

LIVELIHOOD ENHANCEMENT THROUGH THE WEEDS OF UTTARKASHI DISTRICT OF UTTARAKHAND STATE

Mahendra Pal Singh Parmar and Lokendra Pal Singh Parmar

Abstract

Weed commonly called *khar-kabad* in Uttarakhand or *kharpatawar* in India and worldwide. Any unwanted plant which reduces the productivity of our commercial crop, farmers are often concerned that weeds may reduce crop yields. Weeds use the same nutrients that crop plants use, often in very similar proportions. They also use resources such as water, sunshine and space that might have gone to crops..The more similar the weed and crop requirements, the more they will compete for those resources. Weeds that compete aggressively with crops reduce their yield. Weeds damage the crop yield and they are highly unwanted. Due to their immunity, abundant production in the area might be useful for medicinal uses, organic manure / fertilizer, bio insecticides, bio fungicides and allopathic uses also. So many weeds are very useful in chronic diseases and no alternative of their treatment.

Key Words: Weeds, for Livelihood, introduction of new weeds as fertilizers, fungicides

Department of Botany Govt. P.G College Uttarkashi(UK)¹
Department of Chemistry GOvt. Kirti Inter College Uttarkashi²
E-mail: mahen2004@rediffmail.com

Weed size is partly a matter of timing. Weeds that emerge before the crop are generally larger and better established than those that emerge after the crop. This gives them greater access to soil and spatial resources, and thus they do more damage to crop yield. Size also varies among species. For instance, Canada thistle plants are naturally much larger, and likely to cause more yield loss, than thyme-leaved spurge plants. Size also depends on plant nutrition, disease, and pests. Some weeds may limit crop development through chemical means, or allelopathy, either while they are alive, or as they decompose. Some weeds, for example (Naidu, 2012) or quack grass, release chemicals that inhibit their neighbors so that chemical may be use in other allopathic effects .This affects their competitive relationships. Weeds can cause problems other than crop yield loss. Some weeds are poisonous and can taint food and feed crops. For example, wild mustard seed cannot readily be removed from canola, and can flavor the resulting canola oil if crushed with the crop seed. Stinkweed in feed for dairy cattle produces off-flavors in milk.

Weeds that remain green at harvest, especially those with fibrous stems, can interfere with harvest. The problem varies with both the crop and the weed. A low-growing weed like wild tomato causes very little problem in a cereal crop because most of the plants are below swath height. In a crop like lentil, chickpea, or bean, severe harvest difficulties may occur. The low cut means that wild tomatoes are harvested with the crop, and they can stain the pulse and clog the machinery. Weeds like wild buckwheat, that twine through a crop can also be problematic.

Weeds can harbour problem insects and crop diseases. For instance, mustard-family weeds can carry over canola diseases, making rotation a less effective tool for disease management. Immature weeds can interfere with harvesting operations. Weed seeds in harvested crops cause dockage and increase risk of spoilage. This can reduce crop value, or increase shipping costs. Weeds in grasslands are generally those that are less palatable. They increase with grazing, because the livestock graze them less than the more palatable plants. Over time, this reduces range productivity for livestock. Weeds such as smooth brome or purple loosestrife can compete aggressively with native vegetation, and replace it.

Material and Methods

Total 5 Villages of Dunda Development Block of Uttarkashi district i.e Genwala, Juguldi, Bon, Panjyala and Chinakholi were surveyed during Ravi, Kharif , Jayad Season also after harvesting and Gap periods . Different kinds of Weeds were observed in different season. They collected indentified through Experts, KVK Chinyalisaur and online also. After heavy infestation of chemical, fertilizer, insecticides, fungicides and seeds from outer agencies, it has been observed by us weeds crops drastically increased however production of the crops increases in the area through the support of hybrid seed, chemical, fertilizer, insecticides, fungicides etc.

Results

During the survey at Uttarkashi villages i.e Gainwla (Barshali), Juguldi, Panjyala, Bon, and Chinakholi etc following weeds were observed either fields and nearby area of farming fields during Ravi, Khariif and Jayad session.

S.N	Botanical Name	Local Name	Life Span	Habit	Uses their Parts and Extracts
1.	<i>Amaranthus viridis</i>	Junga-li chaulai	Jan-Dec	Erect	Amaranthus viridis is used as traditional medicine in the treatment of fever, pain, asthma, diabetes, dysentery, urinary disorders, liver disorders, eye disorders and venereal diseases
2.	<i>Avena fatua L.</i>	Jawatu	Apr-May	Erect	Wild Oats has many medicinal uses including use as a tonic, laxative and nerve stimulant. It is used in chorea, epilepsy and nervous exhaustion. The semimatured grain, when in milk is collected and the unripe-seed tincture prepared.
3.	<i>Chenopodium album</i>	Bath-ua	Jan-Dec	Erect	Very useful for making Parantha. Traditionally used as anthelmintic, cardiotonic, carminative, digestive, diuretic and laxative. It is also useful in peptic ulcer, dyspepsia, flatulence, strangury, pharyngopathy, splenopathy, ophthalmopathy and general debility.
4.	<i>Coronopus didymus L. Smith</i>	Jungle ajwan	Mar-Oct	Erect	Plant is used in Hawaiian medicine internally for respiratory problems such as asthma, bronchitis, and emphysema.
5.	<i>Convolvulus arvensis</i>	Heyranpatu	Sep-April	Climber	This plant is being used for many purposes. The root and the resin are cholagogue, diuretic, laxative and purgative. The flower is laxative, used as a tea infusion and also in treatment of wounds and fever, whereas the leaf can be helpful during the menstrual period.
6.	<i>Cleome viscosa L.</i>	Jakhya	Jul-oct	Erect	Cleome viscosa L. (Cleomaceae) is an important traditional medicine of the Indian-Ayurvedic and Chinese-medicine system documented for rheumatic arthritis, hypertension, malaria, neurasthenia, and wound healing.
7.	<i>Cynodon dactylon L. pers</i>	Dubla	Apr-Jul	Grass	The plant has been long used in the traditional medicines to treat various ailments such as anasarca,

					cancer, convulsions, cough, cramps, diarrhea, dropsy, dysentery, epilepsy, headache, hemorrhage, hypertension, hysteria, measles, rubella, snakebite, sores, stones, tumors, urogenital disorders, warts and wounds.
8.	<i>Cyperus rotundus L.</i>	Murya	Jul-Nov	Sedge	Its uses in modern Ayurvedic medicine are primarily for treating fevers and digestive system disorders (diarrhea, vomiting, indigestion, etc.). It is also known as an emenagogue (treats delayed menstruation) and an analgesic useful for dysmenorrhea (painful menstruation).
9.	<i>Eclipta prostrata L.Mant.</i>	Bhangiri	Mar-Sep	Prostrate	<i>Eclipta prostrata</i> , a traditional herbal medicine, has long been used in Asia and South America for the therapy of hemorrhagic diseases (e.g. hemoptysis, hematemesis, hematuria, epistaxis and uterine bleeding), skin diseases, respiratory disorders, coronary heart disease, hair loss, vitiligo, snake bite and those caused
10.	<i>Eleusine indica L. Gaertn</i>	Jharnpriya-kodu	Jul-Nov	Grass	<i>Eleusine indica</i> Gaertn or Wiregrass (grass family Poaceae), is used in traditional medicine as a diuretic, anti-helminthic, febrifuge and for treating cough.
11.	<i>Euphorbia heterophylla L.</i>	Dudhya	Feb- Aug	Erect	is a medicinal plant used in ethnomedicine for the treatment of constipation, bronchitis and asthma
12.	<i>Euphorbia hirta L.</i>	Chota-dudya	Sep- Oct	Erect decumbent	<i>Euphorbia hirta</i> is often used traditionally for female disorders, respiratory ailments (cough, coryza, bronchitis, and asthma), worm infestations in children, dysentery, jaundice, pimples, gonorrhoea, digestive problems, and tumors.
13.	<i>Lantana camera L.</i>	Kuri Ghas	Jan- Dec	Erect	Use of lantana extracts in folk medicine for the treatment of cancers, chicken pox, measles, asthma, ulcers, swellings, eczema, tumors, high blood pressure, bilious fevers, catarrhal infections, tetanus, rheumatism, malaria and atoxy of abdominal viscera, is also reported.
14.	<i>Malva parviflora</i>	Soncheli	Jan-June	Prostrate	The leaves of <i>M. parviflora</i> are used for drawing swollen, inflamed

					purulent wounds. Pharmacological studies shown that <i>M. parviflora</i> possesses antibacterial, antidiabetic, antifungal, hepatoprotective, neuroprotective, anti-irritant, antioxidant, anti-ulcerogenic, analgesic and other activities.
15.	<i>Medicago polymorpha</i>	Ghadu	Aug-Sep	Decumbent	It is used as a green manure, it fixes atmospheric nitrogen. Bur clover is used for medicinal purposes for skin plagues and dysentery. In Italy, bur clover leaf has been used for many centuries, such as medicinal purposes for treating rheumatic pains and wounds and is still used today.
16.	<i>Melilotus alba Medikus</i>	Safed senji	Aug-Oct	Erect	Sweet clover is used to increase the loss of water from the body through the urine (as a diuretic). It is also used for varicose veins and to relieve symptoms of poor blood circulation (chronic venous insufficiency) including leg pain and heaviness, night cramps, itchiness, and fluid retention (edema).
17.	<i>Melilotus indica(L) Allioni</i>	Ban methi	Aug- Oct	Erect	The seed is made into a gruel and used in the treatment of bowel complaints and infantile diarrhoea
18.	<i>Oxalis latifolia Humb.</i>	Bilmoria	Jan- Oct	Erect	It is used in the treatment of influenza, fever, urinary tract infections, enteritis, diarrhoea, traumatic injuries, sprains and poisonous snake bites. An infusion can be used as a wash to rid children of hookworms. The plant is used as an antiscorbutic in the treatment of scurvy.
19.	<i>Polygonum plebeium</i>	Dondya	Jan-Dec	Erect	The crushed seeds are cooked and eaten as a remedy for bowel complaints. And also is eaten as a vegetable in Malawi, cooked with potatoes and groundnuts. In India it is used as a famine vegetable, and it is grazed by horses.
20.	<i>Rumex hastatus</i>	Almoro	Feb-Oct	Erect	The Plant is used as medicine chutney with mint . It is laxative, alterative, tonic, used in rheumatism, skin diseases, bilious complaints, piles, bleeding of lungs etc.
21.	<i>Solanum nigrum</i>	Makoi	Aug-Sep	Annual	The plant to treat pneumonia, aching teeth, stomach ache, tonsillitis, wing worms, pain,

					inflammation and fever, tumor, inflammation, and also as hepaprotective, diuretic, antipyretic.
22.	<i>Tridax procumbens</i>	Kanphuli	Jan-Dec	Erect	Used as a drink to treat bronchial catarrh, diarrhoea, dysentery and liver diseases
23.	<i>Anagallis arvensis</i>	Billi booti	Feb-Oct e	Erect	The plant is anti-mycotic, antimicrobial, molluscicidal, antioxidant, anti-inflammatory, anti-leishmania, antiviral, cytotoxic, and spermatogenesis
24.	<i>Asphodehus tenuifolius</i>	Bhokat piaz	Jan-Dec	Erect	It is used for colds and hemorrhoids, a febrifuge and also used for rheumatic pain. Seeds are also used as diuretic agent, healing wound and they are applied externally to ulcers and for inflamed parts.
25.	<i>Achyranthes bidentata</i>	Chicheree	Jan-Dec	Annual/ Erect	A. bidentata has been widely used as blood-activating and stasis-resolving medicine for the treatment of various diseases including amenorrhoea, dysmenorrhoea, lumbago, gonalgia, paraplegia, edema, stranguria, headache, dizziness, odontalgia, oral ulcer, hematemesis, and epistaxis.
26.	<i>Asparagus racemosus</i>	Satrawar	April – October	Perennial	Used for constipation, stomach spasms, and stomach ulcers. It is also used for fluid retention, pain, anxiety, cancer, diarrhoea, bronchitis, tuberculosis, dementia, and diabetes. Some people use it to ease alcohol withdrawal
27.	<i>Centella asiatica</i>	Brahmi butti	April - October	Prostate	It is used to heal wounds, improve mental clarity, and treat skin conditions such as leprosy and psoriasis.
28.	<i>Carthamus oxycantha</i>	Pohli, Kandiyari	April - September	Annual weed	Used in the treatment of rheumatism, cerebral thrombosis, male infertility, bacteria, diarrhoea, and bronchitis, along with jaundice and constipation.
29.	<i>Fumaria indica</i>	Shahtra, Pitpapa	Jan-Dec	Semi erect, Annual weed	Fumaria indica is used in aches and pains, diarrhoea, fever, influenza, liver complaints, vomiting, constipation, dyspepsia, blood purification, leucoderma, anthelmintic, diuretic, diaphoretic and, in combination with black pepper, for jaundice.
30.	<i>Glum aparine</i>	Wambooti	Jan- Dec	Annual/ erect	Used to treat scurvy, scrofula, psoriasis, eczema, seborrhoea,

					sunburn, freckles, sores, blisters, wounds and burns. It was also used as a pulp to relieve poisonous bites and stings.
31.	<i>Lathyrus aphaca</i>	Kurri	Annual	Jan -May	Use as a green forage during winter season . Local resident uses asgreen salad with coriander . Rumex and Rhododendron medicine and dyestuff. .
32.	<i>Lathyrus sativus</i>	Chraal ,Kasseri	Annual	Dec- May	Despite serious safety concerns, Lathyrus sativus is used in unleavened Indian bread. Lathyrus seeds are eaten as food and used as animal fodder throughout the world. Drops of the palnts prepared and sold haigh rates.
33.	<i>Lepidium sativum</i>	Halon	Annual	Dec -Jan	Lepidium sativum is widely used in folk medicine for treatment of hyperactive airways disorders, such as asthma, bronchitis and cough. The crude extract of Lepidium sativum (Ls.Cr) inhibited carbachol (CCh, 1 μ M-) and K ⁺ (80 mM-) induced contractions in a pattern similar to that of dicyclomine.
34.	<i>Phalarish minor</i>	Dumbi sittee	Annual	Jan-July	It is used as a fodder or forage for livestock and birdseed, but is poisonous to some mammals, and is a potential contaminant of seed crops.
35.	<i>Saponaria vaccaria</i>	Takla	Annual	July -Dec	A decoction is used to treat skin problems, breast tumours, menstrual problems, deficiency of lactation and sluggish labour[218]. The seeds are also taken internally as a galactagogue
36.	<i>Stelleria media</i>	Stelphullan booti	Annual	July - March	Used to treat various gastrointestinal disorders, asthma, diarrhoea, measles, jaundice, renal, digestive, reproductive and respiratory tracts inflammations. They also lessen swelling and used as plasters for broken bones.
37.	<i>Eupatorium adenophorum</i>	Kala bansa/ Bhangu	Annual	Erect	Very useful in injury, wounds and cuts and also used by the some Tribes as an herbal medicine for treating fever and insomnia.
38.	<i>Ageratum houstonianum</i>	Fulmundya/par deshi ghas / flossflower	Annual	Semi Erect	The juice of the plant is used externally to treat cuts and wound . Herbs may be use as green manure.
39.	<i>Urtica dioica</i>	Kandali/Shishon Bichoo ghash			Used for hundreds of years to treat painful muscles and joints, eczema, arthritis, gout, and anemia. Today, many people use

					it to treat urinary problems during the early stages of an enlarged prostate (called benign prostatic hyperplasia or BPH)
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Conclusion

It has been observed that if we develop enterprise, formed herbal companies for income generation and use these weeds for medicine, plant protection i.e insecticide, fungicide, green manure etc. Farmers of the area stated their insecticides, panchgaby, Gau amrit with Cow urine/curd/butter etc. Lantana is also using for furniture, Needle using for insect repellent and green vegetable and as tea leaf also. Lemon leaf, lemon rind, capsicum powder and so many plants are also using for plant disease production also.

Reference

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