



TRADITIONAL AND UNDERUTILIZED VEGETABLES OF WESTERN HIMALAYAN REGION OF INDIA

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ABSTRACT

The present investigation conducted in the temperate region of Kashmir valley revealed important underutilized vegetables consumed by the sample population and more common by the tribal communities of the surveyed region. These communities were found expert collectors of these herbs and use them for common culinary and ethnic medicinal purposes. Underutilized species hold a great genetic diversity and a vast heritage of indigenous knowledge. The new emphasis given to indigenous knowledge is creating new favourable conditions for the enhancement of these species largely maintained today by local communities. Due to the modernization the common people are forgetting these traditional foods and because of the floral and genetic erosion due to various natural causes and human interference many of these foods are near to the verge of extinction. Hence the present study was initiated to document the basics information of these lesser known food plants to plan future possibilities for popularizing these valuable herbs. These greens possess enough potential if utilized and explored up to their maximum potential through specific breeding and laboratory techniques to meet the present nutritional needs and secure the future demands.

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INTRODUCTION

The search for lesser known crops, many of which are potentially valuable as human foods is a long lasting continuous process and with tireless efforts man has successfully exposed nature to a greater extent for meeting the requirements of sustenance on the mother earth. India being blessed with varied climatic conditions provides habitat to a number of green foods, some of which are still underutilized and their knowledge is confined to some tribal and ethnic communities living in close conformity to the nature. These green unexposed foods are found to possess ample amount of vitamins and minerals (Sheela *et al.* 2004). They owe the potential to nourish the ever increasing human population. Many of these plant species are found resilient, adaptive and tolerant to adverse climatic conditions, although they can be raised at lower management costs even on poor marginal lands. They have remained underutilized due to lack of awareness and popularization techniques for utilization. Now-a-days underutilized foods are gaining importance as a means to increase per capita availability of foods.

Keeping in view the importance of this thrust area of underutilized foods; the present investigation was conducted with the objective of exploring the lesser known underutilized vegetables consumed by the rural communities of Kupwara district of Jammu and Kashmir state. The ethno-medicinal value of many plant species has been reported from the area by many workers (Bhattarya A, 1991; Sharma and Jamwal, 1988.), but the culinary use has not been reported in the literature.

MATERIAL AND METHODS

Kupwara district of Kashmir valley is spread an area of 2379 square kilometers including 1651 sq. km. of forest area, wrapped by the Pirpanchal and Shanbari mountain ranges accompanied by snow clad peaks and dense verdant forests (kupwara.nic.in). The survey on the identification and utilization of underexplored vegetables was conducted in selected blocks of the district Kupwara. The district Kupwara possesses twelve blocks and three villages from six purposively selected blocks were identified for the study. Minimum twenty respondents were selected randomly from each village. Simple questionnaire

schedule was developed to elicit the information regarding the various aspects of underutilized greens used in the culinary purpose by these rural people. These sample vegetables were identified on the basis of their local names from Kaul, M. K. (1997) and further identification was done by the expert taxonomist.

The present investigation pertaining to the underutilized or unexplored vegetables used by the sample population in their culinary use in the surveyed frontier district of temperate valley revealed that the area is rich in plant diversity and a number of lesser known vegetables were found growing and utilized by the inhabitants of the villages particularly the hill dwellers and some tribal communities of the Lolab and chowkibal valleys of the district.

RESULTS AND DISCUSSION



Photographic Depiction of Underutilized Vegetables;

a; *Rumex acetosa*, b; *Plantago major* /*Plantago lanceolata*, c; *Origanum vulgare*, d; *Mentha arvensis*, e; *Cinchorium itybus*, f; *Mentha longifolia*, g; *Amaranthus caudatus*, h; *Taraxacum officinalis*, i; *Portulaca oleraceae*, j; *Stellaria medica*, k; *Malva neglecta*, l; *Amaranthus* spp.

The details of these underutilized vegetables collected during the study are being presented in Table-1. Underutilized vegetables are now emerging as important

of lesser known vegetables which may in future provide enough potential as nutritious green foods for the ever increasing population of our country.

Table 1 Summarized details of the underutilized vegetables

S. No.	Local name	Botanical name	Family	Edible plant part
01.	Abej	<i>Rumex acetosa</i> L.	<i>Polygonaceae</i>	Leaves, apical shoots
02.	Batt gull/ Gul	<i>Plantago major</i> L. <i>Plantago lanceolata</i> L.	<i>Plantaginaceae</i>	Whole plant in tender stage and later only leaves
03.	Baber	<i>Origanum vulgare</i>	<i>Laminaceae</i>	Leaves at all stages, dried seeds as spice
04.	Fuddneh	<i>Mentha arvensis</i>	<i>Laminaceae</i>	Leaves in chutney and with other vegetables, dried leaf powder
05.	Handiposh/ Sazehand	<i>Cinchorium itiybus</i> L.	<i>Asteraceae</i>	Whole tender plant with immature flowers
06.	Jangli fudneh	<i>Mentha longifolia</i>	<i>Laminaceae</i>	Leaves
07.	Lesseh	<i>Amaranthus caudatus</i> L.	<i>Amaranthaceae</i>	Whole tender herb, dried for offseason
08.	Madaan handh	<i>Taraxacum officinalis</i> W.	<i>Asteraceae</i>	Whole green plant, dried for use in winter
09.	Nunner	<i>Portulaca oleraceae</i>	<i>Portulacaceae</i>	Whole tender plant, dried for offseason use
10.	Nickhakh	<i>Stellaria medica</i>	<i>Caryophyllaceae</i>	Whole plant at tender stage
11.	Sustchsal	<i>Malva neglecta</i> L.	<i>Malvaceae</i>	Leaves of all growing stages in fresh and dried form
	Sazaposh	<i>Athaea rosa</i>	<i>Malvaceae</i>	Whole plant in tender stage
13	Wasthakh	<i>Amaranthus spp.</i>	<i>Amaranthaceae</i>	.Tender leaves in early growth

bio-resources to combat malnutrition and hidden hunger. The present investigation explored some important plant species belonging to different families used by the inhabitants of the district in culinary purpose. Apart from fresh use, the people of the area collect these herbs and dry them for use in the off season when there is non-availability of vegetables due to severe and snowy winter. The poverty and less accessibility in the district has made the inhabitants more or less dependent upon the natural resources, particularly the rich forest cover for various domestic needs, (Bhat *et al.* 2010.). These plant species were found growing on the meadows, near and inside forest areas and in the cultivated fields and kitchen gardens in abundance except a few species which were scarcely spread. Gupta *et al.* (2003) reported that underutilized green leafy vegetables were good source of many nutrients like iron, calcium, ascorbic acid carotene that could help in overcoming malnutrition at a negligible cost. A similar trend in nutrient composition of underutilized greens has been reported by Raghuvanshi *et al.* 2004. Some anti-nutrient factors of underutilized vegetables have been reported by Sheetal *et al.* 2005.

Documentation and information plays a crucial role in the enhancement of the use of underutilized crops. The most immediate step in the field of documentation is to take stock of available information on current activities and produce information and publications that provide guidance, options, techniques and approaches for national programmes and other partners whose awareness of the importance of these species has been raised (Padulosi, S. 1999). The present study explores some important aspects

The present study aims at providing a basic platform for selecting promising plant species in future, their composition aspects and multiyear studies to evolve species having enough potential as a vegetable crop. The cultivation of these underexplored vegetables could be taken up to augment total food supply of the country.

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