

# ASHWAGANDHA (*Withania somnifera* L.) DUNAL- AN ANCIENT MEDICINAL CROP

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## INTRODUCTION:

Ashwagandha *Withania somnifera* (L.), is an important ancient medicinal plant, used in the Indian traditional medicinal system i.e. Ayurvedic. The local name of ashwagandha seems to have been derived from the sanskrit language. It is combination of “Ashwa” means horse and “Gandha” means smell which means smelling like horse. Botanically, Ashwagandha belongs to the family Solanaceae, genus *Withania* and species *somnifera*. The genus *Withania* represented by 26 species globally, among which, India hosts only two species, *Withania somnifera* and the wild *Withania coagulans*. The chromosome number of ashwagandha was found variable as 2n=24, 2n=48 and 2n=75. Among the ayurvedic Rasayana herbs, Ashwagandha holds the most prominent place. It is known as “Sattvic Kapha Rasayana” Herb. The plant has been highly acclaimed for its beneficial effects in a variety of ailments since ancient times. It is native to Indian sub-continent and is the third important prioritized medicinal plant listed by National Medicinal Plant Board (NMPB). The root of Ashwagandha is economic part due to its good medicinal properties. Ashwagandha is commonly available as a churna, a fine sieved powder that can be mixed with water, ghee (clarified butter) or honey. It enhances the

function of the brain and nervous system and improves the memory. It improves the function of the reproductive system promoting a healthy sexual and reproductive balance. Being a powerful adaptogen, it enhances the body's resilience to stress.



## Common Names:

**English:** Winter cherry, Poison gooseberry, Indian ginseng

**Sanskrit:** Ashwagandha and Varahakarni

**Hindi:** Asgandh and Punir

**Gujarati:** Asan, Asana, Asoda, Asundha, Aksand, Ghodaakun

**Rajasthani:** Sarvgandha

**Punjabi:** Aksan and Asgand

**Marathi:** Askandha, Kanchuki

**Kannada:** Hiremaddinagida, Kanchuki, Asvagandhi

**Tamil:** Amukkira

**Telugu:** Pulivendram, Panneru-gadda, Panneru

**Malayalam:** Amukkuram, Pevetti

## BOTANICAL DESCRIPTION:

Ashwagandha small, woody, erect perennial shrub that grows usually 30 to 150 cm height with tomentose branches. It is an erect growing dicotyledonous plant with fleshy long tap root system, stem and Branches are covered with minute star shaped hairs. Leaves are simple, dull green and ellip. Flowers are small, inconspicuous, greenish or lurid yellow and the inflorescence is umbellate cyme. Fruits type is berry and it is globous, spherical yellow/orange-red/red in coloured, enclosed an inflated and membranous calyx. Seeds are small kidney shapes yellow-coloured. The root is straight, unbranched, bear fibers, outer surface buff to gray yellow, bitter and acrid odour. The plants flowers and fruits during November to February. Economic part of plant is dry root having a good medicinal property due to presence of secondary metabolites.

## GEOGRAPHICAL DISTRIBUTION:

Globally, the species is distributed in Africa, Mediterranean to India and Sri Lanka. In India, it is also found throughout the drier parts of subtropical like Rajasthan, Punjab, Haryana, Uttar Pradesh, Gujarat, Maharashtra and Madhya Pradesh.





## SECONDARY METABOLITES:

- Alkaloids: withanine, somniferine, visamine, withasomnine, choline etc.
- Steroidal compound: ergostane
- Steroidal lactones: withaniferin A, withanolides A-Y, withasomniferin-A, withasomniferols A-C, withanone etc.
- Saponins containing an additional acyl group: sitoindoside VII and VIII
- Withanolides with a glucose at carbon 27: sitoindoside IX and X
- Withanolide glycosides: withanosides I, II, III, IV, V, VI and VII
- Pyrazole derivatives: pseudowithanine and ashwagandhine
- Beside these contents this plant contains starch and amino acids including aspartic acid, proline, tyrosine, glutamic acid, cystine, tryptophan, alanine and elevated amount of iron.

## MEDICINAL PROPERTIES:

Root, leaves, fruits and seeds are commercial parts of Ashwagandha for possessing of medicinal properties. This quality herb possesses therapeutic value against a number of ailments such as antioxidants,

adaptogen, arthritis, asthma, liver tonic, mental diseases, anti-inflammatory, antitumor, anti-stress, mind-boosting, immune-enhancing, rejuvenating properties, male sexual disorders, ulcers, bacterial infections, venom toxins and senile dementia. Ashwagandha root has also been noted to have sex-enhancing properties. Ashwagandha has the ability to restore sexual health and improve overall vitality while promoting a calm state of mind. Ashwagandha increases haemoglobin (red blood count) and hair melanin. From its ancient use to its modern application, it has been proven to be a safe health alternative to millions of patients. Its market potential is huge and growing ever since in the field of supplement, extract, capsule, powder.

## CONCLUSION:

Ashwagandha is recognised as a potential medicinal plant in Ayurveda. The root powder of Ashwagandha is the most economic part due to its multiple medicinal properties. It is a safe health alternative in the era of Ayurveda. Demand of ashwagandha is increasing as a feed supplement, extract, capsule or powder as a commercial product in the market.

