

God's crown plant: Mahkota dewa

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Introduction

Mahkota dewa, an interesting plant belongs to the nativity of Indonesia. It is observed that over centuries, the people in Indonesia are utilizing both the leaves and fruit as their traditional medicine. The plant scientifically known as *Phaleria macrocarpa* (Scheff.) Boerl which is observed to have impact in controlling impotency, diabetes, cancer, allergy, kidney issues, heart and liver problems, skin problems etc.

Each and every portion of the crop observed to have positiveness in anticipation of the human health issues. Almost all parts of the plant viz., leaf, stem and fruit have wider usage in allopathic treatments. Among, the constituent of stem have healing power in treating cancer in bone and the seed constituent to treat cervical cancer and breast cancer; diseases related to heart, lung and liver. Leaves have the major constituent in treating diabetics, impotence, skin allergy and several blood related diseases. In addition, the plant also have the potential in alleviating animal health problems. Mahkota dewa fruit have wider utility both as a fresh and processed products viz., juice, tea and blending material with juices. Moreover, it must be cautious with raw fruits of being to be toxic and poisonous.

Plant Description



SCIENTIFIC NAME: *Phalaria Macrocarpa*

COMMON NAME: God's Crown, Pau, Makuto Queen And King Of Drug

FAMILY: Thymelaceae

ORDER: Malvales

Mahkota dewa (*Phaleriamacrocarpa*) being a small plant assures continuous growth throughout the year. The plant in an average grow upto a height of 5m, and in maximum it may reach even 18m level. The plant is confined with the suitable elevation upto 1200m MSL and observed to have the productive period upto 20 years. In usual, the plant morphologically appears with the crown in branched manner, woody stem with bark, good root system and the leaves will be green and tapering with sharp edge, white pleasant smelled flowers appear in the shape of trumpet. The matured fruit appear eclipse in shape with varied diameters of 3-5 cm, smooth skin with red /maroon in colour whereas pit would be of poisonous.

Medicinal Value of Mahkota Dewa

Anti-cancerous property

The cytotoxic activities due to methanolic extract derived for various plant parts including fruits good in minimizing the risk of colon cancer, cervical cell lines in cancer, breast cancer, and liver carcinogenic cell lines.

Anti-diabetic property

Due to the inhibition activity of pancreatic enzymes (α -amylase) by fruits, there was a delay in glucose absorption and had impact in lowering the blood sugar level and reduce HbA1c (glycated hemoglobin) in long term effect.

Anti-inflammatory property

Mahkota dewa plant have potential anti-inflammatory action due to the presence of compounds like terpenoids, saponins etc.

Anti-microbial property

All the fruit portions were observed to have the potential source of anti-bacterial activity against pathogenic bacteria strains like *Bacillus subtilis*, *Bacillus cereus*, *Escherichia coli*, *Enterobacter aerogenes*, *Klebsiella pneumonia* and many more. Moreover, it also have the antifungal property against *Aspergillus niger*.

Anti-oxidant property

Reactive oxygen species (RoS) or the free radicals observed to have some deleterious effects on human system. The extract obtained from this plant show anti-oxidant movement with its free radical scavenging activity.

Anti-hypertensive property

It was observed that the leaf and fruit extracts of Mahkota dewa exhibit the advanced level of inhibitory activity against *Acetylcholine esterase*, due to the effect of converting enzyme angiotensin.

Anti-hyper cholesterol property

Hypercholesterolemia is mainly due to the enhance body cholesterol. The imbalance due to body cholesterol results in health issues of arteriosclerosis and heart diseases. In this line, the fruit of Mahkota dewa conserves potential compound *viz.*, gallic acid, which regulates the cholesterol homeostasis by lowering the level of cholesterol in body.

Anti-infertility male property

The rate of infertility increasing day by date with human due to changing life style and raised up an major issue in human all over the world. The issue be due to the deficiency of androgen or lower testosterone. In this content, Mahkota dewa registering its potentiality in enhancing the secretion of testosterone hormone due with the presence of saponin. Moreover, Mahkota dewa act as an alternative to enhancing the male fertility by enriching the quality of sperm.

MAHKOTA DEWA PLANT PARTS AND THEIR PROPERTY

S. No.	Tissue	Property
1	Pericarp, mesocarp, seed, fruit, fruit pulp, leaves,	Cytotoxic

	irradiated leaves	
2	Pericarp, fruits, fruit powder	Anti-diabetic
3	Fruits	Anti-inflammatory
4	Young and old fruits, pericarp, mesocarp, seed	Anti-oxidant
5	Pericarp, mesocarp, seed, leaves	Anti-bacterial
6	Pericarp, mesocarp, seed	Anti-fungal
7	Fruits	Vascrelaxant
8	Fruits, leaves	Anti-hypertensive

(Sitale Mamatha *et al.*, 2020)

Toxicity

The ripe Mahkota dewa fruit in unprocessed form supportive in treating oral ulcers as a traditional medicine. The property responsive to the role haven't identified yet and hence, the processed fruit alone be prescribed for human consumption.

Mahkota dewa (God's Crown Plant), being a fruiting plant observed to be fortified with tremendous medicinal values. With regard to its adaptation, the existing tropical conditions in south Indian be suitable. The bearing of Mahkota dewa commence from second year and with its short statured phenomenon, the canopy be regulated in easy way. With regard to Indian condition, till date the production package is not been regulated, anyhow it can be amenable for planting in backyards of home due to its potential health benefits.

References

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