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ETHNOMEDICINAL PLANTS USED AGAINST GASTROINTESTINAL DISORDERS IN NEPAL. A REVIEW

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ABSTRACT

The gastrointestinal disorders that occur in the gastrointestinal tract are of common prevalence in human beings. Traditionally used medicinal plants play vital role in curing the various disorders of the body. The present study was carried out to find the ethnomedicinal plants used for the treatment of gastrointestinal disorders in human beings. A total of 289 ethnomedicinal plant species belonging to 229 genera representing 101 families are documented from west Nepal to east Nepal. Local people in different districts of the country are using the ethnobotanical plants in the treatment of gastrointestinal problems such as cholera, diarrhoea, dysentery, gastritis, constipation, to kill worms and to increase appetite. On the basis of number of citation, Zanthoxylum armatum, Aegle marmelos, Berginia ciliata, Cannabis sativa, Chenopodium album, Cinnamomum tamala, Cynodon dactylon, Cyperus rotundus, Drymaria cordata, Mangifera indica, Melia azadirchta, Oxalis corniculata, Plantago major, Rubus ellipticus, Syzygium cumini, Woodfordia fruticosa, and Zingiber officinalae were found important ethnomedicinal plants used in the treatment of gastrointestional disorders. As the knowledge about the usage of the ethnomedicinal plants are eroding, proper documentation and conservation of such plants and traditional ethnomedicinal knowledge of local people is needed.

Key words: Genera; Conservation; Constipation; Treatment; documentation.



INTRODUCTION

People residing in rural areas have a close association with the natural resources of their surrounding and possess hands-on knowledge about various uses of the plants and plant parts around them. The ethnic communities have significant knowledge on utilization of plants and plant parts and there is a long tradition of transferring this indigenous knowledge from generation to generation (Acharya and Acharya, 2009). Plants are the primary health care resource in many communities around the world (Bannerman et al., 1983). Of the 75,000 used in different systems plants medicine, more than 20,000 species of higher plants are used in the traditional treatment practices of indigenous cultures living around the world (Ved Prakash, 1998). In Nepal, about 80% of the rural communities depend upon herbal plants as medicine for their primary primary health care (Ghimire et al., 1999). It is estimated that about 1700 species of the plants are utilized by different ethnic groups in Nepal to meet their primary healthcare needs (Rawal, 2004). Nepal is rich in both traditional knowledge as well as natural resources (Koirala et al., 2009). Documentation of ethnomedicinal use of plants has been considered a high priority to support the discovery of new drugs to

benefit mankind (Ghimire and Bastakoti, 2009). Gastrointestinal disorders are the any condition or disease that occurs within the gastrointestinal tract of the body and have a high prevalence in human beings. The important gastrointestinal problems are diarrhea, dysentery, gastritis, constipation and parasites (Kasper et al., 2005). Use of ethnomedicinal plants to cure aastrointestinal disorders is still common in many ethnic communities in developing country like Nepal. The present study aimed to document the ethnomedicinal plants used the treatment in gastrointestinal disorders in human beings, their mode of use and frequency index of those plants.

Life forms of ethnomedicinal plants used in gastrointestinal disorders

Altogether 289 species of ethnomedicinal plant species from 101 families and 229 genera are documented from Nepal (Table 1). Regarding the life forms, out of the 289 species, 24 species (9%) are climbers, 148 species (51%) are herbs, 44 species (15%) are shrubs and 73 species (25%) are trees (Figure 1; Table 1). Among them, 96% (278 spp.) of the total recorded ethnomedicinal plants used to treat gastrointestinal disorders are angiosperms (240 spp. of dicots & 38 spp. of monocots), 2% are gymnosperms and remaining 2% are pteridophytes (Figure 2).



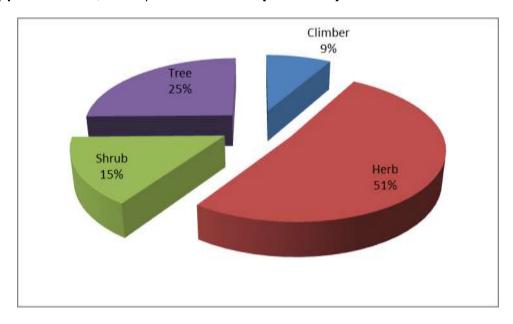


Figure 1. Life forms of ethnomedicinal plants

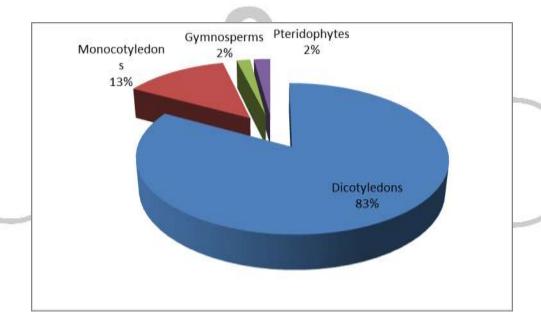


Figure 2. Types of ethnomedicinal plants

Families of ethnomedicinal plants used in gastrointestinal disorders

51 families are with more than one ethnomedicinal plants used to treat gastrointestinal disorders and remaining 49 families have single species of ethnomedicinal plant species. Fabaceae was found to have the highest number of species i.e. 20 spp. followed by Asteraceae with 15 spp., Polygonaceae, Rosaceae, and Ranunculaceae having 11 spp. For each, Zingiberaceae 9 spp., Apiaceae, Rutaceae, and Lamiaceae having 8 spp. each and so on (Figure 3).

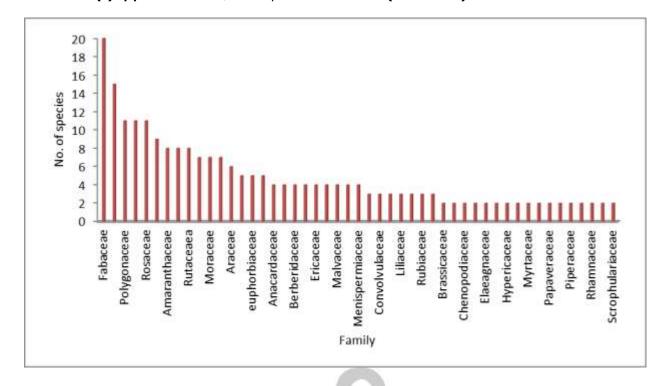


Figure 3. Families having more than one species

Use category

revealed that The different study ethnomedicinal plant parts were used in the treatment of gastrointestinal disorders. The plant parts such as fruit, leaves, shoots, bark, stem, spore, bulbils, flower, latex, resin, seed, and underground parts like root/rhizome/bulb / tuber and in some cases whole plant are used for the treatment. The most commonly used plant parts were underground parts (74 spp.), whole plant (47 spp.), fruits (43 spp.), leaves (29 spp), bark of 23 spp. and so on (Figure 4). In case of other plant species two or more than two plant parts are used for the treatment.

Among the total of 289 ethnomedicinal plant species, the sixteen plant species were identified as important on the basis of highest citations. These are Zanyhoxylum armatum, Woodfordia fruticosa, Rubus ellipticus, Plantago major, Oxalis corniculata, Drymaria cordata, Cyperus rotundus, Cinnamomum tamala, Aegle marmelos, Cannabis sativa, Chenopodium album, Cynodon dactylon, Mangifera indica, Melia azadirchta, Syzygium cumini and Zingiber officinale.

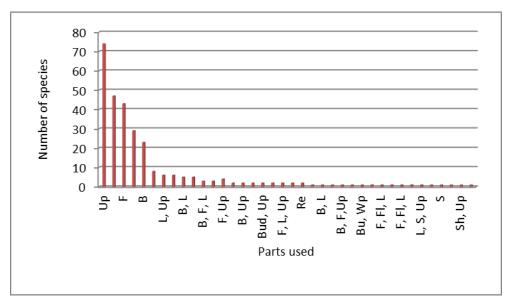


Figure 4. Parts used and number of species

Table 1. List of ethnomedicinal plant species used in the treatment of gastrointestinal disorders.

		1		1	1	1	1	1
S.no	Scientific name	Nepali name	Family	Habit	Used parts	Uses	References	Citation s
	i			1		Wood decoction and bark powder is given orally in intestinal pain, diarrhoea and	Singh <i>et al.</i> , 2018; Dhami,	
1.	Acacia catecheu (L.f)Willd	Khayer	Fabaceae	T	B, S	dysentery.	2008	2
2.	Acacia nilotica (L.) Willd. Ex Del.	Babool	Fabaceae	Т	B, S	Stem and bark is boiled and juice is taken in diarrhoea and dysentery.	Singh <i>et al.</i> , 2018	1
3.	Achyranthes asper L.		Amaranthaceae	Н	Up	Root juice or decoction is given in diarrhoea, dysentery and constipation.	Dhami, 2008; Bhattarai <i>et al.</i> , 2009	2
4.	Acmella calva (DC.) R.K. Jansen		Asteraceae	Н	F	Fruit is used in gastritis and intestinal worms.	Adhikari <i>et al.</i> , 2019	1
5.	Acmella paniculata (Wall. Ex DC.) R.K.Jansen	Bhuitimur	Asteraceae	Н	Fl	Flower juice is given in stomach pain.	Singh <i>et al.</i> , 2018	1
6.	Aconogonon molle (D.Don) Hara	Thotne	Polygonaceae	Н	Sh	Shoot infusion is consumed to relieve intestinal pain.	Rokaya <i>et al.</i> , 2010	1
7.	Aconitum bisma (BuchHam.) Rapaics	Bikh	Ranunculaceae	Н	Wp	Powder of dry plant or fresh plant paste is used in diarrhoea and vomitting.	Rokaya <i>et al.</i> , 2010	1
8.	Aconitum ferox Wall. Ex Ser.	Seto bikhma	Ranunculaceae	Н	Up	Dried root is taken with boiled water to treat diarrhoea and stomach disorders.	Singh <i>et al.</i> , 2016	1



	Aconitum heterophyllum Wall.ex	Asiah	Damungulagasa	11	II.	Root powder is taken with hot water to cure diarrhoea and	Rokaya et al.,	1
9.	Royle Aconitum laciniatum (Bruhl)	Atish	Ranunculaceae	Н	Up	dysentery. Dried root is boiled and taken to	2010 Singh <i>et al.</i> ,	1
10.	Stapf Acorus calamus Linn.	Kalo bikhma	Arageae	Н	Up	Rhizome is used to cure diarrhoea and dysentery. Rhizome powder is used in indigestion and to kill worms.	Rana et al., 2015; Rokaya et al., 2010; Shrestha & Dhillon, 2003	1
	Aegle marmelos(L.) Correa ex	Bojho	Araceae		Up B, F,	Fruit and bark juice is given orally in diarrhoea and dysentery. Leaves juice is given for stomach disorders, dysentery and	Singh et al., 2012; Acharya, 2012; Dhami, 2008; Acharya & Acharya, 2009; Ambu et al., 2020; Bhattarai et al.,	3
12.	Roxb. Ageratum conyzoides L.	Bel Gandheghas	Rutaceae Asteraceae	Н	L Wp	Plant decoction mixed with pepper paste is given to acute stomachache and diarrhoea.	Joshi et al., 2011; Joshi et al., 2018	2
14.	Aleuritopteris bicolor (Roxb.)Fraser-Jenk.		Pteridaceae	н	Wp	Plant juice is given in diarrhoea, dysentery and gastritis.	Adhikari et al., 2019	1
						The paste of bulb is boiled and soup is used in indigestion and	Rokaya et al.,	
15.	Allium carolinianum DC.	ban lasun	Amaryllidaceae	Н	Bu	stomach disorders,	2010	1
16.	Allium cepa L.	Pyaaj	Amaryllidaceae	н	Bu	The paste of bulb is boiled and soup is used for indigestion and stomach disorders.	Rokaya <i>et al.</i> , 2010	1
		- /				Whole plant is grinded and paste is boiled and used in stomachache	Rokaya et al.,	1
17.	Allium fasciculatum Rendle.		Amaryllidaceae	Н	Wp	and diarrhoea. The powder of whole plant is taken with hot water for killing	2010 Rokaya <i>et al.</i> ,	1
18.	Allium hypsistum Stearn	Chyapi	Amaryllidaceae	Н	Wp	worms in stomach. Bulb decoction is	2010	1
19.	Allium sativum L.	Lasun	Amaryllidaceae	Н	Up	given in gastritis, diarrhoea and dysentrey.	Adhikari et al., 2019	1

20.	Alnus nepalensis D.Don	Utish	Betulaceae	Т	В	Bark decoction is drunk to treat gastric problems.	Shrestha & Dhillon, 2003	1
21.	Aloe vera (L.) Burm.f.	Gheukumari	Asphodelaceae	Н	L	Leaf pulp is given orally in stomach disorders, constipation and indigestion. It increases appetite.	Singh et al., 2012; Acharya, 2012; Dhami, 2008; Ambu et al., 2020	4
22.	Alstonia scholaris (L.) R.Br.		Apocynaceae	Т	В	Bark juice is given in diarrhoea and dysentery.	Dhami, 2008	1
23.	Alternanthera sessilis (L.) R. Br. ex DC.		Amaranthaceae	Н	Wp	Plant paste is used in bloody dysentery.	Dhami, 2008	1
24.	Amaranthus caudatus L.	Latte	Amaranthaceae	Н	Sh, Up	Tender shoot is used as vegetable and used in diarrhoea and dysentery. Root juice is used as laxative and used in diarrhoea.	Rokaya <i>et al.</i> , 2010; Malla <i>et al.</i> , 2015	2
25.	Amaranthus hybridus L.		Amaranthaceae	Н	Sh	Tender shoot is cooked as vegetables which improves digestion.	Rokaya <i>et al.</i> , 2010	1
26.	Amaranthus lividus L	Latte	Amaranthaceae	н	Sh	Tender shoot is cooked as vegetables and useful in diarrhoea.	Rokaya <i>et al.</i> , 2010	1
27.	Amaranthus spinosus L.	Lunde	Amaranthaceae	н	Up	Root juice mixed with root juice of <i>Rubus ellipticus</i> is given to treat stomach disorders.	Manandhar et al., 1990; Dhami, 2008	1
28.	Ammomum subulatumRoxb.	Alaichi	Zingiberaceae	Н	F	Seeds are taken in stomachache and aromatic appetizer.	Rana et al., 2015	1
29.	Amorphophallus campanulatus (Roxb.) Blume ex Decne		Araceae	Н	Up	Cooked corm is given in dysentery.	Singh <i>et al.</i> , 2018	1
30.	Ampelocissus divaricata (Wall ex M.A.Lawson) Planch		Vitaceae	С	F	Fruit juice is taken orally in indigestion.	Singh <i>et al.</i> ,2018	1
31.	Anagallis arvensis L.	Armale	Primulaceae	Н	Wp	Whole plant is taken in diarrhoea, dysentery and stomachache.	Acharya, 2012	1
32.	Ananas comosus (L.) Merr.	Pineapple	Bromeliaceae	Н	L	Leaf is orally given in constipation. Fresh leaves are chewed to expel intesinal worms.	Singh <i>et al.</i> , 2018	1



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33.	Anaphalis margaritaceae L.	Bukiphool	Asteraceae	Н	Up	Root juice is used in diarrhoea and dysentery.	Malla <i>et al.</i> ,2015	1
34.	Anemone obtusiloba D.Don		Ranunculaceae	Н	F	Seeds are chewed for indigestion.	Rokaya <i>et al.</i> , 2010	1
35.	Anemone polyanthes D.Don		Ranunculaceae	Н	F	Seeds are chewed for indigestion.	Rokaya <i>et al.</i> , 2010	1
36.	Anemone rivularis BuchHam. ex DC		Ranunculaceae	Н	F	Seeds are chewed for indigestion.	Rokaya <i>et al.</i> , 2010	1
37.	Anemone rupicola Cambess.		Ranunculaceae	Н	F	Seeds are chewed or powdered and used in indigestion and gastritis.	Rokaya <i>et al.</i> , 2010	1
38.	Angelica archangelica L.		Apiaceae	Н	L	Leaf decoction is given to abdominal pain.	Malla <i>et al.</i> , 2015	1
39.	Aralia cachemirica Decne		Araliaceae	S	Up	Root paste is taken with hot water for stomachache and gatritis.	Singh <i>et al.</i> , 2016	1
40.	Araucaria bidwillii Hook.		Araucariaceae	T	B, L	tree bark and leaves are chewed directly to treat gastritis and stomachache.	Sing <i>et al.</i> , 2016	1
41.	Arctium lappa L.	Kuro	Asteraceae	Н	F	seed powder mixed with water and infusion is taken orally in indigestion.	Rokaya <i>et al.</i> , 2010	1
42.	Argemone Mexicana L.		Papaveraceae	S	F	Seed juice is drunk in indigestion.	Shrestha & Dhillon, 2003	1
42	Arisaema jacquemontii Blume.	Paka	Aragana	н	I IIa	leaves are cooked as vegetables to cure stomachache. Tuber paste is consumed during	Rokaya et al., 2010; Singh et	2
43.	Ansaema jačquemontti Biumė.	Bako	Araceae	Н	L, Up	gastritis.	al., 2016	2
44.	Arisaema nepenthoides (Wall.) Mart.	Bako	Araceae	Н	L	leaves are eaten as vegetables to cure stomachache and constipation.	Rokaya <i>et al</i> ., 2010	1
45.	Arisaema tortuosum (Wall.) Schott	Gaubako	Araceae	Н	L, Up	Leaves and tubers are used as vegetables and is beneficial for stomachache.	Rokaya <i>et al.</i> , 2010	1
46.	Artemisia vulgaris L.	Titepati	Asteraceae	S	L	Leaf juice is used in gastritis.	Acharya, 2012; Joshi <i>et al.</i> , 2018	2
47.	Artocarpus heterophyllus Lam.	Katahar	Moraceae	Т	В	Bark juice is used to treat bloody dysentery.	Dhami, 2008	1



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48.	Asparagus filicinus BuchHam. Ex D.Don		Asparagaceae	Н	Up	root decoction or powder used as anthelmintic and to cure diarrhoea.	Rokaya <i>et al.</i> , 2010	1
49.	Astilbe rivularis BuchHam. Ex D.Don	Thulo okhati	Saxifragaceae	Н	Up	Root juice is used as apetizer and taken in diarrhoea and dysentery. Dry rootb is directly chewed during stomach pain	Acharya, 2012; Singh <i>et al.</i> , 2016	2
50.	Azadirachta indica A.Juss.	Neem	Meliaceae	Т	B, L	Leaf and bark is used to treat diarrhoea and dysentery. Leaf decoction is antihelmintic.	Dhami, 2008; Bhattarai et al., 2009	2
					,	Leaves decoction		
51.	Basella alba L.		Basellaceae	С	L	is given in constipation.	Singh <i>et al.</i> , 2018	1
52.	Bauhinia purpurea L.	Tanki	Fabaceae	T	Fl	Mature flower and buds are taken to treat stomachache and diarrhoea.	Joshi <i>et al.</i> , 2011.	1
53.	Bauhinia vahlii Wight & Arn.	Bhorla	Fabaceae	s	B, F, Up	Bark juice is taken to cure diarrhoea and dysentery. Root juice is given in dysentery. Roasted or boiled seeds are good in indigestion and acidity.	Acharya, 2012; Dhami, 2008	2
54.	Bauhinia Variegata L.	Koiralo	Fabaceae	Т	B, Fl	Bark decoction and flower juice are given in diarrhoea, dysentery and indigestion.	Singh <i>et al.</i> , 2012; Acharya, 2012; Dhami, 2008; Acharya & Acharya, 2009	4
					,	Root infusion is taken orally to cure	Rana et al.,	1
55.	Begonia picta Sm.		Begoniaceae	Н	Up	constipation.	2015	1
56.	Benincasa hispida (Thunb.) Cogn.	Kubindo	Cucurbitaceae	С	L	Leaf juice is recommended for colic pain. Root juice is	Malla <i>et al.</i> , 2015	1
57.	Berberis aristata DC.	Chutro	Berberidaceae	S	F, L, Up	recommended for dysentery. Fruit and leaf juice is used to treat diarrhoea and dysentery.	Malla <i>et al.</i> , 2015; Kunwar & Adhikari, 2005.	2
58.	Berberis lycium Royle		Berberidaceae	S	B, F, L	Infusion of fruits, barks and leaves are used to cure diarrhoea.	Rokaya <i>et al.</i> , 2010	1
59.	Berberis mucrifolia Ahrendt		Berberidaceae	S	Wp	Infusion of whole plant is given orally to treat diarrhoea and dysentery.	Rokaya <i>et al.</i> , 2010	1



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60.	Berginia ciliata (Haw.) Sternb.	Pakhambhed	Saxifragaceae	Н	Up	Rhizome is powered and given to treat swollen stomach. Root powder is given in diarrhoea, dysentery and vomitting	Rana et al., 2015; Rokaya et al., 2010; Limbu & Rai, 2013; Kunwar & Adhikari, 2005; Ambu et al., 2020	6
61.	Calotropis gigantean (L.) Dryand.	Chyauphool	Polygonaceae	Н	Wp	The decoction of plant is given in diarrhoea and dysentery.	Malla <i>et al.</i> , 2015	1
62.	Boehmeria platyphylla d.Don	Kamleghans	Urticaceae	Н	L	Decoction of leaf is given in diarrhoea and dysentery.	Malla <i>et al.</i> , 2015	1
63.	Bombax ceiba L.	Simal	Malvaceae	Т	В	Bark powder is given in gastric disorder and gastric. Plant juice is is used in indigestion, diarrhoea and dysentery.	Rana <i>et al.</i> , 2015; Dhami, 2008; Bhattarai <i>et al.</i> , 2009; Rai, 2004.	4
64.	Bridelia retusa (L.) A. Juss.	Gayo	Phyllanthaceae	Т	В	Bark extract is used to treat diarrhoea.	Limbu & Rai, 2013	1
65.	Bryophyllum pinnatum (Lam.) Oken.	Ajambari	Crassulaceae	Н	L	Leaf juice or decoction is given in dysentery and stomachache.	Malla et al., 2015; Joshi et al., 2018	2
66.	Callicarpa arborea Roxb.	Masgedi	Verbinaceae	Т	В	Bark juice is given in indigestion.	Malla <i>et al.</i> , 2015	1
67.	Callicarpa macrophylla Vahl.		Verbenaceae	S	Bud, Up	Root juice is given in indigestion. Young bud paste is drunk in stomachache.	Dhami, 2008; Manandhar, 1987	2
					•	Bark juice is used to treat diarrhoea		
68.	Calotropis gigantea L. Dryand.		Asclepladaceae	T	В	and dysentery.	Dhami, 2008 Manandhar,	1
69.	Campanula pallida Wall.	Ganubuti	Campanulaceae	С	Up	treat diarrhoea and dysentery.	1990; Malla et al., 2015	2
70.	Cannabis sativa L.	Ganja	Cannabaceae	Н	F, Fl, L	Juice of flowers and fruits and seeds are taken orally for diarrhoea,dysenter y and constipation. And also acts as apetizer. Leaf is chewed and swallowed in indigestion.	Rokaya et al., 2010. Joshi et al., 2011. Shrestha & Dhillon, 2003. Manandhar, 1987; Bhattarai et al., 2009	6
71.	Capparis zeylanica L.	Baghmukhe	Capparaceae	С	Up	Root bark paste is orally given in stomachache.	Singh <i>et al.</i> , 2018	1
/1.	саррала дезиней Е.	- Sugmitteet	сирринесис		○ P	Bark and fruit juice is used as medicine in	Acharya and	1
72.	Careya arborea Roxb.		Lecythidaceae	Т	B, F	dysentery.	Acharya, 2009	



							Singh et al.,	
73.	Carica papaya L.	Mewa	Caricaceae	S	La	Milky latex is given in dysentery.	2012; Dhami, 2008	2
15.	Canca papaya L.	Mewa	Carreaceae	3	La	given in dysentery.	2008	1
						Fruits are chewed to increase apetite		
						and to cure	Rokaya et al.,	
74.	Carum carvi L.	Bhotejeera	Apiaceae	Н	F	stomach problems.	2010	1
						Root decoction with salt is taken	Singh et al.	1
75.	Cassia agnes (de Wit) Brenan		Fabaceae	S	Up	for indigestion.	2018	
						Fruit pulp is used to treat indigestion.		
						Seed is used to	D1 : 2000	
						treat constipation, diarrhoea,	Dhami, 2008; Limbu & Rai,	
76		D 7 7 1	F 1	T	_	dysentery and	2013; Bhattarai	2
76.	Cassia fistula L.	Rajbrikshya	Fabaceae	T	F	stomachache.	et al., 2009	1
	Cassia tomentella					Seed paste is used		
77.	(Benth.)Domin		Fabaceae	T	F	as antihelmintic.	Dhami, 2008	1
						Leaf or bud juice is taken for	Manandhar,	1
78.	Castanopsis indica (Roxb.) Miq.	Katush	Fagaceae	T	L	stomach disorders.	1990	
						Bark powder is		1
						used to treat		
79.	Catunaregam spinosa (Thunb.) Tirveng.		Rubiaceae	Т	В	gastritis and stomachache.	Bhattarai <i>et al.</i> , 2009	
1).	Til vong.		Rubiaceae	1	B	stomachache.	2007	
	1				1	Rhizome juice is given to treat	Manandhar,	
				1	u)	stomach disorders	1990; Ambu <i>et</i>	
80.	Cautleya spicata (Sm.) Baker	Banbesar	Zingiberaceae	H	Up	and constipation.	al., 2020	2
		- 1			_/	Bark decoction is		1
	Cedrus deodara (Roxb. Ex					used to treat	1	
81.	D.Don) Hook.f.	Debdar	Pinaceae	T	В	diarrhoea and dysentery.	kunwar & Adhikari, 2005	
						Leaf juice is used		1
82.	Celosia argenteaL.		Amaranthaceae	Н	L	to treat diarrhoea and dysentery.	kunwar & Adhikari, 2005	
02.	ceiosia argenical.		7 Amarammaccae	-11	L	and dysentery.	rumkari, 2003	
						Leaf juice is given orally in	Adhikari, et al., 2019; Singh et	
						indigestion. Plant	al., 2012; Malla	
						decoction is given in indigestion and	et al., 2015; Kunwar &	
83.	Centella asiatica (L.) Urb.	Ghodtapre	Apiaceae	Н	Wp	dysentery.	Adhikari, 2005	4
						Plant juice is		
84.	Chamabainia cuspidata Wight.		Urticaceae	Herb	Wp	given in stomach disorders.	Manandhar, 1990	1
- · · ·								-
						Plant is crushed, filtered and taken	Rana et al.,	
2-	Cheilanthes albomarginata					to dysentery and	2015; Joshi et	
85.	CB.Clarke		Pteridaceae	Herb	Wp	stomach disorders.	al., 2011.	2



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86.	Chenopodium album L.	Bethe	Chenopodiaceae	н	F, Sh	Seed powder is used to make bread and taken in abdominal pain. Tender shoot & flower juice is given orally to kill worms, gastritis and remove constipation.	Adhikari, et al., 2019; Rana et al., 2015; Singh et al., 2012; Rokaya et al., 2010; Joshi et al., 2011	6
87.	Chenopodium murale L.	Bhatebethe	Chenopodiaceae	Н	L	Fresh leaf is used to treat diarrhoea and dysentery.	kunwar & Adhikari, 2005	1
88.	Choerospondias axillaris (Roxb.) Brutt & Hill	Lapsi	Anacardiaceae	Т	В	Bark is usually taken for dysentery.	Rana <i>et al.</i> , 2015	1
89.	Chonemorpha fragrans (Moon.) Alston	Eapsi	Apocynaceae	Н	Up	Root decoction is given in constipation.	Malla <i>et al.</i> ,2015	1
90.	Cinnamomum tamala (Buch Ham.) Nees.	Tejpat	Lauraceae	T	B, L	Leaf and bark is used to treat stomachache, dysentery, gastritis and to increase apetite.	Adhikari <i>et al.</i> , 2019; Acharya, 2012; Joshi <i>et al.</i> , 2018; Singh <i>et al.</i> , 2016; Kunwar & Adhikari, 2005; Rai,	6
91.	Cissampelos pareira L.	Batulopate	Menispermaceae	C	Up, Wp	Bulb is eaten to clear stools. Plant juice is given in indigestion and to kill intestinalworms, diarrhoea and dysentery.	Manandhar, 1990; Malla et al., 2015; Acharya, 2012; Dhami, 2008	4
92.	Citrus lemon (L.) Burm.f.		Rutaceae	S	L	Fresh leaves are chewed to expel intesinal worms.	Singh <i>et al.</i> , 2012	1
93.	Citrus medica L.	Bimiro	Rutaceae	Т	F, Up	Root and fruit juice is used to kill intestinal worms.	Adhikari <i>et al.</i> , 2019	1
94.	Clitoria ternatea L.		Fabaceae	S	L, Up	Leaves and root is given for dysentery.	Singh et al.,2018	1
95.	Coix lacryma-Jobi L.	Bhirkaunle	Poaceae	Н	Up	Root is chewed to kill intestinal worms.	Joshi et al., 2011.	1
96.	Colacasia esculenta (L.)Schott.	Karkalo	Araceae	Н	Up	Boiled corm is used to cure constipation.	Adhikari <i>et al.</i> , 2019; Ambu <i>et al.</i> , 2020	2
97.	Colebrookea oppositifolia Sm.	Dhursel	Lamiaceae	S	L	Leaf juice is used as an anthelmintic.	Manandhar, 1990	1
98.	Commelina maculata Edgew.	Kane	Commelinaceae	Н	L	Leaf juice is is given for apetite and gastritis.	Malla <i>et al.</i> , 2015	1
99.	Commelina paludosa Blume	Kanejhar	Commelinaceae	Н	Up	Root juice is given in indigestion.	Singh <i>et al.</i> , 2018	1



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100.	Coriandrum sativum L.	Dhaniya	Apiaceae	н	L	Green leaves are used in the preparation of soft drink and given in stomachache.	Singh <i>et al.</i> , 2012	
101.	Coriaria nepalensis Wall.	Machhaino	Coriariaceae	S	F	Ripe fruits and plant njuice is taken to treat indigestion.	Ambu et al., 2020	1
								1
102.	Crassocephalum crepidioides (Benth.) S. Moore	Namlejhar	Asteraceae	Н	Wp	Plant juice is given to cure diarrehoea.	Manandhar, 1990	
103.	Crateva unilocularis Buch Ham.	Siplican	Capparaceae	T	Sh	Shoot is used to treat inntestinal worms. Young shoots are boiled and eaten in stomach pain.	Acharya, 2012; Ambu <i>et al.</i> , 2020	2
103.	ridili.	Siplicali	Саррагасеае	1	SII	stomach pani.	2020	1
104.	Cucurbita maxima D.Don	Pharsi	Cucurbitaceae	С	Sh	Tender shoots cure constipation Rhizome is	Rokaya <i>et al.</i> , 2010	1
105.	Cunculias analisidas Casata		Hymavidaaaa	Н	I I o	chewed raw and swallowed in	Shrestha & Dhillon, 2003	
	Curculigo orchioides Gaertn.		Hypoxidaceae		Up	Root paste is taken with hot water for	Rokaya et al.,	1
106.	Curcuma angustifolia Roxb.	Haledo	Zizingiberaceae	H	Up	stomachache. It is used in	2010 Ambu <i>et al.</i> ,	1
107.	Curcuma caesia Roxb.		Zizingiberaceae	H	Up	constipation.	2020	
108.	Curcuma longa L.	Besar	Zizingiberaceae	Н	Up	Fresh rhizome juice is anthelmintic.	Singh <i>et al.</i> , 2012	1
7	Curcuma zedoaria(Christm.)		ΔV			Whole plant is used in stomach		1
109.	Roscoe		Zingiberaceae	Н	Wp	problem.	Acharya, 2012	1
110.	Cuscuta reflexa Roxb.	Aakashbeli	Convolvulaceae	С	Wp	Plant paste is applied externally to treat stomachache.	Singh <i>et al.</i> , 2012	
	V					Root juice is used to treat	Rokaya et al.,	1
111.	Cyathula tomentosa (Roth) Moq.		Amaranthaceae	Н	Up	constipation.	2010	1
112.	Cymbopogon flexuosus (Nees. Ex Steud.) W.Watson	Lemongrass	Poaceae	Н	L	Leaf decoction is given in diarrhoea.	Malla <i>et al.</i> , 2015	
113.	Cynodon dactylon (L.) Pers.	Dubo	Poaceae	Н	Wp	Plant juice is taken for gastric disorders and to kill intestinal worms, root infusion with sugaris given orally in indigestion.	Adhikari et al., 2019; Rana et al., 2015; Singh et al., 2012; Acharya, 2012; Bhattarai et al., 2009	6



						Tuber infusion with sugar/salt is given orally in	Singh et al., 2012; Joshi et al.,2011; Acharya, 2012; Dhami, 2008;	
114.	Cyperus rotundus L.	Mothe	Cyperaceae	Н	L, Up	diarrhoea, dysentery, indigestion and stomach pain.	Acharya and Acharya, 2009; Bhattarai <i>et al.</i> , 2009	6
115.	Dactylicapnos scandens (D.Don) Hutch.	Pahelephul	Papaveraceae	Н	Up	Root decoction is used for dysentery.	Malla <i>et al.</i> , 2015	1
116.	Dactylorhiza hatagirea (D.Don) Soo	Panchaunle	Orchidaceae	Н	Up	Dry or fresh root is consumed with hot water or milk to treat gastritis and intestinal ulcer.	Rokaya et al., 2010; Kunwar & Adhikari, 2005	2
117.	Dalbergia sissoo Roxb. ex DC.	Sisoo	Fabaceae	Т	B, L	bark and leaf juice are given orally in diarrhoea, dysentery and anthelmintic.	Singh <i>et al.</i> , 2012	1
118.	Daphne bholua BuchHam. Ex	Lokhta	Thymelaecaceae	S	Up	Root powder with water or root juice is consumed during stomachache.	Singh <i>et al.</i> , 2016; Shrestha & Dhillon, 2003	2
119.	i		Ranunculaceae	Н (F, FI,	Leaves, flowers and fruits are crushed and consumed to loss of apetite and	Rokaya <i>et al.</i> , 2010	1
120.	Delphinium grandiflorum L. Delphinium himalayae Munz	Atish	Ranunculaceae	Н	Wp	Powder or paste of whole plant is used to treat diarrhoea.	Rokaya <i>et al.</i> , 2010	1
121.	Desmodium gangeticum (L.) DC.	Kachaurijhar	Fabaceae	Н	Up	Root juice is given in diarrhoea.	Singh <i>et al.</i> , 2018	1
122.	Desmodium heterocarpon (L.) DC.	Bangahat	Fabaceae	Н	Up	Root juice is given in diarrhoea.	Malla <i>et al.</i> , 2015	1
123.	Desmodium multiflorum DC.	Bakhreghans	Fabaceae	Н	Up	Root powder mixed with boiled water and given in indigestion.	Malla <i>et al.</i> , 2015	1
124.	Desmostachya bipinnata (L.) Stapf.	Kush	Poaceae	Н	Up	Root juice is given in indigestion and dysentery.	Malla <i>et al.</i> , 2015	1
125.	Dioscorea bulbifera L.	Gittha	Dioscoreaceae	C	Bul	Boiled bulbil is used to treat stomach pain, intestinal worms and gastritis.	Acharya, 2012	1
126.	Dioscorea deltoidea Wall. Ex Griseb	Githa	Dioscoreaceae	С	Bul	Boiled bulbil is used to treat stomach pain.	Acharya and Acharya, 2009	1

127.	Dioscorea pentaphylla L.	Bhyakur	Dioscoreaceae	С	Up	Boiled rhizome is given in abdominal pain.	Adhikari et al., 2019; Singh et al., 2012	2
128.	Diplazium matthewii(Copel.) C.Chr	Nieuro	Athyriaceae	Н	Sh	Young shoots are cooked and taken in stomach problem	Rana et al., 2015	1
129.	<i>Drymaria cordata</i> (L.) Willd. Ex Schult	Abijalo	Caryophyllaceae	Herb	Wp	Plant juice is taken in stomach problem and indigestion. Plant is mixed with rice flour and fried in ghee making bread which is used to cure stomach pain.	Adhikari et al., 2019; Ambu <i>et al.</i> , 2020; Rana <i>et al.</i> , 2015; Joshi <i>et al.</i> , 2011; Acharya, 2012; Joshi <i>et al.</i> , 2018	6
130.	Duchesnea indica (Andrews) Focke	Bhui kafal	Rosaceae	Н	F, Up	Root is used in stomach problem. Fruit is taken as laxative.	Rana <i>et al.</i> , 2015; Kunwar & Adhikari, 2005	2
131.	Elephantopus scaber L.	Sahashrabuti	Asteraceae	Н	Wp	plant extract is used in constipation.	Dhami, 2008	1
132.	Ephedra gerardiana Wall.	Ephedra	Ephedraceae	S	F	Ripe fruits are given to cure indigestion.	kunwar & Adhikari, 2005	1
133.	Euodia fraxinifolia (D.Don) Hook.f.		Rutaceae	T	F	Seed paste mixed with water and consumrd during indigestion and stomach disorders.	Singh <i>et al.</i> , 2016	1
134.	Euphorbia hirta L.	Dudhejhar	Euphorbiaceae	Н	Wp	Leaf juice is given orally in diarrhoea. Plant extract is used to treat diarrhoea and dysentery.	Singh <i>et al.</i> , 2012; Dhami, 2008	2
135.	Euphorbia royleana Boiss.	Sieudi	Euphorbiaceae	S	L, S	Stem is used for stomach disorders during indigestion and constipation.Leaf juice is used to treat diarrhoea, dysentery and constipation.	Manandhar, 1990; Bhattarai et al., 2009	2
136.	Fagopyrum dibotrys (D.Don) H.Hara		Polygonaceae	Н	Up	Dry root powder is consumed to treat diarrhoea and dysentery.	Rokaya et al., 2010	
137.	Fagopyrum esculentum (Moench)	Mithephapar	Polygonaceae	Н	F	Seed flour is used to make cakes which is beneficial for indigestion and diarrhoea.	Rokaya <i>et al.</i> , 2010	1



							Ī	1
	Fagopyrum tataricum (L.)					Seed flour cakes are taken in indigestion and	Rokaya <i>et al</i> .,	
138.	Gaertn.		Polygonaceae	Н	F	diarrhoea.	2010	
139.	Ficus religiosa L.	Pipal	Moraceae	Т	В	Bark juice is used to treat diarrhoea and dysentery.	Dhami, 2008; Joshi <i>et al.</i> , 2011	2
		•				Tender shoot and fruit Is used to treat diarrhoea and		
140.	Ficus auriculata Lour.	Timilo	Moraceae	T	F, Sh	dysentery. Tender leaves are	Dhami, 2008	1
141.	Ficus benghalensis L.	Bar	Moraceae	T	B, L	used to cure cholera and dysentery. Bark infusion is used in diarrhoea and dysentery.	Acharya, 2012; Acharya and Acharya, 2009	2
					,	Fig is eaten raw to	,,	
142.	Ficus semicordata BuchHam ex Sm.	Khanayo	Moraceae	T	B, F	treat constipation and indigestion. Bark extract is used tomtreat dysentery.	Manandhar, 1990; Dhami, 2008; Ambu <i>et</i> <i>al.</i> , 2020.	3
143.	Garuga pinnata Roxb.	Dabdabe	Burseraceae	Т	В	Bark is used to treat stomach disorders.	Manandhar, 1990	1
110.	ouriga pinina torio.	Dubdube	X			Leaves and immature fruits are consumed to treat gastritis. Fruit	1330	
144.	Gaultheria fragrantissima Wall.	Dhasingare	Ericaceae	T	F, L	paste is used to treat intestinal worms.	Joshi <i>et al.</i> , 2011; Acharya, 2012	2
145.	Gentiana pedicellata (D.Don) Griseb.	Tukephool	Gentianaceae	н	Wp	Plant juice is given as anthelmintic.	Manandhar, 1990	1
146.	Girardinia diversifolia (Link.) Friis.	Allo	Urticaceae	S	Up	Root juice is taken orally in gastric disorders and constipation.	Rana et al., 2015; Malla et al., 2015	2
147.	Glycyrrhiza glabra L.	Jethimadhu	Fabaceae	Н	Up	Root juice is used in indigestion.	Malla <i>et al.</i> , 2015	1
148.	Gonostegia hirta (Bl.) Miq.	Maslahari	Urticaceae	Н	Wp	Plant juice is mixed with juice of Drymaria diandra and Centella asiatica to treat diarrhoea	Manandhar, 1990	1
						Bark juice is given in stomach	Manandhar,	1
149.	Grewia serrulata DC.	Syalpuchhere	Malvaceae	T	В	disorders. Rhizome decoction	1990	1
150.	Hedychium spicatum Sm.	Camera	Zingiberaceae	Н	Up	is used in indigestion.	Malla et al., 2015	
151.	Hedyotis scandens Roxb.	Bakhari lahara	Rubiaceae	С	В	Bark juice is given in stomach disorders.	Manandhar, 1990	1
152.	Henckelia urticifolia (Buch Ham. ex D.Don) A. Dietr	Aankhle jhar	Gesneriaceae	Н	Wp	Plant decoction is given to stomachache.	Malla <i>et al.</i> , 2015	1
153.	Heracleum nepalense D.Don.		Apiaceae	S	F	Seed pickles is used to treat stomach disorders.	Singh <i>et al.</i> , 2016	1
			£				I	1



						Root powder is		
154	Handama di Li DC		A.:	11	E	taken with hot water to treat stomachache. Fruit is used to treat	Rokaya <i>et al.</i> , 2010; Limbu &	2
154. 155.	Heracleum wallichii DC. Heynea trijuga Roxb. ex Sims.		Apiaceae Meliaceae	Т	F, Up	Bark and leaf decoction is taken orally in cholera.	Rai, 2013 Singh <i>et al.</i> , 2018	1
156.	Hippophae salicifolia D.Don		Elaeagnaceae	Т	F	Fruit decoction is used to kill stomach worms.	Rokaya <i>et al.</i> , 2010	1
			-			Fruit juice or decoction is consumed as apetizer and	Rokaya et al.,	1
157.	Hippophae tibetana Schltdl		Elaeagnaceae	T	F	anthelmintic.	2010	1
158.	Hypericum cordifolium Choisy.		Hypericaceae	S	Up	Root juice is used to cure diarrhoea.	Manandhar, 1990	1
159.	Hypericum japonicum Thunb.	Kanikeghans	Hypericaceae	Н	Wp	Plant juice is used in dysentery and indigestion.	Malla <i>et al.</i> , 2015	1
107.	11)perteum jupenteum 111unei	Tammegnan	11, persone cue	-11	p	margestrom	2010	1
						Whole plant is recommended in	Malla <i>et al.</i> ,	
160.	Impatiens puberula DC.	Bhendeghans	Balsaminaceae	Н	Wp	indigestion.	2015	
1.51			X			Rhizome is used to treat gastritis and dysentery and	Acharya, 2012;	
161.	Imperata cylindrica (L.) Raeush.	Siru	Poaceae	Н	Up	indigestion	Dhami, 2008	2
162.	<i>Inula cappa</i> (BuchHam. ex D.Don) DC	Gaitihare	Asteraceae	S	Up	Root juice is taken to treat gastritis and indigestion.	Joshi <i>et al.</i> , 2011.	1
162			$\mathbb{X}\mathbb{W}$		G!	Tender shoot is used as vegetable	Singh et al.,	1
163.	Ipomoea aquatica Forssk.		Convolvulaceae	Н	Sh	in gastric trouble.	2012	1
164.	Ipomoea purpurea (L.) Roth.		Convolvulaceae	С	L	Leaf decoction is used in diarrhoea.	Malla <i>et al.</i> , 2015	1
165.	Iris domestica (L.) Goldblatt & Mabb.		Iridaceae	Н	Up	Root juice is used to treat gastric problem.	Ambu <i>et al.</i> , 2020	1
166.	Juglans regia L.	Okhar	Juglandaceae	Т	В	Bark is used to treat intestinal worms.	kunwar & Adhikari, 2005; Acharya, 2012	2
	Juniperus recurva BuchHam ex					Leaves and fruit powder is taken with hot water to	Rokaya et al.,	
167.	D.Don		Cupressaceae	S	F, L	treat diarrhoea.	2010	1
168.	Jurinea dolomiaea Boiss		Asteraceae	н	Wp	Whole plant powder is taken with hot water to treat diarrhoea, dysentery and stomachache.	Rokaya <i>et al.</i> , 2010; Kunwar & Adhikari, 2005	\2
		Totogimi				Leaf juice is used to treat	Ambu et al.,	1
169.	Lablab purpureus (L.) Sweet Lagenaria siceraria	Tatesimi	Fabaceae	С	L	constipation. Fruit juice is given in diarrhoea,	2020 Singh <i>et al.</i> ,	1
170.	(Molina)Standl.	Lauka	Cucurbitaceae	C	F	dysentery.	2012	<u> </u>



171.	Lagerstiremia parviflora Roxb.		Lythraceae	Т	Fl	Flower juice is used to treat diarrhoea and dysentery.	Bhattarai <i>et al.</i> , 2009	1
172.	<i>Lindera neesiana</i> (Wall. Ex Nees) Kurz.	Siltimur	Lauraceae	Т	F	Seed decoction is taken to cure gastritis and diarrhoea.	Acharya, 2012	1
173.	Litsea cubeba (Lour.) Pers.	Siltimur	Lauraceae	S	F	Dry fruits with water is taken to treat stomach problem and gastritis.	Adhikari et al., 2019; Ambu <i>et al.</i> , 2020	2
174.	Litsea monopetala (Roxb.) Pers.	Kutmero	Lauraceae	Т	F	Seeds are used in stomachache.	Bhattarai <i>et al.</i> , 2009	1
175.	Lycopodium clavatum L.	Nagbeli	Lycopodiaceae	Cl	Sp	Spore is chewed in indigestion.	Singh <i>et al.</i> , 2018	1
176.	Lyonia ovalifolia (Wall.)Drude	Angeri	Ericaceae	Т	В	Bark juice is taken as anthelmintic	Acharya, 2012	1
177.	Maesa chisia BuchHam. Ex D.Don	Bilaune	Myrsinaceae	S	В	Bark juice is taken as anthelmintic	Acharya, 2012	1
178.	Mahonia napaulensis DC.	Jamanomandro	Berberidaceae	S	F	Ripe fruits are used to treat dysentery	Acharya, 2012; Paudel <i>et al.</i> , 2018	2
179.	Mallotus nudiflorus (L.) Kulju & Welzen	Raniphal	Euphorbiaceae	T	Up	Root juice is taken in diarrhoea and dysentery.	Malla <i>et al.</i> , 2015; Dhami, 2008	2
180.	<i>Mallotus philippensis</i> (Lam.)Muller.Arg	Sindure	Euphorbiaceae	S	B, Up	Root juice is used to cure gastritis. Bark decoction is used to cure diarrhoea, dysentery and indigestion.	Acharya, 2012; Dhami, 2008; Acharya and Acharya, 2008; Bhattarai et al., 2009	4
181.	Malva verticillata L.		Malvaceae	Н	Wp	Dry plant powder is taken with water to cure diarrhoea and dysentery.	Rokaya <i>et al.</i> , 2010	1
182.	Mangifera indica L.	Aanp	Anacardiaceae	Т	L, B, F	Bark and leaf juice are used to cure dysentery, indigestion, stomachache and as antihelmintic. Fruit peel is boiled and eaten in gastritis.	Acharya, 2012; Dhami, 2008; Kunwar and Adhikari, 2005; Bhattarai et al., 2009; Rai, 2004.	6
183.	Mazus surculosus D.Don		Mazaceae	Н	Wp	Plant juice is given to treat gastritis.	Manandhar, 1990	1

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184.	Melia azadirchta L.	Bakaino	Meliaceae	Т	B, F	Bark juice and fruit is used as anthelmintic and used to treat diarrhoea and gastric infection.	Acharya, 2012; Dhami, 2008; Acharya and Acharya, 2009; Ambu et al., 2020; Bhattarai et al., 2009		6
185.	Mentha arvensis L.		Lamiaceae	Н	L	Leaf juice is used to treat gastritis and stomachache.	Bhattarai <i>et al.</i> , 2009; Paudel <i>et al.</i> , 2018	2	
186.	Mentha spicata L.	Babari	Lamiaceae	Н	Wp	Whole plant juice is orally taken in diarrhoea and stomachache. Leaf is used in gastritis, diarrhoea and dysentery.	Adhikari et al., 2019; Rokaya et al., 2010; Acharya, 2012; Acharya and Acharya, 2009		4
187.	Mesua ferrea L.		Calophyllaceae	Т	Fl	Flower paste is given in amoebic dysentery.	Manandhar, 1990	1	
188.	Michelia champaca L.	Champ	Magnoliaceae	Т	В	Bark juice is used to treat gastritis.	Acharya, 2012	1	
189.	Mimosa pudica L.	Lajjabati jhar	Fabaceae	н	Wp	Plant decoction is given in diarrhoea and dysentery. Root juice is taken to treat stomachache.	Singh <i>et al.</i> , 2012; Joshi <i>et al.</i> , 2018; Manandhar, 1987		3
190.	Mirabilis jalapa L.	Lankajalapa	Nyctaginaceae	S	Up	Root paste is used to treat diarrhoea.	Manandhar, 1987	1	
191.	Morus indica L.	Kimbu	Moraceae	Т	F	Fruit is eaten raw in diarrhoea and dysentery.	Singh et al., 2018	1	
192.	<i>Morus serrata</i> Roxb.	Kimbu	Moraceae	Т	F, Up	Fruit is beneficial in diarrhoea, indigestion and constipation. Root juice is used as antihelmintic. Root paste with water is used to treat diarrhoea.	Rokaya <i>et al.</i> , 2010; Dhami, 2008; Bhattarai <i>et al.</i> , 2009		3
193.	Murraya koenigii (L.) Spreng	Karripatta	Rutaceae	Т	B, L	Bark and leaf juice is used to treat stomachache, diarrhoea and dysentery.	Dhami, 2008; Acharya and Acharya, 2009; Joshi et al., 2018; Paudel et al., 2018	4	
194.	Musa paradiisiaca L.	Kera	Musaceae	S	F	Unripe fruits are given orally in diarrhoea and dysentery.	Singh <i>et al.</i> , 2012; Dhami, 2008		2

195.	Myrica esculenta BuchHam. ex D.Don	Kaphal	Myricaceae	Т	В	Bark juice is given to treat stomach disorders and diarrhoea.	Manandhar, 1990; Shrestha & Dhillon, 2003	2
196.	Nardostachys grandiflora	Jatamansi	Valerianaceae	Н	Up	Rhizome infusion is taken in stomatal disorders and intestinal worms.	Rokaya <i>et al.</i> , 2010	1
197.	Neopicrorhiza scrophulariiflora (Pennell) Hong	Kutki	Scrophulariaceae	н	Up	Rhizome powder is taken with hot water to cure stomachache.	Rokaya <i>et al.</i> , 2010	1
198.	Nephrolepis cordifolia (L.) C. Presl.	Paniamala	Nephrolepidaceae	Н	Up	tuber juice is used in indigestion.	Singh <i>et</i> <i>al.</i> ,2018; Dhami, 2008	2
199.	Ocimum tenuiflorum L.	Tulsi	Lamiaceae	Н	Wp	Leaf and plant juice is used to treat gastric problem, diarrhoea and dysentery.	Dhami, 2008; Ambu <i>et al.</i> , 2020.	2
200.	Origanum vulgare L.	Ramtulsi	Lamiaceae	н	Wp	Dry or fresh plant is boiled with water and is given in diarrhoea, dysentery, constipation and stomachache.	Rokaya <i>et al.</i> , 2010	1
201.	Oroxylum indicum (L.) Kurz	Totala	Bignoniaceae	Т	F	Fruit extract is used to treat diarrhoea.	Limbu & Rai, 2013	1
202.	Osbeckia nutans Wall.	Sanoangeri	Melastomataceae	S	Up	Root juice is taken to treat stomach disorders.	Manandhar,	1
						Plant juice is given	Adhikari et al., 2019; Rokaya et al., 2010; Joshi et al., 2011; Acharya, 2012; Dhami,	
203.	Oxalis corniculata L.	Chariamilo	Oxlidaceae	Н	Wp	to cure diarrhoea, dysentery and stomachache.	2008; Acharya & Acharya, 2009	6
204.	Oxalis debilis Kunth.	Chariamilo	Oxlidaceae	Н	Wp	Plant juice is given in the treatment of acidity, diarrhoea and dysentery.	Malla <i>et al.</i> , 2015	1
205.	Paris polyphylla Sm.	Satuwa	Liliaceae	Н	Up	Rhizome juice is given in gastritis.	Malla <i>et al.</i> , 2015	1
206.	Parnassia wightiana Wall. Ex Wight & Arn.	Sunakhari	Celastraceae	Н	L	Leaf juice is given for constipation and ulcers.	Malla <i>et al.</i> , 2015	1
207.	Pedicularis gracilis Wall. Ex Benth.		Scrophulariaceae	Н	Up	Root extract is given in stomachache.	Malla <i>et al.</i> , 2015	1
208.	Persicaria capitata (Buch Ham. Ex D.Don)H.Gross	Pirre	Polygonaceae	Н	Wp	plant juice is given in stomachache.	Manandhar, 1987	1



								1
209.	Phyllanthus amarus Schumach & Thonn	Bhuiamala	Phyllanthaceae	Н	L	Leaves extract is given in diarrhoea.	Singh <i>et al.</i> , 2018	
210.	Phyllanthus emblica L.	Amala	Phyllanthaceae	Т	B, F, L	Bark and leaf juice is given in diarrhoea,dysenter y and constipation. Fruit is useful in stomachache.	Singh <i>et al.</i> , 2012; Dhami, 2008; Manandhar, 1990; Joshi <i>et al.</i> , 2018	4
211.	Phytolacca acinosa Roxb.		Phytolaccaceae	Н	Up	Root juice is used to treat constipation.	Shrestha & Dhillon, 2003	1
212.	Pinus roxburghii Sargent	Sallo	Pinaceae	Т	Re	Resin is used in stomachache.	Acharya, 2012	1
213.	Piper longum L.	Pipla	Piperaceae	Н	F, L, Up	Fruit powder is given in constipation and indigestion. Leaf powder infusion is used to treat stomachache. Root infusion is used to treat stomachache.	Malla <i>et al.</i> ,2015; Acharya, 2012; Joshi <i>et al.</i> , 2018	3
214.	Piper retrofractum Vahl.		Piperaceae	С	S	Stem is used to treat gastric disorders.	Ambu <i>et al.</i> , 2020	1
215.	Pisidium guajava L.	Amba	Myrtaceae	T	B, Bud	Young buds decoctionand juice is used in the treatment of diarrhoea and dysentery. Bark extract is used to treat diarrhoea and relieve from blood in stool.	Dhami, 2008. Limbu & Rai, 2013. Ambu <i>et al.</i> , 2020. Bhattarai <i>et al.</i> , 2009	4
216.	Plantago major L.	Isabgol	Plantaginaceae	Н	Wp	Seeds are used to cure indigestion, dysentery and diarrhoea. Dry plant powder is taken with water to cure diarrhoea and dysentery.	Adhikari et al., 2019; Joshi et al., 2011; Acharya, 2012; Acharya & Acharya, 2009; Kunwar & Adhikari, 2005; Rokaya et al, 2010	6
217.	Pleurospermum dentatum (DC.) C.B Clarke		Apiaceae	Н	Up	Root powder is taken orally for indigestion.	Rokaya <i>et al.</i> , 2010	1
218.	Plumbago zeylanica L.		Plumbaginaceae	Н	Wp	Plant juice is used to treat gastric disorders.	Ambu <i>et al.</i> , 2020	1
219.	Pogostemon glaber Benth.	Rudilo	Lamiaceae	S	Up	Root juice is given in indigestion.	Malla <i>et</i> <i>al.</i> ,2015	1
220.	Polygonatum cirrhifolium (Wall.) Royle	Khiraulo	Liliaceae	Н	Up	Root juice is orally given to treat diarrhoea.	Rokaya et al., 2010	1

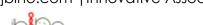
221.	Polygonum plebeium R.Br	Balaunisag	Polygonaceae	Н	Wp	Plant boiled with some water and goven in bllody dysentery	Manandhar, 1990	1
222.	Potentilla microphylla D.Don	Bajradandti	Rosaceae	Н	L, Up	Root paste is taken in diarrhoea. Leaf juice is given in dysentery.	kunwar & Adhikari, 2005; Acharya, 2012	2
223.	Prunus armeniaca L.		Rosaceae	Т	Re	Resin is taken orally to treat diarrhoea.	Rokaya <i>et al.</i> , 2010	1
224.	Prunus cerasoides D.Don	Paiyun	Rosaceae	Т	B, F	Fruit is used to cure gastritis and bark juice is antihelmintic.	Acharya, 2012	1
225.	Pteridium aquilinum (L.) Kuhn.	Uneu	Dennstaedtiaceae	Н	Up	Rhizome decoction is used in gastritis.	Joshi <i>et al.</i> , 2011.	1
226.	Pterocarpus marsupium Roxb.	Bijaya sal	Fabaceae	Т	B, S	Bark and wood infusion is used in gastritis and stomachache.	Dhami, 2008	1
227.	Puning grangton I	Darim	Punicaceae	S	B, F	Fruit pulp, seeds and bark extract are eaten to treat indigestion, dysentery and diarrhoea.	Rokaya et al., 2010; Kunwar & Adhikari, 2005; Bhattarai et al., 2009	3
228.	Punica granatum L. Pyracantha crenulata (D.Don)M. Roem	Ghangaru	Rosaceae	S	F.	Fruit powder withh yogurt is given in dysentery	Malla et al., 2015	1
229.	<i>pyrus pashia</i> BuchHam. Ex D.Don	Mayal	Rosaceae	Т	F	Fruit juice is taken to cure dysentery and indigestion.	Joshi <i>et al.</i> , 2011; Acharya, 2012; Shrestha & Dhillon, 2003	3
230.	Quercus lantana Sm.	Banjh	Fagaceae	Т	В	Bark juice is taken by the women to cure gastritis after delivery.	Joshi <i>et al.</i> , 2011.	1
231.	Ranunculus laetus Wall. Ex D. Don.	·	Ranunculaceae	Н	L	Leafdecoction is given in indigestion.	Malla <i>et al.</i> , 2015	1
232.	Rauvolfia serpentina (L.) Benth. Ex Kurz.	Sarpagandha	Apocynaceae	Н	F	Fruit is used to treat Dysentery.	Acharya and Acharya, 2009	1
233.	Rhamnus virgatus Roxb.	Bhalukada	Rhamnaceae	Т	B, F	Fruit and bark powder is taken orally in diarrhoea and dysentery.	Rokaya <i>et al.</i> , 2010	1
234.	<i>Rheum acuminatum</i> Hook. f. and Thomson ex Hook	Padamchal	Polygonaceae	Н	Up	Roots or rhizomes are crushed boiled and consumed for indigestion and gastritis. Petiols are also consumed in diarrhoea and constipation.	Rokaya <i>et al.</i> , 2010; Singh <i>et al.</i> , 2016; Shrestha & Dhillon, 2003	3

						Root juice is used	kunwar &	
235.	Rheum moorcroftianum Royle		Polygonaceae	Н	Up	to treat dysentery.	Adhikari, 2005	1
236.	Rhododendron arboreum Sm.	Gurans	Ericaceae	Т	Fl	Flower is used to cure diarrhoea, dysentery indigestion and stomachache.	Adhikari et al., 2019; Acharya, 2012; Shrestha & Dhillon, 2003	3
237.	Rhododendron lepidotum Wall. ex d.Don	Sunpate	Ericaceae	S	L	Dry lea powder is used in diarrhoea.	Rokaya <i>et al.</i> , 2010	1
238.	Rhus parviflora Roxb.	Bhakamilo	Anacardiaceae	Т	F	Ripe fruits are used to treat stomachache, dysentery and diarrhoea. Fruit powder is taken with curd to treat dysentery and diarrhoea.	kunwar & Adhikari, 2005; Acharya, 2012; Shrestha & Dhillon, 2003; Rokaya <i>et al.</i> , 2010	4
239.	Ricinus communis L.	Ader	Euphorbiaceae	S	F, Up	Fruit juice is given in diarrhoea, dysentery. Seed oil is given in constipation.	Singh <i>et al.</i> , 2012	1
240.	Rorippa indica (L.) Hiern.	Rugisag	Brassicaceae	Н	Wp	whole plant is consumed raw in diarrhoea.	Rokaya <i>et al.</i> , 2010	1
241.	Rorippa masturtium-aquaticum (L.) Hayek	Simsag	Brassicaceae	Н	Wp	Whole plant powder is given in diarrhoea.	Rokaya <i>et al.</i> , 2010	1
242.	Rubia manjith Roxb. ex Fleming	Majitho	Rubiaceae	C	Wp	Root decoction is taken to get relief from stomach pain and dysentery. The whole plant is used as antihelmintic.	Joshi <i>et al.</i> , 2011; Acharya, 2012; Kunwar & Adhikari, 2005	3
243.	Rubus acuminatus Smith	Ainselu	Rosaceae	S	Up	Root powder or juice is given in excessive thirst and diarrhoea.	Rokaya <i>et al.</i> , 2010	1
244.	Rubus ellipticus Sm.	Aainselu	Rosaceae	S	Bud, Up	Root juice is taken orally to treat lower abdominal pain , diarrhoea and gastritis. Tnder bud extract is used to treat diarrhoea.e	Rana et al., 2015; Rokaya et al., 2010; Joshi et al.,2011; Limbu & Rai, 2013; Shrestha & Dhillon, 2003; Ambu et al., 2020	6
245.	Rubus nepalensis (Hook,f)Kuntze	Bhui kafal	Rosaceae	Н	Up	Root decoction is given in gastric trouble.	Malla <i>et al.</i> , 2015	1
246.	Rubus niveus Thunb.	Kaloainselu	Rosaceae	S	F	Fruits are given in diarrhoea.	Rokaya <i>et al.</i> , 2010	1
247.	Rubus reticulatus Wall.		Rosaceae	S	Up	Root juice is used to treat stomach disorders.	Manandhar, 1987	1

						Doot movedon on		1
248.	Rumex hastatus d.Don	Raktebuj	Polygonacasa	Н	Un	Root powder or paste is given in diarrhoea and dysentery.	Rokaya <i>et al.</i> , 2010	
249.	Rumex nepalensis spreng.	Halhale	Polygonaceae Polygonaceae	Н	Up Up	Root powder is given with hot water to treat constipation and diarrhoea.	Adhikari et al., 2019; Rokaya et al., 2010	2
			2 2 2 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		- SF	Bark powder is taken with water for the treatment of	Joshi <i>et al.</i> ,	_
250.	Schima wallichii Choisy.	Chilaune	Thecaceae	T	В	gastritis.	2011.	1
251.	Selinum wallichianum (DC.) Raizada & H.O. Saxena		Apiaceae	Н	Wp	Root decoctionis used to treat diarrhoea and dysentery. Plant infusion is given to cure stomachache and diarrhoea.	kunwar & Adhikari, 2005; Rokaya <i>et al.</i> , 2010.	1
252.	Semecarpus anacardium L.f.	Bhalayo	Anacardiaceae	Т	F	Fruit is used to cure dysentery.	Acharya, 2012; Acharya and Acharya, 2009	2
253.	Senecio scanden BuchHam. Ex D.Don	Bakhrekane	Asteraceae	С	L	Leaf juice is given for gastritis.	Malla <i>et al.</i> , 2015	1
	x]							
254.	Shorea robusta C.F.Gaertn.	Sal	Dipterocarpaceae	T	B, Re, Up	Bark ,root and resin powder decoction is given in diarrhoea and dysentery.	Singh <i>et al.</i> , 2012; Acharya, 2012; Dhami, 2008; Bhattarai <i>et al.</i> , 2009	4
255.	Smilex asper L.	Jul	Liliaceae	С	Up	Root juice is used to cure stomachache.	Acharya, 2012	1
256.	Solanum nigrum L.	Kaligedi	Solanaceae	Н	F	Ripe fruits are used to treat constipation.	Dhami, 2008	1
257.	Sonchus wightianus DC.	Mulapate	Asteraceae	Н	Up	Root is directly taken to tret gastritis.	Singh <i>et al</i> . 2016	1
258.	Sphaeranthus senegalensis DC.	•	Asteraceae	Н	Wp	Plant juice is used to treat indigestion.	Manandhar,	1
259.	Stephania glandulifera Miers.	Gundarigano	Menispermaceae		Up	Root juice is drunk to treat gastritis.	Ambu <i>et al.</i> , 2020	1
260.	Stephania japonica (Thunb.) Mier	Batulopate	Menispermaceae	С	Up	Root juice is used to treat stomachache.	Manandhar, 1987	1
261.	Swertia chirayita (Roxb. Ex Fleming) Karstern	Chiraita	Gentianaceae	Н	L	Leaves are used to cure stomach disorders, indigestion and constipation.	Adhikari et al., 2019; Joshi et al., 2011; Joshi et al., 2018; Shrestha & Dhillon, 2003	4



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262.	Syzygium cumini (L.) Skeels	Jamun	Myrtaceae	T	B, F	Bark juice is used to treat diarrhoea and dysentery. Fruits are given to cure indigstion and constipation.	Acharya, 2012; Dhami, 2008; L imbu & Rai, 2013; Bhattarai et al., 2009; Rai, 2004	6
263.	Tamarindus indica L.	Imili	Fabaceae	Т	F	Seed paste is used to treat stomachache.	Rai, 2004	1
264.	Taraxacum officinalae Wigg.	Dudhejhar	Asteraceae	Н	Up	Root juice is given to treat stomach disorders.	Manandhar, 1990	1
265.	Tectaria coadunata (Wall. Ex J. Sm.	Kaloneuro	Tectariaceae	н	Up	Rhizome juice decoction is taken to treat diarrhoea, dysentery, stomach pain and giadriasis.	Adhikari et al., 2019; Joshi et al., 2011; Manandhar, 1990; Limbu & Rai, 2013	4
266.	Terminalia alata Heyne ex Roth.	Asna	Combretaceae	T	В	Bark juice is used to cure diarrhoea and dysentery.	Acharya and Acharya, 2009; Bhattarai et al., 2009	2
267.	Terminalia bellirica (Gaertn.) Roxb.	Barro	Combretaceae	T	F	Fruits is used as antihelmintic, gastritis and in indigestion.	Dhami, 2008; Acharya and Acharya, 2009; Ambu et al., 2020	3
268.	Terminalia chebula Retz.	Harro	Combretaceae	T	F	Fruits are used in indigestion and stomach problem.	Dhami, 2008; Acharya and Acharya, 2009	2
269.	Themeda triandra Forssk.	Khar	Poaceae	Н	L	Leaf juice is used to treat gastritis.	Acharya, 2012	1
270.	Thymus linearis Benth.		Lamiaceae	н	Wp	Aboveground part is boiled and given to treat stomachache, gastritis, diarrhoea and indigestion.	Rokaya <i>et al.</i> , 2010	1
271.	Thysanolaena latifolia (Roxb.ex Hornem.) Honda		Poaceae	Н	Up	Root juice is used to treat stomachache and gastritis	Acharya, 2012	1
272.	Tinospora sinensis (Lour.) Merr.	Gurjuko lahara	Menispermaceae	C	S, Up	Decoction of stem is used to cure stomach trouble. Root extract is consumed in gastritis and diarrhoea.	Joshi et al., 2011; Malla et al., 2015; Singh et al., 2016; Bhattarai et al., 2009	4
273.	Toona ciliata M.Roemer	Tooni	Meliaceae	Т	В	Barkmjuice is used to treat diarrhoea and dysentery.	Dhami, 2008	1
274.	Trichosanthes tricuspidata Lour.	Lahareaanp	Cucurbitaceae	С	Up	Root is chewed to cure constipation.	Limbu & Rai, 2013	1



			1	I	I	1	I	1
						Seeds are chewed raw or grinded		1
						powder is given		
						with water in stomachache and	Pokovo et al	
275.	Trigonella foenum-graecum L.	Methi	Fabaceae	Н	F	indigestion.	Rokaya <i>et al.</i> , 2010	
	-					Plant juice is given		
						to treat stomach disorders,	Manandhar, 1990, Malla <i>et</i>	
						dysentery and	al., 2015,	
276.	Urena lobata L.	Nalukuro	Malvaceae	Н	Wp	diarrhoea.	Dhami, 2008	3
						Root decoction is		
						used to cure stomach disorders.	Rana et al.,	
						Cooked leaf or	2015; Rokaya	
277.	Urtica dioica L.	Sisnoo	Urticaceae	S	L, S, Up	stem is useful in gastritis.	et al., 2010; Dhami, 2008	3
277.	Office diolea E.	Bishoo	Citicaccac	5	СР		Diami, 2000	3
						Root powder or paste is given with		
						hot water in		
						indigestion, diarrhoea and	Rokaya et al., 2010; Ambu et	
278.	Valeriana hardwickii Wall.	Nakalijatamansi	Valerianaceae	Н	Up	dysentery.	al., 2020	2
						Fresh or dry root and leaf juice is		
						used in	Rokaya et al.,	
						stomachache, indigestion,	2010. Kunwar & Adhikari,	
						diarrhoea and	2005. Ambu <i>et</i>	
279.	Valeriana jatamansi Jones.	Sughandawala	Valerianaceae	Н	L, Up	dysentery.	al., 2020	3
	1.1					Leaf juice is used to treat stomach		
280.	Vitex negundo L.		Vitaceae	S	L	problem	Dhami, 2008	1
				9	100			
		. /		1		1/		
	100	1				Flower juice is	Manandhar, 1990;	
	la la	- 1				given to bloody dysentery. Leaf is	Achharya,	
	/ /					used to treat	2012; Dhami,	
						gastritis and dysentery. Bark	2008; Ambu et al., 2020;	
		9				juice and root is	Bhattarai et al.,	
281.	Woodfordia fruticosa (L.) Kurz.	Dhairo	Lythraceae	S	Wp	used to treat stomach problem.	2009; Adhikari et al., 2019	6
	, , , , , , , , , , , , , , , , , , , ,				r	£	,	1
						Seeds are taken to		
						treat intestinal pain	Ambu et al.,	
282.	Wrightia arborea (Dnnst.) mabb.		Apocynaceae	Т	F	having dark stool.	2020	
						Leaf juice is taken		1
283.	Youngia japonica (L.) DC.		Asteraceae	Н	L	in indigestion.	Acharya, 2012	
								1
						Fruit is boiled with		
						water and consumed during		
	Zanthoxylum acanthopodium					gastritis, diarrhoea	Singh et al.,	
284.	DC.	Boketimur	Rutaceae	S	F	and dysentery	2016	



285.	Zanthoxylum armatum DC.	Timur	Rutaceae	s	F	The fruit is crushed and taken with boiled water to treat abdominal pain, indigestion, for apetite and antihelmintic	Rana et al., 2015; Joshi et al., 2011; Manandhar, 1990; Singh et al., 2016; Shrestha & Dhillon, 2003; Kunwar & Adhikari, 2005; Adhikari et al., 2019		7
286.	Zanthoxylum oxyphyllum Edgew.	Bogyatimur	Rutaceae	S	F	Seed deoction is used to treat chronic gastritis.	Shrestha & Dhillon, 2003	1	
287.	Zingiber montanum Roxb.		Zingiberaceae	Н	Up	Rhizome is used to treat gastritis.	Acharya, 2012	1	
288.	Zingiber officinalae Roscoe	Aduwa	Zingiberaceae	н	Up	Rhizome decoction or rhizome is boiled and liquid is taken to treat stomachache, constipation and indigestion.	Rokaya <i>et al.</i> , 2010; Dhami, 2008; Joshi <i>et al.</i> , 2018; Bhattarai <i>et al.</i> , 2009; Adhikari et al., 2019		6
289.	Ziziphus mauritiana Lam.	Bayer	Rhamnaceae	Т	B, F	Bark juice is given in diarrhoea and dysentery. Fruit is used to cure stomachache, indigestion and constipation.	Malla et al.,2015; Acharya, 2012; Dhami, 2008		3

Note: Habit; C= Climbers, H= Herbs, S= Shrubs, T= Trees. Used parts; Up= underground parts, Wp= Whole plants, F= Fruits, L= Leaves, B= Bark,

Fl= Flowers, S= Stem, La= Latex, Re= Resin, Sh= Shoot, Sp= Spores, Bu= Bulbil.

Discussion

Ethnomedicinal plants contain the different bioactive coumpounds that play the key role in treatment of the diseases. The known medicinal uses can thus become the vital source of pharmaceutical drugs for the treatment of many diseases. For developing country like Nepal, health status promotion is almost impossible without developing existing traditional medical systems and incorporating it into the national health care system (Koirala and Khaniya, 2009). Traditional medicinal knowledge is developed from the long process of trial and error and thus this could guide search for drug development

(Karunamoorthi et al., 2012). Among the ethnomedicinal plats used for treatment in gastrointestinal disorders, the species viz. Aconitum heterophyllum, Aconitum ferox, Acorus calamus, Azadirachta indica, Berginia ciliata, Cinnamomum tamala, Curculigo orchioides Dactylorhiza hatagirea, Dioscorea deltoidea, Gaultheria fragrantissima, Juglans regia, Nardostachys grandiflora, Neopicrorhiza scrophulariiflora, Paris polyphylla, Phyllanthus emblica, Piper longum, Rauvolfia serpentine, Rubia manjith, Swertia chirayita, Tinospora sinensis, Valeriana jatamansi and Zanthoxylum armatum are prioritized by Government of



Nepal for to raise the economic status of nation (DPR 2006; DPR 2016). Among them some are prioritized for agro-technology development.

Conclusion

This study contributes to the information on ethnomedicinal plant species used in the treatment of gastrointestinal disorders in human beings. In present study, 289 ethnomedicinal plants belonging to 278 dicots (240 38 angiosperms monocots), five species of gymnosperms and six species of pteridophytes are recorded from Nepal. The plant species, Zanthoxylum armatum is found as the most important ethnomedicinal plant species in the treatment of gastrointestinal disorders as it has highest citation. The indigenous traditional knowledge and practices on the usage of local resources including the ethnomedicinal plants are eroding because of many factors. Bioprospecting of those traditionally used ethnomedicinal plants used by the ethnic communities for long time for treatment of gastrointestinal disorder can be done by conducting the proper research work and to find the novel compounds within them. The ethnomedicinal plants thus need to be conserved and managed in a sustainable way. Moreover, the cultivation technology should be developed for ethnomedicinal plants to avoid the over harvesting of the species in wild.

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