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Solanum anguivi : HEALTH BENEFITS

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Introduction:

Fruits and vegetables are rich in different kinds of nutrient and bioactive phytochemical which are crucial for the elements of daily human diet (Wargoitch 2000). These comprises of various phytochemical which has shown the capability of protective some diseases and it also reduces the risk of certain diseases such as – cancer, heart diseases, high blood pressure, diabetes and obesity (Oyeyemi *et al.*, 2015). Solanaceae family contribute an ample medical potential benefit. About 2300 species are reported as good sources of phytochemical and nutritional value in food and pharmaceutical industry (Ralte, 2021). *Solanum Anguivis* is one of the most important *Solanum* species. It is non-tuberous and widely distributed plants and the plants grow well in humid temperature (Kandimalla *et al.*, 2015).



Fig 1: *Solanum anguivi* flower & leaves



Fig 2: *Solanum anguivi* berries

Scientific classification:

Kingdom : Plantae Order : Solanales Family : Solanaceae
Genus : *Solanum* Species : *anguivi*

Morphology:

Solanaceae is an important family; it consists of approximately 98 genera with 2,700 species. This family is responsible for its usefulness in food, spice and medicine. It is shrub,

60 to 250 cm tall with yellow, purple, straight or curved spines all over the plant. Leaves are ovate with oblique base, 5 to 20 cm long and 4 to 18 cm wide. Flower is 8 mm to 2.5 cm across. Fruits are green at young stage and red at mature stage. Fruit is 8 mm to 1 cm in diameter. It is used as therapeutic agent for various diseases (Dalavi and Patil, 2017).

Nutritional Composition:

- The fruits *Solanum anguivi* are good sources of bioactive phytochemicals which include -alkaloids, flavonoids, tannins, saponins, triterpenoids and phenols (Oyeyemi *et al.*, 2015).
- *S. anguivi* fruits constitute a good source of copper, calcium, potassium, sodium, iron, zinc, phosphorus and manganese (Karthika and Vijayakumar, 2017).
- *Solanum anguivi* berries investigated at different stage of ripening. The results showed that fresh berries (the green ones), contained ample amount of vitamin C, polyphenols, tannins and antioxidant activity. While red berries contained high amount of flavonoids (Abbe *et al.*, 2019).

Health Benefits:

- The roots are used in coughs, nasal ulcers, asthma, tooth ache, nervous disorder and fever. It has been widely used in folk medicine as an analgesic for toothache, rhinitis, and breast cancer (Dalavi *et al.*, 2013).
- The grounded leaves were applied on rashes and skin diseases. The fruits parts are used as medicine for high blood pressure, asthma and stomach ache. The leaves and fruits part are rubbed up with sugar and used as external application for itching. Roots were grounded into powder form and used as toothache and insect bites (Ralte *et al.*, 2021).
- They also used as an herbal therapeutic for several diseases such as diarrhea, malaria and prostate diseases (Abbe *et al.*, 2019).
- The presence of tannins in *S. anguivi* fruits accounts for their constricting properties and their physiological role in treating wounds. The fruits of *S. anguivi* also contained phenols and they have been shown to possess antibacterial, antiviral, and anticarcinogenic properties. Tannins are also known to possess antioxidant and antibacterial, as well as anti-inflammatory properties (Oyeyemi *et al.*, 2015).
- Fruit of *S. anguivi* had antibacterial activities and thus have great capability to be developed as antibacterial agents for the treatment of bacterial infections (Arageet *et al.*, 2022).
- Saponin from *Solanum anguivi* fruits has hypolipidemic potential. This may be an indication of progressive metabolic control of *Solanum anguivi* saponin on mechanisms involved in elimination of the lipids from the body
- The extracted fruits of *S. anguivi* exhibited a good activity toward gram-positive bacteria compared to gram-negative bacteria. Generally, gram-negative bacteria are more resistant to antimicrobial agents than gram-positive bacteria. The alkaloids present in the plants have been determined to exhibit antibacterial properties and are used in medicines for treating headache and fever (Tegegne *et al.*, 2021).
- Traditionally the fruit parts are eaten as cooked, raw and as pickle form and some parts are used to mix with other vegetables to prepare a soup.

Conclusion:

Solanum anguivi is a very good source of nutrients with medicinal properties, due to the presence of bioactive, anti-oxidant and antibacterial properties. Different parts of this plant have been traditionally used in various cuisines and for medicine. The fruit parts were grounded in powder form and used in various purposes like to add-up on any foods to enrich the nutritive value of the products. All these medicinal properties are well accepted and implemented. Therefore, *Solanum anguivi* having a positively effect on many ways to bring out a good outcome in different ways. Further studies could be done on this in order to get more nutritional information and health benefits.

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