International Food Additive Database

Maia Jack, Ph.D., Senior Manager
Science Policy – Chemical Safety
mjack@gmaonline.org

2011 GMA Science Forum
May 18, 2011
www.gmaonline.org
Presentation Outline

• Background:
  • Global Based Initiative – Project Proposal
  • Trade Impact & Value
  • Database Status
• Database Development:
  • Decision Approach
  • Features
Background

• Global Based Initiative – Project Proposal
• Trade Impact & Value
• Database Status
Global Based Initiative - Project Proposal

• September 2007 - 3 year GBI proposal submitted

• Objective: Develop a user friendly online database of national food additive regulations
  ✓ Be a resource for U.S. exporters of processed foods
  ✓ Increase understanding of foreign requirements
  ✓ Improve standards harmonization
  ✓ Expose non-science based standards

• Collaborating Parties: GMA (staff and company expertise), FAS, WUSATA
  ❖ Subcontractor – Bryant Christie Inc.

• Modeled on the MRL Pesticide Database

GMA

www.gmaonline.org
Trade Impact & Value

• Trade in Processed Products
  - 40% of U.S. Agriculture Exports
  - Export Opportunities Increasing
  - Products formulated to importing markets – must be compliant

• Trade Barriers
  - Lack of transparency in regulation
    - Lack of English translations, variations in terminology and structure
  - Overly restrictive food additive standards
  - Standards not science based
  - Wide discrepancy in national requirements
  - Protectionist tactics to block products
  - Lack of infrastructure to facilitate additive approvals
International Food Additives Database Provides:

- Single Source of Information for Exporters
- Builds **transparency**
- Adds **clarity** to requirements
- Allows side by side comparison to deter protectionism
- Provides data to assist U.S. negotiators
- Open access exposes standards that are not science based or unnecessarily restrictive
Food Additive Database: Status Update - Funding

✓ July 2008 – GBI Award $225,000
✓ October 2008 – Contract Awarded BCI – Construction Initiated
✓ 2009 Award - $354,000
✓ September 2010 Request - $186,000
✓ Funding to December 2011
Status Update – Outreach/Education

- GMA technical advisory committee established
- Priority countries identified
- January 2010 Pilot Launch
  - Data Completed for: Codex, China & Korea
  - Research Initiated for 17 additional countries
- Pilot testing:
  - GMA staff and companies
  - Associated U.S. trade groups
  - Select sister associations international
  - Positive & constructive user feedback
- 2010 Consultations/ Demonstration:
  - CFSAN, USDA-FAS, Global Attachés
  - China, Korea Regulators
- March 2011 Roll-Out at CCFA – Publicly Accessible
Status Update - Country Selection Criteria

**Higher Tier**
- Food Additive Standards
  - Accessible (internet, GAIN report)
  - English
- Large export market
- Close Alignment with Codex

**Lower Tier**
- Food Additive Standards:
  - Internal inconsistencies
  - Translation required
- Small export market
- Standards being revised
Status Update - Statistics

- Number of Countries: 12 and growing
- Number of Primary Food Additives: 795
- Number of Market Additive Subtype and Synonyms (related to Primary Additives): 1039
- Number of Market Additive Regulations Entered (Food Additive Provisions): 15,189
Status Update - Next Steps

2009 Countries – Codex, China, Korea

2010 Countries
- Argentina, Canada, Costa Rica, Dominican Republic, Honduras, Japan, Peru, Singapore, Taiwan, Uganda

2011 Countries –
- 1st Tier: Australia, New Zealand, Philippines, South Africa, Hong Kong, Malaysia, Chile
- 2nd Tier: Mexico, South Africa, Brazil, India, Central American countries (El Salvador, Guatemala), Panama, Colombia
- 3rd Tier: Russia, EU

Continued Research and Analysis
Continued Monitoring and Updating (Annually - Codex, Others - WTO)
Determine Permanent Host Site
Outreach and Education
Database Development

• Decision Approach
  • Goal
  • Scope
  • Criteria
  • Codex
  • Decision Flow

• Features
Goal

1) Facilitate trade:
   Single source of food additive regulations to ensure compliance

2) Promote Harmonization:
   Alignment of national standards to Codex
Scope

(i) Baseline:
   Codex General Std for Food Additives GSFA

(ii) Food Additives as defined by Codex
   - NO processing aids
   - NO flavorings
   - NO nutrients
   - NO “miscellaneous” substances

(iii) Regulatory Maximum Use Levels
     (No Specs of Identity and Purity)
Database Development Criteria

- User friendly – logical search mechanism
- Accurate and Comprehensive
- Searchable by Additive or Technological Function
- Multiple Market Searches
- Comparative Screens Available
- Pop-up notes provide explanatory information & national nuances
Codex – Food Additives (INS)

Food Additive

Any substance *not normally consumed as a food* by itself and *not normally used as a typical ingredient* of the food, whether or not it has nutritive value, the intentional addition of which to food for a *technological (including organoleptic) purpose* in the manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food results, or may be reasonably expected to result (directly or indirectly), in it or its byproducts becoming a component of or otherwise affecting the characteristics of such foods. *The term does not include contaminants or substances added to food for maintaining or improving nutritional qualities.*
## Codex – Technological Functional Classes (INS)

<table>
<thead>
<tr>
<th>Functional Category</th>
<th>Technological Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acidity Regulator</td>
<td>Flour treatment agent</td>
</tr>
<tr>
<td>Anticaking agent</td>
<td>Foaming agent</td>
</tr>
<tr>
<td>Antifoaming agent</td>
<td>Gelling agent</td>
</tr>
<tr>
<td>Antioxidant</td>
<td>Glazing agent</td>
</tr>
<tr>
<td>Bleaching agent</td>
<td>Humectant</td>
</tr>
<tr>
<td>Bulking agent</td>
<td>Packaging gas</td>
</tr>
<tr>
<td>Carbonating agent</td>
<td>Preservative</td>
</tr>
<tr>
<td>Other Technological Function</td>
<td></td>
</tr>
<tr>
<td>Technological Function Not Specified</td>
<td></td>
</tr>
</tbody>
</table>
Codex – Food Category System

01.0 Dairy products and analogues
02.0 Fats and oils, and fat emulsions
03.0 Edible ices, including sherbet and sorbet
04.0 Fruits and vegetables, seaweeds, and nuts and seeds
05.0 Confectionery
06.0 Cereals and cereal products
07.0 Bakery wares
08.0 Meat and meat products, including poultry and game
Codex –
Food Category System

09.0 Fish and fish products, including molluscs, crustaceans, and echinoderms
10.0 Eggs and egg products
11.0 Sweeteners, including honey
12.0 Salts, spices, soups, sauces, salads and protein products
13.0 Foodstuffs intended for particular nutritional uses
14.0 Beverages, excluding dairy products
15.0 Ready-to-eat savouries
16.0 Composite Foods
Decisions – National Standards
Food Additives

• Substances that **match to Codex** food additives (INS)
• Substances with **legitimate food additive function** (per Codex) (NOT in INS)
• Substances that are **derivatives of, structurally-related to, or an isomer** of existing Codex additives
• Multiple substances in national standard that align with a given Codex additive (**SUBTYPES**)
• Substances that appear to be functional ingredients OR normal constituents of food are included with caveat:

  “Codex has not identified substance X as an additive.”
Decisions – National Standards
Functional Classes

- Codex food additives – Function Classes as identified in INS
- Functions in national standards that align with Codex functional classes
- Function as described by national standard matches a Codex technological purpose
- Other function as specified by national standard – maintain accuracy
- Technological function not specified (additive with no identified function)
Decisions – National Standards

Food Categories

MOST challenging:

- Cultural differences in terminology used (e.g., pudding, jellies, etc.)
- Food categories as described may match to multiple Codex categories (e.g., cheese)

  • Cheese
    - 01.06.01 Unripened cheese
    - 01.06.02.01 Ripened cheese, includes rind
    - 01.06.02.02 Rind of ripened cheese
    - 01.06.02.03 Cheese powder (for reconstitution; e.g., for cheese sauces)
    - 01.06.03 Whey cheese
    - 01.06.04.01 Plain processed cheese
    - 01.06.04.02 Flavoured processed cheese, including containing fruit, vegetables, meat, etc.
    - 01.06.06 Whey protein cheese
Most challenging (con’t):

- Food categories not well characterized – broad scope (e.g., dairy products, beverages, etc.)
- Catch-all food categories (e.g., other foods, finished foods, canned foods, etc.)
  - Dehydrated food for ready to eat (7 subcategories)
    - 04.01.02.02 Dried fruit
    - 04.02.02.02 Dried vegetables, seaweeds, and nuts and seeds
    - 08.02.01.02 Cured (including salted) and dried non-heat treated processed meat, poultry
    - 09.02.05 Smoked, dried, fermented, and/or salted fish and fish products
    - 15.01 Snacks
    - 15.02 Processed nuts
    - 15.03 Snacks - fish based

Not perfect 1:1 alignment:

Strategy – Reasonable alignment to Codex food categories (erred on more comprehensive)
Database Features

- **Registration**
  - Tracking for FAS (understand “user-”ship)

- **Disclaimer**
  - This database is intended to serve as an initial reference source for food exporters. Users are strongly encouraged to verify all information with knowledgeable parties in the export markets prior to the sale or shipment of any products.
  - Additive Synonyms gleaned from national food additive standards may have national specifications of identity and purity that differ from the JECFA specification for the Primary Additive. Importers must comply with the additive's national specifications of identity and purity.
Database Features

• Search Page
  ▪ Additive
  ▪ Functional Class

• Resource/Reference (links)

• Additive Term Comparison (alignment)

• Food Category Comparison (alignment)

• Additional Substances
  ▪ flavorings
  ▪ processing aids
  ▪ nutrients
  ▪ Miscellaneous

• Feedback (BCI)
Demonstration

www.foodadditiveDatabase.com
Please Try it Out!

Maia Jack, Ph.D., Senior Manager
Science Policy – Chemical Safety
mjack@gmaonline.org
(202) 639-5922

Peggy Rochette, Senior Director
International Affairs
prochette@gmaonline.org
(202) 639-5921