

A Review of the Magical Indian Shrub *Asparagus Racemosus*

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Abstract

Asparagus racemosus a climbing Ayurvedic plant which is most an important medicinal plant of tropical and subtropical India. The name “Shatavari” means “a woman who possess 100 children”, referring to the shatavari rejuvenation effect in female reproductive organs.. Aromatic and medicinal plants have played significant role in the lives of humans by providing products for both food and medicine. Shatavari has been described to use as antioxidant, immune stimulant, and anti tussive effects. It is also very useful and effective in the treatment of cancer, kidney disorder, chronic fevers, ulcers, chronic fevers etc. Main use of this drug is in female disorders and several menstrual disorders. The present article explores the taxonomy, morphology, cultivation, harvesting and biological properties of *A. racemosus*.

Keywords: Shatavari, *Asparagus racemosus*, medicine, disorder

Introduction

Medicinal plants are the nature’s gift to human being to make disease free healthy life. India is one of the most medico-culturally diverse countries in the world where the medicinal plant sector is part of a time-honored tradition that is respected even today. Owing to the global trend towards improved ‘quality of life’, there is considerable evidence of an increase in demand for medicinal plant. The *Asparagus* genus is considered to be of medicinal importance because of the presence of steroidal saponins and sapogenins in various parts of the plant. *A. racemosus* is frequently used in ayurvedic drug preparations as it is known to treat conditions such as ageing, to boost immunity, improve longevity, vigor, mental function. *A. racemosus* also finds its application in curing neurological disorders, hepatopathy, tumors and dyspepsia¹. Various therapeutic property of root of *A. racemosus* is well documented in ancient ayurvedic literature. In India, it is one of the 32 plant species identified as priority species for cultivation and conservation by the National Medicinal Plant Board (NMPB). The genus *Asparagus* consisted of about 300 species around the world, out of which 22 species are recorded in India. *A. racemosus* is widely distributed across the globe and its distribution ranges from tropical Africa, Java, Australia, Sri Lanka, Southern parts of China and India, but it is mainly cultivated in India.

Some common names

Shatavari, Vara, Narayani, Shatvha, Keshika, Laghuparnika, Shatvirya, Madhura, Shatpatrika, Vrukshya, Dipya.

Classification of Shatavari:

Kingdom : Plantae

Order :Asparagales

Family :Asparagaceae

Sub family :Asparagoideae

Genus :*Asparagus*

Species :*Asparagus racemosus*L

Vernacular names

Sanskrit :Satavari

Hindi :Satavari, Shatawar or Satmuli

Bengali :Shatamuli

Marathi : Shatavari or Shatmuli

Gujarati :Satawari

Telegu : Toala-gaddalu or Pilli-gaddalu

Tamil :Shimaishadavari or Inli-chedi

Malayalam :Chatavali

Kannada :Majjigegadde or Aheruballi

Madhya Pradesh: Narbodh or atmooli

Kumaon :Kairuwa

Rajasthan :Norkanto or Satawar



Fig. 1 Pictures of *Asparagus racemosus*

A. racemosus is an important medicinal plant which is regarded as a ‘rasayana’ which means plant drugs promoting general well-being by increasing cellular vitality and resistance. Use of *A. racemosus* is mentioned in the literature of Ayurveda (Charaka samhita). Traditionally, *A. racemosus* is indicated in epilepsy, vata disorders, brain tonic, helps in regulating cardiac disorders and hypertension.

It is extensively used in male genital dysfunctions, oligospermia, spermatogenic irregularities and other male disorders such as painful micturition. It is also explored in Ayurveda formulations for digestive discomfort, indigestion, amoebiasis, piles and debility. In females, prescribed by the doctors in habitual abortions, weakness of the uterus, excessive bleeding during menstruation. Recent reports and experiments disclosed Shatavari as antidiarrheal, antispasmodic, aphrodisiac, antidyentery, demulcent, diuretic, galactagogue nutritive, mucilaginous, refrigerant, stomachic properties and works as a tonic for human beings. It is also known to reinforce the immune system and protect vital organs like heart, brain and other organs of the body.

Taxonomy

A. racemosus is a plant with a woody stem and has needle-like leaves with small white flowers. Tuberosous roots 30-100cm thick, leaves reduced to minute chaffy scales & spines. The plant is a climber growing to 1-2m in length, found all over India.

Cultivation

Soil And Climate

Plant usually grows in a variety of soils including medium black having pH 7-8, electrical conductivity 0.15, organic carbon 0.79% and phosphorus 7.3 kg/acre. It can be easily grown in sub-tropical & Sub-temperate agro-climatic regions up to 1400 m.

Land Preparation

The soil is given 10-30 cm deep ploughing followed by 1-3 harrowing after a few days. Grasses and weeds are removed. The land is properly levelled and 40-45 cm broad ridges are prepared for plantation, leaving 15-10 cm furrow space as a channel for irrigation.

Nursery Raising And Planting

Seeds are sown in April in raised beds at 5 cm apart to facilitate decay of its hard seed coat by the time monsoon commences. Germination starts in 8 to 10 days after the first shower of monsoon in June. These seedlings were transplanted on ridges at 60 x 60 cm apart and provided bamboo stakes when the plants attained a height of 45 cm. Vegetative propagation is by division of rhizomatous disc present at the base of the aerial stem. The rhizomatous disc develops several vegetative buds around the aerial shoots. The disc is divided in such a way that each piece possessed at least two buds along with 1-3 tuberosous roots. These pieces are planted covering the buds with 1 cm of soil followed by irrigation. The sprouting commences in 8-10 days after plantation.

Weeding

Two weeding's are carried out during the rainy months, thereafter one in next 1-3 months.

Irrigation

Irrigation is given after the rain season is over, at the rate of two irrigations in winter season and one per month in summer season.

Manures, Fertilisers And Pesticides

The medicinal plants have to be grown without chemical fertilizers and use of pesticides. Organic manures like, Farmyard Manure (FYM), Vermicompost, and Green Manure etc. May be used as per requirement of the species. To prevent diseases, bio-pesticides could be prepared (either single or mixture) from Neem (kernel, seeds & leaves), Chitrakmool, Dhatura, Cow's urine etc.

Morphology

Shatavari is a highly branched, consisting of thorn under shrubs. It is a woody climber plant which is 1-1 m in distance and readily grows up a documentation or over other plant. The leaves of the Shatavari look like pine needles, uniform and small in size. The roots of the plant have a finger like structure and are clustered in nature. It has a tiny white colored flower while the plant itself is bitter-sweet in taste. VAishali

Harvest

Month of May and June is suitable for plantations. Generally Shatavari crop does not affect with pest and diseases. Once harvesting 1.5-2 years after transplanting, this continues for 10-15 years.

Biological Activities

Asparagus racemosus (Shatavari) is used by ayurvedic doctors for the prevention and treatment of gastric ulcers, dyspepsia, galactagogue, nervous disorders, inflammation, liver diseases and many other purposes. Double blind trial suggested it can work as a good galactagogue agent. *A. racemosus* is having anti-ulcerogenic activity so working in peptic ulcer conditions in volunteers. In females *Shatvarichurna* and *Shatavari taila* is very useful for use in *panchkarma* for *Uttarbasti* in *Atyartva* (Menorrhoea) conditions. In modern era *Shatavari* very useful in aschyotan of eye conditions of computer related vision syndrome. Inflammation is the body's defense against infection. Before starting treatment for any type of infection, inflammation need to be reduced in order to treat better and to reduce pain in patients. Intra-abdominal sepsis is key causes of mortality following trauma and bowel surgery. Immunomodulating property of *A. racemosus* has been revealed to defend the rat and mice against experimental induced abdominal sepsis.

Discussion And Conclusion

Asparagus racemosus is an important medicinal plant of Indian flora. This plant is used for many purposes and show many biological activities in Ayurveda. Presently it is used in many ayurvedic medicines and as syrup especially for female as a tonic. Due to this, alternative strategies for propagation and conservation are urgently required to prevent the species being threatened. This review is prepared with the help of literature survey and some previously published articles. Shatavari raise the chances of involvement of Ayurvedic doctors, Pharmacologists, Biotechnicians, and other related research field related personnel for vast research on this commercially valued plant.

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