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Medicinal utilities of weed flora of agriculture field of JNKVV, Jabalpur

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Abstract

Weed flora of Agriculture field has large ecological amplitude, so they multiply and flourish well even in changed environmental conditions. It has been observed that the traditional knowledge which people of the cultivated field posses on the weeds and their uses is of much use which should be explored properly. The present paper enumerates the uses of some weeds collected agriculture and cultivated fields of JNKVV, Jabalpur, Madhya Pradesh.

Keywords: Weed, Jabalpur, Medicinal utilities, JNKVV

Introduction

Weeds are a serious problem in agricultural and horticultural operations. An enormous increase in the human population of the world has taken place since agriculture first began. Man is therefore, still struggling to produce additional food and fibre by proper management of crops in which weeds form a major component. Despite the use of disease free and healthy seeds, ploughing, cultivation, hoeing, hand pulling and crop rotation, weeds persist because of our inability to cope up with their great reproductive capacity and mass recycling potential. In contrast to the cultivated plants, the weed is the invader an uninvited guest in any cultivated field. Weeds are an excellent example of the successful struggle for existence. Out of 3, 00,000 plant species known in the world, about 30,000 are weeds. Weed flora of Agriculture field has large ecological amplitude, so they multiply and flourish well even in changed environmental conditions. Since they have unique potentialities for adaptation they survive almost in any environment and adjust themselves to the changed conditions [1-2]. Man has been mostly indifferent towards weeds and has allowed them to create havoc by growing, spreading and disseminating their seeds at will. Fortunately, a large majority of the weeds are not very harmful to cultivated plant with which they are associated [3-6].

Man managed ecosystem like agricultural fields, and Botanic garden, etc. provide an opportunity to weeds for their invasion. Most of the weeds are capable of thriving in varied habitats. Weed flora of agriculture have different characteristic weeds. Once a certain weed species is introduced, its abundance or scarcity within given portion of garden is determined largely by the degree of competition [7]. The competitive ability of a weed depends upon its vegetative habit, potentiality of seed germination, seedling growth, ecesis and life span. Reduction in the yield of crops due to weeds has been well demonstrated by several workers [7-8]. Weeds are producing large number of seeds which are viable and well equipped for dissemination due to aggressive in nature. Because of these peculiarities weeds speared quickly in the areas where they affect the growth of other plants by absorption of nourishment from the soil. Weed flora of agriculture is having good moderate climatic conditions a large number of rare and important plants are being cultivated and maintained here. The present work related to survey cum medicinal utility of weeds flora which grow along with the cultivated crops & plants, from time to time. To overcome this problem to some extent it is proposed to make use of these weeds for medicinal purposes. Keeping this in view such losses can be compensated by exploring the medicinal utility of very common weeds of agricultural fields. Thus this paper is focused on medicinal evaluation of garden cultivated fields. Instead of using weedicides for their eradication, weeds can be uprooted and instead of throwing they may be used for medicinal purposes.

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Material and methods

Weed flora of agriculture and cultivated fields of JNKVV, Jabalpur was the study site. Daily and seasonal survey of the different areas of the field was carried out from the areas. Information on the medicinal utility of different parts of the weeds against various disorders was collected by the traditional peoples of field[7]. It has been observed that the traditional knowledge which people of the cultivated field posses on the weeds and their uses is of much use which should be explored properly.

Observation

Medicinal uses of weed flora of agriculture field are described below. These weeds are arranged in alphabetical manner followed by family name.

***Acalypha indica* (Euphorbiaceae)**
Leaf juice is given in Pneumonia treatment. Plant contains acalyphin alkaloids which are given in snake bite and scabies diseases. Leaf juice is also given in earache and skin disease.

***Achyranthus aspera* (Amaranthaceae)**
Root paste is applied externally in scorpion sting. The whole plants are used in tooth. Plant ash and small quantity of sugar is given orally for cough. Leaf paste is useful in skin disease and piles.

***Ageratum conyzoides* (Asteraceae)**
The leaves are used in leprosy and uterine disorder, also used in killing the hairs lice. Leaf paste is applied on cuts, wounds, and burns. Leaf juice is useful skin disease and scabies disease.

***Anagallis arvensis* (Primulaceae)**
The leaf juice is given in leprosy and hydrophobia treatment.

***Argemone mexicana* (Papaveraceae)**
The leaf paste is used in ulcer, leprosy. Seed are used in cough, asthma and headache. The whole plant (without root) made into fine paste and applied on white patches in lips and body. Latex is given for pains, swelling and body pains.

***Biophytum sensitivum* (Oxalidaceae)**
The leaf paste is used in cuts and headache. Leaf paste with cow's milk is useful in treatment of menstrual disorders.

***Boerhaavia diffusa* (Nyctaginaceae)**
The whole plant is used in headache. Leaf is given for blood purifying. Root is given for asthma, cough and fever. Root paste with cow milk is given for abortion. Tenders leaves are eaten like vegetable for jaundice.

***Cassia absus* (Caesalpiniaceae)**
Leaf extract is useful in cough and healing. Seeds are useful in for ophthalmic disease and as a median disease cool agent. Seed is cooked as a pulse.

***Cassia tora* (Caesalpiniaceae)**
Leaf is useful in night blindness and leaf paste is used in cuts, boils, burns and as antiseptic treatment. Seed is given in stomach pain. Root is given in fever and abnormal child growth.

***Cocculus hirsutus* (Menispermaceae)**
The leaf decoction is given in fever and urine disorder.

***Cynodon dactylon* (Poaceae)**
The whole plant is used in ulcers in stomach. Leaf paste is applied for piles and is also given in vomiting.

***Desmodium triflorum* (Fabaceae)**
The whole plant is useful in body ache. Leaf is used in dysentery, diarrhea, and toothache.

***Eclipta prostrata* (Asteraceae)**
Leaf juice with coconut oil applied on hair for nourishing. Root paste is applied externally for treatment of antidote to snake bite. Plant powder boiled in water, used in malarial treatment. After burning of whole plant and made into powder mixed in coconut oil and applied on eyelids for conjunctivitis.

***Euphorbia hirta* (Euphorbiaceae)**
The whole plant is used in toothache and vomiting. Leaf juice is given treatment of antidote for snake bite. Latex is useful in scabies disease and scorpion bite.

***Evolvulus alsinoides* (Convolvulaceae)**
The leaf is given in asthma, bronchitis and ulcers. The whole plant is given for stomach pain and scorpion sting. The whole plant ash along with mustard oil applied externally on skin disease. Leaf is useful in treatment of asthma and bronchitis.

***Lagascea mollis* (Asteraceae)**
Leaf paste is given in cuts and wounds. Flowers are given for ear complaints.

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***Oxalis corniculata* (Oxalidaceae)**
Leaf is useful in cough, digestion, and dysentery. Leaf is also useful in insect bite and skin disease. The whole plant mixed with black pepper used for skin eruption and wounds.
***Parthenium hysterophorus* (Asteraceae)**
Flowers are useful in nasal block in cold. Leaves mixed with two or three pieces of garlics and made into fine paste, the paste is squeezed juice put in ear to stop pus flow.
***Sida acuta* (Malvaceae)**
Flowers paste is given in boils and burns. Root paste is applied in snake bite. Leaf is given in gastric disorder and stomach pain.
***Sida cordifolia* (Malvaceae)**
The whole plant is used in dysentery and gonorrhea. Root paste is given in boils and wounds.
***Solanum nigrum* (Solanaceae)**
Leaf used in dysentery, and stomach pain. The whole plant is useful in urine compilation and jaundice.
***Tridax procumbens* (Asteraceae)**
Paste of leaf is given in boils, cuts & wounds. Leaf is also useful in diarrhea, dysentery and leprosy.

Result and discussion

Total 22 weeds belonging to 20 genera and 14 families were found medicinally important. Disease wise analysis has also been carried out and it was observed that various parts of the weeds have been shown their medicinal utility. Leaves were supposed to be the most useful part of the weeds. Out of 22 weeds, leaves of almost all plants species are shown useful for various disorders. This is followed by the whole plant where root of 11 plants are found medicinally important. The analysis reveals that root of six weeds are found useful against various disorders. Analysis reveals that for cut, wounds, boils and burn, maximum twelve weeds plants are used. Eight weed species each for skin diseases and asthma are used for different ailments. Weed flora of agricultural field not only minimize the nutritionally value which ultimately effect the growth and quality of the cultivated crops but minimize the aesthetic value. These weeds found suitable place in the cultivated field/agricultural field as they get sufficient water and proper nutrition. They are found growing in association with cultivated crops in different habitat of the fields and effect the growth of cultivated species/crops. The weed control problems present a major challenges to the cultivated and managing authorities of the agricultural field, because of the increasing labour and other production costs that reduce the net income of the by selling the cut flowers of the cultivated fields etc. Different parts of weeds are very useful in various disorders such as diarrhea, dysentery, cuts, burns, skin diseases, stomachache, jaundice and malaria etc. Before thronging them we can studies the medicinal utilities of weeds.

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