

STUDY OF MEDICINAL PLANTS AMONG WEEDS OF WHEAT AND MAIZE IN PESHAWAR REGION

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ABSTRACT

*Wheat and maize are two major crops of Pakistan facing problems by a lot of weeds infestation. A study was conducted to know the medicinal value of these weeds. A total of 19 weeds of different families were found in maize and wheat fields of Peshawar Region. Most of the weeds were found highly effective against many of the diseases like catchweed bedstraw (*Galium aparine*) is used against skin diseases such as seborrhea, flavonoids and tannins. Puncture vine (*Tribulus terrestris*) is used as sex stimulant. *Cichorium intybus* is excellent tonic for liver and digestive tract. *Convolvulus arvensis* is useful against joints pain. Besides the medicinal importance most of the weeds are used as pot herbs and green fodders.*

Key words: Medicinal plants, wheat, maize, pot herbs, weeds, ethnobotany.

INTRODUCTION

In developing countries like Pakistan, agriculture and forests plays an important role for its economy. Majority of the population of Pakistan is living in the rural areas and their dependence is mainly on agricultural products. The concept of weeds as unwanted plants was born when man started to deliberately grow plants for food. Agricultural researchers have found that weeds cause 17-25% losses in wheat annually (Shad, 1987). In maize and rice the losses on annual basis were amounted to more than 6.3 and 4.9 billions at national and 3.2 and 1.2 billions at provincial (NWFP) level, respectively (Hassan and Marwat, 2001)

On one place where weeds cause so many losses, they also have many beneficial uses in our daily life. The most important positive aspect of the weeds is that nearly all of them are known to possess therapeutic properties and are used by the native people for cure of a variety of human and cattle diseases. (Ibrar *et al*, 2003)

The following species were commonly found in selected areas

1. ***Achyranthus aspera*** Linn.

Family : Amaranthaceae

Vern. Names : Puthkanda (Urdu), Gishkay, Spaoboty (Pushto), Prickly

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caff-flower (English), charchuta (Punjabi)
 Locality : Maize field
 Part Used : Whole herb, leaves, seeds and root
 Medicinal value : Plant is purgative, diuretic, used in dropsy, piles, boils, colic and skin eruption. Root infusion is astringent. Seed is emetic and used in hydrophobia (Khan, 2004).
 Local Uses : Decoction of plant is used for skin diseases.

2. ***Amaranthus hybridus* L.**

Syn : *Amaranthus chlorostachys* Willd.
 Family : Amaranthaceae
 Vern. Names : Karund (Urdu), Mariro (Sindhi), Chalwaiy (Pushto), Trailing Amaranth (English).
 Locality : Maize field
 Part Used : Leaves.
 Medicinal value : Leaves used as vegetable. The leaves are emollient. Used as antidote for snake and scorpion bite (Chopra, 1958; Shinwari et al., 2003).
 Local Uses : Used as Vegetable

3. ***Amaranthus viridis* Tim.**

Family : Amaranthaceae
 Vern. Names : Karund (Urdu), Mariro (Sindhi), Chalwaiy (Pushto), Trailing Amaranth (English).
 Locality : Maize field
 Medicinal Value : Leaves are emollient and used in scorpion sting and snake bites. Laves are also used as pot herb (Khan, 2004).
 Local Uses : Used as vegetable.

4. ***Convolvulus arvensis* L.**

Family : Convolvulaceae
 Vern. Names : Hiran Khari (Urdu), Prawatai (Pushto), Field bind weed (English)
 Locality : Maize and Wheat
 Part used : Vegetative parts
 Medicinal value : Roots are purgative and possess blood coagulating properties due to presence of vitamin K like substances (Khan, 2004).
 Local Uses : Used as animal feed.

5. ***Carthamus oxycantha* M.B.**

Family : Asteraceae
 Vern. Names : Pohli or Kandiyari (Urdu), Kunzalay (Pushto), wooly distaff thistle (English.)
 Locality : Wheat field
 Part Used : Flowers and seeds
 Medicinal value : Flowers laxative, diaphoretic, useful in fevers, measles, eruptive skin diseases, Seeds eaten by children (Ibrar et al., 2003).
 Local Uses : Used for fever, skin and abdominal diseases.

6. ***Cynodon dactylon* (L.) Pers.**

Syn	:	<i>Panicum dactylon</i> L., <i>Digitaria dactylon</i> (L.) Scop.
Family	:	Poaceae
Vern. Names	:	Kabal (Pushto.), Khabal or Talla (Urdu), Bermuda grass (English)
Locality	:	Wheat and Maize
Part Used	:	Whole plant
Medicinal value	:	Plant juice is astringent, diuretic, used in dropsy, hysteria, epilepsy, insanity, diarrhea and dysentery. Crushed roots with cured in chronic gleans. Root decoction is diuretic useful in syphilis. Root infusion used for stopping bleeding of piles (Khan, 2004).
Local Uses	:	Used as animal feed.

7. ***Cyperus rotundus* L.**

Family	:	Cyperaceae
Vern. Names	:	Deela or motha (Urdu), Purple nutsedge (English)
Locality	:	Maize
Part Used	:	Whole plant, root
Medicinal value	:	Ant dysenteric (Chopra, 1958), anathematic, appetizer, treatment of thirst, fever, ulcers, sores, vomiting, eye inflammation, itching (Memon and Shahani, 1988).
Local uses	:	Used against fever and stomach diseases.

8. ***Datura alba* Nees.**

Syn	:	<i>Datura fastuosa</i> L.
Family	:	Solanaceae
Vern. Names	:	Dhatura, Mangaz (Pushto), Dhatura (Urdu)
Locality	:	Maize fields
Part used	:	Leaves, seeds, root
Medicinal value	:	Poisonous, but also a very useful medicinal plant. Leaves are smoked to relive asthma, applied externally on swollen limbs. Extract of leaf is helpful in toothache, headache, epilepsy, Parkinsonism, hemorrhoids, boils and sores. Juice of flower if used for ear-ache. The fruit juice is applied for curing dandruff and falling hairs (Ibrar <i>et al.</i> , 2003)
Local Uses	:	Leaves are smoked for asthma. Flowers with sugar are used for fever.

9. ***Euphorbia helioscopia* L.**

Family	:	Euphorbiaceae
Vern. Names	:	Mandaroo (Pushto), Zahar booti (Punjabi), Sun spurge, Cat's milk (English.)
Locality	:	Wheat field
Part used	:	Shoot, leaf, root, latex
Medicinal value	:	Plant is cathartic, root is anathematic and seeds with roasted pepper given in cholera. Oil from seeds is purgative. Milky juice applied to eruptions (Khan, 2004).
Local Uses	:	Used against skin diseases.

10. ***Fumaria indica* (Hausskn.) H.N. Pugsley in J.L.S.**

Syn	:	<i>Fumaria officinalis</i> Linn., <i>Fumaria parviflora</i> W. & A.
Family	:	Fumariaceae
Vern. Names	:	Papra (Pushto), Shahtra (Urdu), Fumitory (English)
Locality	:	Wheat field
Part used	:	Whole plant
Medicinal value	:	Plant is used as aperients, diaphoretic and diuretic (Khan, 2004).
Local Uses	:	No local uses found.

11. ***Melilotus indica* (Linn) Au.**

Syn	:	<i>Trifolium indicum</i> , <i>Melilotus parviflora</i>
Family	:	Fabaceae
Vern. Names	:	Senji (Urdu), Levanai (Pushto), India clover (English)
Locality	:	Wheat Fields
Part used	:	Whole plant, Seeds
Medicinal value	:	Plant is emollient, externally applied as poultice or plaster for swellings. Seeds are used in bowel complaints and infantile diarrhea (Khan, 2004).
Local Uses	:	Used against skin diseases.

12. ***Silybum marianum* Gaertn.**

Family	:	Asteraceae
English name	:	Milk thistle, holy thistle
Locality	:	Wheat field, Orchards
Part Used	:	Whole herb root, leaves, seeds and hull
Medicinal value	:	Seeds are lactagogue, used in jaundice. Root is useful against all melancholy diseases (Ibrar et al., 2003).
Local Uses	:	No local uses found.

13. ***Sorghum halepense* (L.) Pers.**

Syn	:	<i>Holcus halepensis</i> L.
Family	:	Poaceae
Vern. Names	:	Jangli jawar (Urdu), Gua (Sindhi.), Johonsongrass (English)
Locality	:	Maize field, orchards
Part used	:	Grain
Medicinal value	:	Feeding cattle, horse and poultry. Diuretic and demulcent if taken as a decoction. Leaves poisonous to cattle due to presence of hydrocyanic acid (Ibrar et al 2003).
Local uses	:	Used as animal feed.

14. ***Trianthema portulacastrum* L.**

Syn	:	<i>Trianthema obcordata</i> Roxb., <i>Trianthema monogyna</i> L.
Family	:	Aizoaceae
Vern. Names	:	Narma (Urdu), Bishkapra. Lunak (Punjabi), carpet weed, common purslane (English)
Locality	:	Maize and vegetable fields
Part Used	:	Whole plant
Medicinal value	:	Analgesic, purgative, stomachic, used for the treatment of anemia, bronchitis, piles, inflammation, liver troubles, asthma,

itch, chronic ulcer, night-blindness, diseases of blood and skin (Memon and Shahani, 1988)
 Local Uses : Used against asthma and skin diseases.

15. ***Tribulus terrestris*** Linn.

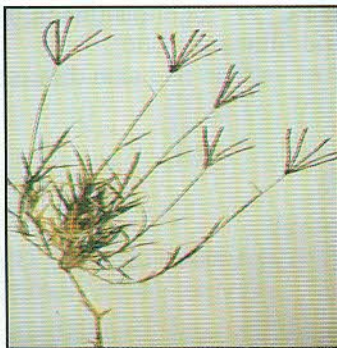
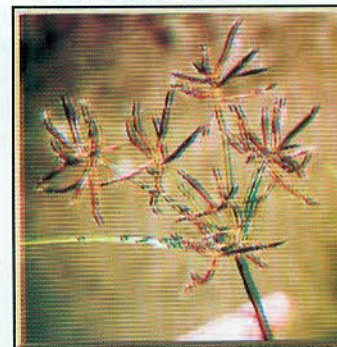
Family : Zygophyllaceae
 Vern. Names : Sarang (Pashto), Bakhra (Saraiki), Gokhru (Urdu), Small caltrops; puncture vine; devil's thorn (English)
 Locality : Maize
 Part Used : Whole plant
 Medicinal value : Fruits are aphrodisiac, tonic, diuretic, cooling, used in painful micturition, calculus affections, urinary discharges and impotence. In form of infusion used as diuretic in gout. Used in kidney disease and gravel (Khan, 2004).
 Local Uses : Used for urinary and sex diseases.

16. ***Galium aparine*** L

Family : Rubiaceae
 Names : Indian blanket, grip grass, catchweed bed straw (English)
 Locality : Wheat field
 Part Used : Whole plant except root
 Uses : Diuretic, tonic, alterative, aperient, also used in skin diseases and general eruptions.

Table-1. Weeds infesting maize and wheat fields having Medicinal value.

S.No	Name of Weed	Family	Name of Crop/Locality
1	<i>Achyranthus aspera</i> Linn.	Amaranthaceae	Maize Field
2	<i>Amaranthus hybridus</i> L.	Amaranthaceae	Maize Field
3	<i>A. viridis</i> Tim	Amaranthaceae	Maize Field
4	<i>Convolvulus arvensis</i> L.	Convolvulaceae	Maize and Wheat Fields
5	<i>Carthamus oxycantha</i> M.B.	Asteraceae	Wheat Field
6	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Wheat and Maize Fields
7	<i>Cyperus rotundus</i> L.	Cyperaceae	Maize Field
8	<i>Datura alba</i> Nees.	Solanaceae	Maize Field
9	<i>Euphorbia helioscopia</i> L.	Euphorbiaceae	Wheat Field
10	<i>Fumaria indica</i> (Hauskn)	Fumariaceae	Wheat Field
11	<i>Melilotus indicus</i> (Linn) Au	Fabaceae	Wheat Field
12	<i>Silybum marianum</i> Gaertn.	Asteraceae	Wheat Field
13	<i>Sorghum halepense</i> (L.) Pers.	Poaceae	Maize Field
14	<i>Trianthema portulacastrum</i> L.	Aizoaceae	Maize Field
15	<i>Tribulus terrestris</i> Linn	Zygophyllaceae	Maize Field

*Amaranthus hybridus* L.*Cynodon dactylon* (L.) Pers.*Amaranthus viridis* Tim*Achyranthus aspera* Linn.*Melilotus indicus* (Linn.)*Fumaria indica* (Hauskn)*Trianthema portulacastrum* L.*Euphorbia helioscopia* L.*Convolvulus arvensis* L.*Silybum marianum* Gaertn.*Tribulus terrestris* Linn.*Cyperus rotundus* L.

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