

INVIGORATING ESSENCE: UNLEASH THE ZEST OF AROMATIC GINGER OR EKANGI

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Abstract

Ekangi (*Kaempferia galanga* L.) or aromatic ginger, a stem less herb belonging to Zingiberaceae family, possesses numerous pharmacological properties such as anti-oxidant, anti-microbial, anti-diabetic, anti-inflammatory, nematocidal, as well as immunostimulatory effects. Ethyl-cinnamate and Ethyl-p-methoxycinnamate are the two most prominent phytoconstituent isolated from extracts of galangal. It is one of the most precious medicinal herbs and spices documented by International Organization which is underutilized and comparatively less known till now. There is an utmost need to present the significance of cultivation of valuable medicinal plant like Ekangi to the mass of the people worldwide.

Keywords: Aromatic ginger, Ekangi, Herb, Medicinal, Phytoconstituent

Introduction

Aromatic ginger or Ekangi, scientifically known as *Kaempferia galanga* L. and commonly called as galangal, is a remarkable herb that has been cherished for centuries due to its captivating aroma, distinctive flavor, and numerous health benefits.

This rhizomatous perennial herbaceous plant belongs to the Zingiberaceae family, which also includes other notable spices like cardamom, ginger and turmeric. Ekangi is native to Southeast Asia or Tropical Asia and is widely cultivated in countries like Thailand, Indonesia, Southern China, Taiwan, Malaysia and India (Koh, 2009; Techaprasan et al., 2010). Renowned for its culinary, medicinal, and cultural significance worldwide, aromatic ginger continues to allure human senses and offer a wide range of uses in various aspects of life. It is considered as a fascinating and widely celebrated spice, leaving an indelible mark on various cuisines and traditional healing systems around the world.

Appearance and Aroma

Aromatic ginger is characterized by its rhizomatous structure, with thick, knobby roots that possesses a pale yellowish-brown outer layer. Inside, the flesh of the rhizome is vibrant yellow or pale cream colour. Galangal has elongated, lance-shaped leaves that are dark green in colour and it grows to a height of about 1 meter. The roots are known for their pungent, warm, and exhilarating aroma, which is

primarily due to the presence of volatile oils, particularly gingerol and shogaol. The scent of ginger is instantly recognizable and often evokes feelings of comfort and familiarity. Its taste profile is a harmonious combination of spicy, pungent, and slightly sweet notes. When consumed, it imparts a warming sensation on the palate, making it a popular spice in both sweet and savory dishes.

Photo Gallery





Different Uses of Ekangi

A. Culinary Uses: In the culinary world, aromatic ginger earned a prominent place as an esteemed ingredient that adds depth and complexity to a wide array of dishes. Its spicy, slightly sweet, and zesty flavor profile makes it a versatile spice, used in both savory and sweet preparations. Ekangi is commonly used in Asian cuisines, where it features prominently in stir-fries, curries, soups, and marinades. It also enhances the taste of baked goods, beverages like ginger tea and ginger ale, and even cocktails in western countries as well as acts as a flavoring agent in sauces and dressings. Whether in powdered, fresh, or pickled form, ginger's distinctive taste elevates the overall culinary experience adding a unique and vibrant touch to countless preparations. Galangal has a stronger and spicier taste compared to regular ginger, with hints of citrus and pine. It is often used in combination with other

spices like lemongrass, chili, and coconut milk to create flavorful dishes.

B. Medicinal Uses: Galangal has been used for centuries in traditional medicine systems like Ayurveda and traditional Chinese Medicine for its medicinal properties as it contains various bioactive compounds, including essential oils, flavonoids, and phenol. Galangal is believed to have anti-inflammatory, anti-bacterial, anti-fungal, and anti-oxidant properties. It has been used to aid digestion, relieve gastrointestinal issues, alleviate pain and inflammation, boost the immune system and support respiratory health. It also has anti-cancer and anti-diabetic effects, although further research is needed to validate these claims. However, it's important to note that scientific research on galangal's medicinal properties is still limited, and it's always advisable to consult a healthcare professional before using it for therapeutic purposes.

C. Cultural Significance: Galangal holds a rich cultural significance, deeply rooted in various traditions and folklore throughout the world. It is often associated with traditional medicine and is used in various rituals and ceremonies. In Thai culture, Galangal is considered as a symbol of good luck and is sometimes worn as an amulet or talisman. It is also used as an ingredient in herbal remedies and beauty products. Aromatic ginger plays a role in culinary traditions and festive celebrations in numerous cultures, symbolizing warmth, hospitality, and good fortune.

D. Use as Fish Feed: *Kaempferia galanga* can indeed be used as a feed additive for fish. While fish feed typically consists of a combination of various ingredients to provide balanced nutrition for fish, the

inclusion of plant-based additives can offer additional benefits. Galangal has been studied for its potential as a natural feed additive in aquaculture. The specific method of incorporating Galangal into fish feed can vary. One approach is to grind or extract the active compounds from rhizomes and include them as an additive in the feed formulation. Alternatively, dried or powdered Galangal can be directly mixed into the feed. It's important to note that the inclusion rate and compatibility with other feed ingredients should be considered to ensure optimal results and avoid any negative effects. The practicality and cost-effectiveness of including Galangal in large-scale fish feed formulations may vary depending on factors such as availability, cost, and regional preferences. Some potential benefits of using Ekangi in fish feed include:

1. **Anti-microbial properties:** Galangal has shown anti-microbial activity against certain pathogens, which can help reduce the risk of infections in farmed fish.
 2. **Digestive health:** The bioactive compounds in Galangal may support digestive health and improve nutrient absorption in fish.
 3. **Immune stimulation:** Galangal has been suggested to have immunostimulatory effects, potentially enhancing the fish's immune system and overall disease resistance.
 4. **Palatability:** The aromatic and spicy flavour of Galangal can enhance the palatability of feed, encouraging fish to consume it more readily.
- E. Use of Root Extracts:** The root extract contains several bioactive compounds, including flavonoids, phenolic compounds, essential oils, and other

phytochemicals that contribute to potential health benefits which are mentioned below.

1. **Anti-inflammatory effects:** Galangal contains compounds with anti-inflammatory properties, such as flavonoids and phenolic compounds which may help reduce inflammation and alleviate conditions like arthritis, joint pain, and other inflammatory diseases.
2. **Anti-oxidant activity:** The extract is rich in antioxidants, which can reduce oxidative stress and cellular damage by neutralizing harmful free radicals which may contribute to overall health and protection against chronic diseases.
3. **Anti-microbial activity:** *Kaempferia galanga* root extract has exhibited anti-microbial properties through inhibition of the growth of bacteria, fungi, and other microorganisms, supporting the immune system's defence against infections and promoting oral health.
4. **Digestive health support:** Galangal extract has been traditionally used to aid digestion and alleviate digestive issues. It may help stimulate the production of digestive enzymes and improve gastrointestinal health and gastric motility, and relieve symptoms like bloating, indigestion, and flatulence.
5. **Immune system support:** Some research suggests that the extract may have immunomodulatory properties, potentially enhancing immune system function and promoting overall health.
6. **Anti-diabetic potential:** Preliminary studies have indicated that Ekangi root extract may have anti-diabetic effects, including blood sugar regulation and improved insulin sensitivity.
7. **Skin health benefits:** Galangal is sometimes used in skincare products due

to its anti-oxidant and anti-inflammatory properties. It may improve skin tone, reduce signs of aging, and provide a natural glow to the skin.

F. Other Uses: In addition to its culinary and medicinal uses, galangal has been used in perfumes, cosmetics, and as a traditional insect repellent. Its aromatic qualities make it a popular ingredient in natural soaps, lotions, and essential oils.

Conclusion

Aromatic ginger or Ekangi stands as a testament to nature's ability to provide us with the incredible fusion of captivating flavor, enticing aromas, and valuable health benefits. Its versatility in the culinary world, coupled with its rich cultural heritage, makes it a spice worthy of admiration. From the zesty kick it lends to dishes to the therapeutic relief it offers, Galangal continues to enchant and enrich our lives. So, next time you savor the distinct warmth and aroma of ginger, take a moment to appreciate the remarkable gift nature has bestowed upon us.

References

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