

## Use and Phytochemical Activity of Celosia Argentea Linn

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### ABSTRACT

Since ancient time in India. *Celosia argentea* linn. Is widely used in traditional medicine, to cure several disorders such as fever, diarrhea, mouth sores, itching wound, jaundice, gonorrhoea and inflammation. Literature survey from books and journal of traditional Indian medicine revealed that *celosia argentea* linn. has a lot of medicinal properties. Leaves, stem and root have been reported for medicinal activity, the plant has pharmacologically been studied for various activities like anti-cancer, hepatoprotection, anti-diabetes etc. However too many scientific studies have been carried out on this plant. For exploring these traditional uses. The present report is deals with traditional uses and pharmacological activity of *celosia argentea* linn. In the treatment of various diseases.

**Keywords-** *Celosia argentea* linn, traditional uses and pharmacological activity.

## I. INTRODUCTION

People have been using medicinal plants since the ancient time. For many of these plants, when and how exactly the isolation and extraction of their medicinal properties have started are unknown. A large number of wild and cultivated plants are being used for treating various disorder and diseases around the world.

*Celosia argentea* linn. is an herbaceous plant. It is one of the most popular of the field cut flower. *Celosia argentea* commonly known as the plumed cockscomb or silver cocks comb.[1] Its leaves and flower can be used as vegetable which can be used as food in India. Is an annual herb that belongs to the Amaranthaceae family.[2] Theoblate black or reddish black seeds, are usually collected in autumn when the infructescence matures, then the plant is picked or cut, then dried, and the seeds are collected and refined. The dried ripe seed is for clinical use.

It is frequently used in traditional Chinese and Indian medicine for treating eye diseases, ulcer to serve

as anthelmintic, to treat trauma to blood, hydroparalysis etc. recently with the increasing extensiveness of studies on chemical constituent the compound of *Celosia argentea* are also being isolated and characterized including saponins, peptides, phenol, fatty acid amino acids and so on. Modern pharmacological studies manifested that semen *Celosiae* possesses miscellaneous bioactivities such as hepato-protection, anti-tumor anti-diabetic anti-oxidant etc.

In addition with respect to its high-nutritive value, it is also highly consumed as a leafy vegetable in some areas. In this paper *Celosia argentea* is reviewed on biological and pharmacognostic characterization, traditional and folk uses, chemical constituent, pharmacological activities and toxicology.

## II. MATERIAL AND METHOD

In the present review information on *Celosia argentea* linn. were gathered through Indian traditional textbook and searching database and web search.

**Synonyms<sup>[4]</sup>**

Botanical Name: *Celosia argentea* linn.  
English Name: Silver cockscomb, white cockscomb, flamingo feathers, wheat celosia.  
Hindi Name: Garkha, garke.  
Marathi Name: Kurdu kurda.

**Taxonomical classification<sup>[5]</sup>**

Kingdom: plantae – plants  
Subkingdom: tracheobionta – vascular plants  
Superdivision: spermatophyta – seed plants  
Division: magnoliophyta – flowering plant  
Class: magnoliopsida – Dicotyledons  
Subclass: Caryophyllales  
Order: Caryophyllales  
Family: Amaranthaceae  
Genus: *Celosia*  
Species: *Celosia argentea* linn.

**Distribution<sup>[6]</sup>**

India: all over India.  
Other country: Nepal, Bhutan, SE Asia, China, Japan, Korea, tropical Africa, at altitudes of 500-1600m.

**Botanical Description<sup>[7]</sup>**

Silver cockscombs are erect, branching plants, 60-75 cm tall, with narrow- elliptic or lance- shaped, strongly veined leaves 5-15 cm long, and hundreds of tiny flowers packed in dense spikes of silver- white flowers which usually stand above the foliage. They are beautiful plants with soft, dense feathery spikes, produced in profusion. Wonderful straw –like flower when dried. It offers fresh shape and colour to cut flower, or everlasting flower arrangements, with 10-13 cm flower spikes on 60 cm stems. Slender cylindrical pink or rose flowerheads have a metallic sheen because the individual flowers are silvery – white at their bases. Silver cockscomb is found in India.



**Part used:** Leaves, Root, Seed and Flower.

**Chemical constituents**

The aerial part of *Celosia argentea* linn. contains flavonoids betavulgarin. The seed contains amino acid: celogenamide A, celointins A, moroidin, aspartic acid, threonine, glutamic acid, the leaf contains glycosides: citrusin C, indicant.

**Phytoconstituent:** chemical composition is the pharmacodynamics basis of herbs. The chemical constituent of *Celosia argentea*, have long been the pursuit of many researchers, and the multiple classes of chemical constituents have been isolated and identified in different investigations, including saponins, peptides, phenol, fatty acid, amino acid, mineral. Saponins and cyclopeptide Moroidin are found in seed, phenol in leaf, ascorbic acid found in leaf.

**Traditional uses<sup>[8]</sup>**

**Edible uses:** Leaves and young shoots, used as a vegetable, used in soups and stew. The leaves retain a pleasant green colour when cooked. An edible oil can be obtained from seed.

**Medicinal use:** The flower and seed are astringent, and haemostatic and ophthalmic, paracitic and poultice.

They are used in the treatment of bloody stool, haemorrhoids bleeding, uterine bleeding, leucorrhoea, dysentery and diarrhoea.

The seed is hypotensive and ophthalmic. It also has an antibacterial action. Inhibiting the growth of *Pseudomonas*.

It is used in treatment of diarrhea and blood shot eyes. Blurring of vision, cataracts and hypertension.

Seeds are widely used in India for the treatment of diabetes mellitus.

A liquid extract from leaves and flower is used as body wash for convalescents.

The leaves are used in treatment of infected sores, wounds and skin eruption.

The whole plants used as antidote for snakebite. The root is used in treatment of colic, gonorrhoea, and eczema.

**Folk use**

Root decoction used in morning gives good result in kidney stones.

Seed powder taken in gap of 4 hours gives very good result.

Two teaspoon root extracts are mixed with 5 g sugar candy 2gm jira (cuminum cyminum) powder and it is given early in the morning for seven days.

One tablespoonful seeds are powdered and this is boiled in 300ml of water until it reduced to 75ml, this is then administered twice a day for 7 to 10 days.

Leaves and seeds used in case of dysentery, diarrhea, acute abdominal pains, seed used in various disorder of kidney.

**Pharmacological activities:** with our increasing knowledge of chemistry and improvements in related experimental conditions, we have begun to use scientific methods to unmask the truth about pharmacological mechanisms of various subjects such as *Celosia argentea*. Mechanism on hepatoprotection, anti-infection, anti-tumor, anti-diarrhea, anti-diabetes, antioxidant, and its therapeutic effect on eye diseases indicated that *Celosia argentea* has enormous potential for further study and exploitation.

### III. CONCLUSION

*Celosia argentea* is common fern and used as medicinal plant in tradition. several secondary metabolites have been isolated from its leaves, roots, and flower of these secondary metabolites have also been found to possess interesting phase activities and some have served as curves for human and live stock disease.

In various solvent extracts from plants have been reported to exhibit biological activity. hepatoprotective, antioxidant, antimicrobial activity.

The biological activities and chemical constituents report review confirm the therapeutic value of *celosia argentea*.

The wide utilization and the entire investigation done on this plant will possibly help to its effective traditional therapy and will be the window for its uses in discovery of new drugs.

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