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Documentation of wild and underutilized vegetables:potential for conservation and utilization

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Wild and underutilized vegetables are important sources of food, nutrition and income for rural communites and indigenous people. Cultivation of high yielding hybrid varieties, change in food habits, climate change and over harvesting have resulted in genetic erosion of these vegetables. In addition to this, their availability,distribution and uses are poorly documented.This study aims to document the wild, neglected and underutilized vegetable species in Jaimini Municipality of Baglung District, Western Nepal. Complete information on wild and underutilized vegetables were collected using semi-structured interviews, guided field walks and field observation. We recorded 64 species of wild and underutilized vegetables belonging to 27 different families in the study area. Leaf was the most used plant part (26 species) and majority of the plantsspecieswere herbs (33 species). Most of these vegetables were consumed in rainy and summer season and their availability decreased during winter season. Knowledge regarding their utilization, cultivation and conservation were also gradually disappearing. Therefore, consumer awareness, evaluation of their nutritional value and promotion for their commercial use should be emphasized for the inclusion of these vegetable species in our daily diet.

Keywords: Conservation, documentation, Jaimini municipality, underutilized, utilization

Nepal has diverse climate. Climate varies according to the altitude, agroecological zones and topography which is reflected in the higher biodiversity prevalent in Nepal (Rana *et al.*, 1998).A total of 246 species of vegetables are found in Nepal,most of which are wild and underutilized (Dangol *et al.*, 2017). Cultivation and gathering of indigenous and wild vegetables for self-consumption are still prevalent, especially in rural areasof Nepal. Especially during scarcity of food and vegetables, people collect wild and underutilized vegetables from their natural habitats(Dangol, 2003). Wild vegetables like *Dioscorea* species are still being used as a daily source of energy and micronutrients by the Chepang community and other isolated communities (Aryal *et al.*,2009). These vegetables contribute to the health and well-being of thousands of indigenous people and local communities in Nepal (Manandhar, 2002).

In the present context, the availability of underutilized species is decreasing at an alarming rate in rural areas consequently causing large genetic, cultural and religious erosion(Aryal *et al.*,2009). The main reasons behind this rapid decline are overexploitation, monocropping, introduction of high yielding hybrid varieties, intensive and mechanized agriculture, population pressure and habitat destruction (Manandhar, 2002). The decline and extinction process are further accelerated by forest fire, deforestation,

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desertification and climate change induced droughts and erratic rainfall (Joshi *et al.*, 2007). Along with their decline, knowledge regarding their cultivation, utilization and conservation is also gradually disappearing (Engle & Faustino, 2006).The conversion of wetlands into agricultural fields, fish ponds, and settlements has destroyed the natural habitats of many indigenous vegetable species(Siwakoti & Tiwari, 2007). Often due to misidentification and limited knowledge about their importance, most of them are treated as weeds (Weinberger& Msuya, 2004). In addition,our indigenous landraces of vegetables are being replaced by exotic high-yielding varieties directly affecting seed production and ultimately leading to their extinction.

Fagopyrum esculentum (Mithephapar), *F. tartaricum* (Titephapar), *Amaranthus lividus* (Lude) and *A. caudatus* (Latte) are still being cultivated in some parts of Nepal (Shrestha *et al.*, 2004). The extension on cultivation of such species may enhance the economic activities of locals and independent for vegetables and food security.

Some of the wild vegetables with high market values such as *Rheum australe* (Padamchal), *Dryopteris cochleata* (Danthe), *Polygonum molle* (Thotne), *Asparagus racemosus* (Kurilo) are endangered due to overharvesting (Joshi *et al.*, 2007). Year-round production in their natural habitat, higher nutritional value, well adapted to adverse environmental conditions, and resistance to insect, pest and diseases has made them superior than our domesticated vegetables (Shava, 2005).

Efforts for the conservation and promotion of largely eroding genetic resources of wild and underutilized vegetable species are incipientstage. In-depth information about their distribution, abundance and availability is still lacking(Joshi *et al.*, 2007). The analysis of the abundance of the species in their natural habitats should be the first step towards the conservation of these species. Hence, this study focuses on strengthening the limited knowledge about these vegetables by assessing their present status, documenting their distribution and suggesting strategies for their conservation.

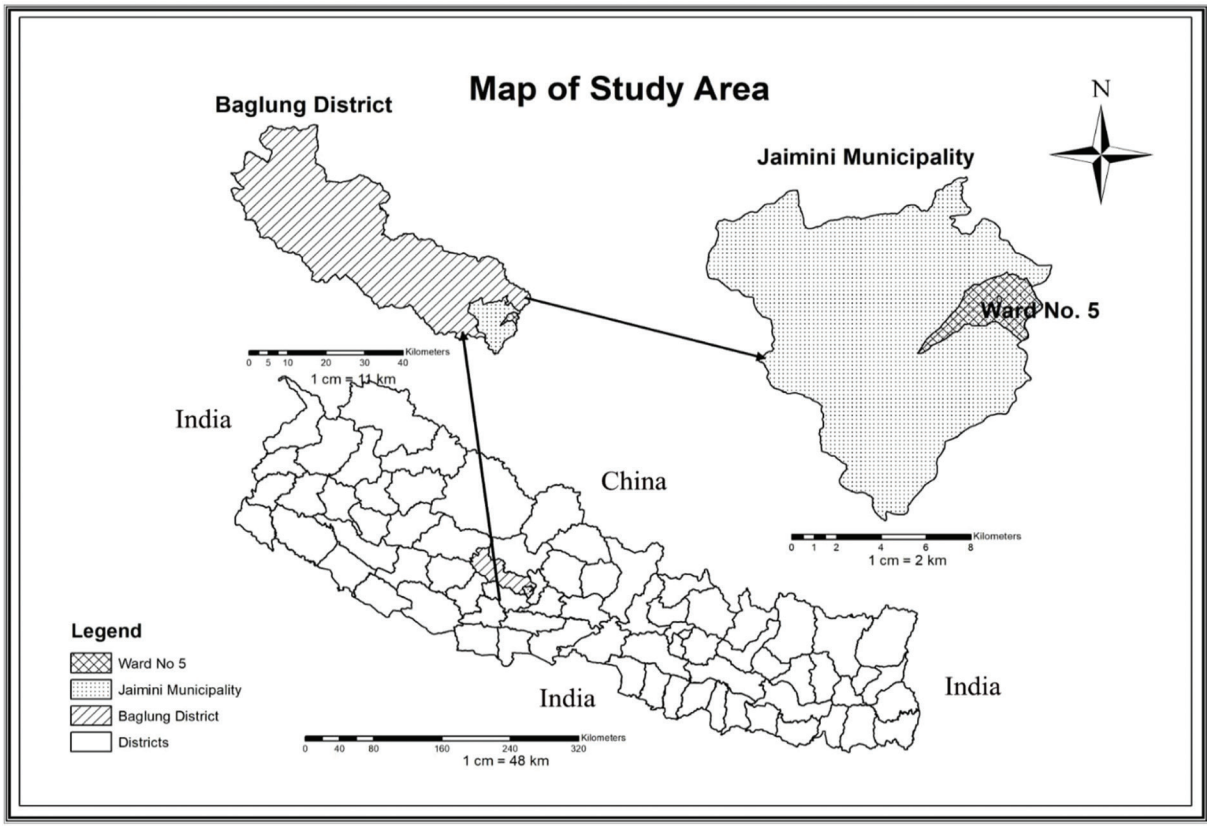

Figure 1: Study area map. Map of Jaimini Municipality Ward-5 in Baglung district

Materials and methods

Study area

The study was carried out in Jaimini Municipality, Ward no. 5 of Baglung district in the mid-hills of Nepal (Figure 1). The district has a total area of 1,784 sq. km. and includes four municipalities and six rural municipalities. Among the ten wards of the Jaimini Municipality, Ward no. 5 is located in the easternmost part. There are 562 households with a total population of 2,392 and covers an area of 6.56 sq. km. The Ward no.5 was particularly selected for this study due to itswider altitudinal range (600 to 2000 ma.s.l.) and diverse climatic conditions, which in turn are likely to support a wide range of plant diversity. Ethnic group (Dalits) holding less agricultural land and residing near to the forest area are most likely to use the wild vegetable species and have a broader knowledge of their occurrence and use.

Data collection and analysis

Complete information on wild and underutilized vegetables were collected using semi-structured interview, key informant interview, focus group discussion, guided field walk and field observation.The fieldwork was carried out during August-September 2021. A total of64 respondents directly involved in the collection of these vegetables from their natural habitats were interviewed. Through the interview, information on local names, habitats, parts used, the season of availability and market value were gathered. The prior informed consent was obtained from all the respondents before the interview. The snowball sampling was used to identify the key informants as only a limited number of local people were found to have in-depth knowledge about the occurrence, distribution and utilization of the wild and underutilized vegetables. The key informants were women involved in daily household activities, elderly people, vegetable sellers, lead farmers and Ward Chairperson. For the collection of information, plant specimens were collected and photographs were taken. Furthermore, guided field walks and direct field observations were undertaken in participation of the key informants and other knowledgeable local people.The forward farmers and senior citizens served as a guide to collect information on the identification of wild and plants used as vegetables.

Vegetable specimens were collected from natural and semi-natural habitats and were photographed. Some of the common vegetable specimens collected were identified with the help of local people and standard literatures (Shrestha, 2013) whereas other specimens were identified by comparing those with the specimens deposited in National Herbarium and Plant Laboratories (KATH), Godawari, Kathmandu, Nepal. The 'Annotated Checklist of the FoweringPlants of Nepal' (Press *et al.*, 2000) was followed for the nomenclature of the collected specimens.

Results

We recorded a total of 64 wild and underutilized vegetable species belonging to 27 families and 45 genera in the study area (Table 1). Cucurbitaceae with 7 species was found to be the most dominant family in the study areafollowed by Fabaceae (6 species), Dioscoreaceae, Poaceae, Amaranthaceae and Polygonaceae (4 species each,Table 1, Fig. 2). Out of the total species recorded, 26 species were used for their leaves, 11 species for fruits, 8 species for young shoots, 6 species for roots/ tubers, 6 species for flowers, 4 species for seeds and 3 species as a whole plant (Table 1). In addition to their use as vegetables, these plants were also commonly utilized as medicine and animal feed.The availability of these vegetables varied among seasons. From June to August, 39 species were reported to be harvested whereas respondents stated ten species to be collected in the month of December to February.

Table 1: List of wild and underutilized vegetablespeciesfound in Jaimini municipality, ward no.5. Local name, scientific name, family, parts uses, season of availability and other uses of the vegetable species

SN	Local name	Scientific name	Family	Parts used	Season of availability	Others uses
1	Banko	*Arisaema tortuosum* (Wall.) Schott	Araceae	Whole plant	June-July	Medicinal
2	Ban kurilo	*Asparagus filicinus* Buch.-Ham. ex D.Don	Asparagaceae	Shoot	May-June	Medicinal
3	Ban lunde	*Amaranthus spinosus* L.	Amaranthaceae	Stalk and leaf	April-July	Fodder
4	Ban nigalo	*Thamnocalamusspathiflorus* (Trin.) Munro	Poaceae	Shoot	June-July	Fodder
5	Ban phapar	*Fagopyrum dibotry*s (D. Don) Hara	Polygonaceae	Stalk and leaf	May-June	Medicinal
6	Ban tarul	*Dioscoreabulbifera* L.	Dioscoreaceae	Root/tuber	December-February	Medicinal
7	Barela	*Cyclantherapedata* (L.) Schrad.	Cucurbitaceae	Fruit	April-June	Feed to livestock
8	Bethe	*Chenopodium albu*m L.	Chenopodiaceae	Stalk and leaf	January-March	Feed to livestock
9	Bhorla	*Bauhinia vahlii* Wight &Arn.	Fabaceae	Fruit	August-September	
10	Bramelidhaniya	*Eryngium foetidu*m L.	Apiaceae	Leaf	August-September	Medicinal
11	Chari amilo	*Oxalis corniculat*a L.	Oxalidaceae	Leaf	April-June	Medicinal
12	Chichinda	*Trichosanthescochinchinensi*s (Lour.) M. Roem.	Cucurbitaceae	Fruit	Autumn	Feed to livestock
13	Dhanthe neuro	*Diplazium maximum (D.Don) C. Chr.*	Woodsiaceae	Stalk and leaf	Rainy	Medicinal
14	Gandhe	*Houttuynia cordata* Thunb.	Saururaceae	Stalk and leaf	April-June	Medicinal
15	Ghartarul	*Dioscoreaalata* L.	Dioscoreaceae	Root/tuber	December-February	Feed to livestock
16	Golkankri	*Solenaamplexicaulis* (Lam.) Gandhi ex Saldanha & Nicolson	Cucurbitaceae	Fruit	July-August	Feed to livestock
17	Halhale	*Rumex nepalensi*sSpreng.	Polygonaceae	Leaf	April-September	Medicinal
18	JhoteKauso	*Mucuna pruriens* (L.) DC.	Fabaceae	Seed	March-April	Medicinal
19	Jhusetil	*Guizotiaabyssinica* (L. fil.) Cass.	Asteraceae	Seed	Winter	
20	Kalobethe	*Chenopodiastrummurale* (L.) S. Fuentes, Uotila& Borsch	Chenopodiaceae	Stalk and leaf	August-October	Feed to livestock
21	Kalobihi	*Solanum nigrum* L.	Solanaceae	Leaf	May-June	Medicinal
22	Kalo neuro	*Tectariacoadunata* (Wall. ex Hook. &Grev.) C. Chr.	Dioeridaceae	Leaf	June-July	Medicinal
23	Kavro	*Ficus concinna* (Miq.) Miq.	Moraceae	Young leaves	May-June	Fodder
24	Khanayo	*Ficus semicordata* Miq.	Moraceae	Fruit	October-November	Feed to livestock
25	Khasreto	*Ficus hispida* L. fil.	Moraceae	Fruit	July-August	Feed to livestock
26	Koiralo	*Bauhinia variegata* L.	Fabaceae	Flower	April-May	Medicinal
27	Kundruk	*Coccinia grandis* (L.) Voigt	Cucurbitaceae	Fruit	Summer	Feed to livestock
28	Kukurdiano	*Smilax aspe*ra L.	Smilacaceae	Shoot	May-June	Fodder
29	Kukurdiano	*Smilax ferox* Wall. ex Kunth	Smilacaceae	Shoot	May-June	Fodder
30	Kutilkosa	*Vicia angustifolia* L.	Fabaceae	Seed	March-April	Feed to livestock

SN	Local name	Scientific name	Family	Parts used	Season of availability	Others uses
31	Kutilkosa	*Vicia hirsuta* (L.) Gray	Fabaceae	Seed	June-July	Feed to livestock
32	Kubindo	*Benincasahispida* (Thunb.) Cogn.	Cucurbitaceae	Fruit	September-October	Feed to livestock
33	Laligurans	*Rhododendron arboreum* Sm.	Ericaceae	Flower	February-April	Fuelwood
34	Latte sag	*Amaranthus caudatus* L.	Amaranthaceae	Leaf	April-July	Fodder
35	Lekalisisnu	*Girardiniadiversifolia* (Link) Friis	Urticaceae	Leaf	June -August	Fiber yielding
36	Liku neuro	*Athyrium atkinsoniiBedd.*	Woodsiaceae	Stalk and leaf	Rainy	
37	Lude sag	*Amaranthus tricolor* L.	Amaranthaceae	Leaf	April-July	
38	Lude sag	*Amaranthus viridis* L.	Amaranthaceae	Leaf	April-July	
39	Masino neuro	*Diplazium esculentum* (Retz.) Sw.	Athyriaceae	Stalk and leaf	May-June	
40	Mithephapar	*Fagopyrum esculentum* Moench	Polygonaceae	Stalk and leaf	May-June	Fodder
41	Nigalo	*Drepanostachyumfalcatum* (Nees) Keng f.	Poaceae	Shoot	April-June	Fodder
42	Neuro	*Depariaboryana* (Willd.) M. Kato	Woodsiaceae	Leaf	June-July	
43	Kulfa sag	*Portulaca oleracea* L.	Portulacaceae	Stalk and leaf	Year round	
44	Parwar	*Trichosanthes dioica* Roxb.	Cucurbitaceae	Fruit	Summer	Feed to lvestock
45	Pate ghiraula	*Luffa acutangula* (L.) Roxb.	Cucurbitaceae	Fruit	Summer	Feed to livestock
46	Pindalu	*Colocasia esculen*ta (L.) Schott	Araceae	Whole plant	August-October	Feed to livestock
47	Photongi	*Physalis minimaculata* Waterf.	Solanaceae	Fruit	Winter	Medicinal
48	Rato latte	*Dysphania ambrosioides* (L.) Mosyakin&Clemants	Chenopodiaceae	Stalk and leaf	August-September	
49	Sajiwan	*Moringa oleifera* Lam.	Moringaceae	Fruit	April-May	Medicinal
50	Sarpa ko makai	*Arisaema jacquemontii* Blume	Araceae	Whole plant	April -May	
51	Simal	*Bombax ceiba* L.	Bombaceae	Fruit	February-March	Medicinal
52	Sim sag	*Nasturtium officinale* R.Br.	Brassicaceae	Leaf	Year round	
53	Simal tarul	*Manihot esculenta* Crantz	Euphorbiaceae	Root/tuber	December-February	
54	Sipligan	*Crateva religiosa* G. Forst.	Capparaceae	Stalk and leaf	March-April	Medicinal
55	Sisnu	*Urtica dioica* L.	Urticaceae	Leaf	Year round	Medicinal
56	Tanki	*Bauhinia purpure*a L.	Fabaceae	Flower	August-October	Feed to livestock
57	Tarul	*Dioscoreadeltoidea* Wall. ex Griseb.	Dioscoreaceae	Root/tuber	December-February	Feed to livestock
58	Tarul	*Dioscorea esculenta* (Lour.) Burkill	Dioscoreaceae	Root/tuber	December-February	Feed to livestock
59	Titephapar	*Fagopyrum tataricum* (L.) Gaertn.	Polygonaceae	Stalk and leaf	May-June	Feed to livestock
60	Thakal	*Cirsium wallichii* DC.	Asteraceae	Shoot	June-July	
61	Tori ghans	*Capsella bursa-pastoris* (L.) Medik.	Brassicaceae	Leaf	January-April	
62	Tatelo	*Oroxylum indicum* (L.) Kurz	Bignoniaceae	Fruit	March – May	Medicinal
63	Tama bans	*Dendrocalamushamiltonii* Nees & Arn. ex Munro	Poaceae	Shoot	June-July	Fodder
64	Tama bans	*Dendrocalamusstrictus* (Roxb.) Nees	Poaceae	Shoot	June-July	Fodder

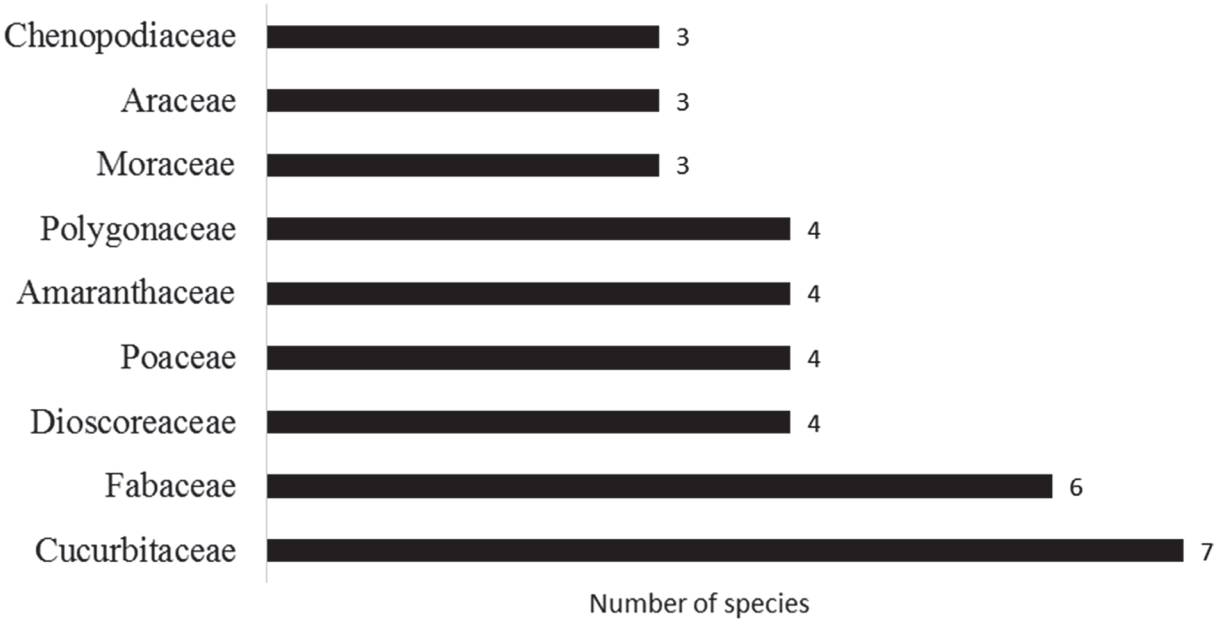

Figure 2: Number of wild and underutilized vegetable species found found inJaimini Municipality, Ward no. 5 by families

The majority of species (21 species) were collected from natural forests, 19 species were gathered from uncultivated lands, 10 species were cultivated in farmers'field, 11 species were grown in home gardens whereas 3 species were collected from fallow lands (Fig. 3).

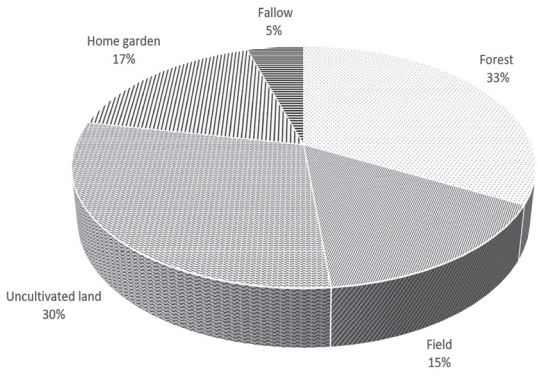

Figure 3: Natural habitats of wild and underutilized vegetable species found in Jaimini municipality, ward no. 5

The majority of the recorded wild and underutilized vegetable species (33 species) were herbs, 14 species were climbers, 11 species were trees, 5 species were grasses whereas 1 species was shrub (Fig. 4).

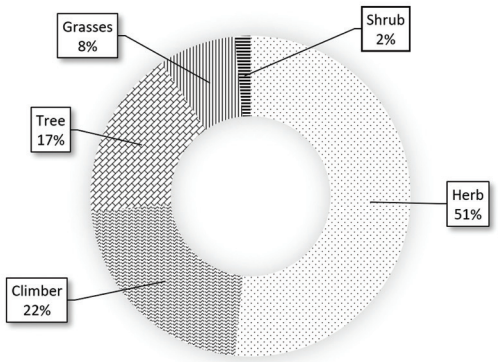

Figure 4: Proportion of wild and underutilized vegetable species found found inJaimini Municipality, Ward no. 5 by life forms

We found that seven species of the vegetables are traded in the local market. They were *Drepanostachyum falcatum* (Nees) Keng f., *Cyclanthera pedata* (L.) Schrad., *Chenopodium album* L., *Bauhinia variegata* L., *Dendrocalamus strictus* (Roxb.) Nees, *Dioscorea deltoidea* Wall. ex Griseb. and *Diplazium maximum* (D.Don) C. Chr.Species like *Diplazium esculentum* (Masino neuro), *Dendrocalamus strictus* (Tama bans), *Moringa oleifera* (Sajiwan) and *Drepanostachyum falcatum* (Nigalo) were found to have high market value and some of the species of *Dioscorea* are culturally important as they have

a high market demand during the Hindu festival of Maghe Sankranti.

Elderly people were found to have wider knowledge about the use of wild plants as vegetables than the younger respondents. They also pointed out that common vegetables like Pate ghiraula (*Luffa acutangula*), Kubindo (*Benincasahispida*) are slowly disappearing from their home garden because of the replacement by modern high yielding varieties of the vegetables. Most of the vegetable species found in this region were nutritionally important while some of them have medicinal value too. Sisnu (*Urtica dioica*), Sipligan (*Crateva religiosa*) and Sajiwan (*Moringa oleifera*) were used locally to lower high blood pressure and high blood sugar level. According to the local farmers, the availability and distribution of these vegetable species are declining at an alarming rate.They also mentioned that there is limited knowledge regarding the use of wild plants in the younger generation. They stated excessive collection, deforestation, drought and forest fires to be the major factor for their declination (Appendix).

Discussion

Wild and underutilized vegetables have been the major source of human diets for centuries with a great contribution to food and nutrition security, particularly for rural people. It is perceived that wild and underutilized vegetables are tastier, more nutritious and are easily available to meet their daily need and are a source of income as well(Limbu & Thapa, 2011;Bhattarai *et al.*, 2013;Aryal *et al.*,2018). In this study, the rural people were dependent on the wild and underutilized vegetables mostly in the lean season. Limbu and Thapa (2011) found majority of Chepang people residing in the hilly areas of Nepal highly dependent on wild fruits and vegetables as shifting cultivation was insufficient to feed their families throughout the year. Another study carried out in a Chepang community reported that 58% of households were depended on wild and underutilized plants for vegetables for up to 5 months a year (Aryal *et al.*, 2009). Bhattarai *et al.* (2013) reported that75% of the respondents were depending exclusively on wild and underutilized plants for 1–3 months and 10% for more than 3 months to meet their daily vegetable requirements in Darchula District.

A review study done byDangol *et al.* (2017) revealed that the highest number of wild edible plants were constituted by vegetable species (246 out of 349 species). The present study documented fewer wild vegetables than Joshi *et al.* (2015), who reported 89 wild vegetable species from Makawanpur district. The possible reason for more number of wild vegetables reported is wider altitudinal range covering a larger area than the present study.Uprety *et al.* (2012) reported 36 wild vegetable species from five districts (Makawanpur, Tanahun, Dang, Bardiya, Kailali) and found highest diversity in Makawanpur district. Regarding the habitat of these species, the majority of them were collected from the forest. Forest providing partial shade, undisturbed conditions and good soil fertility can be probable reasons for their higher diversity. This finding is in line with the result of Joshi *et al.* (2015) which stated forest to be the most important place for the collection of these vegetables whereas in contrast, a lesser number of vegetable species were collected from fallow in this study. The findings of this study showed that leaves and other aerial parts were the most consumed parts as vegetables which is similar to the result of Singh *et al.* (2012) which discovered tender and succulent shoots, young growing aerial parts and leaves (30 species) as the most consumed plant parts of wild edible vegetables followed by floral parts, roots and tubers.

Wild and underutilized vegetables are providing millions of consumers with essential micronutrients, such as vitamins and minerals needed to maintain health and promote immunity against infections. This research found many of the formerly neglected commodities like: Sisnu(*Urtica dioica*), Sipligan (*Crateva religiosa)* and Sajiiwan (*Moringa oleifera*) have now become nutritionally and medicinally important due to consumer awareness.Some species were found to have multiple uses also.Tanki was found to have been used for different purposes like:vegetable, fodder, fuel wood, litters, and also can fix nitrogen in the soil. Many researches

have revealed that the vitamins like vitamin A, B, C, beta carotene, mineral composition such as nitrogen, potassium, calcium, magnesium, and protein contents of wild vegetables are generally higher than those of cultivated species (Flyman &Afolayan, 2006). Rajyalakshmi *et al.* (2001) reported 36 out of 70 wild vegetables eaten by the tribal people in South India had high vitamin A concentration. The same study revealed *Dioscorea bulibifera, D. versicolor, D. deltoida, D. triphylla* to have 5 times more protein than potatoes, sweet potatoes and colocasia. In our study, only four species of *Dioscorea* were documented while Sharma and Bastakoti (2009) reported9 out of 10 species of *Dioscorea* used as food in Chepang community. This indicates that the traditional knowledge of identification, collection, processing and consumption have saved this community of Dhading district from food insecurity to great extent. Singh *et al.* (2012) found a greater number of plant species were used for curing stomach related diseases among 43 wild plants used as vegetable in Rupandehi District. Limbu and Thapa (2011) reported that dust of roots of Kalo neuroandBankurilo eaten with warm water can treat diarrhea.

Issues and challenges

Major issues in the utilization and management of the wild and underutilized vegetables are changing human lifestyle, food habit and taste, modernization in agriculture, lack of human resources for collection, overgrazing, land clearanceandoverharvest. However, the chemical, nutritional and toxicological properties of wild and underutilized vegetables and their modification by various processing techniques still need to be properly studied and documented (Flyman &Afolayan, 2006).

Dependency on imported vegetables, lack of awareness and low demand for underutilized vegetables are the main reasons for farmers' unwillingness to use and grow them. Expectation of farmers to cultivate commercial varieties with a strong market chain can be another challengeintheconservation efforts. People are overharvesting these wild plants from their natural habitats but are not concerned with their conservation and rational utilization. Also, there is a limitation of knowledge about their abundance, diversity, and availability to some local people and ethnic communities only.

Strategies for their conservation and utilization

Wild and underutilized plants are valuable genetic resources. The use of wild vegetables in breeding programs to improve resistance to insect pests and adaptation to different microclimatic niches of Nepal can be a potential scope. Mostly, wild varieties of vegetables are hardy, require low agricultural inputs and can produce desirable yields with fewer management practices. Hence, marginalized lands with lower productivity could easily be utilized to help in their conservation and promotion(Shava, 2005).Participatory variety selection for the adaption of local varieties and awareness programs for the conservation of genetic resources from government, community, and private levels can play important role in the conservation of our underutilized vegetables (Rana *et al.*, 1998).Conservation and awareness programs for local people who know the use of indigenous food plants must be strengthened for rational utilization and conservation(Brush, 1995). Diversity fairs, food fairs, poetry and dramas can be organized to explore these diverse vegetables and sensitize people about their importance.

Both ex-situ and in-situ methods can be applied for the conservation of genetic resources.Along with the sustainable harness, domestication and in-situ conservation of these endangered vegetable species by certain ethnic groups or local people aresimple and highly effective strategies in the case of Nepal and transfer of knowledge concerning conservation is much more practicable (Malla & Chhetri, 2009; Battarai *et al.*, 2013).Community-level seed collectionand establishment of seed bank withtheactive participation of locals are the best alternative for ex-situ conservation of genetic resources. Local communities, ethnic groups and women were found to know the culinary uses, gathering seasons, conservation and utilization better than other people. Hence, they can play an important role in the preservation and domestication of indigenous vegetables (Joshi *et al.*, 2007).

Research and promotion of wild and underutilized vegetables can lead to the rise of new staple crops and hence a sustainable change in consumption patterns could be established (Kunwar *et al.*, 2012). Efforts should be made to cultivate high-value indigenous vegetables permanently on the field or commercial scale to reduce the extinction risk.Also, consumers are always eager to taste new commodities and underutilized vegetables can play an important role to satisfy their demand. Thus, it has now become necessary to diversify our food by accommodating such nutritious wild and underutilized vegetables into our diet for improved health and nutrition (Jaenicke & Hoschle-Zeledon, 2006). Evaluation of commercial use and market values including potentials for their domestiation and promotion should be explored. Also, identification of local and international markets, marketing channels, and value addition of local products should be prioritized for their conservation and development (Shava, 2005). Promotion, utilization, and marketing of indigenous vegetables can aid in their conservation while also reducing food and nutrition insecurity in the country, particularly in rural and hilly areas of Nepal.

Conclusion

The present study documented 64 species of wild and underutilized vegetables from 27 different families. Knowledge of abundance, distribution and utilizationofwild and underutilized plant species has gradually degraded in the new generation. People from the Dalit community who had been highly involved in the collection and utilization of these species have now relied on modern vegetable species. Only few species which are readily available and easy to collect have been extensively used for self consumption or for marketing. Distribution of some of high value marketable wild vegetable species in the study area is declining day by day due to overharvesting while most of them are being neglected. Identification, collection, documentation, characterization, and research from government and non-governmental sides and detailed analysis of their nutritional values should be prioritized for their promotion and conservation. Along with sustainable consumption, domestication, in-situ and ex-situ conservation of these vegetables is the only way of controlling genetic erosionthus, contributing to the food and nutrition security, and a means for income generation for rural people.

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