruits are	Fruits are
	acutangula	ted	and					used as	used in blood
	L. Roxb		cultivate					vegetables	purification,
	(Ridge		d						demulcent,
	gourd/Dod		througho						diuretic,
	aka)		ut India.						nutritive and
									used against
									the worms.
									Fruit used
									against the
									sunburn and
									premature
									greving of
									hair and seeds
									used for skip
									treatment
									Doots on 1
									Roots and
									seeus 10r
									expulsion of
									worms,
									treatment to
									diarrhea and
									syphilis
									(Kirtikar and
4	-			1					

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6.	Momordic	Cultiva	Western	Fruits	Annual	Yes	75	Fruits are	Fruit juice is
	a charantia	ted	and					sliced into	bitter used as
	L. (Bitter		Eastern					small	medicine
	gourd/		Ghats,					pieces,	against
	Karale)		CG. JH					boiled in	leprosv.
			and all					slight	fever, sexual
			over					warm	disorders
			Central					water to	nain
			central					water to	pani, flatulance
			anu Sauth					remove	diabatian and
			South					excess	diabetics and
			India.					bitterness.	rheumatism.
								Then fruit	The extract is
								slices are	also used
								fried and	effective
								mixed into	against
								a gravy to	wound,
								make	burns, itching
								vegetables	skin as well
									as anaemia,
									malaria.
									cholera and
									iaundice A
									seed from the
									fruit woro
									anthalminthia
									and neips to
									expel
									intestinal and
									parasitic
									worms.
									(Joseph and
									Antony,
									2008; Behera
									et al., 2011).
7.	Citrullus	Wild	AP, AS,	Fruits	Winter	Yes	53	Fruits are	The whole
	colocynthi		BR, JH,					chopped	plant parts
	s (Bitter		DL GA					into small	like pulp.
	apple/Cha		GI KA					slices and	leaves seeds
	nni/		KI MH					boiled in	and roots
	Indayan)		OP PB					slight	used for the
	muayan)		RI TN					warm	medicinal
			IND.					water and	nurnoso Dinc
			Ur.					than water	fulpose. Ripe
								inen water	hut he manula
								18	by the people
								removed	suffering
								to reduce	severe
								bitterness.	headache and
								Then	arthritis. Fruit
								these	is used for
								slices are	diabetes.
								mixed	Leaves and
								with mung	roots used in
								dal for	painful
								making	menstruation.
								vegetables	cancer,
									rheumatoid
								Immature	arthritis
								fruit slices	asthma and
								fi un bileos	usunna ana

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0								are also used for making pickles.	jaundice. Its decoction shows cures of leprosy, anti- inflammatory activity and diuretic (Shrivastava and Roy, 2013).
8.	Coccinia grandis L. (Ivy gourd/ Tonduli)	Wild	AN, AP, AS, BR, JH, GA, GJ, HP, KA, KL, LD, MP, MH, MN, OR, RJ, TN, TR, UK, WB.	Fruits	Kainy	Yes	72	Unripened fruits are used as a vegetable with a mug or udid dal. (Green fruit cures sores on the tongue and dried fruit removes eczema).	Fruit and leaves used for the treatment of snake-bite, jaundice, stomach pain, oral-lesions, insanity, diabetes, anorexia, asthma, fever, dropsy, catarrh, epilepsy and gonorrhoea. Fruits are used for acne, typhoid, lesions in tongue, with flower it is used for mental disorders, edema, sedative, hypertension, dermatitis, leucorrhea, hematemesis, loss of appetite, baldness, removal of scars, respiratory problems and lung disorder (Rahmatullah et al., 2012).

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9.	Cucumis melo subsp. agrestis var conomon (Golden cucumber/ Valak)	Wild	AP, AS, KA, KL, MP, MH, MN, RJ, TN, TR, UP.	Fruits	Winter & Summer	Yes	74	Unripened fruits are used as vegetables and ripened once are used as desserts. Fruits are used for preparatio n of sambar, curry, chutney, dosa and juice, cooked and pickled in India.	The fruit is stomachic, whereas seeds are digestive, antitussive, febrifuge, and anthelmintic (Lim TK, 2012). Seeds are used as a vermifuge; the powdered seeds are made into an emulsion and consumed (Swamy KRM, 2017).
10	Luffa cylindrica M. Roxb (Sponge gourd/ Parsa- Dodaka)	Wild	Native and cultivate d througho ut India.	Fruits	Winter	No	57	Immature fruits are used as a vegetable. Immature fruits chopped into straight line slices, these slices are used for making "Bhajiya" a popular and delicious food atom prepared by tribal peoples of Maharasht ra.	The fruits are anthelmintic, carminative, laxative, depurative, emollient, expectorant, tonic useful in fever, syphilis, tumours, bronchitis and leprosy. Seed is expectorant, demulcent and used in dysentery, anti- inflammation , anti-fungus, analgesia and sedation, anti- myocardial ischemia, anti-hyper triglyceride, immunostimu lant, anti- allergy, anti- asthma and expectorant effects, anti- HIV activity, anti-acute hepatic

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									injury, cardiac stimulation, emetic and cathartic. Fruit is used in cooling, strengthening , aphrodisiac, astringent to the bowels, indigestible, expectorant, diuretic, stomachic, demulcent, productive of loss of appetite and phlegm, purifies the blood, allays thirst, cures biliousness, good for sore eyes, scabies and itches (Kirtikar and Basu, 1987).
11	Momordic a charantia Linn. var abbreviata Ser. (Wild bitter melon/ Rankarela	Wild	Western and Eastern Ghats, CG, JH and all over Central and South India.	Fruits	Winter	No	55	Mature fruits are consumed not only as a vegetable but also as a folklore medicine for disease prevention by local residents.	Basu, 1987). WBG (Wild bitter gourd) showing the anti-diabetic, and anti- inflammatory effects. Also effective against disease such as asthma, multiple sclerosis, colitis, inflammatory bowel disease, and atherosclerosis s (de Boer et al., 2000; Holtzman et al., 2002; Bruck, 2005; Rychly and Nebe, 2006).
12	Momordic a dioicea Roxb. (Spine	Wild	Deccan plateau and	Fruits	Rainy	Yes	79	The fruits are cooked as vegetable.	The leaves are aphrodisiac, anthelmintic,

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JCHR (2023) 13(5), 449-464 | ISSN:2251-6727

-		-					
	gourd/		Central			It i	s cure
	Kartoli)		India.			propagate	"tridhosa",
						d b	y fever, asthma,
						undergrou	bronchitis,
						nd tubers.	high cough,
							piles and alter
							"pitta". The
							fruit is
							alexiteric.
							stomachic
							laxative.
							cures "vata"
							biliousness.
							asthma.
							leprosy.
							bronchitis.
							fever, tumors.
							"tridosha"
							urinary
							discharges
							excessive
							salivation and
							troubles of
							the heart
							(Kirtikar and
							Rasu 1999)
							Dasu,1777).

Taxonomic diversity, life forms, and plant parts used:

A total twelve vegetables as indicated in Table 2 and Fig. 3 were recorded from the 122 respondents. The recorded, cultivated and wild fruit vegetables belong to Cucurbitaceae family. The fact that Cucurbitaceae was found to be represented by the highest number of species used for vegetables, in their documentation of traditional vegetables (M.G. Mokganya and M.P. Tshisikhawe, 2019, Shinde S. et al., 2021). In Cucurbitaceae family, all edible fruit vegetables are climber in their habitat and mostly plant parts used for vegetables as fruits consumed by the tribal communities. Out of which 50 % fruits are cultivated and 50 % vegetables are wild in nature as showed in fig.4. Most of the fruits are not sold the local markets of study area but some fruits are sold in the local markets till date (Fig.6). Most of vegetables mature and immature fruits are chopped into small slices and are mixed with cereals for making vegetables. Frequency index is higher in case of cultivated vegetables in respect

to wild cucurbits. In cultivated cucurbits highest frequency index is seen in *Cucumis sativus L*. and lower in *Momordica charantia L*. and in wild cucurbits highest frequency index is showed in *Cucumis melo subsp. agrestis var conomon* and lower in *Citrullus colocynthis L*. as indicated in fig.5. The reason behind the lower frequency index in some vegetables is bitterness of these fruits.

In Cucurbitaceae family generally fruits are used for making vegetables but in addition to this cucurbitaceae fruits are also used in making curry and many gournet dishes in *B. fistulosa*, fruit slices are also eaten by adding small amount of salt for making it testier in *C. sativus L.*, boiled fruit slices are used to make "Kheer" by adding sugar in it in *Cucurbita pepo L.*, fruits slices are used in making Bhajiya in *L. siceraria (Mol.) Standl.* and *L. cylindrica M. Roxb*, pickles in *C. colocynthis*. Fruits of *C. melo subsp. agrestis* are used for preparation of sambar, curry, chutney, dosa and juice and pickles.

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Fig.3: Fruits of Family Cucurbitaceae {1. B. fistulosa 2. C. sativus L. 3. C. pepo L. 4. L siceraria 5. L. acutangula L. Roxb 6. M. charantia L. 7. C. colocynthis 8. C. grandis L. 9. C. melo subsp. agrestis var conomon 10. L. cylindrica M. Roxb 11. M. charantia Linn. var abbreviata Ser. 12. M. dioicea Roxb.] used by tribal communities as vegetables.



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Medicinal applications and dosage:

Cucurbitaceae fruits were frequently consumed during fruiting seasons as indicated in Table 2 and Fig.7 and





Fruit: Fruits of B. fistulosa best known for its beneficial the digestive system, anthelmic, effects to cardiovascular, improving circulatory and nervous systems. C. sativus L. fruit promotes the healthy hair growth, skin problems, sunburn and also curing swelling under the eye. Fruits of C. pepo L. reduces fever, cooling, laxative, good for teeth, throat, eyes. L siceraria fruit are traditionally used as cardiotonic, aphrodisiac and general tonic, liver tonic against the liver disorders and pain, anti-inflammatory, expectorant and diuretic agent. Lagenin isolated from the seeds possesses immunoprotective, antitumor, anti-HIV and antiproliferative properties (Deshpande et al., 2008). L. acutangula L. Roxb fruits are used in blood purification, demulcent, diuretic, nutritive and used against the worms, sunburn and premature greying of hair. Ripe fruit of C. colocynthis rubbed by the people suffering

severe headache and arthritis. Fruit is used for diabetes. Fruit and leaves of C. grandis L. used for the treatment of snake-bite, jaundice, stomach pain, oral-lesions, insanity, diabetes, anorexia, asthma, fever, dropsy, catarrh, epilepsy, gonorrhoea, acne, typhoid, lesions in tongue, with flower it is used for mental disorders, edema, sedative, hypertension, dermatitis, leucorrhea, hematemesis, loss of appetite, baldness, removal of scars, respiratory problems and lung disorder (Rahmatullah et al., 2012). C. melo subsp. agrestis var conomon fruit is stomachic, whereas seeds are digestive, antitussive, febrifuge, and anthelmintic (Lim TK, 2012). L. cylindrica M. Roxb fruits are anthelmintic, carminative, laxative, depurative, emollient. expectorant, tonic useful in fever, syphilis, tumours, bronchitis and leprosy, cooling, strengthening, aphrodisiac, astringent to the bowels, indigestible,

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JCHR (2023) 13(5), 449-464 | ISSN:2251-6727



expectorant, diuretic, stomachic, demulcent, productive of loss of appetite, purifies the blood, allays thirst, cures biliousness, good for sore eyes, scabies and itches (Kirtikar and Basu, 1987). WBG (Wild bitter gourd) showing the anti-diabetic, and anti-inflammatory effects. Also effective against disease such as asthma, multiple sclerosis, colitis, inflammatory bowel disease, and atherosclerosis (de Boer et al., 2000; Holtzman et al., 2002; Bruck, 2005; Rychly and Nebe, 2006). *M. dioicea Roxb.* Fruits are alexiteric, stomachic laxative, cures "vata" biliousness, asthma, leprosy, bronchitis, fever, tumors, "tridosha", urinary discharges, excessive salivation and troubles of the heart (Kirtikar and Basu,1999).

Fruit Juice: Juice of the *C. sativus L.* fruit softens the skin texture, important in weight loss. Seeds are used against in cooling, the intestinal worms and tapeworms. Useful in burning sensation, fever, constipation, diuretic, anthelmintic and bronchitis (Rahman et al., 2008). *L siceraria* fruit juice with lime reduces the urinary tract infection, fight against constipation, leaves juice cure baldness and aid in preventing tooth decay. Fruit juice of *M. charantia L.* is bitter used as medicine against leprosy, fever, sexual disorders, pain, flatulence, diabetics and rheumatism. The extract is also used effective against wound, burns, itching skin as well as anaemia, malaria, cholera and jaundice.

Seeds: Seeds of C. pepo L. reduced tapeworms (Shrivastava and Roy, 2013). L. siceraria seeds were cooling and used to relieve headache. L. acutangula L. Roxb seeds used for skin treatment. Roots and seeds for expulsion of worms, treatment to diarrhea and syphilis (Kirtikar and Basu, 1987). A seed from the fruit of M. charantia L. were anthelminthic and helps to expel intestinal and parasitic worms. (Joseph and Antony, 2008; Behera et al., 2011). C. melo subsp. agrestis var conomon seeds are used as a vermifuge; the powdered seeds are made into an emulsion and consumed (Swamy KRM, 2017). Seeds of L. cylindrica M. Roxb expectorant, demulcent and used in dysentery, antiinflammation, anti-fungus, analgesia and sedation, antimvocardial ischemia. anti-hyper triglyceride. immunostimulant, anti-allergy, anti-asthma and expectorant effects, anti-HIV activity, anti-acute hepatic injury, cardiac stimulation, emetic and cathartic.

Conclusion:

Today, more and more people base their diet on vegetables specially fruits. The Cucurbitaceae family is known and cultivated around the world including India but some plants are wild in nature till date. Cucurbits fruit seeds have also become popular and healthy snack (Dhiman K., et al., 2012). In traditional medicine, cucurbits were used to treat bladder and kidney stones and for their purgative properties (Patel S, et al., 2017, Caili F., et al., 2016). Results of the current investigation

clearly demonstrated that vegetables of family Cucurbitaceae are perceived to have medicinal values. Additionally, the results presented in this report will therefore provide locals of Nanded District with suitable guide to choices of vegetables with medicinal importance. Adequate consumption of bitter vegetables of the Cucurbitaceae family is perceived by Nanded district community members to improve health by minimizing chances of diabetes and hypertension. (Rajasree et al., 2016) reported that cucurbit plants are a rich source of protein that poses many biological compounds necessary for good health. As a valuable support of these findings, (Rahman and Sousa-Poza., 2010) argues that when we consume vegetables, we get proper nutrition to live healthy lives.

The Cucurbitaceae species identified in this review are of medicines. rich sources Hence, extensive pharmacological studies following step wise investigations such as in vitro, in vivo, clinical studies, mechanisms of action and safety evaluation are required. This may serve as leads to the development of new effective therapeutics that may assist in the treatment of various ailments from common to life-threatening diseases.

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Consent of Ethics:

This research study did not involve any human or animal subjects, and it did not raise any ethical concerns or require ethical approval. As such, no ethical considerations were applicable to this study.

Conflict of Interest:

The authors declare no conflicts of interest.

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