

# VETIVER: A VERSATILE MULTIFARIOUS GRASS

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The fragrant, medicinal and soil erosion control properties of vetiver grass and its roots have been very popular since ancient times. The term "vetiver" comes from the Tamil word "vettiver" and it is also known as "vetivert" in Reunion Island, where it is believed to have originated from India. *Vetiveria zizanioides* (Linn.) Nash is the scientific name of vetiver which is a member of the Poaceae family and is also known as the *Khas-Khas*, *Khas*, or *Khus* grass, native to India. Vetiver is a multifunctional grass that is both commercially and environmentally significant. It is a perennial grass with fragrant and extremely valued fibrous adventitious roots. This tufted grass spreads throughout the India's plains up to an altitude of 1200 metres. It produces spongy branched root system with fine rootlets, containing fragrant oil which is a perfume by itself. Leaves of the vetiver plant are long and linear with sharp margins and flowers appear in brownish purple inflorescence. Unlike some other grasses, vetiver's fibrous root system grow downwards, 2-4 m deep and are highly fragrant. Vetiver is a strong plant that can withstand harsh environmental conditions such as poor soil, drought, waterlogging and deep water flow.



Hence, it is also appropriate for planting in infertile soil, desolate plains and large open fields that would otherwise not be used for regular farming of crops. Vetiver is not grown in pots or containers due to their extensive roots system, the plant is only grown in large, sunny areas in sandy-loam soil. Propagation is performed through division of offsets from old plant and in India, the plantation occurs in June. The most common varieties grown in vetiver are Sugandha, Dharini, KS-1, and KS-2. The cultivation of vetiver is widely scattered over Kerala, Karnataka, Tamil Nadu,

Andhra Pradesh, Rajasthan and Uttar Pradesh therefore, it can support the livelihoods of Indian farmers. The North Indian type vetiver essential oil has a good export potential due to the high quality of vetiver oil manufactured in India as compared to other countries such as Indonesia, Pakistan, Senegal, Sri Lanka, Brazil and Haiti. As a result, it is considered to be the best in the global market and attracts a very high price in international market. The vetiver essential oil can also be used as medicinal aromatic plant due to its application in traditional medicine, pest management and as aromatic materials.

## BENEFITS OF VETIVER:

Different part of the vetiver grass i.e. the root, stems, leaves etc. could be used to treat a variety of health problems such as mouth ulcer, boil, epilepsy, burn, snakebite, fever, rheumatism and headache etc. Vetiver grass is grown for a number of reasons including its ability to stabilize water and soil and protect it from erosion. Vetiver is good for animal feed and its fibrous features make it suitable for handicrafts, ropes and so forth.

- ✿ Ayurveda believes that vetiver has a sweet, fresh, relaxing and calming properties due to which it is utilized in the production of Khus syrup and Khus oil.
- ✿ Vetiver can be frequently employed for environmental protection because of its efficiency in regulating runoff, absorbing excess moisture, nutrients and harmful chemicals.
- ✿ Vetiver grass is cultivated as an attractive ornamental plant in South India and can be used to build rooftop of small houses and in the manufacturing of mud bricks for home construction. In Hindu temples, vetiver grass garlands are used to decorate the murti of Lord Nataraja and it is a popular offering to Ganesha.

- ✿ For decades, the vetiver plant roots have been utilized throughout Asia for their aroma and are woven into fragrant matting and screens. The dried scented roots can also be used to produce curtains, fans and other decorative items because when moistened, the product releases a pleasant cooling fragrance for an extended period of time.
- ✿ Dry vetiver roots are used in evaporative coolers in India instead of straw or wood. The odour generated by algae and other microbes can also be reduced using vetiver root padding in such coolers.
- ✿ Vetiver root water has several beneficial health effects for the body. It is highly cooling to the system, reducing body heat and it is also an excellent powerful antioxidant and alkaliser. It not only reduces inflammation and relaxes the body but it also heals the mind and balances negative emotions.
- ✿ Vetiver fibre hat or cap protects the individual from the intense and harsh sunlight. Before wearing these hats in the midday sun, a small amount of water is sprinkled on them to protect against sunstroke.



# VETIVER ESSENTIAL OIL

The vetiver essential oil is extracted from the roots of vetiver plant using steam distillation method and it is also known as the "Oil of Tranquility" and "The Fragrance of the Soil" due of its earthy, sensual, and very soothing fragrance. Vetiver essential oil is mostly composed of sesquiterpenes (3-4%), sesquiterpenols (18-25%) and sesquiterpenones (7-8%). Among these, the most economically important active ingredients are khusimol,

-vetivone, and -vetivone, which account for approximately 35% of the oil. Vetiver essential oil and its components such as vetivone, zizanal, epizizanal, and nootkatone have anti-inflammatory, anti-septic, aphrodisiac, cicatrisant, nervine, sedative, tonic, and vulnerary characteristics and are widely used in aromatherapy. It is also used in a variety of herbal skin care products including soap, face wash and lotions. Vetiver essential oil is a key component found in 90 percent of western perfumes and it is well-known in India as 'Khus attar' a typically intense scent largely preferred by males.

The demand for vetiver oil is rising in both India and the global market as a result of its distinct odour for which it is utilized in both



the flavour and fragrance sectors. Another reason for the growth in demand is that this oil cannot be supplemented by regenerated oil and cannot be produced synthetically. It is utilized as a base note in flavour and aroma with usage ranging from 20-50 percent to 60-70 percent which means it has big market opportunity because there is no doubt about its demand. In 2019, the global vetiver oil market demand was estimated to be 408.8 tonnes. It is expected to grow at a volume-based CAGR of 7.8 percent from 2020 and 2027.

## IMPACT OF COVID-19 PANDEMIC ON VETIVER ESSENTIAL OIL MARKET

COVID-19 had an adverse impact on the vetiver essential oil market in 2020. One of the major consumers of vetiver oil is the spa and cosmetics sectors. Due to the pandemic crisis, spas and other health centres were temporarily shuttered during the lockdown to combat the COVID-19 spread. In order stay safe, people did not regularly use such services even after the lockdown which has a negative influence on the market demand for vetiver oil.

Meanwhile, the need for personal and household cleaning products has risen over this time period in which vetiver oil is employed due to its antibacterial properties that in turn drives market demand. In the short term, the market is likely to increase due to rising demand for flavored fragrances in the leisure and relaxation segment as well as increasing demand for vetiver oil in the food and beverage industry. On the other hand, the high cost of the items and adverse conditions caused by the COVID-19 pandemic are projected to impede market growth.

The increasing utilization of vetiver oil in the healthcare sector is anticipated to provide several attractive possibilities for market growth. Because of the increased use of personal care and cosmetics items as well as the increasing trend of aromatherapy, the spa and relaxation sector is predicted to dominate the market. The Asia-Pacific region is likely to lead the vetiver oil market due to its increased growth in end-use sectors such as perfumes, cosmetics and medicines in countries such as India, China, and Japan.

