



**EUROPEAN COMMISSION**  
HEALTH & CONSUMER PROTECTION DIRECTORATE-GENERAL  
Directorate B - Scientific Health Opinions  
**Unit B3 - Management of scientific committees II**

**Scientific Committee on Food**

**SCF/CS/NF/DOS/5 ADD 1 REV 3 final**  
**14/03/00**

## **Opinion**

### **on the safety assessment of the nuts of the Ngali tree**

(expressed on 8 March 2000)

## **Opinion on the safety assessment of the nuts of the Ngali tree**

### **Terms of Reference**

The Committee is asked to assess the safety from the consumer health's point of view of nuts of the ngali tree as a novel food, and to take into consideration the issues raised in the comments presented by Member States.

### **Background**

Within the framework of Regulation (EC) N° 258/97 on novel foods and novel food ingredients the French authorities received a request for authorisation of the nuts of the ngali tree (*Canarium indicum* Linné) as Novel Food<sup>1</sup>. During the consultation period foreseen in the Regulation, Member States' authorities have submitted comments/objections, in particular regarding the need for toxicological information. Based on these comments/objections, and pursuant to Article 11 of Regulation (EC) 258/97, the Commission has decided to consult the Scientific Committee on Food for evaluation of potential health concerns related to the food use of the product.

The petitioner filed the above application with the competent authority in France, who approved the application subject to certain recommendations regarding microbiological controls, regular monitoring of aflatoxin levels and labelling requirements similar to those for nuts in general because of potential allergenic risks. However, 4 member states raised objections.

### **Presentation of the novel food**

The nut is the fruit of the Nangai tree (*Canarium*), a member of the Burseraceae family, occurring widely between West Africa and Polynesia. Various cultivars with pest and disease resistance have been cultivated. The trees bear fruit after about 10 years. Nut production is seasonal (September to February). The present application concerns ngali nuts produced in Vanuatu. These nuts have been granted a certificate of "Biological Product", renewable annually, by BIO-GRO New Zealand, of the Biological Producers & Consumers Council Inc.

The fruit is egg-shaped and consists of a hard dark husk, containing a thick shell and an inner almond (grain) protected by testa. The testa is thick, bitter and rich in tannins but edible. It is usually removed before consumption. The almond is cream coloured and weighs about 14 g. Eleven kgs of nuts produce about 1 kg of almonds, the hard shell being used locally as fuel. The estimated consumption of ngali nuts in Western Melanesia is about 60 tonnes of almonds or about 70 g/day/person.

## **Technological information**

The ripe ngali nuts are collected after dropping to the ground, the husk is removed and the nuts are left to dry for at least 15 days in a ventilated place. The edible nuts are mechanically shelled and floated in vats of drinking water to allow separation from any shell fragments. They are then soaked in boiling water, the testa is removed manually and the peeled almonds are immersed in boiling water. The duration of these steps is not indicated. The nuts are then dried in an electric dryer at a controlled temperature and moisture level. The final product is packaged under a modified atmosphere (30% CO<sub>2</sub>, 70% N<sub>2</sub>) in plastic bags and has a shelf life of about 10 months.

## **Nutritional profile**

The edible nuts represent some 13% of the total weight of the fruit. Ngali nuts are listed in the Australian tables of composition of Pacific Island Foods<sup>2</sup> and the nutrient content of the kernels has been analysed. However, details of the analytical methods used, the number of samples analysed, and the range of variability of the results have not been supplied. Details of the sampling techniques and the water content have not been provided.

The nutrient profile of ngali nuts closely resembles that typical of nuts in general with a high fat content, 48,5% being saturated, 38% monounsaturated and 14% polyunsaturated (mostly linoleic acid). The nuts are relatively rich in potassium, magnesium and iron. Vitamin content is low, except for vitamin E (3.2 mg/100 g fresh nuts, isomer not specified) and vitamin C (7.6 mg/100 g fresh nuts). The bioavailability of the nutrients of ngali nuts has not been determined but there is no reason to suppose that it differs from that of other nuts commonly eaten in Europe.

## **Evaluation**

Samples of dried kernels from six bags of nuts from the same batch have been analysed for their content of heavy metals, mycotoxins, organophosphate and organochlorine compounds, and total bacterial flora. Insufficient information has been supplied on the analytical methods employed and the storage conditions of the samples. The results of analyses for the absence of aflatoxins B1, B2, G1 and G2 have been submitted but no information has been provided on the possible presence of other mycotoxins common in tropical areas. The level of Pb found was 0.06 mg/kg and that of Cd was 0.025 mg/kg. Neither organophosphate nor organochlorine compounds were detected.

A complete microbiological investigation of the indigenous flora of these nuts has not been carried out. The product does not comply, however, with the current EU hygiene standards.

No toxicological assessment has been carried out and no information submitted on the potential genotoxicity of the ngali nuts.

## Conclusion

The information submitted on the ngali nuts is incomplete with regard to the analytical procedures employed for determining their nutritional composition and the extent of natural variation of the data submitted. The possible allergenicity of ngali nuts has not been investigated. Adequate toxicological data are not available. Thus no conclusions can be drawn on the safety from the consumer health's point of view of Ngali nuts, if the assessment procedures laid down in Regulation 258/97, Article 6.1 and in the guidelines developed by the SCF<sup>3</sup> for the evaluation of the safety of novel foods have to be followed strictly.

## References:

<sup>1</sup> Application submitted by Pacific Nuts Ltd. to the French Competent Authorities.

<sup>2</sup> English, R., Aalbersberg, W., Scheellings, P.: Pacific Island Foods. Description and nutrient composition of 78 local foods. IAS Techn.Rep. 96/02, 1996.

<sup>3</sup> Published as Commission Recommendation 97/618/EC of 29 July 1997 concerning the scientific aspects and the presentation of information necessary to support applications for the placing on the market of novel foods and novel food ingredients and the preparation of initial assessment reports under Regulation (EC) No 258/97 of the European Parliament and of the Council.