

ETHNOBOTANICAL DOCUMENTATION OF SOME VEGETABLE PLANTS IN THE VILLAGES OF GUNA DISTRICT, MADHYA PRADESH, INDIA

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ABSTRACT

The paper deals about some vegetable species used by tribal communities of Guna district of Madhya Pradesh. A record of two vegetables belonging to family Solanaceae, used by fourteen villages of Guna district, M. P., India are given. Characteristic features of vegetable varieties are also mentioned.

KEYWORDS: Ethnobotanical, vegetable plants, tribes, traditional knowledge, Guna

The main aim of the present study is to collect information on vegetable species used traditionally by tribal communities of District Guna, Madhya Pradesh. Plants have been used in traditional medicine for several thousand years. The use of plants as medicines by the local people have been well documented as early as 1935 by Burkill. Theophrastus (370-285 BC) began the scientific classification of plants, and Dioscorides De Materia Medica (77 AD) reported the uses, medicinal and otherwise, of over 600 plants. Ibn al-Baitar (1197-1248) listed over 1400 drugs and medicinal plants in his Corpus of Simples. In India, it is reported that traditional healers use 2500 plant species and 100 species of plants serve as regular sources of medicine. Many of the methods for treating injuries and diseases have been passed down through families for generation and some of these have been adopted for use by the medicinal profession.

In many parts of the Madhya Pradesh especially in the Guna District there is a rich tradition in the use of vegetables as an herbal medicine for the treatment of many diseases. India has had a rich, vibrant and diverse cultural history. An important component of this culture and tradition is that of health and healing. Thus there is a large health and healing related knowledge base present in all ethnic communities across the diverse ecosystems. However, over the last few centuries, this knowledge base has been diluted with increased influences from the mainstream culture, which is derisive of local health

traditions. It is important to urgently put in place effective documentation and assessment programs to revitalize local health traditions otherwise this great people's health culture will be irretrievably lost. A review of literature reveals that though much work has been done on ethnomedicinal plants in India (Agrawal et al., 2007; Sikarwar and Maheshwari 1992; Kadel and Jain 2006; Jain and Vairale 2007; Jain et al., 2010) still there are some interior areas which need to be surveyed intensively like Guna district for searching new traditional medicines.

An ethnobotanical study was undertaken to collect information proposed to be useful for research on medicinal plants of the Guna district of Madhya Pradesh. The state of Madhya Pradesh comprises of a large population of tribal communities belonging to various ethnic groups. These forest dwellers live in forests and possess a vast knowledge on various aspects of plants. Guna, an administrative district of Madhya Pradesh is the gateway of Malwa and Chambal and is situated in Gwalior division of northern part of Madhya Pradesh, situated between 24° 19' N latitude and 77° 15' E longitudes, at a height of about 476m above msl (Jain et al., 2010). Bheel and Sahariya are the major tribal communities of the district of which Bheel tribes comprise larger population. In Gwalior and Chambal divisions, ethnobotanical studies are concentrated on Bheel, Sahariya and Gond tribes (Anis and Iqbal, 2000; Kaushik and Singh, 1996; Sikarwar, 1997) as well as ethnobotanical studies are continuing in several parts of the state (Bhalla et al., 1996;

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Srivastava et al., 1999).

METHODOLOGY

Several field trips were organized between January 2011 to December 2011 in the tribal inhabited localities and different varieties of four vegetables of Solanaeaceae family viz. potato (*Solanum tuberosum* L.), tomato (*Lycopersicon esculentum* Mill.), chilli (*Capsicum annum* L.) and Brinjal (*Solanum melengena* L) were collected from the local market i. e. “Haat” of Guna district and the information about the morphological characters (Shape, size, colour, weight etc) of the vegetable varieties were collected. The collected vegetable specimens have been identified by the Central Potato Research Station, Gwalior; Dept. of Horticulture, Guna and Gwalior and Krishi Vigyan Kendra, Gwalior. Information on varieties of vegetable is also given. Information about sowing time, maturity period, plant height (in feet), length of fruit, colour of fruit, shape of fruit and weight has been enumerated.

RESULTS

In this study, we focused mainly on vegetable species reported by the local people in and around the study area for their medicinal uses. In the present investigation four vegetable plants were collected and were identified their species (Table 1). Out of these four vegetables potato was selected to collect the information about sowing time, maturity period, plant height (in feet), length of fruit, colour

of fruit, shape of fruit and weight (Table 2). Besides these sites of Germplasm collection were also given in table 3.

DISCUSSION

India with its great topographic and climatic diversity has a very rich and diverse flora and fauna. Biodiversity is the most important wealth of our planet and form the foundation upon which the human civilization is built. All socio-cultural, economic and other activities of mankind are directly or indirectly associated with various environmental resources. Unfortunately many vegetable variety rich regions on this planet are passing through a very crucial stage. Thousands of vegetable species varieties now have presence in books only, not in nature. Loss of even a single vegetable species means depletion from the biological gene bank. Vegetable occupy an important place in diversification of agriculture and have played a pivoted role in the food and nutritional security of growing population of our country. Vegetables are becoming important as cash and for urban and export markets. Looking at the national scenario, vegetables have tremendous strength in term of natural resources and genetic resources. The vast diversity of land, soil and agro climatic conditions prevalent in India also offers a unique competitiveness to wide range of vegetables. During the last four decades, India has made commendable progress in vegetable production, securing the position of second largest producer of vegetables in world next only to China.

Table 1: List of selected Vegetables and their varieties

Sl. No.	Name of Vegetable	Variety Name	Sl. No.	Name of Vegetable	Variety Name
01.	Brinjal	Pusa Kranti	03.	Potato	Kufri Bahar
		Pusa Purple Long			Kufri Chandramukhi
		Pusa Uttam			Kufri Jyoti
		Pusa Sanjog			S – 1
		F1 Hybrid 143			Kufri Lauvkar
		F1 Hybrid 227			Kufri Chipsona – 1
		BSS 472			Kufri Sinduri
02.	Chilli	Pusa Jwala	04.	Tomato	Pusa Rubi
		BSS Shikha			Panjab Chhuhara
		Pusa Sadabahar			Pusa Early Dwarf
		BSS – 213			BSS 275
		BSS – 450			BSS 419
		G – 3			BSS Kaveri

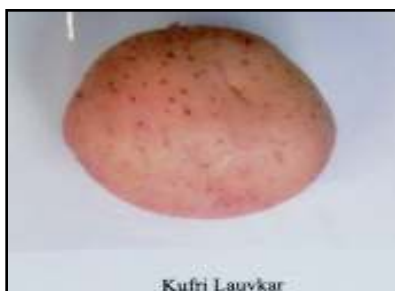
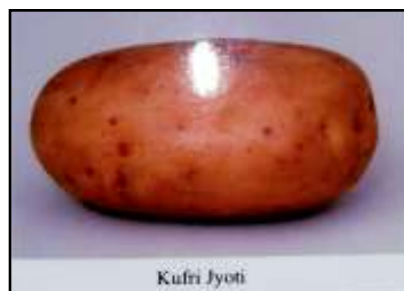
Table 2: Potato varieties found in Guna district and their characteristic features

S. N.	Variety of Potato	Characteristic features of Potato variety							
		Plant Height (Feet)	Maturity Period (in Days)	Fruit Length	Fruit Colour	Fruit Shape	Weight (Grams)	Eyes	Sowing Time
01	Kufri Bahar	2 – 2.5	90 - 100	Large	White	Round - Oval	100 - 250	Flat	Sep – Oct
02	Kufri Chandramukhi	2 – 2.5	80 – 90	Medium	White	Oval	150 - 200	Shallow	Sep – Dec
03	Kufri Jyoti	2 – 2.5	80 – 90	Medium	White	Oval	200 - 250	Shallow	Sep – Dec
04	S – 1	2.5 – 3	85 – 90	Medium	White	Oval	150 - 200	Shallow	Sep – Dec
05	Kufri Lauvkar	1.5 – 2	75 – 80	Large to Medium	White	Round	100 – 250	Flat	Sep – Oct
06	Kufri Chipsona – 1	1.5 – 2	95 – 100	Medium	White	Oblong	100 – 250	Flat	Sep – Oct
07	Kufri Sinduri	1.5 – 2	100 – 110	Medium	Reddish	Round	90 - 150	Medium Deep	Aug – Sep

Table 3: Sites / Villages of Potato Germplasm collection and distance from Guna district

S. N.	Site / Village Name	Distance from Guna	S. N.	Site / Village Name	Distance from Guna
01.	Bajranggarh	6 Km.	02.	Barkhera Haat	10 Km.
03.	Chhipon	8 Km.	04.	Haripur	6 Km.
05.	Malpur	3 Km.	06.	Jaganpur	2 Km.
07.	Vinaykheri	4 Km.	08.	Khejra	5 Km.
09.	Gehun Kheda	11 Km.	10.	Sakatpura	8 Km.
11.	Gader	6 Km.	12.	Kusmoda	4 Km.
13.	Patai	12 Km.	14.	Ruthiyai	17 Km.

Figures of Different Species of Potato



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