

## Plant leaves in food preparation and packaging

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By Casey Ng



Rolls of banana leaves for sale

One of the big visual differences between the flora of the tropics and the flora of other climates is the enormous difference in the size of leaves. When European medieval artists looked around for a leaf big enough to hide Adam's nakedness, they settled on the leaf of the Mediterranean fig, measuring about 6 by 5 inches and, from an artistic point of view, just adequate for the purpose. In the tropics, the leaves of bananas, heliconias, gingers, palms, bamboos, macarangs, cordylines, water lotus, dipterocarpus and many others are much bigger and many are put to excellent use wherever sheets of waterproofed materials are needed.



Banana leaf rice

The pages of the earliest books in South and Southeast Asia were written on palm leaves. Leaves of dipterocarpus trees are used as roof tiles for rustic houses in Thailand and Indochina. Everywhere in Southeast Asia, leaves are used as wrappers for food. Some leaves also impart characteristic flavours to food cooked in them.

This article explores the use of leaves in food preparation and packaging. Everybody who has grown up in the tropics knows about the use of leaves for packaging food but the documentation is spotty – best for banana leaves but rather poor for the numerous other species.

One cannot imagine *nasi lemak* in any form other than wrapped in banana leaf in the shape of a pyramid, unless one lives in Kuala Lumpur, where the unimaginable has happened – *nasi lemak* wrapped in waxed paper!

Banana leaf is also featured in many other Malay traditional foods such as *lemang*, *pulut panggang* and *kuih nagasari*. When cooking the *otak otak*, Nyonya housewives wrap a mix of fish and spice concoction with banana leaf before steaming the packets.

The Chinese serve the red oval shaped *ang koo* (in Hokkien dialect) by resting it on a piece of banana leaf; the original purpose of the leaf may have been to prevent the *ang koo* from sticking to the serving plate.

The experience of eating off banana leaves is also certainly most outstanding when one savours Malaysia's favourite Indian meal – banana leaf rice. At a banana leaf rice restaurant, the leaf is placed face up (the underside is usually waxy-



*Nasi lemak* wrapped in banana leaf in pyramid shape



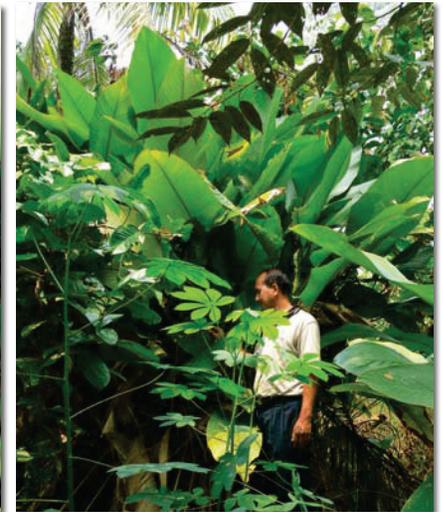
*Nasi lemak*



*Ang koo* and *pulut panggang*

white) with the midrib parallel to the customer. The waiters come with containers of various dishes which are spooned onto the leaf. One can

A selection of indigenous plants used in Sarawak  
as wrappers — all species of the family Marantaceae



ask to be served a bit of everything or one can pick and choose. Traditionally, this is a fixed price meal. After the meal, the lower half of the leaf is lifted up and folded over the other half, along the midrib.

In posh Chinese restaurants there is a rice dish wrapped in the leaf of the lotus *Nelumbo nucifera*. The lotus leaves impart a characteristic flavour to the rice. In Sabah, some rice dishes are packaged in *Macaranga* leaves and in Kalimantan, leaves from teak trees (*Tectona grandis*) are used.

In rural Sarawak the leaves of species of the family Marantaceae are used to wrap cooked rice for the men to take to work in the fields. The leaves are harvested from the forest where they grow as understory shade plants. For convenience, many communities grow the plants in communal plots and harvested leaves may be stacked on kitchen shelves. The range of species is quite amazing and some are probably unknown to science in the sense that they have not yet been botanically described and given scientific names.

*Ketupat* is popularly served during the Hari Raya celebrations at the end of the fasting month, and preparing it starts with weaving coconut or *palas* (*Licuala* sp.) leaves into pouches. The pouches are then filled with rice and boiled. Cooked rice expands and becomes compressed into the shape of pouches. Shoots from older trees are said to emit better fragrance. Indeed, during Hari Raya festive season, coconut and *palas* palm leaves see a big demand.

Similar to *ketupat*, another popular compressed-rice food is the Chinese *bak-chang* (in Hokkien



Rice dish wrapped in a *Macaranga* leaf



*Otak-otak*



*Pulut panggang*

dialect), which is made and eaten during the Dumpling or Dragon Boat Festival that falls on the fifth day of the fifth month of the Chinese lunar calendar. The Dumpling Festival may have originated as a harvest festival, but the

most popular explanation of its origin is that it commemorates Qu Yuan (340 – 278 BC), China's first known poet. Qu Yuan was once a Minister in the State of Chu, one of the seven 'warring states' that were ultimately unified under the Qin Dynasty. Qu Yuan drowned himself when Chu was conquered by Qin. Qu Yuan was held in such high esteem that people searched frantically for his body and threw rice dumplings into the river to distract the fish from feeding on his body. In the making of *bak-chang*, glutinous rice along with other fillings are neatly wrapped with bamboo leaves into tetrahedral, elongated and other shapes. These are boiled to cook and compress the rice. There are many versions of *bak-chang* in Malaysia but they are all typically wrapped in bamboo leaves. In Malaysia the leaves are reputedly from *Dinochloa sublaevigata* bamboos collected from hill forests. It is important to note that the leaves must be boiled to clean and remove fine bristles on the leaf surface before being used to make *bak-chang*. Dried bamboo leaves are also imported from China for the purpose.

Certainly, not all leaves are suitable for wrapping food, but the species that are being used have been tested and proven by long usage. None of the leaves contain any toxins, dyes or irritants. What they share in common is flexibility, which allows them to be folded without breaking, and of course, strong water-proofing quality. In some cases, leaves are pre-softened by steaming, boiling or grilling.

For environmental sustainability, the use of leaves makes sense. They are organic; they add an individual touch to food packaging because one has to observe the character of each leaf



*Bak-chang*



Traditional Kadazan glutinous rice cake *hinompuka*



Steamed fish (*ikan kembong*)

before folding it. They keep alive the traditions that make us different from the rest of the world. They help to maintain alive the diversity of big leaves that characterise the tropics.