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Essential Oil Of Lavender And Its Conservation By Hydrophonic Technique

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Abstract:
Essential oil of Lavender is a popular and complementary used in Indian medicinal system. Lavender is grown in all 20 districts of Jammu and Kashmir UT and has changed the fortunes of farmers under "Aroma Mission or purple Revolution" as an initiative of the central government. The oil obtained from the lavender traditionally believed to have sedative, carminative, anti-depressive and anti-inflammatory properties in addition to its antimicrobial properties. In Kashmir valley lavender is grown both commercially for essential oil as well as for ornamental.

Keywords: Lavender. Essential Oil , Hydroponic technique, Aroma.

Introduction:

Cultivated of Lavender has changed fortunes of the farmers in J&K(UT) under Aroma Mission of purple Revolution as a centre sponsored scheme, pertinently Lavender revolution was launched by Union Minister of Science and Technology in 2013 through council of scientific and industrial research (CSIR). Under this mission, first time formers were given free lavender were saplings where those already grown lavender were charged Rs 4- 5 sapling. Farmers of J&K are happy with farming of unconvential aromatic plants for essential oil. They mission is to enhance the essential oil that are of great demand by the aroma industry through out world. The present study was carried out to

- To assess the area under purple aromatic cultivation.
- To know the current status of value of essential oil from Lavender.
- To know total land under Lavender cultivation.
- Conservation of Lavender through hydroponic Technique.

Material and Methods:

Frequent field trips and visits were done by researchers to know the present status of the cultivation of lavender through aromatic mission by CSIR Jammu and Kashmir has 20 districts and lavender is practiced in almost whole of J&K particularly in Kashmir valley where fields trips has been done by the researchers. The purpose of CSIR Aroma Mission is envisaged to bring transformative change in the aroma sector and rural employment. It is expected to enable Kashmir farmers and the aroma industry to become global leaders in the production and export of some essential oils in the pattern of methol mint.

Lavender has been known to have anxiolytic, anti-inflammatory, antinoceptive, antioxidant, and antimicrobial effects. Herbal products like lavender essential oil may offer a solution to the problem of antibiotic resistance, invasive treatments, and side-effects or eve drug addiction. These properties made lavender an important production aromatic industry.

Fig1 showing

Sapling of lavender
Plants in poly bags
To conserve Lavender by hydroponic technique

In this technique of conservation of Lavender plants by solid medium culture differs from solution in that Lavender plants are grown on solid substrate to which nutrients solution are added. The hanging bags technique just like drying of vegetables and fruits for winters in Kashmir is well aware of this technique. In this hanging bag technique around one meter long media filled polythene bags are used. Lavender plants in net pots are placed into holes cut into the sides of the polythene bags. Nutrient solution is then added to the polythene bag when the grow bag technique is used, polythene bags contains media are place on the ground and small holes are made into the bag and seeding or seeds are the placed inside it and nutrients solution is fed to them on regular basis. In this way we can conserve Lavender plants of Kashmir UT as this is the simple technique which is just like cultivation of plants in pots instead this polythene bags are used.

A) **B)**

Figs2.(A-B) showing how hydroponic bags are prepared for cultivation of Lavender by research scholar Sartaj Ahmad Dar

Result:

Lavender oil (primarily L angustifalia) has been found to be active against many species of bacteria, including those resistant to antibiotics such as methicillin – resistant strapylococcus aureus (MRSA). This is

further complicated by the fact that the majority of research into lavender essential oils has been based on oil derived from lavender. The lavender oil is an essential oil obtained by distillation from the flower species o lavender. Lavender produces two types of oils lavender flower oil, and colour oil, insoluble in water, having a density of 0.879g/ml; and Lavender spike oil, a distillate like all essential oils,Its is mot pure compound . It is a complex mixture of photo chemicals, including linalood and linalyl acetate.

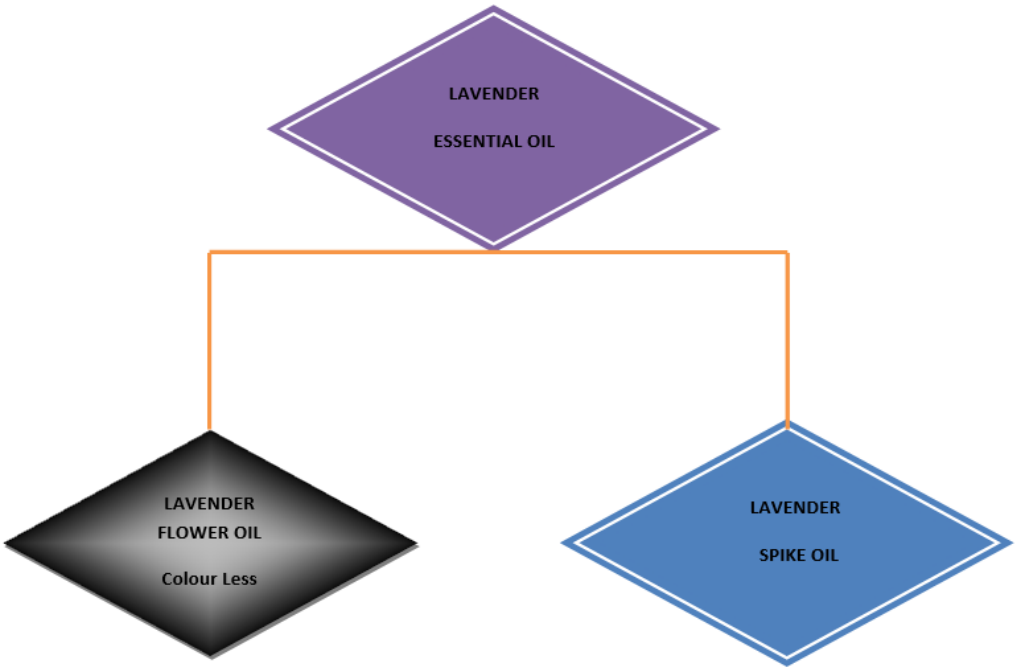

Fig3. Diagrammatic representation of Lavender essential oil

Uses of Lavender Oil:

The purple plant has may uses in aromatic world, a few used of lavender are as follows:

- ❖ Healng of Acne
- ❖ Would healing
- ❖ Heals sunburns
- ❖ Reduce Anxiety
- ❖ Treating Eczema
- ❖ Cures insomnia

In antibacterial heavy weights, this floral oil is an easy choice for natural cleaning that is why it is often found in soaps, shampoos and sprays. Lavender oil is an effective antibacterial, antifungal against fungi both agricultural and medicinal importance especially in inhibition of germ tube growth. It is also effective against agricultural fungi.

Discussion:

Lavender is known for its purple flowers in Kashmir, lavender is known for its antiseptic, antimicrobial, anti-inflammatory antibacterial, and antifungal properties. True Lavender (Lavender angustifolia) is the best variety to use for healing and aromatherapy, as the hybrid oils are much higher in camphor and are more stimulating than calming.

The rare Kashmir Lavender essential oil emanates a sweet aroma with balsamic undertones that act as a natural relaxant. It soothing floral fragrance can be used as a perfume or to relieve headaches and calm the mind. It also has anti-fungal and anti- bacterial properties. A few drops in a hot bath and aid in a good night's sleep.

Notably, Doda district is leading the way and four distillation units have been step up by CSIR-IIIM Jammu in the district Doda reaches these plants for extraction of Lavender Oil. According to Lavender farmers, the

selling of at least on litre of it oil fetches them Rs10,000. These are two famous lavender parks in Kashmir i,e Phalgam resort and central Nunar are witnessing a huge tourist rush.

Fig 4 showing Lavender park of phalgam Jammu and Kashmir UT

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