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Boesenbergia rotunda: NATURE'S SECRET FOR HEALTH, WELLNESS AND INCOME GENERATION

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In Malaysia, *Boesenbergia rotunda* is locally known as 'Temu kunci'. It is a small herbaceous plant with short, fleshy rhizomes that are aromatic and have a mildly pungent taste. The rhizome is finger look-like appearance; thus, its common English name is fingerroot.

Boesenbergia rotunda grows naturally in the teak woods of Central and East Java. It is a native of Java and Sumatra and widely farmed in India, Sri Lanka, South-East Asia (especially in Indonesia, Malaysia, and Thailand), and

southern China. It thrives in deep forests and is widespread across its natural area. *Boesenbergia rotunda* can grow to a height of 15 to 40 cm. The wide, green blade of the leaf contrasts with the scarlet sheath to create a striking contrast.

The apical leaf sheaths are where the inflorescences developed. There are normally 3-4 undivided, ovate-oblong leaves that reach up to 12 cm broad and 50 cm long. The surface of rhizomes is light brown and yellow inside, ovoid-globose, and strongly

aromatic. Its rhizomes look-like fingers which growing from a central part (Bello et al., 2018).

Boesenbergia rotunda is relatively easy to grow and maintain. It thrives in tropical and subtropical climates and doesn't require extensive care once established.

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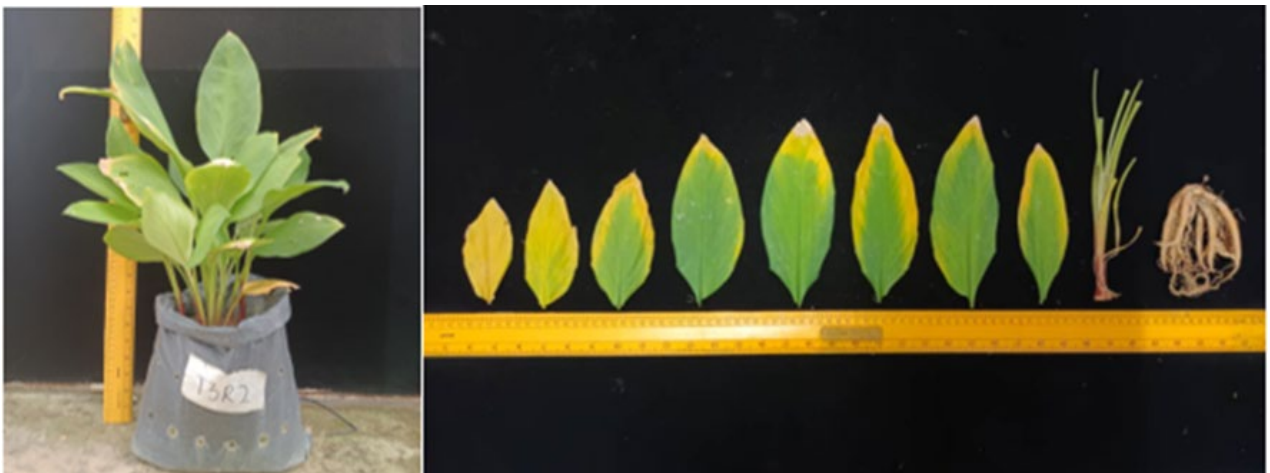


Image 1: *Boesenbergia rotunda* plant (Source: Author's own collection)

Food condiment

In several Asian countries, including Malaysia, Thailand, Indonesia, India, and China, *Boesenbergia rotunda* is used as a condiment herb in cooking to improve the flavour and aroma of dishes like curry and soup. It is used as a traditional "jamu" in Indonesia, a concoction of root, bark, flower, seed, leaf, and fruit, to keep young girls from developing the thin, milky discharge associated with leukorrhoea. Young rhizomes and roots are consumed raw with rice in some regions of Malaysia, same as young shoots are in Java. The rhizomes can also be replaced by fresh, hot shoots to be eaten raw.

Medication

Besides, rhizomes of *B. rotunda* have also been considered as an effective tonic for women after giving birth and serve as a remedy in postpartum protective medication and treatment for rheumatism (Hughes, 2008). The fresh rhizomes are used as a diuretic and to treat inflammatory ailments such dental caries, dermatitis, dry coughs and colds, diseases of the teeth and gums, swelling, wounds, diarrhoea, and dysentery (Eng-Chong et al., 2012).

Additionally, a study discovered that *B. rotunda* might be utilised to speed up the healing of wounds because its crude



Image 2: Fresh rhizome of *Boesenbergia rotunda*
(Source: Author's own collection)

extract significantly increased wound contraction when compared to pure petroleum gel (Nasir et al., 2020). Another important finding was that the extract of *B. rotunda* can be used as a nutraceutical or nutricosmetic to enhance human skin hydration, gloss, and wrinkles (Nasir et al., 2020). Because it contains essential oil and flavonoids, *B. rotunda* is also said to be anti-inflammatory, antibacterial, antifungal, and antioxidant (Bello et al., 2018). According to reports, the extract of *B. rotunda* has a significant deal of potential for development as a natural antifungal to stop vegetable rotting (Nasir et al., 2020). It also has potential as anti-scabies drug to reduce itching from mite bites, antifungal and antiparasitic drug to treat fungal infections and to get rid of helminths or

round worms in the human intestine, respectively (Eng-Chong et al., 2012).

Income Generation

Apart from its benefits in health, *B. rotunda* also gives opportunity to housewives and unemployed individuals to generate income due to its steady demand for culinary and medicinal uses. Nowadays, the price of fresh herbs is rapidly rising where its global market size was valued at USD 3,235.93 million in 2021 and is expected to reach USD 4,584.75 million by 2027. In Malaysia, the market value of the domestic herbal industry was estimated at RM32 billion in 2020 (Zukri, 2022).

Looking at this figure, it is not a surprise where the price of *B. rotunda* fresh rhizome reaches about RM50.00 per kilogram in 2024. Therefore, there is a huge opportunity for

housewives and unemployed individuals to make side income from cultivating and selling the fresh rhizomes from the back of their houses. This makes it suitable for individuals looking to start a small-scale farming venture without prior agricultural experience.

Besides selling the fresh roots, there are opportunities to create value-added products such as dried slices, powders, extracts, or even cosmetics products. Depending on the area, *B. rotunda* products can be sold locally at supermarkets, grocery stores, or directly to restaurants and herbal shops.

Medicinal product from *Boesenbergia rotunda*

Centuries of traditional use and contemporary scientific studies have validated *B. rotunda*'s effectiveness as a natural remedy. As *B. rotunda* known to have a good pharmacological activity, numerous herbal products are utilized from its secondary metabolite content to treat illness and gives wellness. Images 4 shows *B. rotunda* Powder Extract and *B. rotunda* fingerroot Galingale Extract Thai Herbal products. *Boesenbergia rotunda* Powder Extract is ideal for manufacturers to incorporate the powder into their own production or create custom formulations with it as an ingredient, which it is offering a 100% Extract Powder content. The *B. rotunda* Thai Herbal



Image 3: Cultivation of *Boesenbergia rotunda*
(Source: Author's own collection)



Image 4: Examples of *Boesenbergia rotunda* products
(Source: OrientalHeritageHerbalist website)

product is rich in essential substances which are Pinostrobin and Panduratin A that are beneficial to our body.

Although extensive research needs to be done to evaluate on the medicinal properties of *B. rotunda*, its effectiveness to treat several illnesses have been proven since decades ago. Besides, the cultivation of *B. rotunda* is seen to help increase the income of housewives and unemployed

individuals who's live in the rural areas. Indirectly, this helps to eradicate poverty in Malaysia which aligned with the Sustainable Development Goals (SDG) 1 which is to end poverty in all its forms everywhere.

Reference

