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HENBANE

Family: *Solanaceae*

Genus: *Hyoscyamus*

Species: *niger*



Source: <http://www.magialuna.net/h.html>

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General Background

A sticky annual or, more usually biennial herb growing to 1m and with a strong, unpleasant smell. The annual form is almost unbranched, smaller and less downy than the biennial form. It has short soft glandular hairs, more so in the annual form. The biennial form produces only a tuft of radical leaves in the first year which disappear in the winter, the following spring a branched flowering stem emerges from the crown of the plant. The stem is stout and rather woody at the base. Leaves are delicate, slightly lobed with a few small teeth or nearly entire and are arranged alternately with no stalks. Flowers are 2-3cm diameter, bell-shaped, pale-yellow in colour and the biennial form shows purple veining, this can not be seen in the annual form. The anthers of the stamens and the interior, basal part of the flowers are also purple. The fruit is covered with spines formed by the calyx. The exposed cap of the fruit is shed, when ripe, revealing numerous seeds. Henbane is also sometimes referred to as Common Henbane, Black henbane, Poison Tobacco or Hogbean.

Henbane is native to Europe, western Asia and North Africa. It is cultivated for its therapeutic use in North America and in parts of Europe. It thrives in sandy places especially near the sea, elsewhere usually on disturbed ground in farmyards and the like. In Europe it is usually widely scattered as a casual. It has been reported to altitudes up to 4270m.

Details of Quality Characteristics

Henbane is poisonous and narcotic, containing 0.045 – 0.14% tropane alkaloids, especially hyoscyamine and hyoscyne (a hallucinogen) and atropine. All parts of the plant are poisonous, particularly the roots.

Current Production and Yields

The leaves and flowering tops are harvested when the plants are in full bloom. The material is then dried rapidly to enhance colour and quality. Typical yields of henbane are 665kg/ha, the first-year plants yield almost twice as much material as the second-year plants.

Constraints upon Production

Henbane currently requires too much hand labour to make production economical. The plants are subject to legal restrictions in some countries due to their toxicity.

Markets and Market Potential

- Medicinal
- Repellent (mice and rats)

Henbane has been used as a medicinal herb for thousands of years. It is used extensively in modern herbal medicine as a sedative and a painkiller. It is specifically used for pain affecting the urinary tract, especially pain due to kidney stones, and is also given for abdominal cramping. The leaves, flowers and seeds are used for their alkaloids (atropine, hyoscine and hyoscyamine) which are as tranquillisers and sedatives in cases of nervous infections or asthma attacks. They can also be used in tablet form for sea sickness. It provides a valuable treatment for Parkinson's disease, relieving tremor and rigidity in the early stages of the disease. It can relieve neuralgia, sciatica and rheumatism if applied externally as an oil. Hyoscine from henbane is sometimes used as a substitute for opium from *Papaver somniferum*. Hyoscine is also commonly employed as a pre-operative anaesthetic.

Other Information

Growing the plant inhibits the growth of clover. Cattle will avoid grazing henbane due to the rough texture and the repulsive odour produced, hogs can be killed by consuming the fleshy roots of the plants. The leaves and flowers are picked when the plant is in full bloom.

Potato pests are generally fond of Henbane and make it susceptible to severe damage. The crop's worst enemy is the Colorado Potato Beetle which prefers this plant to all the others in the same family. Destruction of the crop by insects is a common problem, sometimes the whole of the foliage is destroyed by the larvae of the leaf-mining fly and the crop is rendered worthless in a week. On emergence the terminal bud of the plant can be destroyed by one of the various species of macro-lepidopterous caterpillars which hide away in the ground.

Mildew is the only disease likely to be a problem in the crop, this can easily be cured by dusting the plants with powdered sulphur.

Research

Useful Websites

<http://www.botanical.com/botanical/mgmh/h/henban23.html> - General information including background, habitat, description, cultivations, harvesting and uses provided

<http://www.wssa.net/subpages/weed/weedstoday/henbane.htm> - General information on background, uses and production methods provided

<http://www.purplesage.org.uk/profiles/henbane.htm> - General information provided on production methods and uses provided

<http://www.drugscope.org.uk/druginfo.htm> - Information on drug related uses of Henbane

http://www.comp.leeds.ac.uk/cgi-bin/pfaf/arr_html?Hyoscyamus+niger - General plant database providing a wide range of information

BioMat Net

Contacts

References

Chevalier, A. (1996). *Encyclopedia of Medicinal Plants*. Dorling Kindersley

Clapham, A.R., Tutin, T.G. and Warburg, E.F. (1962). *Flora of the British Isles*. Cambridge University Press

Cooper, M.R. and Johnson, A.W. (1984). *Poisonous Plants in Britain*. HMSO Publications

