

Rauvolfia serpentina



Rauvolfia serpentina

**Eng : Rauvolfia root, Serpentine,
Serpentine root,
Indian snakeroot**

Hindi: Sarpagandha, Chandra-bhaga

Family: Apocynaceae

**Cultivated for its alkaloid content
which has medicinal uses**

- *Rauvolfia* is a perennial undershrub
- Upto 50 cm tall
- Has characteristically wrinkled tuberous roots reaching 30-50 cm long with a diameter of upto 2.5 cm
- Has whorled, glabrous leaves
- Bears red to pinkish flowers
- Fruits: purplish to black



Rauvolfia serpentina



***Rauvolfia serpentina* flower & fruit**

- **widely distributed in India**
- **considered to be a native of India**
- **grows naturally in**
 - sub-Himalayan tracts from Punjab to Sikkim,**
 - Assam, Nepal and Bhutan upto 1200 msl,**
 - E & W Ghats & Andaman Islands**
- **Cultivated in UP, Mah, Bih, J&K, TN, Ker, Gj**
- **Has become rare in the wild due to rampant collection**

Climate:

- prefers tropical to sub-tropical climate
- with fairly heavy rains between Jun –Aug
- and a temp between 10 - 38°C.

Soil:

- prefers sandy loam to clayey soils
- slightly acidic and rich in humus.

Cultivation:

- is a 1 – 1½ yr crop
- propagated by both seeds and cuttings.
- Crops raised from seeds gives higher yield of roots.
- seeds are sown in well prepared nursery beds
- Seedlings transplanted when 5-8 cm tall (about 2 months old), in well prepared fields (45x30 cm to 60x60 cm apart
- Weeding and hoeing important.
- can be raised as
 - pure crop or
 - mixed crop with maize, cowpea, radish, wheat etc.

- **Parts used:** tuberous roots
- **Harvest:** roots dug out in winter
(Nov in N. India; Jan-Feb in S. India).
protect the root bark and thin fibrous roots
- **The roots are then**
cleaned with water,
dried in the sun,
powdered,
strained and
stored in air tight containers.
- **Av yield / ha:** about 1000 kg



***Rauwolfia serpentina* roots**

Alkaloids:

- alkaloid content of the roots vary from 1.7 – 3 %,
- most of it present in the root bark.
- most important alkaloid : reserpine.
- other alkaloids present
rescinnamine, serpentine, serpentinine,
rauwolfinine, ajmalicine, yohimbine etc.

Uses:

- used in Ayurvedic, Unani and systems of medicine as well as folk medicine.
- root is medicinally important part
- chiefly used in the treatment of high blood pressure (due to its vasodilation property).
- for insomnia (due to its sedative properties)
- for treatment of hysteria
- for various central nervous system disorders associated with psychosis, schizophrenia
- in Ayurveda, used for treatment of insanity.

In traditional medicine, roots are used for:

- treatment of insanity,
- for reducing blood pressure,
- as antidote for insect stings & snake venom,
- for painful affections of bowels,
- to stimulate uterine contractions in child birth.
- for intestinal disorders e.g. diarrhoea, dysentery,
- as antihelminthic,
- for treatment of cholera, colic & fever
- skin diseases
- pneumonia

... traditional medicine contd

- headache
- spleen disorders

leaves used for:

- removal of opacities of the cornea of the eye.

Thank you