Ensuring the Integrity of the European food chain

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SC2 A competitive food industry Healthy and safe foods and diets for all
To provide Europe with a state of the art and integrated capability for detecting fraud and assuring the integrity of the food chain.

To provide a sustainable body of expertise that can inform high level stakeholder platforms on food fraud / authenticity issues and priorities.

To bridge previous research activities, assess capability gaps, commission research and inform EU future research needs.

Adding value to the European agri-food economy by providing food safety, authenticity and quality assurance.
€12M (€9M EC contribution) FP7 project with 38 partners (+25 new in July 2016)
Key Outputs: progress at M30/60

- Global independent **network** of experts
- **Scientific opinions** to support regulations and enforcement
- **Stakeholder** secure forum

- Anticipating food fraud: **early warning system**
- Development of new **analytical and screening methods** for olive oil, fish, spirit drinks
- **Commissioning** €3M of new research

- Food integrity **database hub**
- **Harmonisation/consolidation** of existing methods / databases
- Identifying **research gaps**

- **Industry integration**
- **Global perspective** (consumer behaviour at export)
- Knowledge/technology transfer and **dissemination**
1st Outputs

FI Network

Procurement of €3M of new research

3 x FI Conferences

Global focal point, >250 attendees

>200 Members from 36 Countries

Academic / research organisation: 30%
Industry: 31%
Multinational / global organisation: 3%
Non-governmental organisation (NGO): 2%
Other: 13%
Safety: 6%
Trade association: 2%
Policy maker: 2%
Regulatory agency: 10%
Retail: 1%
Trade association: 2%
Safety authority/agency: 6%

Procurement of €3M of new research (WP9)

Results of Procurement Call

- Call opened 24/06/15
- Closed 14/08/15
- 83 initial expressions of interest
- 27 proposals submitted
  - 2 proposals - FI01 - Standardisation and harmonisation of untargeted food integrity methods – 1 selected
  - 7 proposals - FI02 - Innovative approaches to assure the integrity of complex foods – 3 selected
  - 7 proposals - FI03 - A feasibility study of how information can be shared along the supply chain to identify risks to the integrity of food – 2 selected
  - 11 proposals - FI04 - Rapid, on-site, cost effective methods for feed/food fraud detection - 2 selected
- Negotiation complete, 8 contracts awaiting signoff (DoW)
FI Network (WP1)

Scientific Opinions

SO1 Use IRMS of geo-origin
SO2 Testing in Risk Man.
SO3 Targeted >non-targeted
SO4 Multi-variate statistics
SO5 Database use & Curation
SO6 Application of NMR
SO7 Application of NGS

Workshops:
Stakeholders - Brussels 2014
Industry - Lodi 2015
Food Analysts - Bilbao 2015
Food Crime - Prague 2016
Industry - Prague 2016
The FoodIntegrity Knowledge Base (WP2)

• Mapping of analytical methods for the detection of fraud and/or verification of integrity onto specific commodities or food authenticity issues

• Open source for industry and control bodies


Diagram:
- Food Commodity or Ingredient
- Fraud/Authenticity Issue
- Analytical Method
- Analytical Reference data
- Inventory of authentic reference data sets
- Inventory of existing analytical tools
Click on the down arrow to select from list

**FOOD COMMODITY**

**Food Category**
Select from drop-down list

**Commodity Detail**
Enter as free text – e.g. butter

**CN code**

**FOOD INTEGRITY ISSUE**

**Description**
Add as free text to describe the issue

**Type of fraud**
Select one

- Dilution
- Substitution
- Concealment
- Mislabelling
- Unapproved enhancement
- Grey market
- Counterfeiting
- Other

**Issue**
Select one or more

- Product composition
- Geographical origin
- Botanical/Cultivar/Varietal/Species
- Production system/process
- Product quality
- Other issue
- Other

**Importance**

- Incidence:
  - very often
  - often
  - rare
  - no longer encountered

**Location in supply chain:**

- Agricultural producer
- Storage/transport
- Food manufacturer
- Trader
- Distributer
- Wholesaler
- Retailer
- Unknown

Next screen
WP 2 – Knowledge Base
Data entry screen

**FOOD COMMODITY**

Food Category
Select from drop-down list
- Animal products
  - Eggs and egg products
  - Honey and royal jelly
- Meat and edible offal
- Milk and milk products
- Seafood
  - Bivalve molluscs
  - Crustaceans
  - Fish
  - Seaweed
  - Surimi
  - Other sea food
- Fruits and vegetables

**FOOD INTEGRITY ISSUE**

Description
Add as free text to describe the issue

Type of fraud
Select one
- Dilution, substitution
- Concealment
- Unapproved enhancement
- Mislabelling
- Grey market, counterfeiting

Issue
Select one or more
- Product composition
- Geographical origin
- Botanical/Cultivar/Varietal origin
- Production system
- Product processing
- Product quality
- Other issue

Importance
Incidence:
- very often
- often
- rare
- no longer encountered

Level:
- consumer
- producer
- both

Next screen
WP 2 – Knowledge Base

Data entry screen

FOOD COMMODITY

Food Category
Select from drop-down list

Commodity Detail
Enter as free text – e.g. butter

Royal jelly

FOOD INTEGRITY ISSUE

Description
Add as free text to describe the issue

Royal jelly produced from non-authentic saccharide sources

Type of fraud
Select one

Dilution
Substitution
Concealment
Mislabelling
Unapproved enhancement
Grey market
Counterfeiting
Other

Issue
Select one or more

Product composition
Geographical origin
Botanical/Cultivar/Varietal/Species
Production system/process
Product quality
Other issue

Importance
Incidence:

very often ○
often ○
rare ○
no longer encountered ○

Location in supply chain:

Agricultural producer
Storage/transport
Food manufacturer
Trader
Distributor
Wholesaler
Retailer
Unknown

Next screen
Food Integrity Website

Food Integrity

Food Integrity: the state of being whole, entire, or undiminished or in perfect condition. Providing assurance to consumers and other stakeholders about the safety, authenticity and quality of European food (integrity) is of prime importance in adding value to the European Agri-food economy.

News

Lamb mince containing 80% Beef - Date: 31 Aug 2015
Directors of the supermarket which supplied lamb mince to restaurants and takeaways in Manchester have been fined £200k...
Read the full article

Australian Seafood Labelling - Date: 29 Aug 2015
In Australia, seafood consumption has doubled in the past 40 years and more than 70% of Australian consumers prefer local seafood...
Read the full article

Quiet Summer 2015 - Date: 21 Aug 2015
NAS, Italy: a food fraud police has inspected over 600 sites across the country this year and found that 45% of them had...
Read the full article

Events

4th MS-food Day
October 7-9, 2015 Foggia, Italy
www.msfoodday.danepug... Read the full article

Shaping the Future of Food Safety, Together – Milan, 14-16 October 2015
EFSA is pleased to announce the details for the Scientific Conference being organised on the occasion of the World Expo 2015...
Read the full article

7th International Symposium on Recent Advances in Food Analysis
7th International Symposium on Recent Advances in Food Analysis (RAFA 2015) will be held on 3-6 November 2015, in Catania...
Read the full article

Twitter Feed

Food Integrity @FoodIntegrityEU 11 Sep Point and shoot - moving out of the laboratory and into the food supply chain - Analytical Methods (RSC Publishing) pubs.rsc.org/en/content/art... Expand

Food Integrity @FoodIntegrityEU 32 Jul Two weeks until the submission deadline 14th August 2015 for #FoodInegrity 33m of EU funding. See http://www.fda.gov.uk/foodintegrity/... Expand

Food Integrity @FoodIntegrityEU 23 Jul BBC News - Dried or dried? 'latest food fraud' says Which? Lab.co.uk/news/uk-236606... Show Summary

Prof Chris Elliott @QUELfoodProf 23 Jul Oregano adulteration in UK & R cited up by @BIGS_Official research – 25% samples tested had an issue. mkebd.com/news/uk-food/news/o... Ratuatuated by Food Integrity Show Summary

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## Impact

<table>
<thead>
<tr>
<th>Expected Impact</th>
<th>FI Impact</th>
<th>Relevant FI Output</th>
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<tbody>
<tr>
<td>Increasing EU added value through the concept of Food Integrity</td>
<td>Improved capability of stakeholders wrt food fraud, comms, systems, methods, intelligence</td>
<td>KB, Network, workshops, Early Warning Systems (EWS), rapid methods, improved food assurance. Scientific Opinions, Dissemination and promotion of FI concept.</td>
</tr>
<tr>
<td>Strengthen the competitiveness of EU food producers</td>
<td>FI systems and outputs help protect industry added value.</td>
<td>Industry implementation. Rapid methods, assurance systems, EWS, improved understanding of consumer attitudes to EU exports.</td>
</tr>
<tr>
<td>Improved communication of quality attributes</td>
<td>Improved understanding of attitudes, preferences and expectations for European and Chinese consumers</td>
<td>Consumer behaviour study in China. Toolbox for EU exporters to China</td>
</tr>
<tr>
<td>Reduce trading blocks</td>
<td>Enhanced assurance of EU products will reduce likelihood of counterfeit EU products being on sale in foreign markets.</td>
<td>Fit for purpose industry assurance applications and systems. Enhanced knowledge of food authenticity issues, risks and mitigation strategies.</td>
</tr>
<tr>
<td>Restore consumer confidence</td>
<td>Stakeholders embrace FI concept and implement strategy</td>
<td>Dissemination and engagement activities (network, workshops, social media) with input from Industry and Consumer groups (Which?)</td>
</tr>
<tr>
<td>Support EU Policies</td>
<td>Provide input into EU for and committees</td>
<td>Strong active links with DG Agri, DG Sante, DG Research, JRC’s, EFSA.</td>
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## Lessons learnt

<table>
<thead>
<tr>
<th>Successes</th>
<th>Challenges</th>
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<tbody>
<tr>
<td>Stakeholder engagement</td>
<td>Stakeholder patience (research project not operational activity)</td>
</tr>
<tr>
<td>Excellent consortium- delivering</td>
<td>Procurement of new research (€3M) slow and resource intensive</td>
</tr>
<tr>
<td>Bringing together of the disparate actors in the food chain to assure the food supply</td>
<td>Financial inefficiency of the procedures available to incorporate new partners into FI</td>
</tr>
<tr>
<td>Exporting FoodIntegrity- strong links with China, SE Asia, US</td>
<td>Yet to engage with India, Russia,</td>
</tr>
<tr>
<td>Exploiting the relatively large resources available to FI- ability to influence/act</td>
<td>Bureaucracy associated with managing 38 soon to be 63 partners</td>
</tr>
<tr>
<td>Sustainability of project components</td>
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</tr>
</tbody>
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How to Get Involved

Join FoodIntegrity network

Visit FoodIntegrity website
www.foodintegrity.eu

E-mail FoodIntegrity
foodintegrity@fera.gsi.gov.uk
FOOD INTEGRITY 2017
“Assuring the integrity of the food chain: turning science into solutions”

Parma, Italy 10-11 May 2017
Acknowledgements

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THANK YOU

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