

South Pacific Commission

Community
Health Services



SOUTH
PACIFIC
FOODS

Leaflet **15**
1991

Nuts and Seeds

A variety of tastes and uses

A delicious and useful part of the diet of Pacific Islanders consists of edible nuts and seeds. The different varieties that are grown range from the most common and widely used nuts, such as coconuts, to others such as kauris (*Agathis* species) eaten in certain areas of New Caledonia, ngali nuts (*Canarium* species) in the Solomons, navele (*Barringtonia* species) in Vanuatu, Tahitian chestnut (*Inocarpus edulis*) in Fiji and many parts of Polynesia, and different varieties of pandanus used in Papua New Guinea and on atolls such as Kiribati and Tuvalu.

Some can be eaten raw, for example, pandanus nuts and ngali nuts, while others need to be soaked in water before eating. Whatever the method of preparation used, edible nuts and seeds are an excellent food resource for family meals, snacks, or times of food shortages.



Easy to grow

Nut trees and seeds are easy to grow and harvest. They do not need a lot of looking after. Some can be grown from seeds, others from stem, branch or root cuttings. Many grow 'wild' throughout the Pacific, but unfortunately are often removed during bush clearing. Traditional methods of growing nut trees are still practised in some areas. Some may take a long time to mature, but once they are ready, they can provide food for a very long time. Large trees such as the Tahitian chestnut may also provide shade to other crops in the garden.

Nuts trees are particularly useful because they are more resistant to bad weather conditions and pests than other types of plant foods.

A healthy choice

Nuts and seeds are two of the most nutritious foods that are easily available for the family in the Pacific. They can be regarded as a complete food because they usually contain enough of the essential nutrients that we need — energy from oils and fats, proteins, vitamins and minerals.



Nut trees and seeds are easy to grow



SOME EDIBLE NUTS AND SEEDS FOUND IN THE PACIFIC

Notes: Common names are those of the plant, not the seeds' names.
* No photo shown.

Common names	Scientific name	Description	Food value, preparation, uses
1. Breadfruit seeds; Cook Is.: kuru; Fiji: uto; French Polynesia: maiore uru; Kiribati: mai; Niue: me; Ponape: mai kole; Samoa: 'ulu; Tonga, Tuvalu, Wallis & Futuna: mei; Yap: su.	Artocarpus edulis	Large evergreen tree up to 20 metres high. Some varieties bear fruit containing the edible seeds.	Roasted or boiled.
2. Candlenut; Cook Is.: tuti; Fiji: sikeci; French Polynesia, Tonga: tuitui; New Caledonia: tai; Papua New Guinea: kemiri.	Aleurites moluccana	Large tree, with pale green leaves and small greenish-white flowers, fruit contain shelled seed.	Good source of oil; nut roasted and eaten as a snack or added to desserts, cakes, and pies.
3. Cashew nut; Cook Is.: aratita popaa; Northern Marianas, Samoa: apuinitia.	Anacardium occidentale	Medium or small tree with yellowish to purplish fruit containing a single seed or nut.	Good source of oil, protein, iron and Vitamin B complex; roasted and eaten as snack or added to cakes, desserts, etc.
4. Coconut; Cook Is.: nu; Fiji, Niue: niu; French Polynesia: hakan; Guam, Northern Marianas: niyog; Kiribati: ben, te-ni; Marshall Is.: mere; Palau: lius; Ponape: mangas; Samoa: popo; Truk: apun, nu; Tuvalu: fuaniu.	Cocos nucifera	Tall palm-tree with long trunk and crown of leaves, with nuts growing on stalks from inside base of leaves.	Good source of oil and fibre; processed food: biscuits, cakes, pastries; good snack, fresh, or grated; cream extracted and used with Pacific foods—root crops and vegetables.
5. Cut nut; Fiji: vutu; Niue: 'ai; Papua New Guinea: pau; Solomons: fala; Tonga: 'ai; Vanuatu: navele; Wallis & Futuna: vutu kai.	Barringtonia edulis	Large fruit-bearing tree, mostly grown in coastal areas; oval fruit, green or dark purple on outside with edible nut when mature.	Good source of energy; good snacks for children, mostly eaten raw or cooked.
6. Indian almond; Java almond; beach almond; Cook Is.: kauriki; Fiji: tavola; Kiribati: te kunikuna, te tarin; Kosrae: sarf; Niue: telie; Northern Mariana Is.: talisai; Palau: miich; Papua New Guinea: klis; Samoa, Tuvalu: talie; Solomon Is.: talise; Tonga: telie; Tuvalu: talie; Vanuatu: natavoa; Yap: kal.	Terminalia catappa	Large branching tree, leaves usually red; fruit contains small edible nut.	Good source of energy; outside part of fruit can be eaten when ripe; seed used as a snack or added to cakes and desserts.
7. Macadamia nut*	Macadamia integrifolia, M. tetraphylla	Large tree with round hard thick-shelled nuts.	Good source of energy; eaten raw or roasted.
8. Pandanus nut; Cook Is., French Polynesia: 'ara; Kiribati: te-kaina; Niue: fa; Papua New Guinea: karuka; Ponape: fahs; Solomon Is.: fau; Tokelau: fala; Tonga: fa; Tuvalu, Wallis & Futuna: fala.	Pandanus tectorius P. julianetii, P. conoideus, P. species	Spiky-leaved 'palm trees, commonly growing on atolls.S	'Good source of energy; nuts eaten raw, cooked, roasted or smoked.
9. Pawpaw seeds, papaya; Cook Is.: vi ninita; Fiji: maoli, weleti; French Polynesia: i'ita; Kiribati: tebabaia; Kosrae: es; Marshall Is.: geinapu, keinabu, mohmiyap; Papua New Guinea: paipai; Tokelau: esi; Tonga: lesi; Tuvalu: olesi.	Carica papaya	Erect, tall palm-like tree with large green leaves on long stalks; fruit containing the seed grow on short stalks at base of leaves.	Good food value; freshly chopped or mashed can be used in salad mixtures.
10. Peanut; monkey nut; Cook Is. French Polynesia: aratita;	Arachis hypogaea	Low-growing small plant bearing seed pods underground.	Very good sources of protein and vitamins; roasted and eaten as snack; use in soups and stews; grind and add to cakes and desserts; excellent snack food for children.
11. Pili nut; Papua New Guinea: galip nut, kanari; Samoa: lama; Solomon Is.: ngali; Vanuatu: nangai.	Canarium species	Large forest tree bearing fruit with fairly large hard-shelled seed inside.	Good source of energy eaten raw, roasted or baked in earth oven; can be stored for a long time.
12. Pumpkin seeds; Cook Is.: motini; Guam: amasa; New Caledonia: wajei; Tonga: hina.	Cucurbita maxima	Trailing or climbing herbs with flat oval shaped seeds inside pumpkin fruit.	Good source of oil; cooked; deep-fried and used in soups, sauces; give a nutty flavour.
13. Red bead; Cook Is.: matako-viriviri; Niue: poumea; Samoa: lopa; Tonga: lopa.	Adenanthera pavonina	Large tree with tiny pale green leaves.	Good food value; mature seeds eaten raw or roasted and used as a children's snack.
14. Tahitian or Polynesian chestnut;* Cook Is.: i'i; Fiji: ivi; French Polynesia: ifi; Kosrae: clark, hi; Papua New Guinea: 'aila; Ponape: marap; Samoa: ifi; Solomon Is.: ipie; Vanuatu: namambe.	Inocarpus edulis; I. tagiferus	Very large tree, bearing kidney-shaped fruit with edible kernel or seed.	Good source of energy; can be boiled and baked in earth ovens.
15. Watermelon seeds; New Caledonia: kavé paaka.	Citrullus vulgaris	Trailing or climbing vines with small yellow flowers.	Seeds contain edible oil; eaten raw or ground and added to desserts, cakes and pies.

months if free of insects and disease. Peanuts, pumpkin and breadfruit seeds can also be baked and then stored in airtight containers for a long time. Roasting will also help remove water faster and make the nuts more tasty and crunchy to eat.

Peanuts must be cooked

Some nuts (for example, peanuts) must be cooked either by roasting or by boiling before being eaten. This is because raw peanuts contain a substance which stops our bodies using the protein inside the peanuts. Cooking destroys this substance. Cooked nuts provide protein which the body needs for growth.

To roast peanuts over the fire, place whole peanuts in their shells on a tray or frying pan. Put this over the fire until the peanuts are cooked. Turn occasionally for even roasting or mix sand with peanuts first before putting onto the tray or frying pan. This will keep them from burning and help them to roast evenly.

To roast peanuts in an oven, place shelled peanuts one layer deep in a shallow pan. Roast the shelled nuts at 350°F or 180°C for 15–20 minutes until golden brown. Stir occasionally for even roasting.

Popular and nutritious food products can be made using nuts and seeds. One such product is peanut butter. To make it, use shelled, dried and roasted peanuts. Remove their skins and then grind the nuts. Add a little salt and oil to the peanut mixture and grind well. When the mixture is ready, store in clean, airtight containers. Peanut butter is a good food for children's school lunches. Do not store for longer than one week.

Polynesian breakfast

4 servings:

- 4 cups grated raw chestnut kernel
- 1/2 cup thick coconut cream
- 1/2 cup water
- 2 softened banana leaves

1. Place grated chestnut kernel in a bowl.
2. Add prepared coconut cream to grated chestnut.
3. Wrap mixture in softened banana leaves and bake in earth oven or steam until cooked.
4. Serve as a breakfast dish for the family.

Healthy bars

8–10 servings:

- 3 eggs, beaten
- 3/4 cup sugar
- 1 cup wholemeal flour
- 1/4 cup skim milk
- 1/2 teaspoon baking powder
- 3 1/2 cups chopped nuts
- 1/2 cup grated coconut

1. Mix eggs and sugar, then add flour, skim milk and baking powder.
2. Add chopped nuts and coconut. Mix well.
3. Spread on well-oiled 20 cm square baking pan.
4. Bake in a moderate oven (350°F or 180°C) for 30 minutes.
5. Cut into squares while still warm. Cool and store in an airtight container.

Note: This is a delicious and nutritious snack for children, but make sure they clean their teeth well after eating it.

Mango nut bread

6 servings:

- 1/2 cup butter or margarine
- 3/4 cup sugar
- 2 eggs
- 2 cups sifted flour
- 1 teaspoon baking soda
- 1/2 cup chopped nuts
- 1/4 teaspoon salt
- 1/2 cup mango pulp
- 1 tablespoon lime or lemon juice



1. Cream the butter or margarine and sugar together.
2. Beat in the eggs gradually.
3. Stir in dry ingredients.
4. Mix the mango pulp and lime juice and add to the butter mixture.
5. Put into a greased loaf tin or other baking dish.
6. Cook in a moderate oven (350°F or 180°C) for 1 hour.
7. Mango nut bread is better if it is cut 2 or 3 days after baking.

Pawpaw seed dressing

- 1 cup white vinegar
- 1/2 cup sugar
- 1 teaspoon seasoned salt
- 1 teaspoon dry mustard
- 2 cups oil
- 1 small onion, chopped
- 2 tablespoons fresh pawpaw seeds

1. Place vinegar and dry ingredients in a bowl. Whisk or beat very hard with a fork and gradually add the oil to make a smooth sauce.
2. Add the chopped onion and beat well.
3. Finely chop or mash the pawpaw seeds with a fork.
4. Add seeds and beat the mixture well.
5. Use as desired as a dressing for fruits or green salads.

Note: A much smoother dressing can be made by using a blender instead of whisking or beating by hand.

Surprise salad dressing

- 1/4 cup peanut butter
- 1/4 cup honey
- 1/2 cup mayonnaise or salad dressing
- 1/2 cup chopped ripe fruits such as pawpaw, pineapple or mango

1. Mix the peanut butter with the honey.
2. Fold in the mayonnaise or salad dressing.
3. Add the chopped fruits.

Use as a salad or coleslaw dressing.

Peanut salad

1 serving:

- 1 peeled ripe banana
- 1/2 cup coarsely chopped peanuts or 2 tablespoons peanut butter
- 2-4 lettuce leaves
- 2 tablespoons mayonnaise or Surprise salad dressing

1. Make a cut all the way along the top of the banana, being careful not to cut all the way through.
2. Spread the cut slightly and fill with coarsely chopped peanuts.
3. Serve on a lettuce leaf with mayonnaise or Surprise salad dressing.

Coconut macadamia chicken

4 servings:

- 4 chicken pieces
- Freshly ground pepper
- 4 tablespoons butter
- 1/2 cup green onions
- 1 tablespoon brown sugar
- 2 teaspoons thyme or other herbs (optional)
- 1/2 cup sliced green peppers
- 2/3 cup chopped pawpaw or pineapple
- 2 tablespoons fresh lemon juice
- 3/4 cups macadamia nut pieces
- Coconut crust (use recipe below)

1. Season chicken pieces with pepper.
2. Heat butter in frying pan and brown chicken pieces on all sides.
3. Arrange browned chicken pieces in a single layer in a baking dish.
4. Add onion to the frying pan and stir to coat with drippings.

5. Stir in brown sugar, herbs (optional), green peppers, pawpaw or pineapple and lemon juice. Cook for 2 minutes. Spoon evenly over the chicken pieces.
6. Cover and bake in a moderately hot oven (375°F or 190°C) for 45 minutes or until chicken is tender.
7. Remove cover. Sprinkle coconut crust over chicken and then sprinkle with macadamia nut pieces.
8. Bake uncovered for 10 minutes more.
9. Spoon juices over chicken as it is served.
10. Serve with green leaves and baked or boiled root crops.

Note: A very tasty meal. Other nuts can be used instead of macadamia nuts.

Coconut crust

- 5 tablespoons melted polyunsaturated margarine
- 2 tablespoons lemon juice
- 1/4 teaspoon salt
- 1/4 teaspoon pepper
- 1 1/2 cups grated coconut
- 2 tablespoons chopped fresh parsley (optional)

Mix all the ingredients together and use as a crispy topping or crust for savoury dishes.

Peanut stew

4 servings:

- 8 small sweet potatoes
- 4 spring onions
- 4 tomatoes
- 4 tablespoons oil
- 1/2 cup roasted peanuts
- 1/2 cup water
- 1 cup green leaves

1. Wash and peel sweet potatoes, then cut into pieces.
2. Wash spring onions and tomatoes, then chop into small pieces.
3. Put oil in a pot over the fire. Fry the onions and tomatoes until soft.
4. Add the roasted peanuts and sweet potatoes. Add 1 or 2 cups of water.
5. Boil for about 30 minutes or until peanuts and sweet potatoes are soft.
6. Add the green leaves and cook for 5 minutes more.
7. Serve hot or cold.

Note: This is a very nutritious and tasty dish for children.

Tahitian chestnut cake

- 1 cup grated chestnut
- 3 eggs
- 1 cup coconut cream
- 1 cup sugar
- 2 cups flour
- 2 tablespoons baking powder
- 1 softened banana leaf

1. Mix all ingredients to a moist consistency.
2. Wrap in prepared banana leaf.
3. Bake in an earth oven for 1 hour.
4. Serve with hot lemon-leaf tea.

Note: Mashed banana can be added for extra flavour. Aluminium foil can be used instead of banana leaf.



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

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Published by the South Pacific Commission and printed by Stredder Print Limited, Auckland, New Zealand.

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Original text: English.

Reprinted in 1995 with financial assistance from the Australian Agency for International Development (AusAID) and the Technical Centre for Agricultural and Rural Co-operation ACP/EU.



SPC Cataloguing-in-publication data
Nuts and seeds.

(South Pacific foods leaflet ; 15)

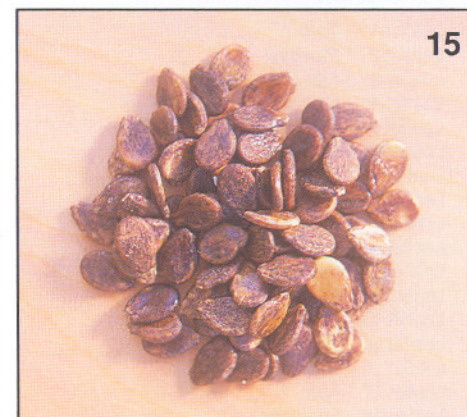
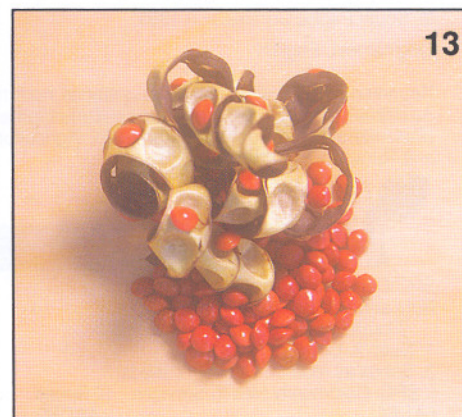
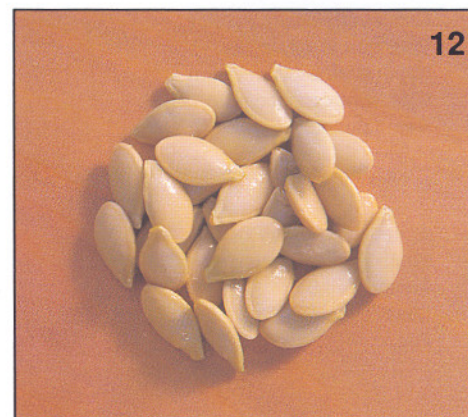
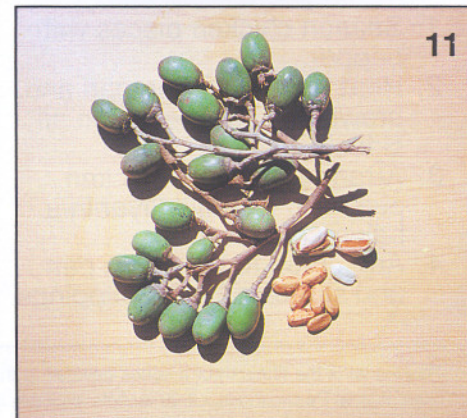
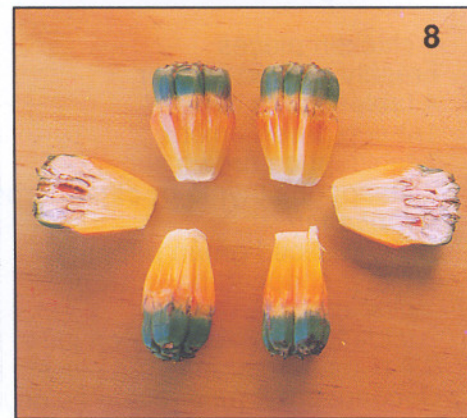
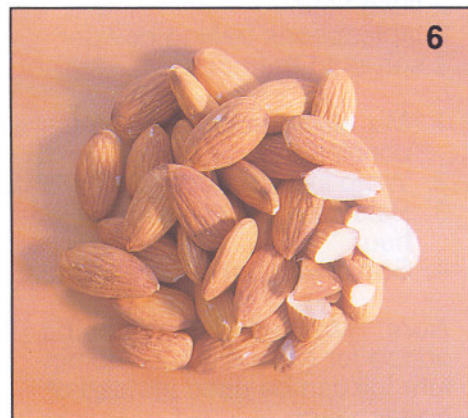
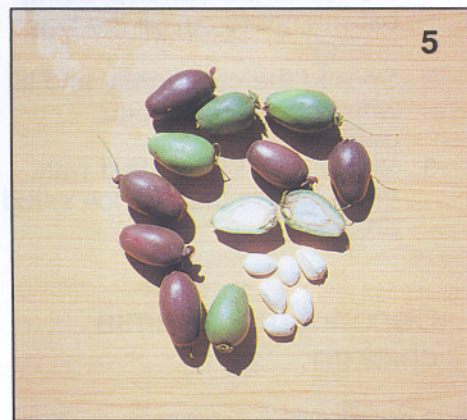
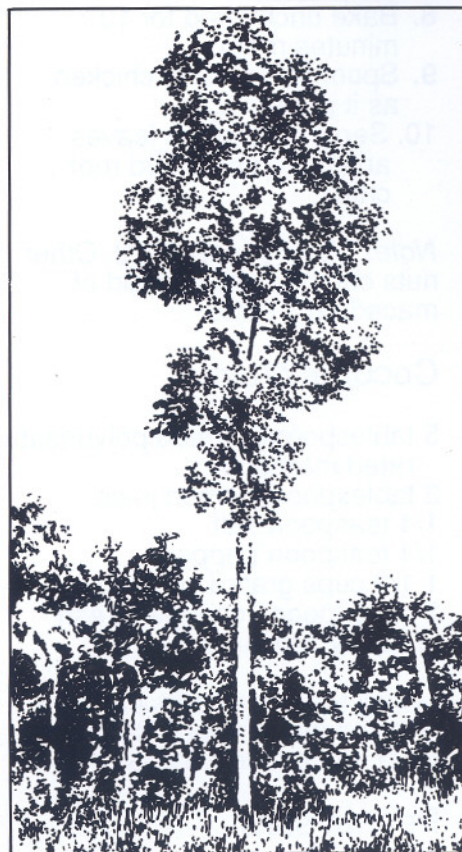
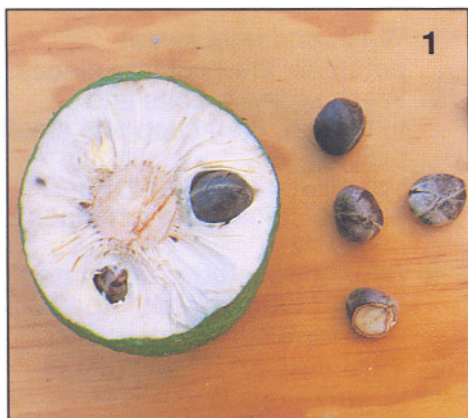
1. Nuts 2. Cookery (Nuts)
 3. Seeds as food 4. Cookery (Seeds)
 - I. SPC. Community Health Services. II. Series 641.64 AACR2
- ISBN 982-203-439-3

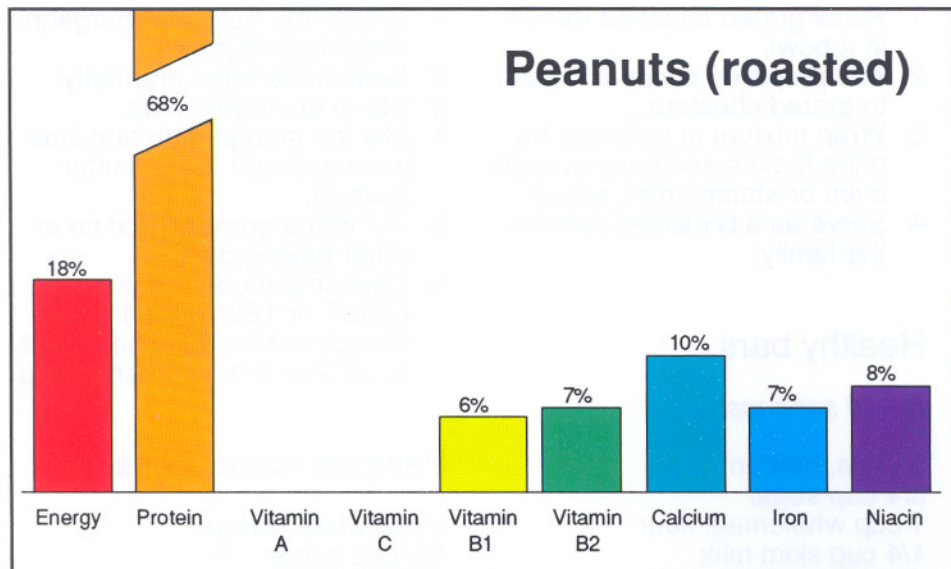
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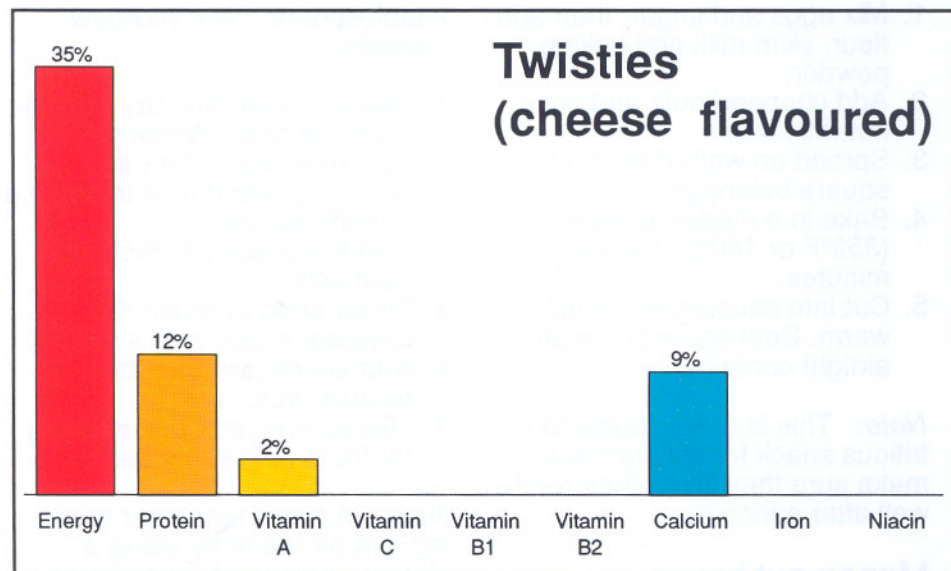
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Percentage of daily needs of an adult woman filled by 70g (about half a cup) shelled peanuts.



Percentage of daily needs of an adult woman filled by 35g (about 1 packet) cheese flavoured twisties.

*Food Technology in Australia, Volume 34(10) October 1982 (pages 453—454).

Nuts and seeds are an excellent source of *energy* which the body needs to stay active. This energy is mainly in the form of fats and oils. Nuts and seeds can help supplement the starchy roots and tubers which make up a large part of the traditional Island diet. In some areas, such as the remote New Guinea highlands, nuts and seeds are highly valued because they are often eaten as a staple food. There they may provide the major source of energy in the diet.

Nuts and seeds are also very good sources of *protein*. When mixed with other fruits and vegetables, nuts and seeds help to improve the quality of meals,

particularly when there is very little meat or fish available. Protein is needed to help the body grow and stay healthy.

Most edible nuts and seeds provide very good sources of vitamins, particularly the B-vitamins — *Vitamin B1* (thiamin), *Vitamin B2* (riboflavin) and *Niacin*. These vitamins are very important. They help to release the energy from food so that it can be used by our body.

Nuts and seeds also contain lots of minerals, particularly *calcium* and *iron*. Calcium helps to make strong bones and teeth and iron helps keep our blood strong and healthy.

Tasty and healthy snacks for everyone

From the bar graphs, it can be seen that roasted peanuts are nutritious and better as a snack than flavoured snack foods such as cheese-flavoured snacks sold in shops.

Children should be encouraged to eat foods made from nuts and seeds as a snack or part of their main meal. Flour made from peanuts is a very good food for babies. It is easily made by roasting peanuts over a fire, removing the skins and then wrapping the roasted peanuts in a cloth and pounding them with a stone. The flour produced can be added to soups or mixed with a cooked mashed staple food for the baby.

Older children can eat nuts whole, as snacks or in salads. Some edible nuts and seeds (for example, red bead (*Adenanthera pavonina*), cashew nuts and peanuts) can be dried, roasted and then used as snacks for the whole family. Most nuts and seeds need to be prepared in such a way that eating them is easier for young children and old people with no teeth.

Preparation and preservation

Freshly picked, some nuts and seeds are delicious to eat raw, while others need to be dried, roasted or cooked.

They can be boiled with other vegetables, then mashed, strained and added to soups, stews and casseroles. Cooked, roasted or dried, then chopped or ground finely to a powder, nuts and seeds are also excellent additions to cooked mashed vegetables, breadfruit or bananas, or to starch such as sago, to make puddings and desserts.

Drying is the best way to preserve nuts and seeds. First pick them fresh and then dry them in the sun to remove as much water as possible. The more water that is removed, the longer they will keep. To store most nuts, place them in a basket and leave in a cool, dry place. They will keep for

Peanut salad

1 serving:

- 1 peeled ripe banana
 - 1/2 cup coarsely chopped peanuts or 2 tablespoons peanut butter
 - 2—4 lettuce leaves
 - 2 tablespoons mayonnaise or Surprise salad dressing
1. Make a cut all the way along the top of the banana, being careful not to cut all the way through.
 2. Spread the cut slightly and fill with coarsely chopped peanuts.
 3. Serve on a lettuce leaf with mayonnaise or Surprise salad dressing.

Coconut macadamia chicken

4 servings:

- 4 chicken pieces
- Freshly ground pepper
- 4 tablespoons butter
- 1/2 cup green onions
- 1 tablespoon brown sugar
- 2 teaspoons thyme or other herbs (optional)
- 1/2 cup sliced green peppers
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Note: A very tasty meal. Other nuts can be used instead of macadamia nuts.

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I. SPC. Community Health Services. II. Series
641.64 AACR2
ISBN 982-203-439-3

Copies of this and other leaflets in this series can be obtained from:

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