3rd GLOBAL FOOD REGULATORY SCIENCE SYMPOSIUM

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GEMS Food Database Introduction & Review of the Requirements of Data Input into the GEMS Food Program

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INTRODUCTION

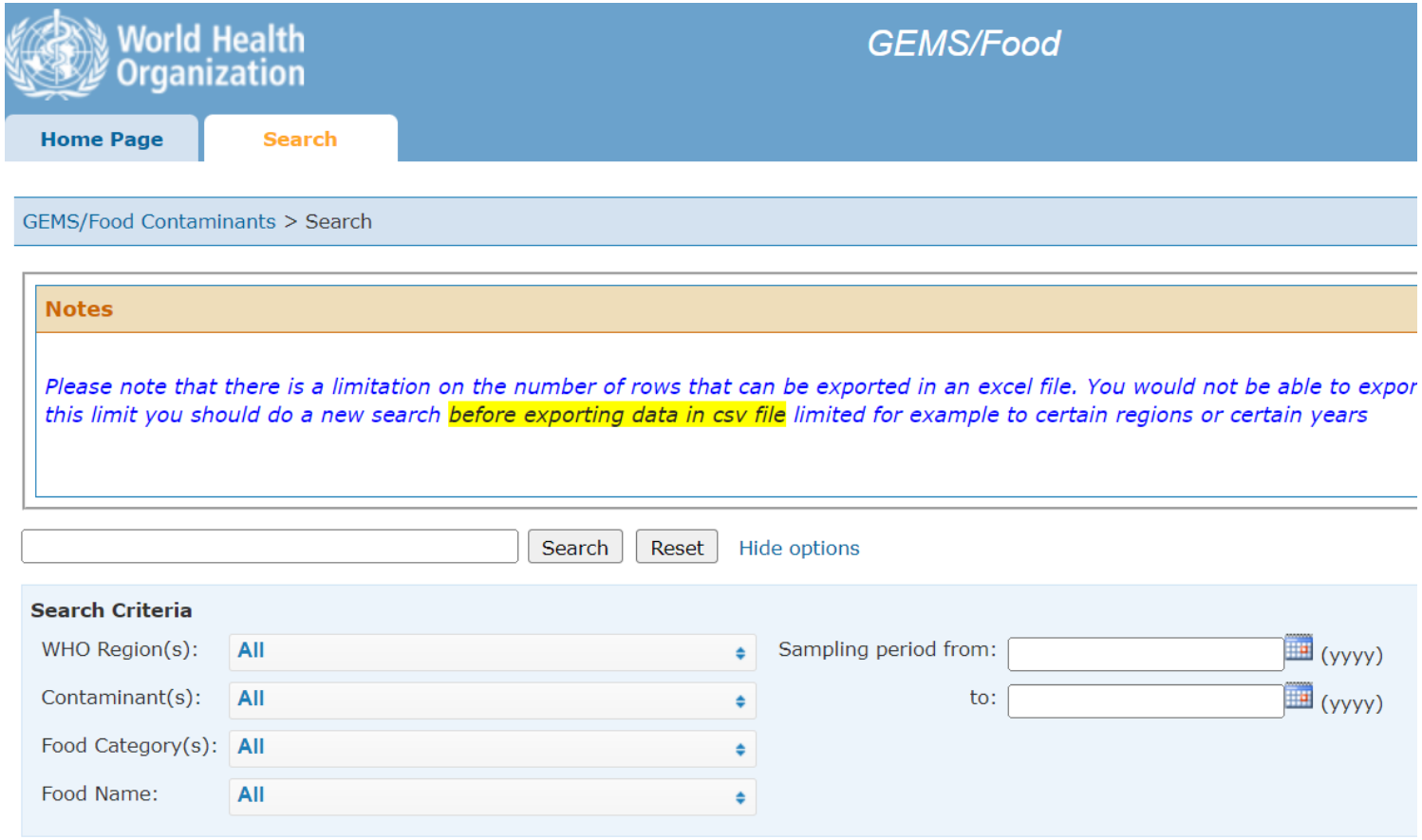
- **Since 1976**, the Global Environment Monitoring System - Food Contamination Monitoring and Assessment Programme, which is commonly known as **GEMS/Food**, has informed:

  - governments,
  - **the Codex Alimentarius Commission and its scientific advisory bodies**, such as JMPR and JECFA, and
  - other relevant institutions, as well as the public,

  on **levels and trends of contaminants in food**, their contribution to total human exposure, and significance with regard to public health and trade.

INTRODUCTION

The GEMS/ Food Database: this is a **web-based system** to access and submit data on contaminant levels in foods.



INTRODUCTION

- The GEMS/ Food **Cluster diets**: as part of its dietary exposure assessment mandate, GEMS/Food has developed model diets which are currently used for predicting dietary intake of various chemicals (**17 cluster diets**).

World Health Organization

GEMS/Food Cluster Diets - 2012

A part of the FOSCOLLAB

Click here to download full data set

Clusters and Countries

Select Clusters

G01	Afghanistan, Algeria, Azerbaijan, Iraq, Jordan, Libya, Mauritania, Mongolia, Morocc...
G02	Albania, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, R...
G03	Angola, Benin, Burundi, Cameroon, Congo, Côte d'Ivoire, Democratic Republic of t...
G04	Antigua and Barbuda, Bahamas, Barbados, Brunei Darussalam, French Polynesia, G...
G05	Argentina, Bolivia Plurinational State of , Brazil, Cape Verde, Chile, Colombia, Cost...
G06	Armenia, Cuba, Egypt, Greece, Iran Islamic Republic of , Lebanon, Turkey
G07	Australia, Bermuda, Finland, France, Iceland, Luxembourg, Norway, Switzerland, U...
G08	Austria, Germany, Poland, Spain
G09	Bangladesh, Cambodia, China, Democratic People's Republic of Korea, Guinea Biss...
G10	Belarus, Bulgaria, Canada, Croatia, Cyprus, Estonia, Italy, Japan, Latvia, Malta, New ...
G11	Belgium, Netherlands
G12	Belize, Dominica
G14	Comoros, Fiji Islands, Kiribati, Papua New Guinea, Solomon Islands, Sri Lanka, Van...
G13	Ethiopia, Erythrea, South Sudan, Botswana, Burkina Faso, Central African Republic, ...
G16	Gabon, Rwanda, Uganda
G17	Samoa, Sao Tome and Principe
G15	Serbia, Czech Republic, Denmark, Hungary, Ireland, Lithuania, Portugal, Romania, ...

REGISTRATION AND LOGIN

- **Data providers** should first register and create a WHO login (e-mail address) and password.

- The institution owning the data should provide the GEMS/Food administrator with contact details to have it listed as a collaborating institution.

- Once logged in to the database, the user will have access to the **Excel templates** for contributing data, that allow data providers to enter the national food classification and to map it with the WHO and/or the FoodEx2 classifications.

FOOD MAPPING

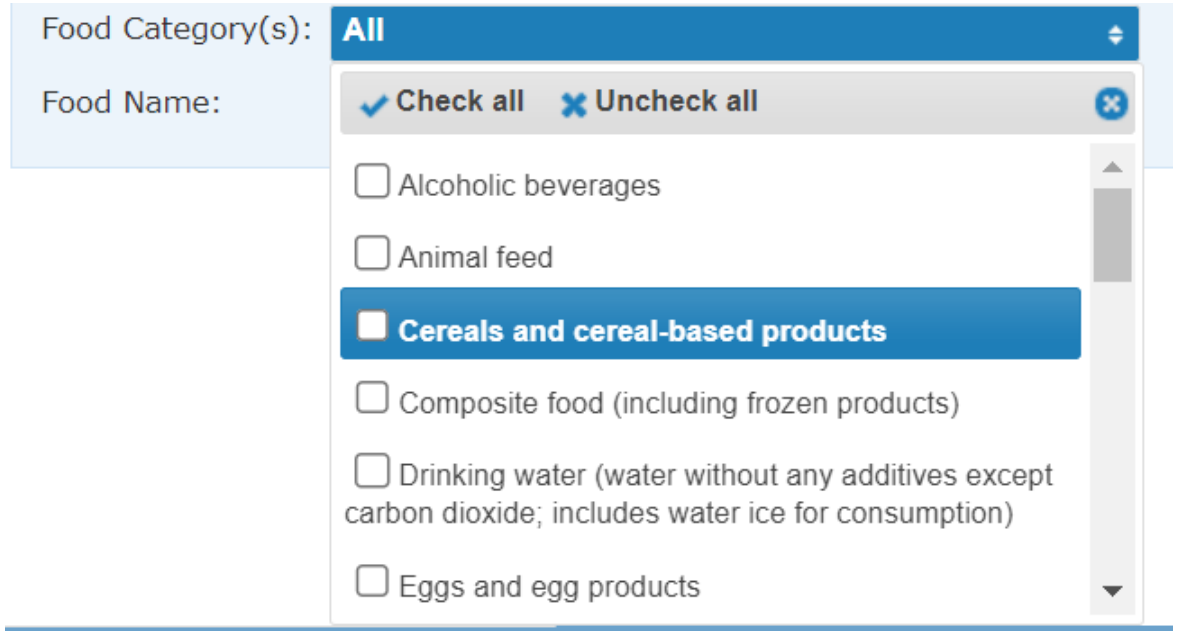
- The **national classification** should be mapped with either the WHO or the FoodEx2 classification (The **local food identifier** consists of the name given to the food in the national database).

- The GEMS/Food code is based on a hierarchical classification with **2 levels:**

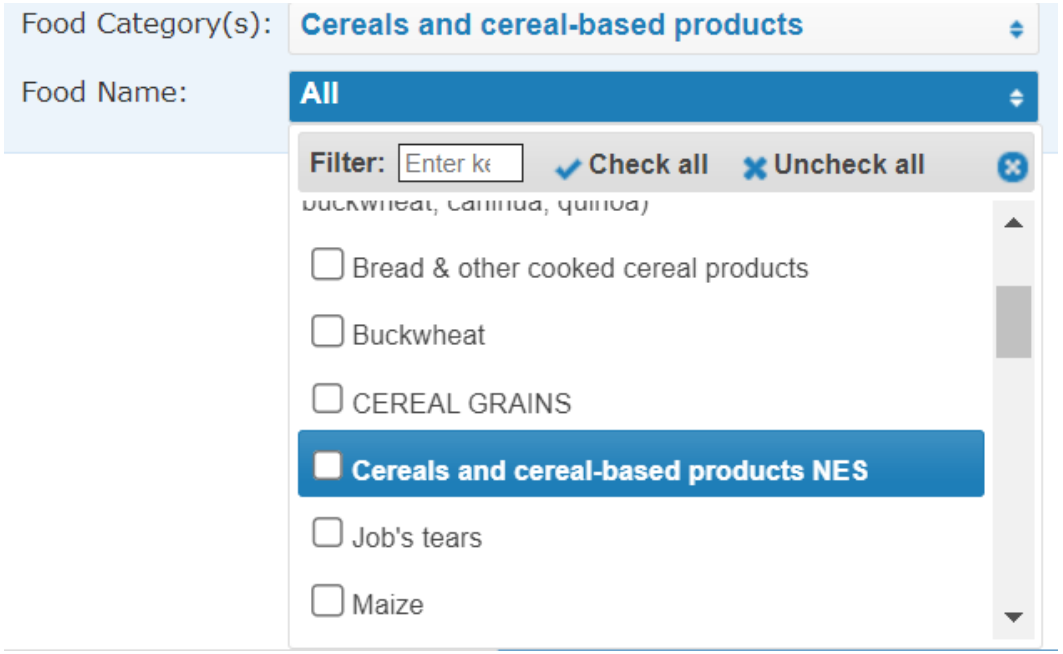
  - The first level (**WHO Food Group**) corresponds to 23 broad categories usually reported in food consumption surveys plus one category for feed.
  - The second level (**WHO Food Identifier**) corresponds to the detailed food descriptors used in the Codex Alimentarius Committees and to foods, processed or not, and analyzed as purchased or as consumed.

- The FoodEx2 code developed by EFSA and recommended for dietary exposure assessment **is already mapped with the WHO code**.

FOOD MAPPING



If no information on the detailed food category (e.g., "fruit") select a WHO Food Identifier similar to the WHO Food Group (e.g., Fruit and fruit product NES).



If the precise food name is not listed, the more generic sub-group listed in CAPITALS should be chosen.

STATE OF THE FOOD ANALYZED

- **Basis for the Analytical Results**: Fat content, Dry weight, As is (raw, fresh) or As consumed.
- **Portion analyzed**: edible only, or total food i.e., edible + inedible portion of food.
- **State of food analyzed**: cooked food, raw food or if the information is unknown.

ANALYTICAL QUALITY ASSURANCE

Field	Description	Content
Sampling Date	Date/Year of sampling	The date when the sample was collected (YYYY)
Sample representativeness/reliability	Sampling design	Random sampling, Targeted sampling or unknown.
Analytical Quality Assurance	To indicate the level of laboratory proficiency	• Internal quality assurance and reference standards only. • Successful participation in relevant proficiency tests during the sampling and analysis period. • Official accreditation for the relevant methods during the sampling and analysis period. • Unknown quality insurance of the lab.

ANALYTICAL QUALITY ASSURANCE

Field	Description	Content
Measurement units for Contaminant Levels	Homogenized units	mg/kg (milligram per kilogram or parts per million), µg/kg (microgram per kilogram or parts per billion), ng/kg …
Limit of detection (LOD)	LOD is the minimum concentration of a contaminant that can be qualitatively measured in the specific food	Number
Limit of quantification (LOQ)	LOQ is the minimum concentration of a contaminant that can be quantitatively measured in the specific food with an acceptable level of accuracy and precision.	Number
Individual vs aggregated data	The reported result is based on pooled sample?	The number of individual samples in the pool?

GEMS / FOOD

World Health Organization

GEMS/Food

Feedback | Login | Search

Home Page | **Search**

GEMS/Food Contaminants > Search

Search Criteria

WHO Region(s): **All**

Contaminant(s): **Abamectin**

Food Category(s): **Fruit and fruit products**

Food Name: **Avocado**

Sampling period from: (yyyy)

to: (yyyy)

Search Results Export to file (csv) | Print | Get link to this search | Email this search

Record Type	Region	Contaminant	Food Group	WHO Food Identifier	WHO Food Code	State of food analysed	Result	Units	LOD	LOQ	Year Sample	Sample representativeness (or reliability)	Lab identification	Food origin	Analytical quality assurance	Results based on
Individual	PAHO	Abamectin	Fruit and fruit products	Avocado	FI 0326	Raw	ND	mg/kg	0.01	0.011	2015	Random sampling	8	Imported	Officially accredited	As is
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ARAB FOOD OCCURRENCE DATABASE

Published Data

Unpublished Data

- Control laboratories
- Research Institutes
- Chambers of Commerce, Industry & Agriculture

Data Mining

Data Availability

Data Generation

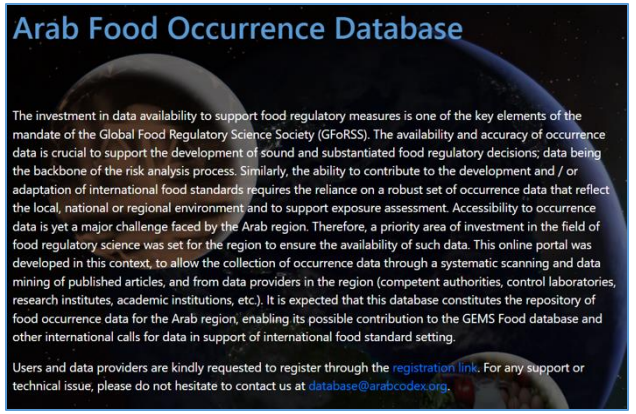
Reliable food testing:

- Standard methods.
- Reference Laboratories at national and regional levels.
- Generation of food monitoring data.

ARAB FOOD OCCURRENCE DATABASE

Data is imported to an **online portal,** accessible at data entry level (Admin) or data consultation (User).

Search Criteria
Country
Contaminant
Food Category
Food Name
Date
.....




thank you
danke
謝謝
ngiyabonga
teşekkür ederim
рахмат
Баярлалаа
спасибо
mersi
kia ora
barka
welalin
spas
tack
dank je
misaotra
matondo
paldies
grazzi
gracias
mahalo
tapadh leat
хвала
asante
manana
obrigada
murakoze
tenki
faafetai lava
vinaka
спасибі
blagodaram
kiitos
dankie
nanni
nandri
dhanyavad
mauruuru
bedankt
hvala
köszönöm
akun dankon aĉiū
bayarlalaa
gràcie
enkosi
dziękuję
djiere dieuf
tau
mochchakkeram
дякую
mamnun
chokrane
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sulpáy
taiku
go raibh maith agat
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děkuji
obrigado
sagolun
sukriya
kop khun krap
arigatô
takk
dakujem
trugarez
ありがとう
mèsi
didi madloba
najis tuke
tanemirt
grazie
rahmet
kam sah hamnida
rahmat
terima kasih
diolch
dhanyavadagalu
shukriya
mercé
мерси
ευχαριστώ
merci
شكرًا لك
তোমাকে ধন্যবাদ
감사합니다
xièxie