

Last updated: 20th September 2002

HAWK'S BEARD

Family: *Compositae*

Genus: *Crepis*

Species: *alpina*



Source: <http://www.ustermuseum.org.uk/flora.htm>

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General Background

An annual to perennial herb. Stems are 0-120cm with long, erect branches from the base or middle. Leaves are shortly and softly hairy, rarely with short glandular hairs, and are obovate-oblong, obtuse, narrowed to the base and denticulate. 1-20 capitula. Ligules are yellow, purplish on the outer face. Achenes are yellowish to black, marginal and inner kinds.

Hawk's Beard is also sometimes referred to as Alpine.

Details of Quality Characteristics

The seeds of *Crepis alpina* contain acetylenic fatty acids. These will be useful in bio-based paints, inks and coatings due to its highly reactive structure. Hawk's Beard has an extremely low oil content.

Current Production and Yields

Crepis alpina is not yet grown for commercial production. The crop awaits co-ordinated efforts of crop production, processing, product development and marketing before domestication becomes reality.

Constraints upon Production

Not adapted to the European temperate zones for successful production.

Markets and Market Potential

Crepenine acid which can be extracted from the plants can be used for coatings, resins and lubricants. The unusual acetylenase and desaturase genes expressed can provide a renewable source of anticancer and microbicidal agents along with 'green' lubricating oils.

Crepis alpina is not yet grown for commercial production.

Other Information

Research

The Danish Ministry of Food, Agriculture and Fisheries together with the Swedish University of Agricultural Sciences are conducting research to increase the production of acetylenic fatty acids in the seeds of *Crepis alpina*.

Useful Websites

<http://www.ag.ohio-state.edu/~opbc/research/minto.html> - Biotechnology and uses of *Crepis alpina*

<http://www.hort.purdue.edu/newcrop/proceedings1996/V3-060.html> - Underexploited temperate industrial and fibre crops

BioMat Net

[FAIR-CT96-2000 Production of fatty acid esters useable as fuel by fermentation of biomass](#)

[AIR2-CT94-0967 Manipulation of liquid metabolism aimed at production of fatty acids and Polyketides – final report](#)

Contacts

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References

Leel, M., Lenmanl, M. et al, (no date). A7 Cloning of a cDNA encoding an acetylenic acid forming enzyme and its functional expression in yeast. *Michigan State University Press*.

Institute for Food Research: Norwich

Available from: <http://www.msu.edu/user/ohlrogge/abstractw.htm>

Roseberg, R.J., (1996). Under exploited Temperate Industrial and Fibre Crops. *Progress in New Crops*. ASHS Press: Alexandria pp60-84

