



## *Lavandula angustifolia*: A Popular Herb for Home Gardens

(\*Tulshika Choudhary)

Agriculture University, Jodhpur

\*Corresponding Author's email: [tulchika@gmail.com](mailto:tulchika@gmail.com)

*Lavandula angustifolia*, commonly known as English lavender, is a species of flowering plant in the mint family, Lamiaceae. It is native to the western Mediterranean region, primarily the Pyrenees and other mountain ranges in northern Spain, but also in southern France, Italy, Croatia, and Bosnia and Herzegovina. It is widely cultivated as an ornamental plant for its fragrant flowers and attractive gray-green foliage. The flowers are pinkish-purple in color and the plant has a strong, sweet scent. The essential oil of *Lavandula angustifolia* is used in aromatherapy and perfumery. It is also a popular choice for gardeners, as it is easy to grow and can be used in a variety of ways. Lavender cultivation is a rewarding experience that can provide a beautiful addition to any garden.

### Uses and Health benefits of Lavender

There are various forms of lavender products available which are commercially made from lavender dried leaves and plant essential oils.

- Home decorating.
- Air freshener.
- Lavender essential oil is used in massage therapy.
- Lavender is good for skin health (helps to treat acne and eczema).
- Helps in detoxifying the skin.
- Helps in healing wounds/burns/insect bites.
- Helps in the relaxation of muscles.
- Lavender oil is good for hair health (Treats dandruff, hair fall, lice etc. and works as a good conditioner).
- Helps in treating insomnia.
- It is a wonderful herb to treat anxiety and depression.
- Helps in curing headaches and aids in digestion.
- Relieves nausea feeling.
- Lavender can aid in relieving bloating.
- Lavender is the best natural perfume.

### Lavender cultivation practices

English lavender is commonly grown as an ornamental plant. The lavender plant is a perennial flowering aromatic herb or shrub that can reach a height of 40 cm to 80 cm. The leaves are evergreen, opposite, oblong-linear, 2–6 centimeters long, and 4–6 millimeters broad. The flowers are pinkish-purple (lavender-colored), produced on spikes 2–8 cm (1–3 in) long at the top of slender, leafless stems 10–30 cm (4–12 in) long. It is popular for its colorful flowers, its fragrance, and its ability to survive with low water consumption. It does not grow well in continuously damp soil and may benefit from increased drainage provided

by inorganic mulches such as gravel. It grows best in Mediterranean climates similar to its native habitat, characterized by wet winters and dry summers. It tolerates acid soils but favors neutral to alkaline soils, and in some conditions it may be short-lived. Lavender can be grown in backyards, pots/containers as well. Few dozens of lavender plants growing in the backyards can make you rich. The commercial cultivation of lavender on large scale can fetch crores of rupees.

In India, the lavender crop is cultivated in low rainfall regions and on the slopes of hills of Himachal Pradesh and Uttar Pradesh. The lavender crop is also successfully grown in the Kashmir valley region.



### Lavender Varieties

There are 4 types of Lavender plants grown in India.

#### 1. True Lavender Variety

- This variety is the longest-grown lavender species and is native to the Mediterranean area.
- It can be grown 1600 to 1700 meters above sea level.
- The flowering shoots of true lavender plants are about 20 to 40 cm long & single stalked.
- The grayish-green felty pubescent leaves are about 30 to 50 mm long.
- The essential oil content of this variety is about 0.5 to 0.1%.

#### 2. Spike Lavender Variety

- This variety of Lavender originated in the Mediterranean region and can grow at 250 to 700 meters above sea level.

#### 3. Lavandin Variety

- This variety is a hybrid of true lavender and spike lavender.
- This variety can be grown at heights of 800 to 1000 meters above sea level.
- This variety of Lavender shrub can reach a height of 0.8 to 1 meter.
- This variety plant has a hemispherical shape.
- The spikes of lavender may grow to 0.6 to 0.9 meters and generally it is branched.
- The leaves of this variety are thin, lanceolate, opposite, and green in color without pubescent.
- The essential oil content of this variety is about 0.9 to 3%.

#### 4. Sher-e-Kashmir Variety

- This variety is released by CIMAP, Lucknow (UP). This is a superior clone with about 100% higher essential oil yields.

### Climate

The ideal climatic conditions are cool winters and cool summers. Lavender is a temperate plant and can tolerate drought and frost conditions. You can get more yields when cultivated

at higher altitudes. The lavender crop requires good sunlight as well. In case of poor lighting conditions, one can observe less yield of flowers and reduced essential oil content.

### Soil Requirement

Light well-aerated dry and calcareous soils with slopes rich in organic matter are best for lavender cultivation. Lavender is very sensitive to waterlogging. The ideal soil pH for getting higher essential oil ranges from 7.0 to 8.3. The best part of Lavender is, it can be cultivated even on poor soils and eroded soils. In commercial Lavender cultivation, soil testing helps to find out the suitability.

### Land Preparation

Prepare the land by giving 2 to 3 deep ploughings to remove any weeds, plants and to bring the soil to the fine tilth stage. You can add appropriate well-decomposed farmyard manure (FYM) during land preparation to enrich soil fertility.

### Propagation

Propagation of Lavender can be done by Seeds, Rooted Cuttings (vegetative method), Tissue Culture, and Layering.

- **By Seeds:** Seeds should be sown in prepared beds, 1 meter wide, in an autumn season either through broadcasting method or in row method with 10 cm to 12 cm apart for raising nursery. Small seeds should be mixed with fine coarse sand for uniform distribution. The seed rate of 2 grams is required to cover 1 square meter area. The sowing depth should be about 1 to 2 cm. The seeds should be covered with farmyard manure and should be left in this stage during the winter season. The seeds usually germinate in spring at 14°C to 15°C. Make sure to keep the nursery bed moist always by regularly sprinkling the water. Make sure to prune Lavender seedlings periodically to prevent follicle formation.
- **By Root Cuttings:** Cuttings of Lavender should be taken from healthy mother plants grown outdoors. Use rooting hormones to encourage rooting growth. 10 to 15 cm cuttings should be made from young top shoots of the plants. The bottom 2/3<sup>rd</sup> is stripped from leaves. 1/2 to 2/3<sup>rd</sup> of the cuttings should be inserted in a proper growing medium and propagated in trays or seedbeds. A mixture of 30% fine farmyard manure/garden compost and 70% sand works well. In the Kashmir region, black polythene covers are used to protect the seedbeds from cold weather.
- **By Tissue Culture:** Lavender tissue culture propagation is very expensive and this method of propagation is done for the mass propagation of lavender from selected mother plants. The advantage of tissue culture is to produce disease-free, and genetically identical plants.
- **By Layering:** In this method of propagation, select a long, healthy stem and remove 12 to 15 cm of foliage, leaving 10 cm of foliage at the tip of the branch. Cover the 9 bare sections with moist soil and the branch will root at the soil level. Cut the new plants from the mother plants after rooting. The plants should be replanted in the prepared field after the onset of roots usually from 6 to 12 weeks. A liquid organic feed should be provided on a weekly basis.

### Planting season

Autumn planting is best in mild climatic conditions. This ensures that plants can get established very well just before winter & in spring will grow quicker. Spring planting is the only option in cold winter areas. Planting should be done after the frost is passed.



## Planting and Spacing

Transplantation of Lavender seedling should be done either in autumn or in spring. Lavender is planted at a distance of 4 feet in between rows and 30 cm to 40 cm inside the rows. The plant density of 20,000 per hectare produces the highest yield. Earthing up of soil should be carried out around the seedlings for the root establishment.

## Irrigation

In commercial Lavender cultivation, irrigation should be provided for the first 2 years until the crop has been established. In the case of lighter soils and low rainfall regions, irrigation should be provided at crucial stages of plant growth. During flower initiation, you must ensure proper irrigation. Avoid overhead irrigation such as sprinkler irrigation as it can increase disease problems. Adopt drip irrigation in Lavender crop as it can save water and control weed growth.

## Manures and Fertilizers

Lavender crop responds very well to fertilizers. The recommended N, P, K are 100kg, 40kg, 40kg per hectare. As a basal application, use 20 kg of 'N' full dose of P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O. The remaining 80 kg of 'N' should be applied in two splits doses during each year.

## Intercultural Operations

Hand hoeing and mechanical weeding (with a tractor-drawn cultivator) should be carried without damaging the roots. Provide mulching to reduce weed emergence and increase soil moisture retention. Flower buds of Lavender should be pruned off during the first two years period to help the plants to develop a strong framework.

## Harvesting

Generally, Lavender plants start flowering earlier in warmer and low altitude regions and flowering starts late in high slopes. As part of harvesting, flowers should be cut with a stem length of 10 cm. In the Kashmir regions, the Lavender crop would be ready for harvesting in August-September.

## Yield

The oil quality and yield depend on variety, soil, agro-climatic conditions, and the process of distillation. Under optimal medicinal/herbal cultivation practices, one can obtain a yield of 15 kg per hectare with an oil content range of 1.2% to 1.5%.

## Lavender Recipes

- 1) Grilled pork chops with lavender and rosemary: Pork chops rubbed with a mixture of extra-virgin olive oil, minced garlic, dried lavender, rosemary, lemon juice, kosher salt, and black pepper. Grilled over flame.
- 2) Peach lavender jam: A fruity preserve made with peaches, lavender-infused water, lemon juice, granulated sugar, and fruit pectin.
- 3) Lavender lemonade: A refreshing summer beverage made with lavender-infused simple syrup, fresh lemon juice, and cold water.
- 4) Lemon-lavender tea cookies: Classic shortbread cookies made with dried lavender flowers and lemon zest.
- 5) Lavender roast potatoes: Halved fingerling potatoes tossed in olive oil, dried lavender, kosher salt and black pepper. Oven roasted until golden and tender.
- 6) Lavender focaccia: Homemade focaccia bread made with dried lavender flowers.
- 7) Lavender honey: Honey infused with chopped lavender blossoms, heated, steeped, and strained to remove the flowers.