

***Tridax procumbens*: A medicinally valuable weed**

***Tridax procumbens* Linn is a typical medicinal plant that belongs to the family Asteraceae which is used in Ayurveda as medicine due to the presence of pharmacological activities. It is an annual or perennial plant, native to Central and South America and occurs throughout India as a weed, commonly known as 'Coat buttons' and Tridax daisy in English. Its leaves have antiseptic, insecticidal and antiparasitic properties. Therefore, it could be used in organic farming for sustainable agriculture in the future.**

T*RIDAX procumbens* Linn. (2n=36), is an annual or perennial plant from the Asteraceae family, native to Central and South America and naturalized in tropical Africa, Asia, Australia and India. It is found all over in India, especially in Rajasthan, Uttar Pradesh, Maharashtra, Madhya Pradesh, Jharkhand and Chhattisgarh regions. It is commonly known as a widespread weed and pest plant. It is also known as Coat buttons in English, Jayanti veda in Sanskrit, Kansari in Hindi, Ghamara (in local language) etc. *T. procumbens* is found along roadsides, waste grounds, dikes, railroads, riverbanks, meadows, and dunes. Its widespread distribution and importance as a weed are due to its spreading stems and abundant seed production. Leaves are simple, opposite, stipulate, lanceolate or ovate, toothed margin, shortly and petiole, hairy on both surfaces. Flowers are tubular shape, yellow composite, bisexual flowers with basal placentation and inflorescence capitulum. The plant has two flower, types ray florets and disc



Leaf of *Tridax procumbens*

florets. Flowering occurs in *T. procumbens* throughout the year. The herb is tolerant to drought, humidity, pollution, seashore, slope and wind. Traditionally, whole aerial parts of *T. procumbens* are useful medicinally, it has been in use for wound healing, hypotensive action, anticoagulant, antifungal, insect repellent and treatment for infectious skin diseases in India. A study was carried out to verify the claims wherein tribal inhabitants of Udaipur district, Rajasthan were using the plant for treatment of diabetes.

Phytochemical constituents

Phytochemical screening revealed the existence of flavonoids, alkaloids, carotenoids, β -sitosterol, n-hexane, fumaric acid, luteolin, glucoluteolin, quercetin, isoquercetin, dexamethasone, lauric acid, rutin, palmitic, myristic, linoleic acid, arachidic, tannins and oxoester. A novel flavonoid named 'procumbenetin' has been extracted from the leaf of the plant. Mineral composition of *T. procumbens* leaves is

calcium, magnesium, potassium, sodium and selenium. Leaf of *T. procumbens* mainly contains crude proteins 26%, crude fibre 17% soluble, carbohydrates 39%, calcium oxide 5%. Quercetin, isoquercetin, luteolin, and glucoluteolin have been reported from its flowers. Oleanolic acid was obtained in good amounts from *T. procumbens* and found to be a potential antidiabetic agent when tested against aglucosidase. *T. procumbens* can be used as a prospective source of provitamin A (carotenoid).

Medicinal properties

Each and every part of *T. procumbens* is useful, having pharmacological properties. The plant product over synthetic compound is the need in the treatment of diseases as it does not have any deleterious effect on higher animals including humans. India is home to a variety of traditional medicinal systems that rely to a very large extent on native plant species for their raw drug material. The work



Flower of *Tridax procumbens*

Tridax procumbens...



Seed production of *Tridax procumbens*

done till date on various pharmacological activities like wound healing activity, antimicrobial, anti-inflammatory, hepatoprotective effect, immunomodulating property, antidiabetic, and antioxidant, bronchial catarrh, diarrhea, dysentery and hair treatment give immense importance to the herb. The qualitative analysis revealed the presence of the biomolecules such as flavonoids, tannins, phenolic compounds, anthraquinone, catarchol, saponins, steroids, and terpenoids.

Summary

Tridax procumbens is found throughout India and have various pharmacological active compounds which allow its use as folk medicine in variety of ailments. It has been widely used in the Ayurveda due to the presence of medicinal properties for wound healing, malaria, diarrhea, dysentery, bronchial catarrh, stomach-ache and reducing blood pressure. It also prevents hair loss and haemorrhage from cuts and bruises. Its flowers and leaves possess antiseptic, insecticidal and parasiticidal properties. *T. procumbens* also shows various pharmacological activities. Therefore, there is a broad area of research in direction of more pharmacological activities of plant and use their properties like antimicrobial and insect repellent properties in organic farming to reducing the input cost in agriculture.

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