



# GABI

*(Colocasia esculenta)*

INDIGENOUS  
VEGETABLES  
OF THE  
PHILIPPINES

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## GABI

*Colocasia esculenta*  
(L.) Schott**English names:**Taro, Cocoyam,  
Elephant's ear, Dasheen,  
Eddoe**Philippine local names:***Gabi* (Tagalog), *Natong*,  
*Katnga*, *Gaway* (Bicol),  
*Aba*, *Abalong*, *Balong*,  
*Dagmay*, *Gaway*,  
*Kimpoy*, *Lagbay*, *Butig*,  
(Visayan), *Badyan*  
(Hanunóo), *Aba*, *Awa*  
(Ilokano), *Atang* (Itawis),  
*Sudi* (Ivatan)

## NAME GAME

In addition to the names listed above, there are still more names: *Karot*, *Pikaw Pising* and *Pakak* in Ilocos; *Gutaw* and *Utan* in Capiz, and many more. Gabi's many names extend to its other edible parts. The petiole may be called *tangkay*, *paklang* or *vunes*. The young leafless runners are called *takway*, *alikway* or even *balong* or *abalong*, which is used interchangeably with the local name of the cultivar that produces a lot of runners, popularly used in Panay island's *dagmay* and *laing* dishes. The starchy corms may be called *laman*, *ugat*, *tayud*, *aba* or *awa*.

**Did you know** that the use of many distinct local names for a vegetable is an indication of how long it has been grown? With these many distinct names for the plant and its edible parts across the different linguistic groups, Filipinos must have been growing and eating Gabi since antiquity.



# WHAT MAKES GABI, A GABI?

**G**abi leaves are large, like downward-pointing hearts, green and waxy on the upper surface, while pale bluish-white with a frosted appearance underneath. The leaf is supported by a long petiole or stalk originating from an upright tuberous rootstock, called a corm (*laman*).

The petioles are arranged in a way similar to the way rose petals are arranged. Also referred to as stalks, they are erect and are attached to the leaf near the central part of the leaf blade. The two upper leaf lobes are joined together at a point away from where the petiole is attached to the leaf, so that Gabi leaves look less arrow-like than other similar-looking plants in the Aroid family.

The leaf and petiole are succulent and come in various colors ranging from light green to dark green to dark purple and sizes depending on the variety and growing environment.

*Position of attachment of petiole at the back of the taro leaf.*





# ITCHY GABI? ITCH IS NOT A PROBLEM

**G**abi's reputation for acidity and itchiness is a downer for some. However, Gabi is one of the oldest food crops that grows almost everywhere in the Philippines. Even if it may not be native to the archipelago, some scientists believe that the famous Rice Terraces of the Philippine Cordilleras were originally constructed for Gabi cultivation. Stories of wild Gabi saving many Filipinos from famine during World War II also abound. Today, Panay Island in the Visayas and the Bicol Region in Southern Luzon are best known for their gastronomic fetish on Gabi, despite its reputation for being acrid and itchy if not prepared properly.

## What's with the itch, anyway?

The acidity and itchiness of Gabi are due to crystals of calcium oxalate. These look like bundles of needles contained in tubular or capsule-shaped cells in the leaves called "idioblasts". When the plant is damaged or cut, the idoblasts are also cut open and shoot the needles of calcium oxalate, causing the itchiness in the skin or the irritating sensation in the tongue and throat. The concentration of calcium oxalate in the leaves decreases as the leaves age.

The Gabi itch is well-known, but this has not deterred Filipinos from embracing the exotic taste of *laing* and *pinangat*, possibly Gabi's most popular preparations.

## How is this itchiness managed, then?

There are both legitimate preparation practices as well as folk rituals bordering on the superstitious, to lessen – if not eliminate – Gabi's acidity. Who knows, there might even be a scientific basis for each of them.

1. Drying Gabi leaves before cooking is believed to significantly reduce the risk of an itchy Gabi dish. Hang newly-harvested Gabi leaves by the petioles above the cook stove or fireplace, or dry them under the sun for two to three days. Strip parts of the lamina of the furled leaves leaving the midrib and carefully peel the stalk using a knife. When properly cleaned and dried, Gabi leaves may last for 2-3 weeks or even a month. However, in Leyte, hanging to air-dry is enough if there is no intention to store the leaves.
2. In using furled and unfurling leaves (*piripit/pilipit*), it is recommended that the leaves are tapped three times on the table or any surface. Then, leaves are opened and the central part wiped with a clean cloth to remove the wax.

Next, the tip is removed and the stalk peeled before tying the leaf into a knot. Water running off the Gabi leaf drips out of its tip, taking with it some of the calcium oxalate crystals – and thus, increasing the concentration at the tips. Thus, removing the tips removes much of what causes the itch.

3. For the corm, it is recommended that the skin is peeled off completely, and the peeled corm diced and soaked in water with a few drops of vinegar and a pinch of salt.
4. The runners (*takway*) are similarly soaked in water with a few drops of vinegar and a pinch of salt. Preferably, harvest only the young and soft runners, wash in running water, and peel the skin off, leaving only the soft and tender inner part, which is cut into equal lengths.
5. It is also good to avoid two things when cooking: constant stirring and covering the cooking pan. As soon as the color changes, a few drops of vinegar and a pinch of salt is added.
6. Finally, it is believed that planting Gabi during full moon (*dayaw, paghipono, takdul* or *ugsan*) and low tide (*hubas*) will reduce itchiness.

## Where Gabi Grows

It is perhaps safe to say that Gabi can grow anywhere – or at least, cultivars are available for a wide range of tropical growing conditions. In practically all sites, at least one Gabi cultivar was mentioned as an indigenous vegetable, whether for its leaves, petioles, runners, corms, or all of these. They may be cultivated in home gardens or in larger production areas, or simply gathered from field margins, forested areas, idle lands, or beside bodies of water.

Gabi made it to the list of invasive weed species because of the ways by which it adapts and reproduces. Gabi has been noted to kill other herbaceous plants nearby, including Gabi plantlets – an effect called “allelopathy”. Thus, it can colonize a wide range of habitats from full sun to deeply shaded areas and from uplands to fresh water wetland areas. There can be two classifications of Gabi, based on growing requirements: the wetland and the upland Gabi. Though both types can be grown in either condition, the upland type does not thrive well in waterlogged conditions.



## Growing Gabi

Gabi can reproduce sexually by seeds, or vegetatively by corms, cormels and runners. It is more common, though, for Gabi to be grown by vegetative means rather than by seed. Soil must be loosened first, either by creating furrows on a flat bed, or digging 10-cm deep holes in hilly areas. Plant Gabi at least 50 cm apart. It takes at least 8 months to harvest time, when leaves start to yellow and dry up. Due to its allelopathic effect, it may not be advisable to plant Gabi in the same area continuously.



Suckers



Runners



Or with cormels that grow on the corms



Tops with parts of corm



**GABI** (*Colocasia esculenta*)

# FOOD TRIP

The complete daily Pinoy meal consists of steamed rice, viand of fish or meat and vegetable (*kanin, ulam* and *gulay*). Dessert is an option.

**While primarily a rootcrop in many parts of the world,**

Filipinos embrace Gabi as a starch source for snacks, dessert and as a vegetable. As a vegetable, it that can be prepared in various ways: as an ingredient of the simple *paksiw* and *law-uy* (clear vegetable soup) to the elaborate *ensalada* and adobo and the exotic *laing* and *pinangat*. These dishes may be flavored with *bagoong* (fermented fish), *alamang* (fermented shrimp or krill), fresh/dried/smoked fish/shrimp/shell and seasoned with different souring ingredients (vinegar, *calamansi, batuan, tamarind, kamias, libas* or *roselle*). The flavor of each is enhanced by adding some herbs and spices such as *salay/tanglad, sibuyas, bawang, luya, chili, black pepper, dulaw* (turmeric) and many more. In addition, Gabi is also a common ingredient of traditional *lawot-lawot* (mixed vegetables in coconut milk) and varieties of “modified” pork/beef stew such as *pochero, sinigang* and *nilaga*.



*Fish soup with Gabi*

**From north to south,** there is always the *ginataang Gabi*, in some form or another, with some or all of its parts cooked in coconut milk or gata, including the famous *laing* and *pinangat*. Also, some versions of the clear vegetable soup called *dinengdeng* can have Gabi’s starchy corm, even in Visayan and Mindanao versions, *lao-uy, laswa* and *linapuwahan*. *Dam-ang*, a delicious Gabi dish from Benguet province, is memorable. Also, treat yourself to versions of *Adobong Gabi* – usually petioles and runners –in Iloilo and South Cotabato.

**When in Capiz,** try to sample *abalong* with bamboo shoots (*labong*) and *tinabal*, a not-so-dry fish preserved in salt or salt water, or the *adobong takway* with *ginamos*. Just ask the locals for guidance.

*Laing*



# FOOD TRIP

GABI (*Colocasia esculenta*)



**In South Cotabato**, you find that this melting pot of Ilokano, Tagalog, Ilonggo, Cebuano and indigenous B'laan and T'boli cultures offers just about every Gabi dish these ethnolinguistic groups from north to south offer - you just have to know which group you are dining with.

Lately, food innovations and health and wellness trends have put Gabi in local and international cuisines.

**In the Bicol region**, the most popular Gabi preparations are probably *laing* and *pinangat*, both cooked in coconut milk. *Laing*, though, is prepared from dried furred Gabi leaves (blade and stalk), while *pinangat* is prepared using using opened leaves.

*Utan*



To cook *laing* the Bicolano way, simply combine the garlic, onion, ginger, chili pepper, and dried fish/smoked fish/pork/shrimp/crab meat with the coconut milk and bring to a boil. When all the ingredients are tender, add the dried Gabi leaves. Do not cover the cooking pan and do not stir. Notice that the leaves will slowly sink and the color will turn darker. Add pure coconut milk and simmer until the coconut milk becomes oily. In other provinces like Quirino, Isabela, Laguna, Iloilo, Capiz, Leyte and Cotabato, young Gabi leaves, corms and runners are cooked using the same procedure except that all the ingredients are boiled in water before coconut milk is added.

The same procedure is used in preparing *pinangat* except that all the ingredients including grated meat of an immature coconut (*alangan*) are carefully wrapped in layers of fresh Gabi leaves. Some people add a few drops of vinegar to add flavor, as well as to increase shelf life.

In 15-20 minutes, *laing* and *pinangat* are ready for the dinner table. Some enterprising locals have ventured into serving *laing* and *pinangat* in fine dining restaurants so that one can enjoy them even outside the home, and even abroad.

**The Bicolano influence** in the southern towns of nearby Quezon province is evident in the popularity of similar dishes, particularly, *pinangat*.



**GABI** (*Colocasia esculenta*)

# FOOD TRIP

However, it has its own *tinadtaran*, a variant of *pinangat*. The difference lies in the stuffing: *tinadtaran* has fresh water shrimp with grated meat of a young coconut ground together with the spices, while *pinangat* can have sardines, meat or any other stuffing also ground with the spices and meat of an immature coconut.

In both, the ground fillings are combined with shredded Gabi leaves and coconut milk before being wrapped in 2-3 layers of Gabi leaves. Each package is secured with a string and arranged together in a casserole with layers to Gabi leaves under the casserole cover as a buffer. Cooking time for a batch of 70 pieces or packets is 11-12 hours, coconut shells fed into the slow fire one at a time, along with bits of firewood.



*Tinadtaran*

## DID YOU KNOW?

### 100-GRAMS OF THESE GABI PARTS PROVIDE:

		<b>Boiled Gabi Leaves</b>	<b>Boiled Gabi Petioles</b>
<b>Water</b>	<b>g</b>	88.0	96.2
<b>Energy</b>	<b>kcal</b>	48.0	14.0
<b>Protein</b>	<b>g</b>	1.40	0.20
<b>Fat</b>	<b>g</b>	0.40	0.10
<b>Carbohydrate</b>	<b>g</b>	9.70	3.20
<b>Dietary fiber</b>	<b>g</b>	0.60	0.30
<b>Ash</b>	<b>g</b>	0.50	0.30
<b>Calcium</b>	<b>mg</b>	72.0	33.0
<b>Phosphorus</b>	<b>mg</b>	28.0	11.0
<b>Iron</b>	<b>mg</b>	0.40	0.40
<b>Beta-carotene</b>	<b>micrograms</b>	4,000	125
<b>Thiamin</b>	<b>mg</b>	0.02	0.01
<b>Riboflavin</b>	<b>mg</b>	0.08	0.01
<b>Niacin</b>	<b>mg</b>	0.40	0.10
<b>Ascorbic acid</b>	<b>mg</b>	21.0	2.0

Source: Food and Nutrition Research Institute (FNRI). *The Philippine Food Composition Tables 1997*. p.37. Department of Science and Technology





## FROM SHARED COMMUNITY RESOURCE TO TRADED GOOD

Because of *laing* and *pinangat*, Gabi has gained a reputation outside of its traditional culinary niches. In the past, and even in many rural communities at present, Gabi growing in the wild is “protected” and “managed” by the community as a shared resource. Every household in the community is free to harvest enough for its own daily consumption, and take on the responsibility of ensuring that something is left to regenerate, and that its growing environment remains viable.



As human settlement increased, people started to domesticate Gabi in home gardens and to sell excess harvests in nearby markets to meet the growing demand. People became aware that there are many types of Gabi with distinct traits for specific purposes. Starting in the 1980s, the leading production areas are Camarines Sur, Samar, Leyte, Iloilo, Negros Oriental and Cotabato provinces. In addition, given the increasing demand for Gabi products both in local and international cuisine, large plantations were established in provinces near Metro Manila such as Laguna, Quezon and Cavite. Dried/fresh Gabi plant, ready to cook leaves, corms and stolons are sold in public markets as well as in big grocery stores. More recently, Mindoro has been supplying Gabi to Divisoria market.





**The wide variation in Gabi's features** has encouraged national academic and research institutions to establish germplasm collections and conduct varietal screening and evaluation programs. Until 2007, the Philippine Rootcrops Research and Training Center (PhilRootcrops) based at the Visayas State University (VSU) in Baybay, Leyte has produced ten (10) recommended Gabi varieties: VG-1 (Kalpao), VG-2 (Iniito), VG-3 (Dalwangan), PSB G-4, PSB G-5, NSIC G-6, NSIC G-7, NSIC G-8, NSIC G-9 and NSIC G-10. Work continues to identify more high-yielding varieties adapted to either lowland and upland areas, resistant to insect pests and diseases and have good eating quality. Indeed, Gabi holds much potential for human nutrition, livelihoods resiliency and climate change mitigation.

**There are 323 Gabi accessions** maintained by National Plant Genetic Resources Laboratory (NPGRL) based at the Institute of Plant Breeding, College of Agriculture and Food Science, University of the Philippines Los Baños (UPLB) in Laguna. Of these, 226 accessions are conserved as living plants in the field, 49 *in vitro*, and 48 conserved in the field and *in vitro*. Forty-two (42) of those accessions conserved *in vitro* have been sent for safety duplication at the Secretariat of the Pacific Community (SPC), a scientific and technical organisation of countries in the Pacific region.



**NPGRL was established on November 12, 1976** by Presidential Decree 1046-A to serve as the national center for plant genetic resources activities and the national repository of important and potentially useful agricultural crops.

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## Focus group discussions

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Barangay San Agustin, Municipality of San Nicolas, Ilocos Norte  
Barangay Anaao and Barangay Alilem Daya (Poblacion),  
Municipality of Alilem, Ilocos Sur

Barangay Dinwede East, Municipality of Cervantes, Ilocos Sur  
Barangay Bagumbayan-Ilajas and Barangay Buhay,  
Municipality of Alimodian, Iloilo

Barangay Dusacan and Barangay Jamog Gines,  
Municipality of Leon, Iloilo

Barangay San Jose and Barangay San Antonio,  
Municipality of Tapaz, Capiz

Barangay Molet and Barangay Lucero,  
Municipality of Jamindan, Capiz

Barangay Tablu and Barangay Liberty, Municipality of Tampakan,  
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These small pamphlets are intended to spark renewed interest in the conservation, use, production and promotion of Philippine indigenous vegetables that have always been part of Filipino food culture and are key to household food and nutrition security.

