The OrganicDataNetwork online database – and the challenge of presenting European market data in a common database

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Contents

› How we collected the data
› How we processed and stored the data
› How we analysed the data
› What challenges we encountered when entering the organic market data from the various countries into one database
Two market data surveys

- The partners of the OrganicDataNetwork carried out 2 surveys on organic market data in Europe.
- The first survey covered all European countries, the second only the countries represented in the project.
- For the first time, all European market data were entered into one database.
  (Eurostat provides area, livestock numbers and production data but no market data in its organic database).
Indicators used in the OrganicDataNetwork

› Animals [heads]
› Area; area fully converted and under conversion: total and by crop
› Export volume and value: total and by product
› Import volume and value: total and by product
› Operators: Exporters, importers, processors, producers
› Production volume and value: total and by crop/product
› Retail sales volume and value: total and by product
› Related indicators:
  › Share of overall totals,
  › growth rates,
  › Per capita consumption
We used a questionnaire for standardized data input.

The OrganicDataNetwork’s questionnaire as well as further sample questionnaires are available at the OrganicDataNetwork website. http://www.organicdatanetwork.net/index.php?id=2649
Database structure

Main table with key information

(ID, source key, year, country, crop/product, indicator, label, value)

Look-up/dimension tables

Source (detailed description)

Country/region (classification)

Crop /product (classification)

Indicators (Definition and measuring unit)
Classifications used by the OrganicDataNetwork


**CPA 2008: Classification for manufactured products**

<table>
<thead>
<tr>
<th>Detail</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>10</td>
<td>Food products</td>
</tr>
<tr>
<td></td>
<td>10.3</td>
<td>Processed and preserved fruit and vegetables</td>
</tr>
<tr>
<td></td>
<td>10.39</td>
<td>Other processed and preserved fruit and vegetables</td>
</tr>
<tr>
<td></td>
<td>10.39.2</td>
<td>Processed and preserved fruit and nuts</td>
</tr>
<tr>
<td></td>
<td>10.39.21</td>
<td>Fruit and nuts, uncooked or cooked, frozen</td>
</tr>
<tr>
<td></td>
<td>10.39.22</td>
<td>Jams, fruit jellies and fruit or nut puree and pastes</td>
</tr>
<tr>
<td></td>
<td>10.39.23</td>
<td>Nuts, groundnuts, roasted, salted or otherwise prepared</td>
</tr>
<tr>
<td></td>
<td>10.39.24</td>
<td>Fruit and nuts, provisionally preserved, not for immediate consumption</td>
</tr>
<tr>
<td></td>
<td>10.39.25</td>
<td>Other prepared or preserved fruits</td>
</tr>
</tbody>
</table>
Different hierarchies make data difficult to compare

- Different data collectors have developed different hierarchies for their needs
  - E.g. household or trade panels use other hierarchies than statistical offices
- To make them comparable, it is the best to have as many details as possible
- If you build up new data collection system we recommend to use the relevant Eurostat codes
Data analysis and quality checks via MS Excel pivot tables

› For the quality checks of the OrganicDataNetwork data we used Pivot tables as a basic tool.

› We programmed a number of tables for data checking.

› We used the “conditional formatting” function to highlight inconsistent data.
Quality checks

A number of quality checks were used in the OrganicDataNetwork project and implemented via Pivot Tables:

› Comparison between two years (for all indicators)
› Comparison with overall country total (e.g. comparing organic area with total area)
› Organic production (share in %) < organic area (share in %)
› Organic yield < conventional yield
› Organic area < total area
› Imports < retail sales
› Domestic organic consumption = organic sales, sold as organic + organic imports - organic exports
Data availability in Europe by indicator

- **AREA in hectares** 39 countries
- **ANIMALS in numbers** 35 countries
- **Total RETAIL SALES value** 33 countries
- **PRODUCTION volume by product** 24 countries
- **RETAIL SALES value by product** 18 countries
- **Total EXPORT value** 14 countries
- **Total IMPORT value** 11 countries
- **EXPORT value by product** 6 countries
- **IMPORT value by product** 5 countries
- **RETAIL SALES volume by product** 5 countries
- **Total EXPORT volume** 4 countries
- **EXPORT volume by product** 3 countries
- **PRODUCTION value by product** 3 countries
- **IMPORT volume by product** 3 countries
- **Total Import volume** 1 country

Source: OrganicDataNetwork 2014
The market was 22.8 billion euros; six percent more than in 2011.

The largest market for organic products in 2012 was Germany with a turnover of 7 billion euros, followed by France (4 billion euros) and the UK (1’950 million euros).

As a portion of the total market share, the highest levels have been reached in Denmark, Austria and Switzerland, with six percent or more for organic products. The highest per capita spending is also in these countries and in Luxembourg.
The ten European countries with the highest retail sales 2012

The European market for organic food and drink: The countries with the highest sales 2012

Source: OrganicDataNetwork Survey 2014

Germany: 7'040
France: 4'004
United Kingdom: 1'950
Italy: 1'885
Switzerland: 1'520
Austria: 1'065
Spain: 998
Sweden: 905
Denmark: 887
Netherlands: 791

OrganicDataNetwork 2014, based on national sources
Challenges – different data types

✓ Within one country usually the existing panel data with its classification and/or extra surveys are used

✓ Within the country is fine and often the best solution

✓ Comparing with other countries' data is especially difficult because of

✓ Different classification and groupings
✓ Household panel vs. Trade Panel vs. Survey data
Implications of for common database

To store the retail sales data from the various European countries in one database for an easy country-to-country comparison is tricky, as in fact data are not comparable, and conclusion must be made with greatest care only.

› For many countries data are incomplete and do not cover the whole product range (Austria):
  
  *If no data are shown this does not necessarily mean there are no sales for a certain product.*

› Also for the products reported, the reported value or volume may be incomplete for some countries (e.g.- Austria, Germany) but not for others (Italy, France) the direct comparison between these countries is therefore not possible
Challenges on market data comparison

The surveys on European published market data have shown that a number of challenges are associated with the market data. The challenges include

› Lack of data and incomplete data;
› Different classifications for market data, which make data storage, data processing and analysis a big challenge;
› Differences in definitions;
› Quality issues.

The current data situation makes international comparisons very difficult and the calculation of a total European/EU value for any product is impossible.
Further challenges that become obvious when merging all data into one database

Danger of wrong conclusions because:

› Fluctuating exchange rates: Growth rates for one country and the comparison with others may be distorted

› Comparison data with the overall total (important for quality checks) are either not available or use different nomenclature/definitions and again comparisons are not possible.
The online database

Inspite of all the concerns, the OrganicDataNetwork makes the data collected available at its website.

› All data collected by indicator as MS Excel Table
› Dynamic easy to use datatables for selected indicators and crops
  › Key indicators (total organic area, total retail sales, total operators etc.
  › Organic area and production by crop
  › Organic retail sales by product
Website with data tables and accompanying excel file
## Results

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Item</th>
<th>Retail sales [Mio €]</th>
<th>Retail sales, ppp [€/person]</th>
<th>Retail sales: Share of total value [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>2012</td>
<td></td>
<td>887.00</td>
<td>109.40</td>
<td>7.60</td>
</tr>
<tr>
<td>France</td>
<td>2012</td>
<td></td>
<td>4'004.00</td>
<td>55.75</td>
<td>2.40</td>
</tr>
<tr>
<td>Germany</td>
<td>2012</td>
<td></td>
<td>7'040.00</td>
<td>85.56</td>
<td>3.70</td>
</tr>
<tr>
<td>Italy</td>
<td>2012</td>
<td></td>
<td>1'885.00</td>
<td>30.28</td>
<td>1.45</td>
</tr>
</tbody>
</table>
### Data specific explanations

| Area fully conv | 2011 | Annual green fodder from | Comparison figure from FAO only covers a part of the annual plants harvested green; therefore the percentages calculated with these data may not be accurate.
|                | 2012 | Annual green fodder from | Comparison figure from FAO only covers a part of the annual plants harvested green; therefore the percentages calculated with these data may not be accurate.
| Area under conv | 2011 | Annual green fodder from | Comparison figure from FAO only covers a part of the annual plants harvested green; therefore the percentages calculated with these data may not be accurate.
|                | 2012 | Annual green fodder from | Comparison figure from FAO only covers a part of the annual plants harvested green; therefore the percentages calculated with these data may not be accurate.
| Area [ha] | 2011 | Annual green fodder from | Comparison figure from FAO only covers a part of the annual plants harvested green; therefore the percentages calculated with these data may not be accurate.
|            | 2012 | Annual green fodder from | Comparison figure from FAO only covers a part of the annual plants harvested green; therefore the percentages calculated with these data may not be accurate.
| Import [t] | 2011 | Apples | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Apples | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Bananas, no details | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Bananas, no details | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Berries, other | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Berries, other | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Buckwheat | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Buckwheat | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Citrus fruit, other | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Citrus fruit, other | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Cocoa powder/drinking chocolate | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Cocoa powder/drinking chocolate | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Coffee, decaffeinated or roasted | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Coffee, decaffeinated or roasted | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Cream | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Cream | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Fruit drinks and juices | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Fruit drinks and juices | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Fruit, other | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Fruit, other | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Fruit, tropical and subtropical | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Fruit, tropical and subtropical | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Grain maize and corn cob | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Grain maize and corn cob | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Grain mill products, other | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Grain mill products, other | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Green tea and black tea | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Green tea and black tea | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Herb teas | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Herb teas | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Muesli | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Muesli | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2011 | Nut, no details | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
|          | 2012 | Nut, no details | For Italy: Please note that the import data refer only to imports of non-EU countries that are not part of the equivalence regime.
Acknowledgements

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Thanks for listening
Any questions?