

Cooking banana

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Cooking bananas are an important staple food for many people in the Pacific. Most types of banana (*Musa* spp.) can be harvested and cooked when still green, but some varieties are more commonly used for cooking. In this leaflet, these are referred to as 'cooking bananas'.

Cooking bananas are generally eaten when still green and starchy. However, some are also eaten in the half-ripe and ripe stages, in which case they are considered both 'cooking' and 'dessert' types.

Different types of cooking bananas

Cooking bananas, like dessert bananas, come in a great variety of shapes, sizes and colours. They may be large, weighing up to 300 grams, but some popular types of cooking bananas have small fruit of around 50–100 grams. Unripe bananas generally have green peel, but some varieties have brownish, red-orange or ash-coloured peel.

The flesh of cooking bananas and plantains is generally a deeper colour, ranging from cream to orange, although the white-fleshed *Cavendish* variety is also used for cooking in some places.

Plant growth and structure

Banana plants grow from an underground stem called a corm that sends up a shoot called a sucker. This grows into a mother plant that dies after it fruits.

The plants are propagated by suckers and usually fruit after one to one and a half years. They fruit throughout the year but are more likely to fruit during warm weather. The whole set of fruit is called a 'bunch', a cluster of fruit a 'hand' and a single fruit a 'finger'.

There are many differences in the plant structure of various types of cooking bananas. Some grow to only 3 metres (8 feet) high, while others grow as high as 8 metres (15 feet). The bunches of fruit hang downwards except for Fe'i bananas, which grow upwards. Fe'i bananas are unique to the Pacific.



Nutrition

Cooking bananas are rich in the energy (calories) that the body needs for warmth, work and play. The energy comes from the sugars and starch in the bananas. Green bananas have higher levels of starch than sugars. As bananas ripen, the starch turns into sugars, which are more easily digested.

Vitamin A

- Cooking bananas with yellow or orange flesh are rich in provitamin A carotenoids, the precursors to vitamin A.
- As bananas ripen, the flesh colour changes and the provitamin A carotenoids gradually develop to their maximum levels.
- Carotenoids are not usually destroyed during cooking. In fact, cooking may help the body use them more easily.
- Some varieties have deeper yellow or orange flesh. When ripe, they may contain up to 400 times more beta-carotene than white-fleshed varieties.

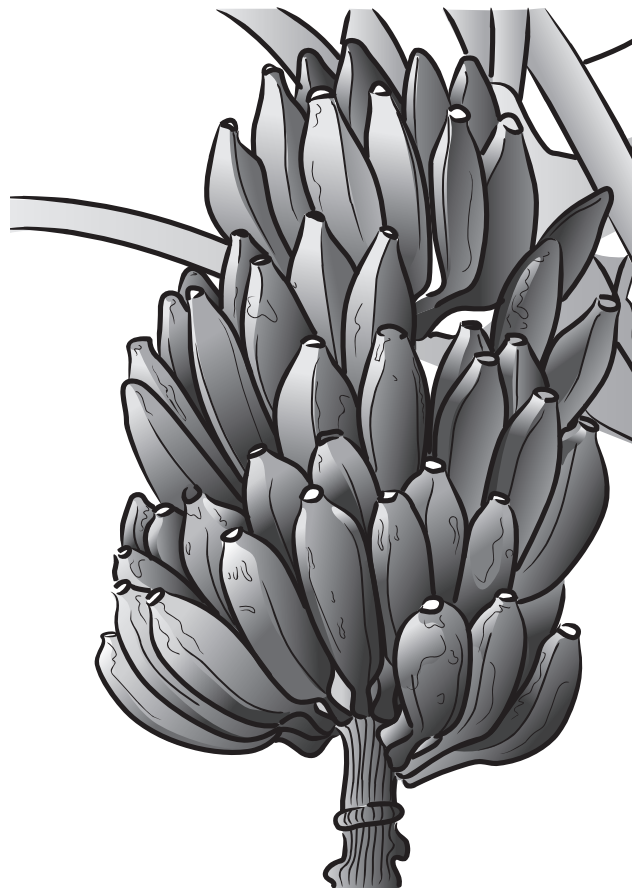
Vitamin A is important for protecting against infection and for good vision and healthy eyes. Beta-carotene is the most important of the provitamin A carotenoids. Consuming carotenoid-rich food may help to protect against diabetes, heart disease and cancer.

Other nutrients

Research shows that a variety of Fe'i banana called *Karat* has high levels of riboflavin (a B vitamin), niacin (another B vitamin), alpha-tocopherol (vitamin E) and the mineral calcium, which is vital for bones and teeth.

The Pacific Islands Food Composition Tables show that cooking bananas have a higher level of potassium than dessert bananas. Potassium is a vital mineral for regulating the metabolism and maintaining normal blood pressure. Bananas are also a good source of vitamin C, which is important for fighting against infection and helps the body use certain forms of iron.

The banana flower bud, which can be used as a vegetable, is particularly rich in nutrients and is a good source of vitamin C, provitamin A carotenoids, iron and potassium. Vitamin C is, however, destroyed by long cooking.





Cooking banana

The table and graphs below compare the nutrient content of fresh banana products to boiled white rice, which is often used to replace local starchy foods. Bananas are a better choice because they have higher food value.

Comparison of nutrient content of 100 gram (g) edible portions of banana and white rice

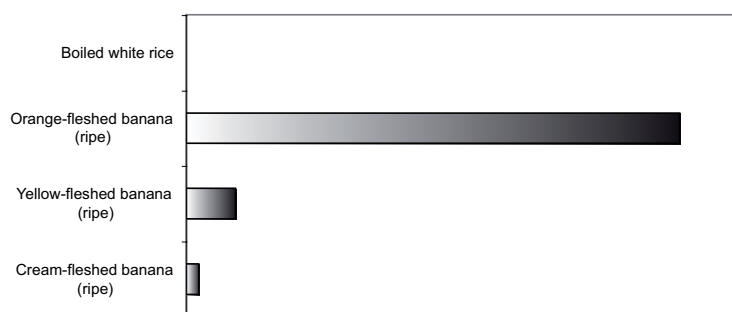
	Kcal*	Fibre (g)	Calcium (mg)	Iron (mg)	Potassium (mg)	Beta-carotene equivalents* (µg)	Riboflavin (mg)	Niacin (mg)	Vitamin C (mg)	Vitamin E (mg)
Cooking banana, boiled, flesh colour and maturity not specified ¹	111	1.2	5	0.5	400	116	0.04	0.5	9.0	0.3
Ripe cooking banana, fried, flesh colour not specified ¹	265	2.3	6	0.8	610	149	0.02	0.6	12.0	2.2
Ripe banana, boiled, cream-flesh, raw/cooked ^{2,3}	na	na	na	na	na	85-205	na	na	na	na
Ripe banana, boiled, yellow-flesh, raw/cooked ^{2,3}	na	na	6.5	0.1	269	232-892	na	na	na	na
Ripe banana, yellow/orange-flesh, raw/cooked ^{2,3}	na	na	68.6	0.2	253	565-2473	0.47-14.30	22.6	na	1.55
Ripe banana, orange-flesh, raw/cooked ^{2,3}	na	na	na	na	na	1450-8508	0.2	na	na	na
Banana flower, cooked ¹	42	1.8	70	2.0	572	184	0.02	0.7	3.0	trace
Banana flower, raw ¹	43	1.5	73	2.1	601	193	0.03	1.1	5.8	trace
White rice, boiled ¹	123	0.8	4	0.3	10	0	0.01	0.6	0	trace

¹ Dignan et al. 2004; ² Englberger et al. 2003a; ³ Englberger et al. 2005b; na = not available.

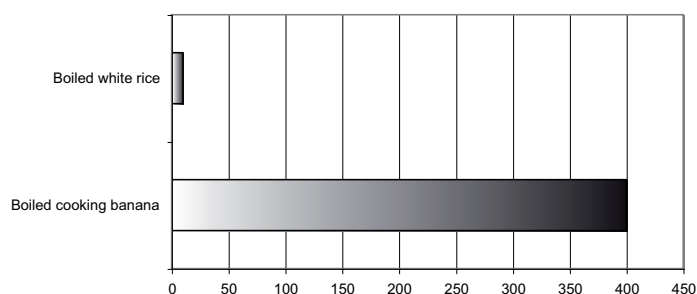
*Energy expressed as kilocalories; †provitamin A carotenoids expressed as the sum of the β -carotene plus half of the β -carotene.

Note: A white-fleshed banana weighs 50–150 g, a *Karat* banana weighs 100–300 g, and an *Utin Lap* banana weighs 50–70 g.

β -carotene equivalents (µg)



Potassium (mg/100g)





rib off the back so that the leaf lies flat. Then cut the leaf to the size needed. After filling it with food, fold and tie with a mid rib from a coconut leaf. Wrapping foods in banana leaves for school lunches or for selling at the market is convenient, cheap and hygienic, as long as the leaves are wiped clean before use. A nutritious way to cook food is to wrap packets of food in banana leaves and steam or bake the packets in an earth oven.

Preparation and preservation

For easy peeling, green bananas are boiled or steamed in their skins until soft and then peeled. Traditionally, green bananas are cooked in earth ovens or over hot coals. They may be peeled, soaked in salty water and then baked. Another cooking method is to bake grated or sliced bananas wrapped in leaves with coconut cream. Fermented paste made from green bananas may be baked in an earth oven as a cake.

Dried bananas

Dried bananas make a delicious inexpensive snack.

Dried bananas can also be soaked and added to dishes such as porridge before cooking.



Using cooking bananas

Cooking bananas can be used in many ways:

- Boiled, steamed, baked or fried
- Mashed and baked with coconut cream
- Mashed with other root crops, such as taro and cassava, in traditional recipes
- Dried in slices for snacks

Banana flower buds are picked from the ends of bunches of cooking bananas when the fruit is half grown. Picking the flower buds at this stage will not damage the fruit. To prepare banana flower buds for eating, remove the tough outer layers of the flower bud and slice thinly into sections like an onion. Wash in salty water, kneading to wash out some of the sticky sap. Rinse in fresh water and use in salads, soups or other cooked dishes, including meat-less burgers and seafood or meat dishes.

Banana leaves are not eaten but are often used to wrap food. Use a clean, undamaged, whole green banana leaf and soften it by holding it over a flame. Cut the mid-

1. Firm, ripe bananas of any kind can be dried, although some varieties dry better than others. Ripe cooking bananas dry very well, but do not use overripe ones.
2. Cut the peeled bananas into slices about 1 centimetre thick. If the slices are too thin, they will break up when drying or stick to the drying tray. If they are too thick, they will not dry thoroughly. All the slices should be about the same thickness. The slices can be tossed in lime or lemon juice at this stage to minimise the browning (oxidation) that some varieties show during the drying process.
3. Dry the banana slices on trays either in the sun, in an oven at a very low temperature, or in a dehydrator. Be sure to cover the slices well during drying to protect against flies and other pests.
4. Store the dried slices in airtight containers or sealed plastic bags.

Infant food

After being breastfed for 6 months, infants can be given ripe cooking banana in addition to breast milk. It is better to give them bananas with deeper yellow or orange flesh as these have higher food value than the white-fleshed types.



Recipes

Banana flower bud soup

Four servings:

- 2 cooking banana flower bud
- 1 cup shelled shrimp or prawns
- 1 onion, sliced
- 4 tablespoons oil
- 2 cups water
- 4 cloves garlic, chopped (optional)
- lemon juice

1. Remove the tough outer covering of the flower bud until the tender parts are reached. Slice into thin pieces. Wash the pieces in salty water, squeezing out the sap, and rinse. Set aside to cook later.
2. Mix the shrimp or prawns with the sliced onion and lemon juice.
3. Fry the garlic in the oil. Add the shrimp mixture.
4. Add the water and continue cooking.
5. Add the chopped banana flower buds. Turn over constantly until tender.

Note: Banana flowers can also be prepared as a vegetable; simply leave out the shellfish.

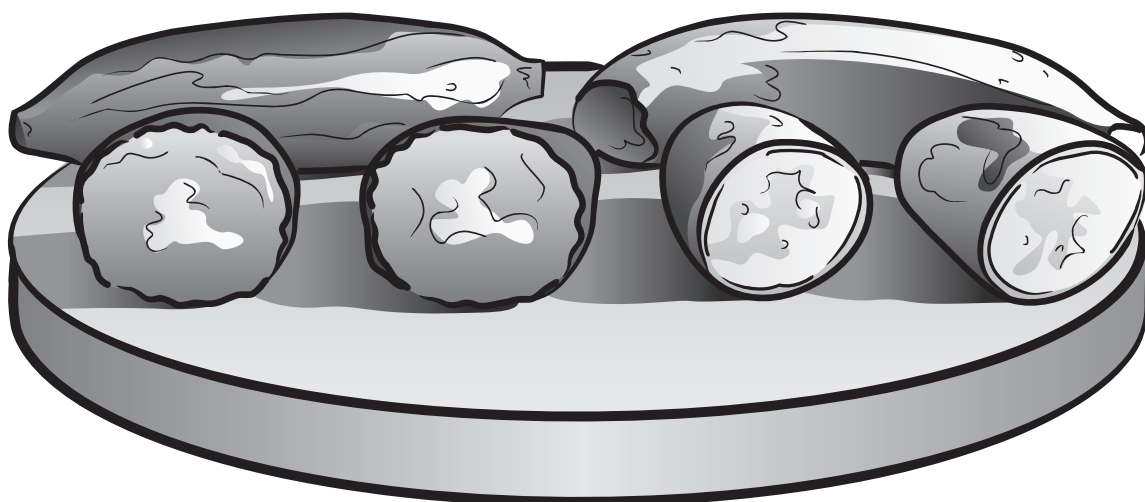
Baked cooking banana and fish

Eight servings:

- 4 ripe cooking bananas
- 8 pieces of fish
- 1 onion, sliced
- 4 tomatoes, sliced (optional)
- Coconut cream from 2 coconuts
– about 1 cup
- Clean banana leaves

1. Peel bananas and slice.
2. Divide the bananas, fish and other ingredients on to eight pieces of banana leaf and wrap into packages.
3. Place the packages in a baking dish.
4. Bake in oven at a moderate temperature (180°C or 350°F) until the fish is tender (about 30–45 minutes).

For health reasons, it is best not to add salt.





Stuffed banana and fish

Six to eight servings:

- ➔ 6 green cooking bananas
- ➔ 225 g (8 oz) fresh or canned tuna
- ➔ 1 onion, chopped
- ➔ 1 egg, beaten

1. Without peeling the bananas, cut them into halves lengthways.
2. Scoop out the flesh with a spoon, leaving a boat-shaped peel.
3. Grate the banana flesh.
4. Mix the fish and chopped onion with the grated banana. Add the beaten egg to bind the mixture.
5. Put the mixture back into the banana peels. Tie the halves together with string.
6. Steam for 25 minutes or bake in oven at a moderate temperature (180°C or 350°F) for 45 minutes.

Baked grated bananas

- ➔ 25 green bananas
- ➔ 4 coconuts, grated

1. Scrape out three-quarters of the flesh of the green bananas with a spoon, scraping in a lengthwise direction.
2. Put the scraped-out banana back into the banana peel.
3. Place the bananas in a pot, stacking them one on top of the other.
4. Squeeze in enough coconut cream to just cover the bananas.
5. Boil until cooked.

Note: Some people add sugar to this dish. For health reasons, it is best not to add sugar. If you do, add only a very small amount.

References

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