CANADIAN NUTRIENT FILE

Compilation of Canadian Food Composition Data

2010 DATABASE STRUCTURE

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FILE STRUCTURE and TABLE of CONTENTS

Introduction

The downloadable files comprising the Canadian Nutrient File database are unaccompanied by software. They are relational files available in three formats: delimited ASCII text files, DBF files and CSV files. In order to view and utilize these files one must both own and be familiar with a database management software program. Examples on the market include Microsoft Access, DBASE, FoxPro, Lotus Approach and many others. Spreadsheet programs such as Excel are not large enough to open most of these files and files become truncated.

To save space and speed up downloads; the files are zipped into one large file with a file name ending with '.exe'. This is the file that is downloaded to whatever directory the user specifies. After downloading, go to that directory and double click on the exe file; this will extract the many files comprising the CNF database.

Some database management programs require you to "Open" these files into their programs while others require them to be "Imported". Once they are imported, the corresponding tables can be joined using the common fields indicated in the File Relationships section below.

New for this Edition

1- New Food Code

Over time, CNF users tend to get used to the numeric code associated to certain foods, and start to refer to these foods using their code. Since 2001, the only published numeric identifier was a number used internally by our database as the primary key that uniquely identifies foods and links them to related data fields (FD_C in the FOOD_NM table).

However, in 2008, it was necessary to merge the CNF database with another internal Health Canada database, which caused many of the primary keys to change. We will no longer use the primary key as the unique CNF food code.

This prompted us to modify the name of the FD_C field. It is now the primary key and all primary key fields are ending with _ID (FC_ID) in the CNF database in order to be easily identified. We also introduced a new field that we name the FD_CODE, this being the unique food code that is not the primary key.

New Field Structure and Roles

Field	Description of Field	New role in the database	Will appear in the web Search application
FD_C is now FD_ID	Food ID field or food identifier	This is the primary key and remains the link for joining related tables	No
FD_CODE	Food code	This will be the new user food code	Yes

As a convenience and whenever possible for previously-published foods, the old food code FD_C (in the 2007b database) and the new food code FD_CODE (in >2010 versions) will not be different. They will just be stored in a different field which is no longer the primary key.

In order to facilitate the ease of use of the tables, all primary key field names are ending with _ID

It is recommended that the food ID and primary key (now the FD_ID) be used only to link tables and that the food code FD_CODE be displayed.

Remember that all of the nutrient data is stored per 100 g of the food. If you want to manipulate the data to display weights per portion, this can be done through some sophisticated calculated field programming.

If you are not familiar with these terms you may want to buy a nutrient analysis software program which features 2010 CNF data.

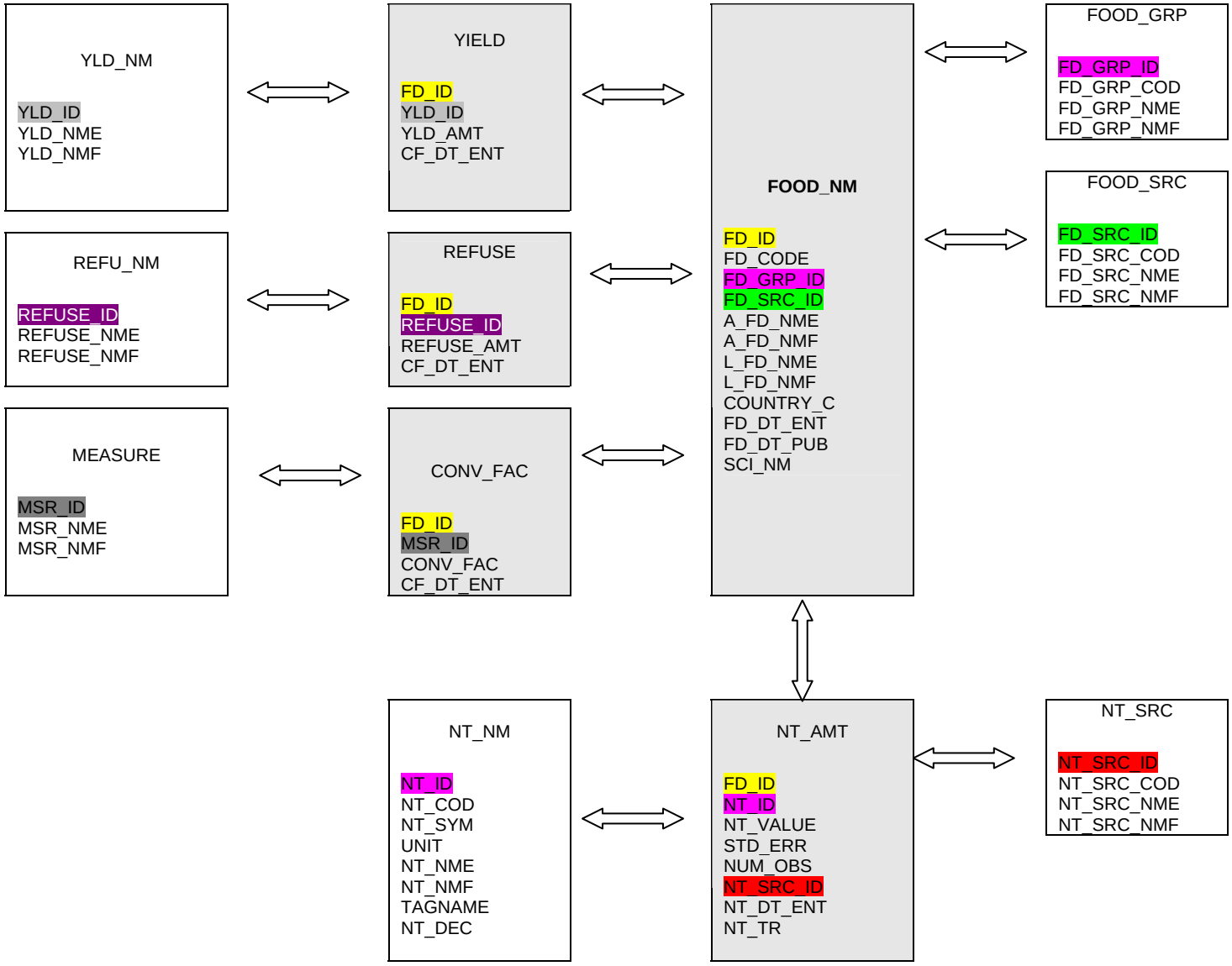
Note: ASCII text files are delimited by a $ sign

2- Withdrawal of Eating Well with Canada's Food Guide Groupings and Serving Sizes

Portion size measures which relate Canada's Food Guide to Healthy Eating (CFGHE)[1] food grouping principles to each of the CNF foods were added to the 2005 version of the database. Some of these assignments are in the process of being updated to reflect revisions recently published under the new title Eating Well with Canada's Food Guide (CFG)[2] Therefore, for the present we are not publishing these assignments in the 2010 version of the CNF.

Interested parties are encouraged to go to the website of the Office of Nutrition Policy and Promotion at Health Canada. They have developed a new website where all of the information regarding the Food Guide can be located.

2010 FILE RELATIONSHIPS



Update Files

ADD

FOOD_ADD
FD_ID
FD_CODE
FD_GRP_ID
FD_SRC_ID
A_FD_NME
A_FD_NMF
L_FD_NME
L_FD_NMF
COUNTRY_C
FD_DT_ENT
FD_DT_PUB
SCI_NM

NT_NM_A
NT_ID
NT_COD
NT_SYM
UNIT
NT_NME
NT_NMF
TAGNAME
NT_DEC

NT_AMT_A
FD_ID
NT_ID
NT_VALUE
STD_ERR
NUM_OBS
NT_SRC_ID
NT_DT_ENT
NT_TR

CF_ADD
FD_ID
MSR_ID
CONV_FAC
CF_DT_ENT

NT_SRC_A
NT_SRC_ID

MEASU_A
MSR_ID
MSR_NME
MSR_NMF

REFU_ADD
FD_ID
REFUSE_ID
REFUSE_AMT
CF_DT_ENT

YLD_ADD
FD_ID
YLD_ID
YLD_AMT
CF_DT_ENT

YLD_NM_A
YLD_ID
YLD_NME
YLD_NMF

REFU_NM_A
REFUSE_ID
REFUSE_NME
REFUSE_NMF

FD_SRC_A
FD_SRC_ID

CHANGE

FOOD_CHG
FD_ID
FD_CODE
FD_GRP_ID
FD_SRC_ID
A_FD_NME
A_FD_NMF
L_FD_NME
L_FD_NMF
COUNTRY_C
FD_DT_ENT
FD_DT_PUB
SCI_NM

NT_AMT_C
FD_ID
NT_ID
NT_VALUE
STD_ERR
NUM_OBS
NT_SRC_ID
NT_DT_ENT
NT_TR

NT_NM_C
NT_ID
NT_COD
NT_SYM
UNIT
NT_NME
NT_NMF
TAGNAME
NT_DEC

MEASU_CHG
MSR_ID
MSR_NME
MSR_NMF

CF_CHG
FD_ID
MSR_ID
CONV_FAC
CF_DT_ENT

YLD_CHG
FD_ID
YLD_ID
YLD_AMT
CF_DT_ENT

REFU_CHG
FD_ID
REFUSE_ID
REFUSE_AMT
CF_DT_ENT

DELETE

FOOD_DEL
FD_ID
A_FD_NME
A_FD_NMF

NT_AMT_D
FD_ID
NT_ID
NT_COD

REFU_DEL
FD_ID
REFUSE_ID

YLD_DEL
FD_ID
YLD_ID

CF_DEL
FD_ID
MSR_ID

MEASU_DEL
MSR_ID

NT_SRC_COD NT_SRC_NME NT_SRC_NMF	FD_SRC_COD FD_SRC_NME FD_SRC_NMF			MSR_NME MSR_NMF
				NT_NM_D NT_ID NT_COD NT_SYM

Description of Files

Name	File Name	File Description
Food Name	FOOD_NM	This is a principal file. It stores information about each food in the database. It contains a description of each food in English and French as well as dates and comments.
Nutrient Amount	NT_AMT	**This is the main file**. It uses information (by linking) from the FOOD_ NM table (among others) to identify which nutrients and amounts are recorded for that food.
Conversion Factor	CONV_FAC	This is a principal file. This file contains portion size conversion factors. The conversion factors are food specific multipliers by which the nutrient values for each food may be multiplied to give the nutrients in described portions.
Refuse Amount	REFUSE	This is a principal file. This file contains the percent of refuse, or inedible portion, for each food.
Yield Amount	YIELD	This is a principal file. This file contains the yield from refuse and/or cooking losses assigned to certain foods. These yields are most often used for food inventory purposes.
Food Group	FOOD_GRP	This file is a support or "list" table that is used to link to the FOOD_NM table. It contains a list of 23 different group headings (in English and French) based on similar characteristics of the foods.
Food Source	FOOD_SRC	This file is a support or "list" table that is used to link to the FOOD_NM table. It contains a list of several food sources (in English and French) that foods can be grouped on.
Nutrient Name	NT_NM	This file is a support or "list" table that contains the list of nutrients (in English and French) used in the NT_AMT file, with which it is linked.
Nutrient Source	NT_SRC	This file is a support or "list" table that is used to link to the NT_AMT file. It contains a list of several sources and/or types of nutrient data (in English and French).
Measure	MEASURE	This file is a support or "list" table that is used to link to the CONV_FAC table. It contains a list of measures (in English and French).
Refuse Name	REFU_NM	This file is a support or "list" table that is used to link to the REFUSE table. It contains a list of refuse types.
Yield Name	YLD_NM	This file is a support or "list" table that is used to link to the YIELD table. It contains a list of yield types or yield descriptions (in English and French).

Principal Files

I. Food Name File:

File name: FOOD_NM

Field Name	Field Type	Size	Field Description	Links
FD_ID	N	11	Sequential number generated by the database identifying the food records. This is the primary key.	NT_AMT CONV_FAC YIELD REFUSE
FD_CODE	N	8	Identifier code for the foods. In the 2007b version this was the FD_C	N/A
FD_GRP_ID	N	11	Sequential number generated by the database for the food groups	FOOD_GRP
FD_SRC_ID	N	11	Sequential number generated by the database for the food sources.	FOOD_SRC
A_FD_NME	T	200	Abbreviated food name in English	N/A
A_FD_NMF	T	200	Abbreviated food name in French	N/A
L_FD_NME	T	255	Complete food name in English	N/A
L_FD_NMF	T	255	Complete food name in French	N/A
COUNTRY_C	N	20	Corresponds to the USDA NDB code	N/A
FD_DT_ENT	T	dd/mm/yyyy	Date the food name data was entered into the database	N/A
FD_DT_PUB	T	dd/mm/yyyy	Date the food name data was originally published	N/A
SCI_NM	T	100	Scientific name of the food	N/A

II. Nutrient Amount File:

File name: NT_AMT

Field Name	Field Type	Size	Field Description	Links
FD_ID	N	8	Sequential number generated by the database identifying the food records.	FOOD_NM
NT_ID	N	4	Sequential number generated by the database for the nutrient names	NT_NM
NT_VALUE	N	12/5	Mean value in 100g, edible portion. (The number of decimal places does not reflect the accuracy of the data.).	N/A
STD_ERR	N	8/4	Standard error of the mean	N/A
NUM_OBS	N	6	Number of samples	N/A
NT_SRC_ID	N	15	Identifier code generated by the database for the nutrient source	NT_SRC
NT_DT_ENT	T	dd/mm/yyyy	Date the data was entered into the database	N/A
NT_TR	T	1	Trace nutrient identifier. The nutrient is likely present, but at a level below significant contribution to the diet or beneath a level that can be measured adequately.	N/A

III. Conversion Factor File:

File name: CONV_FAC

Field Name	Field Type	Size	Field Description	Links
FD_ID	N	8	Sequential number generated by the database identifying the food records.	FOOD_NM
MSR_ID	N	10	Sequential number generated by the database for the measure descriptions	MEASURE
CONV_FAC	N	9/5	The factor by which one would multiply the nutrient per 100g to	N/A

Field Name	Field Type	Size	Field Description	Links
			obtain nutrient amounts per the measure described (the weight of that food in the measure described divided by 100)	
CF_DT_ENT	T	dd/mm/yyyy	Date the data was entered into the database	N/A

IV. Refuse Amount File:

File name: REFUSE

Field Name	Field Type	Size	Field Description	Links
FD_ID	N	8	Sequential number generated by the database identifying the food records.	FOOD_NM
REFUSE_ID	N	10	Sequential number generated by the database for the refuse descriptions	REFU_NM
REFUSE_AMT	N	9/5	Percent refuse	N/A
CF_DT_ENT	T	dd/mm/yyyy	Date the data was entered into the database	N/A

V. Yield Amount File:

File name: YIELD

Field Name	Field Type	Size	Field Description	Links
FD_ID	N	8	Sequential number generated by the database identifying the food records.	FOOD_NM
YLD_ID	N	10	Sequential number generated by the database for the yield descriptions	YLD_NM
YLD_AMT	N	9/5	Yield from refuse and/or cooking losses	N/A
CF_DT_ENT	T	dd/mm/yyyy	Date the data was entered into the database	N/A

Support Files:

A. Food Group File:

File name: FOOD_GRP

Field Name	Field Type	Size	Field Description	Links
FD_GRP_ID	N	15	Sequential number generated by the database for the food groups	FOOD_NM
FD_GRP_COD	N	15	Identifier code for the Canadian Nutrient File food groups. There are 23 different CNF food groups	N/A
FD_GRP_NME	T	200	Food group name in English	N/A
FD_GRP_NMF	T	200	Food group name in French	N/A

B. Food Source File:

File name: FOOD_SRC

Field Name	Field Type	Size	Field Description	Links
FD_SRC_ID	N	2	Sequential number generated by the database for the food sources	FOOD_NM
FD_SRC_COD	N	15	Identifier code for the food sources. Food sources give an indication as to Canadian content	N/A
FD_SRC_NME	T	200	Food Source description in English	N/A
FD_SRC_NMF	T	200	Food Source description in French	N/A

E. Nutrient Name File:

File name: NT_NM

Field Name	Field Type	Size	Field Description	Links
NT_ID	N	4	Sequential number generated by the database for the nutrient names	NT_AMT
NT_COD	N	15	Identifier code for nutrient name descriptions	N/A
NT_SYM	T	10	Nutrient symbol or abbreviation of the nutrients. They may differ from international nomenclature.	N/A
UNIT	T	8	Unit of measure (e.g., mg, g, mcg)	N/A
NT_NME	T	200	Nutrient name in English	N/A
NT_NMF	T	200	Nutrient name in French	N/A
TAGNAME	T	20	International Network of Food Data Systems (INFOODS) Tagnames. A unique Abbreviation for a food component developed by INFOODS to aid in the interchange of data.	N/A
NT_DEC	N	15	Number of decimal places used in the rounding of the nutrient value	N/A

F. Nutrient Source File:

File name: NT_SRC

Field Name	Field Type	Size	Field Description	Links
NT_SRC_ID	N	15	Sequential number generated by the database for the nutrient sources	NT_AMT

NT_SRC_COD	N	15	Identifier code for nutrient source descriptions.	N/A
NT_SRC_NME	T	200	Nutrient source description in English	N/A
NT_SRC_NMF	T	200	Nutrient source description in French	N/A

G. Measure File:

File name: MEASURE

Field Name	Field Type	Size	Field Description	Links
MSR_ID	N	10	Sequential number generated by the database for the measure descriptions	CONV_FAC
MSR_NME	T	200	Measure description in English	N/A
MSR_NMF	T	200	Measure description in French	N/A

H. Refuse Name File:

File name: REFU_NM

Field Name	Field Type	Size	Field Description	Links
REFUSE_ID	N	10	Sequential number generated by the database for the refuse descriptions	REFUSE
REFUSE_NME	T	200	Refuse description in English	N/A
REFUSE_NMF	T	200	Refuse description in French	N/A

I. Yield Name File:

File name: YLD_NM

Field Name	Field Type	Size	Field Description	Links
YLD_ID	N	10	Sequential number generated by the database for the yield descriptions	YIELD
YLD_NME	T	200	Yield description in English	N/A
YLD_NMF	T	200	Yield description in French	N/A

N = Numeric - # of characters / # of decimals (if decimal)
T = Text
N/A = Not applicable

Update Files

For the 2010 version we are offering update files that track records that have been changed, added or deleted since the release of the 2007b version of the CNF.

A. Added Files

File Name	File description	Comment
FOOD_ADD	Added food names	
NT_NM_A	Added nutrient names	
NT_AMT_A	Added nutrient amounts	Includes nutrient values added to already existing foods as well as new foods
MEASU_A	Added measures	
CF_ADD	Added conversion factors	Includes conversion factors values added to already existing foods as well as new foods

File Name	File description	Comment
REFU_ADD	Added refuse	
YLD_NM_A	Added yield names	
YLD_ADD	Added yields	Includes yields added to already existing foods as well as new foods
REFU_NM_A	Added refuse names	
FD_SRC_A	Added food sources	
NT_SRC_A	Added nutrient sources	

These files are in the same format as the Principal or Support Files.

B. Changed Files

File Name	File description	Comment
FOOD_CHG	Changed food names	
NT_NM_C	Changed nutrient names	
NT_AMT_C	Changed nutrient amounts	
CF_CHG	Changed conversion factors	
YLD_CHG	Changed yields	
REFU_CHG	Changed refuse	
MEASU_CHG	Changed measures	

If the values in any fields have changed, the entire record is included for that file. These files are in the same format as the Principal or Support Files. Unfortunately, simple changes to the wording or spelling of the food names were not captured in the food change update file for this edition.

C. Deleted Files

File Name	File description	Comment
FOOD_DEL	Deleted food names	
NT_AMT_D	Deleted nutrient amounts	Includes nutrient values that were removed from the database (including those which accompany a deleted food

File Name	File description	Comment
CF_DEL	Deleted conversion factors	Includes conversion factors that accompany a deleted food (including those which accompany a deleted food
YLD_DEL	Deleted yields	
REFU_DEL	Deleted refuse	
MEASU_DEL	Deleted measures	
NT_NM_D	Deleted nutrient names	

Although every attempt has been made to include all additions, changes and deletions to the CNF since the last release in these update files, the nature of this very large electronic database and the complex programming involved in editing, it is possible that some changes were not tracked accurately. It is recommended that one also downloads the entire database for reference.

References

1. Health Canada. 1992. *Canada's Food Guide to Healthy Eating*. Minister of Public Works and Government Services Canada.

2. Health Canada. 2007. *Eating Well with Canada's Food Guide*. www.healthcanada.gc.ca/foodguide