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**Lesser Known Edible
Tree Species**

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Foreword

Featured in this issue of RISE are three edible, lesser-known and indigenous species. These are binucaao (*Garcinia binucaao*), lipote (*Syzgium polycephaloides* (C.B. rox) Merr. and libas (*Spondias pinnata*).

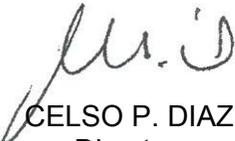
Binucaao commonly called batuan in the Visayas is a native tree that produces a sour fruit, a favorite and popular souring ingredient for Visayan dishes. To increase its production, the ECG Farm owned by businessman Eduardo Cojuangco in Negros Oriental has developed 10-ha plantation for this minor crop. While waiting for the tree to bear fruit, they intercrop it with bananas.

Libas is the known souring agent, in the Bicol Region. The young leaves are dried and used in the preparation of laing, a very popular Bicolano dish. When fresh, it is used as filling for fish cooked in coconut milk called sinanglay.

Lipote, on the other hand, was reported to have medicinal properties that lower high blood pressure and high level of cholesterol. It also has a anti-oxidant action.

These edible tree species are profitable crops because they do not require much inputs. You need not spray chemical insecticides or fungicides or apply fertilizer. They are seldom attacked by pests and diseases.

We hope the information in this issue will guide you in propagating and utilizing these indigenous species for health reasons and biodiversity conservation.



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1. Hog plum

Common name: Hog plum (En.); libas (Pilipino)

Local names: lannu, lanu (Cagayan); libas (Bataan, Tayabas, Capiz, Cotabato, Zamboanga) lubas, libas (Bicol)

Scientific name: *Spondias pinnata* (L.f.) kurz.

Family: Anacardiaceae

Description

Spondias pinnata is a medium to tall tree reaching a height of about 25 m and a diameter of about 60 cm. It is wholly or partly deciduous with occasionally small buttress. Its bark surface is smooth, with irregular cracks, greyish to pale reddish brown, exceeding a clear, sticky sap with turpentine smell. Leaves are arranged spirally, leaflets are alternate to opposite. Flowers are bisexual. Fruit is yellow in color, fleshy, drupe with a finely flavored edible pulp; seed is hard, ridged and has a fibrous surface. *S. pinnata* is a light-demanding species.

Distribution

S. pinnata is native to India, Burma (Myanmar), Indonesia, Southern China, Thailand and throughout Malesia to the Solomon Islands. It is widely distributed in the Philippines.

Uses

The tree is used as shade and living fence posts.

Wood is utilized in temporary construction, mouldings, interior finish, drawers, turnery articles, carvings, core stock of plywood and pulp. Because of its lightness and softness, the wood is more suitable in the manufacture of matchsticks, matchboxes, boxes and crates.

Leaves have a sour taste are edible. When young leaves are used as ingredient in meat stew and filling for fish sinanglay, a Bicolano delicacy. Bicolanos also use dried young leaves in the preparation of "laing", a favorite and popular dish among the local people. Leaves are also used as feeds for cattle.

The fruits have a sour taste. They are eaten raw and can be made into jams, jellies and juices. It is also given to pigs as feeds.

The bark, leaves and fruits have medicinal properties and is used in the treatment of wounds, sores and burns.

Habitat

Scattered in primary and secondary forests, flood, plains, along the inner border of tidal forest, along savannas and teak forest.

Environmental requirements

The suitable elevation for *S. pinnata* is from lowland up to 500 m asl. It requires areas with well-drained soil and limestone sites.

Phenology

Flowers appear before the leaves or accompanied by very young ones. Flowering and fruiting is from June to October.

Propagation: Through seeds, cuttings and air layering

Seed technology

Depulped fruits (stones) are used for sowing and one stone of *S. pinnata* contains 1-3 viable seeds. There are 250 fresh stones/kg. Seed viability is up to one year. Germination percent is 5-20% in 12-51 days.

Plantation establishment

Direct seeding is better than planting bareroot seedlings. Stumps have also been successfully used for planting.

Growth

The mean annual diameter increment of a 22-year-old *Spondias pinnata* tree in India was 1.1 cm.

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Recipe

LAING

Ingredients

1 pack	dried gabi leaves
1 c	dried young libas leaves (chopped)
1/4 k	pork (ground or cut into cubes)
2 tbsp	toyo
1/4 c	bagoong alamang (sauce remove)
10 pcs	siling labuyo (crushed) or
10 pcs	siling haba (sliced into rings)
2	onion (sliced)
1 pc	piece ginger (crushed)
3 pcs	medium-sized coconut (grated)
3 cups	water

Procedure

In a frying pan or carajay, boil pork until tender. When almost done, season with soy sauce to taste until oil appears. Remove from fire and set aside. Separately extract coconuts using 1 cup of water each. Pour coconut milk into the pan where pork has been cooked. Add the above ingredients except gabi and libas leaves. Over low fire, let it simmer while continuously stirring to prevent curdling and scorching. Let it boil for 5 minutes, then add gabi leaves. Reduce the fire into low flame until the gabi is cooked. Add libas leaves and season to taste. Continue cooking until the sauce becomes transparent and oil appears. When done, remove from fire and serve hot or cold.

FISH SINANGLAY

2 pcs	medium-sized tilapia or bangus, cleaned and cut lengthwise, slit at the back, and marinate in
1/2 c	vinegar and salt to taste for 2 hours or more
Filling:	
2 pcs	tomatoes large, chopped finely, juice removed
1/2 c	young libas leaves, chopped finely
1 pc	onion, chopped finely
2 pcs	garlic, chopped finely
1 small	ginger, chopped finely
1 pc	lemon grass, chopped finely (leaves set aside)
	kakang gata of 1 coconut
	Pechay or banana leaves (for wrapping)
	Salt to taste

Sauce:

Vinegar and salt mixture where the fish was marinated, tomato juice, onion, garlic, ginger (chopped), lemon grass leaves, 2 pieces green and red pepper, coconut milk (add 1 cup water for the second extraction)

Procedure:

In a bowl, mix chopped tomatoes, libas, garlic, ginger, lemon grass, kakang gata and salt to taste. Remove excess juice and set aside the juice. Stuff the fish with the mixture, then wrap with pechay or banana leaves and tie it with the thread or straw to prevent opening during cooking. In a saucepan or shallow cooking dish, put the fish and the sauce mixture together with the coconut milk. Put over low fire and bring to a boil for 20 minutes or until done. Season to taste and remove from fire. Arrange in a platter and serve hot or cold.

2. Lipote

Local names: lipote (Laguna, Tayabas); baligang (Camarines, Albay); balasugan, magtalulong (Cagayan); igot (Samar); pilanai (Tayabas); maigang (Samar, Leyte).

Scientific name: *Syzygium polycephaloides* (C.B. Rox) Merr.

Family: Myrtaceae

Description

A tree reaching a height of about 15 m and a diameter of about 30 cm. The small branches are distinctly four-angled and more or less swollen at the nodes. Leaves are opposite, smooth, pointed at the apex, somewhat heart-shaped at the base. Flowers are fragrant, white and occur in clusters on the trunk and branches. Fruits are irregularly globose, fleshy, red to blackish red when ripe, with rosy and juicy flesh. Taste is sweet-sour and edible.

Distribution

Luzon (Albay, Cagayan, Camarines, Laguna, Mindoro and Sorsogon); Leyte and Samar.

Uses

Lipote leaves are not attacked by moth larvae, thus making this tree a highly recommended shade tree. It is also a good windbreak and ornamental. Lipote fruits are rich in Vitamin C and as such a common source of fresh and preserved fruits in Catarman, Samar; Liliw, Laguna; Lucban, Quezon and in Bicol. It can also be processed into jams and jellies. The juice is made into wine. Lipote was reported to have medicinal properties that lower high blood pressure and high level of cholesterol and with anti-oxidant action. The flesh of the fruit is dried and processed into capsule or tablet. Because of the pleasant taste, some birds and fruit bats feed on the fruit.

Habitat

Grows in forested areas; domesticated in Bicol, Laguna, Samar and Quezon.

Environmental requirements: Grows at low and medium altitudes.

Phenology

In Mt. Makiling, located in Laguna, flowers emerge during the month of December and ripe fruit can be harvested in July.

Propagation: Propagated by seeds

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3. Binucao

Common name: Binucao

Local names: Ballok (Benguet); balikot (Ilocos Norte); bangkok (Zambales); batuan (Negros, Guimaras Island, Burias Island); bilukao (Rizal, Bataan, Batangas, Camarines); binukao (Laguna, Bataan, Batangas, Camarines); buragris (Camarines); kamangsi (Tayabas); haras (Capiz); kandis (Palawan); kamurai; kulilem (Cagayan); maninila (Albay).

Scientific name: *Garcinia binucao* (Blanco) Choisy

Family: Guttiferae

Description

Binucao is a tree reaching a height of about 25 m and a diameter of 40 cm. Leaves are opposite, shiny and smooth. The newly emerged leaves often exhibit a reddish color. The branches tend to be pendulous. The bark is black in color. Flowers are small, red and borne in clusters. Fruits are yellowish when mature, somewhat rounded, and 4 cm

or more in diameter. They have a firm outer covering and contain a very acid pulp with several seeds.

Distribution

Binucao is common and widely distributed throughout Luzon and the Visayan Island. Ten hectares are planted for this crop at ECG Farm in Negros Occidental. This is owned by Eduardo Cojuangco, Jr.

Habitat

Binucao trees are found scattered and are second-storey trees of primary lowland and secondary forests.

Environmental requirements: Binucao requires a well drained area at low altitude.

Propagation

Enclose the area covered by the crown of the mother tree and apply compost in it. Allow the ripe fruits to fall. In two years, the seeds of fallen will germinate.

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