Medicinally Important Underground Fruit and Leafy Vegetables of Frontier Regions of Bannu, Khyber Pakhtunkhwa, Pakistan

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Abstract:
The survey was carried out randomly to get information and documentation of underground, fruit and leafy vegetables of selected areas of Frontier Regions of Bannu, during 2013. A total of 26 plants belonging to 11 families were collected which are used as vegetables in the Frontier regions of District Bannu and some grow in wild habitats and majority are cultivated. These 26 vegetable plants species are widely used for the treatment of a variety of diseases by the local communities. The documentation contains Botanical names of plants, family names local names, parts used and medicinal uses. These plants belong to the following families, Cucurbitaceae (5 spp),
Saad Ullah Khan, Rehman Ullah Khan, Sultan Mehmood, Sikandar Khan Sherwani, Asim Muhammad, Tasveer Zahra Bokhari, Aziz Khan, Ihsan Ullah – Medicinally Important Underground Fruit and Leafy Vegetables of Frontier Regions of Bannu, Khyber Pakhtunkhwa, Pakistan

Solonaceae (5 spp), Chenopodiaceae (4 spp), Brassicaceae (3 spp), Alliaceae (2 spp), Fabaceae (2 spp), Malvaceae (1 spp), Amaranthaceae (1 sp), Apiaceae (1 spp), Convolvolaceae (1 sp) & Zingiberaceae (1 sp). Vegetables are a rich source of vitamins and micronutrients and they are used to improve immune system and are a cheap source of antibacterial, antifungal, anti-inflammatory, anti-diabetic, anti/protozoal and anti-dysenteric agents and are used to treat various infectious disease.

Key Words: medicinal vegetables, FR- Bannu

Introduction

Pakistan is rich in medicinal plants and it includes almost 6000 flowering plants which have great medicinal importance. In Pakistan 200 different plant species are used to treat a variety of skin disorders, diarrhea and dysentery, gastrointestinal diseases, urinary diseases and kidney diseases (Hayat et al. 2008). A lot of plants are used by local people for the prevention of gastric or digestive disorders (Sidhu et al. 2007). Vegetables have good health effects it improve immune system (Ather and Nasir 2005).

Nowadays people use vegetable plants but only few communities cultivate them, while most of the plants are present in the wild habitats and human vegetable consumption is based on a rather very limited number of crops (Bussmann and Sharon 2006, Kunwar et al. 2006, Cavender 2006, Pieroni et al. 2007). Vegetables constitute an important part of daily diet (Pandey 2008). The indigenous knowledge about the medicinal plants is gathered by many local people from various regions of Pakistan (Tareen et al. 2002; Durrani et al. 2003; Durrani and Manzoor 2006; Manzoor et al. 2013).

Materials and Methods

A number of field trips were arranged to the different villages in the Frontier Regions of district Bannu Khyber Pakhtunkhwa, like Painda Khel, Sada Khel, Amal Khel, Tarkhuba, Azim killa, Marghali, Musa Khel, Waligai, Bezan Khel and Saifaal Khel etc. during the year 2013 in order to categorize those underground, fruit and leafy vegetable plant species which are mainly used for the treatment of various
disorders. The information was together by using questionnaires and interviews with traditional plant users. The plant specimens were recognized with the help of flora of Pakistan by using the Nomenclature of Nasir and Ali (2005) and voucher specimens are deposited in the Department of Botany, University of Science and Technology, Bannu Khyber Pakhtoonkhwa, Pakistan.

**Results and Discussion**


*Abelmoschus esculentus* (L.) Moench unripe fruit is used to treat asthma, cough and bronchitis, *Allium cepa* L and *Allium sativum* L are useful in cardiovascular problems, blood pressure and diabetes, *Amaranthus viridis* L is important to treat stomach problems, *Beta vulgaris* L is used in inflammation, earache and stomach problems, *Phaseolus vulgaris* L is used to degrade body fat, *Praecitrullus fistulosus* (Stocks) Pang used in gastric problems. *Zingiber officinale* Rosc rhizome is used to get relief from stomach problems etc.

**Enumeration of Plants**

No.(1) Plant Name: *Abelmoschus esculentus* (L.) Moench
Family: Malvaceae
English Name: Lady’s Finger
Local Name: Bhindhi
Position: Fruit vegetable
Parts Used: Unripe fruit
Medicinal Uses: Fruit is used to treat throat, cough and bronchitis infections.

No.(2) Plant Name: \textit{Allium cepa} L
Family: Alliaceae
English Name: Onion
Local Name: Pyozh
Position: Underground vegetable
Parts Used: Fleshy leaves and green leaves
Medicinal Uses: Leaves are a rich source of vitamin-C and they are used to treat cardiovascular diseases and diabetes.

No.(3) Plant Name: \textit{Allium sativum} L.
Family: Alliaceae
English Name: Garlic
Local Name: Yeza
Position: Underground Vegetable
Part Used: Fleshy leaves and green leaves
Medicinal Uses: Plant parts are used to treat cardiovascular diseases, Blood pressure, Headache, Diabetes and tumors.

No.(4) Plant Name: \textit{Amaranthus viridis}.L.
Family: Amaranthaceae
English Name: Wild Amaranth
Local Name:Ranzakaa
Position: Leafy vegetable
Parts Used: Leaves
Medicinal Uses: It is used to treat constipation, also used for stomach problems.

No.(5) Plant Name: \textit{Beta vulgaris} L.
Family: Chenopodiaceae
English Name: Beet
Local Name: Chakandar
Position: Under Ground Vegetable
Parts Used: Roots and Leaves
Medicinal Uses: Plant parts are used to treat constipation, inflammation, earache and Ulcers.
No.(6) Plant Name: *Brassica oleraceae* Crucifera var. Capitata
Family: Brassicaceae
English Name: Cabbage
Local Name: Band Ghobai
Position: Fruit Vegetable
Parts Used: Leaves
Medicinal Uses: Plant parts are used to treat kidney problems

No.(7) Plant Name: *Brassica oleraceae* var. botrytis
Family: Brassicaceae
English Name: Cauliflower
Local Name: Phol ghobhi
Position: Herbage Vegetable
Parts Used: Inflorescence
Medicinal Uses: The plant parts are used as chemoprotective and antidiabetic.

No. (8) Plant Name: *Capsicum annuum* L.
Family: Solanaceae
English Name: Pepper
Local Name: Mirch
Position: Fruit vegetable
Parts Used: Fruits, seeds
Medicinal Uses: They are a rich source of vitamin C and are stimulant and carminative.

NO.(9) Plant Name: *Cicer arietinum* L.
Family: Fabaceae
English Name: Chickpea
Local Name: Channa
Position: Fruit vegetable
Parts Used: Fruit and seeds
Medicinal Uses: They are used for cardiovascular, anti ulcer and heart diseases.

No.(10) Plant Name: *Chenopodium album* L.
Family: Chenopodiaceae
English Name: White Goose foot
Local Name: Speen sumai
Position: Leafy vegetable
Parts Used: Leaves
Medicinal Uses: The leaves are diuretic, sedative and laxative.
NO.(11) Plant Name: Chenopodium murale L.
Family: Chenopodiaceae
English Name: Nettle leaved Goose foot
Local Name: Surmai
Position: Leafy Vegetable
Parts Used: Leaves
Medicinal Uses: The leaves are diuretic, sedative and laxative

No.(12) Plant Name: Cucumis sativus L.
Family: Cucurbitaceae
English Name: Cucumber
Local Name: Badrang
Position: Fruit Vegetable
Parts Used: Fruit
Medicinal Uses: Used as salad and anti-inflammatory agent.

No.(13) Plant Name: Cucurbita pepo L.
Family: Cucurbitaceae
English Name: Pumpkin
Local Name: Kado
Position: Fruit Vegetable
Parts Used: Fruit
Medicinal Uses: Used in the treatment of obesity, irritable bladder in children and gastric problems

No.(14) Plant Name: Daucus carota L.
Family: Apiaceae
English Name: Carrot
Local Name: Gagar
Position: Underground Vegetables
Parts Used: Root
Medicinal Uses: roots are used to improve eye sight, Prevent cancer, antioxidant and blood purification.

No.(15) Plant Name: Ipomoea batatas (L.) Lam.
Family: Convolvulaceae
English Name: Sweet potato
Local Name: Khwash alo
Position: Root vegetable
Parts Used: Root
Medicinal Uses: Used to treat allergies, cardiovascular problems, cancer, HIV and ageing

No.(16) Plant Name: *Luffa acutangula* (L.) Roxb.
Family: Cucurbitaceae
English Name: Angular loofah
Local Name: Tori
Position: Fruit vegetable
Parts Used: Fruit
Medicinal Uses: It is used to treat diabetes, Ulcers, laxative and expectorant.

No.(17) Plant Name: *Lycopersicum esculentum* Mill.
Family: Solanaceae
English Name: Tomato
Local Name: Tamator
Position: Fruit Vegetable
Parts Used: Fruit
Medicinal Uses: To treat illness, improve growth, maintaining blood and used in inflammation

No.(18) Plant Name: *Momordica charantia* L.
Family: Cucurbitaceae
English Name: Bitter gourd
Local Name: Kareela
Position: Fruit Vegetable
Parts Used: Fruit
Medicinal Uses: Used in Diabetes, Treat cough, bronchitis, antioxidant and ulcers

No.(19) Plant Name: *Phaseolus vulgaris* L.
Family: Fabaceae
English Name: Kidney Bean
Local Name: Lobia
Position: Fruit vegetables
Parts Used: Fruit
Medicinal Uses: Decrease glucose level and decrease body fat.

No.(20) Plant Name: *Praecitrullus fistulosus* (Stocks) Pang.
Family: Cucurbitaceae
English Name: Round melon
Local Name: Tinda
Position: Above Ground vegetable
Parts Used: Unripe fruit
Medicinal Uses: It has anthelmintic and antioxidant activities sometimes used for gastric problems

No.(21) Plant Name: *Raphanus sativus* L.  
Family: Brassicaceae  
English Name: Radish  
Local Name: Mooli  
Position: Underground Vegetable  
Parts Used: Root  
Medicinal Uses: Rich source of vitamin C used to treat Juidance and earache.

No.(22) Plant Name: *Solanum nigrum* L.  
Family: Solonaceae  
English Name: Black nightshade  
Local Name:  
Position: Fruit vegetable  
Parts Used: Fruit  
Medicinal Uses: It is used against stomachache, fever and dysentery complaints.

No.(23) Plant Name: *Spinasia oleracea* L.  
Family: Chenopodiaceae  
English Name: Spinach  
Local Name: Sobah  
Position: leafy vegetable  
Parts Used: Leaves  
Medicinal Uses: To treat cardiovascular diseases, rich in vitamin A, Anemia and Antioxidant.

No.(24) Plant Name: *Solanum tuberosum* L.  
Family: Solanaceae  
English Name: Potato  
Local Name: Aleg  
Position: Underground vegetable  
Parts Used: Stem and tubers  
Medicinal Uses: It is a rich source of carbohydrates and is used in cough and flue.
No.(25) Plant Name: *Solanum melongena* L.  
Family: Solanaceae  
English Name: Egg Plant  
Local Name: Bengarah  
Position: Fruit Vegetable  
Parts Used: Fruit  
Medicinal Uses: It is a rich source of iodine and used to treat diabetes, Asthma and reduce cholesterol level.

No.(26) Plant Name: *Zingiber officinale* Rosc.  
Family: Zingiberaceae  
English Name: Ginger  
Local Name: adarak  
Position: Fruit Vegetable  
Parts Used: Fruit  
Medicinal Uses: It is used for gastrointestinal problems.

Table 1. Species Distribution in Various Families

<table>
<thead>
<tr>
<th>Name of family</th>
<th>No. of Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cucurbitaceae</td>
<td>05</td>
</tr>
<tr>
<td>Solonaceae</td>
<td>05</td>
</tr>
<tr>
<td>Chenopodiaceae</td>
<td>04</td>
</tr>
<tr>
<td>Brassicaceae</td>
<td>03</td>
</tr>
<tr>
<td>Fabaceae</td>
<td>02</td>
</tr>
<tr>
<td>Alliaceae</td>
<td>02</td>
</tr>
<tr>
<td>Malvaceae</td>
<td>01</td>
</tr>
<tr>
<td>Amaranthaceae</td>
<td>01</td>
</tr>
<tr>
<td>Apiaceae</td>
<td>01</td>
</tr>
<tr>
<td>Convolvolaceae</td>
<td>01</td>
</tr>
<tr>
<td>Zingeiberaceae</td>
<td>01</td>
</tr>
<tr>
<td><strong>Total No. 11</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total No. 26</strong></td>
<td></td>
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</tbody>
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Fig: 1 Graphic representation of Species Distribution in Various Families
BIBLIOGRAPHY:


