

Weeds: Benefits and Drawbacks

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SUMMARY

Unwanted plants that grow alongside the primary crop in agricultural fields are known as weeds, and they are fierce and powerful rivals for crops. Their copious seed production, quick population establishment, and adaptation characteristics make them tough competitors and help in their survival. Weeds are often considered harmful because they compete with crops and can be expensive to control, but some weeds can actually be beneficial to agriculture.

INTRODUCTION

Weeds are undesirable plants that can be hazardous, hurtful, or economically disastrous in a particular setting. Primary production and biodiversity are both seriously threatened by weeds. In addition to displacing native species and lowering farm and forest productivity, they also have a major role in the deterioration of land and water. In spite of all the difficulties caused by weeds, they can offer some beneficial and enormous medicinal properties. Some weed species are used as major ingredient in production of medicines and antibiotics.

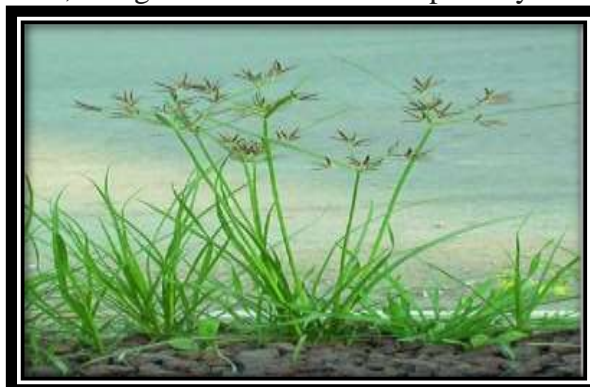
Cynodon dactylon (Arugu)

Cynodon dactylon (L.) Pers. is a perennial grass. Proteins, carbohydrates, minerals, β -sitosterol, flavanoids, alkaloids, glycosides, and triterpenoids are among the many metabolites found in the plant. Anasarca, cancer, convulsions, cough, cramps, diarrhea, dropsy, dysentery, epilepsy, headache, hemorrhage, hypertension, hysteria, measles, rubella, snakebite, sores, stones, tumors, urogenital disorders, warts, and wounds are just a few of the conditions that the plant has long been used to treat in traditional medicine. The plant has biological activity, including antibacterial and antiviral qualities.



Cyperus rotundus (Korai)

Cyperus is one of the most promising health supplementing genera of the Cyperaceae family, housing 950 species, with *Cyperus rotundus* L. being the most reported species in pharmacological studies. *Cyperus* species have been used traditionally to treat a variety of illnesses, including inflammatory conditions, blood abnormalities, menstrual irregularities, and gastrointestinal and respiratory ailments.



***Parthenium hysterophorus* (Mookuthi Poo)**

Parthenium can help with a variety of health issues, including skin inflammation, rheumatic pain, diarrhea, urinary tract infections, dysentery, malaria, and neuralgia. It has been discovered that *Parthenium hysterophorus* is pharmacologically active as a vermifuge, a treatment for neuralgia, and an analgesic in muscular rheumatism. Additionally, this herb is said to be a promising treatment for hepatic amoebiasis. Parthenin, the major constituent of the plant, exhibits significant medicinal attributes including anti-cancer properties. Parthenium compost is a nutrient-dense, eco-friendly bio-fertilizer that can increase soil fertility. It contains more nitrogen, phosphorous, and potash than farm yard manure. Parthenium can be used to remove heavy metals and dyes from the environment. Adsorbents made from parthenium can be used to remove methylene blue from water.

***Amaranthus viridis* (Kuppaimeni):**

Amaranthus viridis L belongs to Amaranthaceae family and Amaranthus genus. Grain of amaranth is a pseudo-cereal with unique nutritional and agronomic attributes. A natural defense against a number of illnesses, including atherosclerosis, arthritis, cardiovascular diseases, cataract, emphysema, retinopathy, neurodegenerative diseases, gastroprotective, anti-gastric ulcer, and anti-colorectal cancer activity, is provided by the bioactive compounds found in amaranthus.

***Phyllanthus niruri* (Keelanelli):**

Phyllanthu sniruri belongs to the family Phyllanthaceae is a perennial tropical shrub, which has been used for a wide range of diseases in South and south-east Asian traditional medicine, including but not limited to jaundice, diarrhoea, dyspepsia, genitourinary infections and renal stones. The leaves and fruit have been used to cure gallstones and jaundice in traditional medical systems like Ayurvedic and Unani therapy. The herb, known as Bhumyamalaki in South India, is thought to cure syphilis, gonorrhoea, and constipation. This herb, known locally as "pitirishi," has become well-known in northern India as a home cure for bronchitis, asthma, and even tuberculosis. This herb's young shoots can occasionally be used as an infusion to treat persistent diarrhea.



***Cassia auriculata* (Aavaaram Poo):**

Cassia auriculata belongs to the family *Caesal pinioideae* is a notable medicinal plant deeply rooted in traditional medicine, plays a significant role in the Ayurvedic systems of India and Sri Lanka. A wide range of pharmacological activities, including as anti-inflammatory, anti-cancer, antidiabetic, and antioxidant qualities, are imparted by the phytochemical makeup. *C. auriculata* has been used successfully in traditional medicine to treat a number of illnesses, including type II diabetes, skin, eye, liver, and urinary tract diseases.



***Tridax Procumbens* (Vettukkaaya-thalai):**

Tridax Procumbens belongs to family Asteraceae is represented with various names, as Mexican daisy, Jayanti (in traditional ayurvedic and in siddha), in tamil Vettukkaaya-thalai and A kohadi (in folk). Alopecia, diarrhea, respiratory issues, and anticoagulant qualities have all been demonstrated to be alleviated by the therapeutic qualities of whole plant extracts. *T. procumbens* extract's most beneficial and promising medical qualities include its ability to promote wound healing, immunomodulation, anti-inflammatory, antibacterial, and bradycardiac actions. With numerous potential therapeutic effects demonstrated by in vitro techniques, *T. procumbens* has long been utilized as a herbal remedy for its anti-oxidant and antibacterial efficacies. According to reports from a few Indian tribal communities, the leaf's juice extracts can be used as an anticoagulant, to promote hair growth, and to treat wounds or injuries to the skin when taken as a liquid suspension.



***Aerva lanata*(SiruKadalai):**

Aerva lanata species belongs to *Amaranthaceae* family. It is self-pollinating, bisexual plant having globose like structure has various phytochemical constituents. Traditionally it was used in treating cough, dysuria, hemiplegic migraine and kidney related disorders. *Aerva* species include antimicrobial, anti-urolithiasis, antiulcer, anti-asthmatic, acute kidney injury, anti-diarrheal activity, antioxidant, antihyperglycemic, antilipidemic, and antiulcer characteristics, according to pharmacological research. Because of its stronger antioxidant impact and other ingredients, *Aerva lanata* has a prospective function in treating a variety of diseases and metabolic problems, leading to better healthcare.

**CONCLUSION:**

Even though weeds invade into cropping area as an alien species which compete with crop for nutrition, sunlight, air and water, these also have many beneficial and useful properties to human beings. Many weed species contain anti-oxidant, anti-cancer, antibiotic, anti-asthmatic, anti-bacterial, anti-viral, anti-fungal and anti-inflammatory properties. The various parts such as stem, leaves, flower have unique properties. *Cynodondactylon*, *Cyperus rotundus*, *Parthenium hysterophorus*, *Amaranthus viridis*, *Phyllanthus niruri*, *Cassia auriculata*, *Tridax Procumbens* and *Aerva lanata* are some of the beneficial weeds among numerous weeds invading agricultural field.

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