

Report

Food composition activities in the Oceania region

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Abstract

OCEANIAFOODS was established in 1987. Countries under its umbrella are Australia, New Zealand and the Secretariat of Pacific Communities (SPC, formerly the South Pacific Commission), which represents 22 Pacific Island governments. The convenorship rotates among these three regions. This report highlights major activities undertaken by OCEANIAFOODS from 2002 to 2005. The SPC, based in New Caledonia, includes a Lifestyle Health section (LHS) and a sub-office in Fiji. In Fiji, the Food and Agriculture Organisation (FAO) commissioned a project to strengthen food analytical capability in the Pacific region. The project, which ran from April 2002 to August 2004, succeeded in meeting all its goals with some adjustments. In Australia, food composition work is undertaken by Food Standards Australia New Zealand (FSANZ) and has focused on three key areas: providing a free web-based nutrition panel calculator for nutrition labelling, preparing for the release of updated Australian nutrient data, and initiating several small analytical projects including the analysis of iodine levels in common foods and folates and folic acid in foods such as breakfast cereals. Activities outside FSANZ include further research on folate analysis at the University of New South Wales. In New Zealand, the focus has been on developing the food composition database. In 2003, Dr. Heather Greenfield reviewed the New Zealand Food Composition Database (NZFCDB), and in July 2004 the Ministry of Health renewed Crop and Food Research's contract until June 2007 to maintain the database. Publications over the last 3 years include the sixth edition of the concise food composition tables and release of an updated FOODFiles2004 electronic data files. In April 2005, the Seventh OCEANIAFOODS Conference, Innovations in Nutrient Information, was held in Wellington, New Zealand. Fifty-nine delegates attended the conference at which keynote addresses were given by Joanne Holden (USA), Bill Aalbersberg (Fiji), and Heather Greenfield (Australia). The conference resulted in 13 recommendations being formulated. The convenor of the next OCEANIAFOODS conference is Professor Bill Aalbersberg, Fiji.

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1. History

OCEANIAFOODS was established in 1987. Australia, New Zealand and the Secretariat of Pacific Communities (SPC), which represents other Pacific Island governments, come under OCEANIAFOODS. This paper highlights the major food composition database activities in Oceania region during 2002–2005.

2. Major FCD activities in the Secretariat of Pacific Communities (SPC) during 2002–2005

The SPC is based in New Caledonia and has a sub-office in Fiji. The Institute of Applied Science at the University of the South Pacific (USP) in Fiji was set up in 1977 to provide scientific services to the region. Its core facility is the analytical laboratory where the main analytical work for food nutrients is being carried out. As the USP is a regional facility, it also services 11 other Pacific Island countries and works closely with the SPC in New Caledonia and the regional offices of WHO and FAO. In April 2002, the Food and Agriculture Organisation (FAO)

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commissioned a project in Fiji to strengthen food analytical capability in the Pacific region with the following expected outputs:

- Output 1:* An assessment of the analytical capacity of food laboratories in five participating countries.
- Output 2:* Upgraded analytical capability for food analysis in the participating countries.
- Output 5:* A minimum of 10 technicians trained in food data compilation.
- Output 6:* A minimum of 10 technicians trained in basic food analysis.
- Output 7/8:* A minimum of 10 technicians trained in pesticide/heavy metal analysis.
- Output 9:* A regional workshop at the end of the project.
- Output 10:* Publication of the second edition of Food Tables.
- Output 11:* Achievement of international accreditation at IAS.

On the whole, objectives were met but with some adjustments. More emphasis was put on quality assurance for existing analyses with less emphasis in training on food contaminants analyses. Under the FAO project, an informal audit of the IAS quality system was performed by Environmental Science and Research Ltd. of New Zealand (ESR). In 2003, assessment was performed by International Accreditation New Zealand and accreditation was awarded in June 2004. In 2004, the second edition of the Pacific Islands Food Composition Tables (PIFCTs) was released (Dignan et al., 2004). This edition included analytical data for 98 new foods in the following food groups: green leaves, fruits and nuts, legumes, sea foods, lovo foods, snacks and drinks. Other activities included setting up a gas chromatograph for organochlorine and organophosphate analysis, and pesticide analyses on food samples from the Fiji Total Diet Study.

3. Major FCD activities in Australia during 2002–2005

In Australia, food composition work is undertaken by Food Standards Australia New Zealand (FSANZ, www.foodstandards.gov.au), which maintains a small program of analysis and undertakes to compile and publish data. Over the last 3 years, FSANZ has focused on three key areas.

The first edition of the Nutrition Panel Calculator (NPC) was released in late 2001 specifically to assist industry to develop nutrition information panels, which are now mandatory on the majority of packaged foods supplied in Australia and New Zealand. The NPC allows users to integrate values from a specially prepared database with information on the quantities of ingredients in their food, to produce data on the level of seven nutrients (energy, protein, fat, saturated fat, carbohydrate, sugars, and sodium) per 100 g and per serve of a food. The NPC has

been explained in detail by Cunningham and Trevisan (2002). The revised NPC was launched in October 2004 and is in great demand by users.

The second major food composition activity is the compilation of data for a new set of Australian food composition tables after almost 10 years since the last release of analytical data for Australian foods (NUTTAB 95 and its 1997 supplement) (Australia New Zealand Food Authority, 1999). The updated publications will include the data for several nutrients: iodine, selenium, folate, vitamin B₁₂, β -, δ - and γ -tocopherol, tocotrienols, and vitamin D.

Analytical work during the past 3 years has focused on specific data gaps that impose limitations on FSANZ's standard development work. Work in the following five areas began in early 2002.

Analysis of instant and simmer soups: Fifteen samples of instant and simmer soups were analysed for proximate, minerals, and vitamins because FSANZ did not previously hold nutrient data for these product.

Minerals in fruits and vegetables: FSANZ receives queries from consumers concerning the deteriorating nutrient quality of Australia's food supply. In order to address such concern, FSANZ commissioned a small survey of potassium, sodium, calcium, magnesium, iron and zinc level in 44 types of fruits and vegetables purchased in Melbourne during 2000 and 2001. Results were compared with the results of analyses conducted between 1981 and 1985 for the same items of produce purchased in Sydney. Comparison of values from the two time periods did not indicate that there have been significant or consistent changes in the content of these minerals over time (Cunningham et al., 2004).

Iodine in Australian foods: There is evidence of potential suboptimal iodine status among Australians. It is important to have up to date iodine data in the food composition data set to support researchers and policy makers. There is limited iodine data in Australian foods so data were required across a broad range of foods. Samples were selected either because a significant amount is widely consumed (e.g., beef) and/or because they are anticipated to make a significant contribution to iodine intake (e.g., milk, sushi). The iodine data will be incorporated into new food composition publications and are expected to be released as a separate report.

Folate in Australian foods: A small study is underway to determine the level of folates and folic acid in 30 food samples using the triple enzyme method. The foods selected for analyses are either because they are widely consumed in significant amounts and/or because they are anticipated to make a significant contribution to naturally occurring folates or of added folic acid such as breakfast cereals. Results of this analytical program will be incorporated into the new food composition publication.

Caffeine in Australian foods and drinks: In collaboration with the Environment Health and Chemistry Unit at Primary Industries research Victoria—Werribee Centre, FSANZ undertook a survey of the caffeine content of

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