



## Wild Edible Plants Used by Rural Population in District Poonch, J&K, India

1. Adil Farooq

Received 30<sup>th</sup> Oct 2021,  
Accepted 26<sup>th</sup> Nov 2021,  
Online 31<sup>st</sup> Dec 2021

<sup>1</sup>, Research Scholar, BGSBU, Rajouri,  
Jammu and Kashmir, India

**Abstract:** Wild edible plants refers to the uncultivated plants which are used as substitute of staple food by the people especially during scarcity of food. The present study was conducted to document the wild edible plants used by the rural people in district Poonch. During the study it was found that rural population still use wild plants as food and a total of 58 plant species belonging to 52 genera and 41 families were reported in the study area. Rosaceae was the dominant family with 6 species followed by Moraceae and polygonaceae with 4 and 3 species respectively. Beside using these plants as source of food, some plants like *Amaranthus viridis* L., *Diplazium esculentum* (Retz.) Sw, *Juglans regia* L., *Punica granatum* L. *Prunus armeniaca* L. etc are used as source of income generation.

**Keywords:** Phytodiversity, Rural population, Traditional knowledge, Wild edible plants

### INTRODUCTION

Wild plants are essential for livelihood of rural people especially tribal communities because these people use wild plants for different purposes like as source of food, fuel, fodder, timber, medicine, agricultural implements. Wild plants also act as source of income generation for rural people (Dangwal *et al.* 2014). In many developing countries including India people are mostly deficient in one or more micronutrients due to food scarcity (FAO, 2004). During the period of food crisis people rely on wild resources for their food requirement.

Wild edible plants (WEP) provide food to tribals living in and around forests and these plants act as alternative of staple food during food crisis as they are rich in various vitamins, minerals and proteins (Kumar and Hamal, 2009).

Review of literature revealed that wild plants are being used as source of food throughout the world. Diversity of WEP has been explored by many workers around the globe. Pastor and Gustavo (2007) conducted a detailed study on WEP in Argentina, Javier *et al.* (2006) explored WEP of Spain. In India remarkable work has been done by Agrahar-Murugkar and Subbulakshmi (2005), Saka *et al.* (1992), Sundriyal and Sundriyal (2001), Rakesh *et al.* (2004) and Thakur *et al.* (2020). As far as UT of Jammu and Kashmir is concerned WEP of different regions have been explored by different workers like Srivastava (1988), Rashid *et al.* (2008), Dangwal *et al.* (2014), Bhatia *et al.* (2018), Singh *et al.* (2021) and Khan *et al.* (2009) but WEP of district Poonch have not yet been explored. The present study was conducted with the aim to document the diversity, traditional knowledge and utilization pattern of WEP of District Poonch.

## MATERIAL AND METHODS

Poonch is one of the remote and border district of Jammu and Kashmir bounded on three sides by 103 kms long line of actual control. Located at 33°25' to 34°01' North Latitude and 73° 58' to 74°35' East Longitude, it covers an area of 1,674 km<sup>2</sup> and has mostly undulating and mountainous topography. The present study was carried out between February 2018 and July 2020. Extensive surveys were conducted frequently during this period in the study area. A total of 57 informants were interviewed between the age group of 20-68 years of different educational level (Table 1). Information like local names, part used and mode of utilization were collected in Gojri language. Plants were identified with the help of local floras (Sharma and Kachroo, 1981; Singh and Kachroo, 1994; Singh *et al.*, 2002).

## RESULTS AND DISCUSSION

As per 2011 census more than 80% population of district Poonch lives in rural areas and Gujjar and Bakerwal tribes constitute the major part of rural population. Phytodiversity of the area is exploited by the rural people to meet out their daily needs. They use wild edible plants as a substitute of staple food during food scarcity as they are rich in various vitamins, proteins and minerals. Due to the influence of modern culture, ethnicity including traditional knowledge about wild edible plants of tribal rural population is being lost rapidly (Rashid *et al.*, 2008). Their unique traditional knowledge needs to be documented so that it may be preserved for future generations.

During the present study 58 plants species of WEP have been documented belonging to 52 genera and 41 families [Table 2]. Rosaceae is dominant family with 6 plants species which are used as wild edibles followed by Moraceae with 4 species, Polygonaceae with 3 species, Amaranthaceae, Athyraceae, Brassicaceae, Lamiaceae, Plantaginaceae, Rhamnaceae and Rutaceae with 2 species each. Rest 31 families are represented by one species each [Fig.1]. Angiosperms is the largest group reported to be used as wild edible represented by 54 plant species while Pteridophytes and Gymnosperms are represented by 2 species each where as Algae and Bryophytes are not reported to be used as wild edible in the study area [ Fig. 2]. 29 (50%) species of WEP are herbs, 19 (33%) are trees, 8 (14%) are shrubs and 2 (3%) are climbers [Fig. 3]. Fruits of 27 plants species of WEP are used followed by leaves of 21 species, shoots of 7 species, flowers of 4 species, seeds and rhizome of 2 species each and bark and bulb of 1 species each [Fig. 4]. Many of these plants like *Amaranthus viridis* L., *Diplazium esculentum* (Retz.) Sw, *Juglans regia* L., *Punica granatum* L. and *Prunus armeniaca* L. are found to be exploited by locals as source of income generation and some especially trees are also exploited for fuel, fodder etc. due to which these plants are under great stress.

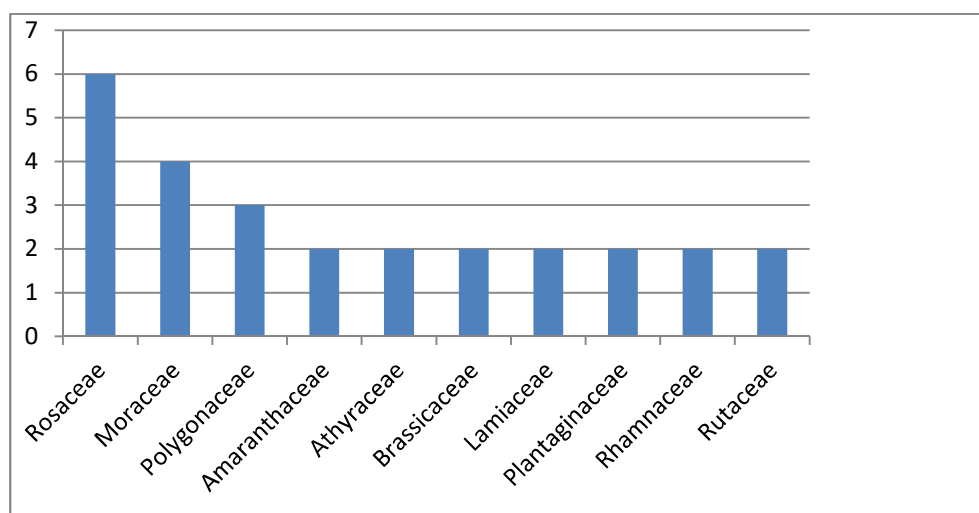


Figure 1. Ten dominant families of WEP

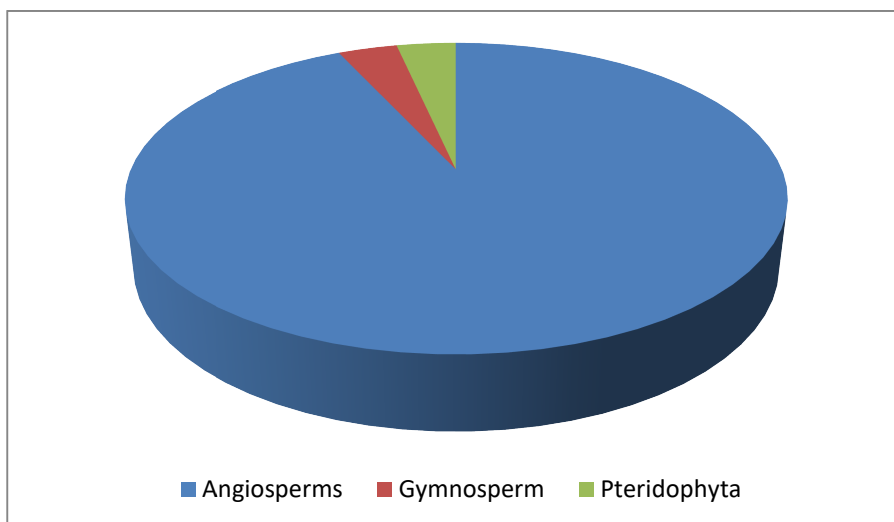


Figure 2. Plant groups of WEP in study area

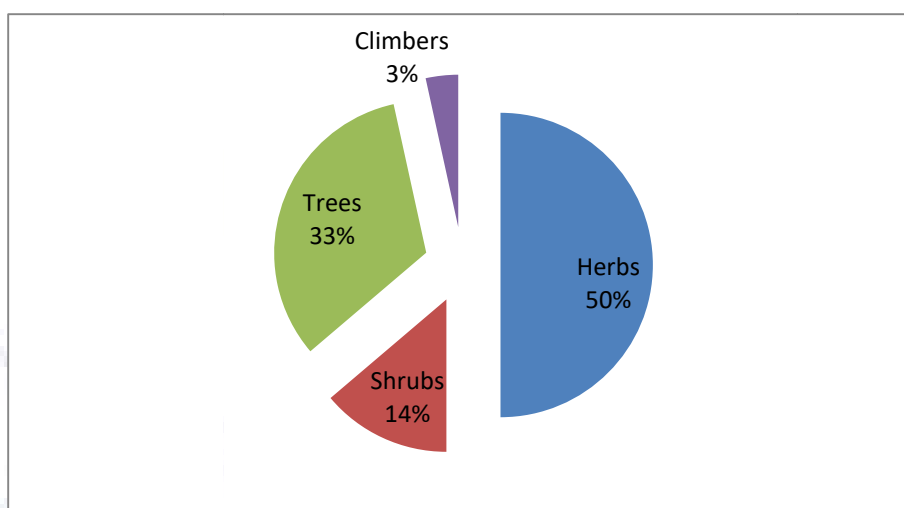


Figure 3. Life forms of WEP of study area

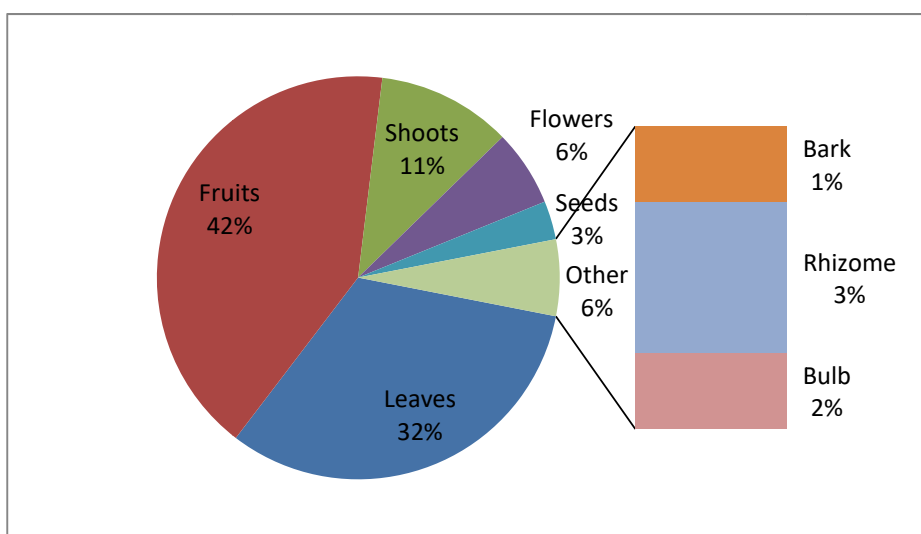


Figure 4. Utilization pattern

Table 1. Details of informants

1	Gender	Male	37
		Female	20
2	Educational Level	Illiterate	18
		Up to 5 <sup>th</sup> Class	19
		Up to 12 <sup>th</sup> Class	11
		Graduate	9
3	Age Group	Up to 30 years	12
		31-50 years	19
		51-68 years	26

Table 2. Wild edible plants used by rural people in study area

S. No.	Botanical name	Local name	Family	Life form	Part used	Uses
1.	<i>Achyranthes aspera</i> L.	Puthkanda	Amaranthaceae	Herb	Leaves	Vegetable
2.	<i>Amaranthus viridis</i> L.	Ganar	Amaranthaceae	Herb	Leaves	Vegetable
3.	<i>Foeniculum vulgare</i> Gaertn.	Sounf	Apiaceae	Herb	Fruits	Spice
4.	<i>Carissa opaca</i> L.	Garna	Apocynaceae	Shrub	Fruits	Fruits are eaten raw
5.	<i>Taraxacum officinale</i> Webb.	Handh	Asteraceae	Herb	Shoots	Vegetable
6.	<i>Diplazium esculentum</i> (Retz.) Sw	Kandor	Athyriaceae	Herb	Young leaves	Vegetable
7.	<i>Diplazium frondosum</i> (Clarke) Christ.	Jatla Kandor	Athyriaceae	Herb	Young leaves	Vegetable
8.	<i>Berberis lycium</i> Royle	Simlu	Berberidaceae	Shrub	Fruits	Fruits are eaten raw
9.	<i>Bombax ceiba</i> L.	Simbal	Bombacaceae	Tree	Flowers	Vegetable
10.	<i>Cordia dichotoma</i> Forst.	Lasoor	Boraginaceae	Tree	Fruits	Pickle
11.	<i>Capsella bursa pastoris</i> Medik	Chamso	Brassicaceae	Herb	Leaves & Shoots	Vegetable
12.	<i>Cardamine impatiens</i> L.	Daraati	Brassicaceae	Herb	Shoots	Vegetable
13.	<i>Bauhenia variegata</i> L.	Kachnar	Caesalpinaceae	Tree	Flowers	Vegetable Raita
14.	<i>Viburnum grandiflorum</i> L.	Guchh	Caprifoliaceae	Shrub	Fruits	Fruits are eaten raw
15.	<i>Stellaria media</i> (L.) Vill.	Laloori	Caryophyllaceae	Herb	Leaves Shoots	Vegetable
16.	<i>Chenopodium album</i> L.	Bathwa	Chenopodiaceae	Herb	Leaves	Vegetable
17.	<i>Commelina benghalensis</i> L.	Angairho	Commelinaceae	Herb	Leaves	Vegetable
18.	<i>Solena heterophylla</i> Lour	Khakhri	Cucurbitaceae	Climber	Fruits	Fruits are edible

19.	<i>Diospyros lotus</i> L.	Amlook	Ebenaceae	Tree	Fruits	Fruits are eaten raw
20.	<i>Elaeagnus umbellata</i> Thunb.	Kankoli	Elaeagnaceae	Shrub	Fruits	Fruits are eaten raw
21.	<i>Rhododendron arborium</i> Sm.	Hardul	Ericaceae	Tree	Flowers	Flowers are edible
22.	<i>Lathyrus aphaca</i> L.	Jangli mutter	Fabaceae	Herb	Fruits	Fruits are eaten during scarcity
23.	<i>Aesculus indica</i> Colebr. ex Camb.	Bunkhori	Hippocastanaceae	Tree	Seeds	Halwa made from seed flour
24.	<i>Juglans regia</i> L.	Khorh	Juglandaceae	Tree	Fruits	Kernels are eaten
25.	<i>Lamium amplexicaule</i> L.	Phumno	Lamiaceae	Herb	Shoots	Vegetable
26.	<i>Mentha arvensis</i> L.	Pootno	Lamiaceae	Herb	Leaves	Chutney
27.	<i>Allium roylei</i> Stern.	Jungli Piyaz.	Liliaceae	Herb	Bulbs Leaves	Vegetable
28.	<i>Malva parviflora</i> L.	Sonchal	Malvaceae	Herb	Leaves	Vegetable
29.	<i>Ficus auriculata</i> Lour.	Tussi	Moraceae	Tree	Fruits Young leaves	Fruits are eaten raw, Vegetable
30.	<i>Ficus palmata</i> Forssk.	Kemri	Moraceae	Tree	Fruits Young leaves	Fruits are eaten raw, Vegetable
31.	<i>Morus alba</i> L.	Toot	Moraceae	Tree	Fruits	Fruits are eaten raw
32.	<i>Morus nigra</i> L.	Shahtute	Moraceae	Tree	Fruits	Fruits are eaten raw
33.	<i>Oxalis corniculata</i> L.	Peeli Khatti booti	Oxalidaceae	Herb	Leaves	Chutney
34.	<i>Fumaria indica</i> (Hausskn.) Pusley	Pitpapra	Papaveraceae	Herb	Leaves	Vegetable
35.	<i>Phytolacca acinosa</i> Roxb.	Kafal	Phytolacaceae	Herb	Leaves	Vegetable
36.	<i>Pinus roxburghii</i> Roxb.	Chir	Pinaceae	Tree	Seeds	Seeds are eaten
37.	<i>Plantago major</i> L.	Chamche pater	Plantaginaceae	Herb	Leaves	Vegetable
38.	<i>Veronica persica</i> Poir.		Plantaginaceae	Herb	Leaves Shoots	Vegetable
39.	<i>Podophyllum hexandrum</i> Royle	Ban kakri	Podophyllaceae	Herb	Fruits	Fruits are eaten
40.	<i>Polygonum amplexicaule</i> D. Don.	Masloon	Polygonaceae	Herb	Rhizomes	Tea
41.	<i>Rumex hastatus</i>	Khatimal	Polygonaceae	Herb	Leaves	Chutney

	D.Don.					
42.	<i>Rumex nepalensis</i> Spring.	Hullah	Polygonaceae	Herb	Leaves	Vegetable
43.	<i>Portulaca oleracea</i> L.	Kulfa	Portulacaceae	Herb	Shoots	Vegetable
44.	<i>Punica granatum</i> L.	Daruno	Punicaceae	Tree	Fruits	Ripe fruits are eaten Dried fruits are used in making chutney
45.	<i>Ziziphus mauritiana</i> Lamk.	Ber	Rhamnaceae	Tree	Fruits	Fruits are eaten raw
46.	<i>Ziziphus oxyphylla</i> Edgrew	Phitney	Rhamnaceae	Shrub	Fruits	Fruits are eaten raw
47.	<i>Cydonia oblonga</i> Mill.	Bai	Rosaceae	Tree	Fruits	Fruits are eaten raw
48.	<i>Fragaria indica</i> Andr.	Kinichi	Rosaceae	Herb	Fruits	Fruits are eaten raw
49.	<i>Prunus armeniaca</i> L.	Haari	Rosaceae	Tree	Fruits	Ripe fruits are eaten
50.	<i>Pyrus pashia</i> Buch. Ham.	Batangi	Rosaceae	Tree	Fruits	Fruits are eaten raw
51.	<i>Rubus ellipticus</i> Sm.	Garacho	Rosaceae	Shrub	Fruits	Fruits are eaten raw
52.	<i>Rubus niveus</i> Thunb.	Pakana	Rosaceae	Shrub	Fruits	Fruits are eaten raw
53.	<i>Citrus medica</i> L.	Gargle	Rutaceae	Tree	Fruits	Pickle
54.	<i>Xanthoxylum alatum</i> Roxb.	Timber	Rutaceae	Shrub	Leaves Fruits	Chutney
55.	<i>Bergenia ciliata</i> Haw. Sternb.	Bat mevo	Saxifragaceae	Herb	Rhizomes	Tea is prepared from rhizome
56.	<i>Taxus baccata</i> L.	Barmi	Taxaceae	Tree	Bark	Tea
57.	<i>Viola odorata</i> L.	Banafsha	Violaceae	Herb	Flowers	Flower are eaten
58.	<i>Vitis jacquemontii</i> Parker	Dakh	Vitaceae	Climber	Fruits	Fruits are eaten

## CONCLUSION

The present study concluded that rural population exploits 58 plant species as wild edible. It is found that those people who graze cattle in forests have more knowledge about the wild plants whose fruits and other plant parts which are eaten raw but women who remain at home were found to have more knowledge about wild vegetables. It is also found that the traditional knowledge is degrading slowly generation after generation as young people who have left their traditional work and started pursuing education have limited traditional knowledge about wild plants. So this valuable knowledge needs to be documented so that it can be preserved for future generations otherwise it will be lost forever.



## REFERENCES

1. Agrahar-Murugkar, D. and Subbulakshmi, G. (2005). Nutritive values of wild edibles and species consumed by Khasi tribes of India. *Eco. Food, Nutr.*, 44:207-233.
2. Bhatia, H., Sharma, Y.P., Manhas, R.K. and Kumar, K. (2018). Traditionally used wild edible plants of district Udhampur, J&k, India. *Jour. of ethnobiology and ethnomedicine*, 1-13.
3. Dangwal, L.R., Singh, T. and Singh, A. (2014). Exploitation of wild edible plants used by Gujjar and Bakerwal tribes of district Rajouri(J&K), India; *Jour. Of Applied and Natural Sci.*, 6(1): 164-169.
4. Food and Agricultural organization of united nations. FAO (2004). The state of food insecurity in the world. Monitoring the progress towards the world food summit 2<sup>nd</sup> millennium developmental goals. Ann. Rep. Rome.
5. Javier, T., Manuel, P. and Ramo, M.(2006). Ethnobotanical review of wild edible plants in Spain. . *Botanical J. of Linnean Soc.*, 152(1): 27-71.
6. Khan, M., Kumar, S., Hamal, I.A. and Koul, S. (2009). Wild edible plants of Sewa catchment area in north west Himalaya. *Jour. of plant Dev. Sciences*, 1(1&2):1-7.
7. Kumar, S. and Hamal, I.A. (2009). Wild edibles of Kishtwar high altitude National Park in northwest Himalaya, Jammu & Kashmir (India); *Ethnobotanical Leaflet*, 13: 195-202.
8. Pastor, A. and Gustavo, F.S. (2007). Edible wild plants of the Chorote Indians, Gran Chaco Argentina. *Botanical J. of Linnean Soc.*, 153: 73-85.
9. Rakesh, K.M., Kottapalli, S.R. and Krishna, G.S. (2004). Bioprospecting of wild edibles for rural development in the central Himalayan mountains of India. *Mountain Res. Dev.*, 24(2): 110-113.
10. Rashid, A., Anand, V.K. and Serwar, J. (2008). Less known wild edible plants used by the Gujjar Tribe of District Rajouri, Jammu & Kashmir State, India; *Int. J. Bot.*, 4 (2):219- 224.
11. Saka, J.D.K., Msonthi, J.D. and Sambo, E.Y. (1992). Dry matter, acidity and ascorbic acid contents of edible wild fruits growing in Malawi. *J. of Trop. Sci.*, 32(3):217-221.
12. Sharma, B.M., and Kachroo, P. (1981-82). *Flora of Jammu and Plants of Neighbourhood vols. I- II.* Bishen Singh Mahendera Pal Singh, Dehra Dun, India.
13. Singh, J.B., and Kachroo, P. (1994). *Forest Flora of Pir Panjal Range (North Western Himalaya).* Bishen Singh Mahendera Pal Singh, Dehradun, India.
14. Singh, N.P., Singh, D.K., and Uniyal, B.P. (2002). *Flora of Jammu and Kashmir.* Botanical Survey of India, Calcutta.
15. Srivastava, T.N. (1988). Wild edible plants of Jammu and Kashmir state-An ethnobotanical study. *Ancient Science of life.* 7(3&4): 501-206.
16. Sundriyal, M. and Sundriyal, R.C. (2004). Dietary use of wild plant resources in Sikkim Himalaya, India. *Econ. Bot.*, 58(04): 626-638.
17. Thakur, A., Singh, S. and Puri, S. (2020). Exploration of wild edible plants used as food by Gaddis-A tribal community of the western Himalaya. *The Scientific world journal*, Vol. 2020: 1-6.