

Timisoara, 25-26 May

NEW TRENDS AND PARTICULARITIES OF LAVENDER CULTURE

Authors: A. R. JIGĂU , F. IMBREA, L. ȘMULEAC, R. PAȘCALĂU
University of Life Sciences “King Mihai I” from Timișoara

Abstract:

Lavender is native to the western Mediterranean basin. The ancient Romans already used it to perfume thermal baths and linen. Saint Hildegard of Bingen, in the twelfth century, gave it a prominent place in its natural pharmacopoeia and, at the same time, it was cultivated in monasteries for its therapeutic properties. Since the Middle Ages, lavender was used in Provence in the manufacture of medicines and perfumes. From the nineteenth century, this aromatic plant saw its cultivation develop in several European countries as well as in America. The region of Grasse, in France, is today the "capital" of lavender, because of its large production of essential oil of this plant, which is used in herbal medicine but also in perfumery. It also grows in the following countries: Portugal, Spain, Balearic Islands, Somalia, India, Sahara and Australia.

We often talk about lavender at all, but there are actually more than 35 species, the best known being true or officinal lavender. It is the most therapeutically versatile species. But, I often advise using super hybrid lavandin in essential oil, which has similar properties and is cheaper. In Banat area, there are several areas cultivated with lavender, both for its aromatic qualities and use but also for the medicinal purposes.

• Introduction

- Lavender, or rather [lavender](#) since there are different species, are aromatic plants with multiple benefits. Very rich in active and olfactory ingredients, they have been used since Antiquity for their virtues and continue to prove valuable in several areas. They are used in various forms, from simple herbal tea to essential oil. Their richness allows them great versatility, calming pain, stress and spasms, fighting bacteria, viruses and fungi, among other properties. A must on a daily basis!
- Lavender in all its forms**
- Wild lavender**
- Lavender belongs to the **botanical family of Lamiaceae**. Like many members of this family, for example [rosemary](#) or thyme, it is an **aromatic plant typical of rocky and arid landscapes** around the Mediterranean. *Lavandula* is a genus that includes many [species](#), 4 of which are present spontaneously in France, cultivated and used for their many benefits:
 - true lavender, also called fine or officinal lavender (*Lavandula angustifolia* syn. *Lavandula officinalis*),
 - aspic lavender (*Lavandula tenuifolia*),
 - lavandin, a natural hybrid of the previous 2 (*Lavandula x intermedia*),
 - butterfly lavender (*Lavandula stoechas*).
- These 4 species are physically very close: a **bushy shrub with evergreen foliage**, opposite gray-green leaves, more or less narrow depending on the species, fluffy. In summer, **long, very fragrant purple-blue flower spikes** form at the end of flower stems. However, slight differences make it possible to differentiate them quite easily:



• Material and method

- Fine lavender shows unbranched, single-spike flower stems, while aspic lavender and lavandin have branched flower stems.
- Fine lavender grows naturally from 800 meters above sea level, while lavender aspic remains on hills, and lavender can be found in plains and up to 800 meters.
- The butterfly lavender bears at the end of its spikes purple bracts that gave it its name. It does not grow in the same soils, preferring siliceous soils.
- Fine lavender shows narrower leaves and its floral spike is long and narrow. The floral ear of lavandin is pointed, while that of lavender aspic is rather short and stocky.
- The scent of each of these lavenders is very different, floral and sweet for fine lavender, green and camphor for aspic lavender, camphor for lavandin.
- The lavandin field shows during flowering a uniform hue because being a hybrid, it is sterile and each plant is a clone, flowering at the same time and in the same way. In addition, lavandin blooms earlier, between June and August, than fine lavender, which is also grown although in smaller quantities.
- The benefits of wild lavender** will be lavished after preparation, from the infusion, the simplest, to the [decoction](#), through honey, essential oil, and even soap. Each of these preparations will offer **different applications, depending on the active ingredients extracted**. These components are all present in the essential oil secreted by the flower. It is secretory hairs located on the plant that diffuse it. It serves to repel aggressors and attracts [pollinating](#) insects.



• Results and discussions

- Lavender infusion**
- This preparation consists of leaving about ten minutes of lavender flowers, dried or fresh, in simmering water. The infusion of lavender **has many benefits, just like lavender tea** : it allows you to relax, because it slows down the activity of the nervous system, it promotes digestion, can calm migraines and stop angina if taken at the very beginning ...
- Lavender decoction**
- The decoction is prepared as follows: put lavender flowers (fresh or dry) in water brought to a boil and [boil](#) for 1 minute, then turn off the heat and let infuse for 10 minutes. It will be **used in massage** on sore muscles, contracted, on sprains or strains ...
- There are several methods of making lavender essential oil, but it is with traditional extraction that the resulting product is of better quality, which is very important for medicinal use.
- The plant is first put to dry, in order to lose the maximum water contained in its tissues. It is thanks to the water vapor diffused in the plants that the essential oil is recovered. This vapor charged with the totum (all the biochemical molecules that make up the plant) is then cooled to return to liquid form. The essential oil is not soluble in water, so it is then easy to separate the 2 liquids.
- An essential oil will contain all the volatile active ingredients contained in the plant and will therefore present in a concentrated way all the medicinal properties of the plant. **Lavender essential oil** is a **benefit for the face**, to **sleep well**, to treat inflammation and stress, for all other **lavender** prescriptions. Official lavender EO or asp calms the bites of mosquitoes and other insects.



• Conclusions

- Lavender, a precious medicinal plant**
- Lavender is widely used in herbal medicine and aromatherapy. True lavender and lavandin are widely cultivated, the first for perfumery, the second for industry because of its slightly less delicate and more camphor perfume. Fine lavender offers a very good quality essential oil, which earned it the AOC 'Huile essentiel de Haute-Provence'.
- The active ingredients of lavender**
- Relatively different in terms of chemical composition (fine lavender essential oil contains no less than 300 components), each of these 3 lavenders has specific properties:
 - Fine lavender EO** consists mainly of linalool (a monoterpene) and linalyl acetate, which gives it antibacterial and antiviral properties. It is also antioxidant, anti-inflammatory, analgesic, antispasmodic, healing, anxiolytic, sedative and insecticide.
 - Aspic lavender EO** contains linalool, camphor and cineole. It is antitoxic, antiviral, immune system stimulating, fungicidal and analgesic.
 - Lavandin EO** is rich in linalool and linalyl acetate, with some camphor and cineole. Very effective antispasmodic, it is also a muscle relaxant, anti-inflammatory, healing and relaxing with sedative effects.
 - Butterfly lavender EO** is composed of 1,8-cineole and fenchone. It therefore displays antibacterial and antifungal properties against many pathogens. It also has recognized antioxidant effects. Like fine lavender, it shows significant anxiolytic effects. The cineole and camphor it contains also make it insecticidal. It is also anti-convulsant.
- In addition, the active ingredients differ depending on whether essential oil, a decoction or an infusion are used (the components are more or less well extracted during preparation, except for the essential oil which, when well extracted, recovers all the components of the plant):
 - The infusion of fine lavender flowers** (internal or external) will be used for its antiseptic, antispasmodic, diuretic properties.
 - Decoction of fine lavender flowers** (internal or external) is hypotensive, antioxidant, anti-inflammatory, antiseptic.
 - The essential oil of fine lavender** internally has an action on the parasympathetic nervous system, is hypotensive, calming, antiseptic. In external use, it is calming, toning, stimulating, antibacterial, healing.

