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Utilization of Wild Edible Fruits Available in Shreenagar Hill for Food Security and Income Generation

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Abastract

This study investigates the significance and utilization of wild edible fruits by local communities, emphasizing their dietary, medicinal, and economic roles. Data were collected through repeated field visits, interviews, and questionnaires with 78 local residents, complemented by secondary sources such as previous studies, journals, and books. A total of 21 species of wild edible fruit plants belonging to 14 families and 19 genera were identified. Among the surveyed households, 68 utilized wild fruits, while only 8 engaged in their commercial sale. The majority of collectors were aged between 30 and 50 years. Rosaceae emerged as the dominant family, and trees represented the prevalent life form among the documented species. All fruits were consumed fresh, whereas several species were also processed into pickles, juices, or dried forms. Ten species held notable medicinal value, being traditionally used to treat various ailments, and six species had economic significance, contributing to local income generation. Despite their ecological and socioeconomic importance, wild fruit species face increasing threats from population pressure, forest fires, overexploitation, illegal logging, and changing climatic conditions. The study highlights the urgent need for conservation measures, community awareness, and sustainable management practices. It recommends that local governments and forest authorities have to develop strategic plans and policies to protect and promote wild edible fruits. Furthermore, both local residents and visitors must adhere to conservation guidelines to ensure the long-term preservation and sustainable use of these valuable plant resources.

Keywords: Socio-economic, Sustainable Management, Rosaceae, Wild, Existence.

Introduction

Wild edible fruits (WEFs) refer to fruit-bearing plant species that are not cultivated but are edible and collected from various natural habitats (Beluhan & Ranogajec, 2010). Wild plants have long formed a significant component of the human diet, with nearly 75,000 plant species known to be edible worldwide (Diamond, 2002; Leonti et al., 2006). These fruits are particularly important during periods of food scarcity, especially in off-seasons when cultivated vegetables and fruits are unavailable (Rasingam, 2012; Deshmukh et al., 2011). WEFs are among the most widely used non-timber forest products (NTFPs) (Cunningham et al., 2004; Hickey et al., 2016)

and are valued not only as food but also for their medicinal properties, being used traditionally to treat a range of ailments (Deshmukh et al., 2010; Hazarika et al., 2012, 2018). Several wild fruits are richer in vitamin C than their cultivated counterparts and serve as essential sources of macro- and micronutrients in local diets (Bvenura & Shivakumar, 2007). Local communities often possess extensive indigenous knowledge about the uses of such plants for food, medicine, and other purposes (Sundriyal et al., 1998).

Nepal, despite its small size covering only 0.1% of the global area, it is remarkably rich in biological and cultural diversity (MoFSC, 2014). A wide variety of wild edible fruit species are distributed across its diverse geographical regions. Altogether, 199 wild edible fruit plant species, belonging to 139 genera and 67 families, have been documented from eastern to western Nepal (Gautam et al., 2020). These fruits play a crucial role in supplementing the diet of local people, particularly in hilly and remote regions where transportation challenges and economic constraints limit access to cultivated fruits (Bajracharya, 2020). Documentation of such species is essential because they represent an integral part of natural vegetation and contribute to both ecological balance and food security. Assessing the diversity of wild edible fruit species can provide valuable insights into potential risks of extinction, aid in establishing conservation priorities, and guide the development of sustainable management strategies (Zang et al., 2011). Many ethnic groups in rural Nepal have their own traditional knowledge regarding the use of wild edible fruits for both dietary and medicinal purposes. Thus, WEFs significantly contribute to the livelihoods and cultural practices of Nepalese communities closely connected with nature.

Humans have depended on wild plants for sustenance since the dawn of civilization, leading to a profound relationship between people and plants (Rajbhandary et al., 2020). Through centuries of trial and error, early humans identified numerous wild plants as edible and gradually domesticated some of them (Niveditha, 2017). Today, wild edible fruits continue to serve as vital non-timber forest products and important sources of nutrition, medicine, and income for local populations (Sadespande & Shackleton, 2019). Harvesting WEFs also supports rural employment and can supplement household income. Although the direct sale of wild fruits often yields low returns due to their short shelf life and limited market demand, value addition through processing into pickles, chutneys, jams, or jellies can enhance shelf stability and increase profitability for local communities (Mohapatra & Panda, 2009). Consequently, WEFs play an important role in combating malnutrition among rural populations (Ngome et al., 2018).

Wild fruits are valuable sources of vitamins, minerals, dietary fibers, and natural bioactive compounds with medicinal potential. Studies have shown that these fruits often contain higher concentrations of active medicinal compounds than cultivated species (Marwat et al., 2009). Plants naturally produce antioxidants to combat oxidative stress caused by light and oxygen exposure (Lobo et al., 2010). Antioxidants are crucial for human health as they neutralize free radicals, reducing the risk of chronic diseases and protecting tissues from oxidative damage (Biswas et al., 2022). Numerous epidemiological and nutritional studies have demonstrated that increased consumption of fruits and vegetables significantly lowers the risk of chronic diseases

such as cancer, coronary heart disease, and Alzheimer's disease (Lock et al., 2005; Gescher et al., 1998). Thus, WEFs hold immense importance as natural dietary supplements, traditional medicines, and indirect sources of income that collectively improve the well-being of local populations.

Wild edible fruits have historically served as vital sources of nourishment and protection against hunger, especially for marginalized and tribal communities. They continue to contribute to food security in many parts of the world. However, with the growing dependence on commercially imported fruits and a general lack of awareness regarding native wild species, many locally available fruits are often neglected. Documenting and promoting these indigenous fruits are essential for maintaining biodiversity, supporting rural livelihoods, and recognizing their nutritional and medicinal values.

In Nepal, several studies have examined the importance and utilization of wild edible fruits in different regions. Nevertheless, limited research has been conducted specifically on the collection, use and significance of WEFs in Shreenagar Hill, Tansen, Palpa. Therefore, this research aims to fill that gap by providing scientific data useful for local government agencies, community organizations, and academic institutions. It also seeks to assess the health impacts of WEFs, emphasizing their role as preventive medicine and contributors to sustainable livelihoods. The specific objectives of this study are to document the existing collection patterns and utilization of important wild edible fruits (WEFs), identify the number and types of wild edible fruit plant species, examine the various forms of their application practiced by local people, and investigate their medicinal properties and sustainable use.

Materials and Method

Study area

The study area for the research work is Shreenagar Hill, Tansen, Palpa of Lumbini province-5 . It lies 1 km. northwest of Tansen town at a height of 1,372 meters above sea level spreading over 1300 Ropani equivalent to 70 hectares of land. It falls under the Tansen Municipality ward no. 1, 3, and 5 and famous for its scenery sight, natural beauty and picnic spot that attracts local, national as well as international tourists.

These parts are rich in the availability of wild edible fruits so household survey was done from these three wards. According to the CBS (2021), the combined total population from these wards was 14,130 from which 6508 (46.05%) were male and 7622 (53.94%) were female. Also as a combined of 7966 households are present in these ward. The main occupation of the people are self- business, teaching schools, abroad job, local and government jobs, wage labor and few involving in husbandry of crops and animals.

Shreenaagar Hill possesses a cool climate and consists of sub-tropical type of vegetation. The major forest type includes *Pinus roxburghii* (Salla), *Shorea robusta* (Sal), *Castonopsis indica* (Katus), *Schima wallichi* (Chilaune), *Rhododendron arboreum* (Laliguras) etc. Some of the major WEFs plants are *Myrica esculenta* (Kafal), *Pyrus pashia* (Mayal), *Diospyros malabarica* (Khalluk), *Rubus ellipticus* (Ainselu) etc.

Method of data collection

Primary and secondary data were collected by using RRA (Rapid Rural Appraisal) method.

Field visit and observation

The research includes field survey, household survey, evaluations, formal interviews and questionnaire. The questionnaire was taken from the 78 households including all type of economic group, ethnic group, age and sex. To obtain a better knowledge and the information, WEFs was identified from the secondary source before visiting to the field.

The main objective of the research is to explore and document the knowledge of WEFs existing in the study area and its role in local community use in various format. Therefore, explanatory, informative and qualitative research designs were employed.

Random household sampling was done among the residents near periphery of Shreenagar Hill to assess the diversity of wild edible fruits and its status very purposively in order to meet the first objective of the research. However, to meet the second objective, traditional heath practitioner and seller of wild edible fruits were randomly selected.

The study area was visited total 3 times from the December to May. The first field visit was done from December 26 to 2024 January 3. The first visit was mainly focused to collect the information about species of wild fruits. A local person was engaged during this visit as a guide for identifying and collecting species samples. The second visit was done from March 12 to 16. During second visit information was gathered from local knowledge about wild fruits and its uses through household survey, group discussion, interviewing the local people etc. The third visit was done from May 20 to 25. The field was visited again for collecting the information about the plant conditions, identifying plants leftover during first visit, the local people were asked about an extent of collection of wild fruits, their different mode of application in both taste and health and also the market condition and value of wild fruits through the help of vendors from local areas. Collectively of total 18 days were spent on the field visit.

Secondary sources

The secondary information about the uses and importance of WEFs were collected from the internet, several published journals, articles, research reports, documents, web sites etc.

Data Analysis

The data collected from the field and secondary source was tabulated systematically into separate format in order to meet the desired objectives. Then they were analyzed qualitatively and quantitatively by descriptive methods and were represented by using figures, charts and graphical representations.

Result and Discussion

Diversity and utilization process of WEFs

Altogether 21 species belonging to the 14 families and 19 genera of wild edible fruit plants were documented from the study area. They have been used by the local people as source of nutrients, diet, fruits, medicine, trade etc.

Both the local government and Forest Division Office (FDO), have been protecting of the forest area. Trees cutting, bush cutting, cattle grazing and habitat destruction of wild lives are completely restricted from but utilization of wild fruits in its tentative season without harming to the plants is an optional permission to the people. Permission should be taken from the related authority for the harvest of fruit.

Information of general household

Altogether 78 household survey was done for the collection of the information. Out of which 68 households were utilizing the fruits. Most of the household were headed by male (65%) and female (35%) of total household. Every household composed with 3-6 family members in size from which 10-50 years of age group was the most dominant one. The age group of 30-50 years of age were engaged in maximum utilization of the wild fruits. Among the usage of wild fruits, only 8 households were using wild edible fruits as income source. The survey shows that maximum number of household uses WEFs both in terms of nutrients, diet and source of income.

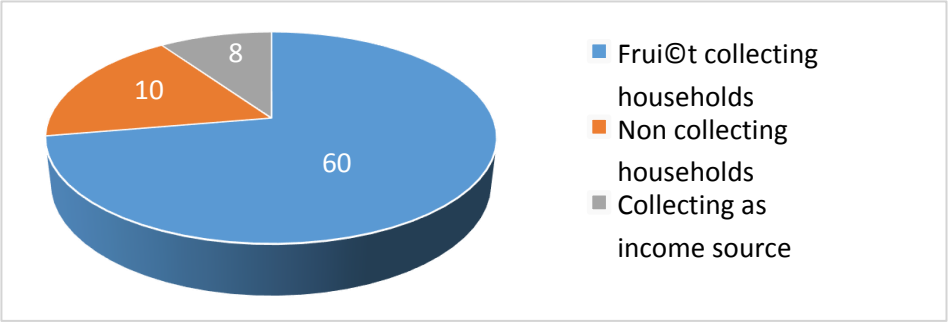

Fig. 1: *Household activities on wild edible fruits*

Among the total usage of wild edible fruits from the 68 household excluding the households that do not collect wild edible fruits, 50% of wild edible fruits were used by people from 30-50 year of age. They were active participants in the utilization of wild edible fruits from the study area. This utilization process includes many factors like consumption, harvest of fruits, medicinal uses, trade etc. as being touched with the availability of fruits. The age group of 10 -30 constitute 30 % of total utilization followed by 15% from age group 50-70 years and 5% above 70 years of aged people.

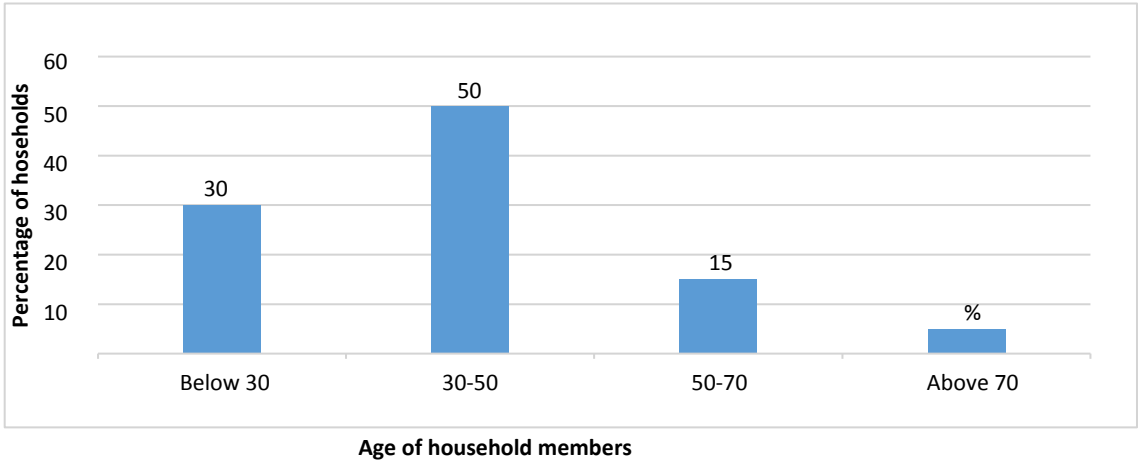

Fig.2: *Usage of wild edible fruits by age group*

Collection of wild edible fruits

The time period between April to July was the best months for the ripening most of the fruits. Most of the fruits were collected for household uses such as nutrient, diets as well as medicines. During the time of ripening of fruits, they were picked and collected from the ground and incase of reachable height the fruits were collected directly from the trees. Hooks and sticks were used to collect fruits, if the height of trees is very tall and the branches are soft. Most of the collected fruits were consumed as fresh fruits. Only some of the fruits were processed and modified into various forms such as juice, jam, sweet nuggets and pickle. Maximum number of fruits were collected for home consumption and only few scales of fruits being sold to the market.

Diversity of wild plant species with edible fruits

Altogether 21 species of wild edible fruit plant species from 14 families and 19 genera were identified from the study area. Among 14 families, 3 families provide more than one species of wild edible fruits viz. Rosaceae (4 species), Moraceae (3 species) and Anacardiaceae (3 species). Other families were followed by each of one species. Rosaceae was the dominant family that consist of 4 species.

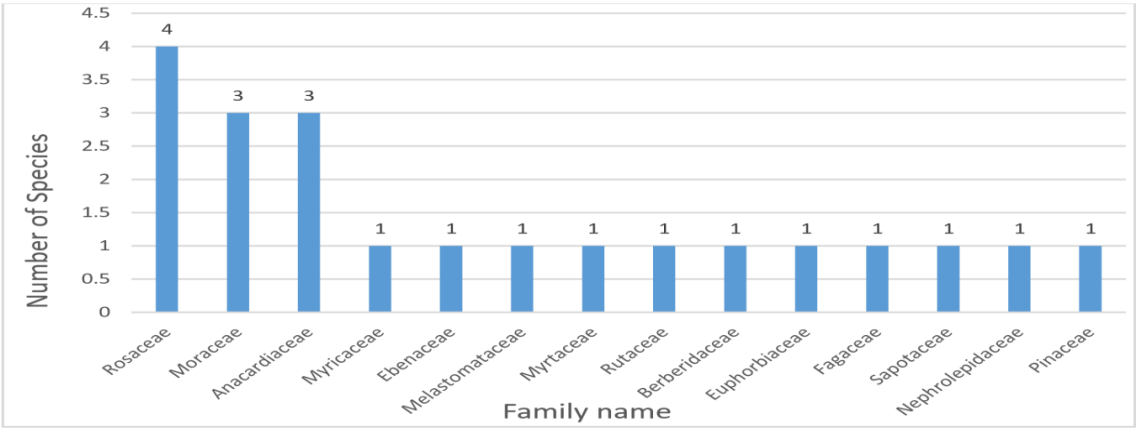

Fig. 3: Families with No. of species

Rosaceae was found to be dominant family from the study area similar to the Gautam et al. (2020). This might be adaptation of this family in different habit like trees, shrubs and herbs. As compared to Gautam et. al (2020), the no. of families of the species found here is seen in limited number. Mahato (2014) reported 37 species under 17 families and 27 genera from the same district in which present study area is located.

Habit group classification of WEFs

The edible fruit from wild plants have different life forms. Among 21 species belonging to the 14 families and 19 genera of WEF plants, fruits from tree species (71.42% or 15 spp.) are commonly used followed by shrubs (19.04% or 4 spp.) and herbs (9.52% or 2 spp.).

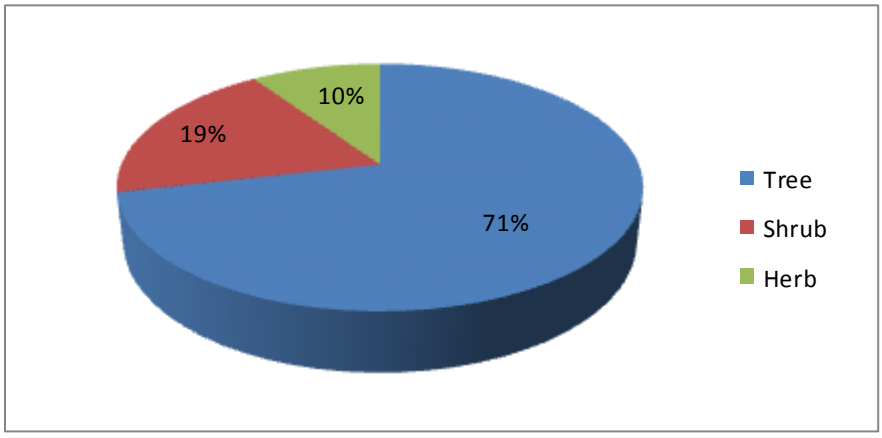

Fig. 4: *Habit of Wild Edible Fruit Plant Species*

Tree was the dominant life form of wild edible fruits plants which was similar to the Mahato (2014). Tree provides more number of fruits than the other habit of plants and constitute 71.42% of total WEFs plant. This might be the growing condition of trees in critical condition like change in climate, temperature, humidity and even in dry condition as well. The study carried out by Gautam et. al (2020) on wild edible fruits of Nepal, the maximum number of fruits were provided by tress that constitute 49% of total species of wild edible fruits plants followed by 24% of shrubs, 18% of herbs and 9% of climbers. The dominant life form of plants that provide maximum wild fruits were similar to the research study carried out by (Gautam & Mahato) that matches with the present study.

Use categories of wild edible fruits

Wild edible fruits are processed in different variety of products and also can be stored for a long time of use. These fruits are cooked, fermented or mixed with other spices for long duration of storage. The study showed that wild fruits were used in different forms such as fruits, vegetables, jam, juices, pickles, oil, spices etc. Fruits of one spices were used more than one form. According to the usage of wild fruits by the local people, 21 species were used as raw fruits, 9 species as juice, 3 species as pickle and 5 species in dried form. This might be due to the ease of direct consumption in fresh condition and contamination of more amount of vitamins, minerals, iron and other necessary elements. Except raw fruits, conversion of fruits in the form of juice, jelly, pickle, chutney etc. increases the shelf life of fruits, also can be used for long period and bring profits to the local communities mentioned by (Mohapatra and Panda 2009).

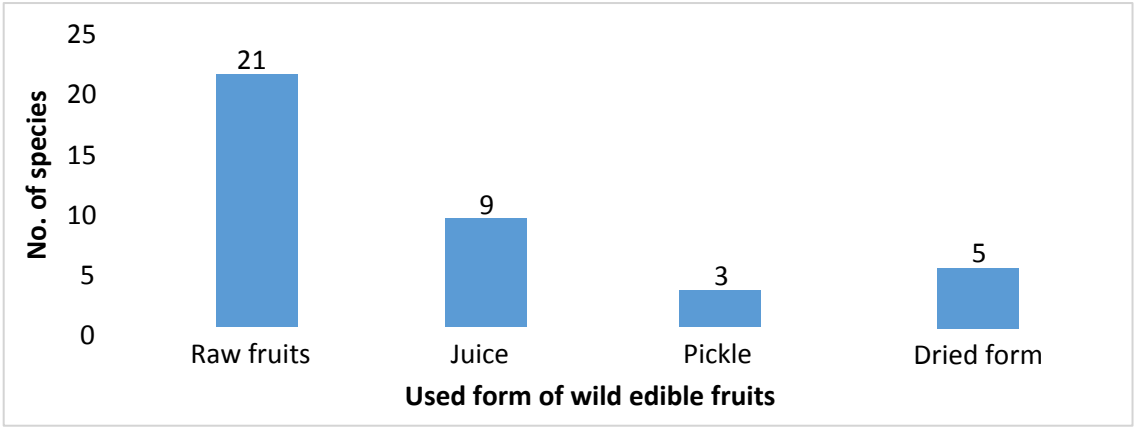

Fig: 5.: *Different usable form of wild edible fruits*

Medicinal uses of Wild edible fruits

From the total 21 species, 10 species were highly used as medicine. Fruits and its plant parts were believed to cure various ailments. Even some plant species were regarded as Ayurvedha medicine such as *Phyllanthus emblica* and *Berberis asiatica*. 8 species were used to treat gastrointestinal disease (diarrhea, dysentery, abdominal pain, stomach disorders), 6 species were used to treat cough, cold and sore throat, 5 species were used to treat cholesterol, 5 species were used to cure cut, wounds and burn, 3 species were used to treat jaundice and two spices were used to treat asthma and diabetes. These wild fruits and its plant parts were used in the form of juice or by grinding and making paste and applying to the affected area specially wounds and cuts as well as directly consumption as fresh fruits (Table 2).

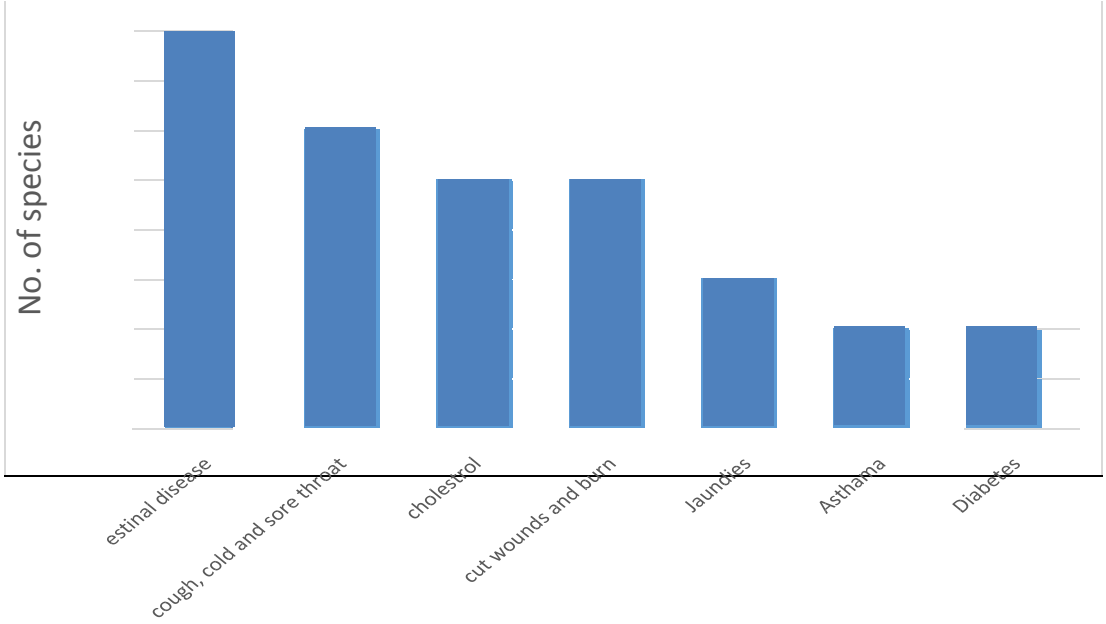

Fig: 6: *Treatment of diseases by WEF plants species as medicine*

WEFs were used as medicines for treatment of different aliments. Many diseases were treated by wild fruits and its plants part as traditional healing practices by the local people. Similar condition was found from the study carried out by Dwa (2022) in Pokhara valley of Kaski District where WEFs and its plants were used by local residents as important parts of ethno-medicines to cure various diseases. Manandhar (2002), also reported in his study about the medicinal properties of wild edible fruits for curing various disease. Out of 21 species of wild fruits, these 10 species hold most important place as a medicine used by local people. This might be locally available of these fruits in the market and have been used as culinary part in most of the household kitchen. Because of their use in most of the treatment of disease from generation to generation, people might have possessed good knowledge about their use and easy way of identification of these 10 wild fruit plants.

Market condition of WEFs

The study found that only 8 houses were directly engaged in marketing of wild fruits. Only 45 species of wild fruits were sold in to the market. These species of fruits were quiet popular than the rest of the other fruits. Kaphal, Amala, jamun and Lapsi are the most dominant fruits which were easily sold into the market. Folk believes that consumption of these fruits have many disease resistant properties. Due to the limited availability of wild fruits and short period of existence, most of the locals who are engaged in the harvesting fruits were dependent only in the season of fruiting. Market value for such wild edible fruits were quiet good but limited quantities of wild fruits from the study area and excessive quantities of cultivated and exotic fruits were available to the market due to which the popularity and importance of local wild fruits were over shadowed. Hence, attraction to the imported fruits were highly emphasized.

Threats to the wild edible fruits

Every year in dry season, forest fire destroys many species of the plants including wild fruit plants. Dried leaves that falls on the ground are mostly like to catch up fire that may spread in all areas resulting to the burn of trees and bushes. Another factor that causes the loss and decreases in availability of wild fruits is over harvest by the visitors and local people. Random plucking of fruits and breaking of twigs and branches of plants by the visitors also has resulted in the declination of such important wild edible fruits.

Participants also expressed their deep concern about improper management of forest resources for recreational parts of work. For the construction of structural monuments and buildings for the attraction of more number of visitors certain lands are made empty by destroying tress and various plants. This has also caused the loss of wild plants in their natural habitat. Land encroachment, fire wood collection were also main issues for the decrease of wild fruits plant species. Other natural factors like climate change, heavy and less rainfall over the year, hail storms were another natural threat to the declination of wild edible fruits through the views of local people.

Conclusion

Shreenagar hill forest have diverse vegetation that also includes many wild edible fruits plant species. The local communities are using the wild fruits resources for different purposes. These wild fruits are the important part of their life as it serves both nutrients and medicines as well.

Total 21 species belonging to the 14 families and 19 genera of wild edible fruit species are identified from the study area. Classifying about their habits, 15 species of plants are trees, 4 species are shrubs and 2 species are herbs. Tree is the dominant life forms of WEF plant that form 71.42% of wild fruits pant from the study area. Rosaceae is the dominant family as it serves 4 species of plants followed by Moraceae and Anacardiaceae with 3 species and other families with 1 species of Wild edible fruit plants. These plant species provide various fruits that are used in various mode of application from the single fruit.

The fruits are highly used by the local community of people and they are also transferred into various products like juice, jam, achar, pickles and also as dry fruits for long storage. 9 species are used for making juice, each 3 species are consumed by making pickles and 5 for dry fruits.

Wild edible fruits are highly used as medicines to treat different aliments by the local people. These fruits serve as a traditional medicine for their health care. 10 species of WEFs plant species are highly used by the local communities to treat various diseases. Out of 10 species, 8 spp. are used to treat gastrointestinal disease like diarrhea and stomach disorder, 6 species are used to treat cold and cough. 5 species are employed to treat cholesterol and for jaundice, 3 species were employed and 5 species for cut and wounds are mostly used. Diabetes and asthma are treated by 2 species. Juice, paste and fruits itself are the common practices applied by the local community to treat various diseases.

Only 6 species of wild fruits are sold most commonly which were Bel, Amala, Katush, Lapsi, Kaphal and Jamun. The market price for these fruits are quite good. People are engaged in selling wild edible fruits only for a season during their availability. Only 8 households are engaged in marketing of these wild fruits as they made some benefits for household expenditure.

Many wild fruits are under threaten by various factors like bush fires, overharvesting, plucking fruits before ripening, improper management and lack of awareness. These issues have affected the loss of plant species and its numbers.

References

Bajracharya, D (1980). Nutritive values of Nepalese edible wild fruits. Zeitschrift Lebensmittel-Untersuchung Und –Forschung 171(5): 363–366.

Beluhan S, Ranogajec A (2010). Chemical composition and volatile components of Croatian wild edible mushrooms. Food Chem. Elsevier Ltd;124(3):1076-82.

Biswas S. C., Kumar p., Kumar R., Das S., Misra T. K., Dey D. (2022) Nutritional composition and antioxidant properties of the wild edible fruits of Tripura, Northeast India. Sustainibility.14(19) doi: 10.3390/su141912194.12194

Bvenura C, Sivakumar D. (2007). The role of wild fruits and vegetables in delivering a balanced and healthy diet. Food Research International 99: 15–30.

Cunningham, A. B.; Shackleton, C.M. (1998). Use of fruits and seeds from indigenous and naturalized plant species. In *Indigenous Forest and Woodlands in South Africa: Policy, People and Practice*; Lawes, M., Eely, H., Shackleton, C.M., Geach, B., Eds.; University of Kwazulu Natal press: Pietermaritzburg, South Africa, 2004; pp. 603-626

Dai HY, Li QA, Chen LF & Deng HW (1992) Protective effect of extract from Choerospondias axillaris fruit on myocardial ischemia of rats. Chinese Traditional and Herbal Drugs 23: 641–643

Deshmukh BS, Waghmode A. (2011). Role of wild edible fruits as a food resource: Traditional Knowledge. Int J Pharma Life Sci. 2(7):919-924

Deshmukh, B.S.; Shinde, V. (2010). Fruits in wilderness: A potential of local food resource. *Int. J. Pharmacol. Bio Sci.2*, 1–5.

Diamond J. (2002). Evolution, consequences and future of plant and animal domestication. Nature 418:700-707

Gautam R. S, Shrestha J. S, Shrestha I. (2020). *Wild Edible Fruits of Nepal*. Int. J. Appl. Sci. Biotechnol. Vol 8(3):289-304.

Gescher A., Pastorino U., Plummer S. M., Manson M. M. (1998). Suppression of tumor development by substances derived from the diet-mechanisms and clinical implications. *Br. J. Clin. Pharmacol.* 45:1-12.

Hara, H. W. T., Stearn W. T. and L. H. J. Williams. (1978). An Enumeration of Flowering Plants of Nepal. British Museum (National History) London.

Hazarika, T.K.; Pongener, M. (2018). Potential wild edible fruits of Nagaland, North-east India and its significance in the livelihood and nutritional security of rural, indigenous people. *Genet. Resour. Crop Evol. 65*, 199–215.

Hazarika, T.K.; Nautiyal, B.P. (2018). Studies on wild edible fruits of Mizoram, India used as ethno-medicine. *Genet. Resour. Crop Evol. 59*, 1767–1776.

Hickey, G.m.; Pouliot, M.; Smith-Hall, C.; Wunder, S.; Nielsen, M.R. (2016). Quantifying the economic contribution of wild food harvests to rural livelihoods: A global- comparative analysis. *Food policy*. 62, 122-132.

Hooker, J.D. (1872-1997). *The flora of British India*. Vol I –VII. L. Reeve and Co, London.

Leonti M, Nebel S, Rivera D, Heinrich M. (2006). Wild Gathered Food Plants in the European Mediterranean: A Comparative Analysis. Economic Botany 60(2): 130-142

Lobo V., Patil A., Pathak A., Chandra N. (2010). Free radicals, antioxidants and functional foods: Impact on human health. Pharmacogn. Rev.4: 118-126

Lock K., Pamerlaeau J., Causer L., Altmann D. R., McKee M. (2005). The global burden of disease attributable to low consumption of fruit and vegetables: Implications for the global strategy on diet. *Bull. World Health Organ.* 83:100-108

Mahato, R B (2014) Wild edible fruit of Palpa district, west Nepal. Journal of Natural History Museum 28: 127–136.

Manandhar, N.P. (2002). *Plants and People of Nepal. Timber Press.*

Marwat, S. K., Khan, M. A., Khan, M.A., Ahmed, M., Zafar, M., Rehan, F., Sultana, S. (2009). Fruit Plant Species mentioned in the Holy quran and Ahadith and their ethno medicinal importance. American Eurasian Journal Agriculture Environment Science, :284- 295.

Mohapatra AK and Panda PC (2009) Wild Edible Fruit Plants of Eastern India. Regional Plant Resources Centre, Nayapalli, Bhubaneswar 751015 Orissa, India. ISBN- 81- 900920-6-5

MoFSC (2014). National biodiversity strategy and action plan 2014- 2020. Government of Nepal, Ministry of Forests and Soil Conservation, Singhadurbar, Kathmandu, Nepal.

Nagome, P. I. T.; Shackleton, C.; Degrande, A.; Tiegouhong, J. C. (2017): Addressing constraints in promoting wild edible plants utilizing in household nutrition: Case of the Congo Basin forest area. In: agriculture and Food Security 6 (1), 1-10.

Niveditha TMA (2017) Wild edible plants of India- A Review. International Journal of Academic Research, 4(3)1: 189- 198.

Rajbhandary S, Siwakoti M, Rai SK and Jha PK, (2020) An Overview of Plant Diversity in Nepal. In: M. Siwakoti, PK Jha, S. Rajbhandary and SK Rai (eds.) Plant Diversity in Nepal, Botanical Society of Nepal, Kathmandu. Pp. 1-15.

Ransingam L. (2012). Ethno-botanical studies on the wild edible plants of Irula tribes of Pillur Valley, Coimbatore district, Tamil Nadu, India. Asian Pac J Trop Biomed. 2(3).

Ritikar K. R., Basu B. D. *Indian medicinal plants, M/SBishen Singh.* Vol. 1. Dehradune, India: Mahendra Pal Singh; 1975.

Sardeshpande M and Shackleton C (2019) Wild edible fruits: A systematic review of an under researched multifunctional NTFP (Non- Timber Forest Product). Forests 10(467) DOI: 10.3390/f10060467

Shah A. H., Shah A. H., Mehmood A., Khan K. R., Farooq M. and Zohra L. (2019).

Nutraceutical Exploration of Wild Edible Fruits of District Tor GHar, Norther Pakistan.

Shi S, Li ZX., Tian FJ., Bai YF, Tian L, Yang YM et al. (1985) Effect of flavanoid from Choerospondias axillaries fruit on left ventricle function and hemodynamics of anaesthesia dog. Inner Mongolia Pharmaceutical Journal 2: 14–15.

Sundriyal M, Sundriyal RC, Sharma E, Purohit AN. (1998). Wild edibles and other useful plants of Sikkim Himalayas, India. Oecologia Montana 7: 43-54.

Zang Y, Yu M. (2011). Assessment of threaten status on the wild plants under state protection in China. Biodiverse Sci 19 (1): 57062. DOI: 103724/SP. J. 1003.2011.06133.