

Proposed work plan of INFOODS for 2014 to 2015

OCEANIAFOODS region report

Prepared in July 2013

Objective

This paper provides a summary of key activities in the OCEANIAFOODS region for the period 2011–13.

Data Centres and INFOODS secretariat

There is little activity occurring in the OCEANIAFOODS region, outside some targeted government programmes in Australia and New Zealand aimed at addressing some specific regulatory issues, such as monitoring of nutrient fortification. There has not been an OCEANIAFOODS region meeting in the last 2 years due to resource constraints.

Standards

- Nothing to report

Capacity development

Australian Food Metrology Symposium

The first Australian Food Metrology Symposium (AFMS) was held in Melbourne in October 2012. The National Measurement Institute (NMI) co-ordinated the Symposium, which covered a variety of contemporary issues surrounding the analysis of nutrients in foods, presented by national and international experts. The Symposium was followed by workshops on the technical aspects of measuring levels of vitamins and antioxidants in foods. Although attended by a number of delegates from Australia and the ASEANFOODS region, it was notable that there were few delegates from other parts of OCEANIAFOODS.

International Collaboration

Food Standards Australia New Zealand (FSANZ) hosted a post-doctoral scholar from Papua New Guinea (PNG) during 2013. The placement of Dr Lydia Yalambing, from the University of Technology, Lae, was funded by the Prime Minister's Pacific Programme. During this time, Dr Yalambing was able to gain valuable insight into the process of producing food nutrient databases which she aims to apply to the national PNG nutrient database. Dr Yalambing was also able to assist FSANZ with some critical data analysis based on her expertise in the analysis of folate.

New Zealand-Australia Food Composition Meetings

Several organisations with a food composition role in New Zealand and/or Australia meet biannually to discuss current projects associated with food analysis, development of databases, and other technical issues.

These meetings have successfully provided a forum for collaboration and information sharing between these organisations. Some specific issues discussed in 2012 and 2013 have been on challenges with the analysis of total folates, folic acid and iodine, which is

particularly relevant to standards for fortification of bread or bread making flour with these nutrients. The two countries have shared nutrient data for foods that are common between the two countries and also shared information on common recipes and a food density database.

Activities & achievements of the New Zealand Food Composition Database (NZFCD) team

The 'PFR Chairman's Award' for Outstanding Achievement was presented by the New Zealand Plant & Food Research (PFR) Board's Chairman to Zane Gilmore and Subathira Sivakumaran from the NZFCD team for their exemplary collaboration and diligence in ensuring that PFR continues to host the NZFCD, a database of national significance.

Sivakumaran et al presented "New Zealand Food Composition Database – An essential tool" at the New Zealand Institute of Food Science & Technology annual conference, 2–4 July, Hawke's Bay Opera House, Hastings. The FactCard ('Do you know what you're eating?') and live website were also presented at the conference.

A New Zealand delegation from PFR visited the Food Databank National Capability (FDNC) team from the Institute of Food Research (IFR) at Norwich, UK; and USDA Nutrient Data Laboratory team and Food Surveys Research Group at Beltsville, USA. There is a possibility that we could work more closely together in the future.

Food Composition tables/databases

Australian Health Survey

The 2011/13 Australian Health Survey (AHS) is nearing completion. Initial findings on general health factors were released by the Australian Bureau of Statistics in late 2012, physical activity data were released in July 2013 and chronic disease biomedical indicators in August 2013. Full results, including food and nutrient intakes are scheduled for release in late 2013. FSANZ is in the final stages of preparing the nutrient database for this project. AUSNUT 2012 (*name to be confirmed*) will be released alongside the full Survey results for the general population.

The AUSNUT 2012 database will contain nutrient profiles for over 5,200 foods with more than 15,000 associated portion sizes and covering 44 nutrients. The data set will also contain nutrition information for 2140 dietary supplements reported as consumed during the Survey.

Data collection for the National Aboriginal and Torres Strait Islander Nutrition and Physical Activity Survey (NATSINPAS) wave of the AHS will be completed by August 2013. Nutrient data for indigenous foods will be released at a later date.

Analytical Programmes

FSANZ has commissioned several small analytical programmes to support and validate the AHS database and to monitor mandatory fortification requirements. Analyses included iodine and folic acid in a range of loaf breads, and a range of nutrients in unfortified breakfast cereals and other styles of bread such as sour dough and Turkish bread. The data

from these surveys will be incorporated into the AUSNUT 2012 database and subsequently into the next edition of NUTTAB.

Nutrition Panel Calculator (Australia)

An updated version of the Nutrition Panel Calculator (NPC) was released in August 2011. The NPC is a free online tool to assist companies to prepare nutrition information panels for food labels. It contains data for the seven nutrients that must be included in these panels (energy, protein, fat, saturated fat, total carbohydrate, total sugars, sodium). Major upgrades included improved search functionality, better layout and presentation, and new save and print features. The database that supports the NPC was also expanded to include more indigenous foods, nutritionally significant food additives and processing aids, and other miscellaneous food items in response to user requests.

The NPC is available on the FSANZ website

(<http://www.foodstandards.gov.au/industry/npc/Pages/Nutrition-Panel-Calculator-introduction.aspx>).

Australian Total Diet Studies

Traditionally, Australian Total Diet Studies (ATDSs) examined dietary exposure to agricultural and veterinary chemical residues, pesticide residues and metal contaminants. However, the outcome of these studies consistently showed that the dietary exposure of the Australian population was low. Therefore the ATDS has more recently been expanded to include other food chemicals, such as nutrients and additives.

The 23rd Australian Total Diet Study (ATDS) was released in late 2011 and examined the dietary exposure of the Australian population to 214 agricultural and veterinary chemicals, 9 contaminants, 12 mycotoxins, and 11 nutrients. The report of this study is available on the FSANZ website

(<http://www.foodstandards.gov.au/publications/pages/23rdaustraliantotald5367.aspx>).

Sampling for the 24th ATDS was conducted in two seasons of 2011. Analytes included acrylamide, aluminium, sodium/salt, perchlorate, and chemicals used in food packaging which may migrate into food (including BPA, ESBO, perfluorinated compounds, phthalates, and printing inks). The reports for this study will be released in late 2013. Foods sampled for the ATDS were also analysed for sodium content which will be incorporated into NUTTAB but will not be reported as part of the 24th ATDS.

The 25th ATDS is currently underway and will focus on agricultural & veterinary chemicals, metal contaminants arsenic (total and inorganic), cadmium, lead & mercury (inorganic & methyl), and various radionuclides.

NUTTAB (Nutrient data tables for Australia)

FSANZ is currently in the process of developing a pilot of the next NUTTAB publication. This will be the first food composition publication to be produced using Harvest, our new data management system, which will enable a wider range of functionality for users.

The current database, NUTTAB 2010 is available on the FSANZ website (<http://www.foodstandards.gov.au/science/monitoringnutrients/nutrientables/nuttab/Pages/default.aspx>).

New Zealand Food Composition Database (NZFCD)

The New Zealand Institute for Plant & Food Research Limited (PFR) and the Ministry of Health jointly own the New Zealand Food Composition Database (NZFCD). A minimum of 2800 New Zealand-sourced analytical values from 60 foods are added per annum.

The new website for the New Zealand Food Composition Database

www.foodcomposition.co.nz was launched on 28 November 2011. The database provides an open access to three NZFCD output products: The New Zealand FOODfiles, The New Zealand Concise Tables and Nutritional Information Panel (NIP). There have been more than 70, 000 hits from 135 countries and more than 2100 unique users registered to access the NZFCD products since the website launch.

The New Zealand Concise Food Composition Tables

The New Zealand Concise Food Composition Tables, 9th edition 2012 was released on the website in July 2012. It contains information for 34 food components for more than 900 foods and is available as a printable PDF format. The nutrient information is based on both a 100-gram edible portion and one or more common standard servings. The 9th Edition replaces the 8th Edition (2009). The 8th Edition was archived in the same website and is still accessible by users.

The Concise New Zealand Food Composition Tables, 10th edition 2013 is soon to be released on the website as a subset of the FOODfiles 2012.

The New Zealand FOODfiles

The first web versions, the New Zealand FOODfiles 2010 Versions 01 and 02, were released on the website in November 2011 and December 2011, respectively. The most recent version, the New Zealand FOODfiles 2012 Version 01 was released on the website on April 2013. At that time, the New Zealand FOODfiles 2010 Versions 01 and 02 were archived and are still accessible on the same website.

The New Zealand FOODfiles 2012 Version 01 contains complete information on the 76 core components of more than 2,600 foods in the Standard Version and up to 342 components in the Unabridged Version.

The major additions to the New Zealand FOODfiles 2012 since the last release include more than 400 Food Records were added or updated:

- Bakery products: breads added mixed grains and seeds; and chocolate biscuits
- Beverages, non-alcoholic: energy drinks, formulated water, sports drinks, energy food drinks and coffees
- Breakfast cereals: 'Weeties' and 'Fruitful'
- Cereals & pseudo-cereals: rice and noodles.
- Dairy: chocolate ice cream and protein powder.

- Fat & oils: margarines, dripping, shortening and vegetable oils
- Fruits: blueberry, plum, raspberries and kiwifruit.
- Meat: corned beef, beef and lamb
- Miscellaneous: yeast spreads
- Sauces & condiments: ketch up
- Shellfish: mussels
- Snack foods: nut bars
- Vegetables: potato fries, Asian cabbages, cucumber, courgette, spinach, mesclun salad, capsicums, taro and kumara

NZFCD Nutrition Information Panel (NIP) Searchable Database

The same nutrition labelling requirements for packaged foods apply in New Zealand as in Australia. The NIP searchable database contains information on more than 2600 foods and the values for seven mandatory food components (energy, protein, fat, saturated fat, carbohydrate, sugar and sodium) plus dietary fibre (Prosky method) as required by Standard 1.2.8 – Nutrition Information Requirements, of the Australia New Zealand Food Standards Code www.comlaw.gov.au/Details/F2013C00098. The NIP searchable database is a subset of the New Zealand FOODfiles 2012 database.

Current NZFCD Programme

There were 83 Food Records added to or updated in the NZFCD in the last financial year (2012/13). These Food Records will be included in the next update of the NZFCD products on the website www.foodcomposition.co.nz.

These Food Records include:

- Bakery products: gluten free breads
- Beverages, non-alcoholic: nutritional beverages (liquid breakfast)
- Breakfast cereals: ‘Coco Pops’, ‘Light ’n’ Tasty’, ‘Cluster Crisp’, ‘Nutri-Grain’, ‘All-Bran’, ‘Special K’, ‘Just Right’ and ‘Toasted Muesli’
- Cereals & pseudo-cereals: udon noodle (fresh shelf stable)
- Meat: chicken mince
- Meat products: sausages (beef, lamb, pork and chicken; raw and cooked), salami (acidulated and fermented) and luncheon (chicken and ham)
- Vegetables (raw and cooked): New Zealand yam, eggplant, mushroom (Portobello), beetroot (canned), parsnip, Brussels sprouts, celery, tomato puree and tomato paste
- Sauces & condiments: Soy sauce (high and low salt), sweet chilli sauce

Advocacy at international conferences and meetings

There has not been an OCEANIAFOODS region meeting in the last 2 years due to resource constraints.

Nutrition Indicators for Biodiversity

Lydia Yalambing has completed a thesis on the genetic and micronutrient composition of aibika (*Abelmoschus manihot*), which is a common leafy green vegetable grown in PNG. The results of this research will be presented at the 10th IFDC.

FSANZ has supported analysis of the nutrient profile of raw, skinned kangaroo tail from the red kangaroo (*Macropus rufus*), which is hunted in the wild by Aboriginals in Australia and is also processed for commercial sale.

Maxwell et al. have published a paper on the carotenoid content of 97 cultivars of breadfruit, a large starchy fruit most often eaten as a staple food throughout the Pacific islands. The paper, *Identification of pro-vitamin A carotenoid-rich cultivars of breadfruit (Artocarpus, Moraceae)*, is available online at <http://www.sciencedirect.com/science/article/pii/S0889157513000537>.

Analytical capacities for food composition

Vitamin D

A new method for the analysis of vitamin D in food has been developed through a collaboration between the National Measurement Institute (NMI) (Australia), University of New South Wales and University of Sydney.

Iodine in bread

FSANZ has commissioned inter-laboratory analysis of iodine in bread following recent surveys of levels of folic acid, thiamin and iodine in bread. This was done to validate the iodine results prior to feeding results into a wider program to monitor the success of mandatory fortification of bread with iodised salt and bread-making flour with folic acid.

Folates

NMI (Australia) has completed a project comparing analytical methods for the analysis of folate. The study compared the triple enzyme method with LCMS.

Vitamin C

FSANZ also commissioned work on the analysis of vitamin C in raw and cooked potatoes. This was done to assess the effects of sample preparation, and emphasised the importance of correct sample handling.

Funding

Funding for food composition projects throughout the region remains a difficulty and this is likely to continue over the next 2 years. In Australia, there is no recurrent funding set aside for the purpose of generating and publishing food composition data. At present, FSANZ does not have any funding to undertake analytical work on nutrient composition in the 2013–14 financial year.