

# South Pacific Commission

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9



## Breadfruit

### A food for all seasons

Breadfruit is a good staple food that can be easily preserved and eaten all year round. Many Island people use breadfruit only when it is in season. Much breadfruit is therefore wasted because a great deal of this food is available only at one time and because few preservation methods are being used.

Before Europeans came to the Pacific and introduced their foods, breadfruit was preserved so it could be used all the year round. It made good emergency food after hurricanes or floods, before hurricane relief supplies were available. When easy-to-prepare foods that could be stored for long periods of time became available, breadfruit preservation methods were no longer used.

Combining new and old ways of preparation and preservation can make breadfruit an important food for all seasons. Using breadfruit means not having to use expensive imported foods.



Breadfruit trees naturally grow tall, but can be cut back to keep the breadfruit within easy reach.

### A tree requiring little care

The breadfruit tree has the scientific name *Artocarpus altilis*. It grows to 9 to 18 metres (30 to 60 feet) and begins bearing fruit after about six years. It produces fruit for over 50 years. Breadfruit leaves are large, leathery, and over 30 cm (1 foot) long.

Many varieties of breadfruit grow in the Pacific. Leaves differ in shape and fruits differ in shape, size, and time of ripening. Most varieties bear fruit in the wet season, but some bear fruit at other times.

Breadfruit trees grow in a variety of

soils, and fruit well on atolls. Varieties have adapted to different climates, but high winds or little rainfall can cause loss of leaves, and may even cause them to die.

Planting seeds from full ripe fruits in well-drained soil is one way to grow breadfruit trees. Another way is to plant young shoots or suckers. Young breadfruit trees need protection from hot sun. Later they grow best in full sunlight. Older trees require little care except on atolls where they must sometimes be watered and manured with compost.



## Using breadfruit

Breadfruit is used when it is mature, that is, when the white milky sap comes to the surface and runs over the outside. The fruit is still hard and green.

If the breadfruit is allowed to ripen, some of the starch in it turns to sugar. It has a sweet flavour and should be used when it is soft, but not rotten.

Breadfruit seeds, leaves, and blossoms are also eaten. The seeds have a pleasant nutty flavour. Only very young leaves may be eaten. If the blossoms are picked when just ripe, before they are brown and hard, they may be eaten also.

## Preparation

Traditional methods of preparing breadfruit include baking in ground ovens or roasting over hot coals. It may be fermented by burying it in layers between leaves. The fermented breadfruit is removed from the pit, mixed with coconut cream, and baked into a sour bread.

Today, it can be prepared by traditional methods, or baked, steamed, or fried. The fruit is pricked with a fork before baking or roasting it, so that it does not explode. Bake it in a moderate oven (180°C or 350°F) until soft, about 1½ hours. When steaming or boiling breadfruit, peel it first. Mature grated breadfruit may be used instead of wheat flour in some recipes.

Fried breadfruit slices are prepared using roasted or boiled mature breadfruit. Core and slice it to the desired size. Fry in hot oil until golden brown and serve warm.

Young leaves are softened over a fire. Remove the stalks, wash the leaves, and cook covered in a small amount of salted water for about 20 minutes. Serve with coconut cream if desired.

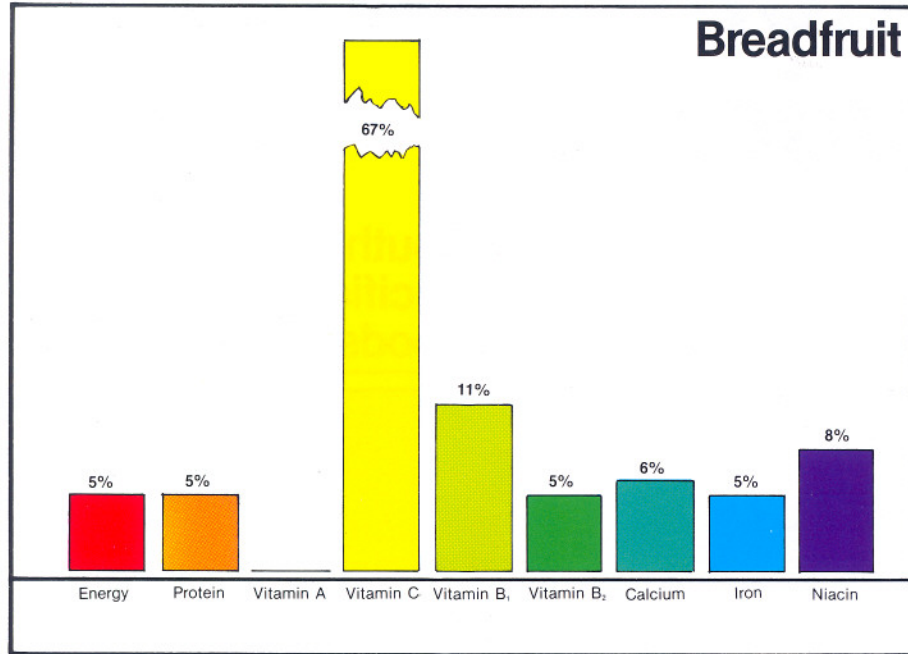
Prepare breadfruit seeds by washing and then dropping them into salted boiling water. Cook covered for 45 minutes. Drain and serve hot. They can also be used as nuts when baking.

eaten alone, but should be mixed with vegetables and meat or fish.

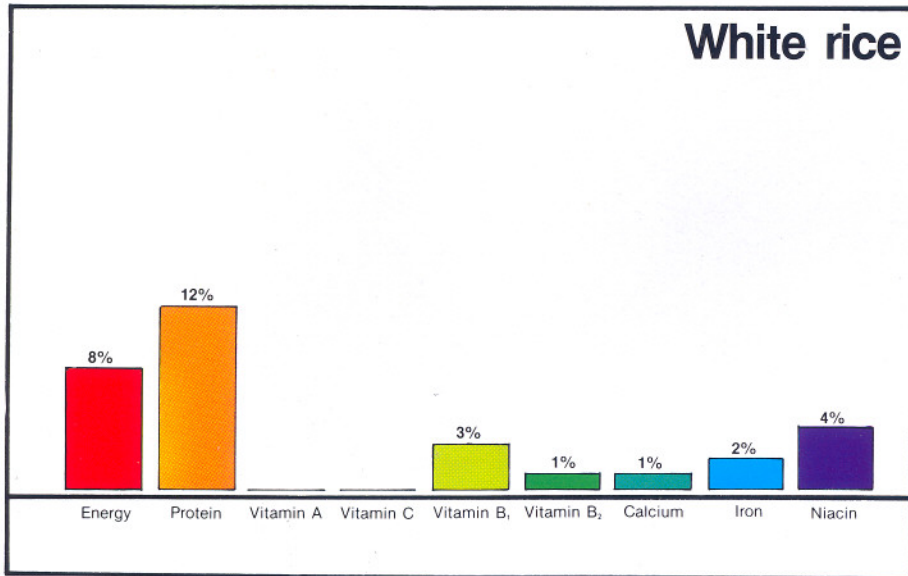
Breadfruit should not be eaten alone either. Eating it with fish, meat, or other protein foods provides the nutrients necessary for a healthy and active body.

**Breadfruit seeds** are a fair source of **protein**, which the body needs to grow and stay healthy. **Vitamin B<sub>1</sub>** (thiamin), which is plentiful in the seeds, helps the body to convert carbohydrates into energy and heat.

**Breadfruit leaves** are good sources of **Vitamin C**, **iron**, and **calcium**. Iron helps keep blood healthy and Calcium helps to make strong bones and teeth.



Percentage of daily needs of an adult woman, filled by one half small boiled mature breadfruit<sup>1</sup>



Percentage of daily needs of an adult woman, filled by one cup of cooked rice<sup>1</sup>

## Energy and fibre

**Breadfruit** is an **energy** food. Starch and sugar make breadfruit high in energy which the body needs for warmth, work and play. Breadfruit is a fair source of **Vitamin C**. This vitamin keeps the body tissues strong, helps the body to use iron, and aids in chemical actions in the body.

Breadfruit is rich in **fibre**, which is needed to make the intestines and bowels work properly. People who eat foods rich in fibre are less likely to be too fat or obese. Obesity can lead to diabetes and heart disease.

Polished white rice provides some energy and protein, but fewer vitamins and minerals than breadfruit. Rice should not be

1. From Food composition tables for use in the Pacific Islands, South Pacific Commission, 1983.



## Preservation

When storing breadfruit for a short period of time, keep it in a cool and dark place until needed. If it is to be stored overnight, place the whole breadfruit under water.

Breadfruit not eaten during breadfruit season is preserved by drying, burying, or freezing. This enables these delicious products to be used at any time of the year and in emergencies. Using preserved breadfruit saves money.

**Drying** is done by the sun or in a very slow oven (50°C or 120°F). Wash mature breadfruit and cut it into pieces. Peel and core it. Slice very thinly, place on racks, and put in the sun to dry. When well dried, wrap in plastic bags or leaves so as to keep out moisture. Dried breadfruit is an excellent addition to soups and stews.

Another way of drying breadfruit is to cook it first and then mash it into paste. Dry the paste in the sun and store in airtight containers.

**Breadfruit flour** is made from dried breadfruit, by pounding or by grinding if a grinder is available. Sift and repeat the process until all of the flour is sifted. Store the flour in an airtight jar. It can be used instead of wheat flour in many recipes.

**Burying** breadfruit is a preservation method used in some parts of the Pacific. It is peeled, cored, and cut up into small pieces. A pit is lined with banana or breadfruit leaves and the breadfruit is put inside. It is covered with more leaves, old sacks, earth, and a layer of stones.

After two months, the breadfruit is fermented and is ready to eat, although it may be kept this way for a year. When the breadfruit is dug up, it is put into sacks and rinsed with water until the sour-smelling liquid is removed. Then it is mixed with coconut cream and baked. Mashed bananas may also be added to the mixture before baking.

**Freezing** breadfruit also preserves it. Boiled, baked, or roasted breadfruit can be frozen. Cut the fruit into thin slices, wrap in grease-proof paper, and then package in plastic bags. It is more convenient for use if frozen in small amounts. Reheat over steam or use in stews or soups. Once unfrozen, it can be fried.

## Breadfruit & beef stew

*Four to six servings:*

½ cup flour  
Salt to taste  
½ kg (1 lb) beef  
3 tablespoons cooking oil  
1 large onion, chopped  
1 cup dried breadfruit  
1 cup pumpkin, chopped  
2 cups green leafy vegetables

1. Mix flour and salt.
2. Cut up meat into small pieces. Add to the flour mixture, mixing until well coated.
3. Heat cooking oil in a large pot. Add the coated meat and brown.
4. When the meat is almost brown, add chopped onion. Stir occasionally until browned.
5. Add water. Cover and cook until meat is tender, about 30 minutes.
6. Add breadfruit that has been soaked in water for 10 minutes, pumpkin, and green leafy vegetables.
7. Cook for another 10 to 15 minutes. Serve hot.

## Breadfruit fritters

*Twelve fritters:*

1 cup boiled mature breadfruit  
1 egg, beaten  
¼ cup skimmed milk powder  
1 tablespoon onion, finely chopped  
Salt to taste  
1 tablespoon capsicum, chopped (optional)  
2 tablespoons water  
Oil for frying

1. Mash breadfruit well with a fork. Make sure to get rid of the lumps.
2. Add beaten egg and milk powder. Stir well.
3. Mix in onion, salt, and capsicum.
4. Add just enough water so the mixture will drop off a spoon.
5. Fry in hot fat, until golden brown. Serve.

## Breadfruit & fish salad

*Four servings:*

2 cups cooked mature breadfruit  
1 cup cooked fresh fish or tinned fish  
2 hard boiled eggs, chopped  
1 cup finely sliced vegetables such as carrots, Chinese cabbage, cucumber, or tomato  
3 tablespoons onion, grated  
Watercress

1. Cut the cooked breadfruit into cubes.
2. Combine all of the ingredients, except the watercress.
3. Add salad dressing or lemon juice if desired.
4. Serve cold on watercress.

## Roast chicken & breadfruit stuffing

*Four to six servings:*

1½-kg (3 lb) chicken  
Salt to taste  
2 cups cooked mature breadfruit  
2 tablespoons cooking oil  
1 piece garlic, finely chopped (optional)  
2 teaspoons lemon juice  
2 teaspoons grated citrus rind  
2 tablespoons parsley, chopped (optional)  
Butter or margarine

1. Rub chicken well with salt.
2. Mash the breadfruit.
3. Fry the onion and garlic in the oil. When cooked, mix it with the mashed breadfruit.
4. Stir grated lemon rind and lemon juice into breadfruit mixture with 1 teaspoon salt and parsley.
5. Place mixture inside chicken. Sew up the end with cotton.
6. Rub chicken with lemon, and then butter.
7. Put in a covered baking dish with ¼ cup water in bottom. Cook in a moderate oven (180°C or 350°F) for 1 hour.
8. Remove cover, baste, and brown for about 30 minutes.
9. Remove the cotton. Serve.



## Breadfruit pudding

*Four to six servings:*

1 large mature breadfruit  
2 coconuts, grated  
Sugar to taste

1. Roast breadfruit over open fire until cooked, about 1 hour.
2. Peel off the skin and wrap in coconut leaves.
3. Beat the breadfruit until tender with a stick or mallet.
4. Cut the breadfruit into small cubes.
5. Prepare coconut cream by putting 3 hot stones into the grated coconut. Quickly toss the coconut around the stones so that it is roasted, but not burnt.
6. Remove the stones and squeeze out the coconut cream, using only a small amount of water.
7. Add sugar to taste to the coconut cream. Pour over breadfruit cubes. Serve warm or cool.

## Breadfruit pastry

*One pie crust:*

1 ripe breadfruit  
 $\frac{1}{2}$  teaspoon salt  
2 tablespoons butter  
Flour

1. Wash the breadfruit well and prick with a fork.
2. Roast on an open fire or bake in a moderate oven (180°C or 350°F) until soft, about 1 hour.
3. Remove the skin, seeds, and dark spots. Sieve the breadfruit while still hot.
4. Measure 2 cups of breadfruit into a bowl.
5. Mix in salt and butter.
6. Form into a smooth ball and knead lightly on a floured board.
7. Shape the pastry into a pie dish using fingers and a glass. The pastry is like a crumb pastry.
8. Prick with a fork. Bake in a moderately hot oven (200°C or 400°F) for 12 to 15 minutes.
9. Fill with a savoury filling.

## Breadfruit buns

*Eighteen buns:*

2 cups breadfruit flour  
1 teaspoon baking powder  
 $\frac{1}{2}$  cup skimmed milk powder  
 $\frac{1}{2}$  teaspoon mixed spice (optional)  
2 tablespoons butter or margarine  
 $\frac{1}{2}$  cup sugar  
1 egg  
1 teaspoon vanilla  
 $\frac{1}{2}$  teaspoon citrus rind, finely grated  
1 cup mature breadfruit, grated  
 $\frac{1}{4}$  cup water

1. Mix together flour, baking powder, milk powder, and mixed spice. Set aside.
2. Cream together the butter and sugar. Add egg, vanilla, and grated citrus rind. Mix well.
3. Add grated breadfruit to the butter mixture.
4. Stir the flour mixture into the butter mixture, adding just enough of the water to make a stiff dough.
5. Drop by tablespoonfuls onto a greased baking sheet.
6. Bake in a moderately hot oven (190°C or 375°F) until golden brown, about 30 minutes. Cool and serve.

This leaflet is the ninth of a series devoted to the uses of local Pacific foods. Other leaflets available in this series are:

Leaflet 1 – *Taro*  
Leaflet 2 – *Pawpaw*  
Leaflet 3 – *Mango*  
Leaflet 4 – *Guava*  
Leaflet 5 – *Cassava*  
Leaflet 6 – *Green leaves*  
Leaflet 7 – *Banana*  
Leaflet 8 – *Coconut*  
Leaflet 10 – *Pineapple*  
Leaflet 11 – *Citrus fruits*  
Leaflet 12 – *Pumpkin*  
Leaflet 13 – *Sweet potato*  
Leaflet 14 – *Yam*  
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