

Literary Review: Dhanyak (Coriander Sativum Linn)**Dr.Anuja.V.Thigale**MD Scholar, Department of Dravyaguna,
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Aurangabad**Dr.Jyotsna V.Kulkarni**Asso.Professor, Department of Dravyaguna,
C.S.M.S.S Ayurved Mahavidyalaya, Kanchanwadi,
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Dhanyak commonly known as coriander is a most popular green herb extending from asian belt to western countries. Coriander is an annual herb used from traditional era as flavouring agent. Ayurvedic literature reflects the herb in terms of its rasa, veerya, vipaak, gunas and karma through the Vargas described in various Nighantus. Coriandrol and Coriandryl acetate being the major constituents it also contains many other phytochemicals. Coriander also holds good nutritive values. Modern research depicts its antioxidant, antibacterial, antifungal, antidiabetic activities. The review presents the brief description of coriander in terms of its morphological features, practices of cultivation and collection, classification, ayurvedic overview, phytochemicals and pharmacological properties.

Keywords: Coriander, Rasa, Veerya, Vipak, Karmas, Coriandryl

Introduction:

Coriander is a well known herbaceous and annual plant belonging to the family Apiaceae. Coriander also known as cilantro and Chinese parsley, Mexican or Japanese parsley. The good seasoning quality of the herb turn it into a good elemental ingredient on kitchen counter. This popular green herb is used in curries, chutneys and salads as ingredient as well as for garnishing. It adds good taste and flavour to food and enhances its aroma. Coriander holds number of medicinal properties and hence it is prevalent from ancient times for its use in various diseases and as a component in medicinal formulations. Dhanyak grows, propagates throughout the year, all the parts of the herb are edible however the leaves and seeds are found to be important.

Botanical Description:

Coriander is a small herb with branches and sub branches. New leaves are oval and aerial leaves are elongated. The leaves of coriander are decomposed in structure. There are either no bracts and if present are small and linear. Calyx are often unequal and are small. The petals are obovate either white or purple in colour. The fruit is subglobose with no prominent ridges, the carpels are slightly concave on the inner side. The dimension of seed is thrice as broad as thick.

Geographical Source And Distribution

Coriander is found in India as well as foreign lands. It is cultivated throughout European Countries preferably in central Europe, eastern Europe. It is widely cultivated in Netherlands, Mediterranean region, Bangladesh, China and India. It was well known in England before the Norman conquest. Ukraine is the major producer of oil and controls the world price on a supply and demand basis, in India it is chiefly found in Madhya Pradesh, Maharashtra, Rajasthan, Andhra Pradesh, Karnataka and Bihar.

Cultivation And Collection:

Coriander is cultivated as kharif as well as rabi crop. It grows well in dry as well as cool climate. The early stage of growth requires cool climate whereas a warm to dry climate is essential at maturity. Usually it grows well at the range of temperature 20 to 30 degrees. It needs light to heavy black soil. It also grows well in drained loamy soils. The pH of the soil required for cultivation ranges from 6 to 8. The field is prepared well by three to four ploughings. Farm yard manure added before or last ploughing. Seeds are split open into halves for germination. For better germination the seeds are soaked in water for twelve hours. The split coriander seeds are sown after ploughing, within one to two weeks

the seeds start to germinate. Thinning should be done after sowing at an interval of one month. The coriander plants are pulled when the fruits are fully ripened and are about to turn dry. The plants should be dried and thrashed with small sticks and seeds should be cleaned.

Scientific Classification

Kingdom	Plantae
Subkingdom	Tracheobionta
Phylum	Spermatophyta
Sub phylum	Angiosperms
Class	Dicotyledonae
Order	Apiales
Family	Apiaceae
Genus	Coriandrum
Species	Coriandrum Sativum

Local Names Of Plant:

Marathi	Dhanna
Sanskrit	Dhanya
Gujrati	Konphir
Tamil	Kothamalli
Telugu	Dhaniyalu
Konkani	Kottumbari
Bengali	Dhane 
Sindhi	Dhano
Malayalam	Kothumpalari

Ayurvedic Properties

Ras: Kashaya, Tikta, Madhura, Katu

Gunas: Laghu, Snigdha,

Virya: Ushna

Vipaaka: Madhura

Karmas: Dipana, Pachana, Graahi,

Rochana, Tridosha.

Nighantu Varg:

Bhavaprakash Nighantu: Haritakyadivarg

Dhavantari Nighantu : Shatpushpaadi varg

Kaiydev Nighantu: Aushadivarg

Raj Nighantu: Piplyaadi Varg

Madanpaal Nighantu: Shuntyaadivarg

Priy Nighantu: Shatpushpaadivarg

The medicinal properties of coriander are described in Ayurvedic literature. It is described in Ayurvedic literature. It is found to be a good appetiser, digestant. It is useful in diseases in

Kaasa, Shwas, Krimiroga, Arsha, Trishna, Daha, Jvara, Shweta Pradar. It works as a good diuretic and is used in conditions like Conjunctivitis and vomiting.

Chemical Constituents:

Major Constituents: Volatile oil of the herb contains 90% of D-linalol (Coriandrol) and Coriandryl acetate.

Minor Constituents: It includes monoterpenes, hydrocarbons, Limonene, Borneol, Citronellol, Geraniol, Heterocyclic compounds viz. Pyrazine, pyridine, thiazole, furan, tetrahydrofuran derivatives; Isocoumarin, viz. Coriandrin, dihydrocoriandrin, Coriandrones, Phenolic acids, Sterols, Flavanoids.

Nutrient Composition:

Carbohydrates, Proteins, Water, Energy, Fibres.

Vitamins: Vitamin A, Vitamin D, Thiamin, Riboflavin, Niacin, Ascorbic acid, Vitamin B12

Minerals: Calcium, Magnesium, Sodium, Potassium, Zinc, Iron and Phosphorus.

Pharmacognostical Properties:

Anti-diabetic effect

The seeds of coriander had a significant hypolipidemic action found in an animal experiment. In a group of rats (tissue) the level of cholesterol and triglycerides increased significantly. There was a significant increase in β hydroxy, β glutaryl coA reductase and plasma lecithin cholesterol acyl transferase activity were noted in the experimental group. The level of low density lipoprotein (LDL), very low density lipoprotein (VLDL) cholesterol decreased while that of high density lipoprotein (HDL) cholesterol increased in the experimental group compared to the control group. The increased activity of LCAT enhanced degradation of cholesterol to fecal bile acids and neutral sterols appeared to account for its hypocholesterolemic effect.

Anti bacterial and Anti fungal Properties

The essential oil of Coriander Sativum has been reported to inhibit the broad spectrum of microorganisms. The anti bacterial activity of coriander sativum was found against Staphylococcus aureus and gram negative bacteria like Salmonella, Escheria coli, Klebsiella pneumoniae, Pseudomonas aeruginosa. The

efficiency of Coriander sativum essential oil has been seen against Candida species. The fungicidal property against the strains of candida was tested with lethal concentration values at minimum to the MIC value and ranging from 0.05 to 0.4%

Anti oxidant Activity

Antioxidants are primarily focused by researchers as they prevent the damage to the body caused by reactive free radicals which occurs in degenerative diseases like Alzheimer, Parkinson and Cardiovascular disorders like Atherosclerosis and ischemic heart disease. The antioxidative capabilities of different parts of coriander was evaluated by determining its effect on scavenging the diphenylpicrylhydrazyl radical inhibition of Fe²⁺ induced porcine brain phospholipid peroxidation and inhibition of 15-lipoxygenase. Polyphenolic compounds are present in Coriander sativum are excellent anti oxidants. Positive correlations were found between total Phenolic content in the antioxidant activity.

Hepato protective Activity

Coriander sativum extract protects liver from oxidative stress. The animal study on the plant extract performed with different doses significantly lower the serum glutamate oxaloacetate transaminase (SGOT), Serum glutamate pyruvate transaminase (SGPT). Oral administration of the leaf extract reduced the toxic effects of Carbontetrachloride.

Anti- Convulsant Activity

The anti-convulsant effects of aqueous and ethanolic extracts of Coriander sativum seeds were studied in order to evaluate the folkloric use of this plant, two anti-convulsant evaluation test namely the pentylenetetrazole (PTZ) and the aximal electroshock test aqueous and ethanolic extracts prolonged onset of clonic convulsions and anti convulsant activity of high dose (5mg/kg) were similar to that of Phenobarbital at a dose of 20 mg/kg in the PTZ test. Both extracts in high doses decreased the duration of the tonic seizures and showed a statistically significant anti convulsant activity in the maximal electroshock test.

Sedative Activity

In Iranian traditional medicine Coriander Sativum has been recommended for relief in insomnia. Animal experiment was performed to

determine the sedative and hypnotic activity using the aqueous and hydroalcoholic extract and essential oil and they were found to be present with sedative hypnotic activity.

Conclusion:

The present literature enrolls a brief review of coriander for its importance as a herbal drug useful in disorders and potent herb extending from India to western countries. It reflects the numerous ways in which the coriander can be used. It is a herb with great nutritive values that make it great for use in dietary recipes and medicinal formulations. It is studied for many pharmacological properties by researchers. Studies can be carried out to explore more about the unexplored potency of the plant.

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