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Medicinal use of weeds

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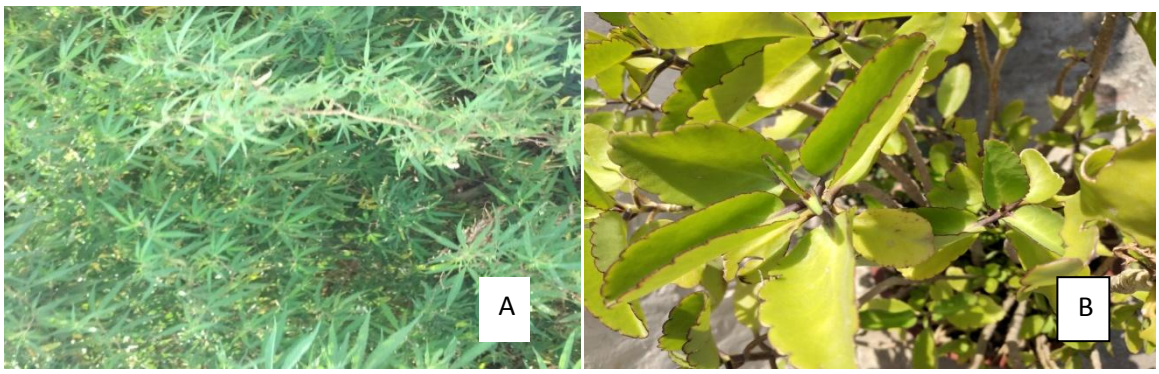
ABSTRACT: Weeds provide major challenge in the cultivation of crop. Regular weeding is done by farmers so that the main crop will get proper space and nutrient to grow. Sometime mulches and weedicides are also used to reduce there growth which may or may not harm the main crop. Weeds although treated as unwanted plants, but they also posses many medicinal properties such as anti-inflammatory, anti diabetic, nerve stimulator etc.To reduce the weed effect on environment and in main crops, weeds are used in medicinal purpose. Now weeds play a key role in drug or medicinal industry.

Keywords: Weedicides, organic mulch, inorganic mulch, anti-inflammatory, nerve stimulator, anti-diabetic.

I. INTRODUCTION:

Weeds are the unwanted plants that grow in the main crop and compete with it for space and nutrients. It creates a serious problem in agriculture and effectively decrease the growth and yield of main crop. Weeds grow extensively in main crop. To reduce the weed growth in field, both organic and inorganic methods are applied. Organic method includes weedicides that may also cause damage to the yield of main crop, on the otherhand inorganic methods include mulches and biocontrol agents which may or may not harm the yield and growth of main crop. Number of unwanted plants belonging the different families including malvaceae, euphorbiaceae, amaranthaceae, acanthaceae, asteraceae, lamiaceae etc are present in the main crop which cause difficulty in growth of main crop, reduce yield, interrupt harvesting of the main crop. Although these weeds cause trouble for main crop but they are also used for medicinal purpose. Some of the weeds acts as nerve stimulator, blood purifier, treat diabetes milletus, jaundice, snake bite etc. Some weeds possess properties of a good insecticide(Nirgundi leaf extract or leaf oil is used as an insect repellent), while some shows good antibacterial activities(Olukoya et al.,1993) The main weeds that grow in the crops are Cannabis, Chenopodium, Solanum nigrum, Acalypha etc. Following is the figure showing different weeds that are commonly present in crops.



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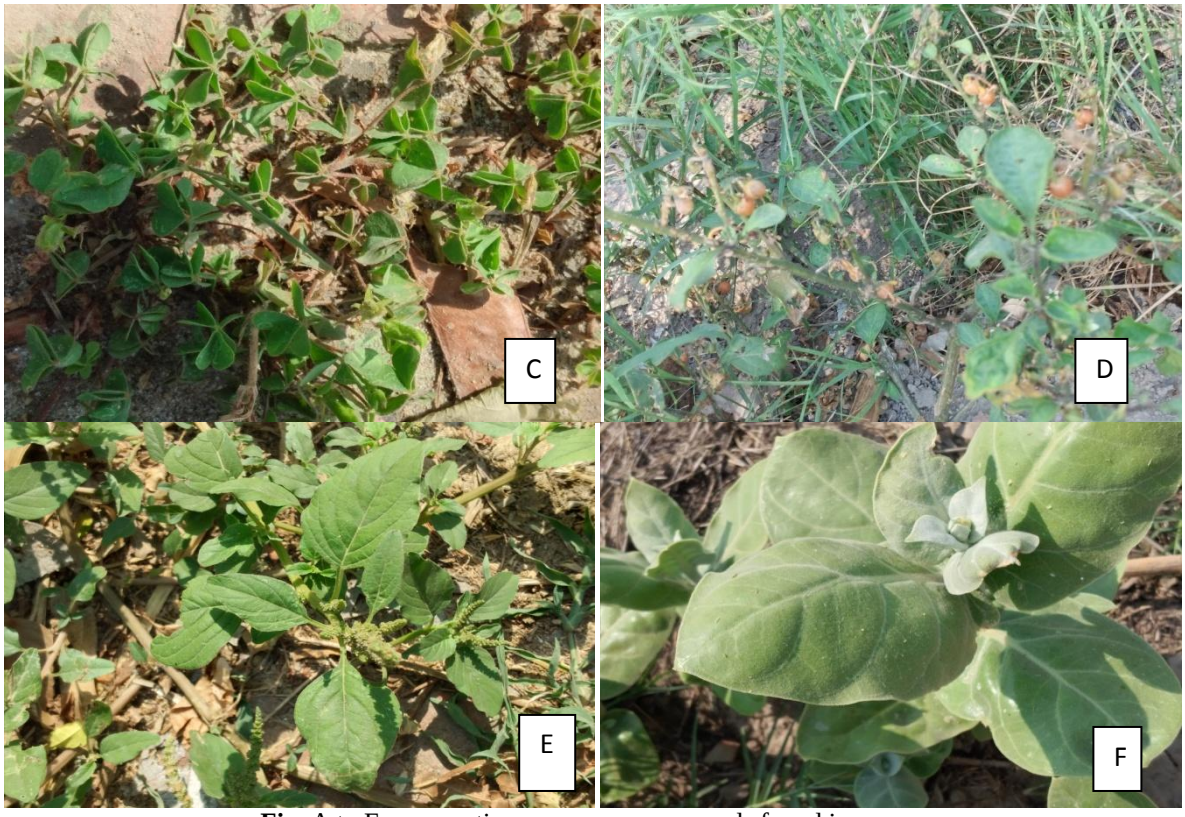

Fig. A to F representing some common weeds found in crops.

A-Cannabis B-Bryophyllum
C-Portulaca spp. D-Solanum spp.
E-Chenopodium F-Calotropis

Table 1: Medicinal uses of weeds.

Weed	Family	Chemical compound	Uses	Reference
Abutilon indicum	Malvaceae	Abutilin A, (R)-N-(1' methoxycarbonyl-2'phenyl ethyl)-4-hydroxybezamide.	• Leaves are used to treat ulcer, fever, diarrhoea	Matlwaska,2002 ; Kuo et al.,2008
Acalypha indica	Euphorbiaceae	Alkaloids, Catachol compounds, flavonoids,saponins,tannins, steroids, phenols	• Roots and leaves are used in the treatment of pneumonia, rheumatism, jaundice	Tiwari et al.,2017
Achyranthes aspera	Amaranthaceae	Fatty acid, olenic acid,oleanolic acid, achyranthine, ketons, betains	• Leaves are applied on insect bites. • Paste made by rots is given with cold water to control bleeding after abortion	Bussman et al.,2006
Adhatoda vasica	Acanthaceae	Vasicinone, vasicine	• Treatment of bronchitis. • Leaves used in storing and packing fruits	Kumar et al.,2013
Ageratum	Asteraceae	Conyzoids, beta	• Antiseptic	Fu et al.,2012

conyzoides		copaene, alpha calacorene	• Prevent skin disease	
Alternanthera sessilis	Amaranthaceae	Uronic acid, palmitic, linoleic acid	• Externally used in treating patient of snake bite • Used to treat diarrhoea • Prevent and cure worms, liver disorders, itching.	Tanaka et al.,2007
Amaranthus spinosus	Amaranthaceae	Diglycoside flavonoids hesperidin, arginine, tyrosine	• Leaves used as vegetables. • Using as dying agents	Tanaka et al.,2007
Ammania baccifera	Lythraceae	Titerpenes, sterols,flavonoids	• Veneral diseases are treated • Antiinflammatory	Sahu, 1984
Boerhavia diffusa	Nyctaginaceae	Palmitic acid, arachidic acid, hentriacontane, urosilic acid	• Treatment of gonorrhoea and jaundice	Bhowmik et al.,2012
Bryophyllus pinnatum	Crassulaceae	Syringic acid, ferulic acid, aurones, phenanthrene	• Give relief from headache • Antitumor	Supratmam et al., 2000
Calotropis procera	Asclepiadaceae	Sugar, saponins, glycosides, cardenolides	• Treat chlorea, elephantiasis	Sahu, 1984
Cannabis sativa	Cannabinaceae	Cannabinoids, limonene, caryophyllene (120 compounds)	• Treat gonorrhoea, indigestion • Act as nerve stimulant	Hazekamp et al., 2012
Cassia abus	Caesalpiniaceae	Anthraquinone glycosides	• Give relief from migraine	Sahu, 1984
Cassia tora	Caesalpiniaceae	Anthraquinone, obtusin(chryso and auranto)	• Treat ringworm. • Give relief from various skin disease	Sahu, 1984
Cyperus rotundus	Cyperaceae	Amentoflavone, sciadopitysin, gingkgetin	• Treat stomach disorder • Act as insect repellent	Jagtap et al.,2004
Eupatorium odoratum	Asteraceae	Caryophyllene, cadinene, beta-cubebene.	• Leaf extract applied in fresh wounds and cuts	Sahu, 1984
Jatropha curcas	Euphorbiaceae	Camphor, pulegone	• Give relief from joint pains	Sahu, 1984
Lantara camara	Verbenanceae	Valecene, germacrene, isocaryophyllene	• Applied in cuts	Sahu, 1984
Ocimum americanum	Lamiaceae	Octanol, geranial, octyl actetate	• Give relief from headache • Treat wounds or cuts in animals	Sahu, 1984
Phyllanthus	Euphorbiaceae	Tannins, saponins,	• Treatment of	Lans et

fraternus		glycosides	jaundice, urinary diseases.	al.,2006
Solanum nigrum	Solanaceae	Solasonine, solamargine, solanidine	• Extract from leaves is given to patients having inflammation of bladder and kidney • Treat diarrhoea, heart diseases	Sahu, 1984
Spilanthus acmella	Asteraceae	Spilanthol, phlobatannins, tannins	• Act as blood purifier • Give relief from toothache • insecticidal properties	Tiwari et al.,2011
Tribulus purpurea	Caesalpiniaceae	Steroidal saponins, flavonoids	• Act as blood purifier • Given treatment to paitent suffering from asthma, piles, spleen, breast bronchitis.	Sahu, 1984
Trichodesma indica	Boraginaceae	Titerpenes, saponins, tannins	• Give relief from stomach disorders	Sahu, 1984
Vitex negundo	Lamiaceae	Viridiflorol, globulol, aromadendrene.	• Give relief from headache	Kumar et al.,2018
Xanthium sarumarium	Asteraceae	Alpha cadinol, limonene, beta caryophyllene, spathulenol	• Root extract act as tonic. • Treat herpes and scrofula.	Weaver et al.,1982

From the above table it is clear that the weeds posses many medicinal properties. Weeds provide treatment against dreadful diseases like jaudine, diarrhoea, liver disorders, kidney diseases, snake bites etc. Weeds possess all the properties due to the presence of certain chemical compounds like terpinoids, saponins, steroids, limonene, tannins, alkaloids etc in various parts of a plant (root, stem, leaves).

II. CONCLUSION:

Weeds are considered as unwanted plants but still they are full of medicinal properties. They are used in relieving pains from headache to diabetes mellitus if used in a proper way. All the weeds include specific compound which help in the treatment of various diseases. Some weeds have good anti-inflammatory property while some are good in treating jaundice, asthama, spleen etc. If consumption is taken under a consultant's advice extract of weeds and product made from weeds will give best result.All the weeds include specific chemical compound(tannins, terpinoids, steroids etc.) which help in the treatment of various diseases. Recommended dose of weeds extract or weed products is consumed. Overdose of weeds product or extract may become lethal.

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