Importance Of Mint Farming

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INTRODUCTION

Mint (Mentha) is a medicinal plant that contains several bioactive components. It has been used as a flavour enhancer in meals all around the world. It is thought to have a higher quantity of antioxidants due to the presence of phenolic acids and flavonoids. Mint has been linked to physiological benefits for humans such as protection against microbes, anticancer and antiallergenic properties, positive effects in lowering blood sugar, analgesic properties, curing loose motion, indigestion, gas and irritation bowel syndrome, relieving respiratory problems, wound healing activity, and being good for breastfeeding. The current study examines evidence-based studies on the bioactive components and health benefits of the mint plant.

Plants contain hundreds of bioactive molecules that are harmless and mostly efficient alternatives with practically no unwanted side effects. These bioactive chemicals have a wide range of physiologically beneficial effects, including antibacterial, antineoplastic, antioxidant, hypoglycemic, analgesic, antidiarrheal, and wound care capabilities. These plants contain natural compounds in both pure and mixed forms that may be acquired by extraction. The chemical variety of such plants cannot be duplicated by others; hence, the possibilities are limitless. As a result of the growing desire for chemical variety in the selection process while looking for natural food, global awareness of eatable flora has grown. Because of diverse types of bioactive chemicals, the medicinal benefits of herbal plants have risen. These bioactive substances compounds aid in the treatment of a variety of ailments. (Amiri et al., 2021; Duraipandiyan et al., 2006; Wani and Kumar, 2018).

Due to the development of adverse effects and microbiological resistance to chemically synthesised medications, specialists turned to ethnopharmacognosy. These phytochemicals are not only safe but also excellent substitutes with few adverse effects. There are hundreds of plants around the globe that have medicinal properties. It should be our aim to introduce such plants to everyone so that everyone can benefit from their benefits. The primary goal of this review study was to highlight the chemical ingredients and major health advantages of the mint plant.

Mentha L. (Lamiaceae) is found worldwide and in a variety of settings. Mentha is a popular herb.

Taxonomy

The Lamiaceae family includes the Mentheae tribe of the Nepetoideae subfamily. More than 3000 names of the genus Mentha have been recorded in the 65 genera of the tribe Mentheae, the majority of which are illegitimate names. Their taxonomy is difficult since the genus' hybridization is simple. Hybrid seeds produce varied progeny and can reproduce vegetatively. This variation has been accompanied by an increase in the number of species and subspecies. One taxonomist published 434 new mint taxa in Central Europe between 1911 and 1916 (Tucker and Naczi, 2007). Between 18 and 25 species are identified in fresh sources. As of July 2019, the Plants of the World Online database recognised the following species.

Composition of Chemicals

The mint's many chemical compounds are economically significant. For example, numerous derivatives and ingredients of mint oil have been employed as flavouring agents in the flavouring business as well as in many other types of meals, herbal goods, medicine, and fragrances. Mint oil is soluble in both water and alcohol. The oil has liquid and solid portions because it contains hydrocarbons, which prevent menthol crystallization.

Research

Fresh mint leaves.

Essential Oils

Essential oils are complex mixtures of organic compounds that are liquid at room temperature and contain volatile components. (Palma et al., 2020). Carvone (1%), pulegone (0.5-1.6%), -myrcene (0.1-1.7%), -caryophyllene (2-4%), limonene (1-7%), isomenthone (2-8%), menthofuran (1-10%), menthyl acetate (2-11%), 1,8-cineole (eucalyptol) (5-13%), menthone (15-32%), and menthol (33-60%). Pulegone oil derived from Menthapulegium, is abundant in pennyroyal oil. The pulegone concentration of Pennyroyal oil of Menthapulegium from Greece ranged from 0.1 to 90.7%. (Shahrajabian and Wenli, 2022). Yasa et al. (2012) revealed the main components of Menthapulegium. These include isomenthone (52.6%), pulegone (29.5%), and menthol (3.6%) in Turkey (Shahrajabian and Wenli, 2022).

Importance

Several studies have shown that Mentha species in various forms (e.g., essential oil (EO), aqueous extract, fresh or dried plant material, compost, etc.) or cropping systems (e.g., crop rotation, intercropping system/cover crop, cultivation, and incorporation as green manure) have the potential to be used in agriculture for the management of plant pathogens (bacteria and fungi) and animal pests (insects, acarine, and nem).

The advantages of Mentha

Digestive Wellness: Mint has digestive characteristics and can help ease indigestion and reduce symptoms such as bloating and gas.

Respiratory Advantages: Mint contains menthol, which may help loosen up nasal passages, making it effective for easing respiratory conditions including congestion and asthma.

Headache and Nausea Treatment: The scent of mint is frequently associated with headache treatment. Headaches may be relieved by using mint oil or breathing its perfume.

Control Nausea: Mint is recognised to have anti-nausea qualities, making it useful for nausea and motion sickness.

Weight Management: According to some research, mint may help with weight reduction by decreasing hunger and increasing digestion.

Oral Health:

Freshens Breath: The pleasant flavour of mint can help battle bad breath and boost dental hygiene.

Antioxidant and anti-inflammatory properties: Reduces Inflammation: Mint has anti-inflammatory chemicals that may aid in the reduction of inflammation in the body. Mint's antioxidants can aid in the neutralisation of damaging free radicals in the body.

Skin Care:

Relieves Skin Irritation: Applying mint extracts or oils to the skin may help relieve irritation and inflammation.

Conclusions

In conclusion, the mint plant, belonging to the Mentha genus, offers a plethora of health benefits supported by evidence-based studies. Its diverse bioactive components, including phenolic acids and flavonoids, contribute to its medicinal properties such as antimicrobial, anticancer, antiallergenic, and analgesic effects. Mint's role in digestive wellness, respiratory health, headache relief, and weight management underscores its versatile applications. The composition of essential oils in mint, featuring compounds like menthol and menthone, further enhances its significance in various industries.The taxonomic complexity of the Mentha genus adds to the richness of its chemical diversity. Mint's economic importance is evident through the use of its derivatives in flavoring, herbal products, medicine, and fragrances. Additionally, the plant's role in agriculture, specifically in managing plant pathogens and pests, highlights its potential in sustainable farming practices.As the global interest in natural remedies grows, exploring and promoting the diverse medicinal benefits of plants like mint becomes crucial. With hundreds of species in the Mentha genus, each offering unique chemical compositions, the possibilities for therapeutic applications are vast. Embracing these botanical alternatives not only aligns with the principles of ethnopharmacognosy but also addresses concerns about adverse effects and resistance associated with synthetic medications. In essence, the mint plant stands as a natural powerhouse, providing a spectrum of health benefits that make it a valuable asset in various fields and for individuals seeking holistic well-being.

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