

## Water Apple - A Rose Scented Thirst Quencher

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### SUMMARY

Water apple is one among the various tropical underexploited fruit crops known for its pleasant rosy flavor, anti-oxidant and anti-hyperglycemic properties. Nowadays, due to growing awareness of masses towards their health and nutrition this crop is getting exploited to certain extent. Even though there is no proper orcharding of this crop in India so far, but the attempts are being made for commercial adoption.

### INTRODUCTION

A tropical underutilized myrtle fruit crop grown in the backyard or in the kitchen garden, commonly known as watery rose apple that goes with the botanical name *Syzygium aqueum* (Burm Alston) is native to South East Asian countries and to certain tropical regions of India. It is commonly known as Malabar plum, Plum rose and Water apple in English, Pani seb in Hindi, Jambakka in Malyalam. This lesser known fruit crop lacks systematic orcharding, utilization and value addition. It was introduced to India by Portuguese traders but at present it is naturally distributed from southern India to eastern Malaysia. It is also spread across the sub Saharan Africa and some regions of America. In India, it is majorly distributed in Kerala, Andhra Pradesh and Western Ghats.

### Nutrient content of watery rose apple

The watery rose apple fruit is rich in fibers, calcium, magnesium, potassium and vitamin -C. Though very low in proteins, it has high antioxidant activity and beta-carotene content. It is a very low calorie fruit due to high water and low fat content. Recently, Nallakurumban *et al.*, 2015, evaluated nutritive value of watery rose apple fruit as follows

Sl. No.	Constituents	Range
1.	Total phenolic contents (mg/100g)	28.80 –30.70
2.	Total flavonoids (µg/g)	62.03 to 62.07
3.	Antioxidant activity (µg/g)	138.4 -144.50
4.	Beta carotene(µg/g)	37.21 -37.28
5.	Ascorbic acid /vitamin C contents (mg/100g)	13.06 to 13.08
6.	Moisture (%g)	91.70
7.	Protein	0.31
8.	Fat (%g)	0.29
9.	TSS (brix)	5.4

### Botany

It is a small to medium sized tree grows to a height of 6-15 m with branching base, having a greyish-brown bark. Leaves are opposite, subsessile and oblong to lanceolate. Flowers are terminal yellowish white or pinkish in colour with single-branched cymes of about 2 cm in length. Fruits are white, small bell or pear shaped, pink to red in color, juicy, spongy, rose-scented consisting of 2-6 seeds. As these are seasonal fruits, flowering occurs during February-March and fruits mature during May-June, but we can get two-three crops per year under proper maintenance and with modern practices. Most of the water apple trees are grown from poly embryonic seeds (producing 1 to 3 sprouts). In India, vegetative propagation *i.e.*, cutting, air layering is being followed.

### Soil and Climatic requirement

As watery rose apple is a tropical fruit tree, 25-32 °C temperature range is desirable for better growth rate, higher yield and quality produce. Deep fertile loamy soil is considered ideal for but it also flourishes well on sandy and limestone mix soil with very little organic matter. It prefers tropical climate and thrives well in warm and humid areas and is sensitive to frost.

**Varieties**

Varieties like Pink, Big Fruit, Thub Thim Chan, Indonesian big fruit, Beg red and Vietnam white are the commonly grown in Southeast Asia.

**Health benefits**

- Fights against free radicals.
- Reduces risk of stroke.
- Boosts good HDL cholesterol.
- Prevents constipation.
- Reduces muscle cramping.
- Maintains good skin health.
- It has anti-microbial, anti-inflammatory and analgesic activity.
- According to Chinese medical science water rose apple leaves, fruits and seeds are reported to be antipyretic while roots are diuretic.
- The flowers of watery apple are astringent and known for their use in the treatment of fever and diarrhea.

**Other uses**

- Tannin extracted from the bark is utilized in tanning and dyeing industries. The wood from the tree is used for firewood, tobacco drying and making baskets, furniture and musical instruments.
- The major consumption of watery rose apple is in the form of raw fruit but it is also used in the form of juice, jelly and wine-making which is cold brewed or distilled to produce fruit liquor with unique taste.
- It is also used for decorating Chinese cuisine and creative dishes. In the cuisine of Indian Ocean islands, the fruit is frequently used in salads. Raw fruits also used for making pickles.
- It is most commonly used in Southern Mexico as shade tree for coffee. Widely used in Agroforestry due to wind resistant capacity of the species.
- Leaves produces essential oil which is widely used in perfume industry.

**CONCLUSION**

A newer dimension of exploiting lesser known nutritionally important fruit crops can attract the consumers as there is trend of growing awareness among the masses towards their healthier diet. Water apple can be grown even on marginal land with minimum maintenance this can be a boon to farmers to take up its commercial cultivation with lesser investment.

**REFERENCES**

- Nallakurumban, P., Suja, N., Vijayakumar, A., Pushpa, G., Geetha, P. S., 2015. Study on Phytochemical and Antioxidant Properties of Water Apple (*Syzygium aqueum*) and Chappathikalli (*Opuntia ficus-indica*). *International Journal for Research in Emerging Science and Technology*. 2(10):18-2.