

AN OVERVIEW OF SOME IMPORTANT ESSENTIAL OILS AND OTHER NATURALS

EUCALYPTUS GLOBULUS

COMMON NAME: *Eucalyptus globulus* (in Australia it is called Tasmanian Blue Gum)BOTANICAL NAME: *Eucalyptus globulus*

This report on *eucalyptus globulus* oil is the eighth in a series of reports being produced by the IFEAT Socio-Economic Sub-Committee on the importance of specific naturals to the livelihoods of those involved in their production. Previous reports have covered the production, processing and marketing of patchouli, cornmint, citronella, jasmine, geranium, petitgrain and lavender. The twelve products chosen for analysis by the committee have been picked because of their high impact on the lives of those involved in producing them and the large number of people affected.

IFEATWORLD will continue to give updates on the work of the Socio-Economic Sub-Committee, chaired by **George Paul**, over forthcoming months and will publish reports on the other four products that are included in the committee's remit (the next one will be *eucalyptus citriodora*). This is an important study for IFEAT, as the information gathered could help to reinforce Federation views in future legislative/regulatory discussions.

INTRODUCTION

Eucalyptus globulus is one of the most commonly used essential oils. A major use of the oil is for flavouring food, with candies and chewing gum being the most popular products. In fragrance compounds its refreshing impact and "cleanliness" feeling is of great importance in toiletries (toothpastes and mouth refreshing products), as well as in various household cleaning products. The same effect is used by perfumers in fine fragrances. It is also used in pharmacy as an antimicrobial agent, especially in respiratory tract infections and similar problems. It is a very common and efficient ingredient in nasal and sinus sprays and also in cough sweets, ointments and chest rubs and stickers to ease breathing difficulties. For the same purpose it is widely applied in aromatherapy. It has invigorating properties and is used as a skin anti-inflammatory agent as well as a painkiller for rheumatic ailments. *Eucalyptus globulus* oil is used for massage and in healing spa baths as well as for sports massage (for muscle fatigue). It can also be used as an insect repellent.

China is the world's dominant supplier of *eucalyptus* oil produced from *E. globulus*. The two traditional producing areas, in the western part of Yunnan, are Dali and Chuxiong/Baoshan prefectures. Two other important areas are around Kunming and in the southern part of Yunnan, including Honghe and Wenshan prefectures (Ni Bo, 2005).

China produces around 17,000 tonnes of crude *E. globulus* essential oil of which around 10,000 tonnes were exported in 2015 according to customs data from China. The crude oil contains 45-52% eucalyptol.

PRODUCTION AND PROCESSING CHARACTERISTICS

In all the producing areas, oil production was one of the aims of establishing the *eucalyptus* plantations and the total area of plantations is around 4.6 million hectares.

Plantations are mainly found in the western and southern parts of Yunnan Province. Actually, in the southern part of Yunnan Province, the extraction of *eucalyptus* oil by steam distilling the leaves is not the major purpose for the planting of *eucalyptus* trees, although China has been the largest commercial producer. In China, these trees are widely used for constructing timber roof supports in mines. *Eucalyptus* trees reach maturity after five years of growth. In order to help the tree grow better, the farmers have to trim the foliage periodically. Whether to extract *eucalyptus* oil from the leaves or not, the cutting of leaves is indispensable work. During the initial growing period, farmers have to prune the trees twice a year and this work can be reduced to once a year after three years.

The harvesting and distillation season varies depending on the production area:

- Dali: May/June to December
- Chuxiong: October to March
- Kunming and southern part of Yunnan: Non-stop year round activity

The distillation of crude oil is mainly located in the western and southwestern parts of Yunnan Province. Oil distillation is of two kinds. In the first kind, the farmers use their own stills to distill the leaves from their own forest land or purchased from land owned by other farmers. Their only investment is the still which costs around US\$400 and the farmers start the process when they have collected enough leaves. The second kind is where areas of land with *eucalyptus* trees are leased from the local government. Rural workers are then hired to collect and distill the leaves. The stills are provided by the contractors.

Rectification of crude *eucalyptus* oil is undertaken by almost 10 factories in Yunnan Province. They collect the crude oil and produce *E. globulus* oil 80% or any other specification according to the customers' requirements. The factories are able to process 20,000 tonnes of crude oil per year (Le Li, 2009).

SOCIAL AND ECONOMIC CHARACTERISTICS

It is estimated that around 500,000 people are engaged in the *eucalyptus globulus* oil industry in China.

CONCLUSION

The production of *eucalyptus globulus* oil amounts to around 17,000 tonnes (of crude oil) per year, making it the largest essential oil in China and a critical income provider to 500,000 people.

REFERENCES:

- **Cury, F. S.**, 2001. *The Eucalyptus Oil Industry in Brazil*. In: IFEAT International Conference 2001. Buenos Aires, Argentina, 11-15 November 2001. London: IFEAT
- **FAO**, 1995. *Flavours and Fragrances of Plant Origin, Chapter 5: Eucalyptus oil*. Rome: FAO
- **ISO 770**:2002. Crude or rectified oils of *Eucalyptus globulus*
- **ISO 3044**:1997. Oil of *Eucalyptus citriodora* Hook
- **ISO 4720**:2009. Essential oils. Nomenclature
- **Lawrence, B. M.**, 2009. *A Preliminary Report on the World Production of Some Selected Essential Oils and Countries*. Perfumer & Flavorist, January 2009, 34, pp.38-44
- **Le Li**, 2009. *The Outlook for Chinese Essential Oils*. In: IFEAT International Conference 2009. Shanghai, China 18-22 October 2009. London: IFEAT
- **Ni Bo**, 2005. *Trends in the Essential Oils Industry of Yunnan Province, PRC*. In: IFEAT International Conference 2005. Cochin, India 16-20 October 2005. London: IFEAT
- **Yeung, W.**, 2005. *An Overview of Trends in China's Essential Oil Industry*. In: IFEAT International Conference 2005. Cochin, India 16-20 October 2005. London: IFEAT
- **J.J.W. Coppin**, "Flavours and Fragrances of Plant Origin" FAO, Rome 1995

