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ROLE OF CROP WEEDS IN TRADITIONAL MEDICINES IN BULDHANA DISTRICT (MAHARASHTRA)

P.S. PATIL, Y.A. AHIRRAO, Y.A. DUSING, U.P. AHER AND D.A.PATIL
P.G. DEPARTMENT OF BOTANY, S.S.V.P. SANSTHA’S
L.K. DR.P.R. GHOGREY SCIENCE COLLEGE, DHULE-424005 (M.S.)
dapatil_10aug@yahoo.com

ABSTRACT:
The present paper deals with the crop weeds used in traditional medicine in Buldhana district of Maharashtra. A field study carried out during 2006-2008 was aimed at documentation and analysis of traditional medicinal knowledge of farmer’s and farm laborers in the district. The interviews and personal observations revelled as many as 31 crop weed species useful in the treatment of about 72 human afflictions. The medicinal recipes are in the form of extract, decoction, infusion, powder, paste, oil, or sometimes used raw directly, apart from latex. The district has rich repository of medicinal plants. Obviously, it needs evaluation on modern scientific lines. It is hoped that the plant species used would yield new lead molecules on scientific scrutiny.

KEY WORDS: Traditional medicine, Buldhana district, Maharashtra.

INTRODUCTION:
A plant is designated as a weed, if man judged it to be not of use and undesirable at a place where it flourishes. Most weeds did not exist before agriculture. They evolved probably along with the crops. They utilize privileges of a cultivated plant. They are thought of negative value because of interference with the agricultural operations. Man has always endeavourer to find out bioresources in his ambience to his benefit. Crop weeds although undesirable in one way; he also employed them for food, medicine, fodder and other miscellaneous purposes (cf. Patil, et al. 2007; Sen, 1981). There are few exclusive publications on utility of crop weeds (Bhattacharya 1996; Patnaik 1956; Swami and Gupta 1996; Thomas and Britto 2000; Patil et al. 2007; Nayak et al. 2009). Buldhana district of Maharashtra was practically untapped for traditional uses. It was investigated during 2006-2008 on this line. The results of
our research are being published (Patil et al. 2007; Ahirrao et al. 2009). Present communication is a part of it.

**METHODOLOGY:**
Several interviews were held with knowledgeable senior farmers, farm-laborers, older men and women in Buldhana district during 2006-2008 in different seasons. The ethnobotanical inquiries pertained to plant and plant part used, method of preparation of recipes and their administration, number of doses and kind of diseases. The voucher specimens collected have been identified using district (Diwakar and Sharma, 2000), regional (Naik 1998; Cooke 1958) and State (Sharma et al. 1996; Singh and Kartikeyan 2000, 2001) floras. They have been housed in the herbarium of our college. Botanical names are arranged alphabetically and family (in parenthesis) is followed by the local names.

**DISCUSSIONS:**
Present authors could gather ethnobotanical information on total 411 plants species belonging to 90 families from Buldhana district. Of these, 31 species are crop weeds belonging 28 genera and 15 families of angiosperms useful as traditional medicine. All are herbaceous taxa. Only 03 species belonging to 03 genera of 03 monocotyledonous families. Apart from these, other plant species viz., Sorghum bicolor, Piper betle, Zingiber officinale, Elettaria cardamomum, Calotropis procera and Allium sativum are used to supplement the drugs used. Various plant parts like leaf, root, fruit, and seeds are employed in preparing ethnomedicinal recipes, besides latex. Entire plants find place in about 07 use-reports. Leaves are useful in about 57 applications, whereas roots for 21, fruits for 04 and seeds for 13 applications. Some domestic substances are also added e.g. honey, ghee, asafoetida, oil, milk, whey, curd, castor oil, jaggery, coconut oil, black and common salts. Cow and human urine are also added. The medicinal recipes are in the form of paste, decoction, juice, extract, infusion, powder, oil, and fumes/smoke. Some plant parts are warmed or cooked and then used directly. Rarely roots are used as necklace. Some recipes of these are more commonly used e.g. paste (24), extract (19), powder (18) and juice (17). Numbers in parenthesis stand for use-reports. The crop weeds are beneficial in treating as many as 72 human ailments. Some ailments are cured using more than one species such as piles and scorpion sting (5 species each), snake-bite, injures, kidney stone, cough, and cold (4 species each), typhoid, jaundice, tooth-ache, hepatitis, rheumatism (3 species each) and diarrhoea, dysentery, asthma,
wounds, migraine and sunstroke (2 species each). Many other diseases are treated by recipes from single species each.

There are some salutiferous remedies which are used to better human health, similar to adaptogenic drugs such as ginseng, chyavanprash, etc. They are advised for enhancing particular aspect of human health. These are some such plant remedies prevalent in Buldhana district e.g. Amaranthus spinosus against weight loss, Aristolochia bracteata to increase body strength or for good health Cassia obtusifolia for better health and disease resistance specially during pregnancy period, and Cynandon dactylon to maintain youthness and increase strength. Similar reports are also on record by Patil (2004) and Redd et al. (1998) wherein some taxa with white latex are suggested beneficial as galactogogue. The plant species reported as Calotropis gigantea, Euphorbia hirta, E. fusiformis, Holostema adakodien, Hemidesmus indicus, etc.

In past, man’s traditional practices related especially to crop weeds have been largely ignored world over. In view of importance of traditional knowledge, indigenous plant utilities are being documented. Crop weeds form subject matter of some investigations (cf. Patil et al. 2007; Bhattacharya, 1996; Patnaik, 1956; Swami and Gupta, 1996; Thomas and Britto, 2000; Punjani, 2002). Moreover, herbal drugs have once again gained importance in healthcare systems. This investigation revealed ethno-pharmacological resources from Buldhana district (Maharashtra) for a number of human afflictions. These, however, are desired to verify for their efficacy of modern scientific lines.

ENUMERATION:
1. **Achyranthes aspera** L. (Amaranthaceae) Agheda, Zinzoda Khara (UPA23, YAD30, PSP280, YAA150):
   i) Fruits of this plant and feathers of peacock are cut into pieces. These are smoked by the sufferer of scorpion - sting.
   ii) Two leaves are crushed along with common salt. This paste is applied daily once on infected teeth till cure.
   iii) Leaf juice, one spoonful twice daily, is drunk to cure piles till cure. Leaf paste is also applied daily on injuries caused due to piles till cure.
   iv) Half spoon of seed powder is dissolved in water. It is drunk daily to cure cough till cure.
   v) Root extract is mixed in human urine in equal proportion. A cup of it is administered to a person suffering from snake-bite.
vi) The whole plant is burnt and ash is dissolved in water. It is boiled and salt is obtained. It is then applied on injuries of anus caused due to piles and fissures till cure.

vii) Entire plants are dried in shadow and powdered. One spoonful powder with honey is consumed at morning for seven days to cure asthma.

viii) Leaf paste is mixed with jaggery. A pellet is prepared. Two pellets a day after tea at morning and at mid-day are administered to cure body pain and also to remove thorns from body.

   i) Extract of leaves, about spoonful twice a day for three days, is orally administered to treat malaria and typhoid.
   ii) Leaf juice is mixed in curd in 1:1 ratio. It is consumed, about twenty ml daily, at morning as a remedy against kidney-stone for 8-10 days.

3. Alternanthera tenella Colla (Amaranthaceae) Pandhari-fuli (YAD3):
   i) Extract of leaves, about 2-3 drops, are applied once daily on the injuries or cuts. This is followed till cure.

   i) Leaves are cooked without oil and consumed with ‘Jawar’ (Sorghum bicolor Moench) bread for 11-15 days to regain weight-loss.

5. Argemone mexicana L. (Papaveraceae) Satyanashi, Vilayachi (UPA44, PSP77, YAD142, YAA415):
   i) Seeds are heated and then powdered. The paste is prepared in water. It is applied on injuries caused due to piles for daily for a week.
   ii) Roots are burnt; fumes are passed on wound caused due to piles. It is practiced once daily for 3-4 days.
   iii) Root paste is applied once daily on tooth ache till cure.
   iv) Root paste is also applied daily once on piles till cure.
   v) Root paste is applied on scorpion-sting.
   vi) Root paste alongwith betel leaf (Piper betle L.) is consumed for three to four days thrice a day to treat malarial fever.
   vii) Root juice (about 20 ml) is also taken orally to treat scorpion sting.
   viii) Latex of the plant is rubbed in case of scabies, eczema and cracks on sole of foot.
   ix) Latex is applied on sweat-lump (Gham-bend) to cure it. It is advised till cure.
   x) Oil is extracted from seed. It is applied on any injury for healing.
xi) Latex is also applied daily once on common injuries for 4-5 days.

xii) Root paste is applied as antidote on scorpion-sting.

xiii) Roots are strung into a necklace and kept around the neck of a sufferer of jaundice till cure.

   i) Extract of leaves is mixed in coconut oil. It is prepared with camphor. Paste is applied daily once on injury caused due to piles.
   ii) Two-three drops of leaf juice are dropped into ears to treat ear-ache. It is practiced for 4-5 days.
   iii) Leaf juice is mixed with lump-sugar. A spoonful is consumed at morning for twenty-one days to increase body strength.
   iv) Leaf extract is prepared in water. About 2-3 drops of extract are dropped into ears to check pus formation.
   v) Leaf juice is taken orally, about spoonful twice a day, for seven days to treat migraine.
   vi) Leaves (4-5) of this species are consumed alongwith the leaves of *Piper betle* L. for four days to cure stomach-ache till cure.
   vii) The leaves are boiled in water. This decoction is used to bath infants for good health.

7. Asphodelus tenuifolius Cav.(Liliaceae) Zar-kanda (PSP243):
   i) Leaves are warmed and oil is applied on them. These are wrapped around the suppurating tumor for 3-4 days.
   ii) Decoction of leaves is applied on fingers to treat whitlow for 2-3 days.
   iii) Extract of leaves is applied once daily on burns. It is followed till cure.

8. Biophytum sensitivum (L.) DC. (Oxalidaceae) Sharmily, Lajalu (UPA83, YAD105, PSP104):
   i) A spoonful of root extract is taken orally twice a day to treat diphtheria. It is advised for a week or so.
   ii) Roots are tied around waist to avoid various diseases. This is followed during especially during the period of ‘Uttara Nakshatra’.

   i) Leaves are crushed. The paste is tied on joints to cure joint-ache till cure.
   ii) Seeds are powdered and bread is prepared. It is consumed for seven days to treat joint-ache.
iii) Leaf juice, about 25 ml, is drunk at morning before tea for jaundice and rheumatism for a week.
iv) Leaves wrapped in a cloth are tied at night on legs to get relief from rheumatism for 7-8 days.
v) Leaf juice, about a glass, is advised to drink against dog-bite and wolf-bite.
vi) Half cup of leaf juice is advised at morning during pregnancy for better health.

vii) Leaf juice and cow-ghee is mixed and drunk for three days during pre- and post-delivery period to increase disease resistance.

viii) Seed powder (about 100 gm) is consumed daily for a week for abortion.
ix) Seed powder is also advised (about 5 gm) daily for seven days to reduce rheumatic pains.

x) Leaves are boiled and then crushed. This paste is applied at night daily to treat arthritis till cure.

i) Root paste is applied as antidote for scorpion sting.
ii) Leaves are used as vegetable to cure fever.

i) Root extract is prepared in water. Two-three spoons of it are given orally 2-3 times a day to cure sun-stroke.
ii) Root extract is given orally. One spoonful is administered twice a day to cure hepatitis. It is administered till cure.

iii) Seeds (5 gm) are powdered finely. The powder mixed in milk is drunk once a day to cure kidney-stone. It is followed for a week.

12. Cleome viscosa L. (Capparidaceae) Tilwan (UPA185):
i) Leaf juice is dropped into nose for three days before sleep at night to cure influenza.

i) Leaf paste is applied once daily on injury for 3-4 days.
ii) Leaves are rubbed in water. One spoonful of it is given twice a day to cure fever till cure.

iii) Leaf paste is applied on any injury to stop blood.

i) Entire plant is crushed in whey. About one spoonful of it is taken orally twice a day to treat burning of eyes and stomach.
ii) Extract of leaves, 2-3 spoons, is taken orally with whey twice a day for 15-20 days to treat spermatorrhoea. It is followed till cure.

iii) Leaves are rubbed in curd and consumed for seven days before meal at morning to cure sunstroke and to check bleeding during urination.


i) Seeds powder is homogenized with honey or mixed with candy. One spoonful is consumed daily at night to maintain youthness.

ii) Seeds are soaked in cow’s urine for seven days. This process is known as ‘Bhavna dene’. These are dried in shadow for seven days and finely powdered with asafoetida and ‘black salt’. This mixture, a spoonful in one glass of lukewarm water at night, is drunk to clear urinary problems, kidney stone and stomach problem. It is also added in milk for bile at night and before dinner for uneasiness.

iii) Decoction of leaves is consumed for twenty one days at night to cure kidney-stone.

iv) Roots are mixed with rhizome of *Zingiber officinale* Rosc. in ‘Hemant’ season (1:1 ratio by weight). It is powdered. A spoonful of it is consumed along with milk. It is used to increase strength.

v) Entire plant is used to prepare decoction. Half cup of it is drunk once in a day to reduce body heat.


i) Fine powder of dried root tubers is homogenized with honey. One spoonful of it is consumed per day to treat cough and cold till cure.

ii) Leaves are chewed against bite of ‘Dhaman’, an aquatic snake.

iii) Leaf extract, about one spoonful, is mixed in water or milk to control acidity. It is consumed for 3-4 days.

17. *Datura innoxia* Mill. (Solanaceae) Dhotra (YAD311, YAA166):

i) Leaf paste is mixed thoroughly with some common salt. It is applied daily on nails in case of their infection till cure.

ii) Decoction of leaves is prepared. A spoonful of it is drunk twice a day to treat snake-bite.

iii) Leaf paste is homogenised with common salt. It is applied on fingers to treat nail-ache.

iv) Leaf juice is applied on cheek to treat mumps till cure.

v) Seeds are mixed with cardamom seeds (*Elettaria cardamomum* L.) and are powdered. It is mixed in animal ghee. It is applied to cure piles.
vi) Five leaves of it and leaves of Calotropis procera (Ait.) R.Br., and castor oil (Ricinus communis L.) is applied on them. These are wrapped on knees to check knee-ache.

18. Datura metel L. (Solanaceae) Kala-dhotara (UPA19, PSP330):
i) Leaves are crushed. The leaf juice obtained is applied on throat as a remedy against throat swelling. It is applied till cure.
ii) Extract of leaves is applied on forehead to cure headache till cure.
iii) Root are crushed and the paste (10 gm) consumed for 2-3 days with bread against hepatitis
iv) Leaf paste is applied on tumours and also on mumps for 7-8 days.

i) Leaves are cooked and consumed as vegetable once a day to cure mouth ulcer and to remove foul smell. This also helps to control diarrhoea and dysentery.

20. Echinops echinatus Roxb. (Asteraceae) Utkttyar, Utkatya (UPA92, YAD19, YAA144):
i) Root paste are consumed with betel leaves (Piper betle L.) for a fortnight to cure impotency.
ii) Roots are crushed and powdered finely. One spoonful of it is mixed in water and drunk at morning for 21 days to cure fever or typhoid.

i) Latex is mixed with whey. Pellets are prepared. Single pellet is taken twice a day for seven days to treat hepatitis.
ii) Leaves are washed and then crushed in water. A spoonful extract is drunk to cure diarrhoea and dysentery.
iii) Roots are boiled in water. This decoction is drunk for twenty-one days at morning. One cup is advised to cure mouth ulcer and uncerated mouth. Tea is forbidden during this treatment

i) Few seeds are kept in milk overnight. This spoonful milk infusion is taken orally for 7 days to cure leucorrhoea.
ii) Decoction of leaves, about two spoonful, is given orally twice a day for days to treat cough and fever.

23. Phyllanthus amarus Schumach. & Thonn. (Euphorbiaceae) Bhuiawala, Lekurwali, Futane (UPA96, YAD130, YAA50):
24. *Physalis minima* L. (Solanaceae) Dokephodi (YAD266):
   i) Few leaves are wrapped in a betel leaf (*Piper betle* L.). It is consumed daily once to check cough.
   ii) Few leaves and seeds are crushed and paste is prepared. It is applied daily on wounds till cure.
   iii) Roots are first dried. These are powdered and paste is prepared in water. It is consumed, about 3-4 gm, daily once for seven days to control fever.
   iv) Seeds are crushed and powdered finely. It is mixed in water. This water is applied to eyes to cure eye infection. It is applied twice a day till cure.
   v) Leaves are powdered. A spoonful of powder is mixed with a cup of curd. It is consumed for seven days twice a day to cure piles.
   vi) Decoction of leaves is administered once a day to pet animals as a remedy against flatulence. Four to five glasses of decoction are advised for two days.

25. *Portulaca oleracea* L. (Portulacaceae) Ghol (UPA 166):
   i) Leaves are crushed and juice is squeezed. Two drops of this juice twice a day is dropped into ears to reduce ear-ach.

   i) Decoction of leaves, about a cup, is drunk before tea for two days to cure intestinal worm till cure.

   i) Root decoction (10-15 ml) is drunk once daily to cure hepatitis till cure.

28. *Solanum virginianum* L. (Solanaceae) Ringni (UPA275, YAD271, YAA422, PSP218):
   i) Roots are extracted in whey. About a glass is drunk thrice as antidote for snake-bite, especially for ‘Ghonas’, a species of serpent.
   ii) Seeds powder is mixed with honey in ratio 1:2. This mixture about one spoonful, is taken orally for cough till cure.
   iii) Seed powder is homogenized with honey. One spoonful of it for seven days is consumed by the patient suffering from asthma.
iv) Fruit are dried in shadow and powdered. It is applied on gums for ten minutes at morning. This is used to cure tooth-ache.
v) Roots are levigated into cow’s urine. This paste is applied daily once for 3-4 days to cure nail bed abscess.
vi) Few roots pieces are wrapped in the leaves of *Piper betle* L. and is consumed for 15 days to cure viral fever and typhoid.
vii) Extract of fruit juice, 2-3 drops, is applied once for three days to cure eye burning.

29. *Striga asiatica* (L.) O. Ktze. (Scrophulariaceae) Taluka (UPA59):
i) Entire plant is crushed. The extract, about half glass, is drunk for abortion for 5-7 days.
ii) Plant juice is applied on stomach for a week to control intestinal worm.

i) Leaf paste is applied on injury for 2-3 days to avoid septic after injury or cuts.
ii) Leaf extract is mixed in ghee or honey in 1:1 ratio. About 2-3 spoons of it is drunk to check passing of blood through urination. It is advised till cure but administered before tea.
iii) Extract of leaf is applied once daily to cure wounds for 5-7 days.
iv) Leaf juice is gargled to check bleeding of gums for 4-5 days.
v) A cup of decoction of leaves is drunk before tea for three to four days to cure wounds and to check fever.

i) Leaves are crushed with one bulblet of *Allium sativum* L. The extract obtained, about 1-2 drops, are poured into nostril of opposite side in case of migraine.
ii) Leaf juice is applied on bleeding injury due to thorns.
iii) Leaf juice is applied on gums daily to cure tooth-ache.

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