GERANIUM

Pelargonium x spp.

INTRODUCTION

“The name geranium oil itself is a misnomer, since the commercial types of geranium oil are derived not from any Geranium, but from several species, varieties and strains of Pelargonium.” (E. Guenther, 1950). Moreover, since the genus Pelargonium hybridises so readily it is just as irrelevant to try to specify the name of a species of Pelargonium.

Geranium essential oil is widely used as an invaluable floral component in fragrances, cosmetics, household items and many other products where fragrance is needed. It is an important component of the soap industry and is used in pharmacy and aromatherapy. There are numerous clinical, scientific publications which prove its antiseptic properties and beneficial influence on human wellbeing and psychological condition.

Geranium oil is extremely complex in its composition, making it very difficult to 'copy' with synthetic materials — undoubtedly from a viable economic point of view.

Pelargoniums are in fact native to South Africa (NB: well) we’ll use the term geranium from now on to reflect the most common naming nowadays). It was probably by the end of the 17th century that cuttings were exported to Europe, and from there geranium was eventually re-exported to the French colonies. In North Africa, rose-scented geranium was first introduced in 1847 from Algeria from France. In Egypt, it was introduced by a Frenchman, Charles Garnier by 1930. Egyptian production was interrupted in the aftermath of Nasser’s coup d’état, but from 1970 it was revitalized through the efforts of Ahmed Fakhry amongst others. Since then, Algerian geranium (once the world’s leading producer) has disappeared.

Oil composition of Chinese and Egyptian geranium oil

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Chinese type</th>
<th>Egyptian (North-African) type</th>
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</thead>
<tbody>
<tr>
<td>Citronellol</td>
<td>32 - 43%</td>
<td>25 - 36%</td>
</tr>
<tr>
<td>Geraniol</td>
<td>5 - 12%</td>
<td>10 - 18%</td>
</tr>
<tr>
<td>6,9-Guaiadene</td>
<td>3 - 7%</td>
<td>4.9% - 5.5%</td>
</tr>
<tr>
<td>10-Epi X Eucladrol</td>
<td>0% (not detectable)</td>
<td>3 - 6.2%</td>
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</tbody>
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In China, cultivation is concentrated in Yunnan Province, in the district of Binchuan. In Egypt, the main production areas are in Upper Egypt, mainly Beni-Suef and Fayoum.

In China, the two main producers of geranium oil are China and Egypt. Combined production has reached annually over the past 5 years, 280-350 tonnes, compared to a total world production of some 350-400 tonnes. Over the past six years Egypt has substantially increased its production to reach 200-230 tonnes, whereas production in China has remained at between 80-100 tonnes. India (25-35 tonnes/year), Madagascar (<100 tonnes/year), South Africa (5-10 tonnes/year), Reunion Island (2-3 tonnes/year), Kenya (<100 tonnes/year), Morocco (<105 tonnes/year) and Congo (<405 tonnes/year) are other smaller geranium oil producers and would account for the remaining 20% or less. The presence of these smaller producers has helped the production figures to be considered more accurate in Uganda, Ethiopia, and Zimbabwe.

In China today, cultivation is concentrated in Yunnan Province, in the district of Binchuan. In Egypt, the main production areas are in Upper Egypt, mainly Beni-Suef and Fayoum. Since then, Algerian geranium (once the world’s leading producer) has disappeared from the map, leaving Egypt as the quasi sole representative of the ‘North African’ geranium type besides a minor production in Morocco.

In China, geranium was introduced to the Yunnan Province by a state-owned company in the 1970s. At that time, geranium was planted around Kunming City, in Anning and Chengqing Counties. The scale was small and quantities produced below 10 tonnes per year.

Chinese and Egyptian (North African) geranium oil have substantial oil composition differences, as shown in the table below.

CONCLUSIONS

In Egypt, the production of geranium is increasingly scattered amongst a greater number of growers. However, taking into account the minimum and maximum production figures of those past 5 years and average farm size in the areas concerned, one can safely extrapolate that up to 8,000 families are involved in the production of geranium oil. This figure does not account for middlemen, intermediaries of all sorts (e.g. transportation), factory workers, exporting companies and other family members involved, leading probably to some 30,000-35,000 people being involved and benefiting from the whole supply chain.

Geranium is the top selling oil from Egypt accounting for 45% of Egypt’s national turnover of 100% pure and natural aromatic raw materials. With 2013 prices hovering (on average) around 120,125,136Egyptian pounds per kilogram, one can argue that a sizeable share of some US$5 million reached the aforementioned 8,000 families.

In Egypt, up to 8,000 families are involved annually in the production of geranium oil and around 25,000-30,000 people are involved in the whole supply chain. Geranium plantations are a real alternative for people’s income in economically undeveloped or underdeveloped areas like Shiping County, Yongsheng County and Yuanmo County.

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Globally, one could arguably extrapolate that the economic benefits of geranium oil production (i.e. from agriculture to initial exports) percolate down to a population of some 100,000—150,000 people.